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ABSOLUTE EXTRACTIONS: EVIDENCE FOR CLAUSE-INTERNAL MULTIATTACHMENT IN K'EKCHI

Ava Berinstein

1. Nuclear Term Extraction

The properties of K'ekchi nuclear term (Subject and DO) extraction will be discussed. It will be shown that nominals heading a final Erg arc (transitive subjects) are distinct from nominals heading a final Abs arc (intransitive subjects and DOs) in their ability to extract: A nominal heading a final Abs arc may freely topicalize, focus, question, and relativize. A nominal heading a final Erg arc may freely topicalize, but it may be focused, questioned, or relativized only in clauses with reflexive morphology.

In Relational Grammar, Topic, Foc, Q, and Rel are all overlay relations (Perlmutter and Postal 1982:Chart 13). For the description of K'ekchi it is necessary to define a subclass of overlay relations which include only Foc, Q, and Rel. This subclass will be referred to collectively as nominals which bear a narrow overlay relation. I will (sometimes) refer to this subclass of relations as "extractions", and to the nominal that bears the narrow overlay relation as the "extractee". The constraint which governs nuclear term extraction is:

**Constraint I:**
If a nominal heads a final nuclear term arc in a clause, and it also heads a narrow overlay arc, it must head an Abs arc.

Notice that I involves no reference to level. If a final nuclear term heads an Abs arc - at any syntactic level - it may bear the Q, Foc, or Rel relation (at surface level). Thus, if an initial Erg is a final Abs, it may bear the Q, Foc, or Rel relation (as in 2-3 Retreat clauses), and if a final Erg heads an Abs arc at some non-final level, it too, by the above condition, will be able to focus, question, or relativize. As predicted by Constraint I, a nominal heading a final Erg arc may be focused, questioned or relativized in a reflexive clause. This follows from an analysis that posits clause-internal multiattachment (MA) in reflexive clauses (Perlmutter and Postal 1983, Rosen 1981). In this analysis, which will be motivated below, one nominal heads an Erg arc and an Abs arc in the initial level
of structure. At the final level of structure it heads only an Erg arc. Since the nominal which heads a final Erg arc also heads an Abs arc in the initial level of clause structure, it may bear a narrow overlay relation in a reflexive clause. Nuclear term extraction thus provides evidence for clause-internal multiattachment in K'ekchi.

A grammar that does not represent grammatical relations at multiple levels of structure will not be able to capture this generalization about K'ekchi extraction.

This paper is organized as follows: § 2 briefly presents some definitions and assumptions relevant to the analysis presented here. § 3 presents the basic properties of extraction. § 4 discusses a restriction on Ergative extraction. In § 5 arguments for clause-internal multiattachment are presented. It is argued that the condition on nuclear term extraction follows from an analysis that posits clause-internal MA in reflexive and retroherent unaccusative clauses. It is also argued that a grammar without the notion of MA will not be able to capture this generalization. § 6 concludes with evidence for clause-internal MA in other Mayan languages.

2. The Framework

This paper is couched in the general terms of Relational Grammar (RG), as developed by Perlmutter and Postal (1977, 1982) and Perlmutter (1980).

2.1 Typology of Strata and some Defined Concepts

In this paper, references will be made to four types of strata (syntactic levels). They are defined as follows:

(1)a. **transitive** - a transitive stratum is one that contains a 1-arc and a 2-arc.

b. **intransitive** - an intransitive stratum is one that is not transitive.

c. **unergative** - an unergative stratum is one that contains a 1-arc and no 2-arc.

d. **unaccusative** - an unaccusative stratum is one that contains a 2-arc and no 1-arc.
By this definition, unergative and unaccusative strata are both said to be intransitive. Also relevant to the present discussion is the definition of the concepts ERGative, ABSolute, and UNERGative. These relations are defined in terms of the notions described above.

(2)a. \( \text{Erg} \) - an Erg is the nominal that heads a 1-arc of a transitive stratum.

b. \( \text{Abs} \) - an Abs is the nominal that heads a 2-arc in a transitive stratum and the nominal that heads a 1-arc in an intransitive stratum.

c. \( \text{Unerg} \) - an Unerg is the nominal that heads a 1-arc in an intransitive stratum.

By extension, we can say that an \( \text{Erg-arc} \) is the 1-arc in a transitive stratum, and an \( \text{Abs-arc} \) is the 2-arc in a transitive stratum and the nuclear term arc in an intransitive stratum.

'Ergativity' in RG is thus defined in terms of the information in RNs. There are several advantages to this approach. Most importantly, it gives a cross-linguistically viable characterization of the notions 'Ergative' and 'Absolutive'. Further, it allows rules in a particular language to reference nominals heading Erg-arcs and Abs-arcs (in addition to 1-arcs and 2-arcs) irrespective of case marking.

2.2 Multiattachment

As previously stated, a concept relevant to the present discussion is multiattachment (MA). To a certain extent, MA may represent so-called 'coreference', as is claimed by Perlmutter and Postal (1983), Perlmutter (to appear), and Postal (1981). However, as is noted by Rosen (1981), not all instances of coreference involve MA. The basic idea of MA is that a nominal can bear more than one grammatical relation in a given stratum. Under the multiattachment hypothesis, the initial stratum of

(3) John understands himself.

would be represented as:

(4) [Diagram showing multiattachment]
In (4) a single nominal heads two arcs with the same tail in the \( c_i \) stratum. Where the \( c_i \) stratum is a non-final stratum, the configuration, as in (4), is grammatical. The question that arises is how to 'resolve' a given multiattachment, such that no nominal heads more than one arc with the same tail in the final stratum.

Figuratively speaking, the resolution requires dismemberment of one of the doubly attached arcs. Two methods of resolution have been attested in languages: 'cancellation' (Aissen 1982b, Gerdts 1981, Rosen 1981) and 'birth' (Perlmutter and Postal 1978). The method of resolution to some extent determines the final (in)transitivity of the clause and will be discussed in § 5.

2.3 A Departure

For our purposes, it is necessary to recognize a class of relations referred to as overlay relations, such as Topic, Foc, Q, and Rel. A nominal that bears an overlay relation to its clause must also bear a central relation (e.g. 1, 2, 3, Obl).

In the analysis presented here, I distinguish between final stratum and surface stratum. Consistent with RG, final stratum is defined as the \( c_i \) stratum where there is no \( c_{i+1} \) stratum. I depart from RG by making the following assumptions: 1) a subset of the arcs in an RN are surface arcs, and 2) all overlay arcs are surface arcs. Thus, where a nominal does not head an overlay, the arc it heads in the final stratum is a surface arc.

3. K'ekchi Extraction

K'ekchi is among those very few languages in the world which regularly place the subject after the object. The neutral word order of nominals is determined by surface stratum relations V(erb)-O(object)-S(ubject).

The subject and direct object nominals carry no case marking. Therefore, the primary indicator of grammatical relations is word order (e.g. position after the verb), plus a system of verbal agreement.

K'ekchi has a morphologically ergative agreement system. There are two sets of agreement markers. Set A (ergative) is used to cross-reference the nominal heading the final 1-arc in a transitive stratum. Set B (absolutive) is used to cross-reference the nominal heading
the final 2-arc in a transitive stratum and the nominal heading the final 1-arc in an intransitive stratum.

In (5a) below, the second person singular Set B affix at cross-references the final direct object and in (5b) it cross-references the final intransitive subject.

(5a) a. X - at -ka- ch'aj.  
    tns-B2 -A1p-wash  'We washed you.'

b. X - at -yajer.  
    tns-B2 -sick  'You got sick.'

Notice that the first person plural transitive subject is cross-referenced uniquely with ka (Set A affix) in (5a). This is distinct from the marker for the first person plural direct object of (5c) which is cross-referenced with o (Set B affix).

(5c) a. X - o -a - ch'aj.  
    tns-B1p-A2-wash  'You washed us.'

3.1 Topic versus Focus

For what follows it is important to be able to distinguish those nominals which head a surface Topic arc from those that head a surface Foc arc. This section will discuss the diagnostics for distinguishing topics from foci. Some of the properties which characterize foci are also relevant to those nominals which bear the Q or Rel relation.

3.1.1 Position

If a nominal bears a narrow overlay relation (Q, Foc, or Rel), it must occur in immediate preverbal position. If a nominal bears the Topic relation, it must occur in clause-initial position. Given that the neutral word order is verb initial (V-(O)-S)), this distinction is often camouflaged by the fact that if only one NP precedes the verb it will be both preverbal and clause-initial in surface structure.

The basic order of elements stated on surface GRs is given in (6a). Topic and focus position relative to other elements is given in (6b) and (6c), respectively.

(6a) V (2 chɔ) (3) (2) (3 chɔ) (Obl*) (1 chɔ*) 1 (*)

b. # Topic (X) V Y
c. Focus V Y

The * after (Obl) and (1 cho) in (6a) above, and after the subject relation in parentheses (*) is to indicate that the position of an oblique (locative, benefactive, instrument), or of a 1- chomeur is not fixed with respect to the final subject. Parentheses indicate optionality.

The importance of the distinction between clause-initial and (immediate) preverbal position will be exemplified in clauses with two fronted NPs. It is shown that nominals heading a Topic arc must occur in clause initial position, while nominals heading a Foc arc must occur in preverbal position.

Instrumental and locative foci condition the presence of the postverbal clitic cui'. Instrumental and locative topics do not (Berinstein 1978). Crucially, cui' appears only in clauses in which the extracted oblique (instrument or locative) occurs in immediate preverbal position, not clause-initial position.

In (7a) and (7b) the subject topic occurs in clause-initial position. The oblique instrumental occurs in preverbal focus position. The presence of cui' signals that the instrument is focus. (7a) and (7b) differ in their final transitivity. (7a) is a transitive clause. Verbal agreement is with the final subject laj Lu' and the direct object li che'. (7b) is a finally intransitive (passive) clause. The absolutive third singular Set B affix cross-references the final subject li che'.

(7a. [ Laj Lu' ] [ oxib chi ch'i ch' ] x -Ø -x -yoq' ncl Pedro three of machetes tns-B3-A3-cut S-Topic Inst Focus
cui' li che'.
cui' the tree
'Pedro, with 3 machetes he cut the tree.'

b. [ Li che' ] [ r- iq'uin li ch'i ch' ] x -Ø-yoq'u- the tree A3- with the machete tns-B3-cut-
S- Topic Inst. Focus
e' cui' .
pass cui'
'As for the tree, with the machete it was cut.'
If the order of the two preposed NP's were reversed, the corresponding sentences would be ungrammatical. This is because cui' marks instrument and locative foci, not subject foci.

(8)a.* [ Oxib chi ch'ich' ] [ laj Lu' ] x-Ø-x-yoc' three of machetes ncl Lu' tns-B3-A3-cut
cui' li che'.
cui' the tree
('With 3 machetes, Pedro cut the tree.')

b.* [R-iq'uin li ch'ich' ] [ li che'] x-Ø-yoq'u-A3-with the machete the tree tns-B3-cut
e' cui'.
pass cui'
('With the machete, the tree was cut.')

Furthermore, cui' does not mark instrumental (or locative) topics. For these two reasons, the sentences in (8a) and (8b) can not be interpreted as having either a Subject Focus, or an Instrument Topic. This supports the positional difference which often serves to distinguish topics from foci.

3.1.2 The Conjunction ut

As a rule of thumb, topics may be distinguished from foci in that they are often introduced by the conjunction ut 'and' as illustrated in (9), below.

(9)a. [ Ut li saj al ] qui-Ø-x - yeh sa' x - ch'ol and the young boy tns-B3-A3- say in his-heart
nak mamin t-Ø - in- cuy a'an.
that never tns-B3- A1- endure that (E&C,J.54)
"As for the young boy, he said to himself, 'Never, will I endure that.'"

b. [ Ut li saj cuinok, li al a'an, laj sic'ol and the young man the boy that the seeker of
ichaj, ] co'o-Ø cui'chic chi r_ atinan-quil li rey.
grass go -B3 again to A3- talk -nom the king
'As for the young man, the boy that one, the hunter of grass, he went again to talk to the king.' (E&C,J.45)

c. [ Ut li r- ixakil ] qui-Ø -x - canab sa' jun li and the his- wife tns-B3-A3-leave in one the
mu sa'x -mu li pim chi-r-e li caratera.
shadow in its-shadow the mt. on-its-mouth the road
'As for his wife, he left her in a shadow, in the shadow
of the mountain beside the road.' (E&C, J.94)

In (9a) the topic is a final Erg, in (9b) the topic
is a final Unerg, and in (9c) the topic is a final DO.

3.2 The Semantics of Foci

It should be noted that the distinction between
topic and focus is not purely positional. As in other
languages of the world, the topic is basically what 'the
sentence is about' or 'the theme of the discourse' (Li
and Thompson 1976). Foci are generally contrastive or
emphatic.

The semantic properties of foci are detailed in
Sections 3.2.1 - 3.2.4 in an effort to establish some
language particular diagnostics for foci in K'ekchi.

3.2.1 Negation

The contrastive properties of foci are evidenced un-
der negation. This will be illustrated with the discon-
tinuous negative form moco...ta.

(10a) [ Moco li cuink ta ] na-Ø- alina a'ban li al.
neg the man neg tns-B3- run but the boy
'It's not the man who runs, but the boy.'

tns-B3-A1-hit but the woman
'It's not the man that I hit, but the woman.'

c. [ Moco che' ta ] x- in- x- sac' cui'.
stick tns-B1-A3- hit cui'
'It wasn't a stick that he hit me with.'

d.* [ Moco che' ta ] x - in- x - sac'.

In (10a)-(10c) the nounphrase circumfixed by moco...
ta is the focus of the clause. As evidenced in (10d),
if the instrument heads a Foc arc (or more generally, if
the instrument heads a narrow overlay arc, see footnote
5), cui' must occur as a postverbal clitic. Extraction
of nuclear term foci is unmarked, as exemplified in
(10a, b).
3.2.2 The Emphatic Particle ha'

The emphatic particle ha' may introduce the focused NP. This is exemplified in (11) below.

(11)a. Ha' li cuink x -Ø - t'ane'.
    emph the man tns-B3- fall
    'That's the man who fell.'

b. Ha' li ic x -Ø - in- lok'.
    emph the chile tns-B3- A1- buy
    'That's the chile I bought.'

c. Ha' li ch'ich' n -in- c'anjelac cui'.
    emph the machete tns-B1 work cui'
    'That's the machete I work with.'

d.* Ha' li ch'ich' n -in-c'anjelac.

In (11a-c) the focused NP has a contrastive value. It is introduced by the emphatic particle ha' and occurs in preverbal position. As evidenced in (11d), if the instrument is focused, cui' must occur.

3.2.3 Use of the Demonstrative

A demonstrative pronoun a'in 'this', a'an 'that', a'ineb 'these', or a'aneb 'those' may co-occur with the focused NP. The demonstrative may be preposed or postposed. If the demonstrative is postposed, it may be used in conjunction with ha' as: ha' NP a'an.

(12)a. Entonces r-iq'uin a'in, li ixk a'an
    then A3- with this the woman that
    qui-Ø -ch'aj-o'.
    tns-B3-diff- inch
    'Then after this, that woman became difficult.' (E&C,T.39)

b. Ha' li jun a'in t -Ø - incu-aj.
    emph the one this tns-B3- A1 -want
    'This is the one I want.' (E&C,Gr.118)

c. Li mealeb a'in x -Ø -in-mes cui'
    the broom this tns-B3-A1-sweep cui'
    x -sa' li cabl.
    its-inside the house
    'This is the broom I will sweep the house with.'
d.* Li mesleb a'in x -Ø - in-mes x -sa'
the broom this tns-B3-A1-sweep its-inside

li cabl.
the house
('This is the broom I will sweep the house with.')

If the NP in preverbal position co-occurs with a demonstrative pronoun, it will have the contrastive properties typical of foci. (12d) is ungrammatical because if the instrument is Focus, cui is obligatory.

3.2.4 The Particle pe'

The "insistence" particle pe' (as it is named by Haeserijn 1979:254) may be used in conjunction with a focused NP for emphasis. Pe' must occur in clause-second position. Therefore, it may occur postposed to the focused NP, as in (13a), or in conjunction with the emphatic particle ha', as in (13b).

(13a. Laat pe' t - at-cam- k.
you pe' tns- B2-die-asp
'You are the one that will die.'

b. Ha' pe' laat t - at-cam- k.
emph pe' you tns- B2-die-asp
'You are the one that will die.'

4. A Restriction on Ergative Extraction

In § 3 we isolated five diagnostics for foci. Using those diagnostics as a criteria for focus, it will be argued in this section that a nominal heading a final Erg arc and a (surface) Foc arc may not 1) occur in preverbal position, 2) be circumfixed by moco...ta, or co-occur with 3) the emphatic particle ha', 4) a demonstrative pronoun, or 5) the insistence particle pe', unless it is the subject of a reflexive clause. Otherwise put: a final Erg can bear the Foc relation only in a reflexive clause.

4.1 Reflexive Clauses

Reflexive clauses in K'ekchi are finally transitive. Two pieces of evidence confirm this: the verbal agreement rule and the aspect rule.
4.1.1 Verbal Agreement

The predicate agrees with its subject and its direct object, if there is one. Thus, the defining morphological property of a transitive stem is the presence of a Set A and a Set B affix, while the defining morphological property of an intransitive stem is the lack of a Set A affix. The predicates in (15a-c) agree with the final Subject and DO of the clause and are cross-referenced by the Set A and Set B affixes, as determined by the rules for person agreement in (14) below.

(14) **Person Agreement:**
   a. A nominal heading a final Erg arc determines Erg agreement in the predicate.
   
   b. A nominal heading a final Abs arc determines Abs agreement in the predicate.

(15)a. Qui-Ø-x-sutk'esi r-ib chok' tz'unun.
   tns-B3-A3-change A3-self as hummingbird
   'He turned himself into a hummingbird.'
   (E&C, MSS.14)

   b. M-Ø-a-q'ue acu-ib sa' ch'a'ajquilal
   neg-B3-A2-put A2-self in difficulty
   'Don't put yourself in danger.'
   (E&C, Gr.183)

   c. Ma x-Ø-r-il r-ib laj Lu' sa' lem?
   Q tns-B3-A3-see A3-self ncl Lu' in mirror
   'Did Pedro see himself in the mirror?'

The verbal morphology of the reflexive clauses in (15a-c) supports the claim that these clauses are finally transitive. It should be noted that agreement with the DO in a reflexive clause must be cross-referenced by the third singular Set B affix. This is because the reflexive noun -ib is syntactically possessed by a pronoun which is coreferential with the subject. As in other possessive clauses (see footnote 4), verbal agreement is controlled by the head noun, not the possessor. For example,

(16)a. Qui-Ø-cu-il l- a-punit.
   tns- B3-A1-see the A2-hat
   'I saw your hat.'

   b.* C- at-cu- il l- a-punit.
   tns-B2-A1-see
   ('I saw your hat.')
4.1.2 Aspect

Aspect marking is conditioned by final (in)transitivity in K'ekchi. Specifically, -k must be suffixed to the predicate of a finally intransitive clause in the incompletive aspect. The incompletive tense prefixes include t(v)- future, and ch(v)- optative.

  opt-B1-rest -asp in my-house  
  'that I may rest in my house'  
  (E&C,GR.149)

b. Ta -Ø- lok'-e' - k li caxlan x-ban li ixxk.  
  fut-B3-buy-pass-asp the chicken A3-by the woman  
  'The chicken will be bought by the woman.'

c. T - o - cuar - k  
  fut-B1p-sleep-asp  
  'We are going to sleep.'

The sentences in (17) are finally intransitive. The presence of the -k suffix is obligatory. -C may be suffixed in other tense/aspects if the clause is finally intransitive but, neither -c nor -k may be suffixed if the clause is finally transitive. The aspect marking rule is presented in (18).

(18) Aspect Marking:  
If the final stratum is intransitive, -k must suffix in incompletive aspect.

As is evidenced in (19), -k may not suffix to the verb stem in a reflexive clause in the incompletive aspect.

(19)* T - Ø- acu- il - k acu-ib sa' lem.  
  fut-B3-A2 -see -asp A2-self in mirror  
  ('You will see yourself in the mirror.')</n
Summing up: two morphological facts attest to the final transitivity of reflexive clauses. First, the verb bears the (Ergative) Set A affix. Second, the verb can not bear the incompletive suffix -k which must occur on finally intransitive stems.

The evidence which distinguishes Ergative extraction from Absolutive extraction will now be presented.

4.2 Ergative Versus Absolutive Extraction

First, it will be shown that an Erg NP may not occur
in the focus position, as defined in (6c). Compare sentences (7a) and (7b), repeated below, to (20a) and (20b).

(7a) [La]j Lu' [oxib chi ch'i ch'] x -Ø-x -yoc'
cnl Pedro three of machetes tns-B3-A3-cut
S-Topic Inst Focus

cui' li che'.
cui' the tree
'Pedro, with 3 machetes he cut the tree.'

b. [Li che'] [r-iq'u-in li ch'i ch'] x -Ø-yoq'u-
the tree A3- with the machete tns-B3-cut-
S-Topic Inst. Focus

e' cui'.
pass cui'
'As for the tree, with the machete it was cut.'

(7a) is a finally transitive clause. (7b) is a finally intransitive (passive) clause. The subject topics of (7a) and (7b) occur in clause initial position. As evidenced earlier ((9a-c)), a nominal heading a final Erg or a final Abs arc may bear the Topic relation.

In both (7a) and (7b) the instrument is Focus of the clause. As such, it occurs in preverbal position and its extraction is marked by the presence of cui'.

In (20) below, the subject occurs in preverbal focus position, and the oblique topic occurs in clause-initial position. Cui' does not occur since cui' marks the extraction of instrument and locative foci, not topics.

(20)a. [R-iq'u-in laso] [li caxon] ta -Ø-cubs-
A3- with rope the box tns-B3-lower-
Inst Topic S-Focus

i - k sa' li jul.
pass-asp in the hole (E&C,Gr.290)
'With rope, the coffin will be lowered into the hole.'

b. [R-iq'u-in laso] [lain] t -Ø-in -cubsi
A3- with rope I tns-B3- A1-lower
Inst Topic S-Focus

li caxon.
the box
('With rope, I will lower the coffin.')
(20a) and (20b) differ in their final transitivity. (20a) is a finally intransitive (passive) clause. The final subject li caxon is cross referenced with the third singular Set B affix. (20b) is a finally transitive clause. The final subject lain is cross referenced with the first singular Set A affix, and the direct object li caxon is cross referenced with the third singular Set B affix.

In (20a) the Unerg NP is Focus. In (20b) the Erg NP cannot be Focus. The ungrammaticality of (20b) is not due to the preposing of the instrument phrase, since instruments may be topics in transitive and intransitive clauses; rather, the ungrammaticality of (20b) is due to the preverbal position of the Ergative NP.

(21) R-iq'uin laso t - ø- in-cubsi li caxon (lain).
A3- with rope tns-B3- A1-lower the box  I
'With rope, I will lower the coffin.'

As (21) shows, lain may occur in subject final position, and its presence is optional. This is the first indication that nuclear terms are not alike with respect to topic and focus. Specifically, Absolutes may be Topic or Focus. Ergatives may head a Topic arc, but as will be shown below, require a special environment to head a Foc arc.

4.2.1 Questioning the Focused NP

The questioned NP in Yes-No questions with ma may occur in the focus position. The DO tikcual ban is questioned in (22). As evidenced in (22a), the DO occurs in its 'normal' object position and in (22b), the DO occurs in the focus position.

(22)a. Ma x -ø -a - q'ue cu - e tikcual ban ?
Q tns-B3- A2- give A1-Dat hot medicine
'Did you give hot medicine to me?'

b. Ma tikcual ban li x - ø -a - q'ue cu - e ?
Q hot medicine that tns-B3-A2-give A1-Dat
'Was it hot medicine that you gave to me?'
(H,G.81)

The Erg NP laat is questioned in (23). As evidenced in (23a), the Erg may occur in its normal subject final position, but it cannot occur in the focus position, as in (23b).
(23a) Ma x - Ø -a -q'ue cu - e tikcual ban laaat ?
Q tns-B3- A2-give A1-Dat hot medicine you
'Did you give hot medicine to me?'

b.* Ma laaat li x - Ø -a -q'ue cu - e tikcual ban?
Q you that tns-B3-A2-qive A1-Dat hot medicine
'Was it you that gave hot medicine to me?'

(23b) is ungrammatical because the Erg NP may occur in
focus position only in a reflexive clause, as in (24).

(24) Ma laaat x - Ø - a -q'ue acu -ib sa' servicio?
Q you tns-B3- A2-give A2 -self to service
'Did you join the army?' (lit. 'Was it you that
gave yourself to service?)

The constraint in (25) will tentatively distinguish
Erg focus from Absolutive focus.

(25) **Erg Extraction Constraint:** (to be revised)
A final Erg may focus only if it is coreferential
with the DO.

4.2.2 **Moco...ta**

The contrastive properties of Absolutive and oblique
foci were evidenced under negation in § 3.2.1. In this
section we will consider Erg foci.

(26a) [ Moco li cuink ta ] na- Ø -alina a'ban li al.
   neg the man neg tns-B3- run but the boy
   'It's not the man who runs, but the boy.'

   tns-B3-A1-hit but the woman
   'It's not the man that I hit, but the woman.'

   tns-B1-A3- hit but the woman
   ('It's not the man that hit me, but the woman.')

As evidenced in (26a) and (26b) final absolutes may
be foci. (26c) is ungrammatical because a final Erg may
not focus in this context. However, a final Erg may be
circumfixed by moce ...ta and focus in a reflexive
clause, as in (27). Notice in the second clause of (27)
that li ixk also heads a final Erg-arc and is focused.

(27) [ Moco li cuink ta ] x - Ø -x -toch' r-ib
    tns-B3-A3-hit him-self
[ ha' li iṣk ] li x -Ø- x- toch' r - ib.
emph the woman that tns-B3-A3-hit her-self
'It's not the man who bumped himself, it's the
woman who bumped herself.'

4.2.3 Ha'

The emphatic particle ha' may introduce the focused
nominal (§ 3.2.2). However, as shown below, a final Erg
may not be introduced by ha' unless it is the focused
subject of a reflexive clause.

(28a. Ha' li cuînk x -Ø - t'ane'.
emph the man tns-B3- fall
'That's the man who fell.'

b. Ha' li ic x - Ø - in- lok'.
emph the chile tns-B3- A1- buy
'That's the chile I bought.'

c. * Ha' li cuînk x - Ø- x- lok' li ic.
emph the man tns-B3- A3- buy the chile
('That's the man who bought the chile.')

d. Ha' eb li ch'ich' x - Ø- e'x-toch' r-ib- (eb).
emph p the metal tns-B3-pA3-hit A3-self-p
'Those are the cars that crashed.' (lit. bumped
themselves/each other)

(29a. Ha' li iṣk (li) x - Ø- yabac.
emph the woman that tns-B3- cry
'That's the woman who cried.'

b. Ha' li ik a'an (li) x - Ø- x- c'am chak
emph the cargo that that tns-B3-A3-bring dir

laj Lu'.
nc1 Lu'
'That's the cargo that Pedro brought.'

c. * Ha' laj Lu' (li) x - Ø- x- c'am chak li ik.
('Pedro is the one who brought the cargo.')

d. Ha' li calejenac (li) x - Ø- x- toch' r- ib
emph the drunk that tns-B3-A3-hit A3-self

sa' li x- jolom.
on the his-head
'That's the drunk who bumped himself on his head.'
In (28a), (28b), (29a), and (29b) the focused Absolutive NP is introduced by the emphatic particle ha'. (28c) and (29c) are ungrammatical because ha' may not introduce the Erg unless it is the final (focused) subject of a reflexive clause, as in (28d) and (29d).

4.2.4 Demonstratives

As noted in § 3.2.3, a demonstrative pronoun may co-occur with a focused nominal for emphasis. As shown below, a demonstrative may co-occur with a focused Ergative NP if it is coreferential with the DO.

(30)a. A cuink a'in junelic na - Ø-tz'ulun arin
     prt man this always tns-B3-come here

Coban.
Coban
'This man always comes to Coban.' (E&C, P.5)

b. A'an jun li na'leb na-Ø -ka-nau lao sa
     that one the idea tns-B3-A1p-know we in

ka-yank - il arin sa' ka-tep, Alta Verapaz.
our-between possess here in our-land Alta Verapaz
'That is one story that we know in our community (am-
     mongst us) here in our land, Alta Verapaz.' (B, S1.94)

c.* (Ha') li tz'i' a'an x -in- x -tiu.
     emph the dog that tns-B1-A3-bite
     ('That's the dog that bit me.')

d. (Ha') li tz'i' a'an x -Ø -x -tiu r -ib.
     tns-B3-A3-bite him-self
     'That's the dog that bit himself.'

A final Absolutive may co-occur with the demonstrative pronoun to focus, as in (30a) and (30b). However, a final Erg (30c) may not, unless it is the subject of a reflexive clause (30d).

(31) below is an example from a text. In the first sentence the NP li capitan is established as the new subject topic (note the conjunction ut). Li capitan remains the subject for the next three clauses. As the 'same subject' in a chain of clauses, li capitan need not be overt until there is a change of topic or focus. The verb of the third clause camsi 'to kill' is preceded by the NP li cuink a'an which co-occurs with the demonstrative pronoun in focus position. Both arguments of
the verb are third singular, as evidenced by the agreement. Is the preposed NP the new subject focus, or DO focus? As predicted by (25), the preposed NP li cuink a'an can only be DO focus.

(31). Ut li capitan qui-Ø -x-yeh nak inc'a' and the captain tns-B3-A3-say that not

na-Ø - cu-aj, chan-Ø. Qui-Ø - xucuac li capitan porque tns-B3-A1-want said-B3 tns-B3-afraid the captain because

na -Ø - x - nau nak li cuink a'an ac x-Ø - x - camsi tns-B3-A3-know that the man that already tns-B3-A3-kill

ut qui-Ø - x-yo'obtesi cui'chic r -ib. and tns-B3-A3-create again A3- self. (E&C, J.144-5)

"As for the captain, he told him that 'No, I don't want it (to fight).' The captain was afraid because he knew that he had already killed that man and he (that man) had come back to life again (lit. created himself again)."

As borne out by the prediction of (25), if a nuclear term occurs in preverbal position in a transitive clause, and the Subject and DO are not coreferential, then that nuclear term must be a focused DO.

4.2.5 Pe'

A focused Absolutive NP may co-occur with the 'insistence' particle pe' (and the emphatic particle ha') as in (32a) and (32b) below, but an Ergative NP may not co-occur with either of these particles unless it is the focused subject of a reflexive clause as in (32d).

(32a). Ha' pe' laat li yo -c -at chi x-camsin-emph pe' you that cont-asp-B2 prep A3-kill-

quil-eb eb l -in halau, eb l -in qu' uiche' ak. Laat pe' nom -p p the-my tepez p the-my wild pigs you pe'
yo - c -at chi x- camsin- quil-eb l -in quej.
cont-asp-B2 prep A3- kill -nom -p the-my deer

'You are the one who is (in the process of) killing my tepezcuintles and my wild pigs. You are the one who is killing my deer.' (B, S3.108-9)
b. \{ laat pe' \} t-at-in-muk r-iq'uin-eb li
    \{ ha' pe' laat \} tns-B2-A1-bury A3- with-p the
    xul cui' t-e'-cam-k .
    animal if tns - p - die-asp
    'You are the one I will bury with the animals, if
    they die.'

c.* \{ laat pe' \} t-in-a-col
    \{ ha' pe' laat \} tns-B1-A2-defend
    ('You are the one that will defend me.')

d. \{ laat pe' \} t-∅-a-col acu -ib.
    \{ ha' pe' laat \} tns-B3-A2-defend your-self
    'You are the one that will defend yourself.'

Briefly summing up, we have established five properties of foci. It was shown that Absolutive and Ergative foci differ with respect to these properties. I argued that the difference between Absolutive and Ergative foci followed from the constraint on Ergative extraction, tentatively stated as (25). Specifically, a nominal heading a final Erg arc may head a Foc arc only if it is coreferential with the DO of the clause. As such, an ergative NP may occur in preverbal position only in a reflexive clause. Further, Ergative foci may co-occur with moco... ta, ha', pe', or a demonstrative pronoun only if they antecede a reflexive.

4.2.6 Q and Rel

We have seen that Absolutes may focus freely, but that Ergative focus is restricted to a reflexive clause. Absolutive and Ergative extractions differ in two other ways: 1) the questionning of an Erg is restricted to a reflexive clause, and 2) the relativization of an Erg is restricted to a reflexive clause. These two processes interact with the characterization of nuclear term extraction because nominals bearing the Q, Foc, or Rel relation must occur in the immediate preverbal position. Constraints governing nuclear term extraction should therefore capture this generalization. This suggests the following more general revision of (25).

(33) Erg Extraction Constraint: (to be revised)
    A final Erg may bear a narrow overlay relation
    only if it is coreferential with the DO.
In (34) below, the final Absolutive intransitive subject (34a), and DO (34b,c) are questioned. It is not possible to question the final Erg, unless it antecedes a reflexive.

(34)a. Ani x -Ø -t'ane'?  
who tns-B3-fall  
'Who fell down?'

b. Ani x -Ø -x- sac'?  
who tns-B3-A3-hit  
'Who did he hit?'

c. Ani x - Ø-x- sac' ha'an?  
who tns-B3-A3-hit 3s pro  
(not:'Who did he hit?')

d. Ani x -Ø-x- sac' r -ib?  
who tns-B3-A3-hit him-self  
'Who hit himself?'

There is no difference in meaning between (34b) and (34c). The only way to express 'Who hit him?' is in a finally intransitive (Retreat) clause (see § 4.3 for details). Thus, as proposed in (33), a final Erg can be Q only if it is coreferential with the DO. Observe the questions in (35).

(35)a. C'a'ru nequ-Ø-e'r - aj li cuink?  
what tns-B3-pA3- want the man  
'What do the men want?'

b. Ani nequ- Ø-e'r- aj li cuink?  
who  
'Who do the men want?' (not:'Who wants the men?')

(35b) is not ambiguous. As predicted by (33), if the subject and DO are noncoreferential and a nuclear term is questioned, then Q must be the final Absolutive of the clause.

As seen in (34) and (35), an Abs NP may be questioned with ani, but an Erg NP has a special restriction. It may be questioned with ani only if it is coreferential with the DO, supporting the tentative constraint proposed in (33).

In (36) the final Unerg NP bears the Rel relation. In these examples the head noun precedes the relative clause which is optionally introduced by li, the definite article. As exemplified below, a wh-question word as ani 'who', or c'a'ru 'what' may also introduce the relative clause.
(36)a. [Na'bal] li nequ-e'-xic r - iq'uin aj ilonel
   many that tns- p -go A3- with ncl see

   nequ- e' -cam.
tns- p -die
'Many of those that go to the shaman die.' (E&C,NBN.8)

b. Quí-Ø- oso' [li cuink] li qui-Ø-chal li
tns-B3-finish the man that tns-B3-come the
plet.
fight
'The man that came to the fight was finished off.' (E&C,J.161)

c. Sa' c'alebal cuan-Ø [li ani] na-Ø-xic chi
   in village exist-B3 the who tns-B3-go to
r - il - bal junak aj ilonel.
A3-see - nom a ncl see
'In the village there are those who go to see a shaman.'

d. Na- x -col -eb [ani] nequ-e'-tiq'u-e' x-ban
tns-A3-save - p who tns- p-bite-pass A3-by
li c'ant'i.
the snake
'Beg saves those who are bitten by the snake.' (B,S1.93)

In (37) the final DO bears the Rel relation. Again, the relative clause is optionally introduced by li, this use of li is distinct from its use as a definite article which must precede the NP.

(37)a. Bar x -Ø- a-lok' [li mesleb] li x - Ø-
   where tns-B3-A2-buy the broom that tns-B3-
cu- il sa' l -acu-ochoch ?
   A1- see in the-A2 -house
'Where did you buy the broom that I saw in your house?'

b. Ma chabil-Ø [li chin ] x - Ø - in-takla
   Q good -B3 the orange tns-B3- A1-send
acu- e ?
   A2 -Dat
'Are the oranges good that I sent to you?'

c. T -Ø - e'x-q'ue retal bar na -Ø- x-tau chak
tns-B3-pA3-give notice where tns-B3-A3-find dir
laj yac [ li c'ar u ] na- Ø- x -tz'aca.
the fox the what tns-B3-A3- eat
'They would watch where the fox goes to find his
food (lit. the what he eats).'

(B,S7.62)

d. X - Ø - x -cam [ li ixl ] li x - Ø -r -il
  tns-B3-A3- die the woman that tns-B3-A3- see
  li cu'ink.
  the man
  'The woman that the man saw died.' (not:'The woman
  that saw the man died. ')

Since there is no special marking associated with the
movement or deletion of nuclear term NPs in K'ekchi, one
might wonder whether (37d) is ambiguous. It is not.
(37d) can only be understood as a clause in which the DO
is Rel, not a clause in which the Erg is Rel.

However, a nominal which heads a final Erg arc may be
Rel as predicted by (33), and exemplified in (38), if it
is coreferential with the DO.

(38) X - Ø -x - cam [ li ixl ] li x - Ø -x -toch'
  tns-B3-A3- die the woman that tns-B3-A3- hit
  r - i b.
  A3-self
  'The woman that bumped herself died.'

We have seen that a nominal heading a final Erg arc
may bear the Q, Foc, or Rel relation only in a reflexive
clause. There are however, grammatical counterparts to
the expressions in (20b), (23b), (26c), (28c), (29c),
(30c) and (32c). Crucially, in these grammatical expres-
sions, the focused nominal which heads the initial Erg
arc heads a final Abs arc in a detransitivized Retreat
clause. This is discussed in § 4.3 below.

4.3 2-3 Retreat and Subject Focus

Syntactically, the (a) and (b) sentences below differ
in that the initial direct object li cu'ink 'the man' is
a final direct object in (39a) but is a final indirect
object in (39b). These sentences differ also in that
(39a) is transitive (as reflected by the verbal agree-
ment with the final subject and DO of the clause), while
(39b) is intransitive. Finally, the (a) and (b) sen-
tences also differ in that the final subject li c'anti'
'the snake' is focus in (39b) and is not in (39a).
(39)a. Ti-Ø-x-lop li cuink li c'anti'.
   tns-B3-A3-bite the man the snake
   'The snake will bite the man.'

b. Li c'anti' ta-Ø-lop - o-k r-e li cuink.
   the snake tns-B3-bite-R-asp A3-Dat the man
   'It is the snake that will bite the man.'

c.* Ta-Ø-lop - o-k r-e li cuink li c'anti'.
   tns-B3-bite-R-asp A3-Dat the man the snake
   ('The snake will bite the man.')

2-3 Retreat is a rule which demotes a direct object to an indirect object. Elsewhere (Berinstein 1980, 1983a, to appear) I have argued that such a demotion has taken place in sentence (39b). There are two consequences of this demotion; first, there is final intransitivity, and second, the final subject of a Retreat clause (in K'ekchi) must bear a narrow overlay relation (i.e. Q, Foc, or Rel). The constraint that guarantees this is:

(40) Retreat Subject Constraint:
   If the initial DO is the final IO of a clause c,
   then the final subject of clause c must bear a narrow overlay relation.

For this reason, the relational network associated with (39c) and represented in (41c) is ill formed. Simply put: the final subject of a Retreat clause must extract.

Crucial to the 2-3 Retreat analysis is the claim that Retreat clauses involve two levels of structure: an initial level which is transitive and a final level which is intransitive. The relational network associated with (39a) is given in (41a). This clause has a single-level transitive structure. The relational network associated with (39b) is given in (41b). The initial DO of the clause li cuink 'the man' is the final IO, and as predicted by (40), the final subject of the Retreat clause heads a narrow overlay arc.

(41)a. 
   
   (b. 
   c.*
The lack of a Set A suffix and the presence of the intransitive aspectual suffix -\( k \) attest to the final intransitivity of the Retreat clause in (39b) (see Sections 4.1.1 and 4.1.2 for the formulation of these rules). The Case Marking rule and the Retreat Marking rule further support this claim.

In K'ekchi, as in most Mayan languages, obliques are expressed by a possessive construction. The head noun in this construction termed 'relational noun' by Mayanists, is obligatorily possessed and corresponds to the semantic function. The possessor of the noun is the nominal bearing the oblique relation. As in other possessive constructions, the head noun (relational noun) agrees with the possessor and is marked by an affix from (Ergative) Set A. For example:

(42)a. chok' r - e li ixk
    prep A3-Ben the woman 'for the woman'

b. chi cu -u (lain)
    prep A1-Abl  I 'from me'

c. chi r - u li mex
    prep A3-Loc the table 'on the table'

Final nuclear terms, on the other hand, are 'unmarked'. By this, it is meant that final subjects and direct objects bear no case markers, are not introduced by a preposition, and are not possessors of a relational noun. The Case Marking rule is stated in (43).

(43) Case Marking Rule:
(i) Final nuclear terms are unmarked.
(ii) All other grammatical relations are presented as possessors of a relational noun.

The rules governing person and number agreement in relational nounphrases follow from the Nominal Agreement Rules in (44) and (45) below.

(44) Nominal Agreement:
(i) The possessor of a noun determines Set A agreement.
(ii) Third plural possessors of a noun determine number agreement optionally.

(45) Nominal Affix Positions:
(i) Set A affixes prefix to the possessed noun.
(ii) If number agreement is determined, eb must suffix to the possessed noun.
The 'logical object' of a Retreat clause is presented as the possessor of the obligatorily possessed Dative relational noun stem -e. This argues that the 'logical object' of a Retreat clause is not a DO. Furthermore, it argues that it is an IO, since it is presented in the same form as other final IOs. For example, compare the form of the objects in (46). In (46a) the initial indirect object is a final indirect object. In (46b) the initial direct object is a final indirect object. The fact that these objects share the same morphological shape and agreement pattern follows from an analysis of 2-3 Retreat together with the Case Marking and Nominal Agreement Rules described above.

(46)a. Junelic na -Ø-a -q'ue cu-e li tumin. always tns-B3-A2-give A1-Dat the money 'You always give money to me.'

b. Junelic laat nac-at-tenk'a-n cu-e . always you tns-B2-help -R A1-Dat 'You always help me.'

The rule that conditions Retreat morphology is presented in (47).

(47) Retreat Marking:
If a nominal a heads an Erg arc with tail b and coordinate c_k, and an Abs arc with tail b and coordinate c_k+1, then the verb of clause b has the suffix -o (if the verb is monosyllabic) or the suffix -n (if the verb has two or more syllables).

In (39b) and (46b) the final subject heads an initial Erg arc and a final Abs arc, therefore Retreat morphology is required. Since Retreat marking can only occur in finally intransitive clauses, the presence of the -o, -n verbal reflex provides evidence for the final intransitivity of Retreat clauses.

4.3.1 Subject Extraction

As already mentioned, there are transitive clauses that prohibit the focusing, questioning, or relativization of the final subject. According to the extraction constraint proposed in (33), a final Erg can be focused, questioned, or relativized only if it is coreferential with the DO. Thus, even though both of the clauses in (48) are finally transitive, the subject can only be Q, Foc, or Rel in the sentence associated with (48a).
(48)a. X -Ø- x- sac' r-ib li cuink.
tns-B3-A3-hit A3-self the man
'The man hit himself.'

b. X -in-x -sac' li cuink.
tns-B1-A3-hit the man
'The man hit me.'

So how does one say 'That's the man who hit me!', or 'Who hit me?', or 'The man that hit me died.' in K'ek-chi? The only way to say such phrases is in a Retreat clause. In this sense, Retreat is used for the questioning, focusing, and relativization of an initial Erg. The constraint in (33) specifically restricts nominals heading final Erg arcs from bearing a narrow overlay relation. However, the subject of a Retreat clause heads a final Abs arc. Therefore, it is able to bear a narrow overlay relation.

The questioning of an Erg differs from the questioning of a DO in that Retreat morphology is required for the former and disallowed for the latter.

(49)a. Ani x -Ø-x-sac' ?
who tns-B3-A3-hit
'Who did he hit?'

b. Ani x -Ø-sac'-o-c r-e ?
who tns-B3-hit-R-asp A3-Dat
'Who hit him?'

(50)a. C'a ti -Ø- x- banu li ixk ?
what tns-B3-A3-do the woman
'What will the woman do?'

b. Ani ta- Ø- paba-n- k r-e ?
who tns-B3-ask -R-asp A3-Dat
'Who will ask him?'

(E&C, SM.9:23)

It is important to note the difference in the verbal morphology between the (a) and (b) sentences above. Crucially, in the (a) sentences, where an object is being questioned, the verb has transitive morphology. That is, the verb is cross-referenced with two person markers: the Set B third singular (Ø-) and the Set A third singular (x-) pronouns. On the other hand, in the (b) sentences, where an Erg is being questioned, the verb has intransitive morphology. That is, the subject agreement is Absolutive (Ø-) and the initial DO no longer controls verbal agreement; rather, it is presented in the form of
a Dative relational noun \_re. Finally, the (b) sentences condition the presence of the Retreat suffixes -o (as in (49b)) and -n (as in (50b)). And, the intransitive aspectual suffix must occur in the (b) sentences in the incomplete t(v)-aspect.

The rules established earlier for Retreat Marking, Verbal Agreement, Aspect, and Case argue that the (a) sentences are finally transitive, and that the (b) sentences are finally intransitive. This supports our conclusion that the subject of a Retreat clause can be Q because it heads a final Abs arc. The transitive analogue of the sentences in (49b) and (50b) are therefore ungrammatical, as evidenced in (51a) and (51b) respectively.

(51)a.* Ani x -Ø -x -sac' a'an?
who tns-B3-A3-hit 3s pro ('Who hit him?')

b.* Ani ti- Ø -x -paba a'an?
who tns-B3-A3-ask 3s pro ('Who will ask him?')

In a similar way, it will be shown that the Retreat subject can be Rel, even though the corresponding subject in a transitive clause cannot. This is exemplified in (52).

(52)a. X - Ø -x-cam [ li ixl ] li x -Ø -r -il
  tns-B3-A3-die the woman that tns-B3-A3-see  
  li cu_i nk.  
  the man  
  'The woman that the man saw died.'  
  (not: 'The woman that saw the man died.')

b. X - Ø -x-cam [ li ixl ] li x -Ø -il -o -c
  tns-B3-see-R-asp  
  r - e li cu_i nk.  
  A3 -Dat the man  
  'The woman that saw the man died.'

In (52a) the DO is Rel. The clause is unambiguous. The Erg can not be understood as Rel. The only way the 'logical' subject of a transitive clause can be relativized is as a final Absolutive in a Retreat clause (52b). Other examples are given in (53) and (54) below.
(53) [ Li cuink ] li x -Ø-a'bi- n- k r - e li
the man that tns-B3-hear-R-asp A3-Dat the
son x -Ø-x -bicha.
music tns-B3-A3-sing
'The man who heard the song sang it.' (Ba,KCS.88)

(54) [ A'an ] li qui-Ø -yo'obtesi-n chak k - e nak
that that tns-B3-create -R dir A1p-Dat that
nequ-Ø -e'x-c'oxtla li cristian.
tns -B3-pA3-think the people
'E&c, KK.14
'The people think that that is what created us.'

The nominal bearing the Rel relation in (52)-(54) heads an initial Erg arc and a final Abs arc. That the Retreat subject must bear a narrow overlay relation follows from the Retreat Subject Constraint given in (40).

We have seen that nominals heading a final Abs arc may bear a narrow overlay relation. However, nominals heading a final Erg arc are restricted in a particular way. They may only bear a narrow overlay relation if they antecedes a reflexive. At this point it is not clear why the subject of a reflexive clause is exceptional, or what, if anything, it has in common with the subject of a Retreat clause. In this sense the constraint in (33) fails to capture a generalization about K'ekchi nuclear term extraction (and more generally, about Mayan extraction). Namely, that a nominal must head an Abs arc to bear a narrow overlay relation. This constraint is given in (55) and follows from an analysis that posits clause-internal multiattachment in K'ekchi reflexive clauses.

(55) Extraction Constraint:
If a nominal heads a final nuclear term arc in a
clause c and it also heads a narrow overlay arc,
it must head an Abs arc.

Arguments for this analysis are presented in the next section.

5. Evidence for Clause-Internal Multiattachment

Following recent RG proposals (Aissen 1982b, Johnson and Postal 1980, Perlmutter and Postal 1983, Postal 1981, Rosen 1981), coreference will be represented by multiattachment (MA). The relational networks of reflexive structures (but not all reflexive structures, see
Rosen 1981) involve a stratum in which a single nominal heads two neighboring arcs.

Some RG definitions:
Two arcs are neighbors if and only if they have the same tail. Two arcs overlap iff they have the same head node, and two arcs are parallel iff they are neighbors and overlap.

In (56a) the 1-arc and the 2-arc are neighbors. In (56b) a heads two overlapping arcs, and in (56c) a heads two parallel arcs.

The MA hypothesis (within a single clause) is basically that there exist structures where one nominal bears two (or more) grammatical relations in the same stratum, as in:

(57a. Mary likes herself.  

In (57b), Mary heads an Erg-arc and an Abs-arc in the same stratum. These arcs, the 1-arc and the 2-arc are parallel. Perlmutter and Postal (1983) suggest that the notion of MA can replace the notion of coreference. For example, reflexive constructions would involve a clause-internal MA and equi constructions would involve a cross-clausal MA (defined below). Coreference would not necessarily enter into the conditioning of these rules. Rather, the relevant information would be represented directly in the relational networks. For example, in (57) above, Mary would be correctly understood as both the initial 1 and the initial 2 of the clause. Rosen (1981) challenges this assumption and provides evidence based on reflexive clauses in Italian that not all cases of coreference involve MA. For K'ekchi, it will be argued that not all cases of MA involve coreference. From
this it follows that we are not in a position to dis-
pense with the notion of coreference in the conditioning of syntactic rules. For the purpose of this paper, coreference and MA will be regarded as independent notions.

The definition of cross-clausal MA and clause-internal MA is given in (58). This definition is consistent with Rosen (1981).

(58) Multiattachment:

a. Cross-clausal (or 'general') MA: Two or more overlapping arcs labelled with a central R-sign are headed by the same nominal.

b. Clause-internal (or 'reflexive') MA: Two or more parallel arcs labelled with a central R-sign and sharing a coordinate are headed by the same nominal.

Two properties distinguish 'reflexive' MA from 'general' MA. First, in reflexive MA the arcs have the same tail. In general MA the arcs have distinct tails. Second, in reflexive MA the arcs must share a coordinate i.e. they must be in the same stratum. General MA, on the other hand, is not restricted to the same stratum. Discussion of general MA constructions (unions, equi and ascensions) is presented in Berinstein (to appear) but is beyond the scope of the present paper which will limit its discussion to reflexive MA.

Given the definition of clause-internal MA (58b), we can now distinguish the subnetworks of the Passive and reflexive RNs in (59) and (60) below.

(59) Reflexive sub RN or in the stratal diagram:

(60) Passive sub RN or in the stratal diagram:
The structure in (59) is distinct from a passive RN. In particular, there is no advancee arc. Both the 1-arc and the 2-arc are initial stratum arcs.

In the Passive sub RN a heads a 2-arc at the initial level and a 1-arc at the final level. In the reflexive RN a heads a 1-arc and a 2-arc at the initial level. In the reflexive RN, and not in the Passive RN, a bears two grammatical relations in the same stratum. I will refer to this stratum as a \(1^{\text{coreferential}}\) \(2\) MA stratum, abbreviated thusly, \(1:2\). Given the definition in (58b), it follows that (59) involves multiattachment and (60) doesn't. Unlike Italian, in K'ekchi every instance of coreference must involve MA. However, not every MA involves coreference.

It has been assumed (Perlmutter and Postal 1983) that all MAs which involve coreference must be resolved in a well formed RN. Or more precisely:

(61) A nominal may not head two parallel arcs labelled with a central R-sign at final level.

Therefore, if reflexivization is represented syntactically by MA, as it is in (57), then the MA must be resolved in such a way that no nominal heads more than one arc with the same tail in the final stratum.

Perlmutter's (to appear) proposal (based on joint work by Perlmutter and Postal) for the resolution of multiattachment is that RNs with (clause-internal) MA have arcs headed by pronouns whose function is to 'absorb' all but one of the grammatical relations borne by the multiattached nominal. Further, the GR in the MA stratum that gets 'absorbed/replaced' is the one that is the lower on the relational hierarchy (1, 2, 3, Obi) of R-signs (Johnson and Postal, 1980). For example, the final stratum corresponding to the RN in (57b) would contain a 2-arc headed by a pronoun, as in:

(62)

The pronoun is realized as the reflexive herself in (62) because it meets the conditions for reflexive pronouns in English. The pronoun heads a 'birth arc' (A) with the
same R-sign as one of the two (initially) doubly attached arcs. In this way, the MA in the initial stratum is resolved and the condition in (61) is met. This proposal for MA resolution is referred to as 'pronoun birth'.

Not all multiattachments require pronoun birth. A multiattachment can be resolved by cancelling one of the doubly attached arcs without pronoun birth. This proposal for the resolution of MA is due to Rosen (1981). She argues convincingly that 1:2 and 1:3 MA strata in Italian are resolved by cancelling the object arc.

Thus, it should be noted that there are reflexive constructions, as discussed by Postal (1977), which are initially transitive, but finally intransitive. Postal's arguments for French (based on Kayne 1975) for the final intransitivity of reflexive clauses depend on an analysis of causative clause union (CCU). Relevant to this analysis is the 'Union Law' (Perlmutter and Postal 1974). The Union Law predicts that the downstairs 2, or intransitive 1 (i.e. Absolutive) will bear the upstairs 2 relation, and that the downstairs transitive 1 (i.e. Erg) will bear the upstairs 3 relation in CCU. Therefore, CCU provides a test for determining the final (in)transitivity of the complement clause. In French, if a reflexive clause is complement to a CCU construction (with main verb faire 'to make') the downstairs 1 is upstairs 2. This is evidence for the final intransitivity of the reflexive clause in French. Extrapolating somewhat, the final intransitivity of the reflexive clause follows from an initial 1:2 MA stratum which is resolved by 2-cancellation.

A similar analysis of reflexive clauses is discussed by Gerdts (1983) for Halkomelem (a Salish language). However, in Halkomelem Gerdts provides evidence for the initial transitivity of reflexive clauses (based on the rule for transitive marking), and evidence for the final intransitivity based on CCU, final (subject) agreement, and case. (In Halkomelem a final Erg can not be a proper noun, however the final subject of a reflexive clause can be a proper noun.) Gerdts argues that reflexive clauses are initially transitive involving a 1:2 MA. Multiattachment is resolved by cancelling the 2-arc, resulting in an intransitive final stratum.

Cancellation has also been attested in Tzotzil (Aissen 1982b). In Tzotzil there is a productive rule of 3-2 advancement (Aissen 1982a). The morphological reflex of
this advancement is the suffix -be on the verb. Syntactically, the initial 3 is a final 2, and the initial 2 is a final 2 chômeur. Indirect objects which are notional benefactives advance to direct object with the same morphological and syntactic consequences. While there are no final indirect objects, it is necessary to assume their existence in non-final strata, since every clause in which an indirect object (notional recipient or benefactive) occurs, except those where the indirect object is cancelled, is marked with -be.

(63)a. 7i -s - meltzan-be jun falta
cp -E3- make -be one skirt
'She made her a skirt.' (Aissen:1982b)

b. 7i -s-meltzan jun falta
cp -E3-make one skirt
'She made a skirt (for herself).'

Both clauses (63a) and (63b) are finally transitive. This is evidenced by the ergative third singular agreement with the final subject of the clause. In (63a) the 3 has advanced to 2. In (63b) there is no advancement, and -be does not occur suffixed to the verb. In (63b), and not in (63a), there is a coreferential reading. The structure assigned to (63b) by Aissen is (64).

(64)

In this RN there is an initial 1:3 MA which is resolved by 3-cancellation. 3-cancellation in Tzotzil does not require pronoun birth.

Two forms of resolution have been discussed: pronoun birth and cancellation. If, for example, a language has a 1:2 MA stratum, resolution may involve either 2 birth or 2 cancellation. Corresponding to these two resolutions are finally transitive and intransitive reflexive clauses, respectively.

Now let us return to K'ekchi nuclear term extractions and the constraint proposed in (55) to govern them. It was shown that final Absolutes focus, question, and relativize. In contrast, Ergative NPs focus, question,
and relativize only in reflexive clauses. (55) claims that a final nuclear term must head an Abs arc to be Q, Foc, or Rel. That Ergatives may focus in a reflexive clause, follows from an analysis of clause-internal MA in K'ekchi reflexive clauses. Crucially, a nominal that heads a final Erg arc may focus because it heads an Abs arc at the initial level. Unlike Italian, French, and Halkomelem, K'ekchi reflexive clauses are finally transitive. The initial 1:2 MA is resolved by 2 birth. For example, the RN associated with (30d), repeated below as (65a), is (65b).

(65a). Li tz'i' a'an x - Ø -x-tiu ri-ib
   the dog that tns-B3-A3-bite A3-self
   'That's the dog that bit himself.'

b. [Diagram]

The nominal that heads the final Erg arc may focus in (65a) because it heads an Abs arc. The 2 arc of the initial 1:2 MA satisfies this condition, stated in (55) and repeated below for convenience.

(55) **Extraction Constraint:**
   If a nominal heads a final nuclear term arc in a clause c and it also heads a narrow overlay arc, it must head an Abs arc.

Summing up, the constraint proposed to govern nuclear term extraction (55) assumes the notion of multiattachment. This proposal henceforth the COMA hypothesis (co-reference with MA), will be compared to a grammar without the notion of MA, henceforth the NOMA hypothesis (no MA). It is argued that the notion of MA is required to capture the generalization of nuclear term extraction in K'ekchi. These arguments provide evidence that linguistic theory must countenance the notion of multiattachment.

5.1 Arguments for Multiattachment

Two grammars will be compared, one with the notion of MA (COMA) and one without it (NOMA). It is argued that there is independent evidence for MA in the representa-
tion of coreference. Under the COMA hypothesis the syntactic condition that governs nuclear term extraction is given in (55). Under the NOMA hypothesis the semantic condition that governs ergative extraction is given in (33). These are renumbered as (I) and (II), respectively.

(I) **COMA Condition on Nuclear Term Extraction:**
If a nominal heads a final nuclear term arc in a clause c and it also heads a narrow overlay arc, it must head an Abs arc.

(II) **NOMA Condition on Ergative Extraction:**
A nominal heading a final Erg arc can head a narrow overlay arc only if it is coreferential with the DO.

If Constraint I is the only condition on RNs involving narrow overlay relations, then Absolutives can bear a narrow overlay relation and Ergs can, when they meet the condition. Assuming the notion of MA, this condition is met at the initial level of a reflexive clause (i.e. the 1:2 MA stratum).

Under the COMA grammar, the fact that direct objects and subjects of intransitive clauses (Passive, Retreat, etc.) may be focused, questioned, and relativized follows from the same constraint that allows transitive subjects of reflexive clauses to focus, question, and relativize.

If Constraint II is the only condition on RNs involving narrow overlay relations, then an Erg can bear a narrow overlay relation only if it is the subject of a reflexive clause. The NOMA grammar misses the generalization that the only nominals which head nuclear term arcs that can extract are those which head Abs arcs.

Therefore, under the COMA hypothesis, the constraint on nuclear term extraction is completely characterized by one generalization, namely Constraint I, above. The NOMA grammar would incorporate that statement, but in addition, it would require a separate statement allowing extraction of final Ergs in a reflexive clause. Furthermore, under the NOMA grammar, one must deduce that Absolutives can extract. Under the COMA grammar, it is a positive prediction. This is an argument in favor of the COMA hypothesis.
5.2 The Oblique Law

The second argument that will distinguish a no multi-attachment grammar (NOMA) from a multiattachment grammar (COMA) depends on the Oblique Law, a proposed universal of clause structure which is required independently under both analyses. It is argued that the ungrammaticality of oblique reflexive clauses follows automatically from the Oblique Law and the notion of multiattachment. A grammar without multiattachment would, on the other hand, require an additional condition on coreference to rule out oblique reflexive constructions.

The Oblique Law (Perlmutter and Postal 1982) is stated in (66).

(66) We say that B is a $c_i$ arc, if B is an arc one of whose coordinates is $c_i$.

Then: If A is an Oblique arc, A is a $c_1$ arc.

This Law claims that oblique relations are never acquired in post-initial strata. For example, it predicts that demotions of the form *1-Obl, or *2-Obl will be ill-formed in the world's languages.

In K'ekchi all non-nuclear term expressions are 'flagged' (see Case Marking Rule in § 4.3). Obliques are presented as possessors of an obligatorily possessed noun stem. The rules which determine nominal agreement are stated in (44) and (45). (67) below is exemplary.

(67)a. X -Ø-in-tz'iba li hu chok' acu-e.
    tns-B3-A1-write the letter for A2-mouth=Ben
    'I wrote the letter for you/your benefit.'

b. T- in- c'ojla- k ch- a -c'atk.
    tns-B1 sit -asp at-A2-side=Loc
    'I will sit at your side/beside you.'

c. X- Ø- e'x -mak' li ka-ch'och' chi k - u.
    tns-B3-pA3-take the A1p-land from A1p-face=Abl
    'They took our land from us.'

The clauses in (67) are monostratal. The RN associated with (67a) is illustrated in (68).
A corollary of the Oblique Law (as noted by Rosen 1981) is stated in (69).

(69) In a given RN, if a reflexive (pro)noun heads a final Obl arc, it must head an initial Obl arc.

Let's consider the proposed clause structure of an oblique reflexive clause under the NOMA and COMA hypotheses. A sentence such as 'Mary sewed a huipil for herself.' would be associated with the (simplified) RNs in (70a) under the NOMA, and (70b) under the COMA.

Under the NOMA hypothesis, the oblique NP in question 'for herself', would bear an initial oblique relation and a final oblique relation. This is consistent with the Oblique Law. Since there is no multiattachment under the NOMA grammar, the structure of oblique reflexive clauses (70a), does not differ from the structure of 'plain' non-reflexive oblique clauses (68).

Under the COMA hypothesis, 'for herself' is a final oblique, but it is not an initial oblique. A grammar with the Oblique Law and the notion of coreference represented syntactically by MA therefore predicts that RNs such as (70b), will be ungrammatical. This is the case. *Ix K'ekchi there are no oblique reflexive clauses.

(71a) *Lix Mar qui-Ø -x- boj li po'ot chok'

the Mar tns-A3-A3-sew the huipil for

r - e r - ib.
A3-Ben her-self
('Mary sewed the huipil for herself.')
b.* Laj Xal qui-∅-x-q'ue li utz'u'uj chi ncl Xal tns-B3-A3-put the flowers on
r - e r - ib.
A3- Loc him-self
('Baltazar put the flowers on top of himself.')

c.* Lain x- ∅ -cu-elk' li tumin chi
   I tns-B3-A1 -steal the money from
cu- u cu- ib.
A1- Abl my- self
('I stole the money from myself.')

d.* Lain t- ∅ -in-c'am li ɪk in-ban cu-ib.
   I tns-B3-A1-carry the cargo A1-Ag my-self
   ('I will carry the cargo by myself.')

Under the NOMA hypothesis there is nothing that rules out (71). Therefore, the NOMA grammar will require an additional condition on coreference to explain the ungrammaticality of these sentences. How would such a condition be stated? A first attempt is given in (72).

(72) NOMA Condition on Coreference
The final 1 of a clause c may be coreferential with Possr GR_x of clause c if and only if Possr GR_x is possessor of a DO.

(72) restricts the class of coreferential constructions to subjects and objects, as in (73). In (73) the final 1 is coreferential with the pronominal DO possessor. However, the restriction in (72) is far too specific, since a final 1 may be coreferential with a pronominal oblique possessor, as in (74).

(73)a. X - ∅ - in -lok' li cu -ac.
   tns-B3-A1 -hunt the my- clothes
   'I bought my clothes.'

b. X - ∅ - in -toch' cu -ib.
   tns-B3 - A1 -bump my- self
   'I bumped myself.'

(74) Li cuink x- ∅ - x -sic' li ac chok' r-e
the man tns-B3-A3 -hunt the clothes for A3-Ben
li r - ixakil.
the his- wife
'The man looked for clothes for his wife.'
Since there is no MA in the NOMA grammar, the RN attributed to (74) has the same structure as the one in (70a). This poses a problem for the NOMA hypothesis, since there are now two types of clauses, (71) and (74), with the same clause structure, but differing in grammaticality. Thus, the constraint will have to specifically delimit the class of noun phrases which can be coreferential to a final 1. We have seen that a final 1 can be coreferential to a pronominal DO possessor (73a), to a final DO (73b), and to a pronominal oblique possessor (74). However, the final 1 can not be coreferential with a pronominal oblique possessor if the head noun is a reflexive noun. The condition on coreference for the NOMA hypothesis is stated in (75).

(75) NOMA Condition on Coreference
If a nominal heads a 1 arc, it can not be coreferential with a nominal that heads an Oblique arc.

Given this condition, under the NOMA hypothesis the sentences in (71) are ruled out because the nominal (-ib) that heads the oblique arc is coreferential to the final 1. The sentence in (74) is acceptable because the oblique arc is headed by li r-ixakil 'his wife', while the 1-arc is headed by li cuink 'the man'.

In sum, the COMA hypothesis together with the Oblique Law provide an explanation for the ungrammaticality of the sentences in (71). To account for this ungrammaticality under the NOMA hypothesis, an additional condition on coreference (75) is required. The Oblique Law argues for the necessity of MA to represent coreference. It is therefore an argument for the COMA hypothesis.

5.3 A Condition on Inanimate Nominals

The third argument that will distinguish a no multiattachment grammar (NOMA) from a multiattachment grammar (COMA) depends on a condition on inanimate nominals.

First, it should be noted that an inanimate nominal can head a final Abs arc. In (76a-c) the inanimate nominal heads a final Unerg arc. In (76d) the inanimate nominal heads a final DO arc.

(76)a. Li ik' na- $\emptyset$ -ec'an sa' x- yank li xak.
the wind tns-B3-rustles in its-between the leaves
'The wind rustles between the leaves.' (E&C,CQ.4)
b. Qui-Ø-sa li ha'.
   tns-B3-evaporate the water
   'The water evaporated.'  (H,D.291)

c. Li chok nequ-e'-nume' chi r-u choxa.
   the clouds tns-p-pass on its-face sky
   'The clouds pass by in front of the sky.'

d. X-Ø-in-c'am chak li ha'.
   tns-B3-A1-carry dir the water
   'I brought the water.'

However, an inanimate NP may not always head a final nuclear term arc. For instance, there are passive clauses in which the inanimate NP heads a final Cho-arc, but there are no corresponding active clauses in which the inanimate NP heads a final Erg arc. The tentative constraint proposed to account for this fact is stated as:

(77) An inanimate nominal cannot head a final Erg arc.

Some active-passive pairs are given in (78)-(80). The (a) examples are passive clauses. A passive 1-chomeur is introduced by the relational noun -ban. In the (b) examples it is shown that the inanimate NP may not be a final Erg.

In response to the question: 'How are your children?'
(78)a. Cau-eb ca'ajcu'i li mas ca'chin x-Ø-tau-e'
   strong-p but the most small tns-B3-find-pass
   chic x-ban ojb.
   again A3-by cough
   'They are strong, but the smallest one has been
   found again by the cough/has caught a cold again.'

b.* Cau-eb ca'ajcu'i li mas ca'chin x-Ø-x-tau
   tns-B3-A3-find

(79)a. Lix ka'al a'an li qui-Ø-pub -a -c
   ncl girl that who tns-B3-shot-pass-asp
   x-ban li cak.
   A3-by the lightning
   'That's the girl who was shot/hit by lightning.'
b. * Lix ka'al a'an li qui-Ø -x-puba li cak.
    tns-B3-A3-shoot the lightning
    ('That's the girl that the lightning shot/hit.')

(80)a. Qui-Ø -c'at-e' x-ban li cak li x-jolom.
    tns-B3-burn-pass A3-by the lightning the his-head
    'His head was burned by the lightning.' (B,S7.87)

b. * Qui-Ø -x- c'at li x-jolom li cak.
    tns-B3-A3-burn the his-head the lightning
    ('The lightning burned his head.')

The passive RN associated with (80a) is given in (81a)
and the RN for the corresponding transitive clause (80b)
is given in (81b).

(81)a.  

In accordance with the prediction in (77), the (b)
sentences are ungrammatical because the final 1 heads
an Erg arc.

The only way to express the (b) clauses in (78)-(80)
is to detransitivize them. Retreat is also possible.
Crucially, in the retreat clauses that follow, the
inanimate NP heads an initial Erg arc, but it does not
head a final Erg arc. The corresponding active transi-
tive counterpart of these clauses are ungrammatical.

(82)a. Li ninki xox x- Ø -camsi-n r-e.
    the big spot tns-B3-kill -R A3-Dat
    'It's smallpox that killed him.'

b. * Li ninki xox x- Ø -x- camsi.
    tns-B3-A3- kill
    ('Smallpox killed him.')

(83)a. Li hik qui-Ø -mich' -o- c r-e li
    the earthquake tns-B3-uproot -R-asp A3-Dat the
    che'.
    trees
    'It's the earthquake that uprooted the trees.'
b.* Li **hik** qui-Ø-x-mich' li che'.
the earthquake tns-B3-A3-uproot the trees
('The earthquake uprooted the trees.')

(84)a. Li **vacuna** qui-Ø-ban-o-c r-e lix *Mar_.
the vaccine tns-B3-cure-R-asp A3-Dat art *Maria
'It's the vaccine that cured Maria.'

b.* Qui-Ø-x-ban lix *Mar li **vacuna**.
tsns-B3-A3-cure art *Maria the vaccine
('The vaccine cured Maria.')

The RN associated with (82a) is given in (85a) and the RN associated with (82b) is given in (85b).

The inanimate nominals in the (a) sentences in (82)-(84) head an initial Erg arc and a final Abs arc in a Retreat clause. As mentioned earlier, the final subject of a Retreat clause must head a narrow overlay arc (see (40)). In contrast, the inanimate nominals in the (b) sentences head an initial Erg arc and a final Erg arc in a transitive clause.

Superficially, it appears to be the case that an inanimate NP cannot head a final Erg arc. However, as shown in (86)-(88) an inanimate NP can head a final Erg arc if it is subject of a 'reflexive' clause. These sentences are all finally transitive. The reflexive object controls third singular Set B agreement. The inanimate NP controls Set A agreement.

(86) X - Ø-e'x-toch' r-ib li ch'ich'.
tns-B3-pA3-hit A3-self the metal
'The cars collided/hit each other.' (H,D.328)
(Sp. 'Los carros se rozan.')

(87) Nequ-Ø-e'x-tiu r-ib li po ut li sak'e.
tsns-B3-p A3-eat A3-self the moon and the sun
'The moon and the sun eclipse/eat themselves.' (Sp.'la luna y el sol se comen mutuamente')(H,D.325)
Li ninki xox na- ꝝ-x- bon r-ib
the big spot tns-B3-A3-spread A3-self
'Smallpox spreads itself/is contagious.'
(Sp. translation offered by consultant: 'La viruela se contagiosa.') (E&C,NX.15)

Under the COMA grammar, the condition that accounts
for the nuclear term inanimate nominals in (76a-d), the
passive clauses in (78)-(80), the retreat clauses in
(82)-(84) and the 'reflexive' clauses in (86)-(88) fol-
lows from (89) and the notion of multiattachment.

(89) COMA Condition on Inanimate Nominals:
If an inanimate nominal heads a final nuclear term
arc, it must head an Abs arc.

Under the NOMA grammar, the 'reflexive' clause data
does not follow from (89) because there is no multiat-
tachment, therefore the inanimate subject would not head
an Abs arc in (86)-(88). The proposed condition for in-
animate nominals under the NOMA grammar is:

(90) NOMA Condition on Inanimate Nominals:(1st version)
An inanimate nominal may head a final Erg arc
only if it is coreferential with the DO.

It is argued that under the COMA hypothesis, the con-
straint on inanimate nominals is completely character-
ized by one generalization, namely (89). The NOMA gram-
mar would incorporate that statement, but in addition it
would require a separate statement allowing Ergative in-
animate nominals in a 'reflexive' clause. Crucially, the
NOMA grammar misses the generalization that nuclear term
inanimate NPs must head an Abs arc. The condition on in-
animate nominals therefore provides an argument in favor
of the COMA hypothesis.

5.3.1 Retroherent Unaccusative Clauses

We must explain why the clauses in (86)-(88) have re-
flexive morphology. That is, if we compare a sentence
like (88) 'smallpox is contagious' to a sentence like
'that's the dog that bit himself' (65), only in the
latter case is there a potential for distinct reference.
Yet, both sentences in K'ekchi are finally transitive
and have reflexive morphology.

Under the COMA grammar, the Unaccusative Hypothesis
together with the notion of multiattachment provide an
explanation for these facts. Under the NOMA grammar an
ad hoc constraint on reflexivization is required.

The Unaccusative Hypothesis (Perlmutter 1978) claims that there exist initial strata having a 2 and no 1. The advancement of the 2 to 1 from an intransitive stratum is known as Unaccusative advancement. This is exemplified in the RN in (91).

\[(91)\]

(92) is a typology of the types of plain and retro-(herent) 2-1 advancements (Perlmutter and Postal 1983) that occur in the world's languages.

(92) Typology of Plain and Retro 2-1 Advancements

Plain Passive \hspace{1cm} Retro Passive
Plain Unaccusative \hspace{1cm} Retro Unaccusative
Plain Impersonal Passive \hspace{1cm} Retro Impersonal Passive
Plain Imp Unaccusative \hspace{1cm} Retro Imp Unaccusative

For example, passive is the advancement of 2-1 from a transitive stratum. Alongside Plain Passive is Retro-herent Passive. This too, is the advancement of 2-1 from a transitive stratum, but the advancee retains the 2 relation in the arrival stratum, as in:

\[(93)a. \hspace{1cm} \text{Plain Passive} \hspace{1cm} \text{b. Retroherent Passive}\]

In (93a) the nominal \(a\) heads two parallel arcs - the 1-arc and the 2-arc - in different strata. In (93b) the nominal \(a\) heads two parallel arcs in the same stratum. It is this stratum which is taken to be the condition for 'reflexivization', thus accounting for the reflexive morphology associated with constructions of this type. Distinct from reflexive structures discussed so far, the 1:2 MA stratum in retroherent advancements is non-initial. Furthermore, retro MA doesn't involve coreference.

Unaccusative advancement is the advancement of 2-1 from an intransitive stratum, as in (91). And alongside
plain Unaccusative advancement is Retroherent Unaccusative. This is the advancement of 2-1 from an intransitive stratum, and the advancee retains the 2 relation in the arrival stratum. An example from Italian (Rosen 1981) is exemplary.

(94)a. La catena si è rotta. 
'b. The chain broke.'

The subnetwork of (94b) is associated with (94a). Both Perlmutter (to appear) and Rosen (1981) provide several arguments for the initial unaccusativity of these clauses. In particular, the choice of the auxiliary essere follows from an analysis which requires a 1:2 multiattachment. It should also be noted that the verb carries with it the reflexive clitic si. Reflexive morphology is not associated with Plain Unaccusative, as evidenced in (95a) below.

(95)a. La nave è affondata. 
'b. The ship sank.'

While retroherent advancement clauses have reflexive morphology, they genuinely lack the semantics of a reflexive clause. This is also evidenced in the Russian example in (96). s' is an allomorph of sja and occurs in retroherent unaccusative clauses.

(96)a. On zastrelilsja. 
'b. He shot himself.'

b. Moja rucka slomalas'. 'My pen broke.' (Rosen: 1981)

The retroherent Unaccusative clauses in Italian (94) and Russian (96) involve multiattachment, but do not involve coreference. This same observation is relevant to K'ekchi and will help provide an account of the reflexive morphology in (86)-(88). In particular, the structure associated with (86) is represented in the relational network in (97).
In (97) there is an initial unaccusative stratum. The 2 advances to 1 by retroherent unaccusative advancement. At the $c_2$ level there is a 1:2 MA stratum. As in the resolution of other MA strata, MA is resolved by 2 birth and the birth arc assumes the lower of the R-signs in the MA stratum. Thus, the reflexive noun rib heads a final 2 (birth) arc.

Under the COMA hypothesis, the fact that an inanimate nominal may head a final Erg arc follows from the fact that it heads an Abs arc in a non-initial 1:2 MA stratum. The constraint proposed in (89) captures this generalization.

Under the NOMA hypothesis, the condition in (90) claims that an inanimate NP can head a final Erg arc only if it is coreferential to the DO. Crucially, in retroherent unaccusative clauses the final 1 and 2 are not coreferential. To account for the sentences in (86)-(88) under this approach, an ad hoc constraint on reflexivization would be required. Given a definition of 'reflexivization' as in (98) below, the inanimate nominal condition (90) can be revised accordingly.

(98) **NOMA Condition on Reflexivization:**
A clause $c$ is a "reflexive" clause if -ib heads a final 2-arc in clause $c$.

(99) **NOMA Condition on Inanimate Nominals:**
An inanimate nominal can head a final Erg arc only if it is subject of a "reflexive" clause.

It should be noted that even with the revised version of the inanimate nominal condition in (99) and the condition on reflexivization (98), the NOMA hypothesis still misses the generalization that nuclear term inanimate nominals must head an Abs arc. And it is precisely that fact which unifies inanimate NPs heading final 1- arcs in intransitive clauses, 2-arcs in transitive clauses, and Erg arcs in retroherent unaccusative clauses as a class. This is an argument against the NOMA hypothesis. It is therefore an argument for the COMA hypothesis.
5.3.2 Inanimate Extraction

In this section it will be shown that an inanimate nominal heading a final Erg arc in a retroherent unaccusative clause may bear a narrow overlay relation. It is argued that this follows from the same constraint that governs nuclear term extraction elsewhere in the language, under the COMA hypothesis. The NOMA hypothesis, on the other hand, would require a separate statement allowing inanimate nominal extraction in a 'reflexive' clause, missing the generalization that nuclear term extractees must head an Abs arc. Again, this is an argument against the NOMA hypothesis. It is therefore an argument for the COMA hypothesis.

As is shown in (100) and (101) below, an inanimate nominal heading a final Erg arc can bear a narrow overlay relation.

(100) Lï ninki xox a'an jun yajel na- 0- x-bon 
the big spot that one sickness tns-B3-A3-spread

r- ib.
A3-self

(E&C,NX.26)

'That smallpox is a sickness that spreads itself/
is contagious.'

(101) Ha' eb li ch'ich' x- 0 -e'x-toch' r- ib.

emph p the metal tns-B3-pA3-hit A3-self

'Those are the cars that crashed/hit each other.'

The relational network associated with (101) is represented in (102). Under the COMA hypothesis, the fact that the inanimate nominal can bear a narrow overlay relation follows from Constraint I ( § 5.1 ), repeated below, and the notion of multiattachment.

(102)

(I) COMA Condition on Nuclear Term Extraction:
If a nominal heads a final nuclear term arc in a clause c and it also heads a narrow overlay arc, it must head an Abs arc.
Since the inanimate nominal heads an Abs arc in the non-initial 1:2 MA stratum in (102), the condition for nuclear term extraction is met.

According to the NOMA hypothesis, a nominal heading a final Erg arc may extract only if it is coreferential with the DO (Constraint II, § 5.1). In retroherent unaccusative clauses the final 1 and 2 are not coreferential. Thus, to account for these clauses under the NOMA hypothesis, a revised version of the Ergative Extraction Constraint given in (103) below, together with the constraint on 'reflexivization' given in (99) above would be required.

(103) NOMA Condition on Ergative Extraction:
A nominal heading a final Erg arc can head a narrow overlay arc only if it is subject of a 'reflexive' clause.

Under the NOMA grammar however, there is no explanation for why Ergatives cannot extract in 'non-reflexive' clauses or for why inanimate nominals cannot head a final Erg arc in 'non-reflexive' clauses. Furthermore, there is no explanation for why 'reflexive' clauses are exceptional in both cases. Under the COMA grammar there is an explanation: it's a special property of nuclear term extractees and inanimate nominals that restricts them to heading an Abs arc. In particular, these nominals head an Abs arc in reflexive and retroherent unaccusative clauses, but do not head an Abs arc in non-reflexive clauses.

Summing up: Under the COMA hypothesis, multiattachment together with the unaccusative hypothesis provide an account for the reflexive morphology without coreference. The inanimate nominal argument provides additional evidence for multiattachment and coreference as independent notions. As exemplified by retroherent unaccusative clauses, not all instances of MA involve coreference. It was shown that the key to understanding the reflexive morphology in (86)-(88) and (101)-(102) followed from the claim that these clauses involve a non-initial 1:2 MA stratum.

It was also argued that given the notion of MA, two generalizations about K'ekchi syntax could be made explicit. First, nuclear term extractees must head an Abs
Second, nuclear term inanimate nominals must head an Abs arc. A grammar without the notion of MA (i.e. the NOMA) was unable to capture either of these generalizations and in addition, required ad hoc constraints on coreference (72) and 'reflexivization' (98).

Given an RG framework which posits GRs at multiple levels of structure, transitive subjects of reflexive and retroherent clauses fit into a class with intransitive subjects and DOs because they all head an Abs arc.

Crucially, the transitive subject of a reflexive clause heads an Abs arc in an initial 1:2 MA stratum and the transitive subject of a retroherent unaccusative clause heads an Abs arc in a non-initial 1:2 MA stratum, and both behave like Absolutives with respect to extraction and the inanimate nominal condition.

Thus, a grammar that does not represent grammatical relations at multiple levels of structure will not be able to capture the generalization about K'ekchi nuclear term extraction or K'ekchi nuclear term inanimate NPs.

6. Evidence for MA in Other Mayan Languages

It is interesting to note that other Mayan languages support the COMA nuclear term extraction constraint (not fully—because of language particular differences) that a nuclear term may be Q, Foc, or Rel if it heads an Abs arc. For instance, it is well known that the majority of Mayan languages impose a special constraint on the extraction of Ergatives, i.e. to question, focus, or relativize an Erg, the clause must be detransitivized. This (detransitivized) construction is typically described as (agentive) antipassive (Smith-Stark 1976). Because of this observation (by Smith-Stark) in so many Mayan languages (Tzotzil, Jacalteca, Mam, Aguacatec, Ixil, Quiche, Pocomchi, Pocomam, K'ekchi, and Uspantec), it was (generally) assumed that a final Erg could not extract in Mayan. As evidenced in K'ekchi however, a final Erg can extract if it is the subject of a reflexive clause. Assuming the notion of multiattachment is relevant to the description of other Mayan languages, we should expect to find other instances of Ergative extraction in reflexive clauses in Mayan. And there are.
6.1 Nuclear Term Extraction

In Quiche, the construction described as the 'agentive antipassive' is used to question, focus, or relativize the Erg. As a consequence, the initial Erg is a final Absolutive, and the initial DO is a final DO chomeur. The verbal reflex of this operation is -ow with root transitive verbs, or -m with derived transitive verbs. A third person DO chomeur is not marked. The focused nominal must occur in the immediate preverbal position, as in (104) and (105).

(104) (Aree) lee achih x- Ø- ch'ay- ow lee ikoq. it is the man tns-B3-hit -AP the woman 'It was the man who hit the woman.' (Mondloch:1978)

(105) Jachin x- Ø- cuna- m lee yawaab? who tns-B3- cure-AP the sick 'Who was the one who cured the sick one?' (M.1978)

The clauses in (104) and (105) are finally intransitive. This is evidenced by the fact that there is only one person marker in the verbal complex, and it is a Set B marker.

In Quiche, an Erg may not normally be questioned in a transitive clause, as (106) illustrates.

(106)a. Jachin x -Ø -u-ch'ay lee ixoq? who compl-B3-A3-hit the woman 'Who did the woman hit?' (Norman:1979)

(106b) b. Jachin x -Ø- ch'ay- ow lee ixoq? who compl-B3- hit -AP the woman 'Who hit the woman?'

As evidenced by the verbal agreement, (106a) is a finally transitive clause and (106b) is a finally intransitive (antipassive) clause. According to Norman, to question the initial Erg unambiguously (106b) must be used, i.e. the initial Erg must head a final Abs arc. As exemplified in (107), however, a nominal heading a final Erg arc may be questioned in a reflexive clause.
(107) Jachin x - Ø - ki - jach k-iib?
who tns-B3-A3p-separate A3p-self
'Who got divorced?'
(lit.'Who separated themselves?') (Norman:1979)

In Quiche, as in K'ekchi, the reflexive noun is based on the same relational noun stem -iib 'self' and it controls third singular Set B agreement. Set A agreement is controlled by the final Erg jachin 'who'. If we assume that the relational network for (107) is (108), then the fact that jachin may be Q in a reflexive clause follows from the same constraint which governed nuclear term extraction in K'ekchi.

(108)

Quiche further supports an analysis positing clause internal MA when we consider retro unaccusative clauses. For example, the sentence in (109) is associated with the RN in (110).

(109) Lee b'atz' x - Ø - u -patzu'ya-j r -iib.
the thread tns -B3-A3- tangle -enc A3-self
'The thread got tangled.'
(lit.'The thread tangled itself.') (Norman:1979)

(110)

As in K'ekchi, the clause in (109) is initially unaccusative and finally transitive.

In Jacalteca, a Mayan language of the Kanjobalan subgroup, Craig (1977) points out that Ergatives may not normally be Q, Foc, or Rel. Rather, a detransitivized construction which she describes as "Erg deletion and -n(i) suffixation" is required. (The -n(i) suffix is cognate with Antipassive morphology in many Mayan languages; see Smith-Stark 1976 for discussion.) Craig views this process as a "disambiguation mechanism" i.e.
to distinguish the unmarked subject and object in constructions involving movement or deletion of one of them. The intuition behind the disambiguation theory is that deletion of the Erg case marker with -n(i) suffixation allows the (initial) Erg (final Abs) to be Q, Foc, or Rel unambiguously, since it can not be Q, Foc, or Rel in a transitive clause. That is, listeners must interpret the unmarked proposed NP in -n(i) clauses as the subject, and the unmarked proposed NP in transitive clauses as the object. In (111) below, the DO is focus (111a), Q (111b), and Rel (111c).

(111)a. Ha' ix x - Ø - y - 'il naj.
cleft cl/her asp-B3-A3-see cl/he
'It is her that he saw.' (Craig:1977)

b. Mac x - Ø - y - 'il naj?
whom asp-B3-A3-see cl/he
'Whom did he see?'

c. W-ohtaj ix x- Ø - y - 'il naj.
A1-know cl/her asp-B3-A3-see cl/he
'I know the woman that he saw.'

A nominal heading a final Erg arc may not (ordinarily) be Q, Foc, or Rel. Thus, the -ni construction is required if a nominal heading an initial Erg arc is to be focused, questioned, or relativized.

(112)a. Ha' naj x - Ø - 'il - ni ix.
cleft cl/her asp-B3-see-suff cl/her
'It is he that she saw.' (Craig:1977)

b. Mac x - Ø - 'il - ni ix?
who asp-B3-see-suff cl/her
'Who saw her?'

c. W-ohtaj naj x - Ø - 'il - ni ix.
A1-know cl/him asp-B3-see-suff cl/her
'I know the man that she saw.'

In (112), but not in (111), -ni occurs suffixed to the verb. If -ni is not suffixed to the verb (and the subject and DO are both third singular), the proposed NP will not be interpreted as the subject of the clause.

Craig notes an exception to the disambiguation mechanism. Namely, an Erg can be Foc, Q, or Rel in a reflexive clause. The reflexive relational noun stem is -ba. As in K'ekchi, it controls third singular Set B agreement in
the verb. 25

(113)a. Ha' naj x -Ø- s -potx' s- ba.
cleft cl/he asp-B3- A3-kill A3-refl
'It is he who killed himself.' (Craig:1977)

b. Mac x -Ø- s -potx' s- ba?
who asp-B3- A3- kill A3-refl
'Who killed himself?'

c. W- ohtaj naj x -Ø- s - potx' s-ba.
A1- know cl/him asp-B3-A3-kill A3-refl
'I know the man who killed himself.'

Both Quiche and Jacaltec provide support for the multi-
attachment analysis and the Constraint proposed under
the COMA hypothesis for nuclear term extraction. Even
though Constraint I was proposed as a constraint partic-
tular to the grammar of K'ekchi, we have seen that it is
able to capture several generalizations which are shared
by the majority of Mayan languages: 1) Ergs are distinct
from Absolutives in their ability to extract, 2) an Erg
must be multiattached to a 2 to be Q, Foc, or Rel, i.e.
it must head an Abs arc, and 3) there is evidence for
clause-internal multiattachment in Mayan. This was evi-
denced in reflexive clauses with reference to nuclear
term extraction, and inanimate nominals.

NOTES

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In addition, I would like to thank Francis Echius and
Ruth Carlson who have provided me with numerous K'ekchi
texts and insights into the language.

1. This is not an optimal statement. These notions
can be made more precise in terms of the 'erase' rela-
tion between arcs introduced by Johnson and Postal
(1980).

2. Explicit arguments for the distinction between
final and surface level are found in Berinstein (to ap-
ppear).
3. K'ekchi is a Mayan language of the Quichean subgroup and is spoken in Guatemala by approximately 210,000 people.

The alphabet chosen to represent the phonemes of K'ekchi is that which has been authorized by the Ministry of Education through the Instituto Indigenista Nacional. This orthography represents [k] with k (or qu if it precedes the vowel i or e), [g] with k, [x] with j, and [ç] with ch. If ' follows a vowel it represents [?], however, if ' follows a consonant it represents a glottalized consonant. There is a ten vowel system /a, e, i, o, u/ and /a', e', i', o', u'/ where an underline signifies length.

Abbreviations which appear in the K'ekchi glosses include: tens - tense, ncl - noun classifier, art - article, emph - emphatic, prf - particle, neg - negative, asp - aspect, q - question, opt - optative, fut - future, nom - nominalization, p - plural, prep - preposition, pass - passive, AP - anti-passive, R - retreat, dir - directional, Ben - Benefactive, Abl - Ablative, Loc - Locative, Dat - dative, pro - pronoun, A1, A2, A3 - 1st, 2nd, 3rd person etc., B1, B2, B3 - Absolute 1st, 2nd person etc.

Abbreviations which appear in the references to the examples are in the form: (author, ref. page) and include: E&C - Francis Eachus and Ruth Carlson, H - Haeserijn, Ba - Marlys Bacon, Gr - grammar, G - Guña, and D - dictionary. Unmarked examples are based on my fieldwork. Language consultants were Adelina Ac and Carlota Yalibat. Other examples are based on eighteen unpublished stories that I collected. These are cited by story number and line. Thus, the example corresponding to (B, S2.18) occurs on the 18th line of the 2nd story.

Most of the stories cited in the E&C references may be found in Eachus and Carlson (1971), however some are unpublished. Finally, Gr refers to two sources: Haeserijn's (1966) grammar and Eachus and Carlson's (1980) pedagogical grammar.

4. The Set A affixes have another function: They are used in expressions of possession and prefix to the possessed noun to indicate the person (1st, 2nd, 3rd) and number (1st, 2nd) of the possessor, as in:

(1) a. ka - tz'i' (lao)
    Alp - dog 1p pro
      ________________
    'our dog'
(1)b. li x-punit laj Lu'  
    the A3-hat ncl Lu'  
    'Pedro's hat' (lit. 'his-hat Pedro')

c. li r-ak - eb  
    the A3-pig -p  
    'their pig'

Third plural number is cross-referenced independently by  
the plural morpheme eb/e' (Berinstein 1981).

It should also be noted that there are two sets of  
Set A affixes. One set is immediately prefixed to (verb  
or noun) stems which are consonant initial, and the other  
set is prefixed to stems which are vowel initial.  
(Vowel initial stems result from initial glottal stop  
deletion.) The Set A and B forms are listed in Table 1.

Table I: The Set A and B affixes (Berinstein 1981)

<table>
<thead>
<tr>
<th>Set A</th>
<th>Set B</th>
</tr>
</thead>
<tbody>
<tr>
<td>/C</td>
<td>/V</td>
</tr>
<tr>
<td>Person 1s</td>
<td>Cui/incu</td>
</tr>
<tr>
<td>2s</td>
<td>a</td>
</tr>
<tr>
<td>3s</td>
<td>x</td>
</tr>
<tr>
<td>1p</td>
<td>ka</td>
</tr>
<tr>
<td>2p</td>
<td>e</td>
</tr>
<tr>
<td>Number 3p</td>
<td></td>
</tr>
</tbody>
</table>

5. In Berinstein (to appear) it is argued that 1)  
cui' marks the extraction of nominals heading an initial  
Instrument or Loc arc and a narrow overlay (Q, Foc, or  
Rel) arc, 2) the position of a nominal heading a narrow  
overlay arc is immediate preverbal, and 3) the position  
of a nominal heading a Topic arc is clause-initial.

6. Another negative form macua' 'it isn't' can also  
illustrate this point.

7. In (32a) laat 'you' heads a final Abs arc and is  
cross-referenced by the second singular Set B affix. The  
Set B forms prefix in (verbal) constructions with an o- 
vert tense prefix, and suffix elsewhere, as in:

(1)a. ixl - at  
    woman-B2  
    'You are a woman.'
(1)b. \textit{X - at -t'ane' tns-B2 -fall}
'You fell down.'

The auxiliary \textit{yo} does not occur with a tense prefix, therefore the Set B form \textit{at} is suffixed in (32a).

8. 2-3 Retreat has also been attested in Turkish (Ozkaragoz 1982), French (Postal 1981), Choctaw (Davies 1982), Yukulta and Nyamal (Klokeid 1978).

9. The Case Marking Rule will have to be revised when constructions involving 2-chomeurs are considered.

10. The verbal reflex \textit{-o, -n} which occurs in Retreat clauses also occurs in Antipassive clauses. The rule presented in (47) is applicable to both (see Berinstein to appear for discussion). The rule in (40) however, distinguishes between Retreat subjects and AP subjects. This is because, as the rule states, the subject must bear a narrow overlay relation if the initial DO is the final IO of the clause. In AP clauses, the initial DO is a final 2-chomeur. Therefore, AP subjects do not have to bear a narrow overlay relation.

Evidence for the initial transitivity of Retreat clauses is presented in Berinstein (to appear). Arguments that the initial DO is a final IO are based on a) pronominal dependents, b) reflexivization, and c) word order. Arguments that the initial IO is a final IO Chomeur are based on a) IO word order, b) IO topicalization, and c) questioning non-nuclear terms. Finally, arguments that the initial Erg is a final Abs are based on a) its ability to extract, and b) a constraint on inanimate nominals. These last two arguments interact with the claims of the present paper and will be discussed in subsequent sections.

11. It should be noted that the subject of an Antipassive (AP) clause may bear a narrow overlay relation for this same reason (i.e. it heads a final Abs arc). Final subjects in Retreat and AP clauses are distinguished because the final subject in a Retreat clause must bear a narrow overlay relation (see (40)), while the final subject in an AP clause may bear a narrow overlay relation. What Retreat and AP subjects have in common is the fact that neither can bear a narrow overlap relation in the corresponding transitive clause.

12. There is one exception to this. Some speakers allow an Erg to bear the Rel relation in a restricted
environment. For those speakers who allow this optional variance, an additional constraint with the following effect would be required:

1. A final Erg may head a Rel arc in a clause if it is 3rd person and the final 2 of clause is not 3rd person.

13. I have innovated a convention for the representation of multiattachment. A 1-(coreferential) 2 is 1:2, similarly, a 1-(coreferential) 3 is 1:3, a 1-(coreferential) Benefactive is 1:Ben, and so on.

14. It is not clear that (61) is a linguistic universal. (61) is the underlying assumption that led Perlmutter (to appear) and Perlmutter and Postal (1983) to their proposal of 'pronoun birth', which will be discussed below.

15. It should be noted that the Union Law has since been shown not to be a universal. It is one of three possibilities.

16. In Mayan languages, the reflexive object is a possessed noun stem. It is not a pronoun. It would be more accurate to say that Tzotzil does not require (reflexive) 'noun birth', however, I have used the term 'pronoun birth' since that is what has been established in the literature (Perlmutter to appear, Rosen 1981).

17. A recent proposal by Rosen (to appear) is a viable alternative to pronoun birth. She argues that grammars must make special reference to the situation where a realization rule (e.g. linearization, case marking, verb agreement etc.) encounters a cross-clausal MA and that two possibilities need to be recognized: double realization (DR) and single realization (SR). A morphological rule using the DR option takes into account all arcs belonging to the MA, both upstairs and downstairs. A morphological rule using the SR option takes into account the upstairs arcs only, and ignores the downstairs arcs. One consequence of this account is that the finiteness or non-finiteness of complements can follow from universal principles. For instance, a language in which equi constructions are DR will have a finite complement. Whereas, a language in which equi constructions are SR will have a non-finite complement. In the resulting typology, Rosen shows that no predicted type remains unattested: Ascensions may be DR (Greek) or SR (English), while Unions may be DR (Tzotzil) or SR (Romance), thus
providing a formal correlate to the traditional 'finite/nonfinite' distinction in complements.

The 'realization' hypothesis can be generalized to clause-internal MAs, as well. If for example, all of the arcs must be realized in a reflexive 1:2 MA the final stratum will be predictably transitive. The realization hypothesis therefore also provides a formal correlate to the 'transitive/intransitive' distinction in reflexive clauses.

If Rosen's 'realization' proposal is adopted for resolution of reflexive MA, K'ekchi would require a rule with the following effect:

(A) If a nominal a heads a 1-arc and a 2-arc with the same tail at the final level, then the 2 is realized as -ib.

Therefore, it should be noted that if the reflexive nominal -ib is attributed to DR instead of pronoun birth, the generalization governing nuclear term extraction (55) would remain the same. That is, both pronoun birth and DR provide evidence for MA. It is another question, as to whether or not -ib should be attributed to pronoun birth or DR, and the reflexive data in K'ekchi alone is not sufficient to decide between these two hypotheses. However, attempts will be made to point out differences and/or similarities between pronoun birth and DR, whenever possible. In this regard, it should be noted that acceptance of the realization hypothesis does invalidate the constraint in (61). This however, is no great loss. (61) is atypically one-sided. It says that clause-internal MAs must be resolved. It says nothing about cross-clausal MAs. Presumably, this is because a nominal may head 2 (or more) overlapping arcs at final level. If this is so, there is no apriori reason that a nominal cannot head 2 (or more) parallel arcs at final level.

18. In footnote 12 it was noted that some speakers allow a final Erg to bear the Rel relation in a restricted environment. Therefore, it should be pointed out that the constraint proposed in footnote 12 would be required for those speakers under both the NOMA and COMA grammars and hence cancels itself out as an argument for or against either of these hypotheses.

19. Two points should be noted: First, if a language attributes its reflexive morphology to DR (see footnote
17) rather than to pronoun birth, the Oblique Law would not provide an argument for MA. Second, if a language resolves its MA via pronoun birth, then the Oblique Law together with the notion of MA make the prediction that a MA of the form 1:Obl will be ill-formed in that language, as in K'ekchi.

Thus, if a language makes a distinction between reflexive structures that do and do not involve MA, and MAs are resolved by pronoun birth, one would predict that the reflexive structure that does not involve MA would be required for the representation of oblique reflexives in that language. Therefore, it should be noted that while Italian does not have pronoun birth, it does have two types of reflexives and as argued by Rosen (1981), the se stesso reflexive does not involve MA, but the si reflexive does. Furthermore, she argues that oblique reflexives in Italian are restricted to the se stesso type.

20. In Jacaltec, as in K'ekchi, an inanimate nominal may not normally head a final Erg arc. Craig (1977) reports the following intransitive clauses (1a), (2a), with no active transitive counterpart.

(1a). xpehi te' pulта yu cake.
    close cl/the door by wind
    'The door was closed by wind.'

(1b.* speba cake te' pulта
    close wind cl/the door
    ('The wind closed the door.')

(2a). chin xiw yu sc'ejalholo
    I am scared by dark
    'I am scared by dark.'

b.* chin xibte sc'ejalholo
    me it scares dark
    ('The dark scares me.')</n
The inanimate nominal in (1a) and (2a) occurs as the oblique possessor of the instrumental relational noun stem -у; it may not occur as the final Erg, even though the verbs in these clauses may be finally transitive, as evidenced in (3), below.

(3a). speba naj te' pulта
    close cl/he cl/the door
    'He closed the door.'
b. chin haxibte an
    me you scare 1p
  'You scare me.'

21. There is a growing literature on unaccusative advancement and the unaccusative hypothesis. Some of the languages that have been attested as having initially unaccusative clauses include Albanian (Hubbard 1979), Choctaw (Davies 1981), Lakhota (Williamson 1979), Turkish (Özkaragöz 1980), Cebuano (Bell 1982), Georgian (Harris 1982), Italian (Rosen 1982), and Halkomelem (Gerdt 1981).

22. The term 'retroherent' was introduced by Rosen (1981) as a cover term for constructions which were previously described as 'reflexive passive', 'reflexive unaccusative', and 'reflexive impersonal passive' in Perlmutter (1978) and Perlmutter and Postal (1983).

23. No one has explicitly argued that the Russian examples in (96) are retroherent unaccusatives.

24. The analysis for retroherent unaccusative advancement proposed for K'ekchi differs from the run-of-the-mill retroherent unaccusative clause (see footnote 21). In K'ekchi the initial level is unaccusative, however, the final level is transitive. In the languages discussed earlier, the final level of the retro clause was intransitive. This raises an interesting question about the notion of 'cancellation' and 'birth'. For instance, we have seen that there are initially transitive clauses which involve a 1:2 MA and 2 cancellation. In this case, the final stratum is intransitive (as in French and Halkomelem reflexives). There are also initially transitive clauses which involve a 1:2 MA and 2 birth. In this case, the final stratum is transitive (as in K'ekchi reflexives). Thus, the resolution of an initial 1:2 MA stratum by cancellation results in final intransitivity, while resolution by birth results in final transitivity.

I am claiming that an analogous situation occurs in retroherent unaccusative clauses. If the non-initial 1:2 MA is resolved by cancellation, the result is a finally intransitive clause (as in Italian retro unaccusative clauses). If the 1:2 MA is resolved by birth, the result is a finally transitive clause (as in K'ekchi retro unaccusative clauses).
The point is that irrespective of the initial (in)-transitivity of the clause, if a 1:2 MA stratum (initial or non-initial) is resolved by cancellation, the final level will be intransitive, and if it's resolved by birth (or double realization, see footnote 17), the final level will be transitive.

25. The -ni construction in Jacaltec is not a 'bona fide' antipassive construction. Craig analyzes these constructions as finally transitive (1980). Aissen (1980) describes them as morphologically intransitive, but with syntactic transitivity. The problem is this: although the verb lacks a Set A affix, under certain conditions the Set B affix may agree with the initial DO. Although the agreement in the -ni construction is somewhat complicated, the point is that in reflexive clauses (where the agreement is 'regular') a nominal heading a final Erg arc can bear a narrow overlay relation when otherwise in order to do so, some special morphology is required. The fact that the Erg may bear a narrow overlay arc in reflexive clauses follows from an analysis that posits clause-internal MA in Jacaltec reflexives.

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JAPANESE CONSTRUCTIONS MARKED BY -RARE*

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1. Introduction

The literature on Japanese syntax has traditionally described two types of "passive" constructions.\(^1\) In fact there are three. One is very much like the passive in English and many other languages and thus has not been a center of controversy. This so-called "plain passive" can be easily related to active constructions. The direct object of the active sentence, marked by the postposition o, corresponds to the subject of the passive, which is marked by ga. The subject of the active sentence, also marked by ga, corresponds to the nominal which is marked ni in the passive. The passive verb takes the suffix rare. (1) illustrates these properties of Japanese active-passive pairs.

(1) a. John ga Mary o butta.
    John-NOM Mary-ACC hit-PAST\(^2\)
    'John hit Mary.'

b. Mary ga John ni butareta.
    Mary-NOM John-DAT hit-RARE-PAST
    'Mary was hit by John.'\(^3,4\)

It is also possible in Japanese to turn an active sentence into what looks like a passive by converting the indirect object to the subject, marking the old subject ni, and adding the rare suffix to the verb as in (2).

(2) a. Sinpankan ga Taroo ni syoo o ataeeta.
    Judges-NOM Taroo-DAT prize-ACC award-PAST
    'The judges awarded the prize to Taroo.'

b. Taroo ga sinpankan ni syoo o ataesareta.
    Taroo-NOM judges-DAT prize-ACC award-RARE-PAST
    'Taroo was awarded the prize by the judges.'

The above "passivization" of the indirect object is usually either ignored or treated as a special case of the "plain passive". This is easy for speakers of English because on the surface this construction looks just like the English construction illustrated in the gloss to (2b). However, the Japanese construction of (2) is in fact different both from the "plain passive" and from the English "indirect object passive." This matter will be discussed in Section 4.
The last construction I will consider often goes by the name of "adversity passive". This construction requires careful explanation for English speakers, since it is not obviously parallel to any English construction. Some of its outstanding characteristics are the following:

(3) The "passivized" verb may have a direct object.

(4) Intransitive verbs may enter into this construction.

(5) There may be no synonymous active sentence containing the same lexical items.

(6) There is usually a connotation of an unpleasant effect on the party denoted by the final subject.

This construction is exemplified in (7) and (8):

(7) Hisyo wa iya na kyaku ni zimusyo de secretary-TOP unpleasant guest-DAT office-LOC syatyoo o matareta. company head-ACC wait-RARE-PAST 'The secretary had an unpleasant guest wait in the office for the company head.'

(8) Haha ga kodomo ni ano sumi de asobareta. Mother-NOM children-DAT that corner-LOC play-RARE-PAST 'The mother had her children play in that corner.'

In this paper I will refer to all of these three constructions as "rare constructions", reserving the term "passive" to be used in the technical sense proposed in Perlmutter and Postal (1977). The "plain passive" thus becomes the "type A rare construction", the "indirect object passive" becomes the "type B rare construction", and the "adversity passive" becomes the "type C rare construction".

I will begin by discussing earlier attempts at analysis of rare constructions, showing that the argumentation used in their support rests on a faulty assumption. I accept the notion that there are two distinct "subjects" associated with rare constructions, but I maintain that these are not the subjects of distinct clauses, as had been assumed. My analysis employs the theory of relational grammar (RG), which permits "revaluations" such that a single clause can have multiple subjects, provided that there is only one subject in each "stratum" of the relational network.

Arguments for the existence of two subjects in rare clauses
are not sufficient to decide between my analysis and earlier work. They may be taken to support any of several conflicting analyses. What I believe is decisive evidence comes from the interaction of my analysis with two important ideas in RG theory: the Unaccusative Hypothesis and the 1-Advancement Exclusiveness Law. These general principles of linguistic theory interact with my analysis to predict correctly that certain classes of verbs cannot occur in rare clauses although there is no obvious semantic or pragmatic reason for them not to do so. No other treatment of rare constructions has provided a unified, principled account of this phenomenon. Indeed, earlier writers seem to have been almost completely unaware of this problem.

Sections 3 and 4 discuss the type A and B rare constructions, respectively. Section 5 discusses type C clauses and presents the analysis of rare constructions in its most general form. Section 6 explores the implications of the analysis in ruling out various ungrammatical constructions.

2. Previous Analyses.

Writers on Japanese syntax have debated at length just how similar the analyses of the different rare constructions should be. The principal point of agreement is the structure adopted for the "adversity passive". Different authors either make the "plain passive" more like the "adversity passive" or try to explain why such an approach is wrong. I will examine the sorts of structures proposed for the "adversity passive", as these illustrate most generally the point I wish to make.

A typical structure is proposed in McCawley (1972). This is illustrated in (9).

(9)

```
  S_1
   /\     \
  /   \   /
 NP   NP V
   |     |
  S_2 X   "AFFECT"
```

S_2 is an ordinary active sentence like ame ga huru 'rain falls', and X is the person affected by the action expressed by S_2. (9) would underlie sentences like (10), derived via several transformations and some simple morphological rules.
(10) John ga ame ni hurareta.
    John-NOM rain-DAT fall-RARE-PAST
    'John was rained on.'

Sasaki (1974) presents a similar analysis, shown in (11), in the framework of case grammar.

(11)

Sasaki's treatment differs from McCawley's in treating "rare" as a verb and in the order of its constituents, but these differences are unimportant to the point at hand. This is simply that analyses such as these provide no non-ad hoc way to restrict the class of verbs which can appear under the lower S node.

One other analysis which bears mentioning is that of Otsuka (1980), which is a translation of the basic idea used by McCawley and Sasaki into RG notation. This is illustrated in (12) (Otsuka's (17)):

(12)

Syatyoo_i wa okusan_j ni zibun_i,j no zaisan subete o President_i-TOP wife_j-DAT self_i,j -GEN property all-ACC motidasareta.
    take out-RARE-PAST
    'The president_i was affected by his wife's_j taking out all of self's_i,j property.'
In this RN, the embedded clause is initially the 1 of a predicate rare 'befall'. The downstairs 1 okusan 'wife' ascends, assuming the role of upstairs 1 in accordance with the Relational Succession Law, (Perlmutter and Postal, 1983) and putting the downstairs clause en chômage. In the next stratum the upstairs 2 syatyo 'president' advances to 1 putting okusan en chômage. There is clause union in the final stratum. This ferocious-looking RN follows quite plausibly from the assumption that "adversity passives" consist of two clauses. Let us now examine the justification for this assumption.

What is the motivation for the biclusal analysis? I have found no convincing argument for it anywhere in the literature. Most writers refer back to Kuroda (1965) as the authority for this position, but nowhere in this work does Kuroda justify a biclusal analysis for passives. He merely assumes one as a convenient way to discuss the question of reflexivization constraints in Japanese.

Howard and Miyekawa-Howard (1976) offer two arguments for the biclusal analysis, but they both fall through for a single reason. The first of these arguments is taken from Makino (1972). The point of the argument is that certain manner adverbials can be ambiguous in the passive. In a sentence like (13b), the adverb iyaiya 'unwillingly' can be taken to mean either that Taroo was unwilling to invite Hanako or that she was unwilling to be invited by him. This ambiguity is not present in (13a), which can only mean that Taroo was unwilling (Makino 1972):

(13) a. Taroo wa Hanako o iyaiya syootai-sita
   Taroo-TOP Hanako-ACC unwillingly invite-PAST
   'Taroo unwillingly invited Hanako.'

b. Hanako wa Taroo ni iyaiya syootai-sareta.
   Hanako-TOP Taroo-DAT unwillingly invite-RARE-PAST
   'Hanako was unwillingly invited by Taroo.'

The ambiguity of iyaiya in (13b) is explained by claiming that the adverb can be dependent on either S node in the structure in (14).
But this is not the only reasonable explanation. The ambiguity of *iyaiya* can be easily explained by allowing manner adverbials to be interpreted as referring to the attitude of the person denoted by a "nominal heading a 1-arc." This condition does not specify the stratum at which the 1 relation holds, so that both nominals in (15) would be eligible to control the adverb.

Makino's argument thus does not prove the necessity of a biclausal analysis, but it is evidence for the existence of two strata in rare clauses. As formulated above, the condition on control of manner adverbials provides a test for 1-hood at any stratum. This test shows that in the structure associated with (13b), there is a level at which the nominal marked *ni* in the surface structure bears the 1 relation.

Howard and Niyekawa-Howard's second argument concerns antecedence conditions for the reflexive element *zibun*. They claim that the antecedent of *zibun* must be the subject of some clause. But some instances of *zibun* in rare clauses are ambiguous. (12) is an example of such an ambiguous occurrence of *zibun*, as is (16):

(16) John wa Mary ni zibun no kazoku no hanasi
     Johni-TOP Maryj-DAT selfj,G-GEN family-GEN talk
     bakari sareta.
     only do-RARE-PAST
'John was affected by Mary's talking only about self's family.'

The ambiguity of zibun in (16) is taken to mean that there must be two clauses involved in the derivation. But this is not a necessary conclusion. We can maintain a monoclusal analysis of rare clauses and the intuition that the antecedent of zibun must be a subject, if we assume that there are two strata involved in rare clauses and that each stratum has its own subject. As with the argument from adverbial scope, the argument from reflexive antecedence provides evidence for distinct strata and for the initial 1-hood of the ni nominal, but it does not require us to accept a clause-embedding structure for rare constructions.

The ambiguity of zibun in adversity passives is consistent with the assignment of a monoclusal structure to those passives. But zibun is not ambiguous in plain passives. How are we to capture this distinction if both plain passives and adversity passives have a monoclusal structure? I will elaborate on this point in section 6.1, after the structure of rare clauses has been presented.

We have seen that previous analyses of rare constructions depend on the shaky assumption that a biclusal structural should be assigned. This assumption fails to predict the non-occurrence of certain classes of verbs in rare constructions to be discussed in section 6.4, and it leads to a forbiddingly complex structure in the case of Otsuka. Let us now examine the proposed monoclusal analysis, beginning with type A constructions.

3. Type A Constructions.

Type A rare clauses fall into the class of "passive" constructions described by Perlmutter and Postal (1977). Their defining characteristic is 2-1 advancement from a transitive stratum. As an example of a type A rare clause, consider (1a) and (1b). In both (1a) and (1b), the final 1 is marked ga. In (1a) the final 2 is marked o. Ni marks the nominal in (1b) corresponding to the subject of (1a). The morpheme rare occurs in (1b). All of these facts can be accounted for by assuming that (17a) and (17b) are the relational networks for (1a) and (1b), respectively, and that (18)-(21) are morphological rules of Japanese.

(17) a. 

\[
\begin{array}{c}
\text{butu}
\end{array}
\]

\[
\begin{array}{c}
\text{John Marie}
\end{array}
\]
(18) Final 1's are marked ga.

(19) Final 2's are marked o.

(20) Passive chômeurs are marked ni.

(21) Rare marks a 2-1 advancement from a transitive stratum.

(21) is a tentative formulation of the rule governing the distribution of rare and it will be revised later.

4. Type B Constructions.

Type B rare clauses are much like type A clauses. In fact the two constructions are so similar that they have often not been distinguished in the literature. (22a) is the RN associated with (2a) and (22b) corresponds to (2b).

(22) a.

(22b) is much like (17b) in that both involve a chômeur-creating advancement to 1. The crucial difference is that in (17b) it is the 2 which advances, while in (22b) the advancee is a 3. The only modification to our previous rules that this analysis requires is the extension of (21), the condition on the distribution of rare. The revised condition is as in (23).

(23) Rare marks a chômeur-creating advancement to 1 from 2 or 3.
(23) will be revised again after the discussion of type C clauses in section 5.

In this paper I am concerned primarily with the initial and final strata of the structure in (22b). It might be suggested that there is an intermediate stratum in which the initial 3 heads a 2-arc. This would yield a structure like that in (24).

While structures such as (24) cannot be rejected out of hand, there are some problems with them as RN's for type B clauses. The primary motivation for suggesting an intermediate stratum seems to be a desire to reduce the number of independent advancements the theory must recognize for Japanese. Since 2-1 advancement has already been shown to exist in Japanese, it might be intuitively more appealing to have the initial 3 advance in small increments 3-2-1 rather than advancing directly from 3 to 1. This measure does not really lead to economy, however, because there is no evidence for an independent 3-2 advancement in Japanese. For now, I will assume direct 3-1 advancement, although this is not crucial to the main argument.8

5. Type C Constructions.

Sentences (25)-(27) illustrate several important properties of the adversity passive.

(25) a. Ame ga hutta.
    rain-NOM fall-PAST
    'It rained.'

    b. John ga ame ni hurareta.
    John-NOM rain-DAT fall-RARE-PAST
    'John got rained on.'

(26) a. Kanai ga uti o utta.
    wife-NOM house-ACC sell-PAST
    'My wife sold the house.'
b. John ga kanai ni uti o urareta.
John-NOM wife-DAT house-ACC sell-RARE-PAST
'John's wife sold his house on him.'

(27) a. Bill ga Sue ni razio o ageta.
Bill-NOM Sue-DAT radio-ACC give-PAST
'Bill gave a radio to Sue.'

b. John ga Bill ni Sue ni razio o agerareta.
John-NOM Bill-DAT Sue-DAT radio-ACC give-RARE-PAST
'John suffered Bill's giving Sue a radio.'

The (a) sentences of (25)-(27) are normal active constructions. The (b) sentences are traditionally considered "passive" variants of the (a) sentences. This is mainly because they contain the morpheme rare which is also found in plain passives. Semantically, the (b) sentences are interpreted as implying some negative consequence for the referent of the nominal marked by ga. In (25b), this negative effect is probably that John got wet. In (26b), John may have been left homeless by his wife's action. (26b) would certainly not be used if it were the case that John had asked his wife to sell the house. (27b) could be used if, for example, Sue's listening to music kept John awake at night.

Another important thing to notice about the (b) sentences of (25)-(27) is that there is no active sentence which expresses the same meaning using the same lexical material. This is in sharp contrast to the "plain passive", in which the ga nominal of the passive is either the direct or the indirect object of the corresponding active.

Still another syntactic difference between the type A construction and the type C construction is that the type A construction is only possible with transitive verbs, but the type C construction is possible with intransitive verbs as well. (25b) is an example of an adversity passive with the intransitive verb huru 'fall'. A good analysis of the various rare constructions should be able to explain this difference in a natural way.

I claim that type C clauses are structurally analogous to type A and type B clauses. The type C construction is most economically described as a chômeur-creating advancement to 1, but the advancee is neither a 2 nor a 3. It initially bears some oblique relation which I shall refer to as the "Affectee" relation ("Afr" for short). Let us adopt the following notational convention: "CCA-1" will stand for chômeur-creating advancement to 1. "CCA-1" is thus taken to be a cover term for any of the following three cases in Japanese.
We can now state the rules governing CCA-1.

(28) Rare marks the predicate of any clause which contains an instance of CCA-1.

(29) The chômeur created by CCA-1 is marked ni.\textsuperscript{10}

(30) Nominals may advance to 1 from any of the three GR's 2, 3, Aff.\textsuperscript{11}

(31) No clause may contain more than one advancement to 1.

(28)-(31) taken as a group explain our previous observations and make several interesting predictions which are supported by the data. (28) and (29) are low-level rules relating syntactic structure to morpheme strings. (30) and (31) restrict the application of CCA-1 to just those cases where it actually occurs.

(30) is a language-specific constraint. Many languages of the world allow CCA-1 from at least the initial 2. Several of them allow the initial 3 to advance as well. Still fewer generalize the process even further than Japanese does. Examples of this last type include Cebuano and Malagasy, which allow Locatives, Instrumentals, and Benefactives to advance to 1.\textsuperscript{12}

It seems that advancements to 1 such as these conform to an accessibility hierarchy similar to that of Keenan and Comrie. If a language allows advancement to 1 from a given GR, it also allows advancement to 1 from all higher GR's.\textsuperscript{13} Japanese thus restricts advancements to 1 somewhat more than Cebuano or Malagasy, but less than Latin, which allows only 2's to advance to 1.

(31) is the 1-Advancement Exclusiveness Law alluded to in section 2. It has been proposed as a language universal (Perlmutter and Postal, to appear). The universal status of (31) is still very much an open question, and I take no position on this issue here. (31) does, however, appear to be true for Japanese, and it interacts fruitfully with our other rules over a wide range of data, as will be shown in section 6.
6. Consequences of the Analysis.
6.1 Zibun Antecedence.

As I mentioned in section 2, the reflexive element zibun may be interpreted ambiguously in adversity passives, but not in plain passives. (32) is an adversity passive in which the antecedent of zibun may be either Mary or John, while in the plain passive (33), only John can be an antecedent of zibun.

(32) a. John ga Mary ni zibun no uti de
    John-NOM Mary-DAT self-GEN house-LOC
    sissin sareta.
    faint-RARE-PAST
    'John was subjected to Mary fainting in his/her own house.'

b.

(33) a. John ga Mary ni zibun no uti de korosareta.
    John-NOM Mary-DAT self-GEN house-LOC kill-RARE-PAST
    'John was killed by Mary in his own house.'

b.

The only structural difference between (32) and (33) is the GR held by John in the initial stratum. In (32) John is an initial Affectee, but in (33) John is an initial 2. Accordingly I offer the following hypothesis on the nature of possible antecedents for zibun. The antecedent of zibun must be i) human, and ii) a l in some stratum. In addition, if the clause containing zibun is transitive in its initial stratum, then the antecedent of zibun must be the final 1. If the initial stratum is intransitive, then any nominal satisfying the first two criteria (humanness and 1-hood) can be a suitable antecedent for zibun.
6.2 Doubling of CCA-1.

One effect of (31) is to exclude repeated occurrences of CCA-1 within the same clause. One might expect that a sequence of two occurrences of the morpheme rare might be interpreted as plain passive followed by adversity passive. Imagine, for example, that a baby was expected in the Imperial family and a friend of yours had wagered a large sum of money on that baby's being born on May 5th. If the baby were born on the 4th, a neutral observer could use (34) to describe the event.

(34) a. Yokka ni umareta.
fourth day give-birth-RARE-PAST
'He was born on the fourth.'

b. 

("Mother" and "baby" in the RN (34b) stand for phonologically null terms whose meaning is discourse recoverable. The same applies to (35b).) Under the circumstances, you might expect your unhappy friend to say (35).

(35) a.*Yokka ni umarerarete, komatte iru.
fourth day give-birth-RARE-RARE-GER be distressed
'He was born on the fourth on me, and I'm in trouble.'

b. 

In fact, this double passive is unacceptable, as predicted by (31).

Note, further, that (35) is not blocked by any semantic constraint. The meaning may be readily expressed as in (36).

(36) Yokka ni umarete simatte, komatte iru.
fourth day give-birth-RARE-GER end-up, be distressed
'He ended up being born on the fourth, and I'm in trouble.'
This -te simau construction is an alternative to the adversity passive in almost every case where the latter is possible. It is also the most natural way to express the adversative connotation in those cases, such as (35), where the adversity passive is unacceptable due to syntactic constraints.

(37) illustrates one other construction prohibited by (31). (37a) is an RN containing two advancements to 1 within a single clause, violating (31). The first such advancement is 2-1, the second is Aff-1. (37b) and (37c) are grammatical sentences, but they don't encode all of the information in (37a). Specifically, they don't convey the idea of Hanako's involvement in the action. (37d) conveys all of the information in (37a), but it is ungrammatical. There is thus no permissible way to employ two advancements to 1 within a single clause.

(37) a.  

b. Kootyoo ga musuko o sikatta.  
   principal-NOM son-ACC scold-PAST  
   'The principal scolded the son.'

c. Musuko ga kootyoo ni sikarareta.  
   son-NOM principal-DAT scold-RARE-PAST  
   'The son was scolded by the principal.'

d. *Hanako ga musuko ni kootyoo ni sikararerareta.  
   Hanako-NOM son-DAT principal-DAT scold-RARE-RARE-PAST  
   'Hanako had her son scolded by the principal.'

(31) is the simplest way to state the syntactic rule which prevents the generation of sentences like (35) and (37d). The unacceptability of these sentences provides evidence for the validity of (28)-(31) as an analysis of rare constructions.

6.3 CCA-1 and Potentials.

The analysis of rare constructions presented here is capable of explaining many otherwise unexplained facts about Japanese. In particular, it explains the impossibility of combining rare con-
structions with potentials and with a certain class of intransitive verbs which a priori would seem to have very little in common other than their incompatibility with rare.

Potentials belong to a larger class of Japanese predicates, the class of Inversion predicates. Perlmutter (to appear) argues for the existence of the Inversion structure in Japanese. Kuno (1973) notes the similar case marking patterns which apply to potentials and to other predicates denoting competence, fondness, etc. This case marking pattern is sufficient to identify inversion predicates in Japanese. Inversion involves 1-3 demotion followed by 2-1 advancement as illustrated in (38).

(38) a.  

```
P  1  2
P  3
P  3  1
```

hanaseru  Taroo  eigo

b. Taroo ni eigo ga hanaseru.  
   Taroo-DAT English-NOM speak-POT  
   'Taroo can speak English.'

Inversion clauses with an unaccusative stratum contain an advancement to 1. They do not have the morphology associated with rare constructions because this advancement does not create a chômeur, as required by (28). But the fact that there is an advancement to 1 makes any other advancement to 1 impossible, according to (31). This explains why (39a), (40b), and (41b) are ungrammatical utterances in Japanese.

(39) a. *Watakushi-tati wa eigo ni Taroo ni  
   We-TOP English-DAT Taroo-DAT  
   hanaserarete, himitu o ienakatta.  
   speak-POT-RARE-GER secret-ACC say-POT-NEG-PAST  
   'We were unable to tell secrets because Taroo spoke English.'
(40) a. Taroo ni eigo ga wakaru.
Taroo-DAT English-NOM understand
'Taroo understands English.'

b. *Watakusi-tati wa eigo ni Taroo ni
we-TOP English-DAT Taroo-DAT
wakararete, himitu o ienakatta.
understand-RARE-GER secret-ACC say-POT-NEG-PAST
'Because Taroo understood English, we were unable to
tell secrets.'

c. wakaru Taroo eigo watakusi-tati

(41) a. Boku ni okane ga iru.
I-DAT money-NOM need
'I need money.'

b. *Kanai wa, okane ni boku ni irarete,
wife-TOP money-DAT I-DAT need-RARE-GER
tabemono o kaenakatta.
food-ACC buy-POT-NEG-PAST
'My wife was unable to buy food, as I lacked money.'
The interaction of (28) and (31) thus correctly prohibits the co-occurrence of potentials with CCA-1.

6.4 CCA-1 and the Unaccusative Hypothesis.

Another consequence of the present analysis is the prediction that certain intransitive verbs will not occur in type C rare clauses. These are the initially unaccusative verbs of Japanese. The terms "unaccusative" and "unergative" properly apply to strata, not to individual predicates. The definitions are as follows.15

(42) An unergative stratum is one that contains a 1-arc and no 2-arc.

(43) An unaccusative stratum is one that contains a 2-arc and no 1-arc.

By extension we can speak of a predicate which is subcategorized to occur with an unaccusative initial stratum as an initially unaccusative predicate. The unaccusative hypothesis is simply the claim that the intransitive verbs of natural languages will be found to split into two groups: those whose initial strata are unaccusative and those whose initial strata are unergative. Unaccusative verbs have been found in many languages of the world, but so far no test has revealed their existence in Japanese.16 An unaccusative structure is illustrated in (44).

(44) a.

b. Hidoi kaze de doa ga aita.
   strong wind-CIRC door-NOM open-PAST
   'The door opened in the strong wind.'
The final 1 looks and acts just like the initial and final 1 in an unergative clause. (45) illustrates an unergative clause.

(45) a. 

```
   P
    ↓
asobu  kodomo
```

b. Kodomo ga asobu.
   children-NOM play
   'The children play.'

Due to this surface similarity there has been no way to distinguish the two types of intransitive verbs on the basis of their behavior in active clauses. Compatibility with rare, however, can be used for this purpose. Note that (44) contains a 2-1 advancement. (31) then rules out the possibility of any further advancements to 1, so rare should never be found with unaccusative verbs. An "adversity passive" corresponding to (44) is, in fact, ungrammatical as predicted:

(46) *Hidoi kaze de doa ni akareta.
   strong wind-CIRC door-DAT open-RARE-PAST
   'I was upset by the door opening due to the strong wind.'

Of course, many intransitive verbs can appear quite freely in type C clauses:

(47) a. Ame ga hutta.
   rain-NOM fall-PAST
   'It rained.'

b. John ga ame ni hurareta.
   John-NOM rain-DAT fall-RARE-PAST
   'John got rained on.'

(48) a. Isogasii toki, Tanaka-san ga Tokyo ni itta.
   busy time  Tanaka-NOM Tokyo-DAT go-PAST
   'Tanaka went to Tokyo at a busy time.'

b. Isogasii toki, Tanaka-san ni Tokyo ni
   busy time  Tanaka-DAT Tokyo-DAT
   ikaretta.
   go-RARE-PAST
   'Tanaka went to Tokyo on me when I was busy.'
(49) a. Gakusei ga sabotta si sensei ga komatte iru.
    student-NOM skip class and teacher-NOM be distressed
    'The students skipped class and the teacher is upset.'

    b. Gakusei ni saborarete, sensei ga komatte iru.
    student-DAT skip class-RARE-GER, teacher-NOM be distressed
    'The teacher is upset because the students skip his class.'

(50) a. Musume ga kizetu sita.
    daughter-NOM faint-PAST
    'My daughter fainted.'

    b. Musume ni kizetu sareta.
    daughter-DAT faint-RARE-PAST
    'My daughter fainted on me.'

RN's for the (b) sentences of (47)-(50) would all contain the following configuration:

```
  Aff
 /   \
/     \ l
\     / l
  \   / chō
```

It is the existence of this configuration in an RN containing no other advancements to l which authorizes the appearance of the suffix -rare on the verbs of these examples.

Contrasting with these examples are sentences whose RN's would have to contain two or more advancements to l. (46) is an example of this sort, as are (51) and (52) following. In each case, the active (a) sentence is grammatical, but the (b) sentence with rare is not. Without some analysis such as mine, these ungrammaticalities would be completely unpredictable. The fact that (51b) and (52b) are ungrammatical is evidence for an analysis which divides the intransitive verbs of Japanese into two groups.
(51) a. Uti ga yaita.
    house-NOM burn-PAST
    'My house burned down.'

    b. *Uti ni yakareta.
    house-DAT burn-RARE-PAST

(52) a. John wa, ansitu ni iru toki, denki ga tuita.
    John-TOP darkroom-LOC be time, lights-NOM come-on-PAST
    'While John was in the darkroom, the lights came on.'

    b. *John wa, ansitu ni iru toki, denki ni tukareta.

It might be thought that the factor controlling the grammaticality of type C rare clauses is a semantic constraint. This constraint might stipulate that the ni nominal in such clauses must be an agent. This formulation does seem to work in a number of cases, but (47b) and (50b) demonstrate that it simply will not do as a complete explanation. In neither case can the ni nominal be considered an agent, but both (47b) and (50b) are grammatical. This near correlation between agentivity and unergativity is actually quite common among languages of the world, so far as is currently known. Japanese is behaving in a perfectly ordinary way in exhibiting this tantalizing but imperfect alignment.

There are two ways in which one might try to combine AFF-l advancement with initial unaccusativity. One way is illustrated in (53):

(53)

But (53) is prohibited by (31) because it contains two advancements to 1 within a single clause.

A second structure that might be assigned to unaccusative rare clauses is diagrammed in (54):
(54) is like the structure assigned to grammatical type C clauses except that its initial stratum contains a 2 instead of a 1. The grammatical structure is shown in (55):

(55)

Nothing excludes (54) as a possible RN in Japanese, but it cannot underlie any rare clause since no chômeur is created, as required by (28). (54) is also untenable as the RN for a rare clause because the nominal heading the initial 2-arc would have to be marked by particle o rather than ni unless we complicate the case-marking rules in an ad hoc way.

There is no conceivable RN for unaccusative rare clauses which is consistent with the analysis in (28)-(31). Thus the analysis predicts that such clauses will be ungrammatical. The fact that this prediction is fulfilled is evidence in favor of the analysis.19 A summary listing of several intransitive verbs divided into unergative and unaccusative groups will be found in the Appendix.

7. Conclusion.

The ambiguous interpretations of manner adverbials and reflexives in rare clauses have been used to support various biclausal analyses of these constructions. I have shown that these facts can be interpreted as evidence for an analysis which relies on the notions of levels of linguistic structure and on the grammatical relations that appear at each of those levels. In other words, adverbials and reflexives provide evidence that the structure of rare clauses involves two strata.

It is also necessary that there exist two strata in order for rule (31) to work properly. There can be no advancements within a single stratum. Positing a bistratal structure for rare clauses allows rule (31) to operate, prohibiting passives based on other passives, inversion predicates, or unaccusative verbs. The ability to explain the impossibility of such forms is an advantage of my analysis. No other study has explained these facts in any principled way or even discussed them in detail, let alone given a
unified explanation of the sort offered here.

I have presented a unified monoclausal analysis of rare constructions. This is the simplest description of rare constructions yet presented which succeeds in accounting for the differences among them.

APPENDIX

The lists presented below are drawn from interviews with four native speakers of Japanese conducted at two distinct periods. All of the subjects are graduate students in the Department of Modern Languages and Linguistics, at Cornell University.

For the first trial I created 53 sentences of Japanese and read them to three native speakers. The second trial consisted of 44 sentences, 22 of which involved predicates which had yielded mixed results on the first trial. This second set of sentences was submitted to two native speakers, one of whom had also participated in the first trial.

Many of the sentences in both trials produced inconsistent ratings. In several instances I was told that the exact sentence being tested was unacceptable but that the passive verb involved would be grammatical in another context. Such responses have been eliminated from the lists presented here. The verbs given below have been unequivocally either accepted or rejected in their passivized forms by at least two speakers of Japanese.

I. UNERGATIVE VERBS

<table>
<thead>
<tr>
<th>Japanese</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>agaru</td>
<td>'enter'</td>
</tr>
<tr>
<td>asobu</td>
<td>'play'</td>
</tr>
<tr>
<td>au</td>
<td>'meet'</td>
</tr>
<tr>
<td>hasiru</td>
<td>'run'</td>
</tr>
<tr>
<td>huru</td>
<td>'fall'</td>
</tr>
<tr>
<td>kizetu</td>
<td>suru 'faint'</td>
</tr>
<tr>
<td>sinu</td>
<td>'die'</td>
</tr>
<tr>
<td>sissin</td>
<td>suru 'faint'</td>
</tr>
<tr>
<td>suwaru</td>
<td>'sit'</td>
</tr>
<tr>
<td>zisatu</td>
<td>suru 'commit suicide'</td>
</tr>
</tbody>
</table>

Kinoo watakusi ga iya na hito ni uti ni yesterday I-NOM unpleasant person-DAT house-DAT agarareta.
enter-RARE-PAST
'Yesterday I was unfortunate enough to have an unpleasant person enter my house.'

Musuko no Taroo ni byooki de sinareta.
son-COP Taroo-DAT sickness-CIRC die-RARE-PAST
'My son Taroo died of sickness on me.'
Haha ga kodomo ni ano sumi de asobareta.
mother-NOM children-DAT that corner-LOC play-RARE-PAST
'The mother suffered her children's playing in that corner.'

Musume ni zisatu sareta.
daughter-DAT commit-suicide-RARE-PAST
'My daughter committed suicide on me.'

John ga ame ni hurareta.
John-NOM rain-DAT fall-RARE-PAST
'John got rained on.'

II. UNACCUSATIVE VERBS

aku 'open'  nakunaru 'disappear'
aru 'exist'  tigau 'be different, incorrect'
bakuhatu suru 'explode' tukareru 'tire'
hazimaru 'begin'  tuku 'turn on'
itamu 'spoil'  tuzuku 'continue'
koboreru 'spill'  yaku 'burn'
mitukaru 'turn up'

*Ryosin wa, kooba ni tonari ni arareru.
parent-TOP factory-DAT next door-LOC exist-RARE-NONPAST
'My parents are so unfortunate as to have a factory next door.'

*Sakanaya wa sakana ni itamareta.
fish salesman-TOP fish-DAT spoil-RARE-PAST
'The fish salesman had the misfortune of his fish going bad.'

*Mary ga saihu ni nakunarareta.
Mary-NOM purse-DAT disappear-RARE-PAST
'Unfortunately, Mary's purse disappeared.'

*Gakusei wa, sensei ni nakunararete, komatte imasu
students-TOP professor-DAT die-RARE-GER be upset
'The students are upset because their professor died
on them.'

NOTES

* This paper would not have been possible without the support
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provided helpful comments on various drafts. Their help is
gratefully acknowledged.

Many members of the Japanese program at Cornell gave freely of their time to help with the research, providing grammaticality judgments and offering suggestions on possible examples to use. Among this group I would mention Atsuko Shoji, Kyoko Suzuki, Emiko Konomi, Sachiko Awai, and Yukiko Katagiri. My friend Hiroshi Amano also helped in the early stages of preparing examples. To all of these people, I hereby extend my sincerest thanks. Any remaining errors or misunderstandings are, of course, my own responsibility.

1. Cf. Hoffman (1868), Lange (1919), Jorden (1963), and Martin (1975) for variations on this position. Sometimes these descriptive grammarians seem to consider all passives as basically a single construction.

2. Abbreviations used in the glosses and diagrams include: TOP (Topic), NOM (Nominative), ACC (Accusative), DAT (Dative), GEN (Genitive), TEMP (Temporal), CIRC (Circumstantial), LOC (Locative), N (Nominalizer), COP (Copula), POT (Potential), GER (Gerund), and NEG (Negative).

3. The morpheme -rare appears as -are after verb stems ending in consonants.

4. A nominal marked by ni is not necessarily an indirect object, even though ni is glossed in most cases as "DAT". The particle ni has several distinct usages. These include marking for location in space or time, goal, indirect object, and passive chômeur. These last two uses must be kept distinct, especially as they sometimes co-occur in the same sentence.


6. There is more involved in zibun antecedence than simple subjecthood. Shoji (1981, p. 8) gives the following example of an unambiguous occurrence of zibun in a rare clause.

   (i) John ga Bill ni zibun no taipuraitaa o
   Johni-NOM Billj-DAT selfi,*j-GEN typewriter-ACC
   tukawareta.
   use-RARE-PAST
   'Johni was annoyed by the fact that Billj used self'si,*j
   typewriter.'

In (i) the antecedent of zibun must be John and not Bill. It could easily be the case that semantic factors exercise a large
degree of influence over the interpretation of zibun. Even if this were not so, however, the existence of sentences like (i) would be equally difficult to explain in McCawley's theory or in mine.

Farmer (1980) examines the conditions on zibun antecedence in connection with her study of "Propositional Argument Structure" in Japanese. She concludes that the antecedent of zibun must be (1) human and (2) a subject, or (3) possibly a "demoted subject" if "the" subject is not human. This is in accord with my claim that there are different subjects at different levels of structure.

7. In fact, every modification to (21) requires a corresponding modification of (20) such that the initial l in a rare clause always receives the marking ni.

8. The behavior of object honorifics may provide some evidence for the absence of an intermediate stratum in type B constructions. It seems that the initial 2 of a type B clause is a suitable target for object honorification, given the appropriate semantic/pragmatic conditions. But object honorification in general applies only to final objects. This would argue against structures like (24), which predict that the initial 2 is not a final object, but a chômeur.

9. It should be mentioned that whatever befalls the referent of the final subject need not be negative. McCawley (1972, p. 66) gives the following example from Alfonso.

(i). Kirei na ozyoosan ni nakareru  to, pretty girl-DAT cry-RARE-NONPAST when, tyotto uresii mono da. a little glad thing COP 'It's kind of nice when a beautiful girl cries over you.'

Also, some type A clauses and even some type B clauses can be interpreted as implying negative consequences for the referent of the final subject. The feeling of adverse effect associated with these constructions thus seems to be independent of the initial relation of the advancee. Wallace (1978) gives a survey of a number of eastern and southeast Asian languages in which passive-like constructions have adversative connotations. Since the judgment of adversee or benefactive effect is determined by context and not by the choice of construction, I have chosen the neutral term "Affectee" as a provisional name for the relation held in the initial stratum by the advancee in type C constructions.
10. Evidence for the non-termhood of the ni nominal in CCA-1 constructions comes from Relativization and Clefting. Both of these operations are in general restricted to all and only final terms, according to Otaka (1980). The ni nominal of a CCA-1 construction is not accessible to Relativization or Clefting, as shown below. The examples here are based on (1) in the text.

(i) a. John ni butareta Mary
    John-DAT hit-RARE-PAST Mary
    'Mary, who was hit by John.'

    b. *Mary ga butareta John
    Mary-NOM hit-RARE-PAST John
    'John, by whom Mary was hit.'

(ii)a. John ni butareta no wa Mary da
    John-DAT hit-RARE-PAST N-TOP Mary COP
    'The one who was hit by John is Mary.'

    b. *Mary ga butareta no wa John(ni) da.
    Mary-NOM hit-RARE-PAST N-TOP John COP
    'The one by whom Mary was hit is John.'

Unfortunately, these tests are not especially reliable. Kyoko Suzuki (personal communication) informs me that certain ni nominals, especially in causative constructions, are in fact accessible to Relativization and Clefting. See Suzuki (1983) for discussion of the status of these nominals.

Various other phenomena such as quantifier float, subject honorification, and reflexivization show similar tendencies toward supporting my analysis, but none of them has been studied extensively enough to state their exact distribution with confidence. Quantifier float in particular has been the subject of some dispute. Shibatani (1977) argues that QF is possible from any NP which receives the case marker ga or o, regardless of its GR. Hasegawa (1981, p. 169) gives evidence that QF must be allowed to apply to certain NP's marked ni. Her specific example, presented below as (iii), involves what I have analyzed as a passive chômeur. In general, however, the ni-marked nominal in rare constructions cannot float quantifiers, supporting the claim that these nominals are chômeurs.

(iii)a. John ga sannin no kodomo ni sinareta.
    John-NOM three-COP children-DAT die-RARE-PAST
    'John suffered the death of three children.'

    b. John ga kodomo ni sannin sinareta.
The lack of any other logical referent for *sannin* may force the interpretation of (iiib) under which *sannin* is related to *kodomo*. This is a matter of pragmatics. Such a sentence could be considered ungrammatical, but acceptable because the interpretation is clear.

Reflexivization was discussed in Section 2.

11. It should be pointed out that this analysis requires that Aff-1 advancement be obligatory. This can be succinctly expressed as a rule of the form: *Final Aff*. Constraints of this kind are not unknown among the languages of the world. Aissen (1983) proposes for Tzotzil a constraint of the form: *Final 3. Type C rare clauses function in much the same way as the "ethical dative" in Latin and other familiar European languages. They serve to indicate the involvement of someone who is not a direct participant in the action expressed by the predicate. Latin could thus be claimed to have the same constraint as Japanese (*Final Aff*), coupled with Aff-3 advancement.


14. Inversion predicates need not always occur in the inversion structure. In some languages, e.g. Georgian, inversion is found obligatorily and exclusively in certain moods or tenses. In other languages specific predicates always occur in the inversion structure. Japanese has both features. There is a small, closed class of predicates including *wakaru* 'understand' and *iru* 'need' which appear in inversion structures in all tenses. It is also the case that any verb will appear in an inversion structure when it occurs as a potential.

15. See Perlmutter and Postal (to appear) for a systematic presentation of the unaccusative hypothesis.

16. Suzuki (1983) investigates causatives as a means for distinguishing unaccusative and unergative predicates. The degree of correlation between her results and mine is far from clear, but the prospects for an eventual accommodation look promising.

17. Japanese is a highly elliptical language. Sentence (50) is automatically interpreted as involving the speaker's daughter unless some other affectee is overtly expressed. It is a general property of the language that the subject of most declaratives is assumed to be the speaker or the topic of the
previous sentence unless otherwise specified. I have chosen not to express the affectee overtly in several cases where the ellipsis sounds more natural.


19. The analysis presented in this paper depends crucially on the validity of (31) for Japanese. If (31) turns out to be a true language universal, then my analysis is correspondingly strengthened. The facts about unaccusatives, inversion predicates, and double passives would then follow from universal principles, simplifying the grammar of Japanese. I have chosen the conservative route of postulating (31) as a language-specific rule, but allowing for its possible status as a universal.

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lished paper, Cornell University.


DEMOTION AND AMBIGUITY IN CHOCTAW

William D. Davies

0. Introduction

Choctaw, a Muskogean language of Oklahoma and Mississippi, contains ambiguous clauses such as (1).

(1) Sa-shki-t am-ihaksi-tok.
    1Poss-mother-Nom 1Dat-forget-Pst
    'I forgot my mother.'
    'My mother forgot me.'

The ambiguity in (1) is somewhat unusual inasmuch as the thematic roles of the arguments are reversed in the two possible interpretations of the clause. Under one reading the first person singular nominal, marked by dative agreement on the verb, is (informally) the forgetter and sashki 'my mother' is the forgotten, while in the other 'my mother' is the forgetter and 'I' the forgotten. As (1) shows, these interpretations exist side-by-side with all morphological marking remaining the same. This ambiguity exists for a small class of predicates, what I identify as 'inversion predicates' in Davies 1981. The ambiguity also occurs in causatives based on these predicates.

(2) Hattak-at chi-am-ihaksi-chi-tok.
    man-Nom 2Acc-1Dat-forget-Caus-Pst
    'The man made me forget you.'
    'The man made you forget me.'

Given the reversal of thematic roles, these data, at first, appear problematic. However, they can be accounted for straightforward by positing structures which include the demotion of a nominal bearing a nuclear term grammatical relation (subject or direct object) to indirect object, i.e., by positing Inversion and 2-3 Retreat structures, structures argued to be necessary on independent grounds in Davies 1981. These structures are called demotions because a nominal bearing a grammatical relation in one stratum of structure bears a grammatical relation lower on the universal hierarchy of grammatical relations (proposed by Perlmutter and Postal 1977) in the following stratum.

In this paper I illustrate the straightforward account we can give of these puzzling data by incorporating these demotions into the grammar of Choctaw. Since I have presented detailed arguments for Inversion and 2-3 Retreat in Choctaw elsewhere (Davies 1981), I will only review the key points here. The main purpose of this paper is the exposition of the accounts of (1) and (2).
1. Inversion

I first consider the Inversion structure necessary for this analysis. Inversion analyses have been proposed for a number of languages in the literature, including: Georgian (Harris 1981), Udi (Harris in press), Italian, Japanese, and Quechua (Perlmutter 1979), Albanian (Hubbard 1980), Ainu (Tohsaku 1981), Tamil (Jackson 1981), and others. Inversion is characterized by the demotion of a subject to indirect object, depicted schematically in (3).

(3)

Nominal a is referred to as the Inversion nominal (Perlmutter 1979). I show below that the Inversion nominal in Choctaw is characterized by the subnetwork in (3).

The Inversion nominal determines dative agreement, as in (4).

(4) a. Holisso-t am-ihaksi-tok.
    book-Nom 1Dat-forget-Pst
    'I forgot the book.'
 b. Chi-am-ihaksi-tok.
    2Acc-1Dat-forget-Pst
    'I forgot you.'

Dative agreement is a characteristic of indirect objects in Choctaw in the sense that a nominal bearing the indirect object relation at any level of structure determines dative agreement. Therefore, the first person singular dative agreement markers in (4) provide evidence that this nominal bears the indirect object relation.

This nominal also exhibits subject-like behavior. When occurring as an independent nominal, it must be marked for nominative case, a characteristic of nominals bearing the subject relation at any level in Choctaw simplex clauses.

(5) a. Anakosh/#Anakō holisso-t am-ihaksi-tok.
    1=FO=Nom 1=FO=Obl book-Nom 1Dat-forget-Pst
    'I was the one who forgot the book.'
    1=FO=Nom 1=FO=Obl 2Acc-1Dat-forget-Pst
    'I was the one who forgot you.'

In (5), when ano 'I' occurs in the nominative form of the focus morpheme, the clauses are grammatical. However, when the pronominal is in the oblique form, the results are ungrammatical.
Additionally, Inversion nominals can antecede reflexives.

(6) Ili-am-ihaksi-tok.
    Refl-1Dat-forget-Pst
 'I forgot myself.'

In Choctaw, antecedents of reflexives must bear the subject relation at some level (Davies 1981). Therefore, the fact that the Inversion nominal antecedes the reflexive in (6) provides additional evidence of its subject status.

Turning to the other nominal, in (4a) holisso 'book' is marked for nominative case. Following our previous line of argumentation, this provides evidence that it bears the subject relation at some level. An additional argument for subject-hood comes from same-subject marking in clauses such as (7).

(7) Ofi-t am-ihaksi-cha sa-hoyo-tok.
    dog-Nom 1Dat-forget-SS 1Acc-look for-Pst
 'I forgot the dog, and it looked for me.'

In (7) ofi 'dog' controls the same-subject marker cha. Same-subject marking in Choctaw can occur when there are coreferent subjects in linked clauses (Davies 1981). The fact that ofi in the Inversion clause can control same-subject marking argues that it is a subject at some level of structure.

Finally, note that in (4b) the 'object' nominal determines second person singular accusative agreement, chi. I have proposed elsewhere (Davies 1981) that accusative agreement in Choctaw is determined by nominals which bear the direct object relation at any level (cf. note 1). Thus, we have an argument for the direct object status of the nominal object. Third person nominative and accusative agreement markers are not phonetically realized in Choctaw; therefore, we find no accusative agreement marker referencing holisso 'book' in (4a). However, under the assumption that (4a) and (4b) are analogous in their initial structure, holisso would also bear the direct object relation.

The Personal Inversion structure in (6) can account for these facts.
In (8), **arco 'I'** heads an initial-stratum 1-arc; this accounts for the fact that it takes the nominative form of the focus morpheme (5) and can be the antecedent of a reflexive (6). However, it bears the 3-relation in the final-stratum, accounting for the first person singular dative agreement marker in the relevant clauses. **holisso 'book'** heads an initial-stratum 2-arc and a final-stratum 1-arc. The 2hood of this nominal accounts for the agreement facts (second person singular accusative agreement in (4b)); its 1hood accounts for the fact that holisso is marked for nominative case in (4a) and that ofi 'dog' can control same-subject marking in (7).

Notice that substituting **sashki 'my mother'** for **holisso 'book'** in (8) gives a straightforward account of one of the interpretations of (1), i.e., 'I forgot my mother'.

The fact that in (1) the first person singular nominal determines dative agreement while being interpreted as the 'forgetter' is due to the fact that it is an Inversion nominal. The nominative case on **sashki**, the 'forgotten', is accounted for since it heads a 1-arc in the final-stratum of the structure.

2. 2-3 Retreat

I now turn to the 2-3 Retreat structure, which I argue can account for the interpretation of (1) as 'My mother forgot me'. 2-3 Retreat has been proposed for a number of different languages in the literature: Yukulta and Nyaamal (Klokeid 1978), Turkish
(Özkaragoz 1980), French (Postal 1982), Samoan (Cook 1982), and K'ekchi (Berinstein 1983). It is characterized by the demotion of a direct object to indirect object, schematized in (10).

\[ (10) \]

\[ \begin{array}{c}
    \text{a} \\
    \text{b} \\
    \text{c_i} \\
    \text{c_{i+1}} \\
\end{array} \]

I give detailed arguments for a 2-3 Retreat structure for a variety of Choctaw predicates in Davies 1981. Here I concentrate on the 2-3 Retreat structure with Inversion predicates.

In addition to the agreement pattern noted for (4b), ihaksi 'forget' and other two-place Inversion predicates can occur in the pattern in (11).

\[ (11) \]

   book 3Dat-forget-1Nom-Pst  
   'I forgot the book.'

   2Dat-forget-1Nom-Pst  
   'I forgot you.'

In (11), what was identified as the Inversion nominal in section 1 determines nominative agreement and the 'forgotten' determines dative agreement.

In clauses such as (11), the nominal determining nominative agreement (henceforth 'nominative nominal') must take nominative case, as in (12).

\[ (12) \]

   1=Fo=Nom 1=Fo=Obl book 3Dat-forget-1Nom-Pst  
   'I was the one who forgot the book.'

   1=Fo=Nom 1=Fo=Obl 2Dat-forget-1Nom-Pst  
   'I was the one who forgot you.'

However, the dative nominal cannot take nominative case.

\[ (13) \]

   book-Obl book-Nom 3Dat-forget-1Nom-Pst  
   'I forgot the book.'

   2=Fo=Obl 2=Fo=Nom 2Dat-forget-1Nom-Pst  
   'You were the one that I forgot.'
In (13a), `holisso 'book' may be optionally marked for oblique case, but the clause is ungrammatical if it is marked for nominative case. Likewise, in (13b) `chishno 'you' can occur in the oblique form of the focus morpheme but not in the nominative form.

In section 1 I state that only a subject can be the antecedent of a reflexive. (14) illustrates reflexivization in 2-3 Retreat clauses.

(14) Ilim-ihaksi-li-tok.
Refl=Dat-forget-1Nom-Pst
'I forgot myself.'

Recall that in (6) it was the dative nominal (Inversion nominal) which was the antecedent. In (14) the dative nominal is the reflexive, the form of the reflexive marker being determined by the regular agreement rules given in note 1.

Additionally, the nominative nominal controls same-subject marking, as in (15).

2Dat-forget-1Nom-SS know-1Nom-Pst
'I forgot you and I knew it.'

Although in Inversion clauses the dative nominal can control same-subject marking, in this clause type the dative nominal cannot control same-subject marking.

2Dat-forget-1Nom-DS/SS house 2Nom-go-Pst
'I forgot you, and you went home.'

The fact that the dative nominal in the first clause in (16) cannot control same-subject marking (along with the fact that it is coreferent with the subject in the following clause) provides evidence that it does not bear the subject relation at any level.

The above facts are consistent with a 2-3 Retreat structure, as in (17), independently motivated for other Choctaw predicates (cf. Davies 1981). (17) is the structure for (10).

(17)
Thehood of *aro* 'I' accounts for the nominative agreement marker in this clause type, the nominative case (12), the antecedence of reflexives (14), and the control of same-subject marking (15). The hood of *holisso* 'book' and *chishro* 'you' accounts for the dative agreement and the fact that the object never bears the subject relation accounts for the fact that it cannot be marked for nominative case (13) and cannot control same-subject marking in (16).

A final aspect of the analysis is the fact that the initial strata in (8) and (17) are identical. The simplest analysis is one in which synonymous clauses with the same predicate have the same initial stratum. This facilitates the mapping of thematic roles and grammatical relations in a given language. In each structure the forgetter *aro* 'I' is an initial subject and the forgotten *holisso* 'book' is an initial direct object.

Returning to the clause in (1), we can now account for the interpretation 'My mother forgot me' by appealing to the 2-3 Retreat structure. (1) has the structure in (18).

(18)

![Diagram](image)

Note that in (18) the forgetter, *sashki* 'my mother', is once again the initial subject and the forgotten, *aro* 'I', the initial direct object. The configuration of grammatical relations in (18) accounts for the morphological and syntactic properties of clauses like (1).

3. Ambiguity in Clause Union Causatives

I now turn to the ambiguous causative clause in (2), repeated below.

(2) Hattak-at chi-am-ihaksi-chi-tok.
    man-Nom 2Acc-1Dat-forget-Caus-Pst
    'The man made me forget you.'
    'The man made you forget me.'

I have proposed (in Davies 1981) the clause union causatives in Choctaw follow the rule in (19).
(19) **Clause Union**
A downstairs final 1 bears the 2-relation in the Union clause.

All other GRs borne in the union stratum follow the Inheritance Principle and revised Motivated Chomage Law as discussed in Gibson and Raposo (to appear). Therefore, a causative such as (20a) has the structure in (20b).

    man-Nom 2Acc-1Acc-cut-Caus-Pst
    'The man made you cut me.'

b.

The ambiguity in (2) can be accounted for once again by appealing to the alternative possibilities of Inversion vs. 2-3 Retreat, this time in the downstairs clause. For the interpretation 'The man made me forget you', I posit downstairs Inversion, as in (21).³

(21)

What is important is that in (21) the 'forgetter' in the downstairs clause bears the 3-relation and therefore determines dative agreement while the 'forgotten' bears the 2-relation and determines accusative agreement.
We can account for the alternative interpretation, 'The man made you forget me', by positing a downstairs 2-3 Retreat structure, as in (22).

(22)

The 'forgetter' chishno 'you' is a final downstairs subject and a union direct object, thus determining accusative agreement, and the 'forgotten' ano 'I' is a final downstairs indirect object and union indirect object, thus accounting for the first person singular dative agreement marker.

4. Conclusion

The overall goal of this paper has been to show how the notion of demotion to indirect object proposed within the theory of relational grammar, manifested in the Inversion and 2-3 Retreat structures, provides an effective means of accounting for what would otherwise be characterized as peculiar or troublesome ambiguities in Choctaw. Data of this sort provide compelling arguments that an adequate theory of universal grammar must incorporate the construct of demotion.

NOTES

* This work is based on data elicited from a number of consultants who speak a variety of Oklahoma Choctaw. Many thanks go to all of them but especially to Cynthia Billy, Simon Durant, Adeline Hudson, and Diane Jacob. I would also like to thank Carol Rosen for suggestions regarding presentation of the material. Any foul-ups are the responsibility of the author.

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1. In Davies 1981 I propose the following disjunctively ordered set of agreement rules for Choctaw:

(i) a. Indirect objects determine dative agreement.  
b. Direct objects determine accusative agreement.  
c. Subjects determine nominative agreement.

The rules apply in the order specified to each nominal. Thus, if a nominal is an indirect object at any level of structure, it determines dative agreement. Likewise, if a nominal is a direct object at any level, it determines accusative agreement, unless it is an indirect object at some other level. Cf. Davies 1981, 1983 for details.

2. In Davies 1981 I propose the following case assignment rules for Choctaw:

(i) Case Assignment
   a. A nominal which heads a 1-arc is assigned nominative case.  
b. A nominal which does not head a 1-arc is assigned oblique case.

Like the rule of verb agreement in note 1, the case assignment rules apply to nominals satisfying the condition at any level. Therefore, if a nominal ever bears the subject relation, it is assigned (and obligatorily marked for) nominative case.

3. The Impersonal Inversion structure in the downstairs clause in (21) is not a critical issue here. There is a constraint in Choctaw against Personal Inversion when the initial direct object is a first or second person nominal. See Davies 1981 for discussion of this constraint.

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OBLIQUE TO DIRECT OBJECT ADVANCEMENT WITH JAPANESE MOTION VERBS

Stanley Dubinsky

1.0 Introduction

In Japanese, a locative NP associated with intransitive verbs of motion is generally marked by the accusative case postposition ə.

(1) Mitī o aruku.
    street ACC walk
    'I will walk down the street.'

(2) Takai yama o noboru.
    high mountain ACC climb
    'I will climb a high mountain.'

This case marking phenomenon has led some linguists to regard as a direct object the NP which precedes the case marker. Kuno [1973:96] remarks that "some verbs of motion take NF-ə as their object." Alfonso [1966:918] speaks of such verbs as having an "object (i.e., the place of motion, signaled by ə)." Martin [1975:357], apparently because of the case marking of their associated arguments, refers to verbs of motion as "QUASI-intransitives." There are several tests which can indeed be applied to the NP-ə adjuncts of motion verbs to demonstrate that they behave as ordinary direct objects. I will illustrate them further on in this paper.

There is, however, a serious problem in trying to account for the locatives associated with the motion verbs simply as direct objects. Namely, they behave differently in some respects from the NP-ə adjuncts of ordinary transitive verbs. While they pass certain tests for direct object-hood, they fail others. Most notably, they fail to undergo the o/ga alternation typically associated with desiderative (-tai) constructions. Thus, the NP in the following sentence

(3) Hon o/ga yomitai.
    book read-want
    'I want to read a book.'

can be marked with either o or ga, but that of sentence

(4) Mitī o/ga arukitai.
    street walk-want
    'I want to walk down the street.'

is marked with o in the dialect we are concerned with here.
I try to demonstrate in this paper that the relational network for sentences having locative NP-\(\text{O}\) constructions and motion verbs is distinct from that of ordinary transitive \(\text{O-V}\) constructions; in these locative structures the NP in question is an advancee which is an initial oblique (OBL) that advances to direct object (2). Sentence (1) would thus be represented in the following way:

(5)

\[
\begin{array}{c}
\text{aruku} \\
\text{Unspec} \\
\text{miti}
\end{array}
\]

2.0 \textit{Miti o} as an Advancee

In this section, I present evidence to show that the \(\text{O}\)-marked adjunct of a motion verb bears an OBL-relation in the initial stratum, and advances to a 2-relation in its relational network. I begin by showing ways in which this adjunct behaves as a direct object, and then cite instances in which it fails to do so.

2.1 \textit{Miti o} as a direct object

This section contains arguments in support of the final-2 status of accusatively marked locative NPs, such as \textit{miti o} in (1).

2.1.1 \(\text{O}\) case marking

The first reason for characterizing the \(\text{O}\)-marked adjunct of a motion verb as a 2-term is that it is marked by the postposition \(\text{O}\). This could be stated as the following rule:

\[
\text{CASE MARKING WITH } \text{-O}
\]

Mark with the case marker \(\text{O}\) any NP that heads a final 2-arc.

Any grammar of Japanese which sought to describe the locative adjunct of a motion verb as heading any final arc other than a 2-arc would automatically complicate the rule for the distribution of case marker \(\text{O}\). In such circumstance, \(\text{O}\) would need to be specified as marking:
A) final direct objects
   B) final obliques that designate locus of movement for motion verbs

Although such a specification could readily be made, it does complicate the grammar. Thus, unless counterevidence can be shown, the _o_ marking of an NP constitutes an argument that it heads a final 2-arc.

2.1.2 Passivization

It has been variously claimed that the _o_-marked adjuncts of motion verbs do not passivize, and are thereby structurally distinguishable from the direct objects of transitive verbs. Thus, for example, the following sentence is ungrammatical.

(6) *Kono miti ga Taroo ni arukareta.
    this road NOM Taroo DAT walk-PASS-PERF
    'This road was walked by Taroo.'

It has been claimed, most recently by Jacobsen [1982:47], that an _o_-marked nominal cannot passivize unless it is assigned the semantic role of 'patient'. This, he claims, accounts for the fact that the _o_-marked nominal of a motion verb cannot passivize, and predicts the ungrammaticality of (6). However, we find it to be the case that, for speakers who reject (6) as ill-formed, the animate object of a transitive verb is equally unable to undergo 2-1 passivization. Thus, (7) is, at best, highly questionable.

(7) ??Kono hon ga Taroo ni yomareta.
    this book NOM Taroo DAT read-PASS-PERF
    'This book was read by Taroo.'

Such constructions appear to be far more acceptable when the initial subject is indefinite. The following sentence is acceptable.

(8) Kono hon ga ooku no hito ni yomareta.
    this book NOM many POS people DAT read-PASS-PERF
    'This book was read by many people.'

However, in such cases, the _o_-marked NP of a motion verb may also be passivized.

(9) Kono miti ga ooku no hito ni arukareta.
    this road NOM many POS people DAT walk-PASS-PERF
    'This road was walked on by many people.'

Due to the animacy constraint on passivization, we would not want to compare the _o_-marked locative NPs of motion verbs (being invariably [-animate]) with unrestrictedly passivizable [+animate] objects of transitive verbs. However, when the performance of
these locative NPs is compared with that of similarly [-animate] direct objects of transitive verbs, we find that they are identically restricted with respect to their ability to appear in -rare (passive) constructions. I, therefore, contend that passives such as (9) should be taken as evidence for the final 2-hood of the locative NP miti o in (1).

2.1.3 o/ga alternation in potentials

The o/ga alternation exhibited by the direct objects of potential constructions is another phenomenon which provides evidence that locatives marked by o are advancees to 2. Descriptively speaking, the particle o, marking the direct object of a transitive verb in these constructions, is optionally replaced by ga. Thus, we find both of the following sentences to be equally acceptable:

(10) Tanaka-san ga kono hon o yomeru.
    Mr. Tanaka NOM this book ACC read-able
    'Mr. Tanaka can read this book.'

(11) Tanaka-san ni kono hon ga yomeru.
    Mr. Tanaka DAT this book NOM read-able
    'Mr. Tanaka can read this book.'

The same alternation occurs freely with verbs of motion, as in the following:

(12) Tanaka-san ga kono miti o arukeru.
    Mr. Tanaka NOM this street ACC walk-able
    'Mr. Tanaka can walk down this street.'

(13) Tanaka-san ni kono miti ga arukeru.
    Mr. Tanaka DAT this street NOM walk-able
    'Mr. Tanaka can walk down this street.'

Inasmuch as this property of uncontroversial 2-hood is exhibited by the adjuncts of motion verbs, it constitutes an additional argument for their final 2-hood.

This picture becomes clearer when potentials with the case marking shown in sentences (11) and (13) are viewed as monoclausal inversion constructions. Inversion, which is 1-3 demotion, has been motivated for a number of different languages, including Georgian [Harris (1983)], Italian and Quechua [Perlmutter (1979)], and Choctaw [Davies (1981)]. In a forthcoming paper, I will argue that, following the inversion of the initial 1, the NP heading an initial 2-arc undergoes 'unaccusative advancement' and bears a final 1-relation to the predicate. I would thus ascribe to sentence (13) the following relational network:
This analysis explains not only the o/ga alternation, but the case marking of the initial subject NP as well. The initial subject would be expected to behave as a Working 1, and the initial object as a final 1, when the latter is marked by the ga postposition.6

2.1.4 Quantifier float

Quantifier floating in Japanese is held to be sensitive to final grammatical relations. Specifically, "a quantifier can be extracted only from subject and direct object NPs" [Matsuoka (1979:228)]. A more precise statement of the rule would maintain that quantifiers may be floated only from final 1s and 2s. This fact is attested to by passive constructions, wherein the 1-chômeur cannot float a quantifier. In the following sentence, since tomodati heads a final 1-arc it is eligible to float the quantifier, san-nin, while hito, although heading an initial 1-arc, is not. Thus, the sentence is unambiguous:

(15) Tomodati ga hito ni san-nin * korosareta.
friend NOM person DAT three-counter kill-PASS-PERF
'Three friends were killed by a person.'
NOT 'A friend was killed by three people.'

This fact is further illustrated in the following examples. Hon o, the 2 of a monostratal clause, may float a quantifier, while hon de, which is neither a 1 nor a 2, cannot:

(16) Hon o issatu yomimasita.
book ACC one-volume read-PERF
'I read one book.'

(17) *Hon de issatu yomimasita.
book LOC one-volume read-PERF
'I read in one book.'
Such is also the case with intransitive motion verbs. While a locus NP marked by de expectedly does not float a quantifier, one marked by o does. Sentence (18) cannot receive the second interpretation given here:

(18) Kooen de hutatu toorimasita.
    park LOC two pass through-PERF
    'I passed through two (of s.t.) in the park.'
    NOT 'I passed through two parks.'

while sentence (19) can.

(19) Kooen o hutatu toorimasita.
    park ACC two pass through-PERF
    'I passed through two parks.'

Thus, the performance of locative NP-o with respect to quantifier floating confirms its status as a final 2.

2.2 Miti o as an oblique

Having thus demonstrated that the o-marked locative must be said to head a final 2-arc in its relational network, I now point out ways in which it appears not to reflect initial 2-hood.

2.2.1 O/Ga alternation with -tai desideratives

Optional o/ga marking on the direct objects of desiderative constructions is a phenomenon which provides some evidence that an o-marked locative NP does not bear an initial 2-relation to a motion verb. The case-marking alternations in (20) and (21) are equally acceptable:

(20) Hon ga yomi-tai.
    book NOM read-want
    '[I] want to read a book.'

(21) Hon o yomi-tai.
    book ACC read-want
    '[I] want to read a book.'

However, if a motion verb is the predicate of a sentence of this kind, the ga-marked alternate is significantly less acceptable:

(22) Miti ?ga aruki-tai.
    road NOM walk-want
    '[I] want to walk down the street.'
(23) Miti o aruki-tai.
    road ACC walk-want
    '[I] want to walk down the street.'

It is beyond the scope of this paper to argue the structure of desiderative constructions, which I will distinguish from that of potentials in a forthcoming paper. However, the failure of locative NPs to behave as monostatal 2-terms constitutes evidence that they are distinguished structurally from ordinary 2s. I now argue for their status as initial obliques.

2.2.2 Object Honorification

Object honorification is described by Shibatani (1973) [in Ueda [1980:191]] as being a rule that

"converts the verb of the sentence to the infinitive form accompanied by the discontinuous morpheme 'o...su' when the direct or indirect object of the sentence refers to 'a person socially superior to the speaker.'"\(^7\)

Actually, for some speakers, it is possible to invoke this construction when the relevant object-term designates something associated with the honored person. The following sentence is an example:

(24) Watakusi ga Otani-sensei no hon o oyomi-itasimasita.
    I NOM Prof.Otani GEN book ACC read-HON-PERF
    'I read Professor Otani's book [+hon].'

While one may show respect to Professor Otani's book, when saying that one has read it, one may not do the same for his flower garden when saying that one has passed through it. The NP marked by o cannot occur with Object Honorification when the main verb is a verb of motion, as in the following:

(25) *Watakusi ga Otani-sensei no niwa o otoori-itasimasita.
    I NOM Prof.Otani GEN garden ACC pass-HON-PERF
    'I passed through Professor Otani's garden [+hon].'

The fact that the NP-o of motion verbs cannot trigger Object Honorification becomes significant if we consider the following condition as necessary to trigger Object Honorification:

(26) Object Honorification Condition

Object Honorific can be triggered only by an NP that heads an INITIAL object arc.\(^8\)

This formulation is supported by the performance of 1-3 demotees of inversion constructions.
Object Honorification may apply to the 3-term of a monostratal clause, as in

(27) Boku ga sensei ni hon o oyomi-itasimasita.
    I NOM Professor DAT book ACC read-HON-PERF
'I read a book to the Professor [+hon].'

We find crucial evidence for the necessary initial object-hood of the adjunct that triggers Object Honorification in the performance of what have been described by Perlmutter (1979) as "inversion nominals". He argues that an NP undergoing 1-3 deomtion will behave "not like a 3 but like a 1 with respect to honorifics," and shows that it can trigger Subject Honorification. I would add, relevant to this argument, that these nominals cannot trigger Object Honorification, as the following example demonstrates:

(28) *Sensei ni Taro no hanasi ga owakari-itasimasita.
    Professor DAT Taro GEN speech NOM understand-HON-PERF
'The professor [+hon] understood what Taro said.'

Although sensei ni, the inversion nominal, is a final 3 in this sentence, it is not able to trigger Object Honorification, because it is not an INITIAL 3.

I take the performance of 1-3 demotees as motivation for the condition on Object Honorification stated in (26). Thus, the failure of a locative NP to trigger the Object Honorific when it occurs with a motion verb indicates that it behaves like other non-initial objects with respect to this phenomenon.

3.0 Conclusion

I have presented several arguments for the final 2-hood of o-marked locative NPs of intransitive motion verbs. They are the following: 1) its ability to float a quantifier, 2) its ability to appear in -rare constructions as well as any other [-animate] object nominal, 3) its ability to receive ga case marking in -eru potential constructions and, 4) the fact that it receives accusative case marking in non-specialy inflected constructions. I would claim that there is sufficient evidence to conclude that, in the RN of the sentence:

(29) Miti o aruku.
    street ACC walk
'I will walk down a street.'

miti-o definitely heads a final 2-arc. Based, further, upon the evidence presented here, with regard to the Object Honorific, it can be argued that miti does not head a 2-arc in the initial stratum. I therefore propose that the NP miti be analyzed as an
initial OBL-term that advances to 2, and would ascribe the following relational network to sentence (29):

(30)

The foregoing analysis adequately accounts both for ways in which o-marked locatives behave as 2s and for ways in which they do not.

4.0 Epilogue: Double-o constructions

In Japanese, causative constructions are formed by the verbal inflection -sase. These causatives are taken to be bi-clausal constructions, in which the suffix -sase is the predicate of the higher clause and the inflected verb stem the predicate of the lower clause [Kuno [1973:295-8]]. The subject of the lower clause may be marked by either o or ni, in some, but not all, causative constructions. It has been pointed out by Kuroda [1965:36-7] that the alternation between o and ni marking of the complement subject is only possible when the complement verb is intransitive. This alternation reflects a semantic distinction, with the o causative having the meaning 'Y made X do something', and the ni causative meaning 'Y let X do something'. In the ni causative, the referent of X is understood as being a potential controller of the action specified by the complement verb, and is thus required to be [+animate].

(31) Mary wa John ni hatarakaseta.
    TOP DAT work-CAUS-PERF
    'Mary let John work.'

(32) Mary wa John o hatarakaseta.
    TOP ACC work-CAUS-PERF
    'Mary made John work.'

When the complement verb is transitive, its subject cannot be marked by o, and the semantic distinction exhibited by the two types of intransitive causatives is collapsed in the transitive ni causative, which is ambiguous in this regard. The following examples illustrate this constraint:
(33) Mary wa John ni hon o yomasete.
    TOP DAT book ACC read-CAUS-PERF
'Mary made/let John read a book.'

(34) *Mary wa John o hon o yomasete.
    TOP ACC book ACC read-CAUS-PERF

The inadmissibility of (34) was explicitly stated by Shibatani [1973:343-4] in the following surface structure constraint:

"only one N-o can occur in a sentence that has only one verb (provided that the sentence is not derived via conjunction reduction or gapping), and as a consequence if a one-verb sentence has two N-o's the first must turn to N-ni."

However, it has been noted by Poser (1983) and Kuroda (1983), that there are, in fact, constructions which violate this constraint and appear with two o-marked NPs. These constructions are always causatives, and usually involve motion verbs. Their acceptability is enhanced if the locative NP is extraposed to the left of the topic. The following constructions are thus allowable:

(35) Yoru no haiwei o kare wa kuruma o hasiraseta.
    night GEN hwy ACC he TOP car ACC drive-CAUS-PERF
'He drove the car down the highway at night.'

(36) Kono hooru o Taroo wa muriyari senpai o arukaseta.
    this hall ACC Taroo TOP forcibly senior ACC walk-CAUS-PERF
'Taroo forcibly made his senior walk down this hall.'

If the notion "one-verb", expressed in Shibatani's surface structure constraint is taken to mean 'one predicate', then (35) and (36) would not be ruled out by it, since they are bi-clausal constructions. However, in that case the constraint no longer explains the ill-formedness of (34), which is a bi-clausal construction as well. We must therefore attribute the ill-formedness of (34) to the fact that its downstairs clause is finally transitive, as opposed to (35) and (36). A theoretical formulation of these facts would state that, in Japanese, the downstairs 1 (subject) of a transitive clause comes upstairs heading a 3-arc (indirect object). Noting that the downstairs clauses of (35) and (36) are initially intransitive, we can further claim that they have a final intransitive stratum as well and that the OBL-2 advancement assumed for the locative nominals must therefore occur in the upstairs clause. Downstairs OBL-2 advancement of the locative NP would produce a transitive final stratum in the downstairs clause, and result in an obligatory ni causative, as has been observed for all other transitive complements. The following RN is thus
proposed as representing the structure of sentences (35) and (36):

(37)

\[
\begin{array}{c|cc}
1 & 2 & \text{OBL} \\
1 & \text{CHO} & 2 \\
& & 1 & \text{OBL}
\end{array}
\]

The hypothesis that OBL-2 advancement occurs in the upstairs clause is further reinforced by the fact that the double-o causatives in question can alternate with ni causatives, and that this alternation is consistent with the semantic parameters typical of downstairs-intransitive causative unions. The fact that this alternation takes place in a manner consistent with that of all other downstream-intransitive constructions leads to the conclusion that OBL-2 advancement cannot have taken place downstairs to produce a transitive final stratum in that clause. The following examples, taken together with (35) and (36), illustrate the alternation that we expect in constructions in which the downstairs clause is intransitive.

(38) ?Yoru no haiwei o kare wa kuruma ni hasirasetan.
    night GEN hwy ACC he TOP car DAT drive-CAUS-PERF
    'He drove the car down the highway at night.'

(39) Kono hooru o Taroo wa muriyari senpai ni arukaseta.
    this hall ACC Taroo TOP forcibly senior DAT walk-CAUS-PERF
    'Taroo forcibly made his senior walk down this hall.'

The structures of sentences (38) and (39) are taken to be represented by the following RN:

(40)

\[
\begin{array}{c|cc}
1 & \text{CHO} & \text{OBL} \\
1 & \text{CHO} & 2 \\
& & 1 & \text{OBL}
\end{array}
\]

If OBL-2 advancement for sentences (35) and (36) takes place upstairs, as sentences (38) and (39) would lead us to conclude, then we would now predict that the downstairs final 1, which comes upstairs as a 2, is then put 'en chômeur' by the advancement of the locative NP. Thus, in sentence (35), \text{kuruma o} is predicted to be a final 2-chômeur and \text{yoru no haiwei o} is predicted to be a final 2.

If what we have claimed here is indeed the case, then we would hope to be able to demonstrate that the NP \text{kuruma o} of sentence (35) is actually a final 2-chômeur. It has been demonstrated that
passive chômeurs in Japanese can neither relativize nor float quantifiers [Perlmutter (1979)]. It therefore might be a reason-
able conjecture that 2-chômeurs can not accede to these phenomena
either. Since passive chômeurs (1-CHO) cannot trigger Subject
Honorification, might it be the case that object chômeurs would
not trigger Object Honorification either? Finally, the question
of whether one or both of the o-marked NPs can passivize may shed
light on their relational status. In the following discussion I
will demonstrate that all the data provided by these diagnostics
are compatible with the analysis given here, and that there are,
additionally, crucial data which provide further confirmation of
the upstairs advancement posited for the locative NP.

4.1 Relativization and cleft formation

Relativization and cleft formation, which seem to entail simi-
lar restrictions, are held, in Japanese, to be inaccessible con-
structions for final chômeurs [Otsuka (1980)]. Although it is not
clear whether this restriction in Japanese is ultimately tenable,
I will assume it for the sake of this discussion. Thus, we find
that the advancement chômeur in a direct passive construction can-
not be relativized. The chômeur Jiroo ni of the passive sentence
(41) cannot relativize or form a cleft.

(41) Taroo ga Jiroo ni yobareta.
     NOM      DAT call-PASS-PERF
     'Taroo was called by Jiroo.'

(42) *Taroo ga yobareta Jiroo . . .
     NOM      call-PASS-PERF
     'Jiroo by whom Taroo was called . . .'

(43) *Taroo ga yobareta no wa Jiroo desu.
     NOM      call-PASS-PERF PRO TOP is.
     'It is Jiroo who Taroo was called by.'

Although this evidence might suggest that no chômeurs can rela-
tivize, the fact is that the assumed 2-chômeur of sentence (36)
can both relativize and form a cleft sentence. These facts need
not be taken as counterevidence to Otsuka's condition, if that
condition is interpreted as being restricted to mono-clausal con-
structions. Otsuka, in his formulation of the condition, is
accounting exclusively for advancement chômeurs, and not for chôme-
urs created by clause union. I would revise his proposed condi-
tion by stating, more generally, that nominals which head a final
term arc in ANY clause are accessible to relativization and cleft
formation. Thus, since the RN proposed for example (36) is a
clause union, the 2-chômeur in question, senpai, bears a final
1-relation in the downstairs clause, while the nominal hooru heads
a final 2-arc upstairs. The condition for relativization and
cleft formation is thereby satisfied by both both arguments, and,
as expected, we find that they can in fact appear in these con-
strucitons:

(44) Taroo ga muriyari senpai o arukasetara no wa
    NOM forcibly senior ACC walk-CAUS-PERF hall
    'The hall down which Taroo forcibly made his senior walk . . .'

(45) Kono hooru o Taroo ga muriyari arukasetara senpai . . .
    this hall ACC NOM forcibly walk-CAUS-PERF senior
    'The senior who Taroo forcibly made walk down this hall . . .'

(46) Taroo ga muriyari senpai o arukasetara no wa
    NOM forcibly senior ACC walk-CAUS-PERF PRO TOP

    kono hooru desu.
    this hall is.

    'It is this hall down which Taroo forcibly
    made his senior walk.'

(47) Hooru o Taroo ga muriyari arukasetara no wa
    hall ACC NOM forcibly walk-CAUS-PERF PRO TOP

    ano senpai desu.
    that senior is.

    'It is that senior who Taroo forcibly made walk
    down the hall.'

Thus, we find that relativization/cleft-formation facts on the one
hand are compatible with the analysis, but on the other hand pro-
vide no certain grounds for identifying the 2-chômeur we are look-
ing for here.

4.2 Quantifier floating

It was demonstrated in section 2.1.4 that only final 1s and 2s
may launch a quantifier. However, as has been demonstrated in the
preceding section, 4.1, each of the nominals we are concerned with
here does in fact head a final 1-arc or 2-arc in either the
upstairs or downstairs clause of the Causative Union. In applying
this test to the o-marked arguments of sentence (36), we find,
unsurprisingly, that either may float a quantifier.
(48) Kono hooru o Taroo wa muriyari senpai o san-nin this hall ACC Taroo TOP forcibly senior ACC three-CNT
arukaseta.
walk-CAUS-PERF
'Taroo forcibly made three of his seniors walk down this hall.'

(49) Kono hooru o mittu Taroo wa muriyari senpai o this hall ACC three TOP forcibly senior ACC
arukaseta.
walk-CAUS-PERF
'Taroo forcibly made his senior walk down three of these halls.'

Thus, the facts of Quantifier Floating, while consistent with the analysis being proposed here, provide no evidence which might determine which of the NPs in question is the upstairs 2-chômeur.

4.3 Object honorification

Object honorification (OH) was shown earlier to be triggered only by arguments which head initial object arcs. If the conditions we have proposed in (26) are the necessary conditions for Object Honorification, then we would expect that neither o-marked NP of sentence (36) should be able to trigger OH, since neither heads an initial object arc. Expectedly, Object Honorification is impossible when the locative NP, hooru, is the intended trigger, as in (50) below. However, we find it to be acceptably triggered by the 2 of the union stratum, senpai, which heads an initial 1-arc in the downstairs clause of sentence (51).

(50) *Syatyyo no otaku no hooru o watakusi wa Taroo o co.pres. GEN home GEN hall ACC I TOP ACC
muriyari oarukase-sita.
forcibly walk-CAUS-HON-PERF
'I forcibly made Taroo walk down the hall [+hon] of the company president's home.'
(51) Kono hooru o watakusi wa muriyari senpai o
      this hall ACC I TOP forcibly senior ACC

          oarukase-sita.
          walk-CAUS-HON-PERF

'I forcibly made my senior [+hon] walk down this hall.'

Upon examining the necessary conditions for Object Honorification with respect to causative constructions in general, we find that a slight reformulation of these conditions can be made in terms of "STARTER"10 rather than INITIAL object (this formulation would be no less straightforward than (26) and should have no significance for the mono-clausal constructions discussed earlier in section 2.2.2).11 We find, for example, that the downstairs 1 of a causative construction may trigger OH in the upstairs clause as either a 2 or a 3.12 In the two following examples, senpai o and sensei ni (heading final 2- and 3-arcs respectively) are both initial subjects of their respective complement predicates:

(52) Watakusi wa senpai o oarukase-site moosiwakenai.
      I TOP senior ACC walk-CAUS-HON regret

'I made my senior [+hon] walk and regret [it].'

(53) Watakusi wa sensei ni musume o oyobase-site moosiwakenai.
      I TOP teacher DAT daughter ACC invite-CAUS-HON regret

'I made the teacher [+hon] invite my daughter and regret [it].'

Based on these data, I will revise the Object Honorification Conditions as follows:

(54) Object Honorification Condition

Object Honorific can be triggered only by an NP that heads a STARTER object arc.

Thus, the fact that the locative NP of double-o constructions can never trigger OH would be due to the fact that it is not a STARTER 2 in any clause. This in turn provides strong support for the claim that OBL-2 advancement in these constructions takes place upstairs, and that the RN of sentence (36) is in fact as I have represented it in (37).
4.4 Passive

The passivizability of the o-marked nominals of sentence (36), while appearing prima facie somewhat problematic, actually confirms the analysis proposed here. We find that the subject of the downstairs complement, senpai, is passivizable, while the locative NP, hooru, is not.

(55) Senpai ga Taro o kono hooru o muriyari arukaserareta.
    senior NOM this hall DAT forcibly walk-CAUS-PASS-PERF
    'The senior was forced to walk down the hall by Taroos.'

(56) *Kono hooru ga Taro ni muriyari senpai o
    this hall NOM DAT forcibly senior ACC
    arukaserareta.
    walk-CAUS-PASS-PERF
    'This hall was made the senior forcibly walk down by Taroos.'

Examples (55) and (56) raise distinct questions regarding the interaction of passive, causative union, and OBL-2 advancement. Each of these sentences will be taken up separately below. However, as was pointed out in section 4.0 and supported by evidence in section 4.3, there is reason to claim that OBL-2 advancement takes place only in the upstairs clause. If this were not the case, we would expect to find causative constructions with a downstairs motion verb behaving as downstairs finally transitive clauses, and OBL-2 advances able to trigger phenomena such as Object Honorification.13

If the well-formed sentence (55) were to be accounted for as a passivization of (36), it would involve the advancement to 1 of a 2-CHO [as represented in RN (37)]. Such an RN would be a violation of the Chômeur Advancement Ban [Davies (1981)]. However, I would maintain that sentence (55) need not be accounted for in this way, since there exists a perfectly legitimate RN which can account for this sentence without violating any universal principles. In this RN, presented below as (57), the downstairs subject comes upstairs as a 2 from a downstairs intransitive final stratum. This 2 undergoes 2-1 'passive' advancement, which is followed finally by the OBL-2 advancement of the locative NP. This RN is represented as follows:
The ill-formedness of the locative-passive in sentence (56) would seem to preclude any RN in which this nominal headed a starter 2-arc in the matrix clause. If, for instance, OBL-2 advancement was in the downstairs clause, then the locative NP would head a starter 2-arc in the union stratum. In relational terms, we would then predict it to be no less passivizable than the nominal heading a starter 2-arc in example (55) [represented by the RN (57)]. However, if the ill-formedness of (55) is to be accounted for on relational grounds, then it seems reasonable to propose that the locative NP comes upstairs as an OBL and is an OBL-2 advancee, not a starter 2, in the matrix clause. It has been suggested that the ill-formedness of (56) may be due to the same pragmatic constraints that contributed to the ill-formedness of passives having [−animate] 1-1 advancees and [+animate, +definite] chomeurs, discussed in section 2.1.2. This observation appears to be correct, at least in part. An example, similar to sentence (56), but having a [−animate] downstairs subject NP as well as a [−definite] upstairs subject NP, was found to be questionable, but not necessarily ill-formed.

(58) "Route 95" ga ooku no hito ni kuruma o
NOM many GEN people DAT auto ACC

hasiraserareta.
drive-CAUS-PASS-PERF

'Route 95 was driven down in their cars by many people.'

Whether or not the unacceptability of sentence (56) is entirely due to pragmatic constraints, it is apparent that similar constraints interfere with the passivization of an o-marked locative NP in any construction. Thus, if the matrix clause of sentence (56) were held to have the an RN parallel to that of sentence (6) in section 2.1.2, their ill-formedness would be attributable to the same factors.

4.5 Summation

The facts of Relativization and Quantifier Floating, while not helping to distinguish between the final status of the two o-marked NPs, do not contradict this analysis in any way. On the other hand, a number of facts seem to support the analysis. The
downstairs subject of a motion verb is optionally marked by o or ni in causative constructions in a manner consistent with other intransitive verbs. This fact would confirm the downstairs intransitivity of these constructions. Further, the Object Honorific data, along with the ill-formedness of passives such as (56) as compared with (55), strongly suggest that OBL-2 advancement occurs in the upstairs clause, as I have claimed. Taken together, I would claim that the data are most coherently accounted for by the analysis I have proposed here. The RN of such constructions is thus represented below:

\[
\begin{array}{ccc}
1 & 2 & \text{OBL} \\
1 & \text{CHO} & 2 \\
1 & \text{OBL}
\end{array}
\]

It is significant that the only class of constructions which violate the double-o constraint consist of those in which a 2-arc is generated through clause union, and put 'en chômage' by OBL-2 advancement. Since the only violations of this constraint appear to be constructions having a 2 and a 2-CHO in their final stratum, I would claim that the constraint itself is not properly formulated. Rather than a surface case-marking constraint (which is clearly untenable), it seems that what is actually prohibited is the co-occurrence of two nominals heading 2-arcs in the final stratum. Obviously, this sort of constraint is subsumed under the the universal notion of Stratal Uniqueness and need not be stated. Furthermore, from the assignment of the accusative case-marker o to 2-CHOs, we are led to conclude that rules governing the assignment of the postposition o need refer to pre-final strata, assigning this case marker to all Acting 2s (final 2s and 2-CHOs).

NOTES

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1. The dialect accounted for in this paper freely allows such alternation with ordinary transitive verbs. In more conservative dialects (typically used by persons over forty or fifty), the ga variant is obligatory for ordinary transitive verbs, and very restricted for verbs of motion. Such dialects would only enhance the distinctions outlined here.

2. Jacobsen distinguishes between syntactic phenomena that "bear reference to the more general properties of ," and those, such as passivization, which "require reference to the more specific semantic role of the -marked noun phrase" (i.e., patient).

3. The two sentences correspond, respectively, to what Makino (1975) terms Personal and Impersonal Potentials.

4. I am assuming, in this analysis, the interpretation of 'NP-ga NP-ga V[potential]' given by Kuno [1973:53]. He states that in the sentence

   John ga nihongo ga dekiru.
   John NOM Japanese NOM can

John ga must receive the [+exhaustive listing] interpretation, meaning,

'John (and only John) can speak Japanese.'

I will, therefore, claim that 'NP-ga NP-ga V[potential]' is a marked construction that is relationally identical to the inversion construction 'NP-ni NP-ga V[potential],' and exemplifies the use of the particle ga as a focus marker.

5. In the RN I have given in this presentation, I have assumed a personal inversion construction. Although there are good reasons to think that the structure of Japanese potentials is actually that of impersonal inversion, the issues involved are not relevant to this discussion and will not be pursued here.

6. The relational status of these nominals is confirmed by other diagnostics, which have no bearing on the present discussion and are not pursued here.

7. The discontinuous morpheme o...itasu, used in some of these examples, is a variant of the Object Honorific inflection o...su, which indicates greater deference to the addressee.

8. In order to account fully for the restrictions on the class of constructions which may have the Object Honorific, we might propose an additional condition on the phenomenon:
Object Honorific can be triggered only by an NP that does not head a 1-arc.

The motivation for this condition is provided by 'direct passive' constructions, in which the 2-1 advancee, while an initial object, cannot trigger the Object Honorific. The following sentence is thus ill-formed:

*Sensei ga musume ni oyobi-sareta.
  teacher NOM daughter DAT call-HON-PASS-PERF
  'The teacher [+hon] was invited by my daughter.'

Actually, this second condition might be obviated simply by positing a disjunctive ordering between Subject Honorification (SH) and Object Honorification (OH). If Object Honorification were to apply only after Subject Honorification, and only to constructions that did not meet SH conditions, then the conditions governing the application of OH would be reduced to the one stated in (26).

9. Note that the o causative (35) is preferable to the ni causative (38), and that the ni causative (39) is preferable to the o causative (36). This is consistent with the notion that o causatives correlate semantically with absence of control on the part of the downstairs subject. In the pair (35)-(38), the subject kuruma is [-animate] and not interpretable as a possible controller; thus the question mark before sentence (38).

10. Jeanne Gibson (1980) defines the notion STARTER term in the following way:

    "A nominal a is a starter n of a clause b if a bears the
     n-relation to b at level c_i and there is no c_j, j<i such
     that a bears a relation to b at c_j."

Informally stated, this would mean that a nominal is, for instance, a starter 2 in a given clause if the 2 relation is the first QR that it bears in that clause.

11. For some speakers, there are pragmatic constraints which seem to prohibit any co-occurrence of causative and the Object Honorific. I have, necessarily, based the observations discussed here on data gathered from informants for whom such constructions are possible.

12. The morphological interaction between the causative inflection -sase and the discontinuous OH marker o___-su is a valuable diagnostic in distinguishing between upstairs and downstairs objects. The embedding of -sase within the OH marker [oSTEMs-sase-su] indicates that the OH trigger fulfills the conditions upstairs, while the placement of -sase outside the OH marker [oSTEMs-sase] would indicate that the OH trigger is a downstairs
object. In the first set of examples below, the OH trigger, sensei ni, is a downstairs subject and fulfills the OH conditions only in the upstairs clause. This is reflected in the acceptability of (a) as opposed to (b):

(a) Watakusi wa sensei ni kodomo o oyobase-site moosiwakenai.
    I TOP teacher DAT child ACC invite-CAUS-HON regret
    'I made the teacher [+hon] invite my child and I regret [it].'

(b) *Watakusi wa sensei ni kodomo o oyobi-sasete moosiwakenai.
    I TOP teacher DAT child ACC invite-HON-CAUS regret
    ?'I made the teacher invite my child [+hon] and I regret [it].'

Conversely, in a sentence in which a nominal satisfies the OH conditions downstairs, the proper order of the causative and OH morphemes is reversed. Thus, while (c) appropriately indicates that sensei has triggered OH, the inflection in (d) would force an interpretation in which one's daughter was the trigger:

(c) Watakusi wa musume ni sensei o oyobi-sasete.
    I TOP daughter DAT teacher ACC invite-HON-CAUS-PERF
    'I made my daughter invite the teacher [+hon].'

(d) *Watakusi wa musume ni sensei o oyobi-sita.
    I TOP daughter DAT teacher ACC invite-CAUS-HON-PERF
    'I made my daughter [+hon] invite the teacher.'

13. If OBL-2 advancement took place in the downstairs clause, this would result in a transitive final stratum downstairs. The grammar of Japanese would require the downstairs 1 to come upstairs as a 3. This would presumably be followed by 3-1 'dative passive' (as described by Ueda and Kamei (1978)), or by 3-2-1 advancement. This case is represented by the two alternatives below:

```
A)    B)  
  1 3 2  1 3 2
CHO  1 2 CHO  1 CHO
     1 OBL 1 OBL
     1 2   1 2
```

Dative movement (3-2 advancement) exhibited in the RN labeled (B) is otherwise unattested in Japanese. To propose it, solely to account for the data at hand would appear somewhat ad hoc. RN (B) is therefore rejected as a possible account of the structure. The other alternative, shown in (A), involves direct 3-1 advancement, or 'dative passive'. Some 'dative passives' would appear, prima facie, to be possible in Japanese. In general, those transitive verbs whose one object is both dative and passivizable are
restricted to compound, borrowed verbs, whose internal structure is [OBJ-VERB] and whose VERB is suru ('to do'). However, most non-compound verbs which subcategorize for dative objects, such as au ('to meet'), are unpassivizable. These facts are generally left unexplained, and relegated to the lexicon [Kuno (1973), and Ueda and Kamei (1978)]. I would propose (and will argue in a forthcoming paper) that 3-1 chômeur-creating advancement is generally prohibited in Japanese, and that the seeming 'passivization' that occurs with compound verbs would be best accounted for in another way. The structure represented in RN (A) would thereby be ill-formed for Japanese.


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THE IMPERSONAL EXTRAPOSITION CONSTRUCTION IN GERMAN: 
EVIDENCE FOR THE DEMOTION ANALYSIS OF IMPERSONAL PASSIVES

Sarah M.B. Fagan

0. Introduction

Two competing analyses of impersonal passives have been proposed in Relational Grammar: the advancement analysis (Perlmutter and Postal, to appear a; henceforth P&P (a)) and the demotion analysis (Comrie 1977; Keenan 1975). Under the advancement analysis, every impersonal passive contains a dummy 2 which co-occurs with a 1 in some stratum and advances to 1 in the following stratum (1b). Under the demotion analysis, a 1 in some stratum is simply demoted to chômeur in the following stratum; in the version proposed here for German impersonal passives, the 1 is demoted to chômeur with no simultaneous or subsequent promotion of a nominal to 1 (1c).

(1) a. Es wird getanzt.
   it is danced
   'It is danced.'

b. 

![Diagram](image)

c. 

The choice between these analyses has consequences for a number of proposed universals; only the advancement analysis is compatible with (a) the universal characterization of passive as 2-1 advancement, (b) the Motivated Chômage Law (a nominal can acquire the chômeur relation only when retention of its previous relation would violate the Stratal Uniqueness Law (no two nominals can bear the same term relation in the same stratum)), and (c) the Final 1 Law (every basic clause has a final 1). In support of the advancement analysis, P&P (a) provide one argument based on reflexive impersonal passives and three involving joint predictions made by the advancement analysis and the 1-Advancement Exclusiveness Law (1AEX; no clause may contain more than one advancement to 1). They conclude that it must be adopted as a universal characterization of impersonal passives, and that
universals (a)-(c) can therefore be maintained.

P&P (a) note that the predictions made by the advancement analysis and the 1AEX could be duplicated under the demotion analysis if the 1AEX could be replaced by a different universal, the 1-Chômeur Initiality Law (1CIL; non-initial 1s cannot be demoted to chômeur). They argue, however, that the 1CIL cannot be maintained as a universal, in view of the analysis of the impersonal extrapolation construction in Dutch and German proposed by Perlmutter and Zaenen (to appear; henceforth P&Z):

(2) a. Er werden viele huizen door de terroristen verwoest.
there were many houses by the terrorists destroyed 'There were many houses destroyed by the terrorists.'

b. Es wurden viele Häuser von den Terroristen vernichtet.
there were many houses by the terrorists destroyed 'There were many houses destroyed by the terrorists.'

P&Z argue that er and es in (2) are final 1s, and that the underscored NPs are chômeurs; thus, non-initial 1s (e.g., vele huizen in (2a), an initial 2) may become chômeurs, contrary to the 1CIL. P&Z base most of their discussion on Dutch, and do not motivate their analysis in any detail for German.

This paper argues that P&Z's analysis of the impersonal extrapolation construction cannot in fact be motivated for German. The es in (2b) is argued to be a place-holder with no relational status, and the underscored NP a final 1. Moreover, an alternative analysis of Dutch constructions like (2a) is available which does not violate the 1CIL. It is argued that er in (2a) is an adverb, and the underscored NP a final 1. In view of the fact that alternative analyses are available for (2a) and (2b) which do not violate the 1CIL, there may be alternative analyses for other apparent counterexamples to the 1CIL discussed by P&Z. The 1CIL therefore cannot be ruled out as a universal, and, consequently, the demotion analysis of impersonal passives cannot be dismissed.

A second argument bears more directly on the analysis of impersonal passives in German. As claimed above, es in the impersonal extrapolation construction is a place-holder, not a final 1. If one argues that the es in impersonal passives is a final 1 (as required under the advancement analysis), one is unable to capture obvious parallels in the distribution of es in both constructions. Thus it is concluded that es has the same (non-relational) status in both constructions. The demotion analysis is compatible with this treatment of es, and allows one to avoid other ad-hoc assumptions necessary under the advancement analysis as well. In addition, P&P's argument based on reflexive
impersonal passives is argued to be incorrect and thus invalid as support for the advancement analysis. The demotion analysis therefore remains superior to the advancement analysis in its ability to account for impersonal passives in German.

Finally it is suggested that the viability of the demotion analysis of impersonal passives does not necessarily depend on the correctness of the 1CIL, since the effects of the 1CIL in the crucial cases can be duplicated by reasonable assumptions about semantic restrictions.

1. The Impersonal Extrapolation Construction
1.1.1. P&Z's Three Arguments in Support of their Analysis

P&Z provide essentially three arguments in support of their claim that er and es in (2) are final 1s and that the underscored NPs, which they refer to as pivot nominals, are chômeurs. One argument in support of their analysis is based on evidence from word order. Because er in the Dutch construction has the distribution of final 1s (de kinderen and hij in the (a)-sentences in (3-7)), whereas the pivot (twee kinderen and niemand in the (b)-sentences in (3-7)) does not, P&Z conclude that this supports their claim that er is a final 1 and the pivot a final chômeur (P&Z):

(3) a. De kinderen speelden in de tuin vandaag.
    the children played in the garden today
    'The children played in the garden today.'

    b. Er speelden twee kinderen in de tuin vandaag.
    there played two children in the garden today
    'There played two children in the garden today.'

(4) a. Vandaag hebben de kinderen in de tuin gespeeld.
    today have the children in the garden played
    'Today the children played in the garden.'

    b. Vandaag hebben er twee kinderen in de tuin
today have there two children in the garden
    gespeeld.
    played
    'Today there played two children in the garden.'

(5) a. Spelen de kinderen in de tuin?
    play the children in the garden
    'Are the children playing in the garden?'
b. Spelen er twee kinderen in de tuin?
   play there two children in the garden
   'Are there two children playing in the garden?'

(6) a. In welke tuin spelen de kinderen?
   in which garden play the children
   'In which garden are the children playing?'

b. In welke tuin spelen er twee kinderen?
   in which garden play there two children
   'In which garden are there two children playing?'

(7) a. Het verwondert me dat hij gisteren niet gekomen is.
   it astonishes me that he yesterday not come is
   'It astonishes me that he didn't come yesterday.'

b. Het verwondert me dat er gisteren niemand gekomen is.
   it astonishes me that there yesterday no one come is.
   'It astonishes me that there came no one yesterday.'

A second argument for the final non-1hood of the pivot is based on evidence from relative clause extraposition in Dutch. One type of extraposition, which requires no special stress pattern, is not possible from final 1s, although it is possible from final non-1s:

(8) a. Iemand heeft verleden week beweerd, die er geweest is, dat het leven in Mexico nog altijd goedkoop is.
   someone has last week claimed who there been is, that the life in Mexico still cheap is
   'Someone claimed last week, who was there, that the cost of living in Mexico is still low.' (P&Z)

b. Dit verhaal heeft de mensen ervan overtuigd, die uit Alabama kwamen, dat ze gelijk hadden.
   this story has the people thereof convinced who from Alabama came that they right had
   'This story has convinced the people who came from Alabama that they were right.' (de Haan 1979:45)

Because this type of extraposition apparently is possible from the pivot nominal in the impersonal extraposition construction, P&Z conclude that this provides an argument that the pivot is not a final 1:
(9) Er heeft iemand verleden week beweerd, die er geweest is, dat het leven in Mexico nog altijd goedkoop is. 'There claimed someone last week, who was there, that the cost of living in Mexico is still low.' (P&Z)

The third argument for the final non-1hood of the pivot nominal in Dutch is based on the fact that non-subject (prepositionless) nominals in initial position in main clauses receive some kind of emphasis or focus. Because the pivot nominal in preverbal position does have emphasis or focus:

(10) Twee kinderen spelen er in de tuin. 'There are two children playing in the garden.' (P&Z)

P&Z conclude that this supports their claim that the pivot is not a final 1.

1.1.2. P&Z's Arguments Cannot be Applied to German

This section demonstrates that P&Z's arguments based on word order, relative clause extraposition, and emphasis of sentence-initial nominals cannot be used to support their claim that es in (2b) is a final 1 or that the pivot nominal (viele Häuser) is a chômeur.

The German word order facts show that es does not have the distribution of final 1s, whereas the pivot does. The sentences in (11) illustrate the various positions in which final 1s may appear:

(11) a. Die Kinder spielten heute im Garten. 'The children played in the garden today.'

b. Heute haben die Kinder im Garten gespielt. 'Today the children played in the garden.'

c. Spielen die Kinder im Garten? 'Are the children playing in the garden?'

d. In welchem Garten spielen die Kinder? 'In which garden are the children playing?'
e. Es verwundert mich, daß er gestern nicht gekommen ist.
It astonishes me that he yesterday not come

'It astonishes me that he didn't come yesterday.'

The *es of the impersonal extraposition construction, unlike the 1s in (11), may appear only in preverbal position in declarative main clauses:

(12) a. Es spielten zwei Kinder heute im Garten.
there played two children today in-the garden
'There played two children in the garden today.'

today have there two children in-the garden played
'Today there played two children in the garden.'

c. *Spielen es zwei Kinder im Garten?
play there two children in-the garden
'Are there two children playing in the garden?'

d. *In welchem Garten spielen es zwei Kinder?
in which garden play there two children
'In which garden are there two children playing?'

e. *Es verwundert mich, daß es gestern niemand gekommen ist.
it astonishes me that there yesterday no one come

'It astonishes me that no one came yesterday.'

Preverbal position in main clauses is not limited to or characteristic of subject position. Prepositional phrases, adverbs, adjectives, non-finite verb forms, and non-subject NPs — as well as subject NPs — may appear preverbally:

(13) a. Auf den Tisch hat er es gelegt.
on the table has he it laid
'He laid it on the table.'

b. Heute geht er in die Stadt.
today goes he into the city
'Today he's going into the city.'

c. Glücklich ist sie.
happy is she
'She's happy.'
d. Geschrien hat er.
screamed has he
'He screamed.'

e. Romane liest sie gern.
novels reads she gladly
'She likes to read novels.'

f. Dem Alten hat er geholfen.
the old man has he helped
'He helped the old man.'

The fact that es may appear in preverbal position in main clauses therefore cannot be used as evidence to support the claim that it is a final 1. Moreover, because it cannot appear in any of the other positions in which a final 1 can appear (cf. (11b-e)), this suggests that it is not a final 1.

The pivot nominal (zwei Kinder in (12a)), on the other hand, appears immediately after the finite verb, i.e., in the position of a final 1 in a declarative main clause when another element occupies preverbal position. Thus word order provides no evidence to support the claim that the pivot nominal is not a final 1.

Relative clause extraposition in German also fails to provide a test for the final non-1hood of the pivot nominal. In German, relative clause extraposition is not sensitive to the grammatical relation held by the head of the relative clause. According to Loetscher (1972), it is dependent on the position of the head NP, stress, and topic-comment considerations. Put simply, in order for a relative clause to be extraposed, it must be stressed. Thus extraposition is possible from the final 1 in (14a), but not in (14b) (Loetscher 1972:53):

(14) a. Jene Leute bringen es am weitesten, die am besten
does people bring it the furthest who the best
betrügen können.
decieve can
'Those people get the furthest who can deceive the best.'

b. *Die Rennfahrer haben alle mindestens $10,000 gewonnen,
the racers have all at least $10,000 won
die an diesem Rennen teilgenommen haben.
who in this race take part have
'The racers all won at least $10,000 who took part in this race.'

Although (14b) is roughly analogous to the type of extraposition
in (8a), the constraint against this type of extraposition in German is not limited to final 1s, but applies to all nominals:³

(15) a. *Ein Buch möchte ich nicht in die Hand nehmen, das a book would like I not in the hand take that gebraucht ist.
used
'I wouldn't like to get a book that's used.'

b. *Dem Jungen sollte sie das Buch nicht kaufen, der es for-the boy should she the book not buy who it sowieso nicht lesen wird.
anyway not read will
'She shouldn't buy the book for the boy who won't read it anyway.'

Because relative clause extraposition in German does not differentiate between final 1s and final non-1s, it cannot be used as a test for final non-1hood and thus can provide no evidence to support the claim that the pivot nominal in the impersonal extraposition construction is not a final 1.

Likewise, emphasis of sentence-initial nominals provides no evidence to support the claim that the pivot in German is not a final 1. Because the pivot nominal in Dutch receives emphasis in preverbal position, as do other non-subject nominals, P&Z conclude that it is not a final 1. In German, however, the pivot can never appear sentence-initially:

(16) *Zwei Kinder spielten es im Garten.
two children played there in-the garden
'There played two children in the garden.'

Thus P&Z's argument based on emphasis of sentence-initial nominals cannot be applied to German.

The above arguments therefore provide no support for the claim that es in the German impersonal extraposition construction is a final 1 or that the pivot is a chômeur. There is evidence, however, in support of the analysis proposed here, namely that the pivot is a final 1 and es a place-holder.

1.2. Evidence for Pivot as Final 1 and es as Place-Holder

As shown above (section 1.1.2.), evidence from word order is compatible with the claim that the pivot is a final 1. Verb agreement and case marking facts in the impersonal extraposition construction also support this analysis. The pivot nominal determines verb agreement (if the pivot is singular, the verb is
singular; if it is plural, the verb is plural; cf. (17a,b)) and exhibits nominative case marking, both characteristics of final 1s.\(^4\)

(17) a. Es spielt ein Junge im Garten.
   there plays a boy-NOM in-the garden
   'There's a boy playing in the garden.' (P&Z)

   b. Es spielen zwei Jungen im Garten.
   there play two boys in-the garden
   'There are two boys playing in the garden.'

Evidence from word order supports the claim that *es* has no relational status, but is simply a place-holder. First of all, a constraint on word order requires that the finite verb in a declarative main clause be in second position:

(18) *Spielt ein Junge im Garten.
    plays a boy in-the garden
    'A boy is playing in the garden.'

Secondly, there is a tendency in German, as in many other languages of the world (Thompson 1978), for rhematic material to appear as far rightward as possible in a sentence (Loetscher 1972:51). If, in a declarative main clause, the entire assertion is to be viewed as rheme, all constituents appear as far to the right as possible, leaving the preverbal (thematic) position empty. When there is no element to occupy this position, *es* is inserted to satisfy the verb-second constraint and insure the grammaticality of the clause.\(^5\) In the impersonal extraposition construction, theme-rHEME considerations require the preverbal slot to be empty of any meaningful constituent, thus *es* must be inserted in order for the construction to be grammatical.

If one assumes that *es* is simply a place-holder in the impersonal extraposition construction, its distribution is automatically accounted for. *Es* appears only sentence-initially in declarative main clauses because its function is to fill the preverbal slot and insure that the finite verb is in second position. It does not appear in subordinate clauses, for example, because the verb-second constraint does not apply in such clauses (the verb appears in final position; cf. (12e)). Its absence in other clause types can also be explained as a direct result of its place-holder status. If one argues, as do P&Z, that *es* is a final 1, a rule must be added to the grammar stating the restrictions on the distribution of this particular 1. Such a rule is unmotivated, and entails a complication of the grammar.
In short, the analysis proposed here for the impersonal extraposition construction in German is superior to P&Z's analysis. Unlike P&Z's analysis, the analysis here can be motivated: it does not require the addition of any rules to the grammar, and it provides an account for the distribution of es. Consequently, impersonal extraposition in German cannot be viewed as counter-evidence to the 1CIL. Under the analysis here, (2b) and its counterpart without impersonal extraposition, (19), differ with respect to word order (the word order differences signal theme-rheme differences) and the presence of es, a sentence constituent with no grammatical relation (GR), but not with respect to the GRs held by their nominals:

(19) Viele Häuser wurden von den Terroristen vernichtet.
    many houses were by the terrorists destroyed
    'Many houses were destroyed by the terrorists.'

Because impersonal extraposition in German does not alter the GR of any nominal in a given clause, it does not demote any nominal to chômeur, and thus cannot be used to show that a non-initial 1 (e.g., viele Häuser in (2b), an initial 2) can become a chômeur; i.e., it does not violate the 1CIL.

1.3. Reanalysis of the Dutch Facts

This section demonstrates that an alternative to P&Z's analysis of impersonal extraposition in Dutch is available which also does not violate the 1CIL. P&Z argue that evidence from word order, relative clause extraposition, and emphasis of sentence-initial nominals supports their claim that er in (2a) is a final 1 and the pivot a chômeur. In section 1.3.1., however, it is shown that evidence from word order also supports the claim that er is an adverb. In section 1.3.2. it is demonstrated that P&Z's three arguments do not, in fact, provide unambiguous support for the claim that the pivot is not a final 1. Additional arguments are provided in section 1.3.3. which support the analysis proposed here, namely that er is an adverb and the pivot a final 1.

1.3.1. Er not Necessarily a Final 1

Because er appears where final 1s appear, P&Z argue that er is a final 1. Adverbials, however, may appear in exactly the same positions in which er appears:6

(20) a. Op die berg wonen rijke lui.
    on that mountain live rich people
    'On that mountain rich people live.' (Kirsner 1979:106)
b. Er speelden twee kinderen in de tuin vandaag.
there played two children in the garden today
'There played two children in the garden today.' (P&Z)

(21) a. Lang geleden woonden op die berg rijke lui.
long ago lived on that mountain rich people
'Long ago rich people lived on that mountain.'

b. Vandaag hebben er twee kinderen in de tuin
today have there two children in the garden
gespeeld.
played
'Today there played two children in the garden.' (P&Z)

(22) a. Wonen op die berg rijke lui?
live on that mountain rich people
'Do rich people live on that mountain?' (Kirsner
1979:106)

b. Spelen er twee kinderen in de tuin?
play there two children in the garden
'Are there two children playing in the garden?' (P&Z)

(23) a. Wanneer woonden op die berg rijke lui?
when lived on that mountain rich people
'When did rich people live on that mountain?'

b. In welke tuin spelen er twee kinderen?
in which garden play there two children
'In which garden are there two children playing?' (P&Z)

(24) a. Wij weten, dat op die berg rijke lui wonen.
we know that on that mountain rich people live
'We know that rich people live on that mountain.'
(Kirsner 1979:106)

b. Het verwondert me dat er gisteren niemand gekomen
it astonishes me that there yesterday no one come
is
'It astonishes me that there came no one yesterday.'
(P&Z)

Thus evidence from word order is ambiguous with respect to the
status of er: it could be a final 1 or an adverb.
1.3.2. Pivot not Necessarily not a Final 1

Contrary to P&Z's conclusion, evidence from word order does not support the claim that the pivot is not a final 1. The pivot in the (b)-sentences in (20-24), twee kinderen, appears where definite 1s may not:

(25) Kwam door de achterdeur Piet binnen? came by the back door Piet inside 'Did Piet come in by the back door?' (P&Z)

However, indefinite 1s may appear where definite 1s may not, and in fact appear in the same positions in which the pivot appears (cf. rijke lui and twee kinderen in (20-24)). Also, the pivot is indefinite and in general must be indefinite:

(26) Er spelen deze kinderen in de tuin. there play these children in the garden 'There are these children playing in the garden.' (P&Z)

Although the pivot appears where definite 1s do not, one cannot conclude that it is not a final 1; it is simply an indefinite final 1.

Under closer scrutiny, P&Z's arguments based on relative clause extraposition and emphasis of sentence-initial nominals also fail to provide convincing evidence that the pivot is not a final 1. The crucial point in the argument based on relative clause extraposition is P&Z's claim that non-focus extraposition is possible from the pivot in sentences such as (9) (repeated here for convenience), but not from final 1s as in (27).

(9) Er heeft iemand verleden week beweerd, die er geweest there has someone last week claimed who there been is, dat het leven in Mexico nog altijd goedkoop is. is that the life in Mexico still cheap is 'There claimed someone last week, who was there, that the cost of living in Mexico is still low.' (P&Z)

(27) Verleden week heeft iemand beweerd, die er geweest is, last week has someone claimed who there been is dat het leven in Mexico nog altijd goedkoop is. that the life in Mexico still cheap is 'Last week someone claimed, who was there, that the cost of living in Mexico is still low.'

However, when six native speakers of Dutch were asked to judge the grammaticality of (9), only two found it marginally acceptable, whereas four found it ungrammatical. When asked to judge (27),
three reacted exactly as they had to (9), two found it slightly less ungrammatical than (9), and one (who found (9) ungrammatical) found it to be perfectly acceptable. Thus if sentences such as (9) are even marginally acceptable, this can only be due to the fact that (as in sentences such as (27)) the head of the extraposed relative clause is indefinite and not in sentence-initial position (cf. (8a)). Relative clause extraposition in Dutch therefore does not appear to provide a viable test for final non-1hood.

Similarly, emphasis of sentence-initial nominals cannot be viewed as a reliable test for final non-1hood. Final 1s do not as a rule receive emphasis in this position, as do other nominals which are not final 1s. However, the sentence-initial final 1s in the following discourse situations do require special stress:

(28) a. - Piet trouwt Anneke.
    Piet marries Anneke
    'Piet's getting married to Anneke.'

    - Wie trouwt Anneke?
    who marries Anneke
    'Who's getting married to Anneke?'

    - Piet trouwt Anneke.
    Piet marries Anneke
    'Piet's getting married to Anneke.'

b. Piet deed dat, en niet Wim.
    Piet did that and not Wim
    'Piet did that, not Wim.'

Although it is true that the impersonal extraposition construction in (10), in which the pivot is sentence-initial, is acceptable only if the pivot is stressed, it is also the case that it is judged to be acceptable only when imagined to occur in discourse situations similar to those in (29), i.e., in discourse situations analogous to those in (28):

(29) a. - Er spelen twee kinderen in de tuin.
    there play two children in the garden
    'There are two children playing in the garden.'

    - Hoeveel kinderen spelen er in de tuin?
    how many children play there in the garden
    'How many children are there playing in the garden?'
- Twee kinderen spelen er in de tuin.
  two children play there in the garden
  'There are two children playing in the garden.'

b. Twee kinderen spelen er in de tuin, en niet drie.
  two children play there in the garden and not three
  'There are two children playing in the garden, not three.'

Thus the relational status of the pivot in (10) may have nothing to do with the fact that it is stressed. Because the obligatory emphasis of the pivot in this position is very likely due to discourse considerations, one cannot rule out the possibility that the pivot may in fact be a final 1.

To sum up, evidence from word order, relative clause extraposition and emphasis of sentence-initial nominals does not support P&Z's claim that the pivot is not a final 1.

1.3.3. Evidence for Pivot as Final 1 and er as Adverb

In Dutch, as in German, evidence in support of the claim that the pivot is a final 1 is provided by verb agreement and case marking. In (30a), for example, the pivot and the verb are singular; in (30b) both are plural. In (30b), the pivot exhibits nominative case marking:

(30) a. Er loopt een jongen
    there walks a boy
    'There walks a boy.' (Kirsner 1979:6)

b. ...er volgden...zij, die om welke reden ook...
    there followed those-NOM who for which reason ever
    '...there followed...those who for whatever reason...'
    (P&Z)

Although the evidence from word order is ambiguous with respect to the status of er, additional evidence supports the claim that er is an adverb.

First of all, er is a reduced (unstressed) form of the adverb daar 'there', as exemplified by data from Kirsner (1979:3-4):

(31) a. Er blaft een hond.
    there barks a dog
    'There barks a dog there.'
b. Daar blaft een hond.
    there barks a dog
    'There a dog barks; there, there barks a dog.'

Secondly, besides serving as an "expletive" in the impersonal extraposition construction, er also functions as an anaphoric locative, appearing in non-initial position where other adverbial pronouns (hier 'here', daar 'there') and locative PPs occur (Kirsner 1979:3):

    a dog barks in the garden here there there
    'A dog is barking in the garden/ here/ there/ there.'

Thirdly, although impersonal extraposition er can co-occur with locative PPs, hier and daar, it cannot co-occur with locative er, an indication that impersonal extraposition er and locative er are not two independent lexical items, but one and the same (Kirsner 1979:3).

(33) a. Er blaft een hond in de tuin.
    there barks a dog in the garden
    'There barks a dog in the garden.'

    b. Er blaft hier een hond.
    there barks here a dog
    'There barks here a dog.'

    c. Er blaft daar een hond.
    there barks there a dog
    'There barks there a dog.'

    d. *Er blaft er een hond.
    there barks there a dog
    'There barks there a dog.'

    Thus three additional facts about er provide evidence in support of the claim that it is an adverb, not a final 1. Evidence from verb agreement and case marking indicates that it is the pivot, rather than er, which is the final 1.

1.3.4. Summary

In sections 1.3.1. and 1.3.2. it was shown that P&Z's arguments do not provide convincing evidence that er in the impersonal extraposition construction is a final 1 or that the pivot is not.
Additional arguments were provided in section 1.3.3., though, which support the claim that the pivot is a final 1 and er an adverb. Given this analysis, impersonal extraposition in Dutch cannot be viewed as counterevidence to the 1CIL, for reasons analogous to those discussed above (section 1.2) for German.

1.4. Conclusion

In an effort to demonstrate the superiority of the advancement analysis of impersonal passives over the demotion analysis, P&P (a) cite P&Z's analysis of the impersonal extraposition construction in Dutch and German as counterevidence to the 1CIL, a law which, if universally valid, could duplicate the predictions made by the advancement analysis and the 1AEX. In sections 1.2. and 1.3., however, alternatives to P&Z's analysis of the impersonal extraposition construction in Dutch and German were proposed which do not violate the 1CIL. Although P&Z cite Otsuka's (1980) analysis of "indirect passives" in Japanese and Postal's (1982) analysis of the indefinite extraposition construction in French as further counterevidence to the 1CIL, they do note that currently available evidence would allow alternative analyses of apparent counterexamples in other languages. In view of the fact that well motivated alternative analyses are available for the impersonal extraposition construction in Dutch and German which do not violate the 1CIL, one should not disregard the possibility that it may be possible to develop alternative analyses for the apparent counterexamples in Japanese and French as well. Thus the 1CIL cannot be ruled out as a universal, and, consequently, the demotion analysis of impersonal passives cannot be dismissed.

2. Impersonal Passives in German
2.1. Introduction

If the 1CIL cannot be ruled out as a universal, P&P's three arguments for the advancement analysis of impersonal passives which are based on the interaction of this law and the 1AEX will have no bearing on deciding between the demotion analysis and the advancement analysis of impersonal passives. As evidence in support of the demotion analysis, this section provides three arguments based on evidence from German. The first argument refers to the distribution of es in impersonal passives and in the impersonal extraposition construction. The second deals with the fact that the demotion analysis avoids two ad-hoc assumptions which are necessary under the advancement analysis. The third argument is a refutation of P&P's argument for the advancement analysis which is based on reflexive impersonal passives. Their analysis of this construction is shown to be incorrect and thus invalid as support for the advancement analysis.
2.2. Arguments

2.2.1 Distribution of es

One argument in support of the demotion analysis of impersonal passives is based on the distribution of es in the impersonal extraposition construction and in impersonal passives in German. The distribution of es in both constructions is identical (cf. (12), (1a), and (34)):

(34) a. *Hier wird es getanzt.
       here is it danced
       'Here it is danced.'

b. *Wird es getanzt?
       is it danced
       'Is it danced?'

c. *Wo wird es getanzt?
       where is it danced
       'Where is it danced?'

d. *Er sagte, daß es getanzt wird.
       he said that it danced is
       'He said that it is danced.'

As established above, es in the impersonal extraposition construction is a place-holder, not a final 1. If one argues that es in impersonal passives is a final 1, as required under the advancement analysis, one is unable to capture obvious parallels in the distribution of es in both constructions. One must claim that although es in impersonal passives has the same distribution as es in the impersonal extraposition construction, it is nevertheless not a place-holder, but a final 1. The distributional characteristics of es in impersonal passives, however, support the claim that it is a place-holder; es appears in preverbal position in main declarative clauses when there is no other element to occupy this position (when the clause contains only verbal elements as in (1a), or when topicalization is to be avoided as in Es wird hier getanzt. 'It is danced here.'). The demotion analysis of impersonal passives, unlike the advancement analysis, is perfectly compatible with this treatment of es; in the version proposed here for German, an initial 1 is demoted to chômeur, with no simultaneous or subsequent promotion of a nominal to 1 (cf. (1b)). That is, German impersonal passives contain no final 1; es in this construction is simply a sentence constituent with no relational status. The demotion analysis therefore does allow one to capture the distributional parallels between impersonal extraposition es and the es of impersonal passives. In this respect it is superior to the advancement analysis.12
2.2.2. Ad-Hoc Assumptions

Additional support for the demotion analysis derives from the fact that it avoids at least two ad-hoc assumptions required under the advancement analysis. First of all, because passive is characterized as 2-1 advancement under the latter analysis, one must assume that verbs whose initial strata contain a 1 but no 2 do in fact have a 2 in some stratum in passive clauses. In German, though, for many verbs which appear in impersonal passives there is no independent evidence available demonstrating their ability to take 2s. Schlafen 'to sleep', for example, appears in impersonal passives yet cannot have a 2 in a simple active clause:

(35) a. Jetzt wird aber geschlafen!
     now is but slept
     'Now is slept!' (Helbig and Buscha 1975:140)

b. *Er schläft es.
   he sleeps it
   'He sleeps it.'

It is the case, though, that schlafen, like many other verbs which appear in impersonal passives, can appear in reflexive impersonal passives, which are argued by P&P (a) to contain a final 2, sich:

(36) a. Es schläft sich angenehm in diesem Wagen.
     it sleeps itself pleasantly in this car
     'It sleeps itself pleasantly in this car.'
     (Jäntti 1978:245)

b. 

Because verbs which appear in impersonal passives also appear in reflexive impersonal passives and, according to P&P (a), take a final 2 in this construction, one might want to claim that reflexive impersonal passives provide independent evidence that verbs in impersonal passives can have 2s. However, there is a class of verbs which can appear in plain impersonal passives, but cannot appear in reflexive impersonal passives, and cannot take 2s in active clauses:
(37) a. Es wird hier geblieben!
   it is here remained
   'It is remained here!' (Jäntti 1978:277)

b. *In der Heimat bleibt es sich am besten.
   in the homeland remains it itself best
   'In the homeland it remains itself best.'
   (Jäntti 1978:244)

c. *Hans bleibt einen Lehrer.
   Hans remains a teacher
   'Hans remains a teacher.'

Thus for these verbs there exists no independent evidence demonstrating their ability to take 2s.

The second ad-hoc assumption necessary for the advancement analysis of impersonal passives involves the existence of a "dummy" 2 (es in German). A dummy 2 plays a crucial role in the advancement analysis, yet P&P (a) provide no independent evidence for the existence of dummy 2s in German. One might want to argue that es in (38), a marker of an extraposed sentential object, is a dummy 2:

(38) Ich empfehle (es) dir, pünktlich zu kommen.
   I recommend it to-you on time to come
   'I recommend it to you to come on time.' (Helbig and Buscha 1975:145)

There is also an es which marks extraposed sentential subjects in German:

(39) Es freut mich besonders, daß ich ihn getroffen habe.
   it pleases me particularly that I him met have
   'It particularly pleases me that I met him.' (Helbig and Buscha 1975:356)

If this es could be shown to be the same es which appears in impersonal passives, it would not be unreasonable to conclude that the es in (38), the 2 counterpart to the es in (39), is also the 2 counterpart to the es in impersonal passives, i.e., a dummy 2. The es in (39), however, does not have the distribution of the es in impersonal passives, as it is not restricted to sentence-initial position in main declarative clauses:

(40) Mich freut (es) besonders, daß ich ihn getroffen habe.
   me pleases it particularly that I him met have
   'It particularly pleases me that I met him.' (Helbig and Buscha 1975:356)
This es therefore does not appear to be the es of impersonal passives. Consequently, one cannot conclude that the es in (38) is the dummy 2 counterpart to the dummy 1 in impersonal passives. There appears then, to be no independent motivation for the existence of dummy 2s in German.

Because the demotion analysis of impersonal passives, unlike the advancement analysis, does not involve 2s of any kind, it is not required to provide independent evidence for the existence of dummy 2s, nor is it forced to claim that verbs whose initial strata contain a 1 but no 2 do take a 2 in some stratum in impersonal passives. In this respect it is superior to the advancement analysis.

2.2.3. Reflexive Impersonal Passives

The third argument for the demotion analysis of impersonal passives consists in showing that P&P's argument for the advancement analysis based on reflexive impersonal passives is incorrect and thus does not constitute evidence for the superiority of the advancement analysis over the demotion analysis. P&P (a) argue that the advancement analysis, unlike the demotion analysis, allows one to explain what plain and reflexive impersonal passives have in common. According to P&P, reflexive impersonal passives have the structure in (36b). Thus this construction is similar to plain impersonal passives (cf. (1c)) in that it contains a dummy, es, which advances from 2 to 1. However, the only things common to both constructions, namely dummy 2s which advance to 1s, appear in actuality to be quite different. In plain impersonal passives, the dummy, es, is required only when no other element can occupy preverbal position in declarative main clauses; its appearance is limited to just this position (cf. (1a) and (34)). In reflexive impersonal passives, on the other hand, es is mandatory in all clauses, and can appear in any position available to a final 1:

(41) a. *Hier tanzt sich gut.
   here dances itself well
   'Here dances itself well.'

b. Es tanzt sich gut hier.
   it dances itself well here
   'It dances itself well here.' (P&P (a))

c. Hier tanzt es sich gut.
   here dances it itself well
   'Here it dances itself well.'
d. ... daß es sich hier gut tanzt.
    that it itself here well dances
    '... that it dances itself well here.'

The es in reflexive impersonal passives is clearly a final 1; its distribution is identical to that of final 1s. As argued above, es in impersonal passives is a place-holder. Because the two es's are similar in form, but not in function, no special merit can be claimed for an analysis that ascribes to the two es's the same relational status. P&P's analysis of the two impersonal constructions does not appear to explain what the constructions have in common nor why they differ, and therefore cannot be viewed as an argument in favor of the advancement analysis.

2.3. Conclusion

Given the above three arguments in support of the demotion analysis, one must conclude that this analysis remains superior to the advancement analysis in its ability to account for impersonal passives in German. Furthermore, because the advancement analysis may exhibit the shortcomings discussed above in languages other than German, the demotion analysis may prove to be superior to the advancement analysis in other languages as well. Thus the demotion analysis may eventually be shown to be a universally valid characterization of impersonal passives.

3. Relevance of the 1CIL to the Demotion Analysis

Although P&P (a) claim the viability of the demotion analysis to be dependent on the validity of the 1CIL as a universal, the viability of this analysis may in fact be independent of the correctness of the 1CIL, since the effects of this law in the crucial cases can be duplicated by reasonable assumptions about semantic restrictions. Two cases discussed by P&P (to appear b; henceforth P&P (b)), impersonal passives of initially unaccusative clauses and of inversion clauses ((42a,c)) are ruled out under the advancement analysis because both involve two advancements to 1, unaccusative advancement and passive, in violation of the 1AEX. Under the demotion analysis, both involve the demotion of a non-initial 1, in violation of the 1CIL. Crucial to both analyses is the assumption that the two clauses contain as a sub-part of their relational networks the structures illustrated in (42b) and (42d), resp.

(42) a. #In diesem Krankenhaus wird oft gestorben.
   in this hospital is often died
   'In this hospital is often died.' (P&P (b))
P&P, however, provide no independent syntactic evidence that these clauses do in fact have the structures in (42). Clauses such as (42a) are determined to be initially unaccusative because of the non-volitional nature of their predicates. Although it is not explicitly stated, semantic considerations also appear to play a role in determining the presence of inversion in clauses such as (42c) (cf. the comment (P&P (b)) that mir in der Fisch schmeckt mir 'the fish tastes good to me', an apparent inversion clause, is an experiencer). Unless tests can be provided for initial unaccusativity and inversion in German (or in any language which allows impersonal passives) which are independent of semantics, then the assignment of the structures in (42) to clauses such as those in (42) can be viewed as nothing more than the encoding of semantic facts by means of syntactic diacritics (initial unaccusativity, inversion) to account for the ungrammaticality of impersonal passives of certain clauses. If, however, such tests can be provided, it may nevertheless be the case that factors independent of the structure assigned to these clauses rule out impersonal passives. The predicates gefallen, schmecken, and all others apparently associated with inversion, as well as those which, according to P&P (b), appear in clauses with initial unaccusative strata (bluten 'to bleed', funkeln 'to sparkle') do not denote volitional actions. Thus impersonal passives of such predicates may be ungrammatical simply because of the non-volitional nature of the predicates. It may therefore be impossible to demonstrate that these clauses are ungrammatical solely because of their relational structure, in which case they cannot be used as a strong argument in favor of the advancement
analysis over the demotion analysis, regardless of the correctness of the 1CIL.

The third argument presented by P&P (a) in support of the advancement analysis involves the ungrammaticality of clauses such as (43a). According to P&P, (43a) is an impersonal passive of a personal passive, which contains two advancements to 1, in violation of the 1AEX (cf. (43b)). Under the demotion analysis, (43a) represents the demotion of a non-initial 1, niemand 'no one', a violation of the 1CIL.

(43) a. *Es wurde von der alten Frau von niemand geküsst worden. 
   it was by the old woman by no one kissed gotten
   'It was by the old woman by no one gotten kissed.'
   (P&P (a))

   b. 

   P P
   Cho 1 2
   P P
   Cho 1
   Cho 2
   küssen Frau niemand es

   What P&P have failed to see is that the predicate resulting from the personal passive and used to form the impersonal passive in (43) is geküsst werden 'to get kissed', a non-volitional predicate. Furthermore, any predicate formed by a personal passive will be non-volitional. Thus impersonal passives of personal passives may be ruled out for the same reason that the impersonal passives discussed above are ruled out: namely because their predicates denote non-volitional actions. It may be the case that such passives are also ruled out because of their relational structure. However, unless it can be shown that these passives are ungrammatical solely because of their relational structure, their ungrammaticality cannot be viewed as a convincing argument in support of the advancement analysis over the demotion analysis, regardless of the status of the 1CIL.

4. Conclusion

An alternative to P&Z's analysis of the impersonal extraposition construction in German has been proposed here which has provided evidence in support of the demotion analysis of impersonal passives. Additional arguments in support of this
analysis have shown it to be superior to the advancement analysis in its ability to account for impersonal passives in German. This construction in German therefore poses problems for the three laws proposed by P&P discussed above. Namely, given this analysis of German impersonal passives, passive cannot be characterized universally as 2-1 advancement. Personal passives, as well as impersonal passives, involve the demotion of a 1. Thus the demotion analysis could be capable of accounting for personal passives as well as impersonal passives. The second problem posed by impersonal passives in German involves the Motivated Chômage Law. This law cannot be accepted as universally valid, as German impersonal passives provide support for the claim that "spontaneous" demotion is indeed possible. They also provide support for the claim that clauses exist which do not have final 1s. Thus the Final 1 Law cannot be maintained as a linguistic universal.

NOTES

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1. P&P (a) use '0' to represent the linguistic entity that designates an unspecified collection of mind-possessing beings. 'Un' ('Unspecified') is completely unspecified and thus not limited to mind-possessing beings.

2. Because it is indefinite, the pivot, like other indefinite nominals (cf. (ii)), is not required to appear immediately after the finite verb in a main declarative clause:

   (i) Es spielten heute zwei Kinder im Garten.
   'There played today two children in the garden.'
(ii) Vor vielen Jahren wohnten auf diesem Berg reiche Leute. 'Many years ago rich people lived on this mountain.'

3. (14a) corresponds to a type of extraposition in Dutch which (as in German) is possible from all nominals and thus provides no means for distinguishing between final 1s and non-1s.

4. P&Z account for verb agreement and case marking in the impersonal extraposition construction by means of the brother-in-law relation. However, because there is no evidence that the pivot is not a final 1, there is no reason to refer to this relation in the grammar to account for the fact that the pivot agrees with the verb and exhibits nominative case marking.

5. Breckenridge (1975) makes a similar claim when she argues that 2e-insertion is post-cyclic.

6. The (b)-sentences in (3-7) are repeated as the (b)-sentences in (20-24).

7. The indefinite constraint is relaxed in cases such as (30b).

8. P&Z claim that sentences such as (21a) and (22a) are ungrammatical in a particular dialect of Dutch, although those such as (24a) are grammatical in all dialects. However, the ungrammaticality of sentences corresponding to (21a) and (22a) in one Dutch dialect does not weaken the argument presented here, namely that the distributional characteristics of er and the pivot fail to provide conclusive proof that er is a final 1 or that the pivot is not.

9. Extrapolation from a definite nominal is not possible:

   (i) *Heeft de buurman gezegd, die pas in de buurt is komen wonen, dat hij van Brussel is? 'Did the neighbor say, who just moved into the neighborhood, that he is from Brussels?' (P&Z)

10. See note 3 above.

11. As Kirsner (1979:86) notes, the ungrammaticality of (33d) cannot be due to phonological factors, as quantitative er (which has a historical source different from that of extrapolation er) can co-occur with extrapolation er:
(i) Er liggen er twee op tafel.
there lie of-them two on table
'There are two of them lying on the table.'

12. According to Perlmutter (Grammatical Relations Festival, Cornell University), the only kind of argument against the Final 1 Law that can be considered valid is one which shows that an analysis assuming the non-existence of a final 1 in some clause is superior to an analysis assuming the existence of a final 1 in that clause. The foregoing discussion has provided just such an argument. Thus the Final 1 Law must be rejected as a linguistic universal.

13. Scholars are not in agreement as to the status of sich in reflexive impersonal passives. Cranmer (1975), for example, does not analyze sich as an NP; sich is treated as a marker of reduced valence which is inserted under V.

14. This class is made up of the intersection of verbs with initially intransitive strata and those referred to as "intransformativ" by Fabricius-Hansen (1975).

15. Leys (1979:28-29) provides a cross-linguistic argument against treating es in (38) as being related to the es of the impersonal passive or impersonal extraposition construction. In Dutch, the es of the latter two constructions is realized as er, whereas es in constructions like (38) is realized as *het*:

(i) a. Er wordt vanavond gedanst.
there is tonight danced
'It will be danced tonight.'

b. Er staat een vaas op tafel.
there stands a vase on table
'There's a vase standing on the table.'

c. Ik betreur het dat hij komt.
I regret it that he comes
'I regret it that he's coming.'

16. Another reason for assuming that predicates such as sterben 'to die' and gefallen 'to please' are unaccusative and inversion predicates appears to be that their counterparts in other languages (e.g., Georgian) are demonstrably associated with unaccusative and inversion. However, motivation for assigning unaccusative and inversion structures to these predicates in German requires language-internal evidence.
REFERENCES


Cranmer, David John (1976). Derived Intransitivity: a Contrastive Analysis of Certain Reflexive Verbs in German, Russian and English (Linguistische Arbeiten, 38), Niemeyer, Tübingen.


QUECHUA PERSON REFERENCE

Margaret W. Milliken

Languages of the Quechua family are known for their complex morphology. In this paper we will consider a subset of the verb morphology, looking at the present tense forms and the sequence of inflections traditionally referred to as the transition. The transition includes object, tense, and person agreement markers. In some dialects plural agreement markers follow the person markers and are included in the transition. We begin by reviewing analyses that have been proposed for Quechua transitions in two of the dialects. One analysis fails to generate all and only the grammatical forms, and the other can only account for the data with ad hoc statements of anomalies. In this paper an alternative analysis will be proposed which generates all and only the grammatical forms in a principled manner.

In developing our analysis, we first use data from Cuzco Quechua, since this dialect has plural agreement as part of the transition so that there are more forms to work with, and since the present tense verb paradigm is quite regular in Cuzco. In the course of this reanalysis two basic questions will be asked: what are the morpheme divisions, and what morphosyntactic categories are being used. Finally, we will see if the type of analysis proposed for Cuzco will also account for the other dialects.

1. Previous Analyses
1.1 Weber's analysis of Huanuco Quechua

The data from Huanuco Quechua is shown below in chart form so that all of the forms are visible at once for purposes of comparison. The numbers heading the columns represent the person of the object, and those heading the rows are the person of the subject. 1 stands for first person, 2 for second person, 12 for first person inclusive, and 3 for third person. Thus the form in the first column, third row, is the suffix that appears on the verb in a clause with a second person subject and a first person object, and means 'you VERB me'. The symbol : means that the final vowel of the verb root is lengthened. This is the phonological material which signals first person subject. These forms are from Weber (1976:17).
Huanuco Quechua

Object —>  
<table>
<thead>
<tr>
<th>1</th>
<th>12</th>
<th>2</th>
<th>3</th>
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<tr>
<td>12</td>
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<td>nch'i</td>
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<td>2</td>
<td>manki</td>
<td>nki</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>3</td>
<td>man</td>
<td>manchi</td>
<td>shunki</td>
</tr>
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</tbody>
</table>

Figure 1

If we may impute to Weber a strategy which he may have used to come to his analysis, and walk through it: First it is observed that all of the forms with a 1 or 12 object contain the sequence ma, and so it is posited that this is a separate morpheme which means first person or first person inclusive object. Further, all of the forms in the second person subject row have the sequence nki. It is therefore decided that this is a morpheme which marks the verb as having a second person subject. On the basis of these forms, two classes of formatives are set up such that the first class agrees with the object, and the second with the subject. We could represent this in a chart as in Figure 2.
The three remaining forms, however, do not fit into this schema.

(1) a. maqa-ma-nchi
hit-1(2)-12
'He hits us' (*'We hit me', *'We hit us')

b. maqa-shu-nki
hit-2-2
'He hit you' (*'You hit you')

c. maqa-∅-:
hit-3-1
'I hit you' (*maqashu:, *maqa:shu)

In (1) a and b, what have been assumed to be subject agreement formatives do not agree with the person of the subject. Rather, they agree with the object. Instead of going back to the full paradigm to see if there are different generalizations that could be made about the agreement system, (a step which the reader is invited to take) Weber accepts the presence of a regular anomaly and states an ad hoc rule (1976:16):
For the 3—>2 and 3—>12 forms, the ... suffix agrees in person with the object; in all other forms it agrees with the subject.

Example (1c) is also a problem for Weber, since the 2 OBJ marker, shu, cannot occur in this form. Weber points out this second anomaly and handles it by giving another ad hoc statement about second person object agreement to the effect that

(2) a. If the subject is 3, indicate a 2 object with shu.

b. If the subject is 1, indicate a 2 object with \( @ \).

c. If the subject is 2, indicate a 2 object with a reflexive marker.

We see, then, that Weber must resort to two ad hoc statements in order to account for the Huanuco Quechua data.

1.2 Muysken's analysis of Tarma Quechua

The agreement markers of Tarma Quechua are the same as those of the Huanuco dialect except that the 1—>2 form is \textit{maqa-q} instead of \textit{maqa-}. (Muysken 1982:311).

Muysken argues for an analysis of this data which uses WFRs along with interpretive algorithms. The WFRs freely generate words by adding a suffix to a verbal form, and the algorithms specify how that form is interpreted. Since 12 SUBJ nchit and 2 SUBJ nki can sometimes agree with the person of the object, Muysken allows the interpretive algorithms of these suffixes, and of the other suffixes of this positional class, to be more general. They specify that argument of the verb, be it subject or object, has the person features corresponding to that suffix. This more general statement predicts, for example, that a verb such as \textit{maqa-nki} could mean either 'you hit X' or 'X hit you'. Since only the first interpretation, where second person is construed as the subject, is grammatical, Muysken proposes the following filter (1981:316):

(3) Verbs without subject marking are ill-formed

This rules out the interpretation where the marker agrees with the object and the subject is left unmarked.
Even with this filter and with another filter which accounts for the linear order of the suffixes, the rules still generate the following ungrammatical forms:

(4)  a. *ma-
    b. *ma-q
    c. *shu-
    d. *shu-n
    e. *shu-nchi
    f. *shu-q

Muysken must explain these facts as well as explaining why the suffixes nchi and nki are interpreted as third person subject instead of as first person inclusive and second person respectively in the following forms:

(5)  a. maqa-ma-nchi
    hit-1(2)OBJ-12
    'He hits us'

    b. maqa-shu-nki
    hit-2OBJ-2
    'He hits you'

Note that the examples in (5) are precisely the ones which forced Weber to state his subject marking anomaly.

In order to handle some of these cases, Muysken makes the assumption that ma and shu have the idiosyncratic morphosyntactic feature [+collapse] which serves to trigger a transformational rule, which in turn performs an operation on the person features of the suffixes. The rule collapses the person features of a suffix, which must be interpreted as referring to the subject by filter (3), onto the person features of the object marker, and assigns the features for third person to the subject marker (Muysken 1981:318):

(6)  [+obj] (tense) [-obj] \[\rightarrow\] 1 2 3
    \[\alpha\ I\ \alpha I\ \alpha I\ -I\]
    \[\beta\ II\ \beta II\ \beta II\ -II\]
    +colps
    \[1\ \ 2\ \ 3\]

There is a constraint on this rule such that only if the suffixes have identical interpretation can they be collapsed. This constraint has different consequences depending on which object marker occurs. With shu, if the features are not identical, then the form is ungrammatical. This explains the ungrammaticality of examples c-f of (4). With ma, if the features are not identical,
the collapse rule does not apply but the form is grammatical. (7) below includes derivations of four forms, showing how Muysken's analysis works.

(7) a. maqa-shu-nki 'He hits you'
   (i) maqa+shu       The object is [-I +II]
   (ii) maqashu+nki    an argument is [-I +II]
   (iii) by filter (3), nki is [-obj]
   (iv) maqa- shu - nki $\Rightarrow$ 1 2 3
          $^{+obj}$$^{+II}$  $^{-obj}$$^{+II}$  $^{+obj}$$^{-obj}$$^{-II}$$^{-II}$

b. maqa-ma-nki 'You hit me'
   (i) maqa+ma       the object is [+I]
   (ii) maqama+nki    an argument is [-I +II]
   (iii) by filter (3), nki is [-obj]
   (iv) collapse rule cannot apply.

c. *maqa-shu-:
   (i) maqa+shu       the object is [-I +II]
   (ii) maqashu+:     an argument is [+I -II]
   (iii) by filter (3), : is [-obj]
   (iv) collapse rule cannot apply

d. *maqa-ma-: ('He hit me')
   (i) maqa+ma       the object is [+I]
   (ii) maqama+:      an argument is [+I -II]
   (iii) by filter (3), : is [-obj]
   (iv) maqa- ma - : $\Rightarrow$ 1 2 3
          $^{+obj}$$^{+I}$$^{+II}$$^{-I}$$^{-II}$

Muysken's analysis is unsatisfactory in that it introduces a very powerful device into the morphological component of grammars, namely a transformational rule which can change the features of a formative. Furthermore, it requires the use of a diacritic feature [+collapse] to trigger the rule. Finally, as is seen in derivation (7d), the analysis still does not predict the ungrammaticality of forms (4) a and b.
2. Proposed Analysis

Thus far the morpheme divisions and features have been accepted as presented by other analysts. Data from the Cuzco dialect will now be examined and the divisions and the functions of the formatives for this dialect discussed. We will then return to the Tarma dialect to see if a similar analysis will hold for it.

2.1 Analysis of Cuzco Quechua

2.1.1 Cuzco Data

The forms in Figure 3 below were taken from Solá 1967. 22 stands for second person plural, and 33 for third person plural.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>11</th>
<th>12</th>
<th>2</th>
<th>22</th>
<th>(3)</th>
<th>(33)</th>
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<tbody>
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<td>nku</td>
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<td></td>
<td></td>
<td></td>
<td>chis</td>
<td>ku</td>
</tr>
</tbody>
</table>

Figure 3
The last two columns of Figure 3 are identical, so it is apparent that there is no number distinction in third person objects. There is even more ambiguity involved here: verbs with the suffixes of the last two columns can be either transitive with a third person object, or intransitive with no object at all (Weber 1976:16). Thus the 1→3 form *maqa-niy* could mean 'I hit you(sg)', 'I hit you(pl)', or simply 'I hit'. The headings of the third person object columns have therefore been put in parentheses.

2.1.2 Analysis into formatives and features

The endings will be separated into formatives by looking for recurrences of sequences throughout the rows and columns. An alternative method would be to select small groups of forms to compare, and to formulate hypotheses about the meanings of the morphemes just from those selected forms. The problems with that approach are that the hypotheses formed depend upon which particular forms are chosen first for comparison, and that once an hypothesis is formed, there is a tendency to view contrary evidence as an anomaly instead of as an indication that the hypothesis needs to be modified. We saw this in the discussion of Weber's analysis of Huanuco Quechua. The option we have chosen is a more efficient strategy which uses the entire paradigm from the beginning.3

One advantage of looking first at the Cuzco data is that it clearly shows the plural formatives. *Chis* is one of these plural formatives; it occurs not only in the 12 row and column, but also in the 22 ones. The 12 forms, therefore, include a plural marker, as, of course, the first person inclusive is inherently plural. The other plural forms, i.e. the forms in the 11 row and column, and the 33 subject row, all have the sequence *ku*. The generalization concerning plurals, then, is that those which include second person are marked *chis*, and those which do not include a second person are marked *ku*.

*Ki* is another sequence of sounds which recurs in all of the 2 and 22 rows and columns, and nowhere else. *Ki*, then, signifies that second person is present in the sentence as either the subject or the object of the verb. Notice that *ki* is present no matter which of these two grammatical relations is a second person nominal. Here 'second person' does not include the 12 forms.

Some linguists, such as Muysken (1981), Solá (1967), and Weber (1977), analyze the sequence *yki* as a positionally conditioned variant of *ki*. Part of the reason for taking this view is that the second person form of the possessive suffix is *yki* (Solá 1967:5-3). Adopting this view, however, misses a generalization
concerning the forms presented on the chart; namely that \( y \) occurs in all the forms in the 1 and 11 subject rows, while \( n \) occurs in all of the other forms. The generalization then seems to be that \( y \) marks first person exclusive subjects, and \( n \) marks all other subjects.

The only form which might contradict this analysis is the 1→3 suffix \( \text{niy} \). Here a form with a first person subject also has \( n \). We propose that in this form the phonetic sequence [ni] has been added by a phonological rule, and that the underlying representation is /y/, the normal first person subject marker. This analysis is supported by the fact that the sequence [ni] is often epenthetic in Quechua. In Cuzco, it is inserted between noun stems and possessor suffixes when the noun ends in a consonant (Solá:5–2), and before the person suffix in gerundial and agentic clauses in Taruma (Muysken:319). We conclude, then, that \( y \) marks first person exclusive subjects, while \( n \) marks all other subjects, and that the second person marker has only one surface realization. In this analysis of \( \text{ki} \) we are following Cusihuaman (1976:162).

Up to this point, the formatives that have been discussed and their corresponding meanings and features are as follows:

(8) \( y \): first person exclusive subject. \([\text{+subj} \text{ +I} \text{ -II}]\)

\( n \): non first person exclusive subject. \([\text{+subj} \text{ -I}]\)

or \([\text{+subj} \text{ +I} \text{ +II}]\)

\( \text{ki} \): second person subject or object. \([\text{+II}]\)

\( \text{chis} \): deferential plural, used when 12 or 22 is subject or object. \([\text{+II} \text{ +pl}]\)

\( \text{ku} \): plural, used when 11 or 33 is object, or when 11 is subject. \([\text{-II} \text{ +pl}]\)

At this point it should be noted that only two formatives, namely \( y \) and \( n \) agree exclusively with the subject of the verb. For Huanuco Quechua, Weber had considered it an anomaly of the system that in some forms the \( \text{ki} \) and \( \text{chis} \) suffixes agreed with the object instead of with the subject. In Cuzco we see that all eight of the forms where the object is \([\text{+II}]\) have \( \text{ki} \), so that this sequence is much more readily analyzed as agreeing with a second person participant, whether it is the subject or the object. Similarly, the plural markers \( \text{ku} \) and \( \text{chis} \) are present in agreement with plural subjects or with first or second person plural objects.
As Muysken points out, when these formatives are allowed to refer to either subject or object, the grammar must be able to predict which it in fact does refer to when there is no ambiguity. Muysken accomplishes this with the filter stating that verbs without subject marking are ill-formed, and with his feature collapsing transformation. Our explanation of the lack of ambiguity will fall out naturally from a principle which will also explain the distribution of the suffixes wa and su.

Let us move on, then, to the discussion of these two formatives. By referring back to the chart, we see that wa is present in all of the 1, 11, or 12 object forms. The most straightforward analysis, then, is that wa agrees with [+I] objects. Similarly, su occurs when the object is second person, so it agrees with [-I +II] objects. However, it does not occur in all the 2 or 22 object forms; it is present when there is a third person subject, and not when there is a first person subject. This is precisely the same phenomenon as the one in the Huancoco dialect which lead Weber to his ad hoc statement of the form and distribution of the second person object markers, and it is the same phenomenon which lead Muysken to say that when the object is second person, but not when the object is first person, the non-identical interpretation of the person suffixes yields ungrammatical forms.

The one principle which we propose in order to account for these distributional facts and to predict this particular lack of ambiguity of the forms requires that an empathy hierarchy of person be posited for the Quechua languages. The hierarchy for Quechua is 1>2>3, i.e., first person outranks second and third person, and second person in turn outranks third person.

The existence of such person empathy hierarchies and their interaction with syntax and morphology is not uncommon, especially among native languages of America. For example, the Algonquian languages all have reflexes of two different sets of verb suffixes, one which is used for 'inverse' forms, when the object outranks the subject, and a second one which is used in 'direct' forms, when the subject outranks the object (Goddard 1967:94ff). In Southern Tiwa, the empathy hierarchy helps to explain certain phenomena concerning the passive construction. The hierarchy in this language is 1 or 2> 3 animate> 3 inanimate, and there is a general constraint that the final subject must never outrank the final object on this hierarchy (Allen and Frantz 1983:305). Thus the following passive sentence in Southern Tiwa is grammatical:

(9) seuanide-ba te-mu - che-ban
man-INSTR 1SG-see-PASS-PAST
'I was seen by the man.'
but there is no corresponding active sentence. There are not even any person agreement formatives for a third person subject with a first or second person object.

Once the empathy hierarchy 1>2>3 is posited for Quechua, the statement of the distribution of su becomes clear. It occurs precisely when the object outranks the subject on the hierarchy. In fact, since first person is highest ranked, and therefore in any sentence with 1 as object it is the case that object outranks subject, we need only state one condition on the object agreement rules. These rules apply only when the object is the higher ranked participant.5

The unmarked case, then, is for subject to outrank object. We would expect this to be the unmarked case when the independent universal ranking of grammatical relations (GRs) is taken into account. The proposed ranking of GRs is subject > direct object > indirect object. In Quechua, when the empathy hierarchy and the relational hierarchy are aligned such that the higher ranked person bears the higher ranked relation, the object agreement rules are not triggered. In a real sense this is the unmarked case. When the hierarchies are not aligned, and the higher ranked person bears the lower ranked relation, then the grammar stipulates that there must be an agreement marker for the person of that lower ranked relation.

As well as explaining the distribution of these object markers, the interaction of the empathy hierarchy with the object agreement rules also predicts whether the ki, ku, and chis suffixes agree with the subject or with the object. To illustrate, take the following example:

(10) maqa-n-ki
hit—1SUBJ—2
'You hit (him/them).'

Assume that the WFRs have generated this form, and we as hearers must interpret it. From the formatives that are present we can deduce that the subject does not have the features [+I -II], and that there is a participant which assigns the features [+II -I] to the verb. If this were all the information we had, this word would be ambiguous, since three different combinations of subject and object meet this description: 3—>2, 2—>1, and 2—>3(3).

However, there is more information available. We have posited the condition that object markers only occur when object outranks subject. Since the verb in example (16) does not have an object marker, we must interpret it in a way such that subject outranks object. Of the three possible interpretations, only one meets this
requirement, and the verb must mean 2→3(3), 'You hit him/them'.

From the foregoing discussion we conclude that the list of formatives and features given in (8) should be completed as given in (11). O>S means 'object outranks subject on the empathy hierarchy'.

(11) wa: first person object, occurring when O>S
[+I -subj]

su: second person object, occurring when O>S
[-I +II -subj]

2.1.3 Cuzco Rules and Derivations

Having determined what the formatives and relevant features are, we can give the WFRs for Cuzco. These rules and the one readjustment rule needed for the Cuzco dialect are presented in Figure 4. Three pairs of rules are disjunctively ordered and form disjunctive blocks: WR1 with WR2, WR3 with WR4, and WR6 with WR7. These orderings fall out naturally from the general principle of the Elsewhere Condition. Only the first block is explicitly marked in order to show that the condition of hierarchy reversal (O>S) applies for this disjunctive block.

Rules for Cuzco

\[
\begin{align*}
O>S & \quad \rightarrow \text{wa} & \quad \rightarrow \text{ki} \\
[+I -subj] & \quad \rightarrow \text{y} & \quad \rightarrow \text{ku} \\
[-I +II -subj] & \quad \rightarrow \text{n} & \quad \rightarrow \lbrack \text{ni} \rbrack / _{-} y \\
\end{align*}
\]

Figure 4

The WFRs are linearly ordered to ensure that verbs are generated with the suffixes in the correct order. The object markers are added first and occur closest to the verb root; the subject markers y and n are added next, and so they occur after the object markers, and so forth.

Since the rules take a verb with agreement features as input, we are assuming that an agreement rule assigning these features
has already applied. For a nominal to control agreement means that its features are copied onto the verb by this agreement rule. We have pointed out that forms with third person objects are ambiguous, since no third person object ever imposes a marker of any kind on the verb. These forms are therefore interpretable as intransitive, as transitive with a third singular or a third plural object (Weber 1976:16).

These facts require a complication of the grammar. If all subjects and objects control verb agreement, then the verb in a sentence such as 'I hit them' will have the following features:

(12) \[
\begin{array}{c}
\text{V} \\
{+\text{subj}} \\
{+I} \\
{-\text{II}} \\
{-\text{pl}} \\
{-\text{subj}} \\
{-I} \\
{-\text{II}} \\
{+\text{pl}}
\end{array}
\]

The feature [+pl] in the object agreement matrix meets the structural description of WR7, so we wrongly predict that the plural marker ku would occur.

One way to correct this is to complicate WR7 so that it applies when there is a first person plural object, or when there is a plural subject and WR6 has not applied.

(13) \[
\{ \\
{+I} \\
{+\text{pl}} \\
{-\text{subj}} \\
{+\text{pl}} \\
{+\text{subj}}
\} \rightarrow \text{ku}
\]

Note that the forms which are subject to WR6 are no longer a proper subset of those which apply to the rule in (13), so the disjunctive ordering no longer falls out from the Elsewhere Condition.

We opt for a second solution, which captures in one condition the generalization that the forms in the last two columns of Figure 3 are triply ambiguous. We can say that third person objects do not control verb agreement. This predicts both that third person objects will not trigger any overt marking on the verb (in particular, no plural marking), and that these forms can be interpreted as intransitive. The verb in the sentence meaning 'I hit them' under this analysis has only one agreement feature matrix:
Below are some sample derivations. The final form is given first, then the meaning and the feature matrices assigned to each verb, and finally the rules given in Figure 4 are applied.

(15) maqa-wa-n-ki-ku  'You(sg) hit us(excl)'

maqa
O>S WR1 maqa-wa
WR3 -
WR4 maqawa-n
WR5 maqawan-ki
WR6 -
WR7 maqawanki-ku
RR1 -

/maqawankiku/

(16) maqa-wa-n-chis  'He hit us(incl)'

maqa
O>S WR1 maqa-wa
WR3 -
WR4 maqawa-n
WR5 -
WR6 maqawan-chis
RR1 -

/maqawanchis/

(17) maqa-wa-n-chis  'They hit us(incl)'

maqa
O>S WR1 maqa-wa
WR3 -
WR4 maqawa-n
WR5 -
WR6 maqawan-chis
RR1 -

/maqawanchis/

Note: In this example the structural description of WR7 is met, but WR6 preempts it. So the derivation is the same as (16).
(18) maqa-n 'He hits him'

\[
\begin{array}{c}
\text{maqa} \\
\text{WR1} - \\
\text{WR2} - \\
\text{WR3} - \\
\text{WR4} \text{ maqa-n} \\
\text{WR5} - \\
\text{WR6} - \\
\text{WR7} - \\
/\text{maqan}/
\end{array}
\]

(19) maqa-y-ki 'I hit you(sg)'

\[
\begin{array}{c}
\text{maqa} \\
\text{S>O WR1} - \\
\text{WR2} - \\
\text{WR3} \text{ maqa-y} \\
\text{WR5} \text{ maqay-ki} \\
\text{WR6} - \\
\text{WR7} - \\
/\text{maqayki}/
\end{array}
\]

(20) maqa-su-n-ki-ku 'They hit you(sg)'

\[
\begin{array}{c}
\text{maqa} \\
\text{O>S WR1} - \\
\text{WR2} \text{ maqa-su} \\
\text{WR3} - \\
\text{WR4} \text{ maqasu-n} \\
\text{WR5} \text{ maqasun-ki} \\
\text{WR6} - \\
\text{WR7} \text{ maqasunki-ku} \\
/\text{maqasunkiku}/
\end{array}
\]

2.2 Analysis of Tarma Quechua

Our next step is to see if the framework developed for Cuzco Quechua will enable us to generate the forms of the other two dialects. The verbal forms in Tarma and Huanuco are very similar; only the 1—>2 form differs from one dialect to the other. We will focus on the Tarma dialect, which makes the most distinctions in the verb paradigm, and assume that rules developed for this dialect would need only slight modification to account for the Huanuco forms. The present tense verb forms of Tarma were discussed in section 1.2. They are given below in Figure 5 for reference.
The morpheme divisions can be made by analogy with the divisions in Cuzco Quechua. We may also assume that the morphosyntactic features are the same, with the exception of the formatives q and chi. (The latter is cognate with Cuzco chis.) q appears in the 1→2 form, where Cuzco has the sequence y (first person subject) and kí (second person). But the Tarma formative here does not include the first person subject morpheme, and it does not correspond to the usual second person marker, kí. It is therefore analyzed as having the following complex feature matrix:

\[
\begin{bmatrix}
+I \\
-II \\
+subj
\end{bmatrix}
\begin{bmatrix}
+II \\
-I \\
-subj
\end{bmatrix}
\]

In other words, it is the special marker of the 1→2 transition, and the WFR adding q must be disjunctively ordered with the ones adding the first person subject and second person formatives.

We now turn to the features of chi. Though Muysken does not give plural forms, we assume that Tarma is similar to Huanuco, where there is only one plural marker, and it precedes the transition formatives (Solá, personal communication):

\[
\begin{align*}
'I go' & \quad aywa: \\
'We go' & \quad aywa-ya: \\
'He goes' & \quad aywa-n
\end{align*}
\]
'They go'  aywa-ya-n

Since chi does not occur as a plural marker in forms other than the first person inclusive, it has probably been reanalyzed by speakers as being a person marker instead of a plural marker. The person markers and their corresponding features are therefore as follows:

(23) \(/\cdot/ /ki/ /\chi/\)

+I  -I  +I
-II  +II  +II

The formative n, however, may still be analyzed as a subject marker which is not fully specified as to person. It is added to the verb in the elsewhere condition when the subject is not [+I -II]. The formatives ma and shu should also still be analyzed as object markers which are added only when object outranks subject on the empathy hierarchy.

Given these features, the WFRs for Tarma are as listed in Figure 6. Rules 1 and 2, 3 through 5, and 6 and 7 form disjunctive blocks by the Elsewhere Condition. Rules 3 and 7 are also disjunctive by this condition. Note that since WR1 is disjunctively ordered before WR2, forms having objects with the features [+I +II] have ma and not shu for object markers.

Rules for Tarma

$$\begin{align*}
0>S & W R 1 \left[ \begin{array}{c}
-\text{subj} \\
+I
\end{array} \right] \rightarrow \text{ma} & W R 4 \left[ \begin{array}{c}
+I \\
+\text{II} \\
+\text{subj}
\end{array} \right] \rightarrow : \\
W R 2 \left[ \begin{array}{c}
-\text{subj} \\
+I
\end{array} \right] \rightarrow \text{shu} & W R 5 \left[ \begin{array}{c}
+\text{subj}
\end{array} \right] \rightarrow n \\
W R 3 \left[ \begin{array}{c}
+I \\
-\text{II} \\
+\text{subj}
\end{array} \right] \rightarrow q & W R 6 \left[ \begin{array}{c}
+I \\
+\text{II}
\end{array} \right] \rightarrow \chi \\
W R 7 \left[ \begin{array}{c}
+\text{II}
\end{array} \right] \rightarrow ki
\end{align*}$$

Figure 6

Given the disjunctive relationships among the rules in Figure 6, which arise from the Elsewhere Condition and from mutually exclusive feature specifications, there are only nine possible sequences of rules which can apply. This rule system, then, generates only the nine grammatical sequences of suffixes. These sequences of rules and their corresponding outputs are given below in (24).
(24) Rules

3    maqa-q
4    maqa--:
5    maqa-n
5,6  maqa-n-chi
5,7  maqa-n-ki
1,5  maqa-ma-n
1,5,6 maqa-ma-n-chi
1,5,7 maqa-ma-n-ki
2,5,7 maqa-shu-n-ki

It is not immediately obvious how the sequence WR4, WR7 is ruled out. Notice that a verb which would be able to trigger this sequence of rules must have a subject agreement matrix [+I -II] and an object matrix [-I +II]. (Though WR7 specifies just [+II], if the object matrix were [+I +II] then WR6 would apply, preempting the application of WR7.) However, a verb with this combination of agreement matrices will trigger WR3. Since WR3 is disjunctively ordered before WR4 and WR7, neither of these rules is then able to apply, and the sequence WR4 WR7 is correctly predicted to be impossible.

3. Summary and Conclusions

The rule systems we have proposed for Tarma and Cuzco Quechua show that by positing the existence of an empathy hierarchy which interacts with the WFRs, the problems encountered in other analyses are avoided.

To begin with, our analysis does not require that the second person suffix and the plural suffixes agree with the subject. Verbs with person markers which refer to their objects, as in the 3→2 forms, are therefore not 'irregular'. This more general interpretation of these three suffixes does not lead to ambiguity because of the condition on the application of the object marking rules. Only if the object outranks the subject on the empathy hierarchy do those rules apply. Thus the presence or absence of the object markers provides the information necessary to disambiguate the meanings.

Secondly, since the 2 OBJ marker is present only when the empathy hierarchy has been violated, we do not expect this suffix to occur in the 1→2 forms. Its absence is not a problem for our analysis. Muysken (1981:318) tries to explain the ungrammaticality of *shu–q in Tarma Quechua by the fact that q has a complex feature matrix which cannot be operated on by the collapse transformation. However, in Cuzco Quechua the 1→2 transition consists of a sequence of suffixes, and includes the
usual second person marker. Therefore the ungrammaticality of the parallel 1—>2 form in Cuzco, su-y-ki, could not be explained by any constraint on a rule which collapses features.

We conclude, then, that the inflectional rules of Quechua refer to a hierarchy of person, such that object marking is present only when the higher ranked person bears the object relation. Secondly, it has been shown here that if the morphological divisions and morphosyntactic features are correctly analyzed, there is no need to introduce transformational rules into the morphological component of grammars.

NOTES

1. The features [+I ±II] correspond to person as follows: first person is [+I -II], second person is [-I +II], first person inclusive is [+I +II], and third person is [-I -II].

2. Anderson (1982:600), in his discussion of Georgian, also proposes that transformational rules be allowed to operate on morphosyntactic representations. In Georgian there is one set of tenses in which the person agreement is reversed. The prefixes which agree with the subject in other tenses agree instead with the direct object. Similarly, the prefixes which agree with direct object in other tenses agree instead with the subject. Anderson proposes a rule to explain this phenomena which moves columns of features in the representation of the verb. However, this type of morphological transformation is also unnecessary in the case of Georgian. Harris (1981) argues for an analysis of Georgian which explains this phenomenon by positing distinct relational networks.

3. As suggested by G.N. Clements (personal communication), this strategy is not only more efficient for the analyst, but it may also reflect the strategy used by language learners. This in turn implies that the paradigm as a whole entity plays a part in the acquisition of morphology.

4. It should be noted that Solá (1967:5-21) analyses $n$ as an aspect marker which alternates with $\emptyset$ before yki and yku. The meaning is glossed by '.... general present time unless this is modified by the context.' The analysis presented above does not need to posit alternates of any morpheme, and a concrete meaning for $y$ and $n$ is apparent from the paradigm. The analysis as presented has therefore been chosen for this data, but whether this analysis will account equally well for forms in other tenses and aspects is an empirical question which has not yet been explored.
5. There is an alternate analysis which does not make reference to an empathy hierarchy. If we allow feature matrices for both subject and object in one WFR, then the rule affixing su could be specified for second person object and third person subject. The rules for object marking would then have no conditions on their application. The rules would be as follows:

$$
\begin{array}{c}
1. [-\text{subj}] \\
\quad +I \\
\rightarrow \text{wa}
\end{array}
\begin{array}{c}
2. [+\text{subj}] [-\text{subj}] \\
\quad -I \\
\quad +II
\rightarrow \text{su}
\end{array}
$$

The question then becomes, is the empathy hierarchy a separate principle of Quechua grammar, or are the phenomenon which the hierarchy explains the consequence of the application of these very specific rules which are extrinsically and disjunctively ordered. We have opted for a simpler rule system and the positing of an independent person hierarchy.

6. The general principle is that when two rules are related such that the structural description of one rule is a more specific case of the SD of the second rule, and the structural changes are incompatible, the rules are disjunctively ordered. The Elsewhere Condition is attributed to Panini, was precisely formulated by Kiparsky (1973) for phonological rule systems, and was extended to account for positional classes in inflectional morphology by Anderson (1982).

REFERENCES


CHÔMEUR CAUSEES AND THE UNIVERSALS OF CAUSATIVE UNION*

Carol Rosen

The largest question raised in this paper is: within what limits can causative union structures vary across languages? In Comrie's cross-linguistic surveys (1975, 1976), non-universal generalizations are offered together with counterexamples to each, in keeping with a "prototype" approach which does not address our question. The growth of the data base also makes the question a fresh one. Alongside the facts of Hebrew and Kannada (Cole and Sridhar 1977), recent studies on Chamorro (Gibson 1980), Choctaw (Davies 1981), Georgian (Harris 1981), Halkomelem (Gerds 1981), Tzotzil (Aissen 1983), and others, make key contributions. Nowhere in the transformational literature to date is there any restrictive account covering the whole range of causative union phenomena.

Relational grammar does undertake to delimit in universal terms the class of causative union structures. There have not been many different proposals. One is the 'Union Law' of Perlmutter and Postal (1974), another is the new account of unions presented by Gibson and Raposo (to appear). In what follows, these proposals are confronted with a certain problematic class of unions exemplified in Italian by (1). These unions have the property that the causee has the same marking as does the chômeur of a Passive clause such as (2). Let us call (1) a chômeur causee union, a name which is neutral between the different analyses I will discuss.

(1) Faremo accompagnare il gruppo da un interprete.
we'll-make accompany the group by an interpreter
'We will have an interpreter accompany the group.'

(2) Il gruppo sarà accompagnato da un interprete.
the group will-be accompanied by an interpreter

The first concern here is to assign a relational structure to (1). Contrary to Radford (1978), Raposo (1981), and mutatis mutandis Kayne (1975), I argue that in the structure of (1) the complement is monostatal and does NOT contain Passive. This entails that the structure of (1) is at odds not only with the 'Union Law' but also with Gibson and Raposo's characterization of possible unions. My main point, however, is that if we introduce into the Gibson-Raposo account one extremely simple change, it will predict the existence of chômeur causee unions as a normal consequence of the principles that regulate all other occurrences of chômeurs in unions.

Further, the counterevidence to a downstairs Passive analysis for (1) is part of a family of facts suggesting that union complements are a syntactically 'rigid' domain, in the sense that they admit fewer constructions than are found in other clauses. We will see what can be explained, at least in the Romance languages, by a principle stating that no new l's can occur in union complements.
1. Unions, the 'Union Law', and the Downstairs Passive Analysis.

Exemplified in (3)(4) are typical Italian causatives together with the relational structure assigned to them under a union analysis. The basic idea captured in a union analysis is that these constructions involve embedding in their initial structure, but also exhibit a 'flat' structure resembling a single complementless clause. In the diagrams, the upstairs clause has a first stratum (arcs labeled \( c_1 \)) in which the embedded clause is a dependent, and a second stratum (arcs labeled \( c_2 \)) in which all downstairs dependents are upstairs dependents. The stratum in which the downstairs dependents head their earliest upstairs arcs is called the union stratum.

(3) (a) Enzo fa ridere Mimi.
'Enzo makes Mimi laugh.'

(4) (a) Enzo fa innaffiare le piante a Mimi.
'Enzo makes Mimi water the plants.'

The small diagrams (3)(b) and (4)(b) express the form of a union by showing how each nominal's (final) downstairs relation maps onto the relation it bears in the union stratum upstairs. The main question in the study of unions is how to characterize as narrowly as possible the class of such mappings.

In the pattern exemplified by (3)(4), also widely attested in
other languages, the form of the union stratum is contingent on
downstairs transitivity. *Mimi* of (3) and *le piante* of (4), abso-
lutives in the (last and only) downstairs stratum, are upstairs
2's, whereas *Mimi* of (4), ergative in the (last and only) downstairs
stratum, is an upstairs 3. Perlmutter and Postal conjectured in
unpublished work (1974) that this pattern is found in ALL causative
unions, universally. Though I argue against that claim, I retain
the name 'Union Law' as a convenient label for the pattern of (3)(4),
summarized below:

(5) THE 'UNION LAW':

<table>
<thead>
<tr>
<th>downstairs</th>
<th>upstairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 or Intrans 1</td>
<td>2</td>
</tr>
<tr>
<td>Trans 1</td>
<td>3</td>
</tr>
</tbody>
</table>

How would the Union Law proposal deal with chômeur causee unions
such as (1), repeated below?

(1) Faremo accompagnarì il gruppo da un interprete.
we'll-make accompany the group by an interpreter
'We will have an interpreter accompany the group.'

Possibly these unions have the structure shown in (6)(a), where
the relation assigned to the downstairs 1 is neither 2 nor 3, but
chômeur. If so, they counterexemplify the Union Law. However, as
is often noted, chômeur causee unions can be reconciled with the
Union Law by assigning to them a structure in which Passive occurs
inside the complement, as shown in (6)(b). In this case the final
stratum downstairs is like the final stratum of (2): intransitive,
with the initial 2 advancing to 1.

(6) STRUCTURE OF CHÔMEUR CAUSEE UNIONS: TWO HYPOTHESES

(a) Monostratal Complement    (b) Passive Complement

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>Cho 2</th>
<th>1</th>
<th>Cho 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cho 1</td>
<td></td>
</tr>
</tbody>
</table>

Under the Downstairs Passive analysis for (1), *il gruppo* heads a
1-arc in an intransitive final stratum downstairs, and is thus an
upstairs 2 by the Union Law, while the reason *da un interprete* looks
like a Passive chômeur is that it is one.

Though the Downstairs Passive analysis is widely favored, there
is evidence against it. An obvious point is that Passive morphology
can never occur on the complement verb of a chômeur causee union.
This is true of analogous unions in several other languages as well.

(7) * Faremo essere accompagnato il gruppo da un interprete.
we'll-make be accompanied the group by an interpreter
Proponents of the Downstairs Passive analysis treat this fact as a morphological irregularity in the languages concerned, and do not concede that it undermines their position. In the next section, however, I suggest a new means of testing whether the complement of a chômeur causee union actually contains Passive.

2. Counterevidence to the Downstairs Passive Analysis.

The form of this argument is as follows. We note in Italian a curious set of ungrammaticalities not predictable from anything else, and the question is then how to state a constraint that blocks them. A generalization is available, but only if the Downstairs Passive analysis is discarded.

The basis for the argument is a phenomenon I will call the Reflexive Causee Constraint (RCC), illustrated in (8). Though Romance causatives are the topic of a large literature, it has been noted only rarely that causatives like (8) are ungrammatical.¹

(8) * Mario cerca di farsi \{ lavorare amare i propri nemici \\
               mantenere un orario sano \\
               dimenticare Elena \}.

'Mario is trying to make himself \{ work love his enemies \\
                                     keep reasonable hours \\
                                     forget Elena \}.'

These sentences cannot be regarded as semantically anomalous (acceptable paraphrases are available), and the morphology is perfectly interpretable and unambiguous. Though informants see the intended meaning, they reject them unanimously.

How should we state the constraint against (8)? First, the reflexive clitic si is a factor, since non-reflexive parallels to (8) are grammatical:

(9) Mario cerca di farmi (-ci, -ti, -lo, -la) lavorare.
'Mario is trying to make me (us, you, him, her) work.'

The illegal structure of (8) has the property that Mario, initial 1 of the causative verb, also bears a relation in the complement.² Our constraint would be too general, however, if it banned all unions with that property, since the following are grammatical:

(10) Mario cerca di farsi \{ notare invitare a cena \\
               prendere per un inglese \\
               affidare un certo compito delicato \\
               dire la verità \}.
'Mario\textsubscript{1} is trying to [notice him\textsubscript{1} \\
make Unspecified invite him\textsubscript{1} to dinner \\
take him\textsubscript{1} for an Englishman \\
entrust to him\textsubscript{1} a certain delicate task \\
tell him\textsubscript{1} the truth]

The structures of (8) and (10) differ in an obvious way. Consider the 1 of the union complement: in (8) it is the same nominal as the upstairs 1 (Mario), while in (10) it is another nominal distinct from Mario. The relevant parts of the RNs for (8) and (10) are shown below, with heavy lines representing the configuration which Italian prohibits:

(11) (a) ILLEGAL AS IN (8) (b) LEGAL AS IN (10)

Provisionally, then, the constraint against (8) is:

(12) REFLEXIVE CAUSEE CONSTRAINT (TENTATIVE FORMULATION)
A causative union structure is ill-formed if the same nominal heads both the initial 1-arc of the causative verb fare and a 1-arc in the complement.

Of course, this formulation of the RCC is under-motivated, because the union complements in (8) are monostratal. Any of the following descriptions, among others, would be true of Mario's downstairs arc in (8) and not in (10):

(a) initial 1-arc  (d) highest initial term arc
(b) final 1-arc    (e) highest final term arc
(c) 1-arc         (f) highest term arc in some stratum

To find out exactly what the RCC prohibits, different complement types have to be examined. This is done in the next section. But first we will see why the RCC is significant, assuming for now the formulation in (12). Recall the two rival claims about the structure of chômeur causee unions:

(6) STRUCTURE OF CHÔMEUR CAUSEE UNIONS: TWO HYPOTHESES
   (a) Monostratal Complement     (b) Passive Complement

\[
\begin{array}{c|cc}
1 & \text{Cho} & 2 \\
1 & 2 \\
\end{array}
\]
Two typical chômeur causee unions are shown below. While (13) is not significant, its reflexive counterpart (14) yields important counterevidence to the Downstairs Passive analysis.

(13) Mario cerca di farmi notare da Violetta.
    Mario tries to cause-me notice by Violetta
    'Mario is trying to make Violetta notice me.'

(14) Mario cerca di farsi notare da Violetta.
    Mario tries to cause-REFL notice by Violetta
    'Mario is trying to make Violetta notice him.'

If the union complement of (14) is taken to be monostratal, the pertinent parts of the RN are as shown in (15)(a): there is no violation of the RCC. The Downstairs Passive analysis, on the other hand, posits the arcs shown in (15)(b), with the emphasized l-arcs forming a configuration that violates the RCC.

(15) (a) Monostratal Complement     (b) Passive Complement

Under the Downstairs Passive analysis, the chômeage of the downstairs initial l (da Violetta) results from a 2-1 advancement within the union complement. In the complement of (14), the initial 2 and putative advancee to 1 is Mario. However, since Mario is also the l of fare 'cause', its putative advancement to 1 would result in an RCC violation. (Informally speaking: Passive would create the configuration 'MAKE HIMSELF be noticed', parallel to 'MAKE HIMSELF work' in (8).) Yet (14) is perfectly grammatical, which means that the configuration prohibited by the RCC does not exist in its structure. The RCC thus diagnoses the ABSENCE of any downstairs stratum in which Mario heads a l-arc. That is, Mario in (14) cannot be a Passive advancee.

The obvious objection to the foregoing argument is that the RCC could be formulated in a different way. What if the RCC is sensitive only to initial structure? Then it would not ban any patterns arising from advancement, the emphasized l-arcs in (15)(b) would violate nothing, and (15)(b) would be a viable analysis. The next section counters this and related objections by surveying further effects of the RCC.

Nine native speakers of the national language provided the judgments for this study of the Italian RCC. A small amount of data had to be discarded where an individual responded inconsistently. However, the collective verdict was unanimous or clear in most cases.

Inversion examples (3.3) reveal a two-way split among the respondents, indicating that the RCC exists in two versions, strict and lenient. The strict RCC constrains ALL STRATA of the union complement, while the lenient RCC constrains only its FINAL stratum. I propose these formulations:

(16) REFLEXIVE CAUSEE CONSTRAINT (STRICT)
A causative union structure is ill-formed if the same nominal heads both the initial 1-arc of the causative verb fare and the highest term arc in some stratum of the complement.

(17) REFLEXIVE CAUSEE CONSTRAINT (LENIENT)
A causative union structure is ill-formed if the same nominal heads both the initial 1-arc of the causative verb fare and the highest final term arc in the complement.

Crucially, the structure in (15)(b), which the Downstairs Passive analysis ascribes to (14), should be ungrammatical under either version of the RCC, whereas in reality (14) is perfect.

In what follows, three complement types are considered in turn: unaccusative predicates, Ascension predicates and Inversion clauses.

3.1. Causatives of Initially Unaccusative Clauses.

Various studies on Italian (Perlmutter 1980 and to appear, Rosen 1981, 1982) have shown substantial evidence for the Unaccusative Hypothesis, i.e. that intransitive clauses are of two kinds according to whether their initial stratum is unergative (having a 1 and no 2) or unaccusative (having a 2 and no 1). Under the available tests, which will not be repeated here, Mario in (18)(a) is an initial 1, whereas Mario in (18)(b) is an initial 2 that advances to 1.

(18) (a) Mario ha lavorato. 'Mario worked.'
(b) Mario è arrossito. 'Mario blushed.'

To state the RCC exactly, then, we must ask what happens when no initial 1-arc exists in the complement. When (18)(a) and (b) occur as union complements, the RCC shows no distinction between
them. Thus (19), where the initial term of the complement is a 2, is also ungrammatical, like (8):

(19) * Mario cerca di farsi \{ arrossire \\
sparire \\
rimanere calmo \\
stare a galla \}.

'Mario is trying to make himself \{ blush \\
disappear \\
remain calm \\
stay afloat \}.'

We want the RCC to block (19) even though Mario is not an initial 1 of the complement. It is not important to decide now whether the initial 2 (Mario) advances to 1 in these union complements, as it demonstrably does in (18)(b). The illegal property common to (8) and (19), we can say, is that the causer Mario also heads the HIGHEST TERM ARC in some downstairs stratum. This is descriptively correct whether or not one posits a 2-1 advancement within the union complements of (19).

3.2. Causatives of Ascension Constructions.

There can be Ascension (Raising) within the complement of a causative union. These examples are crucial because they show that the RCC does refer to NON-INITIAL levels of structure. Consider the verb sembrare 'seem', which allows Ascension under certain limited conditions. I assume that (20)(a) and (b) have the same initial structure. In the structure of (20)(b), the termhood of Mario in the 'seem' clause is not initial, but by Ascension:

(20) (a) Sembra che Mario sia d'accordo.
   'It seems that Mario is in agreement.'

(b) Mario sembra essere d'accordo.
   'Mario seems to be in agreement.'

Consider the corresponding unions in (21). In the initial structure common to both there is no RCC violation, but in (21)(b) the Ascension creates a configuration where Mario heads the highest term arc in the 'seem' clause, and this results in ungrammaticality:

(21) (a) Mario cerca di far sembrare che sia d'accordo.
   'Mario is trying to make it seem that he is in agreement.'

(b) *Mario cerca di farsi sembrare essere d'accordo.
   'Mario is trying to make himself seem to be in agreement.'

As noted before, the Downstairs Passive analysis expressed in (15)(b) would be viable if the RCC referred solely to initial arcs. But
that formulation is ruled out by (21)(b), which shows an RCC violation arising in non-initial structure. Our RCCs, both strict and lenient, correctly block (21)(b).

3.3. Causatives of Inversion Predicates.

Evidence for 1-3 demotion, known as Inversion, is found in many languages. Perlmutter (1984a) shows compelling evidence that certain Italian verbs such as piacere 'like' have the property that their clauses always contain Inversion. Under this analysis, the structure of (22)(a) is as shown in (b). Note that the strata where Mario heads the highest term arc are the second and third.

(22) (a) Mario piace alle ragazze.  (b)
        Mario likes to-the girls
        'Girls like Mario.'

A corresponding union with Mario as upstairs 1 is ungrammatical:

(23) * Mario cerca di farsi piacere alle ragazze.
        Mario tries to cause-REFL like to-the girls
        'Mario is trying to make the girls like him.'

This confirms what we learned from Ascensions (3.2): one cannot say that the RCC refers solely to initial arcs, since in the complement of (23) the initial stratum is of a form already known to be legal (cf. (10)), having a 1 (le ragazze) distinct from Mario. It is not until the second downstairs stratum, with the demotion of le ragazze from 1 to 3, that Mario acquires the status of highest term arc. Our RCCs, both strict and lenient, correctly block (23). There is no need to decide whether the complement has a third stratum with Mario advancing from 2 to 1, since the RCCs' predictions remain unaffected.

Lastly, consider another Inversion clause. Here Mario is the Inversion nominal, i.e. the demotee from 1 to 3. Only in the first stratum does Mario have the status of highest term arc.

(24) (a) La fonologia piace a Mario.  (b)
        phonology likes to Mario
        'Mario likes phonology.'
Again, an RCC referring solely to initial arcs would fail, for it would wrongly predict that the corresponding union in (25) is ungrammatical. In reality this type of union elicited the responses given in (26), showing the informants sharply divided.

(25) ? Mario cerca di farsi piacere la fonologia.
Mario tries to cause-REFL like the phonology
'Mario is trying to make himself like phonology.'

(26) ok ok ok ok ?? ?? ?? *

All the RCC violations noted up to now, namely (8), (19), (21)(b), (23), are correctly blocked by the lenient RCC, which refers to the downstairs FINAL stratum. Plausibly, then, a speaker could acquire the constraint in that form. Speakers having the lenient RCC will accept (25), for in the downstairs final stratum Mario is a 3, outranked by la fonologia, and thus does not head the highest term arc. The strict RCC, referring to ALL downstairs strata, would be equally acquirable, and has the same effects, except in (25), where it finds a violation because in the downstairs initial stratum Mario is a 1.

Negative judgments on (25) thus provide as a bonus a new argument for the l-hood of the Inversion nominal. In contrast to an Inversion clause such as (24)(a), consider (27)(a) and (b), which are much like it in appearance, but have verbs not belonging to the independently identifiable class of Inversion triggers. The 3's of these clauses are not l's in any stratum.

(27) (a) Le idee geniali verranno a Mario?
ideas brilliant will-come to Mario
'Will Mario get brilliant ideas?'

(b) I baffi ricresceranno a Mario?
mustache will-grow-back to Mario
'Will Mario's mustache grow back?'

Predictably, the corresponding unions in (28) contain no RCC violation, since in their complements Mario is only a 3, outranked in every stratum by the other term.

(28) (a) Mario cerca di farsi venire delle idee geniali.
Mario tries to cause-REFL come some ideas brilliant
'Mario is trying to make brilliant ideas come to him.'

(b) Mario cerca di farsi ricrescere i baffi.
Mario tries to cause-REFL grow-back the mustache
'Mario is trying to make his mustache grow back.'

Despite the superficial parallelism between (25) and (28), it is only (25) that ever gets negative judgments. The initial l-hood
of the Inversion nominal with *piacere* provides the basis for explaining why, given the existence of the RCC, speakers could find (25) defective.

The point of this section is that the RCC, whether in the strict form (16) or the lenient form (17), is always sensitive at least to the FINAL relations in a causative union complement. Given a chômeur causee union such as (14), then, the RCC can tell us whether it contains downstairs Passive as hypothesized in (15)(b). The downstairs advancee l-arc in (15)(b) should be perceived by the RCC if it existed, and we conclude that it does not exist.

4. The Need for a New Account of Unions.

As we have seen, one cannot maintain that chômeur causees arise from downstairs Passive unless one first shows how the RCC can be suitably restated, without ad hocity, to legalize (15)(b) while still prohibiting (8), (19), (21)(b), (23), and variably (25). I infer that the Downstairs Passive analysis is untenable, and (in default of any third proposal) that the complement of a chômeur causee union is monostatal as represented in (6)(a) above. It follows that chômeur causee unions are not only apparent, but actual counterexamples to the Union Law.

The Union Law's status as a universal has already been challenged in several other studies, including Cole and Sridhar (1977), Gibson (1980), and Davies (1981). Chômeur causee unions in Kannada are cited as counterexamples by Cole and Sridhar together with strong evidence against the Downstairs Passive analysis. Otherwise the discussion has centered almost exclusively on the other major class of prima facie counterexamples, those which appear to have the structure (29)(b). In languages having the union strategy (29), the downstairs initial 1 is always an upstairs 2, apparently without regard to the (initial) transitivity of the complement.

\[
\begin{align*}
(29) \text{ (a)} & \quad 1 \quad 2 \\
& \quad 1 \\
(29) \text{ (b)} & \quad 1 \quad 2 \text{ Cho} \\
& \quad 1 \quad 2
\end{align*}
\]

It might be countered that for unions allegedly of the form (29)(b) there are alternative analyses compatible with the Union Law, involving revaluations either within the complement or in an upstairs post-union stratum. For instance, a Union Law union of the form (4)(b), plus a subsequent upstairs 3-2 advancement, would produce the same final relations as in (29)(b). There is evidence that such constructions exist in Tzotzil (Aissen 1983). Or again, for some languages it might be conjectured that all initially transitive union complements are detransitivized via Antipassive, thus totally 'bleeding' that part of the Union Law whereby downstairs final ergatives are upstairs 3's. Seiler (1978) argues that this occurs
with one of the union predicates in Inupiat. Conceivably all apparent instances of (29)(b) might be reconciled with the Union Law in one of these two ways.

This impasse has been broken by two recent dissertations, Gibson (1980) on Chamorro and Davies (1981) on Choctaw. In these languages, as the authors show, unions of the form (29)(b) must be posited, and there is evidence available that excludes the alternatives proposed in defense of the Union Law. These studies make it clear that the range of variation in unions is greater than was asserted by the overly restrictive Union Law.


Since the demise of the Union Law, Gibson and Raposo (to appear) are the first to undertake to re-delimit the class of causative unions. Their main claim is that there is one and only one variable parameter among union strategies, namely the treatment of the downstairs 1. Thus, languages have union revaluation rules which explicitly assign to the downstairs 1 a certain relation in the union stratum upstairs. This relation is either 2 or 3, depending on conditions which grammars are free to specify differently (within limits not made explicit). In effect, they claim that whatever else there is to say about unions, either language-externally or on the comparative plane, will be in the form of statements about these revaluation rules, which deal with the downstairs 1 only. There are no such rules that have access to any other downstairs dependents, and no cross-linguistic variation in the treatment of downstairs non-1's. Rather, the downstairs non-1's all conform to a universal law called the Inheritance Principle, which Gibson and Raposo formulate in an interesting way.

The Inheritance Principle states that any nominal heading a downstairs final GR{X}-arc (GR{X} ≠ 1) must head, in the union stratum upstairs, EITHER a GR{X}-arc OR a chômeur arc. That is, in contrast to the downstairs final 1, which can be revalued, each of the other downstairs dependents must EITHER retain its last downstairs relation OR go into chômeage. With this formulation, it might seem that union strata are underdetermined. The reason why the Inheritance Principle can be so permissive is that there are two independently grounded laws, the Motivated Chômeage Law and the Stratal Uniqueness Law, which interact with it in such a way as to determine uniquely which upstairs relation is assigned to each downstairs dependent. The effect of these laws is that a downstairs dependent (other than the downstairs final 1) is an upstairs chômeur if and only if the retention of its last downstairs relation would create a violation of the Stratal Uniqueness Law in the union stratum.

This principle is illustrated below by two contrasting unions, each of which has a full three-term complement. In Chamorro, the
union revaluation rule is of the type mentioned in (29): a downstairs 1 is always an upstairs 2. Gibson (1980) argues that the Chamorro union (30)(b) is of the form (30)(a): predictably, of the two downstairs objects, the 3 is an upstairs 3, while the 2 (nu i problema) is an upstairs chômeur, since by the Stratral Uniqueness Law it cannot retain the 2 relation.

(30)  
(a)  
\[
\begin{array}{ccc}
1 & 2 & \text{Cho} & 3 \\
1 & 2 & 3 \\
\end{array}
\]

(b) Ha na'-eksplika yu' i ma'estrux nu i problema para si José. to the José

'The teacher made me explain the problem to José.'

Georgian, on the other hand, has the same union revaluation rule as was exemplified for Italian in (3)(4). With a transitive complement as in (31), the downstairs 1 is an upstairs 3. The rest of the union stratum is then predicted on universal grounds to be as in (31)(a): it is the downstairs 3 (Ninos-tvis) that must go into chômeage, whereas the downstairs 2 must be an upstairs 2. The evidence for the final relations shown in (31)(a) is abundant (Harris 1981).

(31)  
(a)  
\[
\begin{array}{ccc}
1 & 3 & 2 & \text{Cho} \\
1 & 2 & 3 \\
\end{array}
\]

(b) Anzorma Vanos daapirebina sabe̱do mankana Anzor-ERG Vano-DAT he-caused-promise printing machine-NOM -him-it-\text{-II}-l

Ninos-tvis. Nino-for

'Anzor made Vano promise a typewriter to Nino.'

In Gibson and Raposo's account, then, a union strategy consists in revaluating the downstairs 1 only. Three universals — the Inheritance Principle, the Stratral Uniqueness Law, and the Motivated Chômeage Law — then interact to predict all other relations in the union stratum, including the distribution of chômeurs, something which can be, but more often is not, apparent from morphological markings alone.

6. Chômeur Causee Unions as No-Revaluation Unions.

The question that now arises is whether chômeur causee unions such as (1) pose a problem for Gibson and Raposo's analysis. They mention such unions, but assume without argument the Downstairs Passive analysis. Thus in the structure they would assign to (1), the downstairs final 1 is the advancee \text{il gruppo}, which is revalued
as an upstairs 2, a result that falls within the bounds of their
typology. I have argued, however, that the Downstairs Passive
analysis is incorrect, and that chômeur causee unions have a mono-
stratal complement:

(32) \[
\begin{array}{l}
1 & \text{Cho} & (2) & (3) & (\text{Obl}_X) & \ldots \\
1 & (2) & (3) & (\text{Obl}_X) & \ldots
\end{array}
\]

This structure is at odds with Gibson and Raposo's claim that unions
always involve revaluation of the downstairs 1 to be an upstairs
2 or 3.

My main point here is that chômeur causee unions of the form (32)
can be reconciled with Gibson and Raposo's account in a strikingly
simple way. Their proposal can be maintained intact, except that
the following should be added. While languages may employ union
revaluation rules, they are not obliged to do so. That is, along-
side those union strategies that involve an explicit revaluation
of the downstairs 1, there is also a union strategy characterized
by the absence of any revaluation of the downstairs 1. In case the
downstairs 1 is not revalued, it then follows from the same uni-
versals already invoked by Gibson and Raposo that the union stratum
will be of the form (32). A causative predicate invariably takes
an initial 1, and if that nominal heads a 1-arc in the union stratum,
the downstairs 1 cannot retain the 1 relation upstairs, and will
therefore be a chômeur in the union stratum, specifically a 1-chômeur.
All other downstairs dependents will unobstructedly assume the same
relations as they last bore downstairs.

The Inheritance Principle as stated by Gibson and Raposo is ex-
licitly restricted to downstairs dependents other than 1's. The
proposal made here simplifies it by deleting that exclusion. Union
revaluation rules, I assume further, are disjunctively ordered with
respect to the Inheritance Principle, in such a way that this prin-
ciple applies to all and only those downstairs 1's that remain
unrevalued.

This section has proposed an account of chômeur causee unions
which has the following advantages: (i) it is consistent with the
counterevidence to the Downstairs Passive analysis, (ii) it does
not widen the class of possible union revaluation rules, and (iii)
it appeals only to principles which have thorough independent
motivation and are assertedly universal. Once we hypothesize that
there can be unions involving no revaluation rule, the existence
of chômeur causee unions such as (1) then follows automatically
from the same principles that characterize the distribution of
chômeurs in all other unions. Lastly, the concept of a no-revalu-
ation union enormously simplifies the grammars of certain individual
languages. It can happen that in a given language, all causative
unions are of the chômeur causee type. With limited exceptions this is true of Kannada (Cole and Sridhar 1977) and perhaps of Gilyak (Comrie 1975). To produce all these 1-chômeurs via downstairs Passive is costly, requiring the ad hoc use of Impersonal Passive, the suspension of constraints against passivizing certain verbs, and other unseemly theoretical gymnastics of the sort criticized by Cole and Sridhar. What our analysis says about such languages is quite simply that they lack union revaluation rules.

7. The Downstairs Freeze in Causative Unions.

It was argued here that Passive does not occur internally to union complements in Italian. This observation is part of a larger picture: the Romance languages present several kinds of evidence suggesting that certain multistratal constructions (though not all) are banned from union complements. The generalization that covers these facts seems to be the following:

(33) **DOWNSTAIRS FREEZE IN CAUSATIVE UNIONS**
If a nominal heads a 1-arc in the complement clause of a union, it heads an initial 1-arc in that clause.

The idea in (33) is that all constructions which create a 'new' 1 are excluded from union complements. Thus (33) does not deny that a union complement might contain, for instance, 1-3 demotion (Inversion), or any of the advancements to object relations such as Benefactive-3 or Locative-3 (Rosen 1981: Chapter 4). Among the banned types, on the other hand, would be not only Passive, but also Unaccusative advancement as well as all constructions that involve a dummy nominal heading a 1-arc.

For example, consider the well-known Unspecified Human Subject (UHS) construction. The structure of a UHS clause, under virtually all analyses, involves an abstract nominal synonymous with French on or German man, which in Italian imposes plural adjective agreement (bruti in (34)(35) is obligatorily plural). UHS clauses are characterized by the non-realization of this nominal and by the introduction of a 'gratuitous' reflexive clitic si:

(34) Si agisce da bruti. 'Unspecified acts like a brute.'

Rosen (1981: Chapter 3) gives an analysis of the UHS construction assigning to (34) a structure in which a dummy nominal heads a pair of (non-initial) arcs, 1 and 2, meeting the general condition for the reflexive clitic si. Significantly, if a UHS clause occurs as a union complement, its characteristic si vanishes:

(35) La miseria fa agire da bruti. 'Poverty brutalizes.'

The poverty makes act as brutes
non-initial 1-arc. Therefore its inability to occur inside a union complement is an expected consequence of (33).

Another prediction of the 'Downstairs Freeze' hypothesis concerns initially unaccusative clauses. Though these are ordinarily at least bistratal, containing a 2-1 advancement, (33) predicts that when they occur as union complements they are monostratal and have no final 1. A union with an unaccusative complement would thus be of this form:

(36) \begin{align*}
\text{UNACCUSATIVE COMPLEMENT} & \quad 1 & 2 \\
\text{(UNDER DOWNSTAIRS FREEZE HYPOTHESIS)} & \quad 2
\end{align*}

Evidence for (36) comes from the 'Disappearing Reflexive Clitic' phenomenon discussed in Rosen (1982). Certain Italian verbs regularly carry a reflexive clitic, called an 'inherent clitic' under some analyses. Several studies from Napoli (1973) on have argued that 'inherent clitic' clauses have an unaccusative initial stratum followed by a reflexive ('copy') advancement (Rosen 1981: Chapter 2). After advancing, the advancee is a 1 and a 2 in the same stratum, meeting the general condition for the reflexive clitic si. With these verbs, then, \text{si} is a concomitant of 2-1 advancement.

(37) Il vigile si è arrabbiato.
'The cop got angry.'

There is just one environment where these verbs appear without their clitic, namely in union complements:

(38) Carlo ha fatto arrabbiare il vigile. (*arrabbiaarsi)
'Carlo made the cop get angry.'

This follows from (33), since the complement has to be monostratal as in (36). There is no 2-1 advancement, hence no concomitant si.

Finally, the 'Downstairs Freeze' hypothesis explains how certain contrasts can arise between unergative and unaccusative union complements. In Italian, the union stratum is identical for both these types, since an unergative downstairs 1 is revalued as an upstairs 2:

(39) (a) \begin{align*}
\text{UNERGATIVE COMPLEMENT} & \quad 1 & 2 \\
1 & & 2
\end{align*}
(b) \begin{align*}
\text{UNACCUSATIVE COMPLEMENT} & \quad 1 & 2 \\
1 & & 2
\end{align*}

Nonetheless, if we accept Gibson and Raposo's analysis, there is an important difference between these two union structures. The difference lies in what causes the downstairs term to be an upstairs 2. In (39)(a) it is the (language-specific) \underline{union revaluation rule}. 
that assigns upstairs 2-hood, while in (39)(b) it is the (universal) Inheritance Principle. We obtain a prediction for any language having the Downstairs Freeze: the language might have a different revaluation rule, so the treatment of an unergative complement might vary from what appears in (39)(a). But the treatment of an unaccusative complement cannot deviate from what is shown in (39)(b), since there are no language-specific revaluation rules that have access to any downstairs dependents other than 1's.

This prediction depends crucially on the Downstairs Freeze hypothesis. If we reject that hypothesis and assume instead that the 2 of (39)(b) advances to 1 downstairs, we then expect that language-particular revaluation rules should treat it like the 1 of (39)(a). The same is true of putative downstairs Passive advances. If they advance, they are subsumed into the class of downstairs final 1's and should become accessible to whatever union revaluation rule an individual language may have.

Against this background, we can interpret as evidence for the Downstairs Freeze hypothesis a set of data cited by Gibson and Raposo. They note that in French, alongside the prevalent 'Union Law' pattern, some dialects have unions like (40): the 1 of an intransitive complement can be an upstairs 3, provided there is also a 3 in the complement.

(40) 3 Cho J'ai fait écrire au Père Noël à mes enfants.
1 3 'I made my children write to Santa Claus.'

They also argue that the more standard form (41) actually has the same union stratum as above, but with a subsequent 3-2 advancement:

(41) 3 Cho J'ai fait écrire mes enfants au Père Noël.
2 Cho 'I made my children write to Santa Claus.'
1 3

The argument for this revaluation to 3, in (41) as well as (40), is that it chômeurizes the downstairs 3 le Père Noël, which accounts for that nominal's inability to cliticize:

(42) * Je lui ai fait écrire \{ à mes enfants \}.
'\{mes enfants\}
  'I made my children write to him.'

Since a downstairs ergative also revalues to 3, one can collapse the two phenomena and arrive at this generalization:

(43) UNION REVALUATION IN FRENCH
In the presence of a distinct downstairs object (2 or 3), a downstairs 1 may be an upstairs 3.

This result would be more impressive if 'may' were strengthened to
'must'. Gibson and Raposo do not find this feasible, since some of their downstairs 1's fail to conform. Significantly, the problem cases are exactly the putative 2-1 advancees, such as la Vierge and les jouets in (44). Here, in contrast to (42), the downstairs 3 remains cliticizable, indicating that it is not chômeurized. We infer that la Vierge and les jouets are not 3's in the union stratum. That is, downstairs initial 2's become upstairs 2's unconditionally.

(44) (a) Dieu leur a fait apparaître la Vierge.  
'God made the Virgin appear to them.'

(b) Je leur ferai envoyer les jouets par Claude.  
'I will have Claude send the toys to them.'

Clearly (44) becomes problematic only because Gibson and Raposo take for granted that 2-1 advancees exist in union complements (Passive in (b), Unaccusative in (a)). The nominals thus introduced into the class of downstairs final 1's have to be forcibly revalued back to 2, destroying the generality of (43).

Under the Downstairs Freeze hypothesis, however, these putative 2-1 advancees are actually only downstairs 2's. They do not advance and do not belong to the class of downstairs 1's. It need not be stated that they become upstairs 2's unconditionally, since this is attributable to the Inheritance Principle. The unions in (44) have the structures (45)(a) and (b) respectively:

\[
\begin{array}{ccc}
45) (a) & 1 & 2 & 3 \\
& 2 & 3 \\
(b) & 1 & Cho & 2 & 3 \\
& 1 & 2 & 3 \\
\end{array}
\]

When the class of downstairs 1's is thus reduced, it is found to behave in a unified way, and (43) is strengthened to a biconditional.

8. Conclusions.

This paper took as its starting point Gibson and Raposo's attempt to re-draw the boundary between what is universal and what is language-specific in causative unions. Their claim is that universal principles determine all aspects of a union stratum except the revaluation of the downstairs 1. I have suggested further that in some unions the downstairs 1 is not revalued, in which case these same universal principles will assign it the chômeur relation upstairs. Chômeur cause unions arise in this way and, contrary to a majority view, do not involve Passive in their complements. The counterevidence to the downstairs Passive analysis aligns with various other facts attesting to the syntactic 'rigidity' of union complements in Romance languages. To capture these facts, a principle called the 'Downstairs Freeze' was proposed in (33), claiming that no causative union complement has a 1 distinct from its initial 1. Interacting with the Unaccusative Hypothesis and the Inheritance Principle, it explains an interesting variety of phenomena.
NOTES

* A shorter version of this paper appeared in CLS 19 under the title "Universals of Causative Union: A Co-Proposal to the Gibson-Raposo Typology". Some sections remain unchanged. This version provides more data from Italian on the Reflexive Causee Constraint.

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1. It has been noted by Raposo (1981) that a version of the Reflexive Causee Constraint exists in French, Portuguese and Spanish.

2. The wording of this discussion presupposes the concept of multiattachment, namely that a single nominal may head two or more arcs belonging to separate clauses, or to the same stratum of one clause. See Rosen (1981) for a detailed discussion of the role of multiattachment in Italian syntax. Although it is argued there that this notion is needed in formulating the RCC, the issue is not crucial to the present line of reasoning.

3. Raposo (1981) claims that the RCC does distinguish between unergative and unaccusative initial strata in French, Portuguese and Spanish. However, the validity of his argument remains in doubt because his examples are based exclusively on the 'let' verbs (laisser, deixar, dejar), which notoriously allow Ascension (Raising) as well as union. Though Raposo asserts that sentences analogous to (19) are grammatical in these languages, the supporting examples are all syntactically ambiguous and need not be analyzed as unions.

4. For the literature on Inversion, see the references under this heading in Dubinsky and Rosen (1983).

5. I have not undertaken to comment here on Fauconnier (1983), another new study of unions, which independently arrives at some of the same conclusions as Gibson and Raposo.

6. The Stratal Uniqueness Law asserts that no two nominals can bear the same term relation in the same stratum. The Motivated Chômage Law is the claim that a nominal cannot go into chômage spontaneously, but only under the Chômeur Condition, i.e. when some other nominal assumes its relation. The Motivated Chômage Law as originally formulated referred to monoclusal structures only, but Gibson and Raposo propose a revised formulation which makes it operative in union strata.
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DOUBLE OBJECTS IN KIKUYU?

Annie Zaenen

Most recent syntactic theories incorporate a principle with the following effect:

1) Each clause has at each syntactic level at most one subject, one object and one second object (henceforth S, DO and 2O respectively).

Theories differ in the way they enforce this result, in their assumptions about the number of syntactic levels allowed, and in either restricting the principle to "core" grammatical functions or generalizing it to all grammatical roles. I will not review these differences here; it suffices to point out that the effect in (1) is part of relational grammar (RG), lexical functional grammar (LFG), government-binding theory, and Dowty’s semantic approach to grammatical relations.

In its RG incarnation, under the name of "Stratal Uniqueness Law", the principle has come under attack from the side of Bantuists who have argued that some Bantu languages provide clear counter-examples. The best known putative counter-example is Kinyarwanda, discussed in Gary and Keenan (1976) and Kimenyi (1980); another strong contender might be Luganda (Clements, p.c.). The argument given for the existence of double objects in a given language is that in that language no grammatical process distinguishes between two postverbal NP's. Finding just one such process destroys the strong argument for double objects (although, of course, it does not leave the original RG account of object promotions unaffected). For Kinyarwanda, Dryer (1983) claims to have found evidence for a distinction between DO and other post-verbal NP's, showing that there is only one DO at any given level. The Luganda case has not been studied in any detail as far as I know.

Here I will look at Kikuyu, another language where there is prima facie evidence for two DO's. The situation in Kikuyu is similar to that described for Kimeru (a closely related language) in Hodges (1976) and taken there as illustrating a double object construction. I will argue that the existence of two passives or the possibility of incorporating pronouns with different thematic roles is in itself not enough to conclude that double objects exist, even when the rule of passivization and that of pronoun incorporation can be shown to be restricted to DO's. As I will show, apart from the a priori argument that can be
made against this conclusion, there is also a set of facts in Kikuyu that can be adduced against such an analysis. I will present the Kikuyu data and then sketch an analysis in LFG.¹

1. Kikuyu objects

   In Kikuyu we find sentences like those in (2) and (3):²

   (2) Kamau ne - a - ruYY - irɛ ɲama.
       Kamau FM SA cook PAST the-meat
       'Kamau cooked the meat.'

   (3) Kamau ne - a - ruYY - e - irɛ mo:do ɲama
       Kamau FM SA cook AP PAST the-man the-meat
       'Kamau cooked the man the meat.'

   (2) and (3) differ in the number of arguments that the verb takes and in the appearance of the applied suffix (AP) in (3). These two differences are related: it is impossible to add an argument without the applied suffix or to add the applied suffix without adding an argument (locative arguments might be an exception to this: Masunaga, p.c.). The ungrammatical patterns are illustrated in (4) and (5):

   (4) *Kamau ne - a-ruYY -irɛ mo:do ɲama
       Kamau FM SA cook PAST the-man the-meat

   (5) *Kamau ne - a-ruYY - e - irɛ ɲama
       Kamau FM SA cook AP PAST the-meat

   The word order in sentences like (3) is fixed for some speakers, whereas for others the given order is highly preferred but the inverted order of the two postverbal NP's is not totally rejected. So parallel to (3) we find the highly marked or ungrammatical (6):

   (6) */??Kamau ne - a - ruYY - e - irɛ ɲama mo:do
       Kamau FM SA cook AP PAST the-food the-man

   One might be tempted to take this as an indication that only one of the post-verbal NP's in (3), namely the first one, is a DO and that the other one has no argument status or is a 20.

   Matters are, however, not that simple, as shown in (7) and (8), where it is illustrated that both objects can passivize:

   (7) ɲama e - ruYY - e - ir - un mo:do (ne Kamau).
       the-meat SA cook AP PAST PASS the-man(by Kamau)
       'The meat was cooked for the man (by Kamau).'
(8) Mo:do a - ruγ - e - ir - uo jama (ne Kamau).
    the-man SA cook AP PAST PASS the-meat (by Kamau).
    'The man was cooked the meat for (by Kamau).'

Truth-conditionally these two sentences mean the same. Similarly each of the objects can be incorporated into the verb as an object prefix, as shown in (9) and (10):

(9) Kamau ne - a - mo - ruγ - e - irɛ jama.
    Kamau FM SA OP cook AP PAST the-meat
    'Kamau cooked the meat for him.'

(10) Kamau ne - a - me - ruγ - e - irɛ mo:do.
    Kamau FM SA OP cook AP PAST the-man
    'Kamau cooked it for the man.'

The situation just sketched gives apparent evidence for two DO's in Kikuyu, and an exactly parallel set of facts is taken to show just this for Kimeru in Hodges (1976).

One could of course question whether the possibility of passivating and of having an incorporated pronoun form are indeed properties of DO exclusively in Kikuyu, as they are in several Bantu languages. I will not demonstrate directly that this is the case. The examples given below and those in Masunaga (1981) show clearly how limited the domain of both rules is, and that there is no reason whatsoever to assume that they apply to anything but DO's.

Kikuyu, however, differs from languages like Kinyarwanda and Luganda in that it allows only for one incorporated pronoun. Both of the versions in (11) are ungrammatical:

(11) a. *Kamau ne - a - mo - me - ruγ - e - irɛ
    Kamau FM SA him it cook AP PAST

b. *Kamau ne - a - me - mo - ruγ - e - irɛ
    Kamau FM SA it him cook AP PAST
    'Kamau cooked it for him.'

This can be due to several reasons; the simplest one that comes to mind is that there is just one slot in the verbal complex for an object infix and that once that this slot is filled no second infix can be squeezed in. The second possible reason is that contrary to appearances there is actually only one DO in a Kikuyu sentence like (3) and that only DO pronouns can incorporate. The obvious way to test this is to try to apply pronoun incorporation and passive in the same sentence; if the ungrammaticality of (11) is due to morphological overcrowding, it should be possible to incorporate the pronoun in a passive sentence; if incorporation is not possible
however, this is, barring other explanations, good evidence that the active sentence did not contain two DO's (and that only DO's incorporate).

The facts bear out the second assumption, as is shown by (12) and (13), which are both ungrammatical:

(12) *nama e - mo - ruγ - e - ir - wo (ne Kamau)  
the-meat SA OP cook AP PAST PASS(by Kamau)  
'The meat was cooked for him.'

(13) *Mọ:do a - me - ruγ - e - ir - wo (ne Kamau)  
The-man SA OP cook AP PAST PASS (by Kamau)  
'The man was cooked it for (by Kamau).'  

The data in (12) and (13) are inconsistent with the hypothesis that sentences like (3) exhibit the double DO construction (as it stands, the hypothesis could be supplemented by other principles, but of course proposing that passive and pronoun incorporation are mutually exclusive without further ado, as is done in Masunaga (1983), is totally ad hoc). The data however are immediately consistent with the idea that either of the two postverbal NP's can be a DO and that the other one is then the 20. This is the analysis that I will sketch within an LFG framework.3

2. An LFG treatment4

In LFG the argument structure of verbs and the changes in that structure are represented by means of lexical rules (i.e. rules that have as their domain lexical items with their dependents and not clauses like the rules of RG). In the lexicon the arguments of the verb that are unrestricted grammatical functions (i.e. SUBJ, DO, and 20, whose meaning depends on the verb and can not be predicted from their own shape) are associated with thematic roles; this association depends on the meaning of the verb. For a verb like cook, the basic association will be the SUBJ with the agent and the DO with the theme, as given in (14).5

(14) - ruγ - :V: cook  
SUBJ DO OBL

agent theme (beneficiary or goal)

The introduction of the applied suffix allows for another association schema given in (15):

(15) - ruγ - er - :V : cook  
SUBJ 20 DO

agent theme beneficiary

As this relationship between the form in (15) and the form with the applied suffix is not limited to the verb to cook, it can be stated in the form of a redundancy rule, as given in (16):
(16) \[ V_{\text{agent}} (\text{theme}) \text{beneficiary or goal} \quad \leftrightarrow \quad [V + \text{AP}]_{V_{\text{agent}}} (\text{theme}) \text{beneficiary (or goal)} \]

The theme in this rule is made optional because the rule can also be used to derive transitive verbs from intransitives.

LFG allows for a second type of redundancy rule that does not associate thematic roles with grammatical functions but expresses the relationship between different grammatical function assignments for a given verb, by and large independently of their thematic role. Passive is such a rule; a version of it is given in (17): 6

(17) \[ \text{SUBJ} \rightarrow \text{BY OBJ} \quad \text{morphological change: w} \circ \text{affixation} \]
\[ \text{DO} \rightarrow \text{SUBJ} \]

Rule (17) applies equally to the form in (14) and the V+AP form so by means of these forms we can account for a sentence like (8) and a simple passive like (18):

(18) \( \text{nama e - ruY- ir - u (ne Kamau)} \)
\( \text{the-meat SA cook PAST PASS} \)

The exact division of work between rule types currently is under investigation in LFG. Some remarks can be found in Bresnan (1982), Baker (1982) and (1983), and in Zaenen and Maling (1983). Currently I am envisioning the following schema:

Thematic Level: rules that add or subtract thematic roles; the
\( \text{relation between open in John opened the door and} \)
\( \text{in the door opened belongs most likely to this} \)
\( \text{level.} \)

Association Level: associates the thematic roles with Grammatical
\( \text{Functions. The rule in (15) is such a rule.} \)

Grammatical Function Level: states relations between different
\( \text{forms that are expressible in terms of GF only.} \)
\( \text{The rule in (17) is such a rule.} \)

This division, however, needs much more motivation than is available now.

What is important in the present context is that the AP redundancy rule cannot apply to passive forms and get us the following form:
(19) V+pass (SUBJ) (BY-OBJ) ↔ V+AP+PASS (SUBJ) (DO) (BY-OBJ)

I assume that this follows from the fact that association level rules apply before grammatical function rules.

To account for a sentence like (7) we will assume that along with rule (16) Kikuyu has another option in associating thematic roles with arguments, that given in (20):

\[(20) \quad V (\text{agent} \quad \text{theme}) (\text{SUBJ}) \quad (\text{DO}) \leftrightarrow [V+AP]_V (\text{agent} \quad \text{theme}) (\text{beneficiary} \text{or goal}) (\text{SUBJ}) \quad (\text{DO})\]

and this rule interacts with (17) giving us sentences like (7). (Note that I am assuming that in Kikuyu word order is sensitive to more than GF alone).

As I do not know more about the possible restrictions on the rule of pronoun incorporation than what is said above, it doesn't seem to be worthwhile to formulate it at this point.

3. Conclusion

What I have tried to do in this paper is show that the existence of two passives as illustrated in (7) and (8) or two different ways of incorporating object pronouns as illustrated in (9) and (10) is not enough to conclude that a language allows for double direct objects. This argument can of course be made a priori and it is presented as such in Perlmutter and Postal (1983). In this paper I have provided a concrete case and analyzed it within the framework of assumptions of LFG, hence in a slightly different way from that sketched in Perlmutter and Postal (1983).

NOTES

*Thanks to Rebecca Gachui for being a patient informant, to G.N. Clements and K. Masunaga for discussion, and to C. Rosen and L. Zaring for editorial comments.

1. Reanalysis of this type of data not involving double objects is of course also possible in RG: I think, however, that the account that I propose is more elegant than the one that Perlmutter and Postal (1983) sketch on a priori grounds.

2. Kikuyu is a Bantu language with the usual noun class system and subject agreement depending on it. It has also an extremely rich tense system, studied in Johnson (1981). The abbreviations
used here are:  
FM: focus marker
SA: subject agreement
AP: applied suffix
PAST: Johnson's 'completive + manifest action'
PASS: passive
OP: object prefix

3. It has to be pointed out that sentences allowing this double construction are extremely rare in Kikuyu. See Masunaga (1981) for a description and for the conclusion that there is a functional anti-ambiguity constraint on their use. I will assume that this is the correct insight, hence that the syntactic rules generating these sentences do not have to be constrained but that there is a kind of functional filter applying to their output; this is of course a point that needs further discussion that will have to await the development of a reasonably precise proposal about the interaction between syntax and pragmatics.

4. This is not the place for a full-fledged exposition of the LFG theory and formalism. The interested reader is referred to Bresnan (1982) and Levin, Rappaport and Zaenen (1983).

5. It is obvious that these associations are not the only ones possible: I do not want to claim that only agents can be basic subjects, what is claimed is that action verbs like cook take their agents as their basic subjects.

6. It is debatable whether passive is one rule or whether it should be split up into an object promotion and a subject demotion rule, either of which can apply independently. For some discussion of the latter proposal within an LFG framework, see Baker (1983).

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A BIBLIOGRAPHY ON RELATIONAL GRAMMAR
THROUGH APRIL 1983
WITH SELECTED TITLES ON LEXICAL FUNCTIONAL GRAMMAR

Stanley Dubinsky
Carol Rosen

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The purpose of this bibliography is to help promote the current growth of research on the role of grammatical relations in universal grammar. Our field has no slogan more solemnly invoked than the idea that syntactic research should bear on the study of universals. When we take this notion seriously, we realize that syntactic research has to be not only vigorously empirical but also collaborative on a large scale.

More than fifty contributors from around the world responded to our canvassing letter and provided much of the information which has been recast by computer into the Language Index and Topic Index that follow the bibliography. We want to thank the contributors for their indispensable help and for the many expressions of encouragement that accompanied their replies. Financial support was provided by the Department of Modern Languages and Linguistics of Cornell University.

Since this bibliography is meant to be a research tool, its scope is not limited by any narrow orthodoxy. The entries can be roughly classified into three groups:

1) RELATIONAL GRAMMAR
   In principle we hope to have listed here the entire literature of 'relational grammar' in the narrower sense, including works which explicitly challenge any of its claims. The defining premises of this framework will be mentioned below.

2) LEXICAL FUNCTIONAL GRAMMAR
   We have included about forty pertinent titles belonging to the literature of lexical functional grammar, a framework presented by Kaplan and Bresnan 1982, which shares certain premises with relational grammar, with the result that claims made in one framework are in many cases readily interpretable in the other.

3) DESCRIPTIVE STUDIES OF RELATIONAL PHENOMENA
   A third group of titles, exemplified by Keenan and Comrie 1977, consists of informal but enterprising studies on relationally-controlled phenomena in a variety of languages. Between relational grammar and this relatively atheoretical approach there is a great distance, but in practice many works turn out to be situated somewhere in between.

Obviously it is in the third category that our selections have had to be most arbitrary, since there exist countless thorough descriptions of languages that could potentially shed further light on our theoretical concerns. If we list Cole's (1982) Imbabura Quechua and omit, say, Craig's (1977) The Structure of Jacaltec, the decision reflects in some small measure a difference in the authors' theoretical orientations, but is largely an arbitrary matter. To list and index all promising sources of data would be a task far beyond our resources.
WHEN AN ENTRY IS MARKED WITH ANASTERISK, e.g. *(1982), *(to appear),
this means that information on how to obtain a copy of it can be found in
the appendix located at the end. Entries marked with an asterisk include,
first, all Indiana University Linguistics Club publications and all papers
published in certain working papers series. The appendix gives the
addresses where these can be ordered. Secondly, for entries that do not
come from any of these institutional sources, an asterisk means that the
author is willing to supply copies at cost. Requests for copies should be
directed to the author at the address given in the appendix. For co-au-
thored papers, generally only one co-author will be found in the address
list. To enable users to estimate the cost of photocopying a paper, the
page count, if known, is given at the end of the entry.

The works listed in this bibliography are nearly all linked in some way
to a single central idea, one which some linguists reject and others regard
as the most massively corroborated linguistic hypothesis since Sir William
Jones. This is the idea that grammatical relations such as subject, direct
object, etc., should be taken as primitives of syntactic theory, and that
this step makes it possible to construct optimal single language grammars,
to formulate the cross-linguistic parallels that emerge, and to factor out
those generalizations that belong to universal grammar.

This central idea gave rise to relational grammar (RG), a framework
developed by David Perlmutter and Paul Postal during the years 1972 to
1978. From the viewpoint of RG's proponents, transformational theories
represent a conservative stance which continues to conceive of syntactic
structures in terms of linearly ordered arrays of constituents, an outlook
inherited from structuralism. RG broke with that tradition by taking gram-
matical relations as theoretical primitives and by insisting on the concep-
tual distinction between a sentence, which is physically-temporally linear,
and its syntactic representation, which is not. RG's formalism expresses
syntactic structures in the abstract, in isolation from their language-spe-
cific morphological trappings. A French sentence and a Tzotzil sentence,
for example, might differ physically in every imaginable way and yet be
formally characterized as instances of the same construction. Introduc-
tions to the formalism of RG can be found in Perlmutter and Postal 1977,

True to the claims of its first proponents, RG's theoretical constructs
did prove to be conducive to the domestication of data from the most exotic
and typologically diverse languages. The broad range of languages treated
in its literature has undoubtedly been the main factor contributing to RG's
reputation. Another is the discovery of various cross-linguistic recur-
rences which were previously unnoticed. Some of the observations most dis-
cussed at the moment are:

(1) that 3-2-1 advancement clauses ('I was shown the sights by my
friends'), in languages having diagnostics for final transitivity,
are finally intransitive. This is predictable in a theory having
the concept of chomage.

(2) that in impersonal passives based on a transitive initial stratum
(roughly of the form 'it was being thrown stones'), there is evi-
dence that the initial 2 is not a final 2. This is accounted for
by the concept of chômage together with the dummy advancement analysis of impersonal passives.

(3) that in one language after another, there are miscellaneous phenomena which show the intransitive clauses splitting into two classes whose membership has vague semantic correlates, varying somewhat across languages. Their contrasting properties turn out to follow in some natural way from the Unaccusative Hypothesis, which says that an intransitive initial stratum may be either unergative (having a 1 and no 2) or unaccusative (having a 2 and no 1).

(4) that the impersonal passive construction shows a systematic incompatibility with certain other constructions, including initially unaccusative clauses. This is accounted for by the 1-Advancement Exclusiveness Law together with the dummy advancement analysis of impersonal passives.

Much has been learned about systems of inflectional morphology. One common belief now made untenable is that rules of case and agreement are sensitive only to surface configurations. Achenese, Choctaw, Kapampangan, Marathi, Southern Tiwa, and Udi are examples of languages where case and/or agreement is contingent on non-final grammatical relations. Though a host of other issues could be mentioned, the point is that the literature cited here is fairly rich in new observations which by and large have not yet been accounted for in other frameworks.

In addition RG's literature has been relatively outward-looking, seeking to debate the premises of other frameworks in their own terms. The main theme at first was the claim that grammatical relations, and not phrase-structure configurations, are the right concepts for expressing syntactic regularities, both language-internally and on the comparative plane. Taken for granted at first was RG's other basic premise, which was an inheritance from TG, namely the idea that sentences have distinct levels of syntactic structure, sequentially arranged, from initial (underlying) through final (surface). From the late '70s on, however, the linguistic scene changed with the proliferation of 'monostratal' or surfacist frameworks which recognize only a single syntactic level. Their proponents wished to show that the abandoned transformational component can be replaced by some set of algorithms which, given a surface structure, can map it onto a semantic representation. In response, a good part of RG's recent literature has spotlighted the issue of multistralism, arguing that no framework can be adequate unless it provides for the representation of distinct levels of syntactic structure, levels expressed in terms of grammatical relations, not semantic or thematic roles.

RG made its debut, in what now seems a rudimentary form, at the 1974 LSA Institute at UMass Amherst. Resurfacing at the 1983 LSA Institute at UCLA, it has taken on a more evolved and less speculative form, though the basic constructs remain equally straightforward. On glancing through this bibliography one can see that during the intervening years much of RG's growth has taken place underground. Conventional publications are in the minority, and materials are scattered far and wide in parajournals, working papers, journals devoted to language areas, unpublished dissertations, and
other inconspicuous places. This literature has nonetheless now reached a critical mass which makes it a potential ground for new works of synthesis, and therefore we think the bibliography is timely.

Computerization means that these listings can be periodically updated. In the present version, about 75% of the entries have been indexed in detail on the basis of a checklist compiled either by their authors or by us, while the other 25% are indexed only on the basis of their titles. With each copy of the bibliography, a blank indexing form has been included as an invitation to contribute new entries for the next edition. Listings of unpublished papers are welcome, but should show both the page count and the asterisk which, as explained above, signals the author's willingness to circulate them. We also hope that users will notify us of any errors they may find.
REMARKS ON THE TOPIC INDEX

A  Headings that begin with a numeral, e.g. '3-2 Advancement', are located at the end of the alphabet.

B  In classifying syntactic rules and conditions we have adopted the following terms, which require explanation.

A metastratal rule is one that specifies some relational configuration without regard to which stratum or strata may contain it. For example, a rule of the form 'any nominal heading a l-arc accedes to phenomenon X' would be described as metastratal, since this condition is satisfied by all l's, whether initial, intermediate, or final.

A conjunctive rule is one that consists of a conjunction of more than one condition. For example, if in order to accede to a certain phenomenon a nominal is required to head both a 2-arc and a final l-arc, this condition is said to be conjunctive.

A condition that requires a nominal to head a 2-arc and a l-arc would be both conjunctive and metastratal.

C  A word of caution is in order about the use of the Topic Index. The following hypothetical entry means only that paper 401 discusses the Inversion construction in connection with data from Abkhaz:

Inversion
   Abkhaz ... 401

The typical situation is that paper 401 argues in FAVOR of analyzing certain Abkhaz sentences as instances of Inversion. However, the user should not jump to that conclusion, since the index entry would look the same if paper 401 argued explicitly AGAINST an Inversion analysis. More generally, while we are confident that the Topic Index will be useful, no part of it should be mistaken for a summary of the conclusions reached in the individual papers cited.
A BIBLIOGRAPHY ON RELATIONAL GRAMMAR
THROUGH APRIL 1983
WITH SELECTED TITLES ON LEXICAL FUNCTIONAL GRAMMAR


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