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H. Andrew Black and
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Introduction

We are pleased to present the first volume of SASC (*Syntax at Santa Cruz*, a collection of papers investigating current issues in theoretical syntax. The papers presented here were written within the last two years in the Department of Linguistics at UC Santa Cruz.

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Editors

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Comitative Coordination using Quantifiers in Quiegolani Zapotec*

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1 Introduction

The so-called Plural Pronoun Construction (PPC) has recently been given both a syntactic (Schwartz 1988) and a semantic analysis (Ladusaw 1989). This paper will build on these works to account for a similar, but exotic Comitative Coordination structure in Quiegolani Zapotec (QZ). The QZ data require both a syntactic and a semantic account. In particular, the Person Hierarchy Effect is crucial for the analysis.

Schwartz (1988) analyzes the PPC as an asymmetric complex NP consisting of a plural pronoun head and a comitative adjunct. The plurality of the pronoun may be seen as agreeing with the entire NP, so that the pronoun may refer to a single person. She notes that the Person Hierarchy Effect, which requires that the person on the head be higher than the person referred to in the adjunct on a scale of $1 > 2 > 3$, holds universally for PPCs. Ladusaw (1989) gives a semantic account of the PPC which shows that both the number resolution and the Person Hierarchy Effect follow from the requirement that the referent named in the adjunct must be included in the group determined by the plural pronoun head.

While the QZ structure displays the Person Hierarchy Effect, it differs from the PPC in that the head may be any nominal rather than only a plural pronoun. Of particular interest is that the number for the construction comes from the quantifier which heads the adjunct phrase. The basic structure under consideration has the form shown, where the subscripts indicate coreference relationships:

$$\underbrace{DP_1}_{\text{Head}} \quad \underbrace{\text{(Aspect-)Quantifier} \quad (DP_1) \quad DP_2}_{\text{Adjunct}}$$

This structure can be found both as a constituent (1a) and in a separated version (1b) where the head is separated from the rest of the structure. These two versions are completely synonymous, as shown in (1).[1] (QZ is a VSO language.)

(1) a. *R-oo* *men* *y-rup* *men* *Biqui* *nisgaal.*
H-drink 3rd P-two 3rd Virginia soda
"She and Virginia drank soda pop."

b. *R-oo* *men* *nisgaal* *y-rup* *men* *Biqui.*
H-drink 3rd soda P-two 3rd Virginia
"She and Virginia drank soda pop."

Syntactically, the QZ structure is analyzed as an asymmetric complex DP where the adjunct is a small clause headed by the quantifier. Coreferentiality of the DP_1s is a syntactic requirement that assures correct semantic construal. A derivational syntax, using only the mechanisms of Focusing, Subject Adjunction (Choe 1986 and Chung 1990), and/or Extraposition from DP, accounts for the separated version.

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[1] The QZ data used in this paper are taken primarily from R. Regnier 1989a. The abbreviations and orthography are explained in the appendix.

Semantically, the structure denotes a group which has the person feature of the head and the number feature of the quantifier. The requirement that the referents of the DPs be included in the defined group entails the Person Hierarchy Effect. This analysis extends both the syntactic and semantic analyses of the PPC, allowing the unique QZ structure to be analyzed as a variant of constructions found in other languages.

The paper is organized as follows. Basic background information is given in the next section, including the structure of nominals and the clause structure assumed for the analysis. Section 3 deals with the properties of the basic structure (1a), beginning with the distribution of the construction and a comparison of this structure with regular DP coordination structures in QZ. The restrictions internal to the structure and the meaning associated with each of its parts are then discussed.

In section 4 the analysis is presented. Section 4.1 covers the syntactic issues, while section 4.2 deals with the semantic account. The analyses given for the PPC and for Comitative Coordination in Russian are discussed here, along with a deeper look at the issues surrounding the Person Hierarchy Effect (section 4.2.3).

Section 5 gives an analysis of the separated structure, presenting further data in section 5.1. The reasons given for why separated PPC constructions in Tzotzil (Aissen 1989) and separated Comitative Coordination constructions in Russian (McNally 1989) are base-generated are shown to be irrelevant for QZ in section 5.2. Therefore, a derivational account is given in section 5.3.

2 Background Information on QZ

Zapotec is part of the Otomanguean language family. There are more than forty distinct dialects of Zapotec. QZ belongs to the Southern group of dialects. Zapotec speakers live primarily in the state of Oaxaca, Mexico. QZ speakers, numbering approximately 3000, are found mainly in the area of Western Yautepec (R. Regnier, 1989b).

The next section gives background information on the typology and X–bar structures of QZ. In section 2.2 I give the proposed structure for QZ nominals, for which I appeal to a version of the DP Hypothesis (Abney 1987 and Stowell 1989). Section 2.3 then discusses how the VSO order of QZ is obtained. I assume a GB analysis (Chomsky 1986), specifically using the Subject Adjunction option as proposed by Choe (1986) and developed by Chung (1990) for Chamorro.

2.1 Typology and X–bar Structures

QZ, and almost all Zapotec languages, are type I languages based on the classification in Greenberg (1963). The characteristics of this type I classification can be translated into the X–bar terms of "head-initial" and "specifier-final".

The basic clausal word order is VSO, as seen in (2)–(4):

(2) *W-eey Benit mël.* BENIT 4
C-take Benito fish
"Benito took a fish."

(3) *R-laa noo dziin yzhe yzhe.* BENIT 11
H-do 1ex work tomorrow tomorrow
"I do work every day."

(4) *R-u mëëz ngyed.* AGOSTO 18
H-eat fox chicken
"The fox is eating the chicken."

SVO is an alternate order, obtained by focusing (5)–(6). A focus marker is optional. Alternatively, the object may be optionally focused, though this is less common.

(5) *Y-ra maa guin r-dil noo.* BENIT 19
P-all 3a this H-fight 1ex
"All those animals are bothering me."

(6) *Le Manwel w-ruu dze ne w-et z-maa men.* AGOSTO 68
FM Manuel C-leave day that C-die POS-3a 3rd
"Manuel left the day that his animal died."

QZ has prepositions rather than postpositions, again showing the head-initial structure. These prepositions are usually body part terms. See examples (7)–(9).

(7) *Chu tank z-ob guiblew ne r-len nis za.* BATHROOM 5
belly tub PR-sit faucet that H-bear water warm
"In the middle of the tub sits a faucet that bears warm water."

(8) *S-ya men ru z-yuu men.* CWENT 14
PR-go 3rd mouth POS-house 3rd
"He went to his house."

As predicted, the genitive or possessor word always follows the noun, in specifier-final position. Nouns which are alienably possessed have the prefix *z* when possessed, but inalienably possessed nouns do not carry the prefix. Examples of possessive noun phrases are given in (8) above and in (9).

(9) *Lex w-a-ron men noo z-yuu z-mig men.* MTLEMON 8
later C-go-leave 3rd 1ex POS-house POS-friend 3rd
"Then they took me to their friend's house."

Adjectives, demonstratives and relative clauses follow the head noun also, while numerals and other quantifiers precede the noun, as shown in (10) and (11), leading to the conclusion that quantifiers head their own phrase.

(10) *y-ra maa guin* BENIT 19
P-all 3a this
"all those animals"

(11) *ndal ngyed gol w-u mëëz* RANCHO 12
lots chicken old C-eat fox
"lots of old chickens that the fox ate"

Greenberg's prediction that interrogative words are sentence-initial is also borne out in Zapotec languages.

(12) *Pa go r-laa de.* GRING 34
Q thing H-do 2
"What are you doing?"

In X-bar terms, this means that CP only will have a specifier-initial structure.

2.2 Nominal Structure

Two versions of a maximal nominal phrase are given in (13). The relative clause in (13a) may be replaced by a demonstrative, as shown in (13b), but the two may not cooccur.

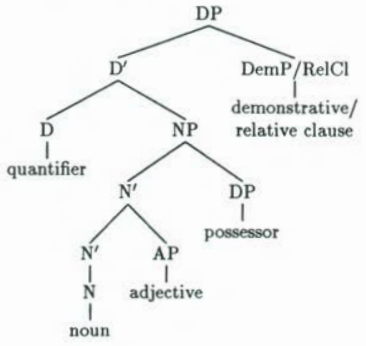
(13) a. *tzup z-pëëk ngas yuuz noo ne w-u z-kyët noo*
two POS-dog black old 1ex that C-eat POS-tortilla 1ex
"my two old black dogs that ate my tortilla"

b. *tzup z-pëëk ngas yuuz noo guin*
two POS-dog black old 1ex this
"those two old black dogs of mine"

Note in (13) that only the use of the quantifier *tzup* "two" gives any indication of the plurality of the phrase. Neither nouns, nor pronouns, nor demonstratives are marked for number. The pronoun *noo* "1ex" is ambiguous between "I/me/my" and "we/us/our".

In order to account for the cooccurrence and ordering of quantifiers, demonstratives, and possessors allowed in QZ, I assume a version of the DP Hypothesis (proposed by Abney 1987 and developed further by Stowell 1989). Since QZ has no definite nor indefinite determiners and in accordance with its head-initial structure, I posit that the head of DP is filled by quantifiers. Further, I propose that the specifier of DP is filled by either a demonstrative or a relative clause, to account for the prohibition on their cooccurrence. Finally, proposing that the possessor fills the specifier of NP allows the *x-* prefix found on alienably possessed nouns to be a case of specifier-head agreement. This structure is shown in (14).

(14)



2.3 How VSO Order is Obtained

To give concreteness to the analysis of these constructions, I will assume a GB theory of syntax. Within this theory, there have been several options proposed to account for VSO word order, including movement of V-to-I-to-C as proposed for V2 order in Germanic languages (Haider & Prinzhorn 1986), a version of the Internal Subject Hypothesis involving V-to-I movement (McCloskey 1990 and others), and the Subject Adjunction option where the subject moves to adjoin to the verb (Choe 1986, Chung 1990). Of these options, I show in other work in progress (following the lead of Chung 1990) that the Subject Adjunction option works best for QZ due to the possibilities for VP and I′ coordination.[2] Therefore, I will assume this option here.

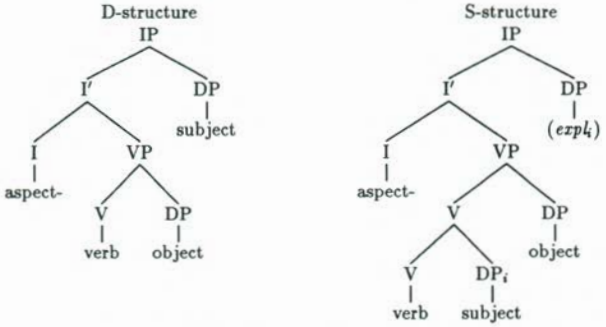
Under the Subject Adjunction option, the subject begins in the specifier of I and then right-adjoins to the verb, leaving behind a coindexed expletive *pro*.[3] I assume that IP is head-initial and specifier-final like the rest of the QZ structures (except CP), that the subject fills the specifier position, and that the aspect marking fills the head of IP position. There is no agreement marking on QZ verbs and aspect occurs instead of tense.

The D- and S-structures can be represented as shown in (15):

[2]The options which begin with the subject internal to VP predict that VP and I′ coordination are impossible.

[3]This downward movement adjoining a maximal projection to a head is clearly suspect. However, it is very similar to the WRAP function in categorial grammar as formalized by Pollard (1984). Further, all of the current options for handling VSO word order encounter either theoretical problems or data coverage problems, or both. This option provides the best data coverage for QZ, so I will adopt it until a better option is available.

(15)



With this background, we are ready to look in detail at the Comitative Coordination structures in QZ.

3 Properties of the Basic Structure

Data for the basic structure, as exemplified in (1a), will be presented in section 3.1, showing the distribution of the structure by grammatical function. Section 3.2 compares these structures to regular DP coordination. After this, section 3.3 discusses the restrictions on the optionality in the structure and the form and interpretation of each of its parts.

3.1 Data

The basic construction under consideration has the form:

DP_1 (Aspect-)Quantifier (DP_1) DP_2

The examples given here are grouped according to the grammatical function of the structure in the sentence. Note that in each example the structure under consideration is underlined. Examples are given with pronouns, proper names, or nominal phrases in each DP position. Also note that in some cases there is only one DP following the quantifier. There are specific restrictions governing when this optionality may occur, which will be presented in detail in section 3.3.5.

These structures are found in subject position in the vast majority of cases.

(16) *S-ya men y-rup men.* SAMUEL 13
PR-go 3rd P-two 3rd
"They were both going."

(17) *G-u-sēē noo y-ra noo.* LIFEINQ 20
P-eat-dinner 1ex P-all 1ex
"We all will eat dinner."

(18) *X-iid noo y-ra noo s-te led-ne z-u z-kamyon Daniel.* MTLEMON 47
F-come 1ex P-all 1ex F-one body-that PR-stand POS-truck Daniel
"We will all come again to where Daniel's truck is."

(19) *Z-a z-unaa men y-rup z-pēēd z-unaa men.* RANCHO 34
PR-go POS-woman 3rd P-two POS-baby POS-woman 3rd
"She$_i$ (his woman) and her$_i$ baby were going."

(20) *Sabt w-a-zee noo, w-za-ndzen noo y-ra z-patron noo.* MTLEMON 6
Saturday C-go-rise 1ex C-eat-breakfast 1ex P-all POS-patron 1ex
"Saturday I got up and ate breakfast with all my patrons."

(21) *Nga ts-uu de y-rup de Susan.* TRIPTOQ 6
there P-be 2 P-two 2 Susan
"There you'll be with Susan."

(22) *Ts-a de y-rup de Susan.* TRIPTOQ 80
P-go 2 P-two 2 Susan
"You can go with Susan."

(23) *W-zhoon men y-ra men z-pëëd noo.* MARTRIST 6
C-run 3rd P-all 3rd POS-baby 1ex
"She and my children ran away."

(24) *W-ya maa y-rup maa z-mig mër gos.* MARTRIST 35
C-dance 3a P-two 3a POS-friend pigeon female
"He danced with the female pigeon's friend."

(25) *Tempran r-a-zee noo y-rup noo znaa noo.* LIFEINQ 1
early H-go-rise 1ex P-two 1ex mother 1ex
"Early my mother and I would get up."

(26) *Nga w-u-gwe noo y-ra noo men.* MTLEMON2 45
there C-eat-lunch 1ex P-all 1ex 3rd
"There we all ate lunch."

(27) *Lez b-weree-ke noo y-ra noo men.* MTLEMON2 57
later C-return-also 1ex P-all 1ex 3rd
"Then we all returned."

(28)–(29) show that the structure can also be focused, giving evidence that it forms a constituent.

(28) *Laa znaa noo yrup zuz noo r-laa-w.* AGOSTO 21
FM mother 1ex P-two father 1ex H-do-3i
"My mother and my father did it."

(29) *Noze noo y-ra noo s-ya den.* SYANODEN 8
only 1ex P-all 1ex PR-go rancho
"Just the rest of us go to the ranch."

(30) gives an example of its use in a stative sentence.

(30) *Xna-ydoo z-pee Manwel n-ak Katalina y-rup Tomas.* AGOSTO 12
mother-church POS-son Manuel S-be Catherine P-two Thomas
"The godparents of Manuel's son are Catherine and Thomas."

These structures can also be the object of a regular declarative sentence, as in (31)–(32), or the object of an embedded clause, as shown in (33)–(34).

(31) *W-nëëz mëëk ngyed y-rup ngyed konej.* AGOSTO 49
C-catch dog chicken P-two chicken rabbit
"The dog caught a chicken and a rabbit."

(32) *W-nache meedz men y-ra men.* ANIMAL 49
C-frighten lion 3rd P-all 3rd
"The lion frightened everyone."

(33) *Biqui z-a g-un kompanyar Guecha y-rup z-pëëd Guecha*
Virginia PR-go P-LM accompany Lucrecia P-two POS-baby Lucrecia
ne ts-a-loo Guecha z-kiich Guecha. GRING 6
that P-go-extract Lucrecia POS-paper Lucrecia
"Virginia went to accompany Lucrecia and her baby to get their visas."

(34) *Y-niiz noo tzup chamar o tson chamar y-ral de y-rup de Susan.* TRIPTOQ 9
P-give 1ex two blanket or three blanket P-cover 2 P-two 2 Susana
"I'll give you two or three blankets to cover you and Susan."

Finally, the basic structure can be a possessor, as shown in (35).

(35) *W-dziin men led-ne ts-oo men z-kiich Guecha y-rup Carmita.* GRING 8
C-arrive 3rd body-that P-extract 3rd POS-paper Lucrecia P-two Carmita
"They arrived at the place where they get Lucrecia's and Carmita's visas."

3.2 Comparison to Regular Coordinate DPs

The similarity between the constructions being considered and coordinate DPs is striking, especially since the first DP does not need to be repeated after the quantifier in certain cases (to be discussed in detail in section 3.3.5). We need to know the form and distribution of coordinate DPs, therefore, in order to have a basis for comparison between the two structures.

QZ has the overt conjunctions *no* "and" and *o* "or". These conjunctions are always found between the two conjuncts, with no repetition of the first conjunct possible nor any separation of the construction allowed.

Some examples with coordinate DPs are:

(36) *R-kandil men-o te zman o chip gbiz.* QUESO 23
H-hang 3rd-3i one week or ten day
"She hangs it for a week or ten days."

(37) *R-ap noo ndal yaa ngyed no te bur.* AGOSTO 41
H-have 1ex lots very chicken and one burro
"I have lots of chickens and one burro."

(38) *Dzit o gyët-guu bzaa n-uu porke neguin r-u men-o.* TRIPTOQ 24
egg or tortilla-tamale bean S-be because thus H-eat 3rd-3i
"There are eggs or bean tamales, because from this they eat."

In addition, two DPs may coordinate without any overt conjunction, as seen in (39).

(39) *Per w-see men y-ra z-kayet Biqui y-ra z-nex Biqui.* GRING 32
but C-throw 3rd P-all POS-cracker Virginia P-all POS-fruit Virginia
"But they threw away all Virginia's$_i$ crackers and all her$_i$ fruit."

An interesting complementarity exists between the grammatical functions where coordinate DPs are found and those where the Comitative Coordination constructions using quantifiers are found. Regular coordinate DPs are never found in subject position, except that they may be used when the sentence consists only of the verb followed by the subject. Further, coordinate DPs are always third person. In contrast, the Comitative Coordination constructions range through first, second, and third person and, though they are occasionally found in other positions, in the overwhelming majority of cases, they are the subject of the sentence. We will see in the next section that the Comitative Coordination constructions provide more information than regular coordinate DPs do, perhaps providing the motivation for using this construction primarily with subjects.

3.3 Interpretation and Restrictions Internal to the Structure

Having seen the overall structure in section 3.1, we will now look in detail at its parts. Section 3.3.1 shows that the quantifier provides the number feature for the construction. The meaning of the optional aspect marking on the quantifier is revealed in section 3.3.2 to be a whole versus partitive reading. This is followed by a discussion of the form of the DPs in section 3.3.3. Section 3.3.4 covers the Person Hierarchy Effect, which will play a crucial role in the analysis. Finally, the conditions on the optionality of the DPs are given in section 3.3.5.

3.3.1 The Quantifier Contribution

The only method available for marking number in QZ is through the use of quantifiers.[4] When no quantifier is used, a noun phrase or pronoun is ambiguous between singular and plural. Use of a quantifier signals that the speaker wishes to make the number explicit.

In addition to number words, QZ has the general quantifiers *ra* "all", *zhi* "few", *ndal* "lots" (used with count nouns), and *naal* "much" (used with mass nouns). Of these quantifiers which can be used in quantificational DPs, only *ra* "all" and the numbers one through four are allowed to fill the quantifier position in the structures we are considering. Since in these structures the quantifier seems to entail a comitative relationship between the two DPs, I will call them Comitative Quantifiers in order to distinguish them from the other quantifiers.

The number-marking role of the Comitative Quantifiers is crucial to the correct interpretation of the construction. There is substantial evidence that the Comitative Quantifiers mark the number of the entire constituent. For example, while (40a) can have either of the first three readings given (with the first one being correct from the context), the last reading is impossible. In contrast, only that reading is possible if the Comitative Quantifier is changed to *yrup* "P-two" as in (40b). What is crucial to understanding this is that *yra* "P-all" cannot be used in contexts where there are only two participants since *yrup* "P-two" provides an alternative way of expressing that. Instead, the plurality expressed by *yra* entails that there are at least three participants.

(40) a. *Sabt w-a-zee noo, w-za-ndzen noo y-ra z-patron noo.* MTLEMON 6
Saturday C-go-rise 1ex C-eat-breakfast 1ex P-all POS-patron 1ex
"Saturday I got up and ate breakfast with all my patrons."
"Saturday we got up and ate breakfast with our patron."
"Saturday we got up and ate breakfast with all our patrons."
*(Saturday I got up and ate breakfast with my patron.)

b. *Sabt w-a-zee noo, w-za-ndzen noo y-rup z-patron noo.*
Saturday C-go-rise 1ex C-eat-breakfast 1ex P-two POS-patron 1ex
"Saturday I got up and ate breakfast with my patron."

Though normally the distinction is made only between dual and plural, using the Comitative Quantifiers meaning "two" and "all" respectively, these structures may also be found where the number marking is singular, or a group of three or four. Singular marking is used to indicate that the action was done alone, as shown in (41)–(42).

[4] Marlett and Pickett (1985) report that outside of the Southern group, all the dialects have either a plural proclitic which is used with nominals and pronouns or a verbal prefix to pluralize the subject, or both. Within the Southern group, quantifiers must be used to mark plurality for a nominal. There are variations as to whether they have singular versus plural distinction in pronouns, though all Southern dialects except QZ have at least singular and plural first person exclusive. QZ makes no singular or plural distinction at all, with the sole exception of the first person inclusive pronoun, which must include the speaker and the hearer and so is in that sense plural.

Though the other Zapotec languages all have quantificational DPs, the use of quantifiers in the constructions being analyzed here is only attested within the Southern group. This complementarity certainly suggests that the proliferation of comitative quantifier constructions in QZ stems from the lack of alternative methods of pluralization.

(41) *Teb tir te mĕr z-ob lo yag, r-oolbaan maa te-tee maa.* MARTRIST 1
one time one pigeon PR-sit face tree H-sing 3a one-one 3a
"One time a male pigeon sat in a tree singing all by himself."

(42) *Luzh lo g-uu men bni, x-iid men te-tee men.* OLDMAN 5
finish face P-sow 3rd seed F-come 3rd one-one 3rd
"After he plants the seed, he will come alone."

Example (43) shows an appositive construction, where the number of participants listed in the appositive must match the number of the Comitative Quantifier.[5]

(43) a. *W-a noo gy-on noo, [Rodolf, Susan, no Min lee].* MTLEMON2 2
C-go 1ex P-three 1ex Rodolfo Susana and Yazmin also
"We three went, Rodolfo, Susan, and Yazmin."

b. **W-a noo y-tap noo, [Rodolf, Susan, no Min lee].*
C-go 1ex P-four 1ex Rodolfo Susana and Yazmin also
(We four went, Rodolfo, Susan, and Yazmin.)

c. *W-a noo y-tap noo, [Rodolf, Susan, Biqui, no Min lee].*
C-go 1ex P-four 1ex Rodolfo Susana Virginia and Yazmin also
"We four went, Rodolfo, Susan, Virginia, and Yazmin."

Example (44) shows that while the Comitative Quantifiers meaning "two" and "all" may be thought of as having two DP argument positions (and "one" only one), the Comitative Quantifiers meaning "three" and "four" have three and four argument positions, respectively.[6]

(44) a. *X-iid noo gy-on noo Susan Rodolf lee.* TEXAS 29
PR-come 1ex P-three 1ex Susan Rodolfo also
"Susan, Rodolfo, and I came."

b. *X-iid noo y-tap noo Susan Rodolf Biqui lee.*
PR-come 1ex P-four 1ex Susan Rodolfo Virginia also
"Susan, Rodolfo, Virginia, and I came."

This further confirms that the quantifier specifies the number of the entire structure.

3.3.2 The Meaning of the Aspect Marking

We move now to the question of the meaning of the aspect marking on the Comitative Quantifiers. The forms of the aspect prefixes are identical to those found on verbs, but their semantic significance is altered somewhat. Three aspect markers are attested on the Comitative Quantifiers in regular quantificational DPs. They never appear on the other quantifiers.

The completive aspect marker *w-* can be used to indicate a finished period of time, as in (45), or to form an ordinal number as in (46).

(45) *W-ra gyĕĕl w-a-zee noo.* MTLEMON 37
C-all night C-go-rise 1ex
"The next day we got up."

[5] In (43) the speaker is Yazmin, who lists herself last and by her proper name in the appositive construction, even though the group is first person. This contrasts with (44), where there is no appositive construction. Within the Comitative Coordination structures, the first person pronoun must come first. This will be discussed more fully in sections 3.3.4 and 4.2.3 regarding the Person Hierarchy Effect.

[6] Thus, *gyon* and *ytap* are very close to being three- and four-place conjunction morphemes which Gazdar *et al.* (1989:170) conjectured that no language could have.

(46) *Per chene w-ya Jose w-rup tir w-za-no Jose Juan.* AGOSTO 20
but when C-go Jose C-two time C-walk-take Jose Juan
"But when Jose went the second time, he took Juan."

Likewise, the future aspect marker *s-* may be used on the Comitative Quantifiers to indicate "another" or "again" as many times as the cardinality of the quantifier indicates (47).

(47) *X-iid noo s-te x-yuu de.* MARTIN 47
F-come 1ex F-one POS-house 2
"I will come again to your house."

The third aspect marker that can appear on the Comitative Quantifiers is the potential aspect *y-* or *gy-*. Its use indicates that the number expressed by the quantifier is that of the whole group, whereas a number without the aspect marking gives a partitive reading. For example, the use of the aspect marking on the quantificational DP in (48) indicates that the two women are all the women of interest in the story. Similarly, in (49a) the reading is that the three rifles were all the rifles that the thieves had, whereas without the aspect marking, (49b) reads that the man took three out of a larger group of rifles that the thieves had.

(48) *Pwes zen-ga w-zac y-rup wnaa guin.* GRING 46
well how-there C-happen P-two woman this
"Well, that's what happened to these two women."

(49) a. *W-eey men gy-on x-kwiib ngbaan.* CWENT 41
C-take 3rd P-three POS-rifle thief
"He carried the thieves' three rifles."

b. *W-eey men tson x-kwiib ngbaan.*
C-take 3rd three POS-rifle thief
"He carried three of the thieves' rifles."

Only the potential aspect marking may occur in the Comitative Coordination structures (not completive or future) and it usually does appear, carrying the same meaning as in regular quantificational DPs. If the aspect marking is not present, a partitive reading is conveyed, as seen in example (50b).

(50) a. *S-ya men y-rup men.* SAMUEL 13
PR-go 3rd P-two 3rd
"They both were going."

b. *S-ya men tzup men.*
PR-go 3rd two 3rd
"Two of them (out of the group) were going."

Consistent with this whole versus partitive meaning of the potential aspect marking, *ra* "all" always carries the aspect marking since the meaning of the quantifier is inconsistent with a partitive reading.

3.3.3 Restrictions on the DPs

The fact that the Comitative Quantifier marks the number of the whole construction interacts with the form the DPs may take. In most cases the DPs are fairly simple in form, but full quantificational DPs are perfectly grammatical in both positions, as long as the quantifiers used in the DPs are consistent with the Comitative Quantifier. For example, (51) shows that a full quantificational DP may be used in DP_1 as long as it is consistent with the number marker by the Comitative Quantifier ((51a) versus (51b)) and (52) shows this is also possible for DP_2.

(51) a. *Te men y-rup x-pĕĕk men z-a x-ten men.* MENMAAC 1A
one 3rd P-two POS-dog 3rd PR-go POS-ranch 3rd
"A man and his dog went to his ranch."

b. *Txup men y-rup x-pëëk men z-a x-ten men.
two 3rd P-two POS-dog 3rd PR-go POS-ranch 3rd
(Two men and their dog went to their ranch.)

(52) W-top Jesus y-ra chip-tzup x-tisipulo Jesus. LUCAS 9:1
C-reunite Jesus P-all ten-two POS-disciple Jesus
"Jesus and all his twelve disciples came back together."

Therefore, both positions may be filled by DPs and not simply NPs.

Coreferentiality of the head DP and the first DP after the Comitative Quantifier (the two DP_1s) is required. DP_1 and DP_2 may not be in reverse order after the Comitative Quantifier (53)–(54), nor may the DP_1 after the quantifier add new information (55).

(53) *Nga ts-uu de y-rup Susan de. TRIPTOQ 6A
there P-be 2 P-two Susan 2
(There you'll be with Susan.)

(54) *Xna-ydoo x-pee Manwel n-ak Katalina y-rup Tomas Katalina. AGOSTO 12A
mother-church POS-son Manuel S-be Catherine P-two Thomas Catherine
(The godparents of Manuel's son are Catherine and Thomas.)

(55) *Lex b-weree-ke men y-ra Rodolf Susan. MTLEMON2 57A
later C-return-also 3rd P-all Rodolfo Susan
(Then they all, including Rodolfo and Susan, returned.)

These sentences are simply uninterpretable in QZ. The reason for this restriction ties in with the need for correct semantic construal in the separated structure, which will be discussed in section 4.1.2.

3.3.4 The Person Hierarchy Effect

A crucial restriction on the form of the DPs is that the person feature of DP_1 must be higher or equal to the person feature of DP_2 on a scale of $1 > 2 > 3$. This is the Person Hierarchy Effect noted by Schwartz (1988) as a cross-linguistic generalization for the Plural Pronoun Construction. QZ examples showing the Person Hierarchy Effect constraint are given in (56)–(58).

(56) a. Nga w-u-gwe noo y-ra noo men. MTLEMON2 45
there C-eat-lunch 1ex P-all 1ex 3rd
"There we all ate lunch."

b. *Nga w-u-gwe men y-ra men noo.
there C-eat-lunch 3rd P-all 3rd 1ex
(There they ate lunch with me.)

(57) a. Ts-a de y-rup de Susan. TRIPTOQ 80
P-go 2 P-two 2 Susan
"You can go with Susan."

b. *Ts-a Susan y-rup Susan de.
P-go Susan P-two Susan 2
(Susan can go with you.)

(58) a. Tempran r-a-zee noo y-rup noo znaa noo. LIFEINQ 1
early H-go-rise 1ex P-two 1ex mother 1ex
"Early my mother and I would get up."

b. *Tempran r-a-zee znaa noo y-rup znaa noo noo.
early H-go-rise mother 1ex P-two mother 1ex 1ex
(Early my mother and I would get up.)

This is a strict requirement in the QZ structure. Correctly accounting for the Person Hierarchy Effect is a central part of the semantic analysis given in section 4.2.

3.3.5 Conditions on the Optionality of the DPs

We have seen that it is possible to have only one of the DPs following the Comitative Quantifier be phonetically realized (section 3.1). There are three conditions on the optionality of these DPs (the DP preceding the Quantifier is always overt).

A. The Subject=Possessor_of_Object Condition

DP_1 may be absent after the Comitative Quantifier if it is also the possessor of DP_2. (59) shows this optionality when DP_1 and the possessor of DP_2 are a proper name and (60) gives an example where both are pronominal.[7] (61) verifies that this optionality is not possible when the possessor of DP_2 is different from DP_1.

(59) a. *Biqui z-a g-un kompanyar Guecha y-rup z-pëëd Guecha.* GRING 6
Virginia PR-go P-LM accompany Lucrecia P-two POS-baby Lucrecia
"Virginia went to accompany Lucrecia$_i$ and her$_i$ baby."

b. *Biqui z-a g-un kompanyar Guecha y-rup Guecha z-pëëd Guecha.*
Virginia PR-go P-LM accompany Lucrecia P-two Lucrecia POS-baby Lucrecia
"Virginia went to accompany Lucrecia$_i$ and her$_i$ baby."

(60) a. *Tempran r-a-zee noo y-rup noo znaa noo.* LIFEINQ 1
early H-go-rise 1ex P-two 1ex mother 1ex
"Early my mother and I would get up."

b. *Tempran r-a-zee noo y-rup znaa noo.*
early H-go-rise 1ex P-two mother 1ex
"Early my mother and I would get up."

(61) a. *W-zhoon men y-ra men z-pëëd noo.* MARTRIST 6
C-run 3rd P-all 3rd POS-baby 1ex
"She and my children ran away."

b. **W-zhoon men y-ra z-pëëd noo.*
C-run 3rd P-all POS-baby 1ex
(She and my children ran away.)

This optionality is the same phenomenon seen in regular transitive sentences when the subject is also the possessor of the object. Some examples are given in (62), where the subject position is empty in each case.

(62) *R-dziin-t* __ *z-ten men.* RANCHO 9
H-arrive-NEG POS-ranch 3rd
"They didn't arrive at their ranch."

(63) *Dze w-dziin* __ *z-ten men w-kaa* __ *z-kix men chu yag.* MENMAAC 3
already C-arrive POS-ranch 3rd C-put POS-bag 3rd belly tree
"When he arrived at his ranch he put his bag on a tree."

There is clearly a special relationship between the subject and the possessor of the object in QZ and other Zapotec dialects. In Yatzachi Zapotec, for example, all reflexive and reciprocal relationships are expressed by this type of portmanteau relationship where only the possessor of the object is overt (Butler 1976). Giving an analysis of the construction exemplified in (62)–(63) will be the topic of future research. For our current purposes it is sufficient to note that the optionality of the repeated DP_1 in examples like (59)–(60)

[7] QZ does not follow Principle C of the Binding theory; proper names are repeated throughout the sentence rather than changing all references after the first to pronouns. Further, there is no marking on the pronouns to indicate reflexivity.

has precedents in Zapotec grammar. Equally importantly, it gives evidence for a clausal analysis of the Comitative Quantifier and following DPs, since the relationship between the DP_1 and the possessor of DP_2 is exactly the same as that between the subject and the possessor of the object in a clause.

B. Redundancy Condition

The Redundancy Condition says that if DP_2 is the same pronoun as DP_1 then DP_2 is not realized phonetically, since it adds no new information. Examples (64b) and (65b) show that the repetition is ungrammatical.

(64) a. *S-ya men y-rup men.* SAMUEL 13
PR-go 3rd P-two 3rd
"They both were going."

b. **S-ya men y-rup men men.*
PR-go 3rd P-two 3rd 3rd
(They both were going.)

(65) a. *G-u-sẽẽ noo y-ra noo.* LIFEINQ 20
P-eat-dinner 1ex P-all 1ex
"We all will eat dinner."

b. **G-u-sẽẽ noo y-ra noo noo.*
P-eat-dinner 1ex P-all 1ex 1ex
(We all will eat dinner.)

C. Non-Pronominal Head Condition

The final condition on the optionality of the DPs distinguishes between pronouns and non-pronominals. If DP_1 is a pronoun not meeting the Subject=Possessor_of_Object Condition then it must be overt. Examples (66)–(68) illustrate this requirement, where in (68) the two different pronouns used indicate two groups being combined, such as Zapotecos and Americans, or two families.

(66) a. *Ts-a de y-rup de Susan.* TRIPTOQ 80
P-go 2 P-two 2 Susan
"You can go with Susan."

b. **Ts-a de y-rup Susan.*
P-go 2 P-two Susan
(You can go with Susan.)

(67) a. *R-oo men y-rup men Biqui nisgaal.* AGOSTO 8
H-drink 3rd P-two 3rd Virginia soda
"She and Virginia drank soda pop."

b. **R-oo men y-rup Biqui nisgaal.*
H-drink 3rd P-two Virginia soda
(She and Virginia drank soda pop.)

(68) a. *Nga w-u-gwe noo y-ra noo men.* MTLEMON2 45
there C-eat-lunch 1ex P-all 1ex 3rd
"There we all ate lunch."

b. **Nga w-u-gwe noo y-ra men.*
there C-eat-lunch 1ex P-all 3rd
(There we all ate lunch.)

The repeated DP_1 may be omitted, however, when both DP positions are filled by non-pronominals.

(69) a. *Xna-ydoo z-pee Manwel n-ak Katalina y-rup Tomas.* AGOSTO 12
mother-church POS-son Manuel S-be Catherine P-two Thomas
"The godparents of Manuel's son are Catherine and Thomas."

b. *Xna-ydoo z-pee Manwel n-ak Katalina y-rup Katalina Tomas.*
mother-church POS-son Manuel S-be Catherine P-two Catherine Thomas
"The godparents of Manuel's son are Catherine and Thomas."

(70) a. *W-nëëz mëëk ngyed y-rup ngyed konej.* AGOSTO 49
C-catch dog chicken P-two chicken rabbit
"The dog caught a chicken and a rabbit."

b. *W-nëëz mëëk ngyed y-rup konej.*
C-catch dog chicken P-two rabbit
"The dog caught a chicken and a rabbit."

As noted earlier, at least part of the purpose of the repeated DP_1 after the Comitative Quantifier is to link the DP_1 to the rest of the structure in the separated version like (1b). When the repeated DP_1 is overt, this linking is assured. The specific conditions on its optionality make the identity of the missing DP_1 recoverable, thus eliminating ambiguity in most cases.

4 Analysis of the Basic Structure

We are now ready to give an analysis of the basic form of the QZ Comitative Coordination structure in which it appears as a constituent. The QZ structure requires both a syntactic and a semantic analysis to account for all of its properties and restrictions. The next section is devoted to the syntactic analysis needed while section 4.2 presents the semantic analysis.

4.1 Syntactic Analysis

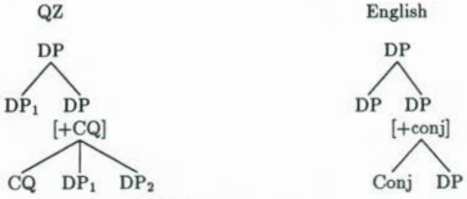
Section 4.1.1 outlines the advantages and disadvantages of several possible syntactic configurations. The syntactic structure I propose is then presented in section 4.1.2.

4.1.1 Possible Structures

A. Layered Coordination Structure

The first possibility to consider is a layered coordination structure, similar to that proposed for English (Gazdar *et al.* 1985). (CQ indicates Comitative Quantifier.)

(71)



This structure would have the following advantages:

1. The meaning of the QZ structure would be similar to coordination.

2. The number in the QZ structure would come from the quantifier, just as the number in a coordinate structure comes from the conjunction: coordinations with *and* have plural number while coordinations with *or* are normally singular.

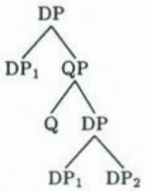
The layered coordination structure would also have some serious problems in attempting to account for the QZ data, however:

1. The rules used to generate the structure would predict iteration, but no iteration is allowed in the QZ structures.
2. It also would not account for: (i) the Person Hierarchy Effect, (ii) the number of DPs allowed following the Comitative Quantifier, and (iii) the optionality restrictions on the DPs.
3. It would predict that no movement would be possible, due to the Coordinate Structure Constraint (Ross 1967), so the separated structure would require a different analysis. (Regular Coordinate Structures in QZ do obey the Coordinate Structure Constraint.)

B. Coordination of DPs following the Comitative Quantifier

A second possible syntactic configuration would be to posit an asymmetric structure where the adjunct QP takes a single DP complement which is itself a coordinate DP.

(72)



This structure would have these advantages:

1. The Comitative Quantifier would always take only one DP complement, rather than one to four.
2. The asymmetric structure would allow the possibility of movement.

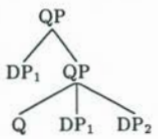
Some important disadvantages need to be mentioned, though:

1. If the DP complement to Q was a regular coordinate DP, we would be able to insert *no* "and" between DP_1 and DP_2. This, however, is not allowed.
2. Within a coordinate DP the order of the conjoined DPs would be reversible, but reversing the order makes the sentence ungrammatical.
3. This structure would give no account for the optionality restrictions on the DPs.

C. Small Clause Focus Structure

A final possibility to consider is that the QP would be a small clause where the DP_1 has been focused. This structure is shown in surface order in (73).

(73)



The focus structure would have the following advantages:

1. Focusing would provide a natural account of the required coindexing of the DP_1s.
2. The small clause analysis of the QP would accord with the Subject=Possessor_of_Object Condition on the optionality of the repeated DP_1.

Again, though, some problems occur with this proposal:

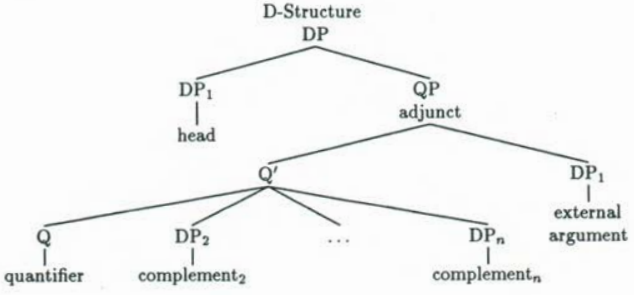
1. Since QZ also allows objects to be focused, we would expect it to be possible for DP_2 to be first, but this is ungrammatical.
2. Focusing is generally optional, so we would need an explanation for why is it obligatory in this structure.
3. Focusing does not normally leave behind a copy of the focused item, though this is possible in QZ.
4. No movement would be predicted to be possible from this structure due to the Segment Theory of Adjunction (Chomsky 1986). This would mean that the separated structure would have to be base-generated.

4.1.2 Proposed QZ Configuration

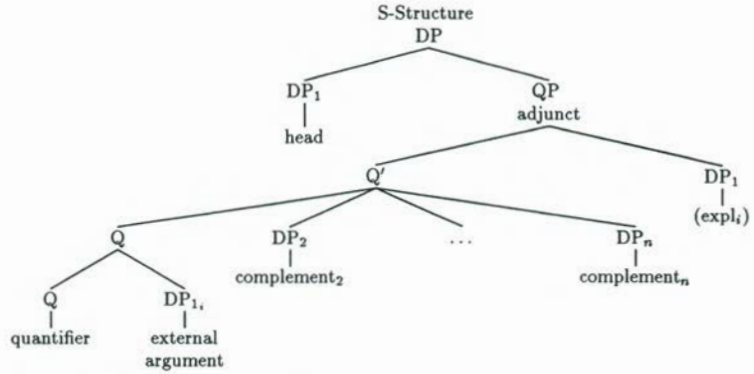
The structure I propose seeks to combine the good points of the possible structures considered in the last section. I assume the basic intuition of an asymmetric structure from Schwartz (1988), with the adjunct XP being a small clause headed by a Comitative Quantifier for QZ. I assume that the Comitative Quantifier is a predicate in the sense that it is defining a comitative or coordinate relationship between its arguments, and that it distinguishes one argument as its external argument. Of the five Comitative Quantifiers that may head a QP, *yrup* "P-two" and *yra* "P-all" may be thought of as transitive predicates taking two arguments. *Te-tee* "one-one" takes only an external argument, while *gyon* "P-three" and *ytap* "P-four" take three and four arguments, respectively.

This proposed structure is shown in (74), where the normal Subject Adjunction movement is assumed to occur in the small clause (74b).

(74) a.



(74) b.



The proposed structure has the following advantages:

1. Its structure is parallel to the structure of the PPC, so a parallel semantic account of the Person Hierarchy Effect in QZ can also be proposed.
2. The small clause analysis of the QP adjunct accords with the Subject=Possessor_of_Object DP optionality condition.
3. The asymmetric structure predicts that movement is possible.

On the other hand, the proposed structure does not automatically account for the requirement of coreferentiality for the DP_1s, the number-marking function of the Comitative Quantifier, or the Person Hierarchy Effect. The first of these issues will be addressed in this section and the others will be dealt with in section 4.2.

Within GB theory, the QP small clause is licensed as a D-Structure adjunct since it is interpretable as modifying the head it adjoins to. QZ itself places a greater restriction on this adjunction, allowing it only if the head DP_1 and the external argument of the Comitative Quantifier are coreferential. The purpose of this syntactic requirement of coreferentiality is to assure the proper semantic construal. When there is more than one DP in a sentence, the coreferentiality restriction determines whether the QP is part of a basic structure or a separated structure.

These structures may not simply be construed with the closest nominal, as shown in (75). Though the possessor immediately precedes the comitative adjunct, the order of the DPs following the Comitative Quantifier prohibits construal with the possessor in (75a), while requiring this construal in (75b).

(75) a. *W-guu Jose leen x-yuu zuz noo y-rup Jose zuz noo.* AGOSTO 44
C-sow Joe inside POS-house father lex P-two Joe father lex
"Joe and my father put it inside my father's house."

b. *W-guu Jose leen x-yuu zuz noo y-rup zuz noo Jose.*
C-sow Joe inside POS-house father lex P-two father lex Joe
"Joe put it inside my father's and Joe's house."

Construal is not determined by marking certain verbs for construal with subjects and others for construal with objects either. In (76a), the only reading possible construes the comitative adjunct with the object. Neither the third person pronoun subject nor the possessor of the locative can serve as the coreferential, missing DP_1 in the comitative adjunct; the first person pronoun object may because it is the same as the possessor of DP_2, thus satisfying the Subject=Possessor_of_Object Condition on optionality. By changing

the positions of the subject and object pronouns in (76b), we now have the comitative adjunct construed with the subject as the only possible reading. Thus, verbs meaning "take" or "send" do not have special construal marking in QZ.

(76) a. *Lex w-a-ron men noo x-yuu x-mig men y-rup x-pëëd noo.* MTLEMON 8
later C-go-leave 3rd 1ex POS-house POS-friend 3rd P-two POS-baby 1ex
"Then they took me and my baby to their friend's house."

b. *Lex w-a-ron noo men x-yuu x-mig men y-rup x-pëëd noo.*
later C-go-leave 1ex 3rd POS-house POS-friend 3rd P-two POS-baby 1ex
"Then I with my baby took them to their friend's house."

Instead, we need a QZ particular restriction for these QP adjuncts. We can restrict the appearance of the QP via the Admissibility Filter given in (77).

(77) QP Adjunct Admissibility Filter

A QP may only adjoin at D-structure to a DP which is coreferential to its external argument.

The number-marking function of the Comitative Quantifier and the Person Hierarchy Effect must still be accounted for. We will appeal to the semantics for this.

4.2 Semantic Analysis

Since we were able to propose a syntactic analysis for the QZ structure which parallels the head-adjunct analysis given for the PPC (Schwartz 1988), we hope to build the semantic analysis also from the semantic account given for the PPC (Ladusaw 1989). The next section looks in more detail at the analysis given for the PPC, noting the difficulties encountered in attempting to extend the account to heads which are not plural pronouns. Section 4.2.2 presents the analysis given by McNally (1989) for Comitative Coordination Constructions in Russian, where the head can be a proper name. Unfortunately, McNally's analysis does not account for the Person Hierarchy Effect. Section 4.2.3 reiterates the importance of the Person Hierarchy Effect in the QZ construction by presenting additional data showing that Ladusaw's inclusion idea is not enough to assure the Person Hierarchy Effect in non-pronominal heads. Finally, section 4.2.4 gives the semantic analysis I propose to account for both the Person Hierarchy Effect and the number resolution.

4.2.1 The Plural Pronoun Construction

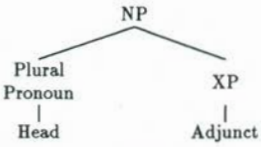
As noted in section 1, Schwartz (1988) discusses a construction found in many languages which she calls the Plural Pronoun Construction. The PPC is composed of a plural pronoun followed by either an NP or a PP, where the plurality of the pronoun may/must be taken to express the number of the entire construction, rather than only that of the pronoun itself. Examples are given from Mokilese (78a) and Latvian (78b).

(78) a. *kamwa Davy inla duhdu* SCHWARTZ 4C
2.DUAL D go swim
"You (SG) and Davy went swimming."

b. *mes ar Jani gajam majas* SCHWARTZ 6C
1.PL & J went.1.PL home
"John and I / we and John went home."

Schwartz analyzes these constructions as asymmetric single-headed constructions where the head must be a plural pronoun and the adjunct is an NP or a PP depending on the language, as shown in (79).

(79)



Two of Schwartz's universals for the PPC are:

1. The head pronoun in this construction is always plural, where the number marking on the pronoun accounts for the number marking of the entire construction.

2. There is a Person Hierarchy Effect in that the person feature of the pronoun head always outranks the person feature of the comitative adjunct on the hierarchy 1 > 2 > 3.

Ladusaw (1989) gives a semantic interpretation for the PPC which entails these universals. He says that, in contrast to a coordination relationship where the conjuncts must be disjoint in reference, the PPC requires that the referent of the adjunct be properly included in the reference of the head pronoun. The comitative adjunct is thus a modifier which provides additional information about the pronoun's reference. Under Ladusaw's analysis, the referent of the NP of the adjunct phrase must be a proper subpart of the group which is the referent of the head pronoun, thus entailing the plurality of the pronoun since it must refer to a group which is at least one larger than the referent of the adjunct phrase. The interpretation that the referent of the adjunct must be included in the reference of the pronoun also entails the Person Hierarchy Effect, due to the meaning of the pronouns. Since a second person pronoun must refer to a group which contains the hearer but excludes the speaker and since a third person pronoun excludes both the speaker and the hearer, a construction with a second person pronoun as head could not have a first person adjunct, nor could a construction with a third person pronoun head have either a first or second person adjunct.

At first glance, it is difficult to determine how the QZ structure relates to universal (1) for the PPC. Since there is no number marking on QZ pronouns, we cannot definitely say we have a plural pronoun as head, though each pronoun may be taken to be either plural or singular. This is a problem, though, for the constructions which use *tetee* "one-one" to mean "alone" since the pronoun cannot possibly be taken as plural in this case. A bigger difficulty is encountered in the case of the QZ structures which have proper names or regular noun phrases as heads.

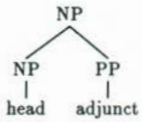
4.2.2 Comitative Coordination Construction

One approach we could take is to analyze all the QZ structures, or at least those which are problematic for universal (1) of the PPC, as versions of the Comitative Coordination Construction proposed by McNally (1989) for Russian. An example is given in (80).

(80) *Anna s P'et'ej pr'idut* McNally 1
Anna-nom with P.-instr come-3pl
"Anna and Peter are coming."

McNally proposes that the structure [*Anna s P'et'ej*] forms a single-headed asymmetric constituent which has a semantics almost identical to that of a symmetric coordinate structure. She analyzes the structure of these Comitative Coordination structures as shown in (81), which is almost identical syntactically to the PPC.

(81)



McNally further notes that the fact that the verb in (80) has plural agreement marking argues for the constituency of the construction. The number marking is not found on the head of the construction, but rather is semantically determined. She argues that the Comitative Coordination construction denotes a group, with an implicature requiring "togetherness", where the referent of the adjunct must be disjoint from the referent of the head.

A major problem with adopting a Comitative Coordination analysis for the QZ structures is that it does not explain the fact that the Person Hierarchy Effect (universal (2) for the PPC) is a strict requirement in the QZ structures, even those with non-pronominal heads. There is no reason under the Comitative Coordination analysis that one could not say *John with me*, but the QZ counterpart of this is ungrammatical.

4.2.3 The Person Hierarchy Effect Revisited

QZ examples were given in section 3.3.4 showing the Person Hierarchy Effect constraint, where the person feature of DP_1 must be higher or the same as the person feature of DP_2 according to the hierarchy $1 > 2 > 3$. Interesting additional evidence which accords with Ladusaw's semantic analysis that the referent of the adjunct must be included in the reference of the head is seen in the distinction between the first person exclusive and inclusive pronouns. When defining a group including first and second person, it is ungrammatical to use the first person exclusive pronoun *noo* as the head, as shown in (82a) and (83a). The grammatical counterpart of each of these is shown in (82b) and (83b) where the first person inclusive pronoun is the head.[8]

(82) a. **G-ux-sēē noo y-ra noo de.* LIFEINQ 20A
P-eat-dinner 1ex P-all 1ex 2
(We(inc) all will eat dinner.)

b. *G-ux-sēē-b y-ra-b.*
P-eat-dinner-1i P-all-1i
"We(inc) all will eat dinner."

(83) a. **G-ux-sēē noo y-rup noo de.* LIFEINQ 20B
P-eat-dinner 1ex P-two 1ex 2
(You and I will eat dinner (together).)

b. *G-ux-sēē-b y-rup-e.*
P-eat-dinner-1i P-two-1i
"You and I will eat dinner (together)."

Since the Person Hierarchy Effect seems to be such a strict constraint, it is important for our analysis to account for it. Therefore, we cannot simply assume a Comitative Coordination semantic interpretation even for the structures with non-pronominal heads. Judith Aissen (p.c.) brought out an interesting point about Tzotzil PPCs which might help us here. She found out, surprisingly, that PPC-type constructions in Tzotzil with proper name heads rather than plural pronoun heads are perfectly grammatical with the same interpretation that PPCs have. This is possible since, in Tzotzil, a proper name may denote not only that individual, but also his family or close associates. This also seems to be true in QZ.

If a proper name may denote that person and all his close associates or belongings, we should be able to extend the semantic interpretation given for the PPC by Ladusaw to the QZ constructions by saying that

[8] Although most of the QZ pronouns are free forms, *be* "1i" and *we* "3i" are phonological clitics which attach to whatever word precedes them.

the referent of the adjunct (DP_2) must be included in the reference of the head (DP_1).[9] However, examples (84)–(85) show that this analysis does not entail the Person Hierarchy Effect for non-pronominal heads. If the person referred to by the second person pronoun is a member of Susan's family, the inclusion idea would predict that (84b) is grammatical, but it is not, since it violates the Person Hierarchy Effect.

(84) a. *Ts-a de y-rup de Susan.* TRIPTOQ 80
P-go 2 P-two 2 Susan
"You can go with Susan."

b. **Ts-a Susan y-rup Susan de.*
P-go Susan P-two Susan 2
(Susan can go with you.)

Similarly, *znaa noo* "my mother" should be able to be the head of a group which includes "me", but as (85b) shows, the Person Hierarchy Effect again rules this out.

(85) a. *Tempran r-a-zee noo y-rup noo znaa noo.* LIFEINQ 1
early H-go-rise 1ex P-two 1ex mother 1ex
"Early my mother and I would get up."

b. **Tempran r-a-zee znaa noo y-rup znaa noo noo.*
early H-go-rise mother 1ex P-two mother 1ex 1ex
(Early my mother and I would get up.)

Clearly, it is the person feature of the head DP that is crucial.

4.2.4 Proposed Semantic Interpretation

The two properties of the QZ structure that the syntax could not account for are the Person Hierarchy Effect and the fact that the Comitative Quantifier in the adjunct marks the number for the entire structure. We saw in the preceding section that we need the person feature of the head to be the person feature of the entire structure in order to account for the Person Hierarchy Effect. I capture both of these properties in the semantic interpretation given in (86).[10]

(86) Proposed Semantic Interpretation

The mother DP defines a group which has the person feature of the head DP_1 and the number feature of the Comitative Quantifier. All the arguments of the Comitative Quantifier must be included in the defined group.

This means that a 1ex head would require ¬2, a 1i head would require 1 and 2. A second person head would mean ¬1, and a 3rd person head would require ¬1 and ¬2. For example, *Susan y-rup Maria* "Susan P-two Mary" would yield:

$$\begin{aligned} &\text{Susan} \in X,\ \text{person}=3 \Longrightarrow 1 \notin X, 2 \notin X \\ &\text{Mary} \in X \\ &|X| = 2 \end{aligned}$$

This analysis thus entails both the Person Hierarchy Effect and the number resolution for the structure.

[9] Note, though, that we do not want the part of Ladusaw's (1989) semantic interpretation which states that the referent of the adjunct must be a *proper* subpart of the reference of the head. He used this to guarantee the plurality of the pronoun, but noted in a footnote that the proper subpart may not need to be stipulated since it should follow from the Pointless Adjunct Principle. We do not need to guarantee the plurality of the pronoun since the number is expressed by the Comitative Quantifier, so by stating only that the referent of the adjunct be included in the reference of the head we can allow cases where DP_1=DP_2. In the QZ structures, the adjunct is not pointless even when the parts are identical in reference, since the adjunct supplies the number information.

[10] We could appeal to the Correspondence Principle (Zwicky 1977) to correlate the syntactic and semantic features on the mother DP, though no overt morphosyntactic marking is present in QZ.

5 Analysis of the Separated Structure

Having given an analysis for the basic syntactic structure and its semantic construal, we are now ready to address the alternate realization of the Comitative Coordination structure. Consider again the pair of sentences in (1), repeated below.

(1) a. *R-oo men y-rup men Biqui nisgaal.*
H-drink 3rd P-two 3rd Virginia soda
"She and Virginia drank soda pop."

b. *R-oo men nisgaal y-rup men Biqui.*
H-drink 3rd soda P-two 3rd Virginia
"She and Virginia drank soda pop."

Example (1b) looks exactly like (1a), except that the object intervenes between the head and the comitative adjunct in (1b). Otherwise, the separated construction is identical to the basic construction, both in its interpretation, the restrictions on the optionality of the DPs, and the fact that the Person Hierarchy Effect is a strict requirement. This section shows that a derivational syntax gives a straightforward account for the separated QZ construction. Further data for the separated structure will first be presented in section 5.1. Section 5.2 then presents the analyses given to similar constructions from Russian (McNally 1989) and Tzotzil (Aissen 1989) where it has been argued that the separated construction must be base-generated. I claim that none of the reasons for that conclusion are present in the QZ case, which allows us to propose a derivational analysis in section 5.3.

5.1 Data for the Separated Structure

As mentioned above, the separated structures are just like the basic structures except that material intervenes between the head and the comitative adjunct. Examples in the texts in R. Regnier (1989a) include numerous cases where the head DP_1 is in the subject position, immediately following the verb. Representative sentences are given in (87)–(93). Note that in (92)–(93), the construction *noo ... yra noo men* is again translated "we all", just like it was for the examples of basic structure where there is no gap between the head and the comitative adjunct phrase. Examples (92)–(93) are also taken from contexts where both Zapotecos and Americans are in the group.

(87) *W-tsoow Rafayel te mezh y-rup Lawer.* AGOSTO 43
C-make Ralph one table P-two Larry
"Ralph and Larry made a table."

(88) *R-ya zuz noo den y-ra znaa noo, r-boo me gyezh.* QUESO 3
H-go papa 1ex rancho P-all mother 1ex H-extract 3f cheese
"My father and mother go to the ranch and she extracts cheese."

(89) *Dxe win dxe noo r-zaal znaa noo noo skwel* ESCUELA 1
already small already 1ex H-send mother 1ex 1ex school
y-rup zuz noo.
P-two papa 1ex
"When I was young, my mother and my father sent me to school."

(90) *Chene w-uu noo lgyēz y-ra znaa noo, r-a znaa noo San Jose.* SANJOSE 1
when C-be 1ex town P-all mother 1ex H-go mother 1ex San Jose
"When I lived in town with my mother (and family),
my mother went to San Jose."

(91) *Teb tir w-a noo gos ru gyoow y-ra noo znaa noo.* SNAKHAIR 1
one time C-go 1ex bathe mouth river P-all 1ex mother 1ex
"One time I went to the river to bathe with my mother
(and other family)."

(92) *W-a noo w-ii lo gyēēl y-ra noo men.* MTLEMON 50
C-go 1ex C-see face lake P-all 1ex 3rd
"We all went to see the lake."

(93) *B-weree noo nēz y-rup noo men.* LIFEINUS 67
C-return 1ex road P-two 1ex 3rd
"We all returned by the road."

Example (94) shows that this comitative construction may also be the subject of a deeply embedded clause.

(94) *Dze-bel r-laan de ts-a de gu-e noo lo men z-iid men*
already-if H-want 2 P-go 2 P-say 1ex face 3rd F-come 3rd
"If you want to go, I will tell him to come,
g-u de diiz y-rup de men. HORTENS 5
P-chat 2 word P-two 2 3rd
so that you can talk with him."

There are also many cases where the head DP_1 is in focus position but the comitative adjunct is clause final, as in (95)–(97).

(95) *Te men z-a x-ten y-rup x-pēēk men.* MENMAAC 1
one 3rd PR-go POS-ranch P-two POS-dog 3rd
"A man went to his ranch with his dog."

(96) *Le Jose w-zhoon y-rup x-unaa Jose.* AGOSTO 69
FM Joe C-run P-two POS-woman Joe
"Joe ran away with Joe's wife."

(97) *Le zuz noo w-guu bni y-ra mee bzaan noo.* SYANODEN 19
FM papa 1ex C-sow seed P-all boy sibling.opp.sex 1ex
"My father planted seed with all my brothers."

(98) is the only example in the texts[11] of a separated construction where the head DP_1 is in object position.

(98) *Lex w-a-ron men noo z-yuu z-mig men* MTLEMON 8
later C-go-leave 3rd 1ex POS-house POS-friend 3rd
y-rup x-pēēd noo.
P-two POS-baby 1ex
"Then they took me and my baby to their friend's house."

5.2 Base Generated Analyses of Other Separated Constructions

We have seen that in QZ there is no outside marking or ambiguity which requires the separated construction to be interpreted differently than the basic structure, as we shall see there is in Russian and Tzotzil. The next section will show that there is different agreement marking on the verb when the Russian constructions are separated, which is why McNally (1989) argues that the head only is in argument position and the adjunct is base generated adjoined to VP for the separated constructions. Then in section 5.2.2 I discuss

[11] My QZ language consultant assures me that separated counterparts of the basic structure in object position are generally grammatical as long as the intervening material is within the same clause.

the ambiguity of Tzotzil sentences containing PPCs, which Aissen (1989) used to argue for two structures for these sentences, one where the comitative PP adjunct is included in the PPC and one where it is simply a VP-adjunct.

5.2.1 Separated Russian Comitative Construction

McNally's (1989) analysis of Russian Comitative Coordination constructions was given in section 4.2.2, where it was noted that plural number agreement marking is found on the verb. McNally shows that the verbal agreement marking is singular, rather than plural, when the parts of the comitative construction are separated in what she calls a Comitative VP Adjunct construction. Examples of this are shown in (99) where (a) is the Comitative Coordination construction like that shown earlier, (b) is the Comitative VP Adjunct construction, and (c) verifies the ungrammaticality of plural verbal agreement marking when the parts are separated.

(99) a. *Anna s P'et'ej pr'idut* — McNally 1
Anna-nom with P.-instr come-3pl
"Anna and Peter are coming."

b. *Anna pr'idot s P'et'ej* — McNally 2a
Anna-nom come-3sg with P.-instr
"Anna is coming with Peter."

c. **Anna pr'idut s P'et'ej* — McNally 2b
Anna-nom come-3pl with P.-instr
(Anna are coming with Peter.)

McNally (1989) gives further arguments regarding the constituency of the Comitative Coordination construction versus the non-constituency of the Comitative VP Adjunct construction. These include the facts that sentences like (99a) are ungrammatical when the NP and PP are separated by adverb interpolation or extraposition, and that the PP in constructions like (99a) may not be extracted via WH-movement while the PP in (99b) may be easily extracted. She thus gives a compelling argument that while the Comitative Coordination construction does form a constituent, the Comitative VP Adjunct construction is base-generated separately.

These arguments do not apply to the QZ constructions, however, since there is no number marking on the verb at all in QZ, much less different number markings to distinguish the different constructions. The number marking for the group remains on the quantifier in all cases. Further, there is no discernible difference in extraction possibilities.

5.2.2 Plural Pronoun Constructions in Tzotzil

Turning now to Tzotzil, Aissen (1989) shows that in Tzotzil an ambiguity is created by adding a comitative PP to a sentence. The plural pronoun head may be interpreted as referring to a single individual, thus including the referent of the comitative PP in its plurality, or as being plural itself, with the referent of the comitative PP simply added on. Examples (100) and (101) illustrate this, where the (a) examples show the verb form and its meaning[12] and the (b) examples show the ambiguity between the PP-included and PP-excluded readings created by adding the comitative PP.

(100) a. *Libatotikotik.* — Aissen 1
We(exc)-went
"We went."

[12] Tzotzil is a pro-drop language and the predicate agrees with both the subject and direct object.

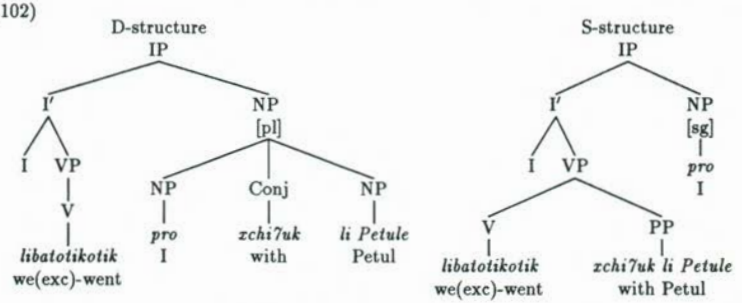
b. *Libatotikotik xchi7uk li Petule.*
We(exc)-went with def Petul
(i) "I went with Petul." (PP-included reading)
(ii) "We(exc) went with Petul." (PP-excluded reading)

(101) a. *Chajtojik.* AISSEN 2
I-pay-you(pl)
"I'll pay you(pl)."

b. *Chajtojik xchi7uk li Xune.*
I-pay-you(pl) with def Xun
(i) "I'll pay you(sg) and Xun." (PP-included reading)
(ii) "I'll pay you(pl) and Xun." (PP-excluded reading)

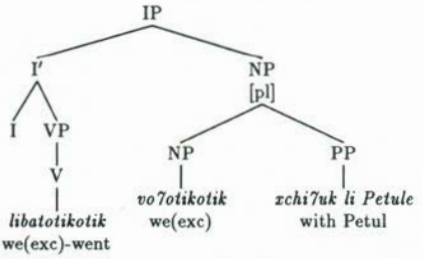
Aissen reports that earlier analyses of the facts of the PP-included readings have assumed that these constructions have an initial coordinate NP, which is a subject in (100b) and an object in (101b). These coordinate constructions are then split up so that the PP becomes a separate VP Adjunct. Many have proposed this type of analysis. Lakoff & Peters (1969) called it *Conjunct Movement* and *Preposition Adjunction* for English. Hetzron (1973) gave it for Hungarian under the name of *Comitivization*. Hale (1975) called it *Conjunct Movement* for Navajo and Aissen (1987) labeled it *Conjunct Union* for Tzotzil. Under this analysis, (100b) would have the syntactic structures shown in (102) for the PP-included reading.

(102)



Aissen (1989) claims that the PPC is a better analysis for the PP-included readings. Under the PPC analysis, the PP-included reading for (100b) would have the structure shown in (103).

(103)

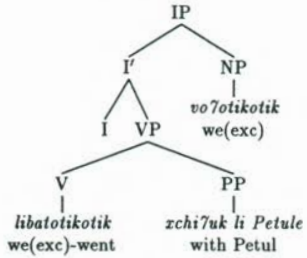


In (103) the subject is first person plural exclusive because its head is, thus the verb is inflected for a first person plural exclusive subject. However, based upon the semantic interpretation given by Ladusaw (1989), the subject really means "we, including Petul" or "Petul and me". All that is necessary to yield (100b) is

to assume that the pronominal head of the construction can drop, like other personal pronouns in Tzotzil.

In contrast, the PP-excluded reading can be represented as in (104), where there is no Plural Pronoun Construction, and the PP is instead base-generated as a VP dependent.

(104)



In computing who went in (104), *Petule* is added to the subject which is already plural, so more than two people must have gone. Again, pro-drop will yield (100b).

The ambiguity in the readings for these Tzotzil sentences is thus explained as a phrase-structural ambiguity if we assume that the PP-excluded readings are base-generated as shown in (104). Again though, we do not see this type of ambiguity in the QZ constructions, so there is no reason to assume that they cannot be generated by movement. It is important to note that I am not proposing that the QZ movement results from a Conjunct Union movement like that shown in (102). Instead, the Subject Adjunction movement which is already a part of the QZ phrase structure system and/or Extraposition from DP, coupled with Focusing in some cases, will account for the separation of the head and comitative adjunct. The beauty of this analysis will be shown in the next section.

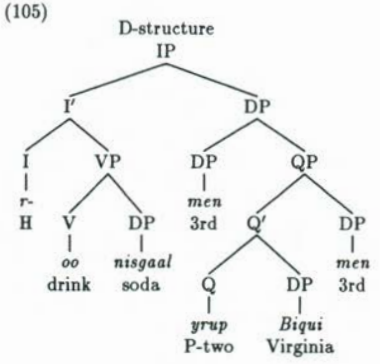
5.3 A Derivational Account of the Separated Structure

Since nothing in the QZ grammar necessitates that the separated structure be base-generated, we can propose a derivational account. This provides a natural account for the fact that the Person Hierarchy Effect and other properties of the construction hold for the separated structure as well as for the basic structure. In this section, the observed distribution of the data for the separated structure is shown to fall out automatically from mechanisms independently needed in the QZ grammar. Section 5.3.1 shows how Subject Adjunction, coupled with Focusing in some cases, can account for the vast majority of the data. Section 5.3.2 shows that Extraposition from DP will account for the separated construction when the head is in object position.

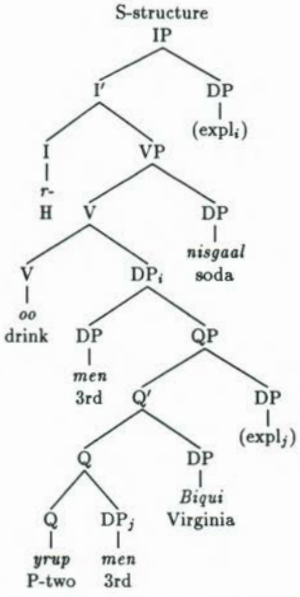
5.3.1 Subject Adjunction Account

The Subject Adjunction option for clause structure, as discussed in section 2.3, includes movement of the subject from its specifier of I position to right-adjoin to the verb, leaving behind an expletive *pro*. When the subject is one of the basic Comitative Coordination structures, such as (1a), the whole structure will move to adjoin to the verb, as shown in (105)–(106).

(105)



(106)

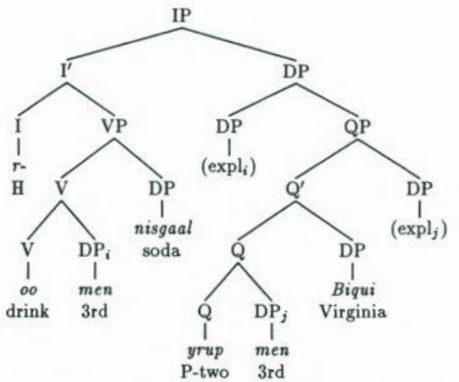


We also saw in the examples that the basic structure can be focused (cf. (28)–(29)). This again involves the entire configuration moving as a unit.

But how would the separated structure be derived? We can exploit the fact that the proposed configuration is an asymmetric single-headed construction and allow only the head to undergo Subject adjunction.[13] For example, sentence (1b) would begin with D-structure (105) above, just like (1a) did, but the S-structure for (1b) would be as shown in (107).

[13]The structure is formed by adjunction rather than being true coordination so the Coordinate Structure Constraint (Ross 1967) does not apply.

(107)



This allows us to analyze both the basic and the separated structures as having the same configuration at D-structure, namely that shown in (74) in section 4.1.2. In the basic structure the entire constituent moves (or remains in place, depending upon its grammatical function), whereas in the separated structure the head only moves under Subject Adjunction.

There are two types of focus constructions possible for the separated structure which can also be accounted for under this proposal. The first type is where the head only is in focus, as in (108).

(108) *Le Jose w-zhoon y-rup x-unaa Jose.* AGOSTO 69
FM Joe C-run P-two POS-woman Joe
"Joe ran away with Joe's wife."

This can be accounted for by assuming that the head DP *Jose* undergoes Subject Adjunction and then the optional focusing takes place. The second type of focus structure possible is where the comitative adjunct is focused, as shown in (109a). Though the third person pronoun in subject position after the verb could possibly be analyzed as a resumptive pronoun,[14] the complete synonymity with (109b-d), which are clearly versions of the Comitative Coordination structure, can be best explained if (109a) as well comes from this structure.

(109) a. *Y-ra men r-too men zhob.* SEMBRAR 13
P-all 3rd H-sell 3rd elote
"Everyone sells elote."

b. *R-too men zhob y-ra men.*
H-sell 3rd elote P-all 3rd
"Everyone sells elote."

c. *R-too men y-ra men zhob.*
H-sell 3rd P-all 3rd elote
"Everyone sells elote."

d. *Men y-ra men r-too zhob.*
3rd P-all 3rd H-sell elote
"Everyone sells elote."

[14] In some of the other dialects of Zapotec, such as Isthmus and Yatzachi, a resumptive pronoun must follow the verb whenever a subject is focused. This requirement does not hold in QZ; instead it is rare that an example with a resumptive pronoun is found.

I claim that in (109a) the subject is a Comitative Coordination structure, where the head has undergone Subject Adjunction and then the remaining structure has been focused.

As previously noted, in the vast majority of the sentences, the Comitative Coordination structures fill the external argument or subject position. We have seen that these examples can be automatically accounted for by the theory of phrase structure adopted for QZ, which is head-initial and specifier-final and places the D-structure subject in the specifier of I, coupled with Subject Adjunction movement that can move either the entire subject or just the head of the structure to right-adjoin to the verb. We also saw that the various options for focusing all or either part of the structure from subject position are readily accounted for by this proposal.

The Comitative Coordination structure can, however, also occur in object position (cf. (31)–(34)). Usually the structure simply remains in place, since there is no material following the object within the clause, but separation can occur. This movement is not an automatic option based on the Subject Adjunction account so another analysis must be given for it.

5.3.2 Extraposition from DP Account

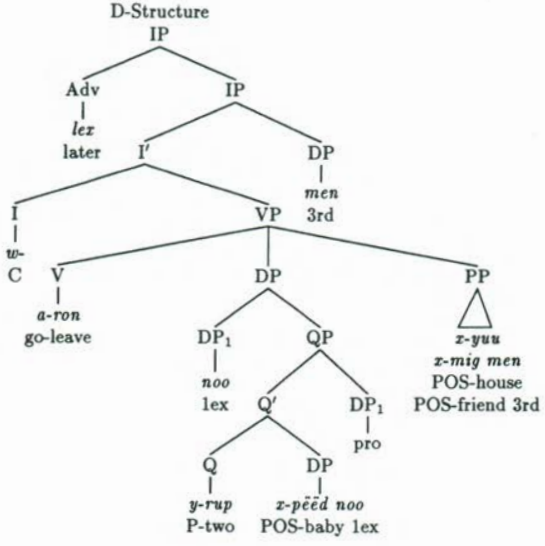
The one example of a separated structure in object position found in the texts is repeated here as (110).[15]

(110) *Lex w-a-ron men noo x-yuu x-mig men* MTLEMON 8
later C-go-leave 3rd 1ex POS-house POS-friend 3rd
y-rup x-pēēd noo.
P-two POS-baby 1ex
"Then they took me and my baby to their friend's house."

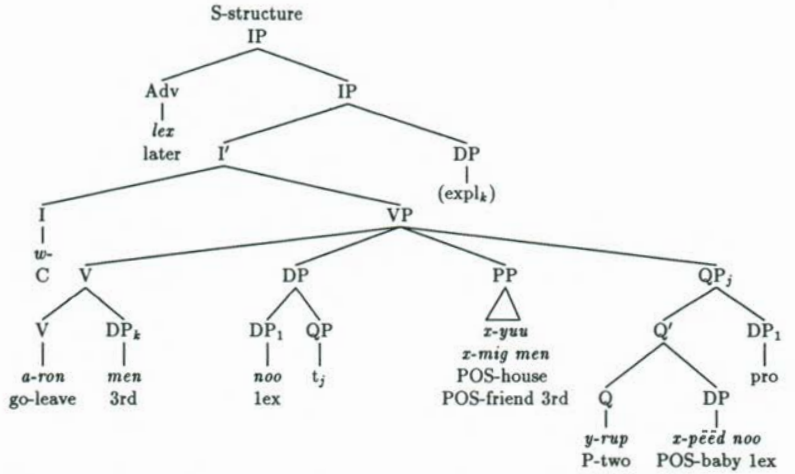
This can be accounted for by allowing optional extraposition of the small clause comitative adjunct, as shown in (111)–(112).

[15] As discussed in section 4.1.2, this example cannot be either a basic structure headed by the possessor of the locative, nor can it be a separated structure whose head is in subject position due to the conditions on the optionality of DP_1 discussed in section 3.3.5.

(111)



(112)



This extraposition movement to adjoin to VP would only be possible out of a Comitative Coordination structure within the VP (as required by the ECP), and it meets the clause bounded requirements of normal

extraposition.[16]

A derivational syntax accounts for the interpretation of the structure as a constituent. The Person Hierarchy Effect is accounted for in the separated structure exactly as it was in the basic structure, as is number marking. Further, the derivational account provides justification for the asymmetric structure proposed. The head only can move via Subject Adjunction, or the small clause can extrapose when the structure is in object position without violating the Coordinate Structure Constraint.

Thus, the facts about the separated structure may be accounted for by analyzing it as a basic structure which has undergone movement. This provides a coherent analysis of the QZ Comitative Coordination structures.

6 Conclusion

We have seen that both the basic and the separated versions of the QZ Comitative Coordination structure can be uniformly handled within a derivational syntax as a single-headed, asymmetric complex DP, similarly to the PPC as analyzed by Schwartz (1988). The important syntactic difference is that the adjunct in QZ is a small clause headed by a Comitative Quantifier, which provides the number for the construction. The syntactic requirement for coreferentiality of the head DP and the external argument of the Comitative Quantifier assures correct semantic construal of the adjunct to the head for both basic and separated structures.

The structure is understood semantically as denoting a group in which the head of the construction provides the person feature for the group and the quantifier within the comitative adjunct provides the number feature for the group. The Person Hierarchy Effect was accounted for by saying that the referents of the DP arguments of the Comitative Quantifier must be included in the defined group. This extends Ladusaw's (1989) analysis of the semantics of the PPC to include cases where the head need not be a plural pronoun.

This documents the Comitative Coordination structures which use quantifiers in Quiegolani Zapotec as quite unique constructions. They were nevertheless shown to obey the Person Hierarchy Effect cited as a universal for the PPC in other languages, which allowed both the syntactic and semantic analyses for the PPC to be extended for the QZ structures.

[16] This type of extraposition would account for the derivation of the separated structure in all cases if a different option for handling VSO phrase structure were assumed.

Appendices

A. Abbreviations

The following abbreviations are used in glossing the QZ examples.

Aspect			Pronouns		
C	=	completive	1ex	=	first person exclusive
F	=	future	1i	=	first person inclusive
H	=	habitual	2	=	second person
P	=	potential	3rd	=	third person
PR	=	progressive	3a	=	third person animate
S	=	stative	3i	=	third person inanimate
			3f	=	third person feminine/familiar
FM	=	focus marker	3m	=	third person masculine
LM	=	loan marker	3d	=	third person deity/baby
Q	=	question marker			
POS	=	possessive prefix used on alienably possessed nouns			

B. Orthography

The segmental inventory for the consonants is shown in (113) (from S. Regnier 1989).

(113)

	Bilabial	Alveolar	Palato-Alveolar	Retro-flexed	Velar	Palatalized Velar	Labialized Velar
Stops	p	t			k	ky	kw
		d			g	gy	gw
Affricates		ts	ch	tx			
			dx				
Fricatives		s		x			
	b	z		zh			
Nasals	m	n					
Laterals		l					
Flaps				r			
Glides	w		y				

Rather than a voiceless/voiced difference, the following are fortis/lenis pairs: *p-b*, *t-d*, *s-z*, *z-zh*, *ch-dz*, *k-g*, *ky-gy*, *kw-gw*. In addition, *f* and *j* are used in Spanish loan words.

QZ has six vowels as shown in (114).

(114)

	Front	Back Unrounded	Back Rounded
High	i		u
Mid	e		o
Low	ë	a	

Each vowel can also occur in a laryngealized glottalized form, written as /VV/ in the data since QZ does not have any vowel clusters.

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South American Verb Second Phenomena: Evidence from Shipibo*

H. Andrew Black

1 Introduction

The phenomenon of "verb-second" (V-2) in the Germanic language family has attracted much attention (cf. den Besten (1983), deHaan & Weerman (1986), Koopman (1983), and Weerman (1989) among many others). To my knowledge, the discussion on V-2 has centered exclusively on these European languages.[1] This paper will add to the scope of the debate by examining the phenomenon in a language from a very distinct genetic stock.

That language is Shipibo, a Panoan language spoken in the South American country of Peru. Shipibo, as documented in Faust (1973) and Day (1991), exhibits what Klavans (1980) calls second position (henceforth 2P) clitics. This language has a set of mood markers which always surface to the right of the first phrase. I will argue that the distribution of these 2P clitics is nicely explained on the assumption that Shipibo (like any good V-2 language) requires obligatory focusing of some XP to the Spec of C position. This analysis also explains why Shipibo, an SOV language, should have apparent WH-Movement, something that is typologically unexpected. Unlike the standardly studied V-2 languages, however, the item that occupies the second position is not a verb, but a mood clitic. Nonetheless, just as the standard V-2 case arguably involves movement from INFL to COMP (after the highest verb has raised to INFL), so I argue that these clitics in Shipibo also raise out of a complex INFL to COMP.

Consider (1), below which contains the indicative clitic *-ra*.[2]

(1) *E-n-ra binon be-que.*
1s-ERG-IND aguaje bring-CMPL
'I brought aguajes.'

The analysis proposed here follows Chomsky (1986) and considers S to be the maximal projection of INFL (i.e. S=IP). The specifier position of INFL will be the subject position. COMP also will have a maximal projection CP. Under these assumptions, I claim that the D-Structure of (1) is as shown on the left in (2). Two applications of Move-alpha produce the S-Structure on the right.

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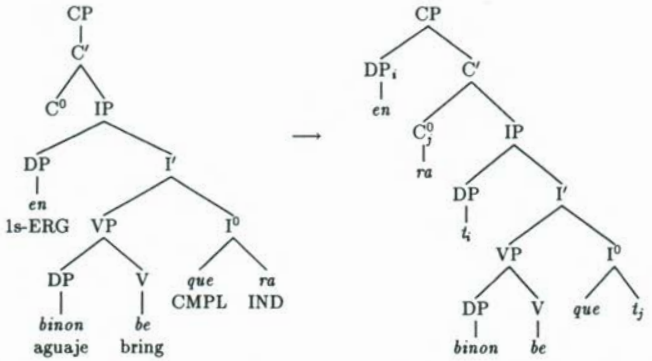
[1] Wackernagel's law for Indo-European claims that enclitics in PIE occupied the second position in the sentence (cf. Collinge 1985). While Indo-Europeanists have discussed Wackernagel's law for non-Germanic languages, this law deals only with the second *word* position. The V-2 phenomenon deals with an item that occurs after the first *phrase*.

[2] All information and data on Shipibo are from Faust (1973) and Day (1991). The interlinear glosses are based on my understanding of the morphology from the descriptions in Faust (1973) and Day (1991). The glossing was greatly aided by using the computational morphological parsing program AMPLE and its companion tool INTERGEN as documented in Weber et al. (1988). The free translations are my translations from the Spanish given in Faust (1973) and Day (1991). The abbreviations employed in the glosses are defined in the appendix following the concluding section.

Aguajes are the nuts of a particular kind of palm tree found in the jungles of Peru.

(2)



The paper is organized as follows. Section 2 provides some background information on Shipibo. This is followed by a discussion in Section 3 of the evidence that the clitics in Shipibo are indeed of the 2P variety. Section 4 argues against any analysis that treats Shipibo cliticization as head adjunction to the XP in initial position in the sentence. By way of contrast, Section 5 argues that the focusing of an XP to the Spec of C position avoids these difficulties entirely. This view is part of the standard analysis of V-2 languages. Section 6 demonstrates how the apparent WH-Movement in this SOV language directly follows from this analysis. The category of the mood clitics is then argued to be INFL in Section 7.[3]

2 Background

This section briefly outlines the word order and phrase structure of Shipibo. That Shipibo is a null subject language is also demonstrated.

2.1 Variable Word Order

The unmarked order of elements in Shipibo clauses can tentatively be schematized as in (3).

(3) Subject < Object < Oblique Arguments < Verb < Adverbials

The order can change for emphasis. Consider these alternate orderings for (1):

(4) *Binon-ra e-n be-que.*
aguaje-IND 1s-ERG bring-CMPL
'Aguajes I brought.'

(5) *E-n-ra be-que binon.*
1s-ERG-IND bring-CMPL aguaje

(6) *binon-ra be-que e-n.*
aguaje-IND bring-CMPL 1s-ERG

The exact shade of meaning distinctions in (4)–(6) are not explicitly detailed in Faust (1973). Given that the order is typically SOV and that fronting is the normal mode of emphasizing an element, merely fronting the subject would make no difference in the surface order. Examples (5) and (6) could conceivably represent strategies for emphasizing the subject: either extrapose the object (5) or extrapose the subject (6).

[3] In addition, there is an appendix that lists the abbreviations used in the glosses of the Shipibo example sentences.

I will assume that (1) and (4)–(6) are all due to movement from a common D-Structure. Whether or not Shipibo requires a focused constituent will be discussed in Section 5 along with whether the movement is adjunction to IP or substitution to the Spec of CP.

Other constituents also can change orderings. In (7)–(8) below, the instrumental phrase can permute with the verb.[4]

(7) *Nocon huetsa-n-ra ea tsaca-que quirica yanco-man.*
1s.gen sibling(ss)-ERG-IND 1s hit-CMPL book blue-ERG
'My sister hit me with the blue book.'

(8) *Nocon huetsa-n-ra ea yancon quirica-nin tsaca-que.*
1s.gen sibling(ss)-ERG-IND 1s blue book-ERG hit-CMPL
'My sister hit me with the blue book.'

The subject permutes with the complement of the verb in (9)–(10).[5]

(9) *Ea-ra mia oin-i ca-que.*
1s-IND 2s see-INF.I go-CMPL
'I have gone to see you'

(10) *Mia oin-i-ra ea ca-que.*
2s see-INF.I-IND 1s go-CMPL
'I have gone to see you.'

In (10), the verbal complement clause has been fronted.

2.2 Phrase Structure

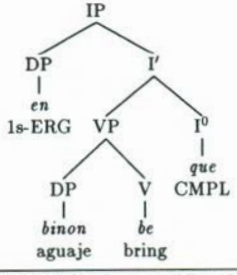
As mentioned in Section 1, I will follow Chomsky (1986) and consider S to be the maximal projection of INFL. COMP also will have a maximal projection CP. Even though Shipibo has no definite or indefinite articles, I will assume the DP hypothesis (cf. Abney 1986). The choice between a more traditional NP analysis and the DP hypothesis is not crucial for what follows.

As noted above, Shipibo is an SOV language. It is no surprise, then, that its phrase structure is primarily right-headed. Consider the following:

(11) *E-n-ra binon be-que.* (=1)
1s-ERG-IND aguaje bring-CMPL
'I brought aguajes.'

Ignoring the *-ra* clitic for now, (11) would have this configuration:

(12)



[4] The gloss 'sibling(ss)' refers to a sibling of the same sex as the speaker.

[5] The complements in these examples can be analyzed either as VP complements to an auxiliary verb or as non-finite IP complements in a raising construction.

Both IP and VP are right-headed.

Prepositional phrases are also right-headed:

(13) *nii* *meran*
forest in
'in the forest'

(14) *jihui* *naman*
tree under
'under the tree'

(15) *nocon papa* *betan*
1s.gen father with
'with my father'

DPs, on the other hand, appear to be mixed in their order. The determiner *nato* 'this' in (16)–(17) is clearly to the left of its NP complement.

(16) *nato quirica*
this book
'this book'

(17) *nato joni*
this man
'this man'

The heads of the relative clauses in (18)–(20) are also on the left, suggesting a left-headed structure (cf. Greenberg 1963).

(18) *nato ochíti nii meran ca-ai*
this dog forest in go-PRES.PTC
'this dog which is going in the forest'

(19) *ja-n ino rete-yantan-a*
3s-ERG tiger kill-PAST.MNTHS-PAST.PTC
'the one who killed the tiger several years ago'

(20) *ja-n pi-ai-ton*
3s-ERG eat-PRES.PTC-ERG
'the one who is eating'

On the other hand, the nesting of the possessives in (21) suggests a right-headed structure.

(21) *nocon tita-n bene-n huetsa*
1s.gen mother-ERG husband-ERG sibling(ss)
'my mother's husband's brother'

Adjectives can appear on either side of the noun they modify (22)–(23).

(22) *quirica yanco-man*
book blue-ERG
'a blue book'

(23) *yancon quirica-nin*
blue book-ERG
'a blue book'

Thus, Shipibo appears to be an OV language with a few VO features. I will argue that CP is left-headed in Section 5.

2.3 Null Arguments

Shipibo allows for null third person arguments when the relevant information is recoverable from the context.

(24) *Mi-n-qui be-a?*
2s-ERG-int bring-CMPL.INT
'Have you brought (it)?'

(25) *Baque-n-ra be-que.*
child-ERG-IND bring-CMPL
'The child has brought (it).'

(26) *Rono mahuat-a-ra oin-ai.*
viper die-PAST.PTC-IND see-CONT
'(He) sees the dead viper.'

(27) *Be-yama-ra-i*
bring-NEGV-IND-CONT
'(He) doesn't bring (it).'

(28) *Be-yama-ra-que.*
bring-NEGV-IND-CMPL
'(He) hasn't brought (it).'

The importance of this is that the clitic in these examples (*-qui* in (24) and *-ra* in (25)–(28)) attaches only to lexically filled material. That is, it will not be realized on a lexically null DP. Since the clitic is a bound form, this is not surprising.

3 Shipibo's 2P Clitics

Having discussed several elements of basic Shipibo syntax, I now address the nature of the clitics in Shipibo. Klavans (1980) notes that clitics are a kind of hybrid between affixes and free words. Like affixes, clitics are bound to a host. Their meaning, however, is often unrelated to that of their host; semantically, they act more like free words. Klavans furthermore divides clitics into two species: verbal clitics and second position (2P) clitics. The verbal strain attach only to verbs. The 2P variety attach either to the right of the first word or to the right of the first phrase.

This section will demonstrate that the mood clitics in Shipibo are classic second position (2P) clitics. More precisely, they are 2P clitics that attach to the right of the first phrase. There appear to be seven such clitics in Shipibo:

(29)

-ra	indicative
-qui	interrogative
-rin	interrogative of nominal predicates
-can	interrogative of response
-main	interrogative of assumption, supposition
-tsi	interrogative of confirmation
-ronqui	reportative

Several examples of the use of the indicative *-ra* have already been presented. The following illustrate the use of the other clitics. First is the interrogative *-qui*.

(30) *Tsoa-qui e-bé ca-cas-ai?*
who-INT 1s-ACCM go-DES-CONT
'Who wants to go with me?'

(31) *Mia-qui jahue-tian Maioshiain ca-ti iqu-i?*
2s-INT what-TIME Pucallpa go-INF be-CONT
'When are *you* going to Pucallpa?'

(32) *Ja-bé-qui mia nocot-a?*
3s-ACCM-INT 2s arrive-CMPL.INT
'Did you come with him?'

The nominal interrogative *-rin* is exemplified in (33)–(34).

(33) *Tsoa-rin mi-pecao?*
who-INT.NOM 2s-BEHIND
'Who's behind you?'

(34) *Mi-na-rin ja rete-anan-ai?*
2s-POS-INT.NOM 3s kill-RECP-PRES.PTC
'Is yours the one that is fighting?'

Examples (35)–(37) contain the interrogative of response *-can*.

(35) *Mia-can, jahuequescá iqu-i?*
2s-INT.RESP how be-CONT
'And you, how are (you)?'

(36) *Min tita-can?*
2s.gen mother-INT.RESP
'And your mother?' (How is she?)

(37) *Mia-can?*
2s-INT.RESP
'And you?' (How are you?)

I assume that predicate deletion has occurred in (36)–(37).

The interrogative of supposition *-main* is demonstrated in (38)–(39).

(38) *Jahuerano-main bo-huan-que?*
where-INT.SUP carry-PAST.TODAY-CMPL
'Where could he have carried it today?'

(39) *Papa-main ino rete-ai?*
father-INT.SUP tiger kill-CONT
'Do you suppose father killed a tiger?'

Examples (40)–(41) illustrate the use of the interrogative of confirmation.

(40) *Nima-tsi ca-i?*
Nima-INT.CONF go-CONT
'Is it certain that Nima is going?'

(41) *Jabo-tsi benó-huan-can-a nii meran?*
3p-INT.CONF get.lost-PAST.TODAY-PLU-CMPL.INT forest in
'Is it certain that they got lost today in the forest?'

Finally, the reportative *-ronqui*[6] is demonstrated in (42)–(43).

(42) *Ca-i-ronqui reocoo-cain-yantan-que.*
go-SIML.I.SS-REPORT turn.over-DEPART-PAST.MNTHS-CMPL
'They say that when he had gone, he turned over (in his canoe).'

[6] There is a phonological rule operative in Shipibo which deletes the rhotic whenever it immediately follows a sibilant. This is why the reportative has the shape *onqui* in (43).

(43) *Jain-oa-s̄h-onqui, bané-yantan-can-que.*
there-ORIGN-PLC.ORG-REPORT return-PAST.MNTHS-PLU-CMPL
'They say that they returned from there.'

I will focus on the indicative clitic *-ra* in what follows.

Klavans (1980) sketches eight characteristics that 2P clitics tend to have. Each of these criteria will be considered in turn.

First, clitics never take stress. Stress in Shipibo is on the first syllable or second if the second is heavy. With the exception of the exceptional form *r-iqui* 'IND-be', these clitics never bear stress.

The second characteristic is what Klavans calls "Host Requirement I." The host to which a clitic attaches must be able to stand alone as a word, independently of the presence of the clitic. Examples (44) and (45), repeated here, clearly show that the host words can stand alone.

(44) *E-n-ra binon be-que.* (=1)
1s-ERG-IND aguaje bring-CMPL
'I brought aguajes.'

(45) *Binon-ra e-n be-que.* (=4)
aguaje-IND 1s-ERG bring-CMPL
'Aguajes I brought.'

The subject *en* bears the clitic in (44), but is able to stand alone in (45). Similarly, the object *binon* is the host for the clitic in (45), but acts as an independent word in (44).

The third characteristic is "Host Requirement II": the clitic is an enclitic that attaches to whatever is in initial position. Examples (44)–(45) above showed that *-ra* attaches on the right of the first element. The following show that it attaches to the first phrasal unit. In (46)–(47), it attaches to a DP. Examples (46b)–(46c) indicate that the clitic never appears on either the second or third constituent.

(46) a. *Maton joi-ra ea aš̄he-cas-ai.*
2p.gen language-IND 1s learn-DES-CONT
'I want to learn your language.'

b. **Maton joi ea-ra aš̄he-cas-ai.*
2p.gen language 1s-IND learn-DES-CONT

c. **Maton joi ea aš̄he-cas-ai-ra.*
2p.gen language 1s learn-DES-CONT-IND

The DP is coordinate in (47), yet the clitic attaches completely to the right of the entire coordinate DP; it never appears on a non-final conjunct as indicated in (47b)–(47c).

(47) a. *Isá yancon, yahuish, ponsen-ra e-n oin-huan-que.*
bird blue armadillo sloth-IND 1s-ERG see-PAST.TODAY-CMPL
'I have seen a blue bird, an armadillo, and a sloth today.'

b. **Isá yancon-ra, yahuish, ponsen e-n oin-huan-que.*
bird blue-IND armadillo sloth 1s-ERG see-PAST.TODAY-CMPL

c. **Isá yancon, yahuish-ra, ponsen e-n oin-huan-que.*
bird blue armadillo-IND sloth 1s-ERG see-PAST.TODAY-CMPL

Examples (48) and (49) indicate that adjectives can appear on either side of the noun they modify. The *-ra* clitic attaches to the right of the entire DP in both cases.

(48) *Yahuish rabe-can-ra pi-que.*
armadillo two-ERG-IND eat-CMPL
'The two armadillos have eaten.'

(49) *Rabé yahuish-an-ra pi-que.*
two armadillo-ERG-IND eat-CMPL
'The two armadillos have eaten.'

Examples (50)-(51) contain relative clauses. The clitic attaches to the right of the final element of the DP. It never attaches to the head of the relative clause (50b), nor can it attach to any "sub-maximal" projection of the relative clause (51b).

(50) a. *Ainbo yacat-a-ra, nocon huaata iqu-i.*
woman sit-PAST.PTC-IND 1s.gen aunt be-CONT
'The woman who is seated is my aunt.'

b. **Ainbo-ra yacat-a, nocon huaata iqu-i.*
woman-IND sit-PAST.PTC 1s.gen aunt be-CONT

(51) a. *Jihui naman yacat-a-ton-ra ea oin-ai.*
tree below sit-PAST.PTC-ERG-IND 1s see-CONT
'The one who is seated under the tree sees me.'

b. **Jihui naman-ra yacat-a-ton ea oin-ai.*
tree below-IND sit-PAST.PTC-ERG 1s see-CONT

In (52), the *-ra* clitic attaches to an embedded clause:

(52) *mia oin-i-ra ea ca-que* (=10)
2s see-INF.I-IND 1s go-CMPL
'I have gone to see you.'

It cliticizes to a PP in (53):

(53) *Nii meran-ra ea ca-tan-huan-que.*
forest in-IND 1s go-REG-PAST.TODAY-CMPL
'I went into the forest today (and have come back).'

It cliticizes to a VP in (54). Observe that the continuative aspect suffix *-i* comes after the clitic.

(54) *Be-yama-ra-i* (=27)
bring-NEGV-IND-CONT
'(He) doesn't bring (it).'

Examples (55)–(60) show that *-ra* can cliticize to an adverbial phrase or clause (in (56) it arguably attaches to a small clause):

(55) *Huetsa bari-tian-ra ea jo-yantan-que, neno.*
sibling(ss) year-TIME-IND 1s come-PAST.MNTHS-CMPL here
'Last year I came here.'

(56) *Ea mašhco-tian-ra, e-n oin-cato.*
1s small-TIME-IND 1s-ERG see-PAST.PFCT
'When I was small, I saw it.'

(57) *Nocot-i-ra ea ochíti-qui raqué-que.*
arrive-INF.I-IND 1s dog-DIR.TO fear-CMPL
'Upon arriving, I was afraid of the dog.'

(58) *Ca-quin-ra e-n pi-que.*
go-SIML.T.SS-IND 1s-ERG eat-CMPL
'When I came, I ate.'

(59) *Nocon papa betan ea ca-ti-ra ja-que, ia-man.*
1s.gen father with/and 1s go-INF-IND have.to-CMPL lake-ERG
'I have to go with my father to the lake.'

(60) *Rama-bi-ra e-n janquenha-ti shinan-ai.*
now-EMPH-IND 1s-ERG finish-INF think-CONT
'Now I'm thinking of finishing it.'

The third requirement that the enclitic attach to whatever is in initial position is thus clearly met.

The fourth characteristic of a 2P clitic is that it does not affect the lexical category of the host. This should be clear from (44)–(60) since the *-ra* clitic attaches to a variety of categories and never changes their category status.

The fifth characteristic is that the clitic is phonologically dependent on its host word. It cannot stand alone as a separate word and it does not receive major stress. This is the case with all the clitics listed in (29).

The sixth characteristic is that the meaning of a clitic is like that of any other full word. Frequently, the clitics are related to variants with full word status. While this is not the case for these clitics in Shipibo (there is no "full word" indicating indicative or interrogative, e.g.), the Shipibo forms do carry the other aspect of the sixth characteristic: the semantic relation between the host and the clitic is often coincidental. Indicative, interrogative, and reportative all match this characteristic.

The seventh characteristic is that the clitic is able to attach to an entire phrase. This is obviously the case given (44)–(60).

Finally, the eighth characteristic is that clitics tend to be mono-syllabic. This is true for all of the clitics listed in (29) except for *-ronqui* 'reportative'.

Clearly, then, these Shipibo forms are valid 2P clitics.

4 Head Adjunction to the Constituent

Considering the close fit between the Shipibo clitics and Klavans' criteria for 2P clitics, one might surmise that clitics are heads that move to the first lexically filled constituent of the sentence. This section will argue against such a head adjunction analysis. First, head adjunction to the head of the first lexically filled constituent is shown to produce an Empty Category Principle (ECP) violation.[7] Secondly, precisely identifying the target head is shown to be difficult from an X-bar Theory point of view. Finally, adjunction to the maximal projection of the first constituent not only produces an ECP violation, but also violates Strong Structure Preservation.

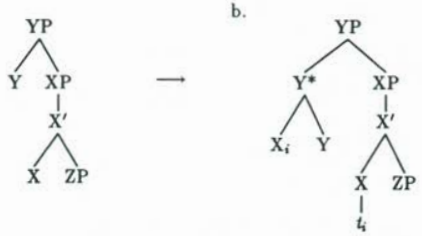
4.1 Head-to-Head Adjunction

One possible way to analyze Shipibo cliticization is to posit that the clitic always moves from its origination point (either INFL or COMP; but see section 7) to adjoin to the head of the first lexically filled constituent. (Recall from Section 2.3 that if the subject is null, the clitic attaches to the object; if both the subject and object are null, then the clitic attaches to the verb.)

There are several difficulties with this head adjunction view. First, movement of this kind will always entail an ECP violation. Baker (1988) argues that movement of (at least lexical) heads should be subject to the same grammatical conditions as movement of XPs. In particular, traces left by head movement must be subject to the ECP. He shows that the ECP is satisfied in the following configuration, where the lexical head X in (61a) can adjoin to Y as in (61b). (Y* indicates the adjoined head node).

[7] I will follow the ECP of Chomsky (1986) although the exact version of the ECP will not be critical for the discussion at hand.

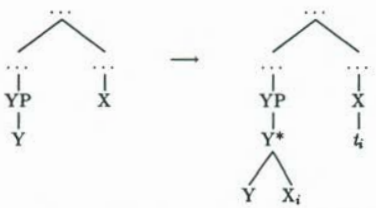
(61) a. b.



Crucially, the maximal projection of the source head (XP) is a complement to the target head Y. The maximal projection YP will always also dominate the source head, so Y will always m-command X.[8] The lexical head Y L-marks XP so XP will not be a barrier to government for X. Y then governs the trace of the moved X.

This configuration will never be realized for the Shipibo clitics. Assuming that the clitics originate in INFL or COMP, Shipibo cliticization would always have a configuration of the kind shown schematically in (62).

(62)



The target head's maximal projection (YP) will never dominate the source head (X), so Y will never be able to m-command X. The trace, then, will not be governed by its antecedent and an ECP violation will result.

If, as Shlonsky (1988) suggests for the Hebrew comp clitic *še*, functional heads which are in non-argument positions do not need to leave a trace, then there is no problem as far as the ECP would be concerned. Under such an analysis, there would be no trace, so the trace would not need to be properly governed.

Does such an assumption, however, lead to a uniform treatment of all projections of functional heads? Whenever the maximal projection of a functional category moves, it leaves a trace if it is in argument position (otherwise it would violate the Projection Principle):

(63) That the kids are having a good time is evident *t*.

Huang (1982) noticed the adjunct/argument asymmetry that exists in WH-movement constructions. A non-argument adjunct will leave a trace:

(64) When did the kids go to bed *t*?
(65) *When did I wonder who put the kids to bed *t*?

Both a functional category argument trace and a non-argument (maximal projection) trace are subject to the ECP. Example (65) violates the ECP since the trace of *when* is neither lexically- nor antecedent-governed. If lexical heads leave traces that are subject to the ECP (cf. Baker 1988), then why should functional heads not do likewise?

Chomsky (1988) argues for the Full Interpretation view of LF: all material that is unnecessary for

[8] α *m-commands* β if and only if α does not dominate β and every maximal projection γ that dominates α also dominates β.

semantic interpretation is deleted in LF. In this view, functional heads could leave a trace in S-Structure, but the trace would be deleted before the ECP applied in LF as long as the particular head contained no semantically significant content. This could be the case for the Hebrew COMP discussed by Shlonsky (1988). In the case of the Shipibo clitics, however, the content of the clitics is crucial semantically. Any traces left by moving one of these could not be deleted.

In short, Baker's (1988) analysis predicts that it is impossible to cliticize via head-to-head adjunction in the case of Shipibo. Furthermore, Chomsky's Full Interpretation view of LF does not rescue any downward movement.

4.2 Identification of the Target Head

There is yet another difficulty with the head-to-head adjunction analysis. The problem is with respect to the target head, i.e. the head to which the clitic attaches. Consider these examples.

(66) *Nato ochíti, nii meran ca-ai-ra sinán-ma iqu-i.*
this dog forest in go-PRES.PTC-IND wild-NEG be-CONT
'This dog which is going in the forest is not wild.'

(67) *Nocon papa ca-a pecáo-ra, e-n atapa rete-que.*
1s.gen father go-PAST.PTC behind-IND 1s-ERG chicken kill-CMPL
'After my father had gone, I killed the chicken.'

In (67), the target head is the postposition *pecáo* 'behind'. The target in this case is the head of the first constituent (assuming that the P in this case takes a small clause as its complement). In (66) the target head would presumably be the verb of the relative clause. This is fairly "deep" within the constituent. In particular, it is not the head of the first constituent (which in (66) would be the determiner *nato* 'this' given the DP hypothesis and the noun *ochíti* 'dog' given the more traditional NP view).

The following pair of sentences raises a similar issue.

(68) *Yahuish rabe-can-ra pi-que.* (=48)
armadillo two-ERG-IND eat-CMPL
'The two armadillos have eaten.'

(69) *Rabé yahuish-an-ra pi-que.* (=49)
two armadillo-ERG-IND eat-CMPL
'The two armadillos have eaten.'

In (68), the clitic attaches to the head of the quantifier phrase 'two'. In (69), it attaches to the nominal head 'armadillo'. How is downward head movement to determine which head to target? From an X-bar Theory point of view, it is unclear how one could answer such a question.

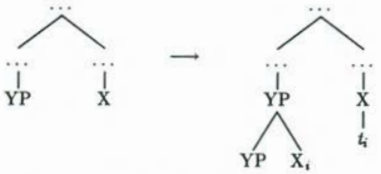
What is common in all the examples, of course, is that the clitic attaches to the rightmost word of the first constituent. Since most maximal projections in Shipibo are right-headed, the clitic often attaches to a head. Under the head-to-head adjunction analysis, we would be hard pressed to explain why the movement would always be to this particular position, regardless of any other head in the constituent.[9]

4.3 Head-to-Maximal Projection Adjunction

While head-to-head adjunction fails, one might wonder about the possibility of adjoining the head to the maximal projection of the constituent. This would have the following schematic configuration:

[9] This is the theoretic challenge of 2P clitics as explained by Klavans (1980). Unlike verbal clitics which always attach to a verb, 2P clitics are not attracted to any particular category type. "Rather, their placement depends on a linear notion *position* coupled with a structural notion *constituent*." (p. 28)

(70)



Such a possibility, too, would cause an ECP violation: X needs to govern its trace. Because of the intervening YP node, it would not even m-command it.[10]

Furthermore, such a possibility would violate Strong Structure Preservation, which asserts that zero level categories (i.e. heads) can only move to zero level categories and maximal projections can only move to maximal projections (cf. Emonds 1976 and Chomsky 1986). Allowing a zero-level category to adjoin to a maximal projection would open the door for many unorthodox movements. Hence, such a move is to be avoided.

A final difficulty with the head adjunction analyses discussed in this section is that they say nothing about why it is that the initial element of the sentence can be any major constituent of the matrix clause. This distribution would need some other, independent explanation, coupled with some mechanism to ensure that the fronted constituent is also precisely the constituent the head will move to. We must look elsewhere to discover an analysis of 2P cliticization in Shipibo.

5 Relationship to Verb Second Languages

I now show that Shipibo 2P cliticization parallels the Verb Second (V-2) phenomena observed for Germanic languages. For both Shipibo and these European cases, there is an obligatory movement of some XP to the Spec of C along with the obligatory appearance of an element in COMP. That element is a verb in Germanic V-2 languages and a mood clitic in Shipibo. The clitic, being a bound form, attaches to the rightmost word of the focused constituent.

The section is organized as follows. First, I argue that focusing in Shipibo is not adjunction to IP, but rather movement to the Spec of C. Evidence from Capanahua, a related language, demonstrates the obligatory movement in sentences with null arguments. Finally, the classic V-2 asymmetry between matrix and subordinate clauses is discussed.

5.1 Focus as Adjunction to IP

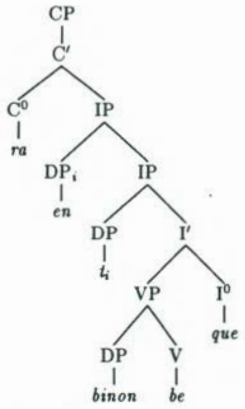
Conceptually, the fronting of a constituent could be the result of either adjunction to IP or substitution to the Spec of C. For Shipibo cliticization, there are several problems with viewing the focusing as adjunction to IP. First, as was just noted in Section 4, the clitic cannot adjoin to the fronted constituent.

Secondly, if the clitic is in COMP and the constituent is adjoined to IP, then the ordering would be incorrect: the clitic would necessarily precede the constituent rather than follow it. For example, (71) would have the structure in (72).

(71) *E-n-ra binon be-que.* (=1)
1s-ERG-IND aguaje bring-CMPL
'I brought aguajes.'

[10] While Chomsky (1986) distinguishes between dominance and exclusion for government purposes, there is no such distinction for m-command.

(72)



This would produce the unattested **Raen binon beque.*

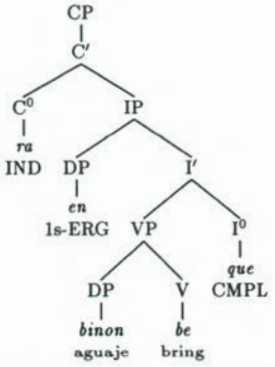
5.2 Focus as Movement to Spec of C

A better approach is to posit that Shipibo is like the Germanic V-2 languages. The focusing is movement to Spec of C. As in Germanic, even though most heads are right-headed, CP must be left-headed. (Recall from Section 2.2 that DPs at least sometimes appear to be left-headed). The clitic surfaces in COMP. Consider how this would work for (73) below.

(73) *E-n-ra binon be-que.* (=1)
1s-ERG-IND aguaje bring-CMPL
'I brought aguajes.'

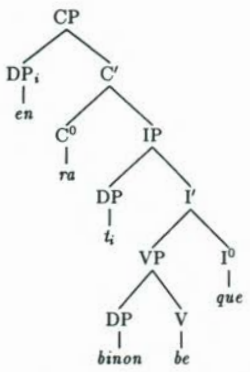
By a mechanism discussed below in section 7, the clitic *-ra* appears in COMP as shown in (74).

(74)



The subject would move to focus position (Spec of C) yielding:

(75)



The clitic attaches to the DP, resulting in the attested word *enra*.

This view does not run afoul of the ECP. Of course, the trace of the focused element would need to meet the normal ECP conditions on movement. This explains why only entire coordinate structures can focus as in (76) and why only an entire relative clause can focus as in (77)–(78).

(76) a. *Isá yancon, yahuish, ponsen-ra e-n oin-huan-que.* (=47)
bird blue armadillo sloth-IND 1s-ERG see-PAST.TODAY-CMPL
'I have seen a blue bird, an armadillo, and a sloth today.'

b. **Isá yancon-ra, yahuish, ponsen e-n oin-huan-que.*
bird blue-IND armadillo sloth 1s-ERG see-PAST.TODAY-CMPL

c. **Isá yancon, yahuish-ra, ponsen e-n oin-huan-que.*
bird blue armadillo-IND sloth 1s-ERG see-PAST.TODAY-CMPL

(77) a. *Ainbo yacat-a-ra, nocon huaata iqu-i.* (=50)
woman sit-PAST.PTC-IND 1s.gen aunt be-CONT
'The woman who is seated is my aunt.'

b. **Ainbo-ra yacat-a, nocon huaata iqu-i.*
woman-IND sit-PAST.PTC 1s.gen aunt be-CONT

(78) a. *Jihui naman yacat-a-ton-ra ea oin-ai.* (=51)
tree below sit-PAST.PTC-ERG-IND 1s see-CONT
'The one who is seated under the tree sees me.'

b. **Jihui naman-ra yacat-a-ton ea oin-ai.*
tree below-IND sit-PAST.PTC-ERG 1s see-CONT

The analysis is elegant and straightforward.

5.3 Sentences with Null Arguments

In addition, this analysis nicely explains forms such as (79)–(80).

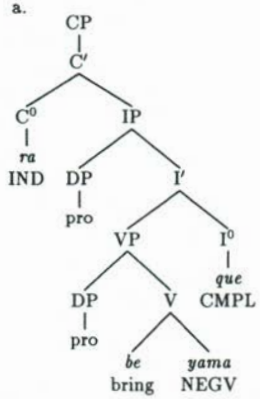
(79) *Be-yama-ra-que.* (=28)
bring-NEGV-IND-CMPL
'(He) hasn't brought (it).'

(80) *Toe-yora-qui-a?*
break-VERY-INT-CMPL.INT
'Did it really break?'

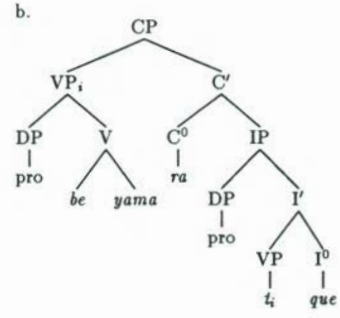
The clitic must have lexically realized material in order to surface since it is a bound form. The only available independent material in these sentences is the verb complex.

The V-2 analysis suggests that (79)–(80) demonstrate a fronted VP. The structure begins as in (81a). The VP fronts to the Spec of C as shown in (81b).[11]

(81) a.



b.



Since both the clitic *-ra* and the aspect *-que* are bound forms, they attach to the verb complex *beyama* to yield the attested *beyamaraque*.

The related language Capanahua provides support for this V-2 analysis. According to Grimes (1984), Capanahua is the closest language in the Panoan family to Shipibo. Like Shipibo, Capanahua has an indicative clitic, *-ta*, that attaches to the first phrase of the clause. The following are from Loos (1969):[12]

(82) *Mani-ta howĩti?ki*
banana-IND ripen
'The bananas are ripening.'

(83) *Mani-ta ?ĩn hisi*
banana-IND 1s see
'I see bananas.'

(84) *Ba?kish-ta koka kanoshi?iki*
tomorrow-IND Uncle go-FUT
'Uncle will go tomorrow.'

Loos observes that when any DPs are null (deleted in his terms) or are shifted to follow the verb, the verb will front; the tense, though, remains in its original position. Crucially for our purposes here, a supportive verb *ha* is inserted to carry the tense:

[11] There is evidence in Shipibo that the negative verbal suffix is a verb itself. For this reason, I have adjoined it to the verb root *be* 'bring'.

[12] Loos describes this clitic as declarative mood; I have chosen to gloss it as IND ('indicative') for consistency with the Shipibo data.

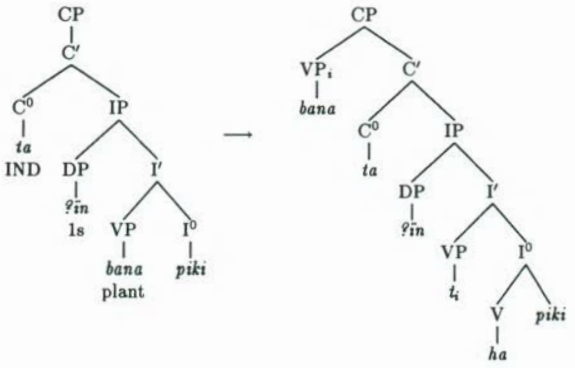
(85) *bana-ta ʔĩn haipiki*
plant-IND 1s did
'I planted.'

(86) *rĩra-ta haiki*
chop-IND is
'He is chopping.'

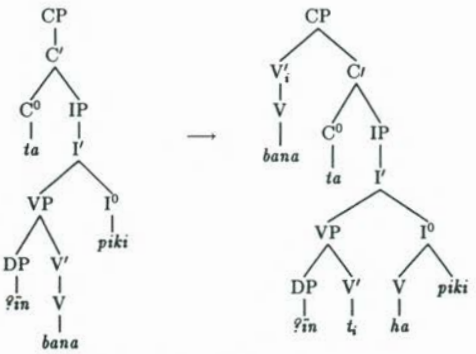
Given that the subject is in Spec of I, (85) and (86) are both instances of VP fronting. When such a VP is fronted, the tense/aspect portion of INFL remains behind. This process in Capanahua corroborates the analysis for Shipibo exemplified in (81).

Before leaving Capanahua, we should notice that this analysis of (85) crucially depends on the subject being in Spec of I. If the subject were in Spec of V, we would have to argue that there was V′ movement to the Spec of C. This is illustrated in (87) (with subject in Spec of I) and (88) (with subject in Spec of V) below.

(87)



(88)



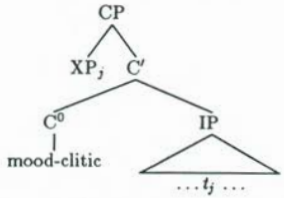
The movement in (88) would violate Strong Structure Preservation since a level-one projection would substitute into the Spec of C position, which is a maximal projection.

5.4 Matrix and Subordinate Clause Asymmetry

It has long been noted that the obligatory focusing characteristic of V-2 languages is limited primarily to matrix clauses. Does Shipibo show a similar pattern?

Every isolated matrix clause is of the form shown in (89).

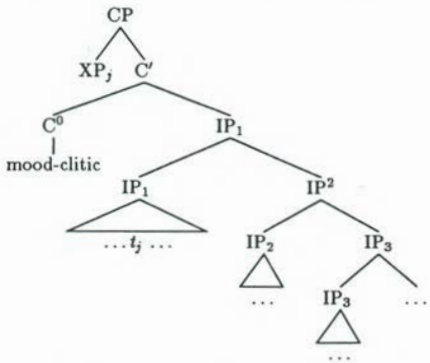
(89)



The only time a matrix clause does not contain one of these mood clitics is when it is part of a larger narrative or story. In such cases, the first matrix clause contains the clitic. The following clauses (of the same mood type) do not. Whenever the mood changes in the discourse, a mood clitic will appear on the clause containing the change.

Since there is no overt conjunction word in Shipibo, one could argue that the string of clauses containing only one mood clitic are in actuality embedded (Loos 1969 argues that this is the case for Capanahua). That is, there is one CP containing the mood clitic followed by a series of embedded IPs as shown in (90).[13]

(90)



Any fronting to the Spec of C position of an XP out of any IP except IP_1 would necessarily involve an ECP violation.

As the sentences in (91)–(95) demonstrate, there is no cliticization in subordinate clauses at all. There is only one clitic per sentence. Examples (91)–(93) contain adverbial clauses.[14]

[13] If the string of clauses were in a true coordination structure, then this would be a violation of the Coordinate Structure Constraint. On the other hand, the kind of clause chaining sketched in (90) is not the typical embedded IP construction. A proper understanding of this is needed.

[14] In (91), the object of the matrix clause is fronted. A more literal translation would be 'I am afraid for my chickens that the tiger might be going to eat (them).' In (92) the word *baquish* refers to a day other than today. The aspect determines whether it means 'tomorrow' or 'yesterday'.

(91) *Nocon atapa-nin-ra ea raquet-ai, ino-n pi-na-quetian.*
1s.gen chicken-ERG-IND 1s fear-CONT tiger-ERG eat-ADVC-ANTE.D.DS
'I'm afraid that the tiger might eat my chickens.'

(92) *Baquish-a e-n peo-quin bena-i.*
other.day-IND 1s-ERG begin-SIML.T.SS look.for-CONT
'Tomorrow I'll begin to look for it.'

(93) *Nocon huai oro-a pecáo-ra; ea nashi-ai,*
1s.gen garden cultivate-PAST.PTC behind-IND 1s bathe-CONT
jo-ríba-noš̄h.
come-ALSO-SUBS.I.SS
'After I cultivate my garden, I'm going to bathe and come again.'

Some embedded clauses are shown in (94)–(95).

(94) a. *E-n-ra onan-que Jose-can chomo toe-a.*
1s-ERG-IND know-CMPL Jose-ERG jar break-PAST.PTC
'I know that Jose broke the jar.'

b. **E-n-ra onan-que chomo Jose-can toe-a.*
1s-ERG-IND know-CMPL jar Jose-ERG break-PAST.PTC

c. **E-n-ra onan-que Jose-can-ra chomo toe-a.*
1s-ERG-IND know-CMPL Jose-ERG-IND jar break-PAST.PTC

d. **E-n-ra onan-que chomo-ra Jose-can toe-a.*
1s-ERG-IND know-CMPL jar-IND Jose-ERG break-PAST.PTC

(95) a. *E-n-ra shinan-ai min huetsa Lima-n ca-ai.*
1s-ERG-IND think-CONT 2s.gen sibling(ss) Lima-ERG go-PRES.PTC
'I think your brother is going to Lima.'

b. **E-n-ra shinan-ai Lima-n min huetsa ca-ai.*
1s-ERG-IND think-CONT Lima-ERG 2s.gen sibling(ss) go-PRES.PTC

c. **E-n-ra shinan-ai min huetsa-ra Lima-n ca-ai.*
1s-ERG-IND think-CONT 2s.gen sibling(ss)-IND Lima-ERG go-PRES.PTC

d. **E-n-ra shinan-ai Lima-n-ra min huetsa ca-ai.*
1s-ERG-IND think-CONT Lima-ERG-IND 2s.gen sibling(ss) go-PRES.PTC

In (94a) the order of constituents of the embedded clause is SOV. An OSV order (94b) is not attested. No clitic appears in the embedded clauses (the c and d cases). Similarly, the order in (95a) is Subject-Oblique. The opposite order is not attested (95b).[15]

One might expect to see an interrogative clitic in an embedded question. Such embedded questions occur in English:

(96) I wonder who brought the aguajes?

I have not found any embedded questions in the Shipibo data. There is, however, a morpheme *bira* glossed as 'perhaps' that conceivably could be used in place of such a construction:

(97) *Jahuerano-ra bo-bira-que.*
where-IND carry-PRHAPS-CMPL
'(I don't know) where he carried it.'
'I wonder where he carried it(?)'

[15] Apparently this particular construction is marginal. I only found these two examples in the corpus.

(98) *Moa-ra ca-bira-que.*
already-IND go-PRHAPS-CMPL
'Perhaps he has already gone.'
'I wonder if he has already gone(?)'

(99) *Rama-ra e-n-bira bo-ti iqu-i.*
now-IND 1s-ERG-PRHAPS carry-INF be-CONT
'Perhaps now I'm going to carry it.'
'I wonder if now I'm going to carry it(?)'

(100) *José-ra baquish-bira jema-nco ca-i.*
Jose-IND other.day-PRHAPS village-PLC.INA go-CONT
'Perhaps tomorrow Jose will go to the village.'
'I wonder if Jose will go to the village tomorrow(?)'

(101) *José-ra baquish jema-nco ca-yá-bira-i.*
Jose-IND other.day village-PLC.INA go-DEF.FUT-PRHAPS-CONT
'Perhaps tomorrow Jose will go to the village.'
'I wonder if Jose will go to the village tomorrow(?)'

(102) *Ea nateš-cas-i-ra i-bira-i.*
1s bite-DES-INF.I-IND be-PRHAPS-CONT
'Perhaps he wants to bite me.'
'I wonder if he wants to bite me(?)'

(103) *E-n-ra atipan-yama-bira-i.*
1s-ERG-IND be.able-NEGV-PRHAPS-CONT
'Perhaps I won't be able to do it.'
'I wonder if I can do it(?)'

The absence of embedded questions and the existence of an alternate means to express such an idea can be explained if no Shipibo verb subcategorizes for a CP. In fact, I have not found any evidence for an embedded CP of any kind. Shipibo has no overt complementizers other than the clitics under consideration (which are not found in any embedded construction). All subordinate clauses (including adverbial clauses) can be analyzed as IPs. Given this, it is no surprise that the clitics only appear on a matrix clause and focusing only occurs in matrix clauses as well.

6 Apparent WH-Movement in an SOV language

Given this V-2 analysis, another aspect of Shipibo syntax can readily be explained. Greenberg (1963) posits a universal that claims in part that languages which have a Subject-Object-Verb (SOV) basic order never put the question word first in a sentence.[16] Frantz (1973) and Scott & Frantz (1974) claim that Sharanahua, an SOV language of the Panoan family that is related to Shipibo, is an apparent exception to this universal since in this language WH-words do move to the left. A similar phenomenon occurs in Shipibo.

When a Shipibo sentence contains a WH-word, the WH-word will often appear initially:

(104) *Tsoa-qui jo-ai?*
who-INT come-CONT
'Who is coming?'

[16] Greenberg gives a chart based on sixteen languages where no SOV languages put the question word first. He then posits Universal 12 (p. 83):

> If a language has dominant order VSO in declarative sentences, it always puts interrogative words or phrases first in interrogative word questions; if it has dominant order SOV in declarative sentences, there is never such an invariant rule.

(105) *Jahue-qui mi-n ac-ai?*
what-INT 2s-ERG do/make-CONT
'What are you doing?'

(106) *Jahue-tian-qui noa nocót-i iqu-i?*
what-TIME-INT 1p arrive-INF.I be-CONT
'When are we going to arrive?'

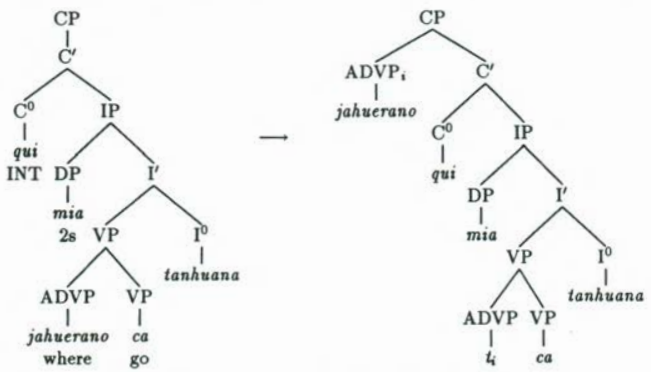
(107) *Jahuerano-qui mia ca-tan-huan-a?*
where-INT 2s go-REG-PAST.TODAY-CMPL.INT
'Where did you go (and come back) today?'

Even though the WH-word is also the subject in (104), movement has still taken place. Since the WH-word is to the left of COMP, it must have moved to Spec of C. Example (105) has the (WH-word) object preceding the subject, which clearly indicates movement. The temporal and locative WH-words are also in initial position in (106) and (107), in contrast to their positions in a sentence like (108), repeated below:

(108) *José-ra baquish-bira jema-nco ca-i.* (=100)
Jose-IND other.day-PRHAPS village-PLC.INA go-CONT
'Perhaps tomorrow Jose will go to the village.'

In each case, the WH-word is in Spec of C. This movement is illustrated for example (107) in (109).

(109)



Such WH-movement is not obligatory as the following demonstrate.

(110) *Jose-can jane-con-qui jahue iqu-i?*
Jose-ERG name-REAL-INT what be-CONT
'What is Jose's real (i.e. Shipibo) name?'

(111) *Mia-qui jahue-tian Maioshiain ca-ti iqu-i?* (=31)
2s-INT what-TIME Pucallpa go-INF be-CONT
'When are *you* going to Pucallpa?'

(112) *Ja-tian-qui jahuerano mia i-cáti-ai?*
3s-TIME-INT where 2s be-PAST.YRS-CONT
'At that time, where were you living?'

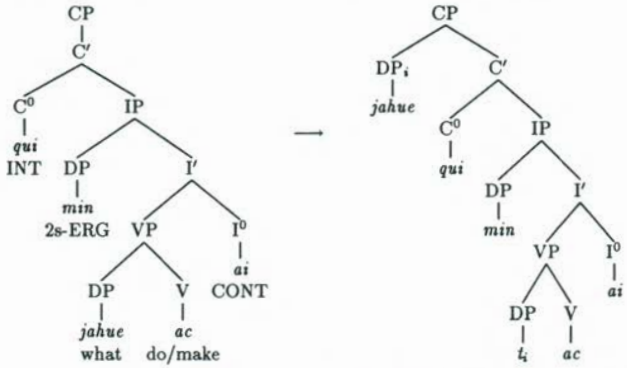
(113) *Mia-qui jahuerano-ash jo-á?*
2s-INT where-PLC.ORG come-CMPL.INT
'Where did you come from?'

In (110)–(113), the WH-phrase resides in its normal position. The Wh-phrase translated as "what" in (110) occupies the object slot. In (111), the temporal WH-phrase appears to be in its normal, non-initial position (compare (108)). Similarly, the locative WH-phrases in (112) and (113) are not fronted.

As the gloss for (111) indicates, the phrase that is in the initial position is actually emphasized. The same is likely for (110) and (112)–(113). This would indicate that Spec of C is a focus position. Such focusing readily follows from the analysis presented here.

The examples containing fronted WH-phrases involve this same kind of movement. For example, (105) would involve the movement shown in (114) (which is similar to that in (109)).

(114)



The choice of which XP will be fronted presumably depends on which element the speaker wishes to place in focus. In Shipibo, it appears that WH-phrases are normally moved to Spec of C. This is not surprising, since such a content question would naturally focus on the missing piece of information represented by the WH-phrase. Occasionally, however, a different element is emphasized (as in (111)). In such situations, the emphasized phrase is fronted instead of the WH-phrase. The WH-phrase remains *in situ*. One never finds both a WH-phrase and a fronted XP as in (115).

(115) a. **Jahue mi-n-qui ac-ai?*
what 2s-ERG-INT do/make-CONT

b. **Mi-n jahue-qui ac-ai?*
2s-ERG what-INT do/make-CONT

The apparent WH-Movement in Shipibo matrix clauses, then, is merely a side-effect of the independently required movement of an arbitrary XP to Spec of C position.

The evidence given by Scott & Frantz (1974) for Sharanahua shows effects similar to what we have seen for Shipibo. Consider these Sharanahua sentences:

(116) *Ahuu-a min rutu-a-mun un tapian.*
what-thing 2s kill-CMPL-INT 1s know
'I know what you killed.'

(117) *Min <u>ahuu-a</u> hua-a-mun un tapian.*
2s what-thing do-CMPL-INT 1s know
'I know what *you* did.'

(118) *<u>Rani</u> chasho ca-a-mun pashna oin-an-ma.*
where deer go-CMPL-INT dog see-CMPL-neg
'The dog didn't see where the deer went.'

(119) *Min <u>rani</u> i-ca-mun tsoa-n oin-misi-ma.*
2s where be-CMPL-INT who-ERG see-exper-NEG
'Nobody ever saw where *you* live.'

Presumably the WH-phrase in (116) and (118) has moved to the Spec of C position. The gloss in (117) indicates that the subject, which is in initial position, is emphasized. Note that (116) and (117) almost form a minimal pair showing a change of emphasis. Similarly, the initial phrase in (119) is also focused. Just as in Shipibo, it appears that an XP is also fronted in Sharanahua, the difference being that in Sharanahua the mood marker normally remains in INFL. In a content question clause, the WH-phrase would normally be in the Spec of C. When some other XP receives special focus, that XP will be fronted instead.

This line of reasoning implies that WH fronting is merely the result of a syntactic focusing strategy. Even though they are SOV languages, Shipibo and Sharanahua have a syntactic means of focusing an arbitrary element. (In Shipibo, this fronting is actually obligatory.) As a result, they give the appearance of having WH-Movement.

Furthermore, if we assume that all subordinate clauses are cases of IPs and not CPs, this analysis also predicts that apparent WH-movement in Shipibo will only occur in a matrix clause. Any movement from a subordinate clause would give rise to at least a subjacency violation since one or more barriers would be crossed.[17] An examination of the corpus of data in Faust (1973) and Day (1991) confirms this prediction: there is no example of WH-movement out of an embedded clause.

7 The Category of the Clitics

In the well-studied V-2 languages in the Germanic family, the elements that occupy the COMP position in a V-2 configuration are never base-generated there. Rather, they are raised INFL-elements; i.e. they are Vs that pass through INFL before landing ultimately in COMP. The question to ask for Shipibo, then, is whether or not these clitics originate in COMP or raise to COMP from INFL.

In this section, I will argue that these clitics originate in INFL and subsequently raise to COMP. There are three lines of evidence. First, the related language, Yaminahua, clearly demonstrates that the clitics cannot begin in COMP. Secondly, the other mood suffixes are in INFL. Lastly, there is agreement between two of the interrogative clitics with the completive aspect. Each of these will be addressed in turn.

7.1 Evidence from Yaminahua

Yaminahua, another related Panoan language, provides evidence that the Shipibo mood clitics originate in INFL and not in COMP. While there is no overt indicative or declarative marker in Yaminahua, there are several interrogative markers.

One in particular is of interest here. The interrogative *mẽ* is normally verb final. When the speaker wishes to emphasize an element, the *mẽ* suffix will attach to the emphasized constituent. The following are taken from Faust (1985) and Eakin (1989).

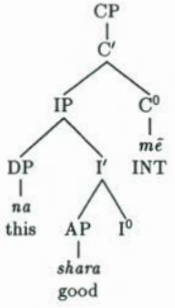
[17] A conjunctive version of the ECP as in Rizzi (1990) would predict that any such movement would also entail an ECP violation since the moved element could not antecedent-govern its trace. The "degree of badness" of such sentences has yet to be determined.

(120) *Na shara-mẽ?*
this good-INT
'Is this good?'

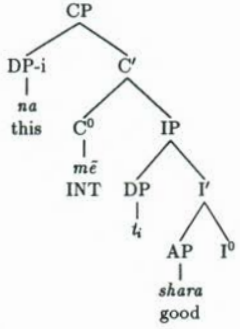
(121) *Na-mẽ shara*
this-INT good
'*This* is good?'

If the interrogative *mẽ* is in COMP, then (120) would have the structure shown in (122a). Assuming that the emphasis in (121) consists of movement of the DP to SPEC of C, (121) would have the structure in (122b).

(122) a.



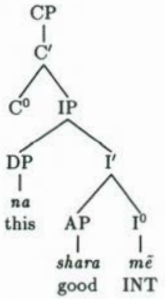
b.



Obviously, it is undesirable to sometimes have CP be left-headed and sometimes be right-headed. To avoid this dilemma, one could posit that the C^0 in (122a) first moves downward to adjoin to *na* and that subsequently the DP containing the *namẽ* complex is moved to Spec of C. Such downward head movement would produce an ECP violation, of course, as we saw in Section 4.

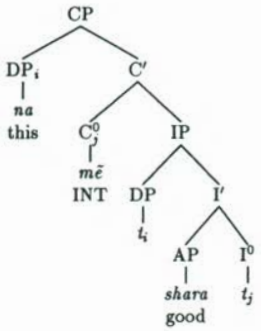
If the interrogative is in INFL, on the other hand, no such problems arise. Example (120) would have the structure shown in (123).

(123)



Example (121) would be derived from (123) by moving the DP to Spec of C and the interrogative to the unfilled C^0 slot. The result is shown in (124).

(124)



These examples from Yaminahua, then, suggest the view that the 2P clitics in Shipibo are a part of INFL. It also shows the necessity of positing a left-headed CP.

7.2 Other Mood Suffixes are in INFL

Further evidence that the clitics begin in INFL can be gleaned from the fact that other mood suffixes are in INFL. Recall from Section 3 that all the clitics indicate mood. The seven clitics are repeated in (125).

(125) (=29)

-ra	indicative
-qui	interrogative
-rin	interrogative of nominal predicates
-can	interrogative of response
-main	interrogative of assumption, supposition
-tsi	interrogative of confirmation
-ronqui	reportative

Both reportative and indicative could be classified as kinds of declarative mood and, of course, the interrogative varieties could be classified as types of interrogative mood. There is a lacuna in the semantic range of the clitics. While they cover declarative and interrogative mood, they leave out the third typical kind of mood: imperative. There are three varieties of imperative constructions in Shipibo, all of which appear in the INFL position. None of them co-occur with any of the 2P clitics.

Examples (126)–(129) exemplify verbs with the standard imperative suffix (glossed here as IMP).

(126) a. *S̃hobo naman bena-hue.*
house below look.for-IMP
'Look for it under the house!'

b. **S̃hobo-hue naman bena.*
house-IMP below look.for

(127) *Oin-hue!*
see-IMP
'Look!'

(128) a. *Binon no-iba be-hué.*
aguaje 1p-PLC.ANM bring-IMP
'Bring the aguajes to us!'

b. **Binon-hue no-iba be.*
aguaje-IMP 1p-PLC.ANM bring

(129) a. *Huinti jato-iba bo-tan-hue.*
oar 3p-PLC.ANM carry-REG-IMP
'Carry the oar to them (and then come back)!'

b. **Huinti-hue jato-iba bo-tan.*
oar-IMP 3p-PLC.ANM carry-REG

The imperative suffix *-hue* is the final suffix of the verb. Such a position is to be expected if this suffix is in INFL since INFL is the rightmost element in the basic clause structure.

The second imperative construction is shown in (130)–(132). These contain the discontinuous exhortative morpheme (glossed as EXH1 and EXH2).

(130) a. *Mia e-n a-šhon-ba-non.*
2s 1s-ERG do/make-BENE-EXH1-EXH2
'Let me make it for you!'

b. **Mia-ba-non e-n a-šhon.*
2s-EXH1-EXH2 1s-ERG do/make-BENE

(131) a. *E-n rete-ba-non.*
1s-ERG kill-EXH1-EXH2
'Let me kill it.'

b. **E-n-ba-non rete.*
1s-ERG-EXH1-EXH2 kill

(132) *Jabo pasian-ba-ca-non.*
3p walk-EXH1-PLU-EXH2
'Let them walk!'

Presumably, the plural (PLU) in (132) is a part of the agreement (AGR) subconstituent of INFL, so it is conceivable that the entire sequence of *ba-ca-non* 'EXH1-PLU-EXH2' is in INFL. Neither *ba* nor *non* nor the combination of *banon* is ever found on any constituent other than the last.

The third imperative form, as shown in (133)–(134), is glossed as the imperative of petition.

(133) a. *Noa oin-ma-ta.*
1p see-CAUS-PETITION
'Well, show us!'

b. **Noa-ta oin-ma.*
1p-PETITION see-CAUS

(134) a. *Jihui-n nee-ta.*
tree-ERG climb-PETITION
'Well, climb the tree!'

b. **Jihui-n-ta nee-ta.*
tree-ERG-PETITION climb

It, too, is verb final and in INFL position.

Imperative mood is not the only mood that can appear in INFL. The 'interrogative of permission' also surfaces in INFL as shown in (135)–(136).

(135) a. *Ea-ribi ca-pan?*
1s-ALSO go-PERMISSN
'Can I go, too?'

b. **Ea-ribi-pan ca?*
1s-ALSO-PERMISSN go

(136) a. *Ia-man nono-pan?*
lake-ERG swim-PERMISSN
'Can I swim in the lake?'

b. **Ia-man-pan nono?*
lake-ERG-PERMISSN swim

Like the imperatives, this interrogative mood never co-occurs with the other 2P clitics. If the clitics did not originate in INFL, it would be difficult to explain why this one interrogative form should surface in a position different from the others. The fact that these moods can surface in INFL adds credence to the assertion that INFL is where every mood in Shipibo originates.

If every mood marker originates in INFL, why is it that some cliticize and others do not? Two observations suggest a solution to this puzzle. First, the mood clitics always co-occur with an overt aspect in INFL, as shown in (137) (cf. also (30)–(60)).

(137) a. *E-n-ra binon be-que.* (=1)
1s-ERG-IND aguaje bring-CMPL
'I brought aguajes.'

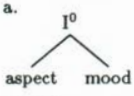
b. **E-n-ra binon be.*
1s-ERG-IND aguaje bring

Secondly, an examination of the Shipibo data reveals that every verb surfaces with an overt INFL element. This suggests the language specific constraint posited in (138).

(138) NULL INFL FILTER: INFL must be overt at S-Structure.

Mood and aspect are morphologically fused in the imperative and interrogative of permission forms, but are distinct in the case of the clitics. Since Shipibo requires every verb, whether finite or non-finite, to have an overt INFL element, only the moods which are independent of aspect can cliticize. A portmanteau element such as imperative or interrogative of permission would not leave an overt INFL element behind if it were to move. I am proposing, in other words, that mood is free to move in (139a) because aspect will meet the overt INFL requirement. In (139b), however, the single morphologically realized element in INFL cannot move without violating the Null INFL Filter.

(139) a.



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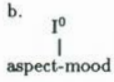

Baker (1988:73) suggests that morphology theory should rule out movement of one head from a structure such as in (139a). He posits the following as a possible principle of morphology theory that will account for this:

(140) $*[X^0 \ldots t_i \ldots]$

The intuition behind this is that there should be no traces within words.

The analysis I propose here is not the only case where a violation of (140) is desirable. Hart (1990) notices that in Homeric Greek tmesis (the process where a preposition can occur either attached to a verb or separated from the verb), the preposition can be seen as first forming a complex head with the verb and then moving out of this complex. While the later movement violates (140), the result is grammatical.

I take it, then, that every mood marker in Shipibo originates in INFL. The mood marker will raise to COMP as long as the Null INFL Filter is not violated.

7.3 Agreement between Interrogative Mood and Completive Aspect

One last piece of evidence favors this view. Normally, completive aspect (CMPL) is realized by the morpheme *que*. When either the interrogative (INT) or the interrogative of confirmation (INT.CONF) clitic is present, however, the completive takes the shape *a* (which is glossed here as CMPL.INT). Consider these sentences (mostly repeated from earlier).

(141) a. *Mi-n-qui be-a?*
2s-ERG-INT bring-CMPL.INT
'Have you brought (it)?'

b. **Mi-n-qui be-que?*
2s-ERG-INT bring-CMPL

(142) a. *Ja-bé-qui mia nocot-a?* (=32)
3s-ACCM-INT 2s arrive-CMPL.INT
'Did you come with him?'

b. **Ja-bé-qui mia nocot-que?*
3s-ACCM-INT 2s arrive-CMPL

(143) a. *Jabo-tsi benó-huan-can-a nii meran?* (=41)
3p-INT.CONF get.lost-PAST.TODAY-PLU-CMPL.INT forest in
'Is it certain that they got lost today in the forest?'

b. **Jabo-tsi benó-huan-can-que nii meran?*
3p-INT.CONF get.lost-PAST.TODAY-PLU-CMPL forest in

If the clitic is in INFL at D-Structure, it can subcategorize for the aspect under quite local conditions. If the clitics were to originate in COMP, the necessary subcategorization would have to be at a distance. The interrogative COMP would in essence need to pass a feature down to the head of its complement (i.e. to I^0 via IP) that would allow the head to result in the correct surface form for the completive aspect.

Thus, these lines of evidence suggest that the clitics in Shipibo originate in INFL.

8 Conclusion

This paper has argued for an analysis of Shipibo mood clitics in which these 2P forms originate in INFL, but move to COMP. The surface distribution of the 2P clitics is thus a direct result of Shipibo being a V-2 language. Just like the Germanic V-2 languages, there is obligatory focusing of an arbitrary XP with concomitant INFL to COMP movement. This focusing requirement explains the apparent WH-Movement in this SOV language, something that is typologically unexpected. In addition, as in other V2 languages, obligatory focusing and INFL to COMP movement are restricted to main clauses. This analysis of Shipibo cliticization is corroborated by evidence from two other Panoan languages, Capanahua and Yaminahua. Thus, this documents that a non-Indo-European language, Shipibo, has Verb Second properties.

Appendix

The following abbreviations are employed in the glosses of Shipibo forms. I devised these abbreviations based on the information given in Faust (1973).

1p	first person plural
1s	first person singular
1s.gen	first person singular, genitive
2p.gen	second person plural, genitive
2s	second person singular

2s.gen	second person singular, genitive
3p	third person plural
3s	third person singular
3s.gen	third person singular, genitive
ACCM	accompaniment
ADVC	advice
ALSO	also (on nouns), again (on verbs)
ANTE.D.DS	antecedent action, definite action, different subject
BEHIND	behind
BENE	benefactive (can also be malefactive with intransitives)
CAUS	causative
CMPL	completive
CMPL.INT	completive with the interrogative
CONT	continuative
DEF.FUT	definite future
DEPART	action is upon departure
DES	desiderative
DIR.TO	opposition or direction toward
EMPH	emphasis
ERG	transitive subject marker (Ergative Case)
EXH1	exhortation part 1
EXH2	exhortation part 2
FUT	future aspect
IMP	imperative
IND	indicative
INF	infinitive
INF.I	verbal complement marker for intransitive verbs
INT	interrogative
INT.CONF	interrogative of confirmation
INT.NOM	interrogative with nominals
INT.RESP	interrogative of response
INT.SUP	interrogative of supposition
NEG	negative on nouns, adverbs, adjectives
NEGV	negative on verbs
ORIGN	origin with nouns
PAST.MNTHS	past time; months or a few years ago
PAST.PFCT	past perfect time/aspect
PAST.PTC	past participle
PAST.TODAY	recent past; same day as spoken
PAST.YRS	past time; many years ago
PERMISSN	request permission
PETITION	petition of command
PLC.ANM	place where an animate being is
PLC.INA	place where an inanimate thing is
PLC.ORG	place of origin; only goes with intransitives
PLU	plural
POS	possessive
PRES.PTC	present participle
PRHAPS	maybe, perhaps
REAL	authentic, very good
RECP	reciprocal
REG	regressive
REPORT	reportative
SIML.I.SS	simultaneous action, intransitive verb in principal clause, same subject
SIML.T.SS	simultaneous action, transitive verb in principal clause, same subject

SUBS.I.SS	subsequent action (purpose), intransitive verb in principal clause, same subject
TIME	time, when
VERY	very, much, (intensifier?)

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Clausal Structure and the Modern Irish Copula*

Cathal Doherty

1 Introduction

Irish has two copular elements, exemplified in (1) and (2) below. These are traditionally termed the 'copula' and the 'substantive verb', respectively.

(1) *Is dochtúir Seán.*
COP doctor Seán
"Seán is a doctor."

(2) *Tá Seán ar meisce.*
be Seán drunk
"Seán is drunk."

Traditional grammars generally observe that the copula is used with predicates expressive of a 'permanent' state or property while the substantive verb is used with more transient predicates. I show that this difference is equivalent to the individual/stage-level contrast of Carlson (1977), Kratzer (1989). The copula takes only individual-level predicates while the substantive verb prefers stage-level predicates.

Copular clauses have posed a longstanding problem for the rationalization of Irish clause structure in that they display radically different syntactic properties from the other finite clauses of the language.[1] Firstly, they have clause-final subjects, as seen in (1) above. This is unexpected given the fact that the surface word order of Irish is strictly VSO, which is commonly accepted as being derived from underlying SVO order through verb fronting. Secondly, copular clauses have accusative subjects, unlike other finite clauses in the language which uniformly have nominative subjects. Thirdly, these clauses do not obey the usual constraints on the distribution of resumptive pronouns in the language. Resumptive pronouns are generally ungrammatical in the highest subject position of an unbounded dependency in Irish. This restriction is termed the 'Highest Subject Restriction' in McCloskey (1990). Copular clauses, however, freely admit resumptive pronouns in this position.

There is considerable evidence that the Irish copula is not a lexical verb but is simply an Inflection particle and that copular sentences are in fact instances of non-verbal predication. I claim that the copular Inflection particle semantically selects for an unsaturated predicational complement, the subject of the clause appearing in Specifier of IP, as in (3a) below. Following Chung and McCloskey (1987) and McCloskey (1990), I assume that the Inflection particle in verbal clauses on the other hand, selects for a saturated complement, a small clause, the subject appearing internal to the complement of Inflection, as in (3b).

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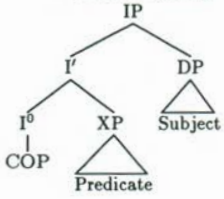
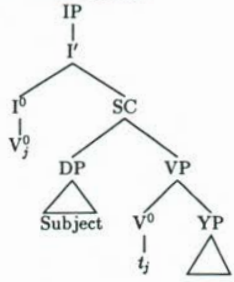
[1] The syntax of the substantive verb is rather straightforward and is not addressed in this paper. For a discussion of the syntax of this verb see McCloskey and Sells (1988).

(3)

a. Copular Clauses



b. Verbal Clauses



This difference in selectional properties between the two Inflection particles results in the realization of the subject of copular sentences in Specifier of IP in contrast with the subject of verbal clauses which is internal to the complement of I^0. This provides the basis for an explanation of the various syntactic peculiarities of copular sentences.

This analysis has important implications for the theory of functional categories in that the copula, which by all morphological and phonological criteria is a functional element of the inflectional class, displays properties generally assumed to be uncharacteristic of functional heads. Firstly, these clauses clearly show that the commonly accepted assumption that functional heads admit at most one category of complement e.g. I^0 admits VP, C^0 admits IP, simply cannot be correct. The copular Inflection clearly takes a wide range of categories in its complement i.e. AP, PP, NP and DP. This analysis is also remarkable in that it assumes that distinct members of the same functional category can have different selectional properties.

In addition, the research program which seeks to replace phrase structure rules with general principles of X′-theory, in particular, the extension of this idea to clausal structure as in Chomsky (1986a), is supported by this analysis. Without recourse to stipulative phrase structure rules, it is possible to provide a unified analysis of Irish verbal and non-verbal (copular) clauses despite their radically different syntax.

Finally, the proposal of Krazter (1989) that individual and stage-level predicates differ in the positional realization of their subjects at d-structure is supported by this analysis in that it is found to provide an explanation of the fact that copular clauses take only individual-level predicates.

1.1 Preliminaries: Basic Syntax and Semantics

The functions of the copula and the substantive verb are quite distinct. The copula is used to predicate individual-level predicates of a subject and also to express the identification relation between two definite, referring noun phrases. On the other hand, the substantive verb is generally, though not exclusively, used to predicate stage-level predicates of an individual and cannot express the identification relation.[2] The following are examples of Identificational copular clauses.

(4) *Is iad na sagairt an trioblóid.*
COP AGR.3PL the priests the trouble
"The priests are the trouble."

[2]This observation is consistently made in traditional grammars. These generally state that the copula takes predicates which are expressive of a permanent property while the substantive verb is used with predicates expressive of more transient properties. (Ó Cadhlaigh (1940:144), O'Nolan (1920:1), (Ua Laoghaire (1895:12)) The relationship between the copula and substantive verb in Irish seems very similar to the relation between the two verbs of existence in Spanish, *ser* and *estar*, as discussed in Ó Máille (1912:57-58).

(5) *Is é an t-ollamh úr é.*
COP AGR.3SG.MASC the professor new him (ACC)
"He is the new professor."

(6) *Is í an bhean is fearr í.*
COP 3AGR.SG.FEM the woman best her (ACC)
"She is the best woman."

Note the presence of an agreement morpheme which agrees in person and number with the noun phrase immediately to the right of the copula in these Identificational sentences. This agreement morpheme which has the phonological appearance of a pronoun, is termed the 'pronominal augment' in traditional grammar.[3]

In Predicational clauses, the copula may have nominal, adjectival or prepositional complements. However, in the modern language only the use of nominal predicates, as in (7)–(9) below, is productive.

(7) *Is mac-léinn é.*
COP student him (ACC)
"He is a student."

(8) *Is teach galánta é seo.*
COP house nice it here
"This is a nice house."

(9) *Ba fhear cliste é.*
COP.PAST man clever him (ACC)
"He was a clever man."

There are strong lexical restrictions on adjectival predicates in copular clauses and it is certainly not the case that all adjectives expressive of a permanent property can occur as copular predicates, as the ungrammaticality of (10) below, shows.

(10) **Is cliste iad.*
COP clever them (ACC)
"They are clever."

In this case, the substantive verb would be used, as in (11) below.

(11) *Tá siad cliste.*
be they clever
"They are clever."

However, those adjectives which do occur in copular sentences seem clearly to be individual-level. In a survey of written sources, I have found the following predicate adjectives in copular clauses: *fiú*, 'worthwhile'; *fíor* 'true'; *maith* 'good'; *olc* 'evil'; *aisteach* 'odd'; *iontach* 'wonderful'; *ceart* 'right'; *cóir* 'just'; *leor* 'sufficient'; *mór* 'big'; *beag* 'small'; *fuar* 'cold'; *gruama* 'gloomy'; *cosúil*, 'similar'; *ionann* 'equivalent'. Some examples are given below.

(12) *Is greannmhar thú.*
COP funny you (ACC)
"You're funny."

(13) *Is aisteach agus is iontach bealaigh Dé.*
COP strange and COP wondrous ways.of God
"The ways of God are strange and wondrous."

(14) *Más ceart mo chuimhne.*
if+COP right my memory
"If my memory is right."

[3]The suggestion that the 'pronominal augment' is an agreement morpheme is originally due to Ken Hale.

(15) *Ní mall a gcosa agus ní fuar a n-aigne.*
NEG+COP slow their feet and NEG+COP cold their minds
"Their feet are not slow nor their minds cold."

(16) *Is ionann an dá rud.*
COP equivalent the two things
"The two things are the same."

There are even more severe lexical restrictions on prepositional predicates in copular clauses. There are only four prepositions which may be used as copular predicates: *de* 'of'; *as* 'from'; and *ó* 'out of' and *le* 'with', indicating possession. These also express individual-level predicates, as can be seen in the following examples.

(17) *Is de bhunadh Phrotastúnach í.*
COP of stock Protestant her (ACC)
"She is of Protestant stock."

(18) *Is as Inis Eoghain é.*
COP from Inis Eoghain him (ACC)
"He is from Inis Eoghain."

(19) *Is ó Bhaile Atha Cliath iad.*
COP out.of Dublin them (ACC)
"They are from Dublin."

(20) *Is liomsa an t-Alfa Romeo sin.*
COP with-me the Alfa Romeo that
"I own that Alfa Romeo."

Therefore, it seems that all the predicates permitted in copular sentences are individual-level. If this assertion is true, then it would not be expected that temporal modifiers could occur in copular sentences. This seems to be the case. A thorough search of a body of data from modern written sources have not revealed any examples of temporal or locative adverbs in copular sentences.

The individual-level interpretation of copular sentences is very clear in the systematic contrast between copular sentences and their equivalents with the substantive verb, as in (21) and (22) below.

(21) a. *Is sagart é mo dhearthár.*
COP priest him (ACC) my brother
"He is a priest, my brother."

b. *Tá mo dhearthár ina shagart.*
is my brother in-his priest
"My brother is a priest."

Stenson (1981:94–5) reports that (21a) above classifies the subject as a member of the set of priests while ((21b), on the other hand, suggests that his being a priest is a state rather than a property of an individual, that he was not always a priest. She reports that this same contrast is evident in the following pair.

(22) a. *Is fear é.*
COP man him (ACC)
"He is a man."

b. *Tá sé ina fhear (anois).*
is he in-his man (now)
"He is a man (now)."

The first sentence, (22a), simply classifies the subject as a member of the set of men, while (22b) would be used in a context where being a man is a state which an individual has achieved, as used of someone who

has just grown up. It is clear then that in both these cases, (21) and (22), we are dealing with the contrast between individual and stage-level predication.

In general sentence which is true in the past (in a neutral context) carries the implicature that it is not true of the present time. For example, the sentence *John was here* strongly implicates that *John* is no longer here, that the sentence is not true of the present time.

Now as individual-level predicates cannot change over time (lacking a location in space and time), the only way that the predicate can be placed in the past is if the subject of the predication is no longer in the universe of discourse. There is also the option of reinterpreting the predicate as stage-level. Consider the following example, (23).

(23) John was a doctor.

Either the predicate *be a doctor* is interpreted as being individual-level, as in (24a), in which case the implicature is that the subject *John* has left the universe of discourse and is probably dead, or the predicate is reinterpreted as stage-level, as in (24b), where the implicature is that the subject used to be a doctor but is no longer one.

(24) a. PAST [doctor'(John)]
b. (∃l)[PAST(l) & doctor'(John, l)]

Notably, the equivalent Irish copular sentence shows no such ambiguity.

(25) *Ba dhochtúir Seán.*
COP.PAST doctor John
"John was a doctor."

The only reading available is that of (24a) above, where the subject has left the universe of discourse and is probably dead. In order to express the stage-level reading where the subject has simply ceased being a doctor, the substantive verb would be used, as in the following.

(26) *Bhí Seán ina dhochtúir (tráth).*
was John in-his doctor once
"John was a doctor (once)."

These facts show that there is a very strong restriction on copular sentences to the effect that they allow only individual-level readings.

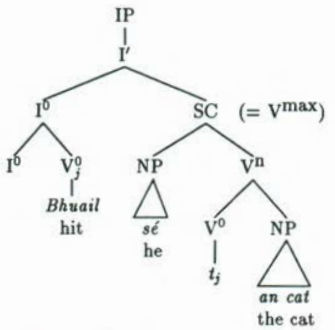
1.2 Syntactic Characteristics of Copular Sentences

The surface word order of Irish is VSO, as is seen in (27) below.

(27) *Bhuail sé an cat.*
hit he (NOM) the cat
"He hit the cat."

Chung and McCloskey (1987) provide convincing evidence that the subject and predicate of Irish clauses form a syntactic constituent, a small clause complement to Inflection. McCloskey (1990:28) claims that this constituency evidence can be accounted for by adopting a version of the VP-internal subject hypothesis, where the complement of Inflection is a verbal small clause, as in (28) below the surface VSO order being derived by V^0 to I^0 movement. I assume this general account of Irish clause structure throughout this paper.

(28)



If surface VSO order were derived from underlying SVO order one might expect to see the underlying order surface occasionally. This seems to be the case in nonfinite clauses, such as (29) below.[4]

(29) *Shílfeá* [*é* *Máire a* *phógadh.*]
you-would-think him (ACC) Máire ptc kiss
"You would think he would kiss Máire."

As noted in section 1 above, copular sentences display many properties which distinguish them from the other clauses of the language. Firstly, the normal underlying subject>predicate order of Irish seems to be reversed. In copular clauses, the predicate clearly precedes the clause-final subject. Secondly, the subject of copular clauses bears accusative case. This again contrasts with other finite clauses in which the subject uniformly bears nominative case, as in (27) above.

Thirdly, the subject of copular clauses does not obey the Highest Subject Restriction (henceforth, HSR) on the distribution of resumptive pronouns in Irish. The HSR is the observation that resumptive pronouns cannot appear in the highest subject position of an unbounded dependency, as for example in (30) below.

(30) **an fear a* *raibh sé breoite*
the man COMP was he ill
"the man who was ill"

Resumptive pronouns can freely appear in the highest subject position of copular sentences, as in (31) and (32) below.

(31) *an fear ar* *dochtúir é*
the man COMP+COP doctor him (ACC)
"the man who is a doctor"

(32) *an bhean arbh* *í* *an múinteoir* *í*
the woman COMP+COP AGR.3SG.FEM the schoolteacher her (ACC)
"the woman who was the schoolteacher"

Finally, the extraction of a subject from copular clauses leaving a gap leads to very marginal results.

(33) a. **an carr a* *b'* *fhiú* *a lán* t.
the car COMP COP.PAST worth a lot
"the car that was worth a lot"

[4]Note that the object of the nonfinite verb has been preposed. McCloskey and Sells (1988) have proposed that this is due to the fact that nonfinite verbs assign Case to the right, and as a result, the object right-adjoins to V' to be assigned Case. Note also that the subject of the nonfinite clause is in the accusative Case. This has been ascribed in Chung and McCloskey (1987) to the application of a default Case-assigning rule which assigns default accusative Case to positions lacking a Case-assigner.

The corresponding sentence with a resumptive pronoun instead of a gap is fine, however.

(33) b. *an carr a b' fhiú a lán é.*
the car COMP COP.PAST worth a lot it (ACC)
"the car that was worth a lot"

This contrasts with the other clauses in the language which freely allow the extraction of a subject leaving a gap.

1.3 The Copula as an Inflectional Element

The beginnings of an account of the unusual syntax of these clauses lies in the fact that copular sentences are clearly instances of verbless predication. There is strong syntactic and morphological evidence that the Irish copula is not a verb but is a functional element, an Inflection particle, as discussed below.

Abney (1987:64–65) employs five criteria to distinguish functional and lexical categories. They are given in (34) below, (paraphrasing Abney).

(34)
(i) Functional elements constitute closed lexical classes.
(ii) Functional elements are generally phonologically and morphologically dependent. They are generally stressless, often clitics or affixes, and sometimes even phonologically null.
(iii) Functional elements permit only one complement which is in general not an argument.
(iv) Functional elements are usually inseparable from their complement.
(v) Functional elements lack "descriptive content" Their semantic contribution is second-order, regulating or contributing to the interpretation of their complement.

The Irish copula is clearly a functional category by these criteria. Firstly, it obviously forms a closed lexical class. Secondly, it is a stressless proclitic which never occurs in syntactic isolation (discussed further in 1.3.1 below). In addition, it may often be phonologically null. Predicational copular sentences are often uttered without an overt copula in casual speech.[5] Therefore, the first two and the fourth criteria are satisfied.

The third criterion is of a lesser status than the others. It is clear that functional elements should lack descriptive content and be morphologically dependent but it is much less clear why admission of only one category of complement is central to the nature of functional elements. In fact, one of the consequences of the analysis of copular clauses proposed in this paper is that functional heads must be allowed more than one category as complement.

The copula also satisfies the fifth criterion in that it lacks "descriptive content". Its semantic function seems to be merely that of marking a non-verbal category, NP, AP or PP as a predicate. As Børgstrom (1940:115) reports of (the very closely related) Scottish Gaelic, "The function of the copula is to enable any non-verbal word ...to form a sentence." Therefore, it seems fairly conclusive that the Irish 'copula' is a functional rather than a lexical element. This is apparently an observation of considerable antiquity, as native grammarians grouped the copula with other categories which are clearly functional rather than lexical. As Ahlqvist (1972:271) notes, ". . . from the *Auricept na nÉces* onwards, the native grammatical tradition treated the copula as a particle or *iairmbérla* [stressless element] together with the definite article and all other proclitics."[6] (my brackets)

In summary, it is clear that the copula is a clause-initial functional category. Therefore, it is reasonable to propose that it is either an Inflection or a Complementizer particle. We will see below that there are clear indications that the copula is a member of the Inflectional class.

[5] Interestingly, this applies only to the present tense copula. The past tense form *ba*, is never deleted.

[6] It is clear that in Old Irish the copula was a verb. However, by the Middle Irish period it had lost most of its verbal characteristics, such as person-number inflection, only the forms *is* and *ba* remaining.

Irish verbs usually distinguish at least past, present and future tense, and conditional mood. These are illustrated for the substantive verb in the first person singular, below.

(35)

Present	*buailim*	I hit
Future	*buailfidh mé*	I will hit
Past	*bhuaileas*	I hit
Conditional	*bhuailfinn*	I would hit

The copula, on the other hand, only distinguishes two forms: *is* and *ba*, usually described as the present/future and past/conditional forms respectively (Ó Siadhail (1989: 219–220), Christian Brothers (1980:113–4)). Note that the past/conditional form induces lenition on the element immediately following it while the present/future form does not.

(36)

Past/Conditional	Present/Future
baL	*is*

These observations are important because this same tense distinction, between past/conditional (inducing lenition) and present/future (no lenition) is clearly a general property of I^0 in Irish. Note in (35) above that the initial consonant of the verb is lenited in the past tense and conditional mood but not in the present and future tenses. This is presumably a result of morphological compounding of I^0 and V^0, mediated by head movement of V^0 to I^0 which is a general feature of finite clauses in Irish.

Secondly, complementizers in Irish appear to be marked for tense. This is presumably a reflex of morphological compounding of Inflection with complementizers.[7] These morphological compounds dispay the very same distinction between past/conditional forms (inducing lenition) and present/future (no lenition) forms as the verb/Inflection compounds, as seen in (37) below.

(37)

	PRESENT/FUTURE	PAST/CONDITIONAL
direct relative	*aL*	*aL*
indirect relative	*aN*	*arL*
interrogative	*anN*	*arL*
subordination	*goN*	*gurL*

Therefore, the fact that the copula is a clause-initial functional category which displays the same tense distinctions and morphological effects as other particles belonging to the Inflectional class, shows clearly that the copula is an Inflection particle.

Inflection particles in Irish form morphological compounds with complementizers, giving rise to forms which have the appearance of tense-marked complementizers, as seen in (37) above. Therefore, if the copula really is an Inflectional element, we would expect that it would have no independent morphological realization in a clause with an overt complementizer but would simply show up as tense features on the complementizer. This prediction is borne out, as seen in the table below which shows the morphological compounds resulting from the combination of various complementizers with the copula.[8]

(38)

	PRESENT/FUTURE	PAST/CONDITIONAL
direct relative+copula	*is*	*a baL/ ab'*
indirect relative+copula	*ar/arb*	*arL/arbh*
interrogative+copula	*an*	*arL/arbh*
subordination+copula	*gur/gurb*	*gurL/gurbh*

Consider the following examples of embedded declarative and embedded interrogative copular sentences as an illustration.

[7] I propose in 2.5 below that this is a reflex of head movement of I^0 to C^0.

[8] The forms ending in *-b* and *-bh* are used before vowels.

(39) *Dúirt siad gur dochtúir é.*
said they COMP+COP.PAST doctor him (ACC)
"They said he was a doctor."

(40) *D'fhiafraigh siad domh ar dhochtúir é?*
asked they of-me Q+COP.PAST doctor him (ACC)
"They asked me if he was a doctor."

The copular Inflectional particle is clearly a distinct Inflectional element from that which appears in verbal clauses. This is clear from the fact that the complementizer/copula compounds, in (38) above, are distinct from the usual complementizer/Inflection compounds, seen in (37) above.

1.3.1 Small Clause Ellipsis

McCloskey (1991:14–22) claims that there is a deletion process in Irish, formally akin to English VP-ellipsis, where the complement of I^0 is deleted. He terms this process 'Small Clause Ellipsis' (SCE). The difference between the two languages is that in Irish, both the subject and predicate are deleted, as they are both internal to the small clause complement of I^0 at s-structure, while in English the subject is in Specifier position of IP at s-structure and so escapes the deletion of the complement of I^0. The following example illustrates this. Note that in the English translation, the subject *they* remains after the deletion.

(41) *Dúirt siad go ndéanfadh siad sin agus rinne* t.
said they that would-do they that and did
"They said that they would do that and *they did*."

There are no Yes/No particles in Irish. The response to a question simply consists of a repetition of the main verb of the question, as (42) and (43) below show.

(42) *Ar bhuaileadar an cat? Bhuaileadar.*
Q hit.PAST.3PL the cat hit.PAST.3PL
"Did they hit the cat? Yes."

(43) *An mbeidís ró-shean? Bheidís.*
Q would-they-be too-old be.COND.3PL
"Would they be too old? Yes."

McCloskey claims that the responsive too is a reflex of Small Clause ellipsis. The d-structure of the responsive is simply a declarative sentence to which the Small Clause Ellipsis process applies, allowing only the content of Inflection (i.e. the fronted verb) to survive.

Given the fact that that this ellipsis process deletes the small clause complement of Inflection in verbal clauses, it should be a useful tool for probing the syntax of copular clauses. Consider the following examples of Predicational copular responsives.

(44) *An dochtúir é? Is ea.* [**Is*]
Q+COP doctor him (ACC) COP DUMMY
"Is he a doctor? Yes."

(45) *An cosúil le taibhse é? Is cosúil.* [**Is*]
Q+COP like with ghost him (ACC) COP like
"Is he like a ghost? Yes."

(46) *An leatsa an carr sin? Is liomsa.* [**Is*]
Q+COP with-you the car that is with-me
"Do you own that car? Yes."

These facts show us two things. Firstly, the copula is clearly a proclitic element which requires a lexical host to form a phonological word. The bare copula, **is*, could never be used in isolation as a response to

a question. This is clearly seen in the Predicational sentences above, where the head of the predicate (or a dummy element in the case of the nominal predicates) supports the copula in the responsive form.[9]

In the case of the Identificational clauses, the agreement element provides a host for the copula, as seen in (47) below.

(47) *An é Seán an dochtúir? Is é.*
Q+COP AGR.3SG.MASC Seán the doctor COP AGR.3SG.MASC
"Is Seán the doctor? Yes."

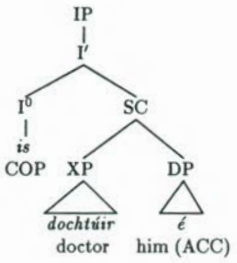
Secondly, if SCE applies in a uniform way in both verbal and copular clauses, then these data indicate that the complement of the copular Inflection contains both the subject and the predicate i.e. that the complement of the copular Inflection is a small clause. However, there are serious theoretical and empirical problems with this conclusion, discussed below.

2 The Syntactic Structure of Copular Clauses

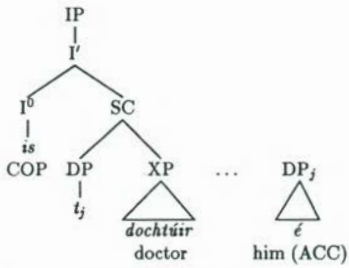
2.1 Complement of Copula is a Small Clause?

Assuming that the complement of the copula is a small clause, two basic possibilities for deriving the subject-final word order of copular clauses present themselves. Firstly, the complement of the copula could be a subject-final small clause, as in (48) below. Secondly, the complement of the copula could be a subject-initial small clause complement, with obligatory postposing of the subject to some clause-final position, as in (49) below.

(48)



(49)



However, both these structures, while deriving the correct word order and being consistent with the ellipsis facts above, seem untenable on both theoretical and empirical grounds.

As reported in Chung and McCloskey (1987:175–183), small clauses in Irish are always subject-initial and occur in a wide variety of environments, even when there is no external governing Case assigner to ensure that the subject gets Case, as in (50) below.[10]

(50) *agus [é i gCalafóirnia]*
while him (ACC) in California
"while he was in California"

[9] This could be characterized as head movement of the predicate head, A^0 or P^0, to the copular I^0. It is an interesting question and unfortunately one which is not addressed here what principles prevent the movement of N^0 to the copular Inflection, as in (44).

[10] Chung and McCloskey claim that default Case-assigning rule which applies in all nonfinite clauses is responsible for this wider distribution of small clauses in Irish than in than in English. English lacks such a rule, and small clauses therefore require an external governor in order for the subject to be assigned Case.

Chung and McCloskey also report that there are no small clauses with nominal predicates in Irish, as the ungrammaticality of (51) below shows.[11]

(51) **agus [é dlíodóir]*
while him (ACC) lawyer
"while he was a lawyer"

Structure (48) above, then, has the serious cost of reversing the normal direction of predication in the small clauses of the language. Even allowing subject-final order as an option, it is very unclear how this order could be restricted to copular clauses, preventing the generation of examples such as (52) below.

(52) **agus [i gCalafóirnia é]*
while in California him (ACC)
"while he was in California"

Also, both structures (48) and (49) above face the problem of admitting small clauses with nominal predicates into the language. This is undesirable as it is very unclear how such small clauses, once admitted to the grammar, could be prevented from appearing in all the environments in which small clauses normally appear, and predicting the grammaticality of examples such as (51) above.[12] The second structure, (49), faces some additional problems. Recall from the discussion of Identificational copular clauses in 1.1 above that the copula agrees with the noun phrase to the immediate right of the copula in these clauses. Anticipating the discussion in 2.7 below somewhat, agreement in Irish is determined by government. Inflecting heads agree with the definite noun phrase they govern. It is unclear, given the fact that the rightmost noun phrase is governed by the copula at s-structure in (49) how to correctly predict agreement only with the leftmost noun phrase. In addition, it is very unclear what principles could ensure that the postposing of the subject in these clauses is obligatory.

Therefore, any account which takes the complement of the copula to be a small clause encounters serious theoretical and distributional problems.

2.2 Are Copular Clauses Impersonal?

Many of the unusual characteristics of the subject of copular clauses are in fact characteristic of objects. For example, it bears accusative case, appears clause-finally and is freely resumed by a resumptive pronoun like other objects in Irish. In relational terms, this suggests that the logical subject of copular clauses is not a final 1 but has been demoted and that copular clauses are impersonal. This approach would provide the basis for an explanation of these object-like characteristics of the subject. An impersonal analysis for Irish copular clauses has been suggested in Ahlqvist (1972) and in McCloskey (1990:216, fn 14) who makes the explicit suggestion that these clauses may contain an expletive subject.

However, when we attempt to translate these relational terms into structure, it seems impossible to avoid proposing that the complement of the copula is a small clause. This is because three argument positions are required, one for the expletive subject, one for the predicate, and one for the logical subject. As the

[11] This is example (15a) in Chung and McCloskey (1987). Chung and McCloskey offer no account of this fact, which is odd in that small clauses with nominal predicates are not uncommon cross-linguistically.

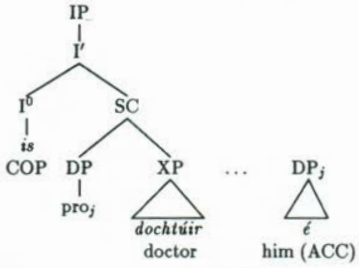
[12] It could be pointed out that small clauses with nominal predicates would be expected to uniformly have an individual-level interpretation and that this would rule out their appearance in sentences such as (51) above. While this may be true in the case of a small clause complement to *agus* 'while', it is not the case that all small clause environments require a stage-level interpretation. For example, small clauses 'in isolation', as discussed in Chung and McCloskey (1987:177) seem clearly to allow individual-level predicates.

Ghaibh criú naomhóige isteach. Iad righin fadthruslógach.
came crew currach in them tough with-long-loping-stride
"The crew of a currach came in. They were tough and walked with a long stride."

Therefore, it could not be claimed that the semantics of small clauses with nominal predicates would be sufficient to restrict them to copular sentences. At any rate, the very severe ungrammaticality of examples like (51) above could hardly be accounted for by the semantic infelicitousness of putting an individual-level predicate in an environment where a stage-level predicate is required.

copula is simply an Inflection particle it seems that the only way to permit three argument positions in the clause is to have a small clause complement to the copula, such as in (53) below, where the complement of the copula is a regular subject-initial small clause whose subject position is occupied by an expletive noun phrase, linked with the logical subject in clause-final position.

(53)



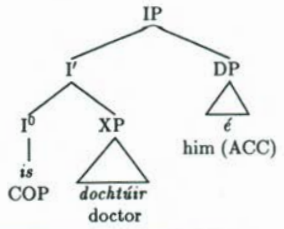
This approach, of course, faces all the theoretical and distributional problems that face any analysis taking the complement of the copula to be a small clause. Firstly, small clauses with nominal predicates would have to be admitted to the grammar but somehow be restricted to copular clauses. It is not at all clear how this could be achieved. Secondly, the obligatory realization of the subject in a position external to the small clause would have to be licensed in some way. Again, it is very unclear how this could be ensured to be obligatory. Thirdly, the agreement process in Identificational copular clauses where the copula agrees with the noun phrase immediately to its right, also poses a serious problem for this approach. As an inflecting head agrees with the noun phrase it governs (anticipating the discussion in 2.7 below), agreement with the expletive (or perhaps the final noun phrase, if an expletive argument chain is proposed) would be incorrectly predicted.

In conclusion, an impersonal analysis of copular clauses in structural terms seems implausible because such an approach would require that the complement of the copula be a small clause.

2.3 The Proposal

I propose that the unique syntax of copular clauses is due to the fact that the copular Inflectional particle selects for an unsaturated predicational complement, crucially not a small clause. This selectional property distinguishes the copular Inflection from the verbal Inflection particle, which demands a small clause complement.[13] This results in the realization of the subject of copular clauses in the Specifier position of IP, as in (54) below, this being the only clause type in the language where this position is utilized.

(54)



[13] This difference in selectional requirements is justified in that the copula, though clearly an Inflection particle, is equally clearly a distinct Inflectional particle from that which occurs in verbal clauses. This is discussed in 1.3 above.

This proposal straightforwardly accounts for the word order of copular clauses, assuming that Irish has a clause-final IP Specifier position, an assumption which is in keeping with the general head-initial characteristics of the language. The other strange characteristics of the subject, its accusative case and the fact that it does not obey the Highest Subject Restriction on resumptive pronouns, can be accounted for assuming this structure, as discussed in following sections.

This proposal finds strong confirmation from Binding Theory. Reciprocals within the predicates of copular clauses may find their antecedents in subject position, as in (55), showing that the subject must be in the c-command relation with the predicate, as is the case in the proposed structure, (54) above.[14] Note further that if the order of subject and predicate is reversed, ungrammaticality results.

(55) *Is cosúil lena chéile iad.*
COP like with each-other them
"They are like each other."

(56) **Is cosúil leofa a chéile.*
COP like with-them each-other
"They are like each other."

The fact that extraction of the subject of copular clauses leaving a gap is ungrammatical, as in (33) above and (57) below, in contrast with verbal clauses, such as (58), which freely allow subject extraction, provides further evidence that the subject of copular clauses is in the Specifier position of IP, following recent proposals by Rizzi (1990).

(57) **Cé$_j$ aL ba dhochtúir* t$_j$*?*
who COMP COP.PAST doctor
"Who was a doctor?"

(58) *Cé$_j$ aL bhris* t$_j$ *an fhuinneog?*
who COMP broke the window
"Who broke the window?"

Rizzi's proposal (Rizzi 1990:31) is that there is a restriction on the proper head government requirement of the Empty Category Principle to the effect that a trace must be head governed within the immediate projection of the governing head i.e. only complements to a potential proper head governor are properly head governed, not Specifiers.

Assuming that Inflection is a potential proper governor, the fact that subject extraction from verbal clauses is free follows from Rizzi's system, as the subject is internal to the complement of I^0 (as in (28) above). On the other hand, the subject of copular clauses occupies the Specifier position of IP and is therefore (following Rizzi) not properly head governed by Inflection. All things being equal, extraction from this position is correctly predicted to be ungrammatical.[15]

[14] Thanks to Jim McCloskey for pointing this out.

[15] While subject extraction from copular clauses seems entirely unproductive, occasional examples do surface in the written language, as below.

an t-uaireadóir aL b' fhiú a lán t.
the watch COMP COP.PAST worth a lot
"the watch which was worth a lot"

Stowell (1985) has proposed that the proper head government requirement of the ECP is further constrained by a requirement that the trace be governed in the *canonical* direction for government, which is parametrically chosen for each language. Now, if both Rizzi's hierarchical notion of strong government and Stowell's linear notion of canonical government are relevant to the ECP then the intermediate status of extraction from copular sentences could be explained. The subject of copular clauses residing in the Specifier of IP is not strongly governed by I^0 but is canonically governed by it. Thanks to Jim McCloskey for pointing this out to me. More work needs to be done to establish the true nature of these examples in the spoken language, however.

2.4 Accusative Subjects

Recall from 1.2 above that the subjects of non-finite clauses and the subjects of small clauses which lack an external governor bear default accusative case. In Chung and McCloskey (1987) this is attributed to the operation of a default Case-assigning rule which assigns Case to the subject of all nonfinite clauses. The presence of this rule in the grammar of Irish accounts for the much wider distribution of small clauses in Irish than in English, under their account.

The effects of this rule can be replicated by assuming that in general Inflection assigns accusative Case, unless it is lexicalized by a verb, in which case it assigns nominative Case (following the general approach of Koopman (1984)). As there is no verb fronting in non-finite clauses, it would be expected that the subject of these clauses would bear accusative case. As for small clauses which lack an external Case-assigner e.g. (50) above, these could be reanalyzed as being small clause complements to a radically empty non-finite Inflection, which assigns accusative Case, as in other nonfinite clauses.[16]

This account predicts that if there are finite clauses in the language lacking verb fronting to Inflection, these clauses should have accusative subjects, as seen in (59) below.

(59)

Inflection	Clause Type	Case of Subject
+FIN, +V	Finite Verbal	NOM
-FIN, -V	Nonfinite Verbal	ACC
+FIN, -V	Nonverbal Finite	ACC
zero, -V	small clauses in isolation	ACC
-FIN, +V	Does not exist	-

Under the analysis proposed here, copular clauses are exactly of this type. They are non-verbal finite clauses and are therefore predicted to have accusative subjects.

2.5 'Small Clause Ellipsis' or IP Ellipsis?

There is an apparent problem for the proposed structure of copular clauses in that it renders the ellipsis facts discussed in 1.3 above anomalous, in that the deletion process would seem to target a non-constituent in copular clauses, as indicated in (61) for example (60) below.

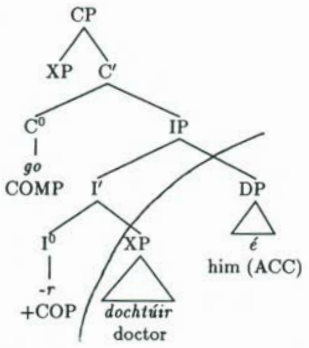
(60) *Dúirt siad gur dochtúir é agus creidim gurb ea.*
siad they COMP+COP doctor him (ACC) and believe-I COMP+COP DUMMY
"They said that he is a doctor and I believe that it is so."

This is problematic because the ellipsis process targets syntactic constituents in other clauses. However, if general I^0 to C^0 movement was a feature of Irish syntax, then this 'Small Clause Ellipsis' process could be reanalyzed as as IP Ellipsis, as indicated in (62) below.[17]

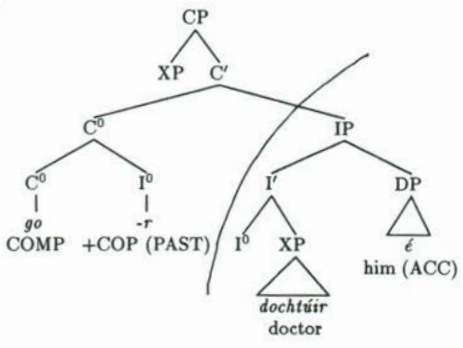
[16] Crucially, however, this Inflection particle could not count as a proper governor, as Chung and McCloskey (1987:197) report that movement of the subject of such clauses leads to an ECP violation. In addition, this nonfinite Inflection particle could not count for minimality purposes, as Chung and McCloskey (1987:193) show that external governors successfully govern the subject such small clauses, making them transparent for the purposes of Binding Theory.

[17] As for verbal clauses, IP ellipsis and Small Clause Ellipsis are notational variants of each other, as the subject is internal to the complement of I^0.

(61)



(62)



There is very strong evidence that verbs and complementizers form a complex head at s-structure in Irish which I take to be a reflex of I^0 to C^0 movement. Firstly, complementizers are marked for the tense distinctions characteristic of Inflectional particles, as discussed in detail in 1.3 above. This would strongly indicate that I^0 and C^0 form a complex head.

In addition there is a clear selection process between complementizers and verbs, operative in the language. There are two forms of the Irish verb, the 'absolutive' and the 'dependent' forms. These are usually homophonous. Occasionally, however, they have different roots. Complementizers are lexically specified as to whether they take the absolutive or dependent form. For example, the negative complementizer used in root clauses, *ní*, selects for the dependent form, as seen in the following example.

(63) a. *Chuaigh sé.*
went.ABS he (NOM)
"He went."

b. *Ní dheachaigh sé.*
NEG.PAST went.DEP he (NOM)
"He did not go"

This selection is not in itself evidence for a s-structure complex head containing the complementizer and verb, as this relationship could simply be mediated by selection of an I^0/V^0 complex by certain C^0 particles. However, it does set the stage for a very strong argument that the verb and complementizers form a complex head. There are clear cases of suppletion in complementizer-verb complexes i.e. the combination of certain verbs with certain complementizers often results in unpredictable forms.

For example, the 'indirect' relative complementizer *aN*, used in resumptive pronoun strategies, selects the dependent form of the verb. The past tense of *aN* is *arL*. However, with the following verbs, there is an unpredictable use of *aN* in the past tense, as seen below.

(64)

Verb		Actual Form	Expected Form
bí	'be'	*aN raibh*	**arL raibh*
déan	'do'	*aN ndearna*	**arL dhearna*
fáigh	'get'	*aN bhfuair*	**arL fhuair*
feic	'see'	*aN bhfaca*	**arL fhaca*

Under the assumption that morphology is the module of grammar which interprets X^0 elements, this seems to argue strongly that the complementizer and verb are in a complex head at s-structure.

I propose that this complex head is formed by head movement of V^0 to I^0 to C^0, a process which is probably motivated by the proclitic nature of complementizers and Inflectional elements. This then allows a

reanalysis of the Small Clause Ellipsis process proposed in McCloskey (1990) as IP ellipsis, which under the proposed structure for copular sentences would apply unproblematically, correctly predicting the deletion of subject and predicate, as in (62) above.

There is one remaining caveat, however. If I^0 to C^0 movement is motivated by purely morphological concerns, as I have suggested above, then the operation of the ellipsis process in responsives becomes problematic.

(65) *Ar bhuail tú an cat? Bhuail.*
Q+PAST hit.PAST you (NOM) the cat hit.PAST
"Did you hit the cat? Yes."

(66) *An dochtúir é? Is ea.*
Q+COP doctor him (ACC) COP DUMMY
"Is he a doctor? Yes."

If the d-structure for the responsive is a simple declarative root clause, then there is no morphological motivation for the I^0 to C^0 movement, as there simply would not be an overt C^0 to trigger such movement. Assuming that McCloskey's analysis of responsives is correct i.e. that responsives are simply the output of the Irish equivalent of VP-ellipsis to a root declarative clause, there seem to be two possibilities for dealing with these data. Either there is I^0 to C^0 movement only in the root clauses from which the responsives are derived, and it is motivated by some principle or there is general (abstract) I^0 to C^0 movement in Irish root clauses. This latter position has been adopted in a number of approaches to Irish clause structure e.g. Stowell (1989b). A resolution of the issue is beyond the scope of this paper, however.

2.6 Highest Subject Restriction

Recall from 1.2 above that copular sentences do not obey the Highest Subject Restriction (henceforth, HSR) on the appearance of resumptive pronouns in unbounded dependencies. The HSR rules out relative clauses such as the following, where the highest subject position is occupied by a resumptive pronoun, either inflectional as in (67), or overt as in (68).

(67) **na daoine a rabhadar breoite*
the people that were-they ill
"the people who were ill"

(68) **an fear a raibh sé breoite*
the man that was he (NOM) ill
"the man who was ill"

As McCloskey (1990) reports, the intuition seems to be that the resumptive cannot be "too close" to its antecedent. Note that examples such as the following where the resumptive is contained within a possessor noun phrase or in a conjoined noun phrase are perfectly grammatical.

(69) *an fear a raibh a mhac tinn*
the man that was his son ill
"the man whose son was ill"

(70) *an fear a raibh sé féin agus Tom i nDoire*
the man that was he (NOM) EMPH and Tom in Derry
"the man who he and Tom were in Derry"

Unlike verbal clauses, resumptive pronouns are freely allowed in the highest subject position of predicational copular clauses and in the rightmost argument position of Identificational copular clauses, as seen in (71) and (72) below.

(71) *an fear ar dochtúir é*
the man COP+COMP doctor him (ACC)
"the man who is a doctor"

(72) *an fear arbh é an dochtúir é*
the man COMP+COP AGR.3SG.MASC the doctor him (ACC)
"the man who is the doctor"

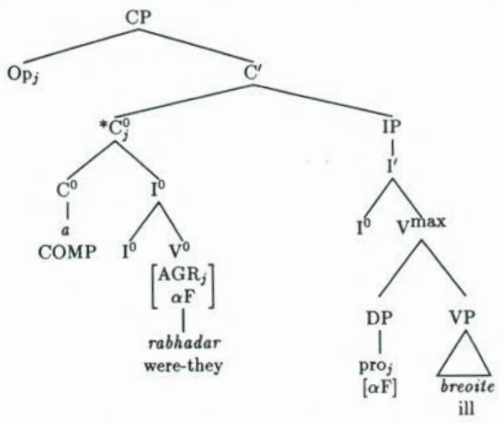
Under the proposed structure for copular clauses, a coherent account of these facts can be provided, making some uncontroversial assumptions about agreement in Irish and by extending the *i*-within-*i* condition to complex heads created by X^0-movement.

I assume, following McCloskey and Hale (1984), that agreement in Irish is the identification of a null pronominal by a governing head. In addition, I make the uncontroversial assumption that the AGR element of the inflecting head bears the index of the null pronominal which it identifies. I claim that it is this co-indexing with the highest subject pronominal which leads to a violation of the *i*-within-*i* condition, (73) below, extended to complex X^0 elements.[18]

(73) $*[_i \ldots \alpha_i \ldots]$

McCloskey (1990) provides convincing evidence that resumptive pronouns are interpreted as syntactic variables and that unbounded dependencies utilizing resumptive pronoun strategies contain a null operator in the Specifier of CP which is coindexed with the resumptive. Adopting this proposal, the mechanism of Spec-Head agreement will ensure that in an unbounded dependency, the index of the operator in Specifier of CP will be realized on the C^0 head. As shown in (74) below, this leads to the C^0 head bearing the same index as the AGR element which it contains. I claim that this results in an *i*-within-*i* violation.

(74)



I also claim that in examples such as (68) where the highest subject is an overt pronominal that the HSR also reduces to the *i*-within-*i* condition extended to complex X^0-heads. There is very strong evidence that subject pronouns in Irish are verbal enclitics, as discussed in Chung and McCloskey (1987:226–228). For example, interjective elements which may normally intervene between the verb and a non-pronominal subject may not do so in the case of a subject pronoun.

[18] Chomsky (1986b:174)

(75) *Bhí, cinnte, nuaíocht aige*
was certainly news at-him
"He certainly had news."

(76) **Bhí, cinnte, siad aige.*
was certainly they at-him
"He certainly had them."

There is also a body of phonological evidence, which I will not detail here that clearly shows the enclitic nature of subject pronouns e.g. the verb-subject complex acts as a unit with respect to stress assignment in the same way that an inflected verb does.

I propose that this enclisis is a reflex of head movement of subject pronouns (D^0s following Abney (1987)) into the verbal complex, a process which is motivated by the clitic-like morphological characteristics of pronouns in Irish. This clitic-like nature is evident in the fact that pronouns cannot generally occur in syntactic isolation in Irish e.g. as a response to a constituent question. An emphatic form is required in such environments, as seen in example (77) below.

(77) *Cé a bhris an cupán? (*Mé/Mise)*
who comp broke the cup 1SG/1SG.EMPH
"Who broke the cup? Me."

Chung and McCloskey claim that subject pronouns are simply phonological enclitics and make no claims as to whether this relationship between the verb and the pronoun should be mediated by some syntactic relationship. However, I propose that this relationship is indeed syntactic and is best captured by means of head movement of D^0 to V^0. This approach receives strong confirmation from the fact that subject pronouns in the left conjunct of a co-ordinate structure do not become enclitic to the verb. Instead, a strengthening particle must be used to support the pronoun, as seen below in (79).

(78) *Bhí mé féin agus Tom i nDoire.*
was 1SG EMPH and Tom in Derry
"Myself and Tom were in Derry"

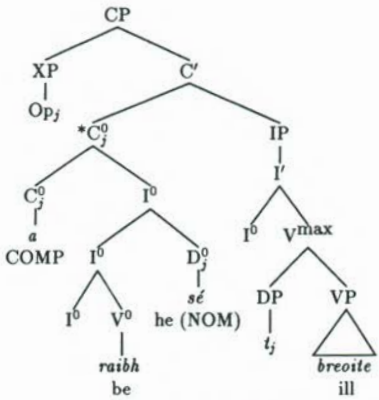
(79) **Bhí mé agus Tom i nDoire.*
was 1SG and Tom in Derry
"Myself and Tom were in Derry."

Under this proposal where subject pronouns are syntactic enclitics, this would be entirely expected, as movement out of the conjoined subject would violate the Co-ordinate Structure Constraint.[19]

Therefore, in the case of (2) where there is an overt pronominal subject, the *i*-within-*i* condition is violated in the same way as with inflectional subjects, as seen below.

[19]Thanks to Judith Aissen for useful discussion about this issue. The proposal of Head Movement of D^0 to V^0 is not actually crucial to the account of resumptive pronoun facts at issue here. All that is necessary is that the V^0 and the clitic-like subject D^0 become a single syntactic head by some mechanism.

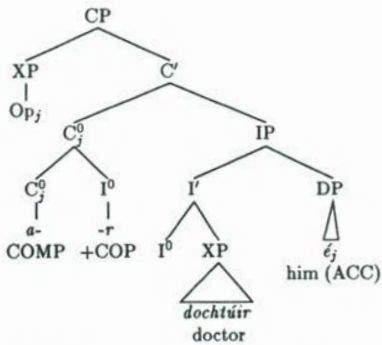
(80)



This approach to the HSR draws exactly the right distinctions in the data. Resumptive pronouns will be freely allowed in possessor and conjunct noun phrases, as movement of the resumptive D^0 out of possessor noun phrases would be excluded by whatever principle excludes movement from nominals in Irish in general while movement from a conjoined NP would violate the Co-ordinate Structure Constraint. Therefore, (69) and (70) above are correctly predicted to be grammatical.

This approach also allows resumptive pronouns to be freely generated in the subject position of copular sentences, simply because the subject of copular sentences is clause-final and is not in the same close morphological relationship to the complex head containing C^0 and I^0 as in verbal clauses, as seen in (81) below.

(81)



Identificational examples such as (72) are also predicted to be grammatical under this approach. In these clauses, the AGR element in the copular Inflection always bears the index of the complement of the copula, the leftmost noun phrase. Therefore, resumptive pronouns will always be allowed in the Specifier of IP in Identificational clauses.[20]

[20] This account predicts that if the leftmost noun phrase in an Identificational clause were to be occupied by a resumptive pronoun, the result would be ungrammatical, because the index of the resumptive would end up on the AGR element in the complex head consisting of the complementizer and copular Inflectional element. Such sentences are in fact ungrammatical.

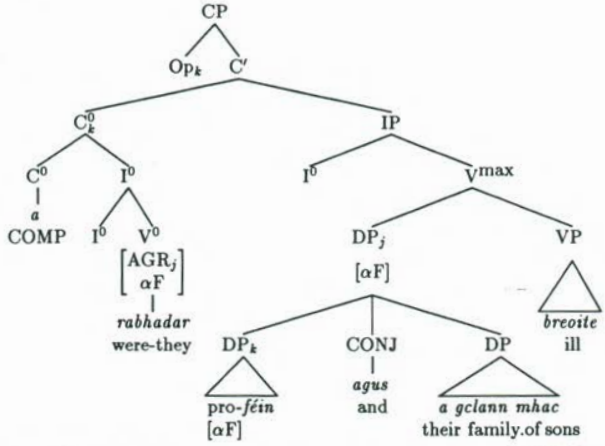
Therefore, the account proposed here which takes the HSR to be a reflex of the *i*-within-*i* condition applied to complex X^0-heads, is empirically very successful. This account depends on two uncontroversial assumptions: (i) that AGR bears the index of the null pronominal which it identifies and (ii) that subject pronouns in Irish are syntactic rather than purely phonological enclitics.

There is one remaining caveat that deserves some explication, however. Irish evidences the phenomenon of left-conjunct agreement, as discussed in McCloskey (1986), (1988). Now, a null resumptive pronoun in the leftmost conjunct of a co-ordinate noun phrase in the highest subject position of an unbounded dependency is grammatical, as in (82) below.[21]

(82) *na daoine a rabhdar* [pro-*féin* *agus a gclann mhac*] *breoite*
the people that were-they EMPH and their family.of sons ill
"the people who they and their sons were sick"

This fact is correctly predicted by the proposed analysis, assuming left-conjunct agreement is the result of the realization of all the features of the leftmost conjunct on the mother node of the co-ordination structure.[22] Agreement in these structures is then triggered by the mother node which, by the *i*-within-*i* condition, bears a distinct index from the null pronominal in the left conjunct position as illustrated in (83) below.

(83)



This results in the index of the mother noun phrase being realized in the AGR element in the complex head consisting of C^0, I^0 and V^0, crucially not the index of the pronoun in the left conjunct position. Therefore, no *i*-within-*i* violation can occur within the complex head.

ʔʷan fear arbh eisean an dochtúir
the man COMP+COP him(emph) the doctor
"the man who was the doctor"

However, this needs to be established with native speakers.

[21] This is adapted from McCloskey (1986:260, fn 10). McCloskey uses this fact to argue against a 'conjunct union' (Hale 1975; Aissen 1985) approach to left-conjunct agreement in Irish. Such an approach, in which the left conjunct is raised out of the conjunct to the matrix clause, would presumably predict that examples such as (81) would be ungrammatical, on a par with (67) above.

[22] The approach taken in McCloskey (1986) is that government is defined in such a way as to govern the leftmost conjunct rather than the mother node. This has interesting consequences for Case-assignment in co-ordinate structures. However, a comparison of the approach of McCloskey (1986) to the one sketched here is beyond the scope of this paper.

2.7 Agreement in Copular Clauses

The agreement process evidenced in Identificational copular clauses is remarkable in three respects. Firstly, it is determined by an overt noun phrase. This is unusual as agreement in Irish seems to be overwhelmingly determined by the identification of null pronominal elements, as reported in McCloskey and Hale (1984). Secondly, this agreement process is only triggered by the noun phrase immediately to the right of the copula. Thirdly, agreement is present only in Identificational clauses and is completely absent in Predicational clauses with nominal predicates.

I claim that these three facts are accounted for under the proposed structure for copular sentences. Firstly, other instances of agreement with overt nominals exist in the language. I claim that agreement in copular clauses reduces to this attested agreement process. Secondly, the fact that agreement is triggered only by the noun phrase to the immediate right of the copula follows from the proposed structure for copular clauses, as this noun phrase is the only one in the relevant relationship with the copular Inflection. Thirdly, assuming the DP hypothesis of Abney (1987), I conclude that the complement of the copula in Identificational clauses is a DP, while the complement of the copula in Predicational clauses is a NP. Assuming that agreement is determined only by DPs and not NPs, the lack of agreement in Predicational copular clauses is expected.

2.7.1 Agreement in Irish

I follow McCloskey and Hale (1984) in assuming that agreement in Irish (in the general case) is the identification of a null pronominal by the realization of its person and number features on a governing head i.e. V^0 and P^0 in (82) and (84) below and D^0 in the case of pronominal possessors, (85) below.

(84) *Bhuaileadar* pro *an cat.*
hit.PAST.3.PL the cat
"They hit the cat."

(85) *liom* pro
with.1.SG
"with me"

(86) *mo theach* pro
1.SG house
"my house"

In general, overt noun phrases, whether pronominal or not, do not trigger agreement. In general, inflected forms cannot be used with an overt nominal.[23]

(87) a. *cuirim* **cuirim mé*
put.1.SG put 1.SG

b. *leofa* **leofa na fir*
with.3PL with.3.PL the men

However, overt noun phrases do occasionally trigger agreement in the language, as reported by McCloskey and Hale (1984, 528-31).

For example, in certain Connacht dialects the normally null pronominal possessor may be overt, as below.

(88) *a* *muirín sise*
3SG.FEM family she
"her family"

[23] This has prompted analyses of Irish agreement as being a reflex of Incorporation of a subject pronoun e.g. Baker and Hale (1988). However, as McCloskey and Hale (1984:528) note, this approach to agreement cannot account for these cases of agreement with overt lexical items. The incorporation account also faces a serious problem in the existence of left-conjunct agreement structures in Irish, as discussed in the previous sections. Incorporation from a co-ordinate noun phrase would violate the Co-ordinate Structure Constraint.

(89) *a chuid seisean*
3SG.MASC portion his
"his portion"

(90) *ar nglór muide*
1PL voice our
"our voice"

In addition, in certain Munster dialects such as that of West Muskerry, for example, verbs in the third person plural form may take an overt (pronominal or nonpronominal) subject, as in the following examples.

(91) *Táid na ba ag innilt.*
be.3PL the cows grazing
"The cows are grazing."

(92) *Táid siad ag innilt.*
be.3PL they grazing
"They are grazing."

These facts show that agreement with overt nominals should not be absent from the grammar of Irish entirely. While I have nothing interesting to say about this process, it does seem reasonable to claim that the agreement process seen in copular clauses is simply another instance of agreement determined by overt nominals, as in (88)–(92) above.[24]

The second remarkable fact about agreement in copular clauses is the fact that it is determined by the noun phrase to the immediate right of the copula only (its complement), and never by the rightmost nominal (its Specifier), as is clear from examples (4)–(6) above and the ungrammaticality of (93), below.

(93) *Is iad na sagairt an trioblóid*
COP AGR.3PL the priests the trouble
"The priests are the trouble."

(94) **Is iad an trioblóid na sagairt*
COP AGR.3PL the trouble the priests
"The trouble is the priests."

This follows directly from the proposed structure for copular sentences, if it is assumed that government is defined in terms of strict c-command i.e. a node α c-commands a node β iff the branching node most immediately dominates α also dominates β, and neither α nor β dominates the other (Reinhart 1976). Under this definition of c-command, heads will only govern their complements, not their Specifiers in the relevant sense. The copular Inflection c-commands only its complement not its Specifier and therefore only agrees with the Specifier. This assumption is compatible with the other instances of agreement seen in (84)–(86), as in all cases, agreement is between a governing head and a complement.[25]

[24] Notably, however overt pronominals do not determine agreement in copular sentences. That is, there are no copular analogues to (91) above, and sentences such as the following are ruled out.

**Is iad iadsan mo chuid mhac*
COP AGR.3PL them my portion sons
"They are my sons."

[25] The syntax of possessor constructions in Irish is not well understood. However, it seems that the possessor NP in Irish does not appear in the Specifier of DP but is actually internal to the complement of D^0. For example, note that the possessor noun phrase must appear immediately to the right of the possessee in possessor constructions and can never appear in the rightmost position, as seen below. (Thanks to Jim McCloskey for pointing this out.) This would be accounted for if the possessor were internal to the complement of D^0.

**eagla na ndaoine roimh na saighdiúirí*
fear the people before the soldiers
"the peoples' fear of the soldiers"

2.7.2 DP-Hypothesis

The third remarkable characteristic of this agreement process, is that it is absent in Predicational clauses. Adopting the DP hypothesis of Abney (1987) where determiners are functional categories of the type D^0 which take common noun phrase (NP) complements, it can be seen that those elements of nominal structure predicted to occur in the D-projection: determiners; genitive clitics and quantifiers, are present in Identificational copular sentences.[26] It is also clear that these elements systematically fail to turn up in the nominal predicates of Predicational copular clauses. Therefore, I claim that the complement of the copular I^0 in Identificational clauses is a DP, while the complement of the copula in Predicational clauses is uniformly a NP. Consider the following examples of Identificational copular clauses.

(95) *Is iad na sagairt an trioblóid.*
COP AGR.3PL the priests the trouble
"The priests are the trouble."

(96) *Is é mo theach an ceann is mó.*
COP AGR.3SG.MASC my house the one biggest
"My house is the biggest."

(97) *Is í Máire mo dheirfiúir.*
COP AGR.3SG.FEM Máire my sister
"Máire is my sister."

The noun phrase complements of the copula in these examples are familiar cases of DPs: a definite article with a NP complement in (94); a possessor D^0 in (95) and a proper name in (96). Possessor constructions with overt noun phrase possessors do not have an overt determiner as seen in (97). These must be analyzed as having a null D^0 head.[27]

(98) *Is é mac Sheáin an duine is fearr.*
COP AGR.3SG.MASC son Seán (GEN) the person best
"Séan's son is the best."

Abney also proposes that quantifiers such as *every* are D^0s which take a NP complement. There are clear examples of such DPs in Identificational copular clauses, such as the following, with the quantifier *gach* 'every/all'.[28]

(99) *B' é gach duine díofa an crann fíge*
COP.PAST AGR.3SG.MASC every person of-them the fig tree
"Every one of them was the fig tree"

Therefore, it seems reasonable to conclude that the complement of I^0 in these Identificational clauses is a DP.

In the Predicational copular clauses, it is equally clear that the complement of I^0 is consistent with what Abney (1987) terms a NP i.e. that which can appear as a complement to a D^0, e.g. common noun phrases

**eagla roimh na saighdiúirí na ndaoine*
fear before the soldiers the people
"the people's fear of the soldiers"

[26] The status of the definite articles and the genitive clitics as functional categories in Irish is much clearer than in English. They are completely stressless, even when the noun phrase is under emphasis.

[27] The reason why this D^0 must be null is an interesting question. Curiously, it is overt when a demonstrative intervenes between the possessor and the possessee, as seen below.

an mac seo Sheáin
the son dem Seán (GEN)
"this son of Seán's"

[28] This example is a modified form of one from taken from Ó Cadhlaigh (1940:161).

and noun phrases with cardinal modifiers, as shown by the following examples.[29]

(100) *Is duine maith é.*
COP person good him (ACC)
"He is a good person."

(101) *Is dhá rud éagsúla iad.*
COP two things separate them (ACC)
"They are two separate things."

Those elements which clearly belong to the D^0 class, articles, genitive clitics, and quantifiers fail to show up in the predicates of Predicational copular clauses.

Therefore, I conclude that the nominal complement of the copula in Predicational copular clauses is a NP and not a DP. Assuming that agreement is determined by DPs and not NPs, we have a ready account of the lack of agreement in Predicational copular clauses.[30]

We have seen so far that by assuming a structure like (54) for copular clauses we can derive an account of most of their salient syntactic characteristics: their subject-final word order, the accusative Case of the subject and the unusual behavior of the subject with respect to extraction. However, we must now ask what mechanisms license this structure. Addressing this question turns out to yield an account of the remaining characteristic of copular clauses - the fact that the complement of I^0 in (54) must be a predicative phrase denoting an individual-level predicate.

2.8 Stage and Individual Level Predicates

Kratzer (1989), working from initial observations by Diesing (1989), has proposed to characterize the contrast between individual-level and stage-level predicates (originally proposed in Carlson (1977)), in terms of argument structure.[31]

Following Williams (1981), Kratzer assumes that the argument structure of lexical items consists of a list of θ-roles, such as experiencer, theme, agent, goal etc. but further proposes that predicates may also have an extra thematic role, a Davidsonian argument which is a role for location in space and time. Kratzer claims that the basic contrast between stage and individual-level predicates is that the former but not the latter possess a Davidsonian argument. Krazter further claims that the Davidsonian argument (if present) is always the external argument of the predicate.

> If a predicate has a Davidsonian argument, it will always be its external argument. If a predicate has no Davidsonian argument, the agent argument will be its external argument. (Kratzer 1989:15)

She also assumes the argument linking principle of Williams (1981).

[29] It is worth noting at this point that occasionally proper names when they are not being used in a deictic sense can be used in the predicate of a Predicational copular sentence, as in the following example.

An Séadna t'ainm?
Q+COP Séadna your.name
"Is Séadna your name?"

This presumably indicates that proper names are ambiguous between being NPs and being DPs.

[30] This seems like a reasonable assumption to make, given the fact that agreement in all other contexts in Irish is determined by either null or overt pronominals (which are analyzed by Abney (1987) as being intransitive D^0s) or by definite noun phrases, such as in example (90) above.

[31] Kratzer differs in her definition of the contrast between individual-level and stage-level predicates from Carlson (1977), who originally proposed the distinction. In Carlson's system, stage-level predicates and individual-level predicates are properties of different entities and types. Individuals are instantiations of kinds in his theory while stages realize individuals at certain points in time and space.

Argument Linking

In deep structure, all arguments except the external argument are realized within the maximal projection of their predicate.

These assumptions result in the obligatory realization of the subject of all stage-level predicates inside the maximal projection of the predicate at deep structure. This is because the Davidsonian argument will always be the external argument in Kratzer's system. This phrase structural encoding of stage-level predicates allows an account of the phenomenon of Quantifier Split in German which is possible only with the subjects of stage-level predicates. (Kratzer 1989:12)

It was determined in 1 above that copular sentences in Irish admit only individual-level predicates. This requirement is unusually strong in that stage-level readings cannot even be forced even under conditions where such a reading would normally be implicated, such as the past tense.

The proposed structure for Irish copular clauses is licensed by the selectional requirements of the copular Inflection which crucially requires an unsaturated predicational complement resulting in the projection of the subject into the Specifier of IP. This selectional property distinguishes the copular from the verbal clauses of the language. The Inflection particle which appears in verbal clauses selects for a saturated complement, a verbal small clause, while the copular Inflection selects for an unsaturated complement, a predicative XP.

Now assuming Kratzer's proposal that the subject of a stage-level predicate must be realized inside the maximal projection of the predicate, this selectional property of the copular Inflection yields an account of the fact that stage-level readings fail to occur in copular sentences. A stage level predicate in a copular sentence would necessarily (following Krazter) realize its subject inside the maximal projection of the predicate, creating a saturated complement to the copular Inflection, in effect a small clause. This of course violates the selectional requirements of the copula and therefore such predicates are excluded from copular sentences.[32]

3 Conclusion

In conclusion, the proposed structure for Irish copular sentences correctly predicts the characteristics which distinguish copular clauses from other clauses in the language: the subject-final word order; the impossibility of subject extraction; the accusative Case of the subject and the fact that the Highest Subject Restriction is not respected.

As noted above, this analysis has serious implications for any theory of functional heads and their properties in that the Irish copula, which is clearly functional by all morphological criteria and of the Inflectional class, displays syntactic characteristics which are usually assumed to be uncharacteristic of functional heads. Particularly, it is shown in this paper that the common assumption that functional heads admit only one category of complement cannot be correct. The copular Inflection admits a wide categorial range in its complement. In addition, this analysis is not obviously reconcilable with any theory which denies that functional heads do not have selectional properties e.g. Grimshaw (1991). This analysis rests on a selectional difference between two members of the same functional category, I^0.

The general program initiated in Stowell (1981) which seeks to replace phrase structure rules with general principles of X'-Theory seems validated under this analysis. In particular, the idea that S is the maximal projection of Inflection, as proposed in Chomsky (1986a), seems reinforced, in that a unified analysis of the syntax of copular clauses and verbal clauses is possible, despite their radically different syntax. The unusual syntactic characteristics of copular clauses follow mostly from the fact that only they make use of the full expansion of IP, projecting the subject into the Specifier position.

[32] This account is incompatible with McCloskey's (1990) claim that the complement of Inflection (in verbal clauses) is a small clause which is the maximal projection of V^0 (cf. (28) above). If this were the case, then individual-level verbs such as *know* would be predicted to have the same syntax as copular clauses, which of course they do not. For this account to be tenable then, it has to be assumed that the complement of Inflection in verbal clauses is a small clause which is *not* the maximal projection of V^0.

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Movement of P^0 in the English Verb-Particle Construction*

Peter Svenonius

1 Introduction

In the verb-particle construction, a verb selects a particle (which I assume, following Emonds (1972), is of the category P) that appears in apparently free order with an NP. For example, the verb *look* can be combined with the particle *up*, as in (1):

(1) a. Fido looked the number up.
b. Fido looked up the number.

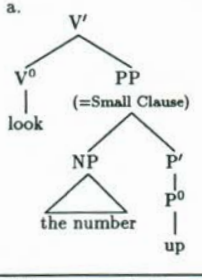
Many different structures have been proposed for sentences of this type. Since Chomsky (1957), the standard analysis has taken (1b) to be basic, involving a complex $[_{V^0}\ V^0\ P^0]$ at D-structure. (1a) has in the generative literature usually been derived through a rich transformational apparatus (e.g. Chomsky 1957, Ross 1967, Fraser 1976).

Current conceptions of syntactic theory adopt a much more restrictive notion of movement, and under GB assumptions it is by no means obvious which (if either) of the two sentences is to be regarded as more closely representing the D-structure order. It is even less obvious what that D-structure is and how the two constructions are related. I will proceed with the assumption that there is a D-structure common to both, and that the non-basic form is derived by movement of either P or NP.

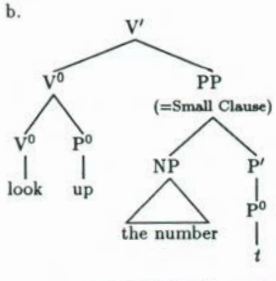
Kayne (1984b) argues based on theory-internal considerations that the particle in (1a) is the P head of a Small Clause (in the sense of Stowell 1983). Under his formulation, (1b) is derived by rightward movement of NP (he suggests that this is a case of "Heavy NP Shift"). In section 2, I argue based on various syntactic evidence that Kayne is correct in proposing that the verb in (1a) selects a Small Clause complement headed by P. In section 3, I propose that (1b) is derived not by NP movement but by head movement of P^0 to V^0.

The structures I propose for (1) are shown in (2) below. (2a) is essentially identical to Kayne's (1984b) structure. I assume, following Stowell (1983), that the small clause is a bar-level 2 projection of its head (in this case P), and that the subject of the small clause is in the specifier position.

(2) a.



b.



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(2b) is derived not by NP movement but by adjunction of P^0 to V^0, subject to the restrictions on head movement as formulated in Baker (1988) and Rizzi (1990). The head-movement account explains the strict adjacency in these constructions of V^0 and P^0; nothing except verbal morphology can appear between them. In addition, it accounts for a wide range of other syntactic patterns, which I discuss in section 3.

2 The D-Structure

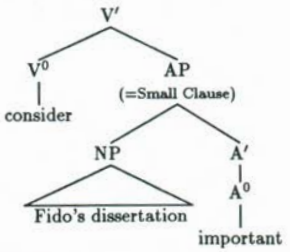
Kayne (1984b) argues for the D-structure given in (2a) for the particle constructions. He rejects the classical $[_{V^0}\ V^0\ P^0]$ analysis (of Chomsky 1957) on a variety of grounds; I discuss that analysis in detail in section 2.4. Kayne also rejects other possible structures for several reasons, many of which are theory-internal. For example, he adopts a framework that does not allow triple (or greater) branching structures (Kayne 1984a), eliminating that possibility; he also supposes that particles cannot be generated as sister to V′ due to restrictions on argument structure.[1] He then supports his conclusion that (2a) is the correct structure by showing that the particle construction patterns after other small clause constructions in a number of ways, i.e., it resists nominalization, it does not undergo A-bar movement, extraction of a subconstituent of its subject is bad, etc. Although no single one of these of these arguments is compelling, the combined weight of these facts suggests that Kayne's original insight was correct. In this paper, I develop further evidence for the notion that verb-particle constructions involve small clauses.

I will briefly summarize the syntactic properties of small clauses, outlining my theoretical assumptions, before moving on to provide a number of syntactic tests that indicate that the structure in (2a) is the correct D-structure for (1a).

2.1 Small Clauses

I assume, following Stowell (1983), that a small clause is a bar-level 2 projection of a lexical head, and that the subject of a small clause is located in the specifier position. All lexical categories may form small clauses. An example of an AP small clause is given in (3).

(3) Felix considers Fido's dissertation important.



Stowell (1986) shows that although the subject of the small clause shows many characteristics associated with direct objects, these are actually characteristics of government by V. For example, small clause subjects take accusative Case in active sentences, move to subject position under passivization, may be reflexive pronouns, and can't be the target of control (PRO). All of this follows under government by V (government is defined in section 2.2).

In addition, Stowell adduces much evidence in support of the constituency of small clauses. He shows that the small clause acts as a Complete Functional Complex (CFC) in the sense of Chomsky (1986) for purposes of defining the binding category for anaphors and pronouns (Stowell 1986:16ff.), showing that it

[1] Kayne (1984b:101 (referring to Chomsky 1981)), claims specifically that a sister to V′ must be "thematically autonomous". He suggests that particles do not satisfy this criterion, but does not elaborate.

must have a subject and a predicate. In addition, the small clause subject displays Subject Condition effects (this will be discussed in section 4).

Examples of small clauses in each of the major lexical categories are given in (4)–(7). The small clauses are marked with brackets.

(4) AP small clauses:
a. A gag kept [the guard quiet].
b. The blast left [the safe undamaged].

(5) VP small clauses:
a. Ian made [the cop loosen his grip].
b. The cop let [his gun drop].

(6) NP small clauses:
a. The fools elected [Bush President].
b. Felix considers [Fido's dissertation a real masterpiece].

(7) PP small clauses (Stowell 1983):
a. I want [that man off my ship].
b. The captain allowed [him into the control room].

The examples of PP small clauses in (7) are from Stowell (1983). In my analysis, these are distinct from the particle constructions only in that the P head of the small clauses in (7) are transitive, and assign Case to an NP complement.

The primary argument against Stowell's analysis has been that the small clause cannot pass standard constituency tests, such as clefting and preposing (see Williams 1983). Stowell argues that although NP may receive Case by virtue of being in a chain with its trace, the subject of a moved small clause cannot receive Case from the trace of the small clause; A-bar movement of small clauses with overt subjects will always be impossible in English.

(8a) shows that it is impossible to construct a cleft of a small clause, and (8b) shows that the small clause cannot topicalize.

(8) a. *It was [the safe undamaged] that the blast left __.
b. *[Bush President], the fools elected __.

The same pattern is observed with the particle constructions, as shown in (9). This is expected, if the particle constructions involve small clauses.

(9) a. *It was [the formula up] that Gretchen looked __.
b. *[The article out], Dirk cut __.

I follow Stowell in assuming that this is a function of Case assignment. In languages like Irish, where there are other options for satisfying the Case Filter, small clauses can be shown to pass various constituency tests, appearing as subjects, undergoing A-bar movement, etc. (see Chung & McCloskey 1987).

The main point of this subsection has been to establish that traditional constituency tests cannot be used to rule out the possibility that the NP and P of the verb-particle construction is a constituent. If small clauses exist at all (as there is reason to believe they do), then some constituents do not pass "constituency tests."

2.2 Movement of the Small Clause Subject

The subject of the small clause is permitted to move. Some examples of A-bar movement of small clause subjects are given in (10).

(10) a. What the blast left [__ undamaged] was the safe.
b. Bush, the fools elected [__ President].

Again, the NP in the particle constructions shows the same behavior, as shown in (11).

(11) a. What Gretchen looked [__ up] was the formula.
b. The article, Dirk cut [__ out].

The trace of the small clause subject, then, is able to satisfy the ECP. For the purposes of this paper, I adopt the "conjunctive" formulation of the ECP developed in the first two chapters of Rizzi (1990), given below.

(12) **Empty Category Principle** (Rizzi 1990:32)
A nonpronominal empty category must be
a. properly head governed (Formal Licensing), and
b. theta-governed or antecedent-governed (Identification).

Each of these concepts will be outlined below; see Rizzi (1990) for more discussion. The subject of the small clause is head governed by V under the definition given in (13) below, adapted from Rizzi (1990:6).

(13) (i) **Government**: X governs Y iff
a. X m-commands Y[2]
b. no barrier intervenes
c. Relativized Minimality is respected
(ii) **Head Government**: X head-governs Y iff
a. X governs Y and
b. X $\in$ A, N, P, V, I[3]

Barriers are discussed more thoroughly in section 4, but for the present purposes it is enough to assume that any phrase that is selected as a complement is transparent, that is, only phrases that are adjuncts or specifiers are barriers.[4] The VP, selected by I, and the small clause itself, selected by V, are never barriers.

Many of the effects attributed to barriers by Chomsky (1986) are due instead in Rizzi's (1990) framework to Relativized Minimality, which states, roughly, that in a structure [X ...Z ...Y], if Z is a potential α-governor for Y, it will block only α-government of Y, where α ranges over A, A-bar, and head.

(14) **Relativized Minimality**: X α-governs Y only if there is no Z such that
a. Z is a typical potential α-governor for Y,
b. Z c-commands Y and does not c-command X.[5]

This entails that a head Z will block government of its complement by a higher head X, but will not block government of its specifier. This is crucial for the government of the small clause subject by V. Note that as government is defined under m-command, a head still governs its specifier. This means that the small clause subject in a structure like (2a) is governed by both V and P.[6]

Proper head government is a more restrictive form of head government; the precise formulation is a matter of debate. The main question for present purposes is whether a head can properly govern its specifier. Baker (1988:39), for example, assumes that it can; Rizzi (1990:30) assumes not. I tentatively accept the latter

[2] X m-commands Y iff the first maximal projection dominating X dominates Y as well. Rizzi assumes also that neither X dominates Y nor vice-versa, but it is likely that this clause can be dispensed with (see Barker and Pullum 1989).

[3] Rizzi's set is A, N, P, V, Agr, T; for purposes of this paper, this specification is equivalent to that given in (13ii).

[4] Rizzi (pg. 111, citing forthcoming work by Cinque) states that a phrase is a barrier to government iff it is not directly selected by a head "nondistinct from [+V]", i.e. not [-V]. This specification includes V, A, I, and C but predicts that complements to N and P will be barriers.

[5] X c-commands Y iff neither X dominates Y nor vice-versa, and the first projection dominating X dominates Y as well (Rizzi 1990:111). Note that under this definition there is no requirement that the relevant projection branch; this means, e.g. a head will never c-command its specifier, assuming there is no pruning convention.

[6] An alternative proposal is considered by Rizzi in a footnote (fn. 4, pg 112); there he suggests Minimality be defined for lexical heads in terms of m-command, causing the small clause head to block government of its specifier by V. Case-assignment of the subject by V is then not possible unless small clauses are headed by a functional category, e.g. Agr. I reject this possibility, partly on the grounds that if all small clauses are AgrPs, there is no way for a verb to select a particular class of small clause. I therefore retain the definition of Minimality in terms of c-command, for all categories.

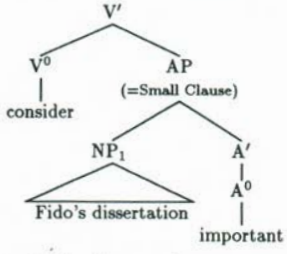
position, formulated as in (15).

(15) **Proper Head Government**: X properly head-governs Y iff
  a. X head-governs Y
  b. X c-commands Y[7]

The formulation of proper head-government in terms of c-command requires that there be no nodes dominating X which do not also dominate Y. This contrasts with m-command in (13) in which only maximal projections are relevant (see Chomsky (1986:8) for discussion).

The verb *consider* in (3), repeated here as (16), will be seen to properly head-govern the subject of the small clause. The A^0 *important*, however, does not, as it only m-commands and does not c-command its specifier.

(16) Felix considers Fido's dissertation important.



As indicated in the diagram, the verb θ-marks the small clause, rendering it transparent to government; this is crucial, as the small clause subject is Case-marked by the governing verb. NP_1, the small clause subject, is θ-marked by the small clause head. This situation is similar to that of the Exceptional Case Marking constructions, where the verb assigns Case to the subject of its complement (see Chomsky 1981).

The second clause of the ECP, the **Identification Condition** given in (12b), requires either antecedent government or theta government. Theta government is defined as *government by a theta-marking head*, stated formally in (17); antecedent government is different from head government (defined in (13)) in that it requires c-command rather than m-command. Antecedent government is defined in (18).

(17) **Theta Government**: X theta-governs Y iff
  a. X governs Y
  b. X θ-marks Y

(18) **Antecedent Government**: X antecedent governs Y iff
  a. X governs Y
  b. X c-commands Y
  c. X and Y are coindexed

V satisfies the proper head government requirement for the small clause subject, as noted. However, as V is not the θ-assigner for the subject, it cannot theta-govern it. P theta-governs its specifier, assuming the definition given in (17), as it θ-marks it and governs it.[8]

[7] Rizzi requires that proper head government be "within the immediate projection of the head", i.e. government by X^0 within X′ (pg. 30); this excludes proper government of the specifier as in (15b). In addition, restriction of proper government to the first projection of a head also means that a moved head that c-commands the specifier of the phrase that it heads will still not properly govern that specifier, since the specifier is still not within its immediate projection. This prevents the proper functioning of the Government Transparency Corollary of Baker (1988), which is important in section 4.

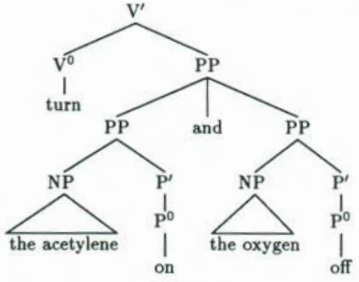
[8] As noted, I assume that the specifier is governed by both P and V. It is properly head-governed by V, and theta-governed by P, but not vice-versa. Chomsky (1986:20–21) assumes that the small clause head is unable to theta-govern its specifier, and provides two alternatives: (i) Case-marking satisfies theta-government, or (ii) the subject may adjoin to VP to antecedent-govern

2.3 Coordination

The impossibility of A-bar movement of the small clause causes it to fail most of the classic constituency tests. This has made it difficult to test for the constituency of the NP-P sequence.

One constituency test that does not rely on A-bar movement is coordination. There are many problems with using coordination as a constituency test, since many sequences of non-constituents can be found in apparent coordinate structures. However, I assume that such constructions of apparent coordination of non-constituents are the result of the interference from such processes as gapping and right node raising. Once such interference is controlled for, only constituents can be coordinated. The small clause analysis predicts that coordination of small clauses should be permitted, and in fact it is, as seen in (19).

(19) Pauline turned [the acetylene on] and [the oxygen off].



Some additional examples are given in (20).

(20) a. The storm windows keep [the cold out] and [the heat in].
b. Try to hold [your hands up] and [your elbows down].
c. Bill switched [the TV on] and [the light off].

If the bracketed sequences in (20) did not represent constituents, coordination would be impossible. It might be suggested that the sentences in (20) are derived by coordination of VP or V′ with deletion of the verb by Gapping, a deletion process that leaves two constituents in the second half of a conjunct (Hankamer 1973). However, it can be demonstrated that Gapping is not at work in (20).

That gapping cannot leave three constituents is shown by the contrast between (21a) and (21b) on the one hand, where the deletion of *eats* is permitted, and (21c) on the other, where deletion leaves three constituents (cf. Jackendoff 1977).

(21) a. Max eats with chopsticks, and Albert with a fork.
b. Max eats lasagna, and Albert chop suey.
c. *Max eats lasagna with chopsticks, and Albert chop suey with a fork.

If (20a-c) are derived by gapping, then adding another constituent to each half of the coordinate structure should result in ungrammaticality; however, as (22) shows, this is not the case.

(22) a. Turn the oxygen off when I say to and the acetylene on a moment later.
b. Turn the oxygen off with your knee and the acetylene on with your elbow.

The temporal phrases in (22a) and the instrumental PPs in (22b) must be outside the small clause (presumably adjoined to V′); thus (22a) and (22b) do not involve coordination of small clauses but of VPs or V′s, with the verb in the second half of the conjunct (*turn*) deleted by Gapping. This shows that [*the oxygen off*] is a single constituent; if [*the oxygen*] were one and [*off*] another, (22) would contain a three-constituent

its trace before moving on.

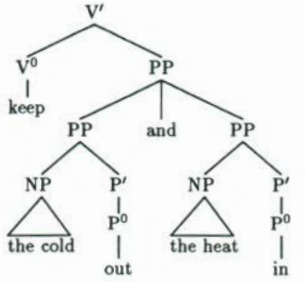
remnant in the second half of the coordinated structure.

Although each of the above examples involves particle verbs that normally allow free order between NP and P, the other order (V-P-NP) is quite impossible in the coordinate structure:

(23) a. *Pauline turned on the acetylene and off the oxygen.
b. *The storm windows keep out the cold and in the heat.
c. *Try to hold up your hands and down your elbows.

The contrast between (20) and (23) is striking. This is fully expected, given the structure in (19). Adjunction of P to V will be impossible, as the Coordinate Structure Constraint (Ross 1967:89) requires movement out of both conjuncts if there is movement out of either one, and there is only one verb to adjoin to. This is diagrammed in (24).

(24)



The only time adjunction of P to V should be licit is in "across-the-board" movement (Williams 1978), which will be licensed when the particle in both halves of the coordinate structure is identical, as shown in (25).

(25) a. Pauline turned [the acetylene off] and [the oxygen off].
b. Pauline turned off [the acetylene __] and [the oxygen __].

In (25b), across-the-board movement has applied to both instances of *off*. However, this structure gives a string identical to one in which a coordinate NP appears, e.g. as in (26).

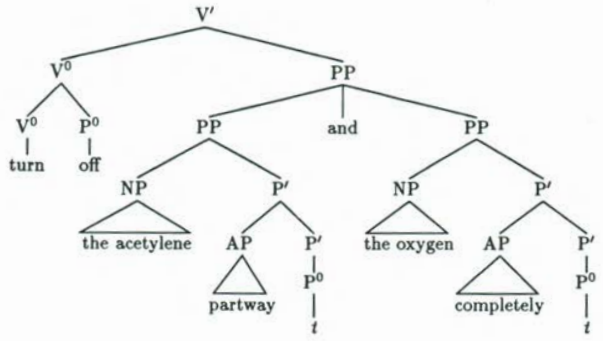
(26) Pauline turned off [the acetylene and the oxygen].

This ambiguity can be resolved by attaching modifiers to P′. In (27a), a modifier is adjoined to the left of each P′, *partway* in one half of the conjunct and *completely* in the other.

(27) a. Pauline turned [the acetylene partway off] and [the oxygen completely off].
b. Pauline turned off [the acetylene partway __] and [the oxygen completely __].

(27b) can only have been derived by across-the-board movement from a D-structure like (27a). The structure is shown in (28).

(28)



Note that the string in (27b) could not have been derived by Gapping, as Gapping is an optional rule,[9] which requires that its non-application yield a grammatical string. For (27b) to be achieved through simple deletion of an occurrence of *off*, the underlying string would have to be (29), which is ungrammatical.

(29) * Pauline turned off the acetylene partway and off the oxygen completely.

Given the small clause analysis, (29) is expected to be bad, since *off* has nowhere to adjoin. Thus the full pattern of coordinate structures is fully expected given the small clause analysis and completely unexpected otherwise.

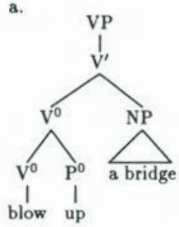
2.4 Against a Complex $[_{V^0}\ V^0\ P^0]$ at D-structure

The classical standard analysis since Chomsky (1957:75–76) has involved a complex $[_{V^0}\ V^0\ P^0]$ at D-structure, deriving the V-NP-P order through use of a transformation. In much early work, it was not considered necessary to specify whether it was NP or P that moved; since then, both possibilities have been proposed. The classical standard D-structure for (30a) is given in (31a) below; the two possibilities for movement to derive (30b) are shown in (31b) and (31c) below.

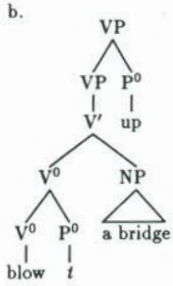
(30) a. Let's blow up a bridge.
b. Let's blow a bridge up.

[9] See, e.g. Emonds (1976:9).

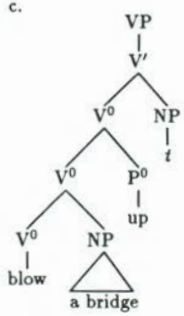
(31) a.



b.



c.



Neither of these two variants of the classical analysis is able to account for the coordination patterns shown in the previous section, as the NP and P are never a constituent. There are a number of other problems with the analyses represented in (31), more or less severe depending on one's view of X-bar principles and Structure Preservation. No account that is in keeping with the X-bar principles and the version of Structure Preservation outlined in Chomsky (1986) can derive (30b) from (31a). The most basic X-bar principles are paraphrased in (32), from Chomsky (1986). The maximal projection is assumed to be bar-level 2.

(32) **X-bar Principles**:

a. $XP \longrightarrow YP^* \quad X'$

b. $X' \longrightarrow X^0 \quad YP^*$

Here YP* stands for "zero or more occurrences of YP", where multiple occurrences of Y need not be of one category. The number of YPs allowed at a given level is generally assumed to be quite small; as already noted, Kayne (1984a) argues that the maximum number is one, i.e., that branching is maximally binary.

In addition, it is generally assumed that **adjuncts** are base-generated adjoined to some projection. Since adjuncts can appear between a small clause predicate and its subject, the model of small clauses being assumed here (i.e. that they are bar-level 2 projections of lexical heads) requires that adjuncts be adjoined at least to the bar-level 1 projection. This can be represented by (33), as the minimal necessary expansion of the possibilities for base-generation.

(33) $X' \longrightarrow X'\ YP$

In (32), the order given (i.e., specifier precedes X′, complement follows X^0) was specific for English; in (33) the order must be unspecified, to allow both pre-head and post-head adjuncts. The same will presumably be true for adjunction to XP. Sometimes other additions are proposed, e.g. $XP \longrightarrow XP\ YP$ for relative clauses. The analysis represented in (31a) requires a further expansion of the X-bar schema, to allow $X^0 \longrightarrow X^0\ Y^0$. Recall that the small clause analysis does not require any expansion of the power of the phrase structure component.

A problem for the standard classical analysis given in (31a) is that postnominal P may project; that is, it may take a complement, as shown in example (34a), and modifiers, as shown in (34b).

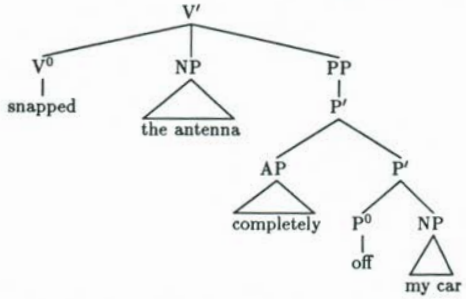
(34) a. Those punks snapped the antenna off my car.
b. Those punks snapped the antenna completely off.

However, X^0 cannot dominate a phrase, by any reasonable expansion of X-bar theory, so as expected, prenominal P never appears with modifiers or complements. This is shown in (35).

(35) a. *Those punks snapped off my car the antenna.
b. *Those punks snapped completely off the antenna.

This requires that the particle be generated to the right of NP, as in (36). The same results obtain whether PP is a second complement of V^0, as shown, or whether it is base generated adjoined to V′.

(36) Those punks snapped the antenna completely off my car.



If this alternative is systematically available, however, then there is no reason to assume that (30b) is not simply generated in a tree like the one shown in (36). Then any movement will be unnecessary, and there will have to be a non-syntactic relation between (30a) and (30b).

Emonds' Structure-Preserving Hypothesis (Emonds 1976 and previous work) was adapted by Chomsky (1986) in the form stated in (37) (called here "strong structure preservation").

(37) **Strong Structure Preservation** (Chomsky 1986:4–6)
a. Maximal projections may substitute for maximal projections.
b. Maximal projections may adjoin to maximal projections.
c. Heads may substitute for heads.

In Chomsky (1986), no other movement is assumed to be possible, and movement is further restricted by the requirement (derived from other principles) that substitution of a maximal projection always occurs in specifier position, never complement position.

There have been various alternative proposals in the literature; Baker (1988) assumes that heads may adjoin to heads; Rizzi and Roberts (1989) propose that adjunction to X′ should be permitted, and weaken (37b) to *non-heads may adjoin to non-heads* (pg. 12); they also speculate that cliticization may involve adjunction of a head to a head, further weakening (37) (pg. 27, fn. 17).

Chung (1989, and references cited there) argues from Chamorro data that maximal projections must be allowed to adjoin to heads. This is in fact the most relevant weakening of (37) for the matter at hand, as a quick glance at (31c) and (40c) will show.

I follow Baker (1988) in characterizing head movement as adjunction; if substitution of heads is also permitted then this makes (37c) parallel to (37a-b), in the sense that heads substitute for or adjoin to heads just as phrases substitute for or adjoin to phrases. The version I will be assuming is given in (38).

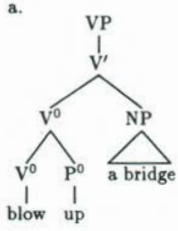
(38) **Strong Structure Preservation** (revised)
a. Maximal projections may adjoin to or substitute for maximal projections.
b. Heads may adjoin to or substitute for heads.

It seems to me that adjunction to X′ (as proposed by Rizzi and Roberts 1989) is a severe weakening of (38), and is thus far undermotivated. I leave the possibility of XP adjunction to a head as an open question in the following discussion.

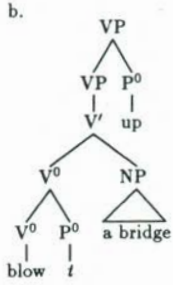
Recall the structures in (31), repeated here as (40).

(39) a. Let's blow up a bridge.
b. Let's blow a bridge up.

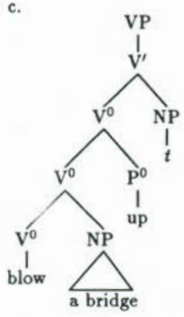
(40) a.



b.



c.



Assuming (40a), (39b) must be derived either by rightward movement of P, as in (40b), or by leftward movement of NP, as in (40c). Assuming the version of Structure Preservation adopted in (38), (40b) is impossible, as it involves adjunction of a head to a maximal projection. (40c) is impossible because it involves adjunction of a maximal projection to a head. Moreover, in (40c) the trace of the moved NP appears to c-command its antecedent, though this hinges on what assumptions are made about adjunction structures; arguably, the NP in (40c) is not dominated by V^0, and is therefore not asymmetrically c-commanded by its trace.

In addition to violating (38) by adjunction of a head to a phrase, (40b) makes incorrect predictions about S-structure. Specifically, it predicts that P will occur to the right of other material in VP, but in fact it never does.

So, for example, in (41) there is an instrumental PP *with a transmitter* to the right of the NP argument *the bomb*. (40b) incorrectly predicts that P should move to the far right edge to adjoin to VP, giving the sentence in (41b). The postulated complex $[_{V^0}\ V^0\ P^0]$ is identified with brackets.

(41) a. They [set off] the bomb with a transmitter.
b. *They [set __] the bomb with a transmitter off.

Recall that the small clause analysis, with P movement to V, makes the correct prediction here, as shown in (42). Here brackets mark the small clause.

(42) a. They set [the bomb off] with a transmitter.
b. They set off [the bomb __] with a transmitter.

The same pattern is observed in (43), using a locative PP.

(43) a. Jason lined up the bottles on the wall.
b. *Jason lined the bottles on the wall up. (* on relevant reading)
c. Jason lined the bottles up on the wall.

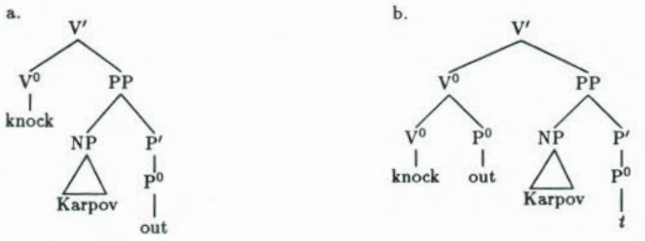
Since in adopting the version of Structure Preservation given in (38) I reject the possibility of adjoining P^0 to the lowest V′, (40b) is impossible. If we adopt Chung's (1989) weakening of Structure Preservation, then we can permit (40c), given that the ECP is satisfied, since the trace of NP is properly governed by its theta-assigning head, the complex $[_{V^0}\ V^0\ P^0]$

However, the base-generation of (40a) and derivation as in (40c) comes at the following cost: to accept (40a) at all is to assume that the movement analysis is redundant, since P must also be base-generated to the right of NP, as in (36); furthermore, we must permit a weakening of (38), which is otherwise a constraint that we would clearly like to maintain.

3 The Derivation of the V-P-NP Order

As noted in the previous section, I adopt Baker's (1988) characterization of head movement as adjunction, although I do not rule out the possibility that heads may substitute, e.g. I^0 for C^0 in German. I repeat the D-structure and the derived structure that I am assuming for the verb-particle construction in (44).

(44) a. Kasparov knocked Karpov out.
b. Kasparov knocked out Karpov.



Baker (1988) uses the Head Movement Constraint (HMC) of Travis (1984) to characterize the restriction on head movement that heads generally only move to the head position that c-commands them.

(45) **Head Movement Constraint** (Baker 1988:53, from Travis 1984):
An X^0 may only move into the Y^0 that properly governs it.

Recall from section 2.2 that proper (head) government requires c-command without intervening barriers or potential head governors; given that PP in (44) is theta-marked by V and therefore not a barrier, and that there are no potential head governors that c-command P but do not c-command V (thus satisfying Minimality), P is properly governed by V and may therefore move to it.

As Baker notes (pg. 53–55), the HMC is reducible to an instance of the ECP (see (12) in section 2.1). The Formal condition is satisfied by V as a head, under proper government, and the Identification condition is doubly satisfied: the trace of P is antecedent-governed by the moved P, and theta-governed by V.[10]

3.1 Licensing of Head Movement

Since the movement of a small clause head is legitimate for ECP purposes, why do other small clauses not exhibit this option? Clearly something special must be said either about the particle or its landing site, or both. The movement of V^0 to I^0 in the Romance languages has generally been understood as motivated by a need on the part of the verb to get Tense and inflectional features; but this movement is mandatory, whereas P movement to V is strictly optional.

Baker (1988) represents the ability of a head to move by marking that head as affixal, but again, this sort of movement tends to be obligatory. Baker marks affixal heads with a hyphen, e.g. Chichewa *-ir* 'to' (pg. 230). Using Baker's notation, we might mark a particle like *out* as *(-)out*, indicating that it is optionally affixal.

Rizzi and Roberts (1989) represent the possibility for head movement by identifying the landing site as having an appropriate morphological slot, which they represent as (e.g.) [__+D^0] for clitics of the category D. Adopting the approach of Rizzi and Roberts, we might mark a verb that can select a particle as having

[10] Assuming that since V θ-marks PP it is the θ-assigner for P.

a slot [__+P^0], which is optionally filled.[11]

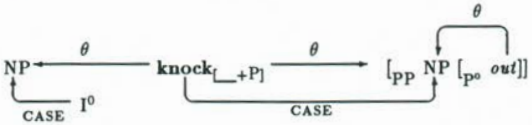
Whatever the formal mechanism for representing the possibility for all and only P small clause heads to optionally move to V, the uniqueness of P in this sense seems justified by the special relationship between P and V in general; a verb that selects a complement headed by P selects a SPECIFIC P to head that complement, unlike most other head-complement relations. This is true not only of small clause PPs, but of subjectless PP complements as well; thus, while the verb *rely* selects a PP headed by *on*, there are no verbs that select a DP headed by *the*, or an NP headed by *banjo*.

The lexical entry for *knock NP out* (from (44)) might be represented as shown in (46).

(46) **knock** [$_{PP}$ *out*]
+Case
< θ-Agent θ-Effect >

From the lexical entry in (46), all other information about the structure of a sentence using this verb can be inferred. As indicated, ***knock*** assigns an Agent θ-role to an external argument (as Agents are always realized externally, this is not specified, but assumed to fall out from general principles). In addition, it assigns a θ-role (which I have indicated as *Effect*) to a PP complement headed by *out*.[12] As a Case-assigner, ***knock*** licenses an NP, but it does not provide a θ-role for one. *out*, functioning as an intransitive preposition, may assign a Patient θ-role, but no Case. The Patient NP, then, will have to appear in the specifier position of the PP in order to receive Case from ***knock***; if it appeared anywhere else in the PP, V could not govern it as P would block government by Minimality. Most verbs in English which take a PP small clause as complement allow head movement to V, which suggests that some general rule assigns ***knock*** in (46) a [__+P] slot for head adjunction. The same lexical entry is repeated in (47), but with all of these relations indicated.

(47)



This encodes essentially the same information given in (46) and the paragraph that follows it.

3.2 Against Rightward NP Movement

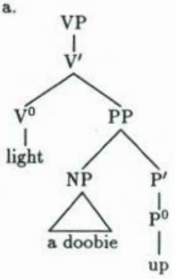
Kayne's (1984b) proposal for the derivation of (48b) from (48a) is depicted in (49).

(48) a. Judge Ginsberg lit a doobie up.
b. Judge Ginsberg lit up a doobie.

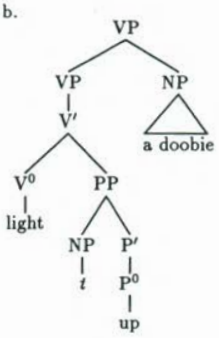
[11] Rizzi and Roberts (1989:19) use this notation to indicate that a head of the specified category will *substitute* for the head so marked; I use it in a spirit somewhat different from theirs, simply to indicate that adjunction of P is possible here.

[12] See Baltin (1989) for arguments that selection is for a head rather than for a phrase; the head is then understood to project its phrase. This would further simplify the lexical entry in (46).

(49) a.



b.



Kayne suggests that this be seen as an instance of Heavy NP Shift (HNPS). His account provides answers for a number of interesting problems, including the distribution of pronouns in particle constructions and the presence of modifiers and complements to P only in the structure in (49a); in addition, his account can be naturally extended to explain the fact that other categories of small clause do not exhibit the possibility of reversing the order of the subject and predicate. However, his solutions contain some flaws, and I will argue that P adjunction to V provides a better account of the alternation.

Kayne observes (as has been noted before, e.g. Ross 1967) that pronouns may not follow the particle, as shown in (50).

(50) a. Horsa bit it off.
b. Hengist threw him out.
c. *Horsa bit off it.
d. *Hengist threw out him.

Kayne suggests that this is accounted for by the analysis of the particle-NP alternation as Heavy NP Shift, since pronouns are by nature not heavy, and will therefore not undergo HNPS.

He notes also that the modifier *right* appears only in constructions in which the particle follows the NP (again, the same observation is made in most of the classical works that discuss the construction, e.g. Ross 1967).

(51) a. Horsa bit his nose right off.
b. Hengist threw the troublemaker right out.
c. *Horsa bit right off his nose.
d. *Hengist threw right out the troublemaker.

This contrast recalls the one noted in section 2.3, that a P with complements or modifiers only appears postnominally. (52) shows P with an NP complement.

(52) a. Horsa bit the nose off his face.
b. *Horsa bit off his face the nose.
c. *Horsa bit off the nose his face.

In (52a), the particle *off* takes an NP complement, *his face*. The particle cannot be estranged from its complement, as in (52b), nor can the particle and its complement appear between the verb and the small clause subject *his nose*.

Kayne's account for the pattern in (50)–(51), and presumably for (52) as well, is that the rightward movement of NP depends on the relative "weight" of the NP to the material being crossed; he formalizes this as in (53) (from Kayne 1984b:127, citing Oehrle 1976).

(53) In $\ldots[e]_i\ X\ NP_i\ \ldots$, where NP_i binds $[e]_i$, NP_i must be at least as heavily weighted as X
Weightings: heavy NP=2, ordinary NP=1, pronoun=0, particle=1, right+particle=2

This formalization can be extended to weight particles with complements as 2, likewise small clause predicates of categories other than P (e.g. A could "weigh" 2 to prevent HNPS). In this way, the fact that it is impossible to move the NP to the right of any of these elements is described; however, the explanation is not very compelling. In general, focus and informational content seem to be the relevant factors for the acceptability of HNPS, not relative weight; consider (54), where HNPS has moved a relatively "light" NP across a large amount of material.

(54) I placed on the edge of the felt-covered pool table you know so well my recently-mixed drink.

In particular, the weighting of "*right*+particle" as 2 is ad hoc; the presence of *right* does not noticeably degrade the preceding example:

(55) I placed right on the edge of the felt-covered pool table you know so well
my recently-mixed drink.

Nor does *right* have any effect on simpler cases of HNPS, as seen in (56).

(56) a. Darwin sent to London every bug he caught.
b. Darwin sent right to London every bug he caught.

It is clear also from word order at S-structure that HNPS is distinct from whatever derives the V-P-NP order; HNPS moves NP to the right edge of VP, as shown in (56). However, the unmarked case for V-P-NP constructions orders the NP BEFORE other material in the VP. The contrast is clear in (57)–(58).

(57) a. Jason lined [the bottles up] on the wall.
b.*Jason lined [__ up] on the wall the bottles.
(58) a. They set [the bomb off] with a transmitter.
b.*They set [__ off] with a transmitter the bomb.

NP movement to the right edge of VP predicts that the ungrammatical sentences in (57b) and (58b) should be grammatical. Of course, with appropriate focus, the sentences in (57b) and (58b) could be acceptable as HNPS constructions. This can be seen in (59).

(59) a. Jason lined up on the wall a bottle each of a hundred and twenty different kinds of beer.
b. They set off with a transmitter the Doomsday Device.

To see that HNPS is distinct from particle shift, one need only compare (59) with (60), which shows the unmarked order for the V-P-NP form of the particle construction.

(60) a. Jason lined up the bottles on the wall.
b. They set off the bomb with a transmitter.

NP movement to the right edge of VP, as in (59), is thus shown to be distinct from the phenomenon informally characterized as "particle shift". P movement to the left correctly predicts the sentences in (60). Assuming that the locative PP in (57) and the instrumental PP in (56) are adjoined to V′, and assuming as argued in section 2.4 that movement cannot adjoin NP to V′ (Structure Preservation), the only remaining possibility for Kayne's analysis is that NP is adjoined to the small clause itself. However, the distribution of parasitic gaps shows that this is not the case. HNPS is an instance of A-bar movement. As such, its trace is known to license parasitic gaps, as shown in (61).

(61) a. I bought for Dirk, without really looking at closely, a picture of Winona Ryder.
b. I cut out, without really looking at closely, a picture of Winona Ryder.

Including additional material in VP differentiates between HNPS and particle shift.

(62) a. I cut out a picture of Winona Ryder with my pocketknife.
b. I cut out with my pocketknife a picture of Winona Ryder.

(62b) is an instance of HNPS, and requires there to be focus on the right-peripheral NP (underlined). (62a) is unmarked. Only (62b) licenses a parasitic gap, as shown in (63).

(63) a. I cut out with my pocketknife, without really looking at, a picture of Winona Ryder.
b. *I cut out a picture of Winona Ryder with my pocketknife, without really looking at.
c. *I cut out a picture of Winona Ryder, without really looking at, with my pocketknife.
d. *I cut out, without really looking at, a picture of Winona Ryder with my pocketknife.

No parasitic gap is licensed, showing that (62a) does not involve A-bar movement of the NP.

3.3 Movement of P^0

The head movement account makes the correct predictions for all the cases shown in (54)–(63) above, and does not incorrectly predict the licensing of parasitic gaps. How, then, does it account for the other phenomena that Kayne's account handles, such as the data in (50)–(52)?

Kayne's account as represented in (53) appeals to the relative weight of P′ and NP, giving restrictions on when P′ can be crossed. The head movement analysis accounts naturally for the fact that no material ever occurs with P when it has moved to V, since head movement only moves a head. The question, then, becomes a different one: what can or cannot be stranded by movement of P^0, and why not?

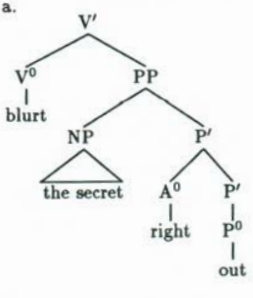
3.3.1 Right

Note that *right* cannot be stranded by movement of P^0.

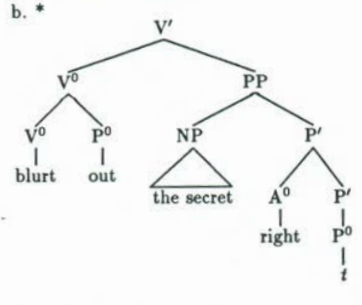
(64) a. Ethel blurted the answer out.
b. Ethel blurted out the answer.
c. Ethel blurted the answer right out.
d. *Ethel blurted out the answer right __.

Contrast the behavior of *right* with that of an adverb like *completely*, which presumably heads an AP that adjoins to P′, as in (27)–(28) on page 99. I propose that modifiers like *right* (there are not many; *straight* is a possible candidate) are bare heads that adjoin to P′. This seems reasonable, as *right* never projects; it does not take modifiers itself, and appears only left-adjoined to the category P. Movement of P^0 will then result in a Minimality violation in the presence of *right*. This is shown in (65).

(65) a.



b. *



The trace of *out* in (65b) cannot satisfy the Identification condition (12b), as *right* is a closer potential antecedent governor than *out*, and a closer potential theta-governor than *blurt*.

In order to permit the base generation of structures like that shown in (65), the X′ rules (given in (32) and (33), repeated here as (66)) must be augmented by a rule like that shown in (67).

(66) $XP \longrightarrow YP^* \; X'$ (specifier)
$X' \longrightarrow X^0 \; YP^*$ (complement)
$X' \longrightarrow X' \; YP$ (adjunct)

(67) $X' \longrightarrow X' \; Y^0$ (adjunct)

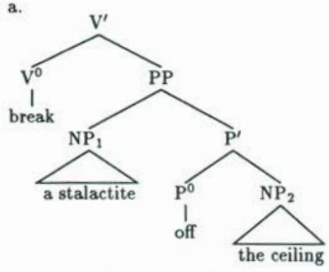
3.3.2 NP Complements

Another element that cannot be stranded by movement of P^0 is an NP complement to P, as in (68).

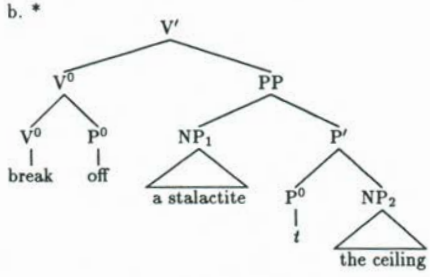
(68) a. Jeff broke a stalactite off the ceiling.
b. *Jeff broke off a stalactite __ the ceiling.

I propose that the ungrammaticality of (68b) is due to the Case Filter, which requires that NP receive Case. The NP *the ceiling* normally gets its Case from the preposition *off*, which in (68b) is too far away. The structure is diagrammed in (69).

(69) a.



b. *



By Baker's (1988) Government Transparency Corollary (GTC), the complex V^0 formed by adjunction of P^0 to V^0 governs everything that P^0 governed in its original structural position (Baker 1988:63–68). By this principle, the complex V^0 in (69b) governs NP_2. This is consistent with the definitions given in section 2.2, as PP is not a barrier.[13] By the Case Frame Preservation Principle (Baker 1988:122), the new complex head cannot assign more or different Case than underived V^0 can. In a language in which underived verbs are able to assign one structural and one inherent Case, the derived head will be able to assign Case to two NPs. Baker gives examples of preposition incorporation in which the complex $[V^0 \; P^0]$ assigns structural Case to the applied object and inherent Case to the basic object (see Baker 1988:250–89).

Baker proposes that the English Dative shift alternation is just such a case (pg. 286). Therefore, at least in theory, the complex head *break off* in (69b) should be able to assign, in addition to the structural Case it assigns to the object *stalactite*, inherent Case to *ceiling*, as the benefactive does. If (69) patterned this way, we would expect (70).

[13] The definition of proper head government in Rizzi (1990) requires that the governee be contained within the immediate projection of the governing head, as noted in footnote 7. This excludes V in C position from being a proper head governor for the subject of IP. However, the C position is already excluded form being a proper head governor under Rizzi's definition of head-government given in (13). Presumably, in languages where V in C can be a proper head governor (e.g. German; Platzack 1987), C is included in the list of proper head governing categories.

(70) *Jeff broke off the ceiling the stalactite.

Clearly, the derived [V P] in (69b) does not have two Cases to assign. I suggest that the crucial distinction between the situation in (69) and the benefactive alternation is that in the benefactive alternation, the verb assigns θ-roles to both internal arguments; inherent Case is assigned along with a θ-role (Chomsky 1981:171). In (69), the verb assigns a θ-role to the small clause, but not to either of the NP arguments. Although the complex head in (69b) contains the θ-assigner for *the ceiling*, it does not acquire the ability to assign inherent Case.

3.3.3 PP Complements

On either account, (69b) is impossible because the NP complement to P does not receive Case. This makes the prediction that a particle construction in which P takes a PP complement should not prevent movement of P. This prediction seems to be borne out, as shown in (71).

(71) a. I cut an article out from the newspaper.
b. I cut out an article from the newspaper.
c. We sent the documents back to the CIA.
d. We sent back the documents to the CIA.

It is possible that the Source PP in (71a-b) and the Goal PP in (71c-d) are not in fact arguments of *out* and are therefore not contained within the small clause, but adjoined to V′. This would entail that (72) involves not coordination of PP, but coordination of VP or V′, with gapping.

(72) Send the documents back to the CIA and the secret memos up to the White House.

I propose that (72) represents the coordination of two small clauses, [*back to the CIA*] and [*up to the White House*]. If these two sequences were not constituents, then only Gapping could derive the structure in (72); but it can be demonstrated that (72) does not involve Gapping. The assumption that (72) involves Gapping hinges on the assumption that [*back*] and [*to the CIA*] are separate constituents. It should not then be possible to construct a coordinate structure that is like (72) but in addition has another, separate constituent in each half of the the conjunct. However, as (73) shows, such an example can be constructed.

(73) Send the documents back to the CIA by mail and the secret memos up to the White House by courier.

Assuming that the manner PPs are adjoined to V′, (73) can only involve coordinate V′s or VPs. Since the verb is missing from the second half of the conjunct, (73) involves Gapping; therefore the second half of (73) includes two constituents. I conclude that [*up to the White House*] is a constituent; likewise [*back to the CIA*].

3.3.4 Pronouns

A final observation that the NP shift account of Kayne (1984b) accounts for, but that I have not explained otherwise, is the distribution of pronouns in particle-shift constructions. Recall from (50), repeated here as (74), that pronouns cannot follow the particle.

(74) a. Horsa bit it off.
b. Hengist threw him out.
c. *Horsa bit off it.
d. *Hengist threw out him.

Two similar accounts present themselves. The first is the possibility that pronouns in English cliticize. This has been suggested many times in the literature (e.g. Hankamer 1973). On this account, the pronoun, adjacent to the verb, moves first, attaching to V^0; the particle may then adjoin, but the surface order will remain as in (74a-b).

The other possibility is a prosodic account, as suggested by Zwicky (1986). Zwicky proposes that in a number of constructions, the rules forming prosodic phrases will require that a noun phrase form a prosodic phrase on its own, e.g. in the construction in (74c-d) but also in examples like (75a), where the relevant prosodic phrase is indicated with square brackets (Zwicky's (2a), pg. 100).

(75) a. Martha told Noel [the plot of *Gravity's Rainbow*].
b.*Martha told Noel [it].

A prosodic phrase must bear accent and therefore cannot exclusively contain an unaccented pronoun, which is why (74c-d) and (75b) are bad. Note that (74c-d) and (75b) improve if the pronoun is given contrastive stress, which arguably allows it to stand as an independent prosodic phrase.

4 The Subject Condition

As Kayne noted, as the subject of a small clause, the lower NP in the particle-verb constructions exhibits Subject Condition effects, that is, extraction of a subpart of the NP is weakly bad. This is shown in (76a) for an AP small clause, in (76b) for a VP small clause, and in (77) for particle constructions.

(76) a.?*Who do you consider a picture of __ entertaining?
b.?*Which puppy did you let the mother of __ drown?
(77) a.?*Who did you tear a picture of __ up?
b.?*What have you poured a bottle of __ out?

The traces in (76)–(77) satisfy the ECP, as they are properly governed by their θ-assigning Ps. Chomsky (1986) ascribes the Subject Condition to **Subjacency**, the requirement that movement not cross more than one barrier. Subjacency violations are noted to result in a less severe degree of ungrammaticality than ECP violations. In section 2.2 it was simply stipulated that adjuncts and specifiers count as barriers to government. There have been many definitions of barriers in the literature, most of them stated in terms of "L-marking" (L for *lexical*; cf. Chomsky 1986:13), a type of relation that renders a maximal projection transparent. On this view, XP is a barrier unless it is L-marked. Many of the restrictions on movement and government were described in Chomsky (1986) in terms of barriers; under Relativized Minimality, α-government is blocked only by a closer potential α-governor (see section 2.2). However, the behavior of adjuncts and specifiers as Subjacency barriers is not intended to be accounted for by Relativized Minimality.

If we assume, as has been traditionally held, that phrases are barriers unless L-marked, then what is crucial for purposes of explaining the Subject Condition in (76)–(77) is that NP not be L-marked; since P is the θ-assigner for NP, any definition of L-marking that does not permit a head to L-mark its specifier accomplishes the required task.[14] I adopt θ-marking under c-command as the necessary criterion for L-marking. This might be described formally as **proper theta-government**, in that the requirement for c-command is already built into the notion of proper government (see (15)). If a θ-marker is always a head (this is by no means accepted by everyone) then L-marking always entails proper head government.

Interestingly, the Subject Condition effects go away when the particle moves to V^0.

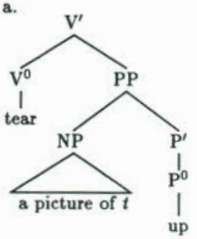
(78) a. Who did you tear up a picture of __?
b. What have you poured out a bottle of __?

This is fully expected under the definitions already assumed, since the θ-assigner for NP is now able to theta-govern NP, under c-command. The construction is diagrammed in (79).[15]

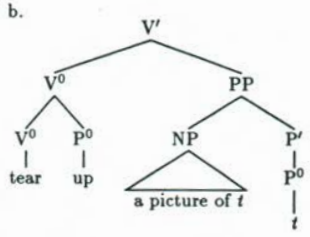
[14] For Chomsky (1986:13) L-marking requires θ-marking of a sister by a lexical head; Stowell (1986) allows any category that is θ-marked to be L-marked, but treats nonmaximal categories as barriers; for Rizzi (1990:112), XP is a barrier if it is not selected by a head not distinct from [+V]; the peculiar phrasing is designed to admit I and C; it excludes N and P as they are [-V]. To allow [+V] small clause heads to L-mark their subjects incorrectly predicts an asymmetry between the different categories of small clauses with respect to the Subject Condition.

[15] Here it is crucial that we not take Rizzi's (1990) definition for proper head government, that the governee must be within the immediate projection determined by the head. See section 3.3.2, and footnote 7 there, also footnote 12.

(79) a.



b.



In (79b), PP is still θ-marked by V, and therefore transparent to government. In addition, the θ-assigner for NP is now part of V^0, which c-commands it. Under the definition assumed above, NP is L-marked in (79b), and therefore not a barrier for movement.

Stowell (1986) discusses a range of asymmetries between small clauses and infinitival clauses in English, including binding facts, the scope of quantified NPs, and the licensing of null operators. He argues that these asymmetries represent a difference between small clauses and infinitival clauses that exists at LF. He proposes that at LF, **Small Clause Restructuring** (SCR) occurs, a process by which the head of the small clause of any category adjoins to V^0. He suggests that whether SCR occurs in the syntax or at LF is a language-specific parameter, just as Huang (1982) demonstrates is the case with WH-movement. Following Stowell's proposal for other small clauses, the special property of P as opposed to other categories that head small clauses is not that it may move to V, but that it may move to V IN THE SYNTAX.

The possibility that all small clauses undergo head movement at LF raises an interesting point regarding the asymmetry between L-marking and theta-government. Recall that although the subject of the small clause is theta-governed under m-command by P, it is not L-marked, as this requires c-command. Recall also that the small clause subject is governed by both V and P. Suppose instead that theta-government, like L-marking, requires c-command. Then the trace of a moved small clause subject violates the Identification condition of the ECP at S-structure, as it is neither theta-governed nor antecedent-governed. However, if Stowell's proposal is correct, the Identification condition will be satisfied at LF, when the head of the small clause moves to V. As Huang (1982) shows, the ECP holds at LF. There is independent evidence (Rizzi 1990:38) that the Identification condition of the ECP can be satisfied at LF, without being satisfied at S-structure.

5 Conclusion

The verb-particle construction is extremely common in English, and yet it has never received an account fully in keeping with the principles of syntactic theory that were developed to deal with the structures of other constructions in English, being treated instead as an anomaly.

The account proposed here provides a natural explanation for what appear at first sight to be strange and irregular patterns in the verb-particle construction. The account is fully in keeping with current conceptions of phrase structure, movement theory, and government and binding relations. The satisfactory treatment of such a contentious construction without additional stipulations or expansions of X-bar theory or Structure Preservation is a success for the theory.

The account proposed here bolsters the growing body of evidence that heads, like maximal projections, may adjoin to each other. It also suggests that lexical heads, like functional heads, govern (but do not properly govern) their specifiers.

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