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CLITIC DOUBLING, REFLEXIVES, AND WORD ORDER ALTERNATIONS IN YAGUA

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Complementary distribution between SVO and clitic-VSO word orders in Yagua receives a natural explanation from independent principles of Case and X'-theories of the Principles-and-Parameters theory of grammar. Word-order variation in Yagua results from the fact that both clitics and arguments compete for a single Case. This conflict is resolved by moving the head of the phrase to the phrase-internal AGR[eement] position and allowing the clitic to acquire morphological visibility via incorporation into the head. Independent justification for this analysis is adduced from reflexives: all and only those arguments whose heads raise to AGR (subject, genitive, and oblique, but not direct objects) may serve as antecedents for reflexive clitics. This is explained if we require that the indices of the head, AGR, and the argument be connected. This analysis sheds new light on phrase structure, Case theory, and clitics in Universal Grammar.*

INTRODUCTION

1. Word order has justly fascinated linguists, at least since Greenberg's 1966 work on language universals. At the time of Greenberg's work, however, syntactic theory was incapable of deriving the basic word-order facts of a given language from general principles. Rather, syntax was primarily concerned with the formulation of specific rules to describe word order and word-order change. But rules are in general only stipulations (however mathematically rigorous and computationally implementable they may be). Therefore, the shift away from rules in favor of broader explanatory principles, as found in Chomsky's Principles-and-Parameters approach (1981, 1986a, 1986b, 1988a, 1988b), hence-

* Yagua, the only extant member of the Peba-Yaguan family, is spoken by approximately three thousand individuals in northeastern Peru. Studies of Yagua grammar include D. Payne 1985, 1986, 1987, T. Payne 1983, 1985, and Payne & Payne 1989. I want to thank Tom and Doris Payne for their careful and important work on Yagua, without which the present study would not exist. Thanks to them also for many helpful discussions of the analyses and data presented here. Thanks also to Carl Pollard, Rick Kazman, Ian Roberts, and audiences at the Working Conference on Amazonian Languages at the University of Oregon (1987), the University of California, San Diego, and the University of Pittsburgh. Sally Thomason gave much-appreciated help in making this paper somewhat less opaque and more readable. Responsibility for the analyses and interpretations of the data is mine. This research was funded by NSF Grants BNS 8405996 and BNS 8617854, NEH Grant RX-20870-87, the University of Oregon Foundation, and the Summer Institute of Linguistics. Yagua examples given in this paper appear in their underlying forms, i.e. prior to morphophonemic rules. This facilitates the discussion by showing morpheme breaks more clearly. The morphophonemic rules are tangential to my present concerns. The reader is referred to the works of D. Payne and T. Payne listed in the bibliography for illustrations of surface realizations. Also, while I have attempted to represent tone, vowel quality, and nasalization, some of my data come from early versions of mss. by the Paynes which did not yet have diacritics drawn in. The reader is referred to Payne & Payne 1989 for better documentation of the phonology of Yagua.

Abbreviations used in this paper are: cl = clitic; 1, 2, 3 = first, second, third person; sg = singular; pl = plural; EMPH = emphatic; EXC = exclusive; INC = inclusive; LOC = locative; DIR = directional; DIM = diminutive; ANIM = animate; INAN = inanimate; TRANS = transitivizer; IRR = irrealis; COR = coreference; $PROX_1$ = nearest proximate tense (near past or early future); REL = relativizer; NEG = negative; NOM = nominalizer.

forth PPA, offers a genuine hope of explaining crosslinguistic and language-specific facts about word order. It is particularly exciting to observe the convergence of independent research within PPA on a small set of principles and parameters that can account for a wide range of apparently divergent facts.[1]

This paper attempts to offer an explanatory account of a significant portion of the syntax of Yagua (spoken in the Amazonian lowland of northeastern Peru), based on the PPA subtheory of syntactic case (henceforth Case, not to be confused with Fillmore's 1968 notion of 'case', which is treated in PPA under theta-theory). Crucial to this account are two innovations in Case theory first proposed in Everett 1986 and 1987—morphological visibility, as defined in 29 below; and the separation of AGR and tense, whereby AGR, but not tense, can be generated in all phrasal categories in multi-AGR languages such as Yagua. This study covers a broad and complex range of interrelated facts of Yagua clitic doubling, word order, phrase structure, and reflexives. The fact that the present analysis can account for all these facts via a small set of Case principles offers significant support for the PPA model.

The specific contributions to linguistic theory that emerge from this study are (i) support for morphological visibility, i.e. the claim that nominals which otherwise need Case can satisfy this requirement if they attach to a word which has Case independently; (ii) support for the parametrization of nominal clitics proposed in Everett 1986, which predicts four and only four basic nominal clitic types crosslinguistically; (iii) the discovery that Kayne's 1983 CONNECTEDNESS principle is also a constraint on agreement, at least in some languages; and (iv) further confirmation of the proposal of Everett 1987 that some languages may generate an AGR node under each maximal category.

To understand the operation of Case theory in Yagua, it is necessary to analyze Yagua clitic placement, especially CLITIC DOUBLING (henceforth just doubling)—the tautophrasal co-occurrence of a clitic and a coreferent NP, known as the clitic's DOUBLE. The word or phrase to which the clitic attaches is known as the clitic's HOST. (These terms are from Zwicky 1977.) I argue that Yagua clitics require Case, unlike clitics in some other languages, e.g. Pirahã (Everett 1987). It follows then (for reasons to be made clear below) that, when doubling occurs in Yagua, a Case conflict results: both the clitic and its double require Case, but only a single Case is available from a given phrasal head for a single thematic (θ-)role. This conflict can be resolved only if the clitic attaches to a host which already has Case, producing all and only the observed word-order changes. (The idea that clitic doubling produces a Case conflict was first proposed in published form by Jaeggli 1982 and Borer 1984.)

Important independent evidence for this analysis comes from facts about Yagua reflexives. The very startling observation that genitive, oblique (i.e.

[1] For example, the reader familiar with Rizzi & Roberts 1989 and Chomsky 1988b will notice a clear similarity between their proposed solutions for French complex inversion (Rizzi & Roberts 1989) and English *Do*-support (Chomsky 1988b) and the present analysis of Yagua clitic doubling. Specifically, all of these papers rely to some degree on the concept of movement to AGR. Rizzi & Roberts 1989 (which I only saw as this article was going to press) defends a kind of morphological visibility quite similar to the version proposed below (and in Everett 1986).

nonnominative, nonpossessive), and subject NPs, but NOT object NPs, may serve as antecedents for reflexive clitics is shown to follow without stipulation from the Case-based analysis and a minor adaptation for agreement of Kayne's 1983 connectedness hypothesis.

The discussion begins with an overview of the word-order facts, followed by an analysis of Yagua clitic doubling, word order, and phrase structure. Next, I offer a proposal on how to extend this account to handle Yagua reflexives. The conclusion summarizes the major findings of the paper, its contributions to linguistic theory, and the challenge it presents to alternative analyses.

OVERVIEW OF YAGUA WORD ORDER AND CLITICS

2.1. WORD ORDER. Now, let's look at some facts. Examples 1–3 illustrate the effect of doubling on word order; 1a, 2a, and 3a show the word orders found without doubling, while 1b, 2b, and 3b show the obligatory word orders which result when phrasal arguments are doubled. (The NPs coindexed with the clitics are the clitics' doubles).

(1) Doubled Subject:
  a. *Pauro$_i$ púúchi-níí$_j$.*
     Paul carry-3sg.cl
     'Paul carries her.'
  b. *Sa$_i$-púúchi Pauro$_i$-níí$_j$.*
     3sg.cl-carry Paul-3sg.cl
     'Paul carries her.'
  c. **Pauro$_i$ sa$_i$-púúchi-níí$_j$.*

(2) Doubled Genitive:
  a. *Alchico rooriy*
     Alchico house
     'Alchico's house'
  b. *Sa$_i$-rooriy Alchico$_i$*
     'Alchico's house'
  c. **Alchico$_i$ sa$_i$-rooriy*

(3) Doubled Oblique:[2]
  a. *Nurutu viimú*
     alligator inside
     'Inside the/an alligator'
  b. *Sa$_i$-viimú nurutu$_i$*
     'Inside the/an alligator'
  c. **Nurutu$_i$ sa$_i$-viimú*

Clitic doubling does not alter the postverbal order of objects, as seen in 1b. Clitics that double objects differ from other clitics in that they are suffixed to their host and do not produce word-order changes. The Paynes label Yagua clitics that double objects and postverbal unaccusative subjects 'Set II clitics' and refer to all other clitics as 'Set I clitics'.

[2] Oblique NPs appear to be of the category NP, rather than PP; see §4.10. below. Thus, I will treat specifier NPs of oblique NPs as genitives for the remainder of the paper.

SVO and VSO word orders both occur frequently in Yagua. In the course of this discussion, I will offer a number of arguments in favor of SVO as the underlying order. A possible argument for VSO order is considered and rejected in §6 below.

D. Payne 1986 observes that full-NP arguments are frequently omitted in Yagua discourse, for reasons irrelevant to our present concerns. When they are absent, however, a clitic is obligatory:

(4) a. *Sa-jų́ųy.*
3sg.cl-fall
'He/she falls.'
b. **Jų́ųy.*

(5) a. *Sa-sííy.*
3sg.cl-run
'He/she runs.'
b. **Sííy.*

The clitic may be omitted when a NP is present:

(6) *Anita jų́ųy.*
Anita falls.'

(7) *Davi sííy.*
'David runs.'

When a nonobject NP occurs without a coreferent clitic, the required order is preverbal for subjects, prenominal for genitives, as in 1–3. This is further illustrated by examples like 8–10:

(8) **Jų́ųy Anita.*
'Anita falls.

(9) **Rooriy Alchico*
'Alchico's house'

(10) **Viimú nurutu*
'Inside the/an alligator'

Except in Left-Dislocation and Focus structures, which are orthogonal to our present concerns (see D. Payne 1985:28), objects always follow the verb, as illustrated in 1 and in 11 below.

(11) a. *Rospita suuta Anita.*
'Rospita washes Anita.'
b. *Sa$_i$-suuta Rospita$_i$-níí$_j$ Anita$_j$.*
c. **Anita Rospita suuta(-níí).*
d. **Anita$_j$ sa$_i$-suuta Rospita$_i$(-níí$_j$).*

As exx. 1–11 show, then, subjects and genitives pattern similarly. Only these grammatical functions may be doubled by Set I clitics. Set II clitics, which double direct objects, are like Set I clitics in that their host must immediately precede their double. Therefore, a grammar of Yagua must contain and, ideally, explain 12:

(12) The host of a clitic must immediately precede the clitic's double.

In addition, of course, we must also be able to account for the word-order

facts discussed above, as well as the fact that clitics are obligatory if a full-NP argument is absent.

An explanation of these phenomena is offered in §4. To better appreciate this explanation we must first consider some additional facts about Yagua clitics.

2.2. SET I CLITICS. As we have seen, Set I clitics may be prefixed to V, N, and P and may double subjects, genitives, and obliques. Moreover, D. Payne (1987:7) and T. Payne 1983, 1985 note that Yagua clitics undergo certain otherwise word-internal phonological processes with their host, such as Vowel Harmony. Thus D. Payne (1987:7) observes that, when the 3sg Set I clitic *sa* is attached to an /h/-initial root whose first vowel is not /o/ or /e/, the root-initial /h/ is dropped (as it always is in such environments) and the vowel of the clitic is changed to 'a vowel of the quality of the first root vowel'. If the first root vowel is /o/ or /e/, no change occurs (/h/ = orthographic *j*):

(13) a. *Sa-rupíy* (no change) 'He/she walks.'
b. *Sa-jimiiy* → *Siimiiy* 'He/she eats.'
c. *Sa-jų́naay* → *Suunaay* 'He/she cries.'
d. *Anita jų́naay.* 'Anita cries.'
e. **Anituunaay.*

Ex. 13e shows that nonclitic arguments cannot undergo Vowel Harmony with their phrasal head, even when the phonetic conditions are met.

Finally, these examples illustrate an important fact about the hosts of Set I clitics: they must assign a θ-role to the clitic's double. Set I clitics are listed in Table 1.

	1	1+2	2	3
SINGULAR	ray-	—	jíy-	sa-
DUAL	nááy-	vụụy-	są́ą́da-	naada-
PLURAL	núúy-	vụụy-	jirey-	riy-

COREFERENCE jíy-/yí-

TABLE 1. Set I clitics.

2.3. SET II CLITICS. Set II clitics differ from Set I clitics in two ways. First, they may only double direct and indirect objects and postverbal unaccusative subjects. Second, their host need not assign a θ-role to their double. They may thus appear on any word that immediately precedes their double. Ex. 14 shows that the Set II clitic must immediately precede its double. The ungrammaticality of placing the clitic in any other position is illustrated by the starred material in parentheses.

(14) a. *Sa$_i$-pų́ų́chi*(**-níí*) *Pauro$_i$ rooriy*(**-níí*) *viimú-níí$_j$ Anita$_j$.*
3sg.cl-carry Paul house into-3sg.cl Anita
'Paul carries Anita into the house.'
b. *Sa$_i$-pų́ų́chi*(**-níí*) *Pauro$_i$-níí$_j$ Anita$_j$.*
c. *Sa$_i$-pų́ų́chi-níí$_j$ Anita$_j$.*

The clitic may be attached to any of the potential hosts in 15, so long as it immediately precedes, i.e. is right-adjacent to, *Anita*.

Table 2 lists the basic Set II clitic forms.

	1	1+2	2	3
SINGULAR	-ray	—	-jíy	-níí 'animate' -rà 'inanimate'
DUAL	nááy	-vu̱u̱y	sa̱a̱dá	naadá
PLURAL	núúy	-vu̱u̱y	jiréy	-ríy
		COREFERENCE -yù		

TABLE 2. Set II clitics.

Before I propose a single analysis relating both sets of clitics, it is necessary to consider the obvious possibility that Set II clitics are enclitic NP determiners, unrelated to Set I clitics. This hypothesis is suggested by the fact that Set II clitics must immediately precede their doubles, regardless of the host to which these clitics attach, and by the fact that NPs doubled by Set II clitics are often interpreted as definite.[3] If the two types of clitics are unrelated, then an attempt to derive their differences would be misguided. There are at least three reasons to reject the hypothesis that Set II clitics are determiners.

First, Set II clitics must appear when no double is present, as in 15 (except in special focus constructions; see D. Payne 1985:28):

(15) *Sa$_i$-suuta Rospita$_i$ imumuuy-níí$_j$.*
3sg.cl-wash Rospita down.river-3sg.cl
'Rospita washes him/her downriver.'

The obligatoriness of the clitic here cannot be explained by the hypothesis that Set II clitics are determiners, since there is no overt NP to mark. The clitic's appearance is, however, predicted by the Case realization hypothesis I advance below.

Second, a definite object need not be doubled unless it is nonadjacent to the verb:

(16) *Núúda$_i$-jiya-numáá jíy$_i$-rooriy-mu-ju̱.*
lpl.EXC-go-now COR-house-LOC-DIR
'We (exclusive) go now to our house.'

[3] While it would take us too far from our main topic to discuss the implications of this here, a possible Case-based account of this fact may be found in recent work by Belletti (1988), who suggests that some examples of obligatory indefiniteness are due to assignment of an inherent partitive Case. Since inherent Case can only be assigned to a nominal which receives a θ-role from the inherent Case assigner (because of the Uniformity Condition of Chomsky 1986a), a nonargumental clitic could not receive this Case, since it cannot receive a θ-role. We might speculate that, since Yagua has no lexical device (e.g. an article) to mark indefiniteness, it exploits the distinction between inherent vs. structural Case to do so. If structural Case in Yagua is interpreted as definite and inherent as indefinite, then doubled NPs would be definite, since a [−A] clitic could only receive a structural Case to reassign to its double. This could have significant crosslinguistic implications as well, since doubled NPs tend to be interpreted as definite in many languages (Givón 1984:366).

Third, indefinite object NPs may also be doubled on occasion, in spite of the tendency to interpret the doubles of Set II clitics as definite:

(17) *Jíy$_i$-duu-tą́ą́ta-níí$_j$ jamiryį tį̨į́tą́jų$_j$.*
2sg.cl-blow-mode-3sg.cl selection all
'You have to shoot a selection of all kinds.'

It is clear, then, that Set II clitics are not merely enclitic determiners. Before we consider an alternative analysis, let us summarize our observations to this point.

(18) a. VS order occurs if and only if the subject is doubled.
b. SV order is required for nondoubled, subject NPs.
c. The genitive NP obligatorily precedes its phrasal head (N) when the genitive NP is not doubled.
d. When the genitive is doubled, the required order is clitic, head N, doubled genitive NP.
e. For all clitics, the host must immediately precede the double.
f. The host of a Set I clitic must θ-mark the clitic's double.
g. The host of a Set II clitic need not θ-mark the double.
h. Set I clitics are proclitics.
i. Set II clitics are enclitics.
j. A Set I or Set II clitic is obligatory when no double is present and optional otherwise.
k. As argued in T. Payne 1983, the requirement that a Set II clitic must be right-adjacent to its double indicates an important syntactic relation between the clitic and its double, which occurs to the right of the clitic. On the other hand, a Set II clitic forms a phonological constituent with its host, which appears on its left. The result is what T. Payne 1983 terms 'wrong way' cliticization.

Parametrization of Yagua clitics

3. Although many authors have considered nominal clitics to be nonarguments universally (see especially Borer 1984 and the papers in Borer 1986), at least three investigators have argued that clitics vary cross- and intra-linguistically with respect to argumenthood (Aoun 1981, Cinque 1988, and Everett 1986, 1987). If clitics do vary crosslinguistically, we must determine whether Yagua clitics are arguments or not. The evidence suggests that they are not. To see why, consider once more clitic-doubling examples, as in 19–20 and previous examples:

(19) *Sa$_i$-jų́núúy-níí dee-nu.*
3sg.cl-look-3sg.cl DIM-ANIM. sg
'She looks at the boy.'

(20) *Sa$_i$-dáátya-nu Pauro$_i$-nii$_j$ Antonio$_j$-ra niquee-jada.*
3sg.cl-know-TRANS Paul-3sg.cl Antonio-3sg.INAN.cl talk-INFINITIVE
'Paul teaches Antonio the word.'

An independent referring expression (i.e. a common or proper noun) may only be assigned one of two kinds of grammatical relations. It may be an ar-

gument of its clause (e.g. subject or object) or it may be appositional, e.g. an intraphrasal topic, a nonsubcategorized (henceforth A′-)position. These are the only relations possible.[4] The θ-role of the doubled NP determines the semantic interpretation of the clitic, which bears no θ-role of its own. This must be so if the doubled NPs are in argument positions, because a single head may not have two arguments associated with the same θ-role. This is due to the θ-criterion (Chomsky 1982:6):

(21) θ-CRITERION: Each term of LF that requires a θ-role (each ARGUMENT) is assigned a θ-role uniquely. Each θ-role determined by lexical properties of a head is uniquely assigned to an argument.

By 21, if the doubled NP is an argument, the clitic cannot be. If the clitic is an argument, the doubled NP can only be appositional, which is not an uncommon phenomenon. For example, Jeanne 1978 argues that appositional NPs are found in each major phrasal category in Hopi, while Bresnan & Mchombo 1987 note a similar possibility for direct object NPs in Chicheŵa. Jelinek 1984 makes similar claims for Navajo. One way to determine the argumental status of Yagua clitics is to discover whether or not doubled Yagua NPs are in argument or A-POSITIONS, as defined by Chomsky (1981:47): 'An A-position is one in which an argument such as a name or a variable may appear in D-structure; it is a potential θ-position. The position of subject may or may not be a θ-position, depending on properties of the associated VP. Complements of X′ are always θ-positions, with the possible exception of idioms.'

Thus, if we can establish that doubled NPs are in A-positions, we may conclude that Yagua clitics are nonarguments. Diagnostics commonly used to determine whether a given nominal expression is an A- or A′-position are given in Table 3.

	A-POSITION	A′-POSITION
Allows bare quantifiers at D-structure	yes	no
Allows extractions	yes	no
Shows weak crossover effects[5]	yes	no
Phonologically salient in relation to rest of clause	not usually	frequently
Pragmatically salient	rarely and not without special devices, e.g. intonation and stress	usually salient and usually marked phonologically

TABLE 3. A- vs. A′-position diagnostics.

We expect answers to the first three diagnostics of Table 3 to be simply 'yes' or 'no'. For the phonological and pragmatic tests, if there are differences in a

[4] Jelinek 1984 claims that doubles in some languages are nonargumental, appositive to the true arguments, the clitics. I will interpret this to mean that in those languages the doubled NPs are in A′-positions, although Jelinek argues that these might be A-positions.

[5] Weak crossover refers to structures containing a pronoun that is referentially dependent on a WH-trace or a quantifier when movement has taken place from an A-position to an A′-position, such that the element moved to the A′-position c-commands both the pronoun and its original (A-)position and neither the pronoun nor the original movement site c-commands the other (see Sportiche 1985:467).

given language, they will be gradient, clustering as indicated. Therefore, the syntactic criteria provide the most reliable tests for A versus A′ positions.

Consider first the bare quantifier test (Cinque 1984 and Rizzi 1986 discuss this restriction in Romance, arguing also that it is not a pragmatic constraint but a syntactic one). Bare quantifiers in Yagua can be doubled, indicating that their doubles are in A-positions and thus are arguments. Certain quantificational pronouns in Yagua are formed by the numeral *tíí* 'one' and a restricting suffix, as illustrated in 22–25:

(22) a. *tíí-tìy*
one-REL
'whoever'

b. *tíí*
'someone, anyone'

c. *tíí-quii*
-ANIM
'one, something (animate)'

d. *tíí-ki*
-unidentified morpheme
'one' (used for jaguars only)

e. *tíí-tą́jų́*
-unidentified morpheme
'all, everyone'

(23) *Tíí-tìy$_j$ jiya-sara tóó-va sa$_i$-sų́ų́y-maa*
one-REL go-habit jungle-DATIVE 3sg.cl-bite-perfective
coodiy$_i$-ntiy-níí$_j$.
snake-repetitive-3sg.cl
'Whoever goes to the jungle, the snake has bitten him/her, too.'

(24) *Teta vurya-a jų́núúy-rà vurya$_i$-a diiy tįįtą́jų́$_i$.*
unless 1pl.INC-IRR look-3sg.INAN.cl 1pl.INC-IRR die all
'Unless we look at it, we will all die.'

(25) *Nee-tìy-muy diiy-vay-ríy riy$_i$-vicha tįįtą́jų́$_i$.*
NEG-CONCLUSIVE-NEG die-NOM.pl-3pl.cl 3pl.cl-live all
'If they are not dead ones, they are all alive.'

The quantifier *tíítìy* 'whoever' is in preverbal subject position in 23; the morphologically related form *tįįtą́jų́* 'all, everyone' is in the postverbal, doubled-subject position in 24 and 25. In spite of its gloss 'all', *tįįtą́jų́* is not a floating quantifier. In nondoubled contexts it appears to be restricted to subject, object, and relative head positions, i.e. A-positions, like English *everyone*. The restriction of these bare quantifiers to A-positions and their appearance in doubling contexts indicates that Yagua clitics are nonarguments.

Let us now consider evidence from extraction, as illustrated in 26.

(26) *Sa$_i$-siiy-rįi jasiy nunu$_i$, coodiy, ją́yanú.*
3sg.cl-run-enroute there isula snake fer-de-lance
tįįtą́jų́$_i$ níí-tìy$_i$ sa$_i$-vicha-sara judára sų́ų́y-rà.
all 3sg.cl-REL 3sg.cl-be-habit hurting bite-3sg.INAN.cl
There scurried up the isula (ant species), the snake, the fer-de-lance, all who are hurting, biting ones.'

According to D. Payne's (1985:70) analysis of Yagua relatives, the relativizer corresponding to English WH-relative words in the preverbal complementizer (COMP) position is *níítìy,* which is doubled in 26 by *sa-*. This can be interpreted in two ways. Either *sa-* is a resumptive pronoun (a phonologically realized variable), in the very restricted sense of Sells 1984 (i.e. a pronoun bound by a quantifier), or the relativizer binds an empty category variable (Chomsky 1981:101) and *sa-* is merely a nonargumental, nonresumptive clitic.[6]

The resumptive-pronoun hypothesis is unlikely. First, it fails to account for the failure of (nonclitic) pronouns to be bound by a quantifier:

(27) *[$_{X^{max}}$ *níítìy$_i$...níí$_i$...*]

A pragmatic analysis might be proposed here. One might claim that pronouns are used for contrast or special emphasis and thus have a more limited distribution than clitics. But this is just a label, not a solution: it fails to tell us how pronouns come to be 'contrastive' in the first place, or how this would explain their failure to be bound by quantifiers. However, if pronouns are arguments, but clitics are not, then we do have an explanation for the fact that only clitics may be bound by a quantifier. Under this view, contrast highlights a semantic role of the predicate. Clitics which do not bear θ-roles could not be contrastive—without a θ-role they have nothing to contrast with. This would also account for a very common crosslinguistic phenomenon: languages which allow clitic doubling also allow quantifier binding of clitics, while those without clitic doubling do not. In this latter group the clitics are presumably arguments (Everett 1986). T. Payne's (1985:23) description of right-dislocated pronouns is relevant here. Yagua pronouns may co-occur with dislocated NPs and quantifiers, if they receive special intonational marking and are separated from the rest of the clause by a slight pause:

(28) *Níí$_i$-niy-téé súúy-téé jiyu-day, nuuvá$_i$.*
3sg.pronoun-(?)-EMPH call-EMPH here-(?) toucan
'He$_i$ really calls, (the) toucan$_i$.'

This is exactly what the θ-criterion predicts if pronouns are arguments (Table 3). So the hypothesis that clitics are nonarguments accounts for clitic doubling, bare quantifier facts, and the failure of clitics to express special emphasis or contrast like pronouns.

I was unable to find examples of weak crossover in the corpus.[7] In any case, this diagnostic requires access to native-speaker intuitions about subtle contrasts of grammaticality. I will therefore close this section on the argument status of Yagua clitics by considering phonological and pragmatic data, the weaker diagnostics of Table 3.

Doubled NPs are apparently not given any special phonological marking such as pause, extra stress, or intonation to set them off from the other constituents of the phrase. No such marking is mentioned in the very detailed data available

[6] Sells (1984:15) defines a resumptive pronoun as '... a pronoun that is operator bound.' That is, the pronoun must be bound by a WH-word or quantifier such as *every, all,* and *some* in order to count as resumptive.

[7] 'Corpus' here refers to all the works of T. and D. Payne listed in the bibliography.

in the Paynes' studies. This is expected if doubles are phrasal arguments in A-positions. Phonological evidence is therefore compatible with my conclusion that doubled NPs are in A-positions.

Pragmatic evidence is also consistent with this claim. If doubled NPs were in A′-positions, we might expect them to function as clarification, afterthought, or intraphrasal topics, since all these roles have a higher degree of pragmatic salience than subjects, objects, and other A-positions (see Dooley 1982 on similar phenomena in Mbyá-Guarani). However, a doubled position is simply interpreted as the subject, direct object, or other constituent of its phrase. In fact, D. Payne (1985:201) asserts that clitic-doubled NPs are less salient pragmatically than nondoubled NPs. This is predicted by an analysis of doubled positions as A-positions, because we do not expect normal objects, subjects, or other argument relations to be used for special effect. This is in fact what we do expect from A′-positions, however, as in left-dislocated and topicalized NPs in English, and this makes the hypothesis that doubled NPs are in A′-positions less likely. I conclude, therefore, that all available evidence from bare quantifiers, extraction, phonology, and pragmatics supports the analysis of Yagua doubled positions as A-positions and, consequently, that Yagua clitics are nonarguments. In the following sections I argue that, despite this fact, Yagua clitics require Case.

Case and word order

4. In PPA, Case is one of the licensing conditions on well-formed expressions (Chomsky 1986a). There is really nothing mysterious about Case; in fact it is quite obvious and must be at least implicitly recognized by any theory of syntax. The difference is that in PPA Case is recognized explicitly. Much effort is given to the attempt to understand the conditions under which Case is assigned and the expressions which require it. Essentially, Case is related to θ-roles in that it is a necessary condition on the Logical Form (LF) interpretation of a θ-role: a θ-role is VISIBLE (cf. 29 below) at LF iff it has Case (Chomsky 1981:337).

This is most obvious in 'free word order languages' such as Ancient Greek and Latin, where the morphological case-ending of a nominal expression is crucial to the interpretation of that nominal's θ-role. But all languages impose restrictions on the relations between phrasal heads and their complements. The restriction is morphological in Greek: the relation of an object to a verb can only be determined if the object bears the appropriate case-ending, usually accusative. In English, the restriction is syntactic: strict word-order relations must be maintained so that, for instance, the subject precedes the verb and the object immediately follows the verb.

We can subsume restrictions of both the Greek and the English varieties under a single generalization: mark the relation of the complement to its head. The marking, whatever form it actually takes, is Case. This marking is usually motivated by the need for the θ-role bearer to acquire visibility prior to LF. As remarked above, a θ-role will only be visible at LF if it has Case.

Everett 1986 argues that a nominal is visible at LF in one of two ways (cf. Baker 1988 and Rizzi & Roberts 1989 for a descendent version of this pro-

posal).[8] It may be assigned Case in an A-position directly by the head of its phrase or it may be visible by virtue of its appearance on a phrasal head (itself licensed or visible at LF by Case-theory, X′-theory, θ-theory, etc.; cf. Chomsky 1986a). This is what happens with incorporated nouns, affixes, and many clitics. These options may be formalized as in 29; 29b depends on the notion of EXCLUSION, as defined in Chomsky 1986b and given below in 30.

(29) VISIBILITY:
   a. POSITION VISIBILITY: α is position-visible if and only if for some β (= X^{max}), β is Case-marked and β = α or β is a projection of α.[9]
   b. MORPHOLOGICAL VISIBILITY: α is morphologically visible if and only if for some γ (= X^0), γ is position-visible and γ does not exclude α.

(30) α is not excluded from γ only if it is substituted into γ or adjoined to γ:
   a. SUBSTITUTION: $[_\gamma \ldots \alpha \ldots]$
   b. ADJUNCTION: $[_\gamma [_\gamma \ldots] \ldots \alpha \ldots]$ (Order irrelevant)

We can see the effects of 29 and 30 more clearly by example (ignoring the effects of Bracket Erasure); consider 31a–b:

(31) a. $[\text{hope} + \text{s}]_V$
   b. $[[[\text{beat}]_V \text{en}]_{\text{PASSIVE}}]_V$

In 31a *-s* is not excluded by the verb *hope*, and in 31b *-en* is not excluded by the verb *beat*.

4.1. CASE ASSIGNMENT. In PPA, Case assignment is accomplished under government by coindexation with a Case-assigner.[10] Nominative Case is assigned by the AGR constituent of INFL, genitive Case by N, accusative Case by V, and oblique Case by P. However, the inclusion of AGR in the list of Case-assigners introduces a slight incongruence: it is the only nonhead which assigns Case. AGR is a constituent of INFL (AUX in earlier theories), the head of S (Chomsky 1986b). One might hypothesize that AGR is the head of INFL (as Chomsky 1986b:24 appears to), but motivating this proposal is not germane to the present discussion. Let us say, rather, that the head of a projection (i.e. any X^0), such as INFL, may assign Case via its 'appropriate morphological

[8] Curiously, neither of these more recent studies cites Everett 1986 as the source of this idea, even though this paper was widely circulated in 1984, much earlier than any similar proposal.

[9] The term 'projection' refers to the dependence of the features and the configurational complexity of the phrase on the lexical properties of the head.

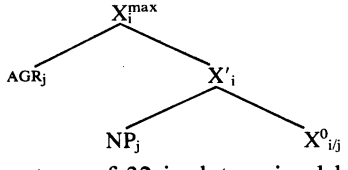
[10] For readers unfamiliar with PPA terminology, some definitions follow. Government: α governs β iff α is a lexical category (e.g. N, A, V, P), α c-commands β, and there is no γ (X^{max}) such that γ dominates β but not α. Case-assigner: α is a Case-assigner for β if α governs β and α has a Case (accusative, nominative, genitive, etc.) in its lexical entry (cf. Everett 1987). The Binding Conditions are: (A) An anaphor must be bound in its minimal governing category (roughly, its minimal containing NP or S). (B) A pronoun must be free in its minimal governing category. (C) A referential expression is free. Binding: α binds β if α c-commands β and α and β are coindexed.

constituent'. This may be the head itself or an AGR node within the head's maximal projection.[11]

4.2. MULTI-AGR LANGUAGES. Everett 1987 argues that in Pirahã each phrasal head contains an AGR position filled by a clitic. In fact, there are many languages in the Amazon (e.g. Pacaas-Novos, Oiampi, Pirahã, and Yagua) and elsewhere which seem to manifest agreement between each phrasal head and its complement. I will refer to such languages as MULTI-AGR languages.

In these languages, it is useful to suppose that each phrase (X^{MAX}) dominates an AGR node. This AGR node may be a morphological constituent of its appropriate X^0 at D-structure (as in Pirahã). Alternatively, as with agreement in English, AGR may be discontinuous from its S-structure host (the verb) at D-structure. In any event, Case is assigned within X^{MAX} from an AGR node. The Case assigned is determined by the head governing AGR. This is a very important notion for our understanding of Yagua, since I want to argue that Yagua nominal clitics are really nothing more than agreement morphemes, generated under an AGR node (as predicted by PPA theory). I am going to defend a structure for Yagua like that in 32:

(32)



The structure of 32 is determined by Case and θ-assignment requirements (e.g. government and adjacency) and X'-theory (although language-specific peculiarities may cause some deviations from expectations based on theoretical proposals). For example, the tree in 32 is binary. If Kayne 1983 is correct, this is what tree structures should look like universally. I assume it here. AGR precedes all other nodes in 32 if the language in question assigns Case to the right, as I will argue that Yagua does. The coindexations in 32 are forced by X' and Case theories: X' theory requires that all projections of the head be coindexed with the head; Case theory requires the complement and the head to be coindexed in order for the head to be able to assign Case and a θ-role to its complement.

Agreement in multi-AGR languages, then, requires no theoretical apparatus beyond that needed for single-AGR languages such as English. Multi-AGR agreement simply extends existing assumptions to a relatively unexplored domain.[12] Let us now return to Yagua clitics.

We concluded earlier that Yagua clitics are nonarguments, which we can represent informally by the feature [−A(rgument)]. A likely place to insert [−A] clitics is under an AGR node (Everett 1987, Rizzi 1986, Koopman 1984).

[11] See DiSciullo & Williams (1987:25) for arguments that words may have multiple heads, such that *a* may be the head of X^0 for feature F_1 and *b* the head of X^0 for feature F_2.

[12] Chomsky 1988b proposes the existence of an AGR node in VP in English. His proposal differs from the one defended here in that mine treats AGR as a constituent of all X^{max} categories, whereas Chomsky's makes AGR the head of a new AGR projection.

But if Yagua clitics are merely nonargumental AGR morphemes, it is difficult to see how they could affect word order as drastically as they did in 1–11 above. In Pirahã, clitics are nonarguments under AGR and do not require Case (Everett 1987). Therefore, they do not affect word order (their principal functions are to identify EMPTY CATEGORIES and express agreement). If Yagua clitics, in spite of being nonarguments (unlike Pirahã clitics), required Case, then we would expect them to affect the syntax in some way—for instance in word order, since Case is strongly linked to configurational and linear requirements, as noted above with regard to English.

Furthermore, if Yagua clitics required Case, then any clitic-doubling construction would contain a Case conflict—competition of the clitic and its double for the Case assigned by the head.[13] This Case conflict would rule all clitic-doubling structures ungrammatical, unless there were some means in Yagua grammar to resolve this conflict. I argue in what follows that a solution is available from independent principles. Let us begin by considering an analysis of clitic doubling of direct objects.

4.3. CASE ASSIGNMENT AND DOUBLING OF DIRECT OBJECTS. My analysis of Case assignment in Yagua assumes that Yagua has a VP node.[14] Although this is not crucial to my Case-assignment hypothesis, it is important to the analysis of reflexives in §5. Recall that doubling of direct objects is optional if the direct object occurs immediately to the right of the verb, but is strongly preferred elsewhere.

(33) a. *Sa-púúchi(níí$_j$)* *Anita$_j$*.
3sg.cl-carry(-3sg.cl) Anita
'He carries Anita.'

b. ?/**Sa-púúchi Pauro Anita$_j$*.
'Paul carries Anita.'

c. *Sa-púúchi Pauro-níí$_j$ Anita$_j$*.
'Paul carries Anita.'

(34) a. *Anita ra rumiy(rà$_i$)* *buyąą$_i$* *yi-íva*.
Anita IRR spill(-3sg.INAN.cl) manioc.beer 2sg.cl-DATIVE
'Anita will spill manioc beer on you.'

b. ?/**Anita ra rumiy yi-íva buyąą$_i$*.

c. *Anita ra rumiy yi-íva-rà$_i$ buyąą$_i$*.
'Anita will spill manioc beer on you.'

[13] Heads generally assign only one Case. However, the Uniformity Condition of Chomsky 1986a does allow double Case assignment by a verb if both NPs are arguments of the verb and one NP receives structural Case and the other receives inherent Case. The Uniformity Condition states: 'If α is an inherent Case-marker, then α Case-marks NP if and only if α θ-marks the chain headed by NP.' Nevertheless, although verbs may assign structural or inherent Case, it is not possible for them to assign separate Cases to an expletive and an argument simultaneously. The expletive could not enter into a chain with an argument NP which already has Case, since chains may only bear a single Case. But then this expletive will at once require an interpretation (because it is visible) but will have none (because its chain has no θ-role), violating the principle of Full Interpretation (Chomsky 1986a).

[14] See §§5–6 below for evidence for a VP node in Yagua.

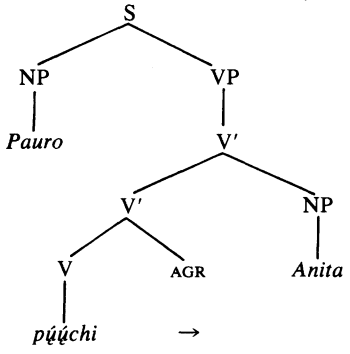
There are two questions here. First, how is Case assigned? And second, what explains the strong tendency of the clitic to appear when the object is nonadjacent to the verb?

The first question is answered in 35:

(35) Assign Case in Yagua to the right.

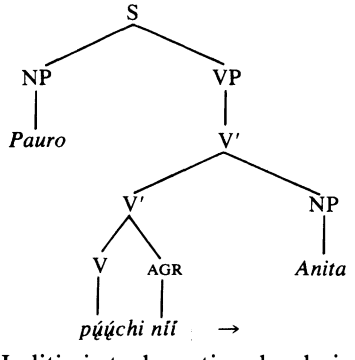
The unidirectionality of Yagua Case assignment expressed in 35 is expected if, as is often argued in PPA, Cases are generally assigned in a single direction. Another near-universal restriction on Case assignment is that the Case-assigner and assignee be adjacent (Stowell 1981). Given these claims, consider a possible structure for VP in Yagua (where '→' = direction of accusative Case assignment):

(36)



In simple SVO structures, accusative Case is assigned within the VP immediately to the right of the verb. When AGR dominates a clitic, 36 is expanded as 37:

(37)



The Set II clitic is truly optional only in this configuration. In other structures, there is a strong tendency to double any object not adjacent to the verb.[15]

(38) When a Case is assigned to a right-adjacent NP, the clitic is truly optional; otherwise, it is strongly preferred.

[15] D. Payne (1985:188) mentions apparent counterexamples to this, although these come primarily from causative constructions. It may be that the nondoubled NPs in causatives are not indirect objects (as they seem to be) but, rather, appositives. If so, then what I have called a preference for doubling objects nonadjacent to the verb might really be an obligatory requirement, assuming that direct and indirect objects but not these causative NPs are arguments.

What accounts for 38? Safir 1981 argues that in most languages Cases must be REALIZED.[16] That is, they must have a phonetic implementation. I claimed earlier that Case may be manifested (i.e. is realizable) either by linearity or affixation. It is in fact possible to account for 38 as a preference for Case to be realized, along the lines of 39:

(39) Yagua Case realization: the relation of an argument to its Case-assigner is expressed by appearance of the argument right-adjacent to the Case-assigner.

This would account for all of the object-doubling facts we have seen to this point. Since Case realization is a phonetic manifestation of syntactic relations, it must apply to audible, i.e. phonetically overt, entities. I assume that adjacency as used in 39 is satisfied only by overt categories in this sense and that it is not blocked by covert categories, such as traces.

The verb assigns Case to the object, via its AGR node. When the object is right-adjacent to the verb, Case realization is satisfied with or without the clitic. But when the object is not adjacent to the verb, the object could only satisfy 39 if doubled by a clitic to its immediate left which assigns it Case. If this proposal is valid, then the principles of Case assignment (35) and Case realization (39) would account simply for placement and preferred occurrence of direct-object clitics when the object is not adjacent to the verb. It is not difficult to understand how Case realization might be preferred but still not obligatory. Hearing Cases (through adjacency or morphological marking) is functionally useful but not required by any surface-structure or phonological principle (it is not required by visibility, which is required at LF). Nevertheless, one's expectation would be that Case realization would be obligatory more often than merely preferred, given its relation to Case assignment, visibility, and communicative usefulness.

The question again arises as to how the clitic satisfies its own Case requirement. I claimed that Yagua clitics need Case. An object clitic will have only one potential Case-assigner, the verb. But if the verb assigns accusative Case to the clitic, the doubled object will fail to receive Case. It seems difficult to reconcile the claim that clitics need Case with the facts.

And yet, there is a solution. As we saw above (29), a morpheme is visible when it is assigned Case directly or when it appears on a licensed X^0 (i.e. word-level) category. To say that a given expression requires Case is to say that it must satisfy position visibility or morphological visibility, as defined in 29 above. According to 29, the only expressions which could acquire morphological visibility are those which attach to X^0. In Yagua these are only clitics and affixes.

Yagua objects may be separated from the verb either by a doubled subject

[16] What Safir 1981 intends is that the licensing of pro is epiphenomenal, a result of whether or not a language allows a Case to go unexpressed. Even if this is incorrect, the proposal that Case is obligatorily manifested phonetically (unless parametrized) is of direct relevance here. Only if the ec is a variable, in the sense of Huang 1984 and as described in Everett 1987 for Pirahã, may both the NP and the clitic be omitted.

or by movement of the object to the rightmost boundary of the VP. If the clitic is present, then it must attach to the verb (which is itself position-visible via PREDICATION; cf. Rothstein 1983 and Fabb 1984). This eliminates the Case conflict between the clitic and its double. When the object is not adjacent to the verb, its Case is not realized via right-adjacency to the verb, its Case-assigner. But if the clitic appears, 39 is satisfied, since the clitic is immediately dominated by AGR and indicates phonetically that AGR and its double are adjacent. Case principles will attach the clitic to an independently visible X^0 category and will ensure that it is left-adjacent to the double. As inherently bound morphemes, clitics must be attached to an independently visible host, satisfying 29. However, NPs may not be so attached (since Yagua lacks this type of incorporation process). This gets us every fact we have mentioned: obligatoriness of the clitic when no double is present, because of Case realization; optionality of the clitic when its double is right-adjacent to the verb, because Case realization is satisfied with or without the clitic; (near-)obligatoriness of the clitic when its double is not right-adjacent to the verb, because Case realization can only be satisfied when the clitic is present; prohibition of the clitic's attaching to its double, because the double is not independently visible; the requirement that the clitic attach to the immediate left of the double, because of Case realization; and the attachment of Set II clitics to the right edge of their hosts, rather than to the left edge, because of the requirements of direction of Case assignment and adjacency.[17]

This account does not assume any sort of 'wrong-way' cliticization (as suggested in Payne 1983). Wrong-way cliticization is purely epiphenomenal.[18] The facts all follow from independent syntactic Case principles.

4.4. INDIRECT OBJECTS. The analysis just presented for direct-object doubling also applies to doubling of indirect objects. D. Payne (1985:30) and Payne & Payne 1989 note several facts about indirect object doubling in Yagua, all of which may be expressed by the generalization that the object closest to the verb need not doubled, while doubling is preferred for the object farthest from the verb.[19] When the verb is ditransitive each object must be referenced, either through a clitic, a NP, or both (except in structures such as Left Dislocation).

[17] Case realization reflects the linear conditions on Case assignment. We can assume that it is the verb which actually assigns Case to the object, either prior to movement or through its trace.

[18] Visibility (29) does not allow the clitic to attach to its double, since the double is not independently visible. It is worth noting, though, that if Yagua clitics were [−C], they would not be restricted to attach only to independently visible hosts. A clitic (or an AGR marker) could attach directly to its double. As Nichols 1986 points out, this is in fact common crosslinguistically. In the framework developed above, this is predicted. Thus, the existence of so-called dependent-marking languages supports the present model. Also, my analysis predicts that no Case-conflict should arise in these languages and thus co-occurrence of the AGR or clitic morpheme and the complement will produce no word-order changes. A preliminary check seems to indicate that this is true, although more study is needed.

[19] My syntactic account differs from Payne & Payne 1989, which analyzes indirect and direct object interrelations in terms of definiteness. The reader is referred to that work for an alternative analysis. The biggest drawback for an analysis based on definiteness alone is that it fails to relate these facts to the many other phenomena discussed in this paper.

Example 40 illustrates the fact that the clitic is obligatory when the NP argument is absent, while 41 and 42 show that it is optional if the NP argument is present and Case principles are respected:

(40) a. **Sa-sąąy.*
b. *Sa-sąąy-níí-rà.*
3sg.cl-give-3sg.cl-3sg.INAN.cl
'He gives it to him.'

(41) *Rodrigo sąąy-(níí$_i$) ravichú$_i$-ray.*
Rodrigo give-3sg.cl rock-1sg.cl
'Rodrigo gives me the rock.'

(42) *Sa-dáátya-(níí$_i$) António$_i$*(-rà$_j$) niquee-jada$_j$.*
3sg.cl-know-3sg.cl Antonio-3sg.INAN.cl talk-infinitive
'He teaches Antonio the word.'

A nonclitic cannot intervene between the verb and a nondoubled direct object, as seen in numerous examples above. However, ex. 43 shows that a clitic, *-ray* '1sg.cl', does not count in determining adjacency, since it intervenes between the verb and the direct object but no ungrammaticality results:

(43) *Yi-a-sąąy-ray$_i$ tiiquii quivą́a$_j$.*
2sg-IRR-give-1sg.cl one fish
'Give me one/a fish.'

That clitics such as *-ray* do not count for adjacency is expected if they Chomsky-adjoin to their host:

(44) a. [$_V$ ...] [$_{clitic}$ ...] D-Structure
Chomsky-adjunction →
b. [$_V$ [$_V$ ...[$_{clitic}$ ...]]]

Thus, no nonverbal boundary intervenes between the clitic and the object and the object counts as adjacent to the verb.

4.5. SUMMARY. Before proceeding, let us sum up the object-doubling facts: Case is usually realized in Yagua; Case is always assigned to a right-adjacent NP; Case realization is always the appearance of the Case-assigner left-adjacent to the Case-bearer at S-structure; Yagua Set II clitics are [−A, +C].

4.6. UNACCUSATIVE SUBJECTS. This analysis also applies across the board to intransitive subjects doubled by Set II clitics:

(45) *Machíturu-numaa(-níí$_i$) António$_i$.*
teacher-now(-3sg.cl) António
'Antonio is now a teacher.'

(46) *Machíturu-numaa-níí.*
'S/he is now a teacher.'

T. Payne (1985:105) relates intransitive verbs taking Set II clitics, which he labels S_0 clauses, to unaccusative verbs. He notes that Yagua, like many languages, has 'stative/nonvolitional' subjects which are treated 'morphosyntactically just like transitive objects'. These subjects, like direct objects, are doubled by Set II clitics, as seen in 45 above. He further remarks that such subjects are often associated with verbs of locomotion and being (as in equative

or predicate nominal constructions), two classes commonly associated with unaccusatives (cf. Burzio 1986 and Davies 1986 for recent accounts). He also observes that many verbs only optionally take subjects doubled by Set II clitics, and that they may instead take subjects doubled by Set I clitics (cf. §4.7 below), depending on their discourse function. I interpret this to mean that raising of the unaccusative subject from its D-structure VP-internal position to [NP,S] position is determined by the discourse.

When the subject is postverbal, it is in the VP object position and may therefore be doubled by a Set II clitic. When unaccusative subjects appear postverbally, the preverbal position is highly likely to be filled by a 'presentational' morpheme (Payne's terminology) such as *muuy* 'there'.[20]

(47) *Muuy-numaa-téé-0-rà jaay-say.*
there-now-EMPH-(?)-3sg.INAN.cl heart-tree
'There now is its (the tree's) heart.'

4.7. SUBJECT DOUBLING. We want to know why doubling by a Set I clitic forces the double to appear to the right of the head, whereas nondoubled NPs appear to the left; why the host of any clitic must precede the clitic's double; and why Set I clitics attach only to the phrasal head. I argue here that the analysis developed for Set II clitics accounts for these facts with the stipulation that Set I clitics appear to the left of their host.[21]

Consider again examples of subject doubling:

(48) a. *Pauro púúchi Anita.*
Paul carry Anita
'Paul carries Anita.'
b. *Sa-púúchi Pauro-níí Anita.*
3sg.cl-carry Paul-3sg.cl Anita
'Paul carries Anita.'

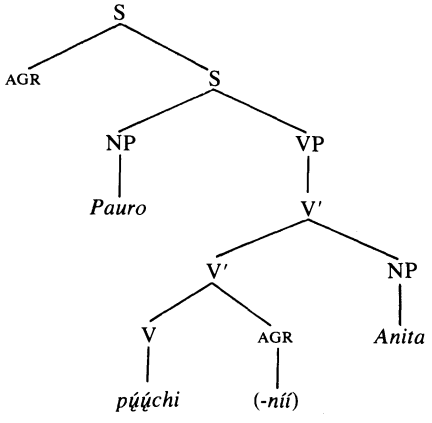
(49) a. *Tomasa$_i$ diiy yi$_i$-íva.*
Tom see COR-DATIVE
'Tom sees himself.' (lit. 'to himself')
b. *Sa$_i$-diiy Tomasa$_i$ yi$_i$-íva.*
'Tom sees himself.'

[20] The unaccusative structure in 47, where the single argument receives structural Case (as shown by the Set II clitic), is at once a problem for 'Burzio's Generalization' (Burzio 1986:185) that unaccusative verbs do not assign Case, and for Belletti's 1988 hypothesis that unaccusatives only assign inherent Case. But there is not enough data to press the issue here. In equatives like 48 and 49 Case is assigned even in the absence of an overt verbal element. My hunch is that Case in equatives results from the predication relation which obtains between the predicate nominal and the unaccusative subject.

[21] There may be a historical explanation for this. Yagua, like most Amazonian languages, may once have had SOV word order. If so, then all clitics would likely have appeared at one time to the right of their doubles, on the left of their hosts as proclitics, since Case would have been assigned to the left, as is normal for SOV languages. Direct Object Postposing, coupled with the condition that nominals appear adjacent to their Case-assigners, could have provoked Set II Clitic Rightward Movement. As the language changed to SVO and rightward Case assignment, the Set II clitics would have been highly susceptible to reanalysis as enclitics.

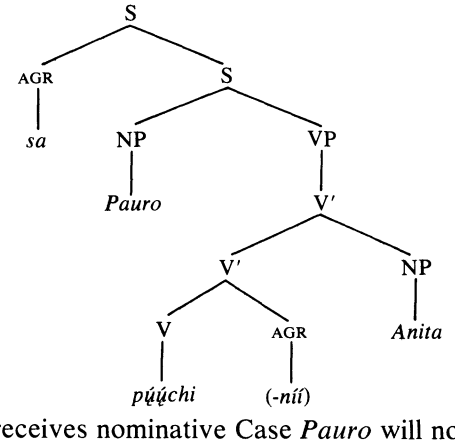
If we generate Set I clitics under AGR and assume that Case in Yagua is assigned to the right, as we did for Set II clitics, then we derive a structure like 50:[22]

(50)



AGR then assigns Case to the right, both in VP (accusative Case) and under S (nominative Case). If a clitic is inserted under the sentential AGR, as in 51, a Case-conflict arises. The clitic and its double compete for a single Case. In 51 the conflict is that both *sa* and *Pauro* are competing for nominative Case which is assigned by AGR.

(51)



If *sa* receives nominative Case *Pauro* will not, and vice-versa.[23] To resolve this conflict, I again appeal to morphological visibility, so that the Set I clitic may reassign its Case to the subject.

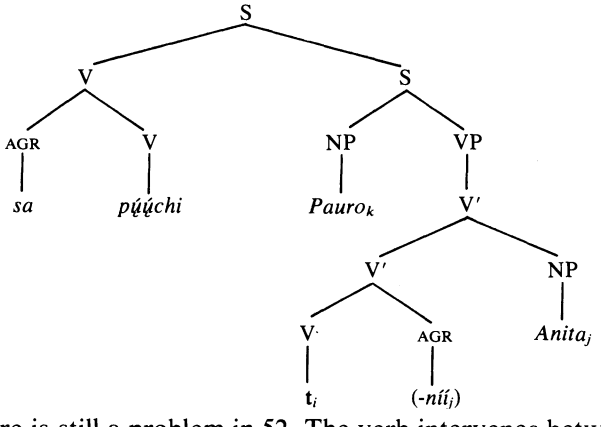
[22] This diagram is not explicit with regard to the structure of IP (Inflectional Phrase), shown here simply as S. X'-theory would likely force the generation of AGR to the right of VP. But Case theory, as per 39 above, would then force movement, presumably via adjunction, to the left of the subject, producing a structure like the one shown. The exact details are important but not crucial here, so I omit discussion of them for the sake of brevity.

[23] It could be argued that since *sa-* is under AGR and c-commands itself it also assigns Case to itself (a possible explanation for what Borer 1984 and Jaeggli 1982 call ABSORPTION). This Case can only be reassigned after *sa-* acquires morphological visibility.

Recall from 29 above that an expression can only acquire morphological visibility if attached to an independently visible host. Thus, the clitic cannot attach to its double, since this would fail to resolve the Case conflict. However, since the verb is independently visible via predication (as argued in Rothstein 1983 and Fabb 1984), the Case conflict in 51 can be resolved by attaching the clitic to the verb, either by lowering the clitic or by raising the verb.

Clitic lowering must be rejected because then the clitic's nominal Case would still not be available for assignment to the [NP,S] position—since Case in Yagua must always be assigned and is realized to the immediate right of the Case-assigner, as we have seen. If the clitic were lowered, *Pauro* would occur to its left, and uniformity of Case assignment would be lost. The only option, therefore, is for the verb to raise to INFL/AGR position (cf. Chomsky 1986a and Travis 1984 for arguments that this is common crosslinguistically). This derives the correct orders and allows *sa* to attach to the verb, freeing its Case for reassignment:

(52)



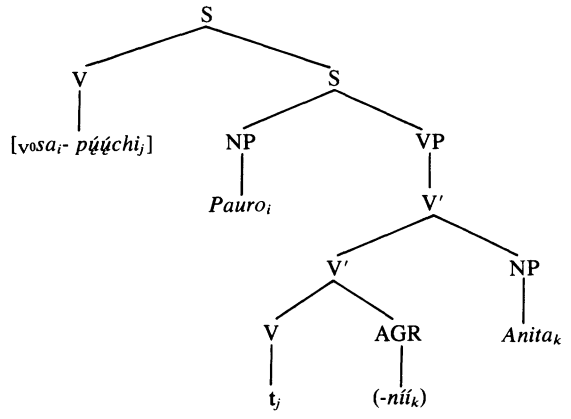
But there is still a problem in 52. The verb intervenes between the clitic and the subject ([NP,S]) position, so the Case-assigner and the Case-assignee are not adjacent. But if the clitic were INCLUDED in its host, then it would count as adjacent to its double—that is, it would then be part of the verb. We defined exclusion in 30 above. INCLUSION is defined in 53:

(53) INCLUSION: α includes β only if every segment of α dominates β (Chomsky 1986b:7).[24]

Subsequent to inclusion of AGR in V, the structure in 52 will be changed to the structure in 54. This structural change, forced by Case theory, thus accounts for the fact that SV order is obligatory without a clitic while VS order is obligatory with a clitic.

[24] This is similar to Emonds' (1985:243) conclusions on the attachment of inflectional morphemes. A Set II clitic will not be included, however, since this extra degree of attachment would not be motivated, at least not by anything I have been able to discover in Yagua. Morphological inclusion is only allowed if motivated (e.g. by a position class slot [cf. Nida 1948:76] generated on the root for the clitic).

(54)



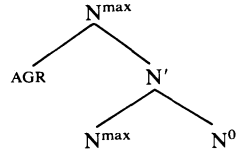
This also explains why the clitic undergoes otherwise word-internal Vowel Harmony with its host, as in 13 above: inclusion renders it part of the verb.

Let us now turn to a consideration of doubling of possessor and oblique NPs. The analysis just developed for subject doubling applies virtually without modification for these categories.

4.9. POSSESSOR DOUBLING. NPs which include a possessor NP in a multi-AGR language will have agreement between the head N and the possessor or genitive NP. This is because, as I claimed above, multi-AGR languages have the following properties: (i) each X^{max} projection dominates an AGR node; (ii) agreement morphemes are inserted under AGR; (iii) Case is assigned by AGR, as the 'approriate morphological constituent' of the head. As with INFL and V in many languages, AGR will assign Case to the argument of its phrase whether or not AGR and the head of its phrase form a continuous constituent at D-structure.

I argued above that nominative and accusative Cases are assigned to the right by AGR. If this is correct, then AGR must appear to the left of the NP complement in NPs. I assume again that trees are always binary, as per Kayne 1983, deriving structures like 55:

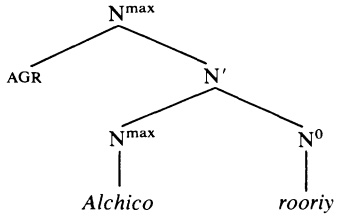
(55)



Consider an NP with a nondoubled possessor. In 56 genitive Case is assigned by AGR to *Alchico* at the immediate right:

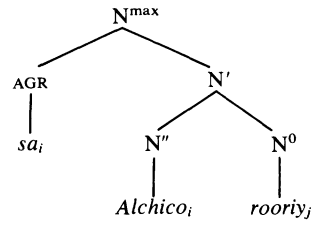
(56) a. *Alchico rooriy* 'Alchico's house'

b.



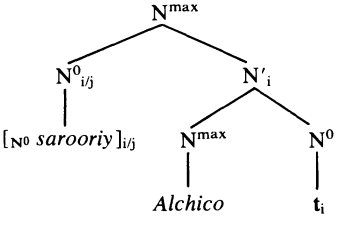
But if a clitic is inserted, the clitic must acquire morphological visibility or the Case conflict between *sa* and *Alchico* will produce ungrammaticality:

(57)



This can be resolved if we allow N^0 to move and INCLUDE AGR. Then *sa*'s genitive Case may be reassigned to *Alchico* via coindexation, the standard means of government, to the immediate right:

(58)



4.10. OBLIQUE NPs. The evidence suggests that there are no postpositional phrases in Yagua, i.e. that there is no clear justification for proposing a separate type of phrasal projection other than NP, S, or VP. What earlier treatments of Yagua refer to as postpositions I analyze simply as enclitic Case markers attached to nominals. I will have nothing further to say here about oblique NPs, since they behave just like genitive NPs with regard to binding (§5) and Case.

4.11. SUMMARY: CLITIC PARAMETRIZATION. This completes the analysis of Yagua clitic doubling. Independent support for it is adduced in the next section. Because this analysis depends on the assumption that Yagua clitics are [+C, −A], its success supports this clitic parametrization. The interaction of these two features predicts exactly four types of clitics crosslinguistically (cf. Everett 1986, 1987 for details):

(a) [+C, +A]: These clitics require both a θ-role and Case. Therefore, they will not allow clitic doubling, since this would require the assignment of a single θ-role to the clitic and its double, a violation of the θ-criterion. Examples of this type of clitic are found in French, Italian, and Standard Spanish.

(b) [+C, −A]: These are exemplified by Yagua and River Plate Spanish. They allow clitic doubling but produce a Case conflict, since both the clitic and its double compete for a single Case, as argued above.

(c) [−C, +A]: In Everett 1986 I argue that these are often found as valency-changing morphemes. An example is the English passive *-en*. Such clitics do not allow doubling, due to the θ-criterion. Rather, they are assigned a θ-role and then must appear on a host by the time the derivation gets to LF, in order to satisfy morphological visibility. They may never appear in a Case-marked position, since they are [−C]. This derives the well-known fact that *-en* must

be generated in English under INFL, the position to which the agent θ-role but no Case is assigned.

(d) [−C, −A]: In Everett 1987 this type of clitic is claimed to be found in Pirahã, an Amazonian language isolate. The purpose of this type of clitic includes agreement and, often, the identification of empty categories. Agreement morphemes in English are also [−C, −A] in my framework.

Everett 1986 argues that some clitics may be [αA/C], with the value of α provided by the θ-criterion or Case theory. Allowing an α value permits some clitics, such as French *il*, to be [+A] in some contexts (e.g. in *Il est venu* 'he came') but [−A] in other contexts, e.g. in complex inversion structures (Kayne 1983, Rizzi & Roberts 1989). This also handles the ambiguous behavior of the clitic *si* in Italian with respect to argumenthood, as reported in Cinque 1988.

The study of Yagua clitics then contributes empirically to the theory of nominal clitics by offering strong support for the importance of the features [C] and [A] in the crosslinguistic classification of nominal clitics.

INDEPENDENT EVIDENCE FROM REFLEXIVIZATION

5.1. Although my analysis accounts for Yagua clitic doubling, I must provide independent evidence that Yagua clitics are dominated by AGR. Without more evidence, the above account may reasonably be accused of being ad hoc. I argue here that reflexivization in Yagua offers the needed independent confirmation. The facts are startling: reflexive clitics may have as their antecedents subjects, genitives, and oblique NPs, but not direct objects. What makes this surprising is that genitives and obliques are not allowable antecedents in most languages since they, like direct objects, fail to c-command the reflexive pronoun. The fact that genitive and oblique antecedents are so rare crosslinguistically also makes a semantic account quite unlikely.

This analysis must be prefaced by an explanation of what is bound by the antecedent in a Yagua reflexive structure. I have argued above that Yagua clitics are not arguments. Then, since reflexivization in general relates two arguments, a clitic must always license an empty category (**ec**) argument in the position of its double when no overt NP is present (also required because the clitics cannot receive the object θ-role, which must be assigned according to the θ-criterion). For nonreflexive clitics, this **ec** will be pro ([+pronominal, −anaphor], using the features of Chomsky 1982). But for reflexive clitics this **ec** will be [−pro, +anaphor, +argument], the covert counterpart of lexical reflexives such as *himself, themselves* (cf. Everett 1987 and Saxon 1986):

(59) ...clitic$_i$...NP$_i$/pro$_i$... (where clitic and NP/pro are alternative expressions of a single θ-role)

The NP/pro in 59 is the double of the clitic, as defined above.

Yagua has two anaphoric clitics. The Set I coreference clitic, *jíy-/yí-*, indicates obligatory binding of a possessor, subject, or oblique NP. The Set II coreference clitic, *-yù*, indicates binding of the direct object (T. Payne 1985:44). The only possible antecedents for either clitic are possessors, obliques, and subjects. The examples which follow illustrate each of the possible antecedents for the coreference clitics.

Exx. 60–62 show subjects as antecedents:

(60) [$_S$ *Nuuda$_i$-jiya-numaa* [$_{NP}$ *jíy$_i$-rooriy-mu-ju*]]
1pl.EXC-go-now COR-house-LOC-DIR
'We are going to our house.'

(61) [$_S$ *Sa$_i$-pú́ú́chi-níí* *Anita* [$_{NP}$ *jíy$_i$-rooriy-mu*]]
3sg.cl-carry-3sg.cl Anita COR-house-LOC
'He$_i$ carries Anita into his$_i$ house.'

(62) [$_S$ *Sa$_i$-juvay$_j$* *Daviy$_i$-bay* [$_{VP}$ **t$_j$**-*yù$_i$*]]
3sg.cl-hit David-hit **trace**-COR
'David hit himself.'

Exx. 63 and 64 illustrate genitive antecedents:

(63) a. [$_S$ *Sa$_i$-jumutyo$_k$* *jiita* *naana-daa-nu$_j$* [$_{VP}$ **t$_k$**-*yù$_i$*]]
3sg.cl-answer (?) 2dual-little-person **trace**-COR
'Her$_i$ son answered her$_i$.' (*naana-* is idiomatic here)

b. [$_S$ *Sa$_j$-jumutyo$_k$* *jiita* *naana$_i$-daa-nu$_j$* [$_{VP}$ **t$_k$**-*yù$_j$*]]
3sg.cl-answer (?) 2dual-little-person **trace**-COR
'Her son$_j$ answered himself$_j$.'

(64) [$_S$[$_{NP}$ *Sa$_i$-rooriy-mu* pro$_i$] [$_{VP}$ *jíy$_i$-pú́ú́chi* pro-*níí* *Anita*]]
3sg.cl-house-LOC-pro COR-carry pro-3sg.cl Anita
'Into his$_i$ house he$_i$ carries Anita.'

Ex. 65 illustrates an oblique NP as antecedent:

(65) [$_S$[$_{NP}$ *Naada$_i$-jinchaju* pro$_i$] [$_S$ *jíy$_i$-tiryo* [$_{NP}$ *saj-viimu* *koodiy$_j$*]]]
3dual-upon pro COR-lie 3sg.cl-inside snake
'(Those) two lie upon each other inside the snake.'

Ex. 66 shows that direct objects may not serve as antecedents:

(66) a. *Sa$_i$-pú́ú́chi-níí$_j$* *Anita$_j$* *jíy$_i$-rooriy-mu.*
3sg.cl-carry-3sg.cl Anita COR-house-LOC
'He$_i$ carries Anita into his$_i$ house.'

b. **Sa$_i$-pú́ú́chi-níí$_j$* *Anita$_j$* *jíy$_j$-rooriy-mu.*
3sg.cl-carry-3sg.cl Anita COR-house-LOC
'He carries Anita$_j$ into her$_j$ house.'

I am going to argue in what follows that these facts may be explained by extending Chomsky's rule of SPEC-head agreement (1986b:24) to multi-AGR languages. The extension is to require AGR, the head of the phrase, and the argument of the phrase to be coindexed. I will also show that this coindexation produces ambiguity in the reference of nonobject NPs, since in those and only those NPs the maximal projection immediately dominating AGR will bear two indices—the index of AGR and the index of the head (N^0).

Before we turn to that topic, however, it is important to understand why a pragmatic account of reflexives is unavailable. A pragmatic analysis cannot predict the fact that direct objects can never serve as antecedents for anaphors (even when fronted for pragmatic effect, as in Left Dislocation structures). Also, such an analysis misses an important generalization: only those NPs which may precede their phrasal head may c-command out of the maximal projection in which they receive their θ-role. This includes possessors, subjects,

and obliques, but, crucially, not direct objects. A pragmatic account cannot explain this. It cannot even express it.

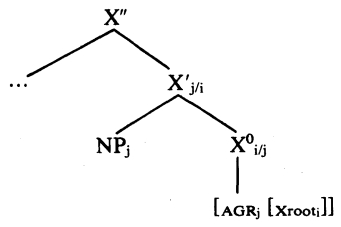
5.2. SPEC-HEAD AGREEMENT. Chomsky claims that any category agrees with itself and with its head, and that SPEC[ifier]-head agreement is a form of 'feature sharing'. That is, the SPEC (the first maximal projection dominated by the phrase in question) and the head of the phrase share features such as person, number, gender, and Case (the 'φ-features' of Chomsky 1981) when AGR is present. Chomsky 1986b also claims that SPEC and head share an abstract φ-feature F when AGR is missing. I generalize this proposal to Yagua by allowing agreement between heads and arguments rather than just between heads and SPEC.

If AGR is in the proper relation (in one of the three ways to be mentioned directly) to the head of S, which in PPA is generally considered an Inflectional Phrase (IP) (a projection of INFL), then, when the VP θ-marks IP, AGR will automatically 'relay' the θ-role and other features, e.g. Case, to the SPEC of IP, i.e. the subject position (Chomsky 1986b). AGR must be coindexed with the relevant argument of X^{max} for that argument to receive the necessary φ-features, and it must be unambiguously identified with the head.

Relating AGR to its head is easily accomplished if AGR actually appears on the head at D-structure (as in Pirahã NP, VP, and PP; see Everett 1987). Alternatively, AGR can be properly identified with its head through movement (e.g. V to INFL movement in English, as discussed in Chomsky 1986b, or INFL to V, as in Pirahã [Everett 1987]). I want to suggest, finally, a third way of formally relating AGR to the head of its phrase, one which does not involve movement or generation on the head. Borrowing from Kayne 1983, I claim that AGR also identifies the head-complement relation if the indices of AGR, the complement, and the head are CONNECTED.

Kayne (1983:165) argues that gaps appear in canonically governed positions and that moved elements and their gaps are separated only by nodes forming a proper subtree. Canonical government is determined by the verb-object relation (see Kayne 1983:168 for details): *X* and *Y* are in a canonical government configuration iff V governs NP to the right (as in a VO language) in the grammar in question and *X* precedes *Y*, or V governs NP to its left (as in an OV language) and *Y* precedes *X*. The antecedent α of an empty category β must be contained in a G(OVERNMENT)-PROJECTION of *X*, the governor of β. This will take place only if α and β are in the same X′ projection of *X* or (simplifying somewhat) if α is in a projection that goes down the same side of the tree as the projection in which β and its governor occur. A well-formed path exists only if all nodes are on the same side (allowing extraction of right branches in right-branching languages and left branches in left-branching languages). If we also require something similar to this for agreement, the indices of AGR, the complement, and the head must be connected (at D-structure). Let us call this related principle AGR-CONNECTEDNESS. This will have little effect in single-AGR languages or in languages where AGR appears on the head at D-structure, since the connection will take place under X′. The effect of connectedness in a language where AGR appears on the head is illustrated in 67:

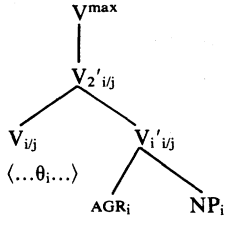
(67)



Assume that an index may PERCOLATE (Lieber 1980) in this fashion only if this is required internal to X″. Then in 67 *j*, the complement feature on the head, will not appear on X″, since nothing within X″ forces it to do so. The index *i* will appear on X″, however, since it is the referential index of the head itself, independently forced to percolate to X″ by X′-theory. I am assuming too, without much justification at this point, that AGR-connectedness differs from movement connectedness in being phrase-bound (i.e. within a single X^{max}).

When connectedness is applied in Yagua, the following indexings are derived, beginning first with VP (and once again assuming binary trees):

(68)



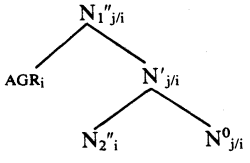
In 68 the *i* indices are connected (i.e. form a subtree) at V_2' and will thus percolate no farther. These are the instantiations of the index of the θ-role assigned by V to NP. Since the *i* indices go no higher, the direct object will not be able to bind anything higher than V_2'. It might be thought perhaps that this would allow the direct object to at least bind an NP inside VP. This is not true, however. The only two kinds of arguments found in the Yagua VP besides the direct object are the indirect object and oblique NPs. Payne & Payne's 1989 description of Yagua indirect objects leads us to believe that these are second objects, as closely related to V as the direct object is. If this is correct, then we might propose that these are also generated within V′. The evidence for this proposal is that indirect objects, like direct objects, may be doubled by Set II clitics. Also, indirect objects never appear with a 'prepositonal' Case marker. All other VP-internal NPs must occur with a Case marker. VP-internal NPs which are not indirect or direct objects may not be doubled by a Set II clitic, and they rarely (if ever) appear to the left of a direct or indirect object. These ordering and clitic-doubling restrictions on indirect and direct objects can be accounted for if direct and indirect objects are generated under V′ and all other VP-internal NPs are generated within VP but higher than V′.[25] Then the direct object may not bind an NP in V′; since its index is found on V′ by

[25] A similar distinction is postulated for Universal Grammar by Belletti & Rizzi 1988.

connectedness, anything it binds in V′ would violate the i-WITHIN-i CONDITION (Chomsky 1981). The essence of this condition is to prohibit a complement from being bound by the head of its phrase. If the direct object NP bound anything within V′, then so would V, since the direct object and V are co-indexed—thus violating i-within-i. But the direct object cannot bind anything higher than V′ either, since V′ is not a maximal projection and only maximal projections can bind (or, for example, the subject would always be bound by AGR, violating the Binding theory; cf. Chomsky 1986a). This correctly prevents direct and indirect objects from serving as antecedents for reflexives within V′. They fail to c-command outside of V′ and thus cannot serve as antecedents outside of this domain.

Now, consider NP:

(69)



Here the first subtree connecting N^0, AGR, and N_2'' is at N_1''. In 69 *j* is the referential index of N^0 and *i* is the index of N_2''. The index *i* appears on N^0 by virtue of the fact that N^0 assigns the θ-role of possessor to N_2'' and θ-assignment always involves coindexation (Chomsky 1986b). Now note that the indices of AGR and N^0 connect only at N_1''. This means that the reference of N_1'' will be ambiguous between N_2'' and N^0.[26]

If this is true, then a reflexive c-commanded by N_1'' may depend referentially on either N^0 or N_2'', exactly as the Yagua facts dictate.[27] Further, I also predict that this type of ambiguity will arise only in phrases where AGR is not on the head of its phrase at D-structure, as in ex. 63a–b.

This account of Yagua reflexives strongly supports the analysis of the preceding sections and is unavailable to any other theory of the AGR-head relation. For example, we cannot analyze these facts in terms of INDIRECT BINDING (Haik 1984). Haik allows an NP to indirectly bind a pronominal that it fails to c-command if the antecedent NP falls within the scope of another NP which does c-command the pronominal. But Indirect Binding does not apply here, since there is no 'other' NP involved.

[26] This type of binding and index percolation will not occur with Kayne's extraction examples, but only where X″ must share an index with X^0. This indexing also does not violate the i-within-i condition because the indices on X″ result from percolation. As noted above, however, i-within-i would apply, for different reasons, if the object were to bind an NP in V′. I-within-i does not apply to percolation of indices via X′-theory; if it did, all phrases would be ill-formed: $[_{X''_i} \ldots X^0_i \ldots]$. Percolation escapes the i-within-i condition perhaps because it is the sharing of a single index. Binding relations are ruled out, however, because they involve identical indices which originate separately—i.e., they index separate θ-roles.

[27] This indexing is an extension of the complement NP's index. It will not itself bind the NP (which would be a violation of Binding Condition C; see Chomsky 1982:6) if unlike categories may not bind each other (the 'offending' index is on a V), or, alternatively, if only arguments are potential binders. In either situation, the only category which can bind an NP out of the dominating X^{max} is the NP complement, via its index on its dominating X^{max}.

A potential problem for my proposed analysis is raised, however, by examples such as 70:

(70) *Sa$_i$-jụtay-jásiy yí$_i$-ą-jiya.*
3sg.cl-say-PROX$_1$ COR-IRR-go
'He$_i$ said (that) he$_i$ will go.'

In 70 *sa-* doubles the subject position of an embedded indirect speech clause. This violates the Binding Conditions (see n. 10 above) if an anaphor is indeed unbound in its governing category, S. However, note that the coreference clitic *jíy-/yí-* may only double subjects of tensed clauses in indirect speech. It has been argued by some (Kayne 1983, Picallo 1984) that subcategorized embedded clauses may be coindexed with the matrix verb. If we assume that indirect speech clauses are subcategorized by and coindexed with the matrix verb *jụtay* 'say', then the binding category for subjects of indirect speech clauses will be the matrix clause, correctly allowing 70. This follows under the notion of binding category defended by Chomsky (1986a:171) and Johnson 1987, who define 'binding category' in the following terms, where I is an indexing, α a domain, β an anaphor, and γ a governor of α. For some β, β must be bound in α, where α is the least Complete Functional Complex containing β for which there exists an indexing J which is Binding Theory (BT)-compatible with (α, β). I is BT-compatible with (α, β) if β is bound in α under I. Moreover, α is a Complete Functional Complex if all the grammatical functions compatible with a head dominated by α are coindexed with α.

According to this definition the binding category for an anaphoric subject of the indirect speech clause will be the main clause, since indirect speech clauses are coindexed with the matrix verb. Then indirect speech clauses need no special stipulations, and their binding properties follow directly from the theory of binding in PPA.[28]

The binding of the Set I coreference clitic *jíy-/yí-* is therefore explained by the interaction of Case theory and Binding theory.

The facts are identical for the Set II coreference clitic *-yù*, except that *-yù* indicates a bound direct object only. Exx. 72–74 illustrate binding of *-yù* by the subject NP and the genitive NP:

(71) *Sa$_i$-jinuuy* pro$_i$*-yù$_i$* pro$_i$.
3sg.cl-look.at pro-3sg.COR.cl pro
'S/he looks at her/himself.'

(72) a. *Sa$_i$-jumutyǫ jɨ́ɨ́ta naana-daa-nú$_j$-yù$_i$.*
3sg.cl-answer DISCOURSE.MORPH 3dual-little-person-COR
'Her son answered her.' (lit. 'herself')

b. *Sa$_i$-jumutyǫ jɨ́ɨ́ta naana-daa-nú$_j$-yù$_j$.*
3sg.cl-answer DISCOURSE.MORPH 3dual-little-person-COR
'Her son answered himself.'

[28] T. Payne (1985:46) notes that there are examples of *jíy-/yí-* used in isolated clauses or non-indirect speech clauses. But since he also notes that native speakers tend to edit such clauses so as to place the antecedent within the same clause as the anaphor, I will consider such examples to be performance errors or, at least, stylistically marked variations from full grammaticality.

(73) a. *Sa$_i$-rooriy-mu sa$_j$-jų̣va-siy-yù$_i$.*
3sg.cl-house-LOC 3sg.cl-strike-PROX$_1$-COR
'In his$_i$ house, he$_j$ struck him$_i$.' (lit. 'himself$_i$')
b. *Sa$_i$-rooriy-mu sa$_j$-jų̣va-siy-yù$_j$.*
3sg.cl-house-LOC 3sg.cl-strike-PROX$_1$-COR
'In his$_i$ house, he$_j$ struck himself$_j$.'

As 74 shows, any c-commanding **ec** or NP may serve as an antecedent for *-yù*, even the Set I reflexive clitic:

(74) *Sa$_i$-rooriy-mu jíy$_i$-sụ́ụ́y-yù$_i$.*
3sg.cl-house-LOC COR-bite-COR
'In his$_i$ house, he$_i$ (lit 'himself$_i$') bit himself$_i$.'

This concludes my discussion of clitic doubling, reflexives, and word order alternations in Yagua. We have seen that movement of the head of the phrase to AGR, motivated by Case theory, in conjunction with the requirement that the indices of AGR, the phrasal argument, and the phrasal head be connected, explains all of the relevant facts. I would now like to consider an assumption that I have made throughout this paper, namely, that the underlying syntactic word order in Yagua is SVO.

UNDERLYING WORD ORDER

6. The assumption that Yagua word order is SVO is absolutely essential to my entire analysis because the analysis crucially relies on configurational relationships among clitics, their doubles, antecedents, and reflexive morphemes. If the analysis I have proposed is to work, the configurations must be as I have claimed them to be. I consider the success of my analysis to be the strongest argument available for SVO as the basic word order in Yagua. However, given the importance of word order to my analysis, I need to discuss the possibility that VSO (which also occurs frequently in the data) is the underlying order, rather than SVO. This is important not only for the analysis I have proposed above, but also because most research on Yagua has claimed the basic word order to be VSO rather than SVO. (Other potential underlying orders are not considered since they do not appear at S-structure and would therefore involve absolute neutralization.)

For example, D. Payne 1985 offers solid arguments that the pragmatically unmarked word order in Yagua is clitic-VSO. In Yagua discourse, SVO order is always used to introduce new participants, thematic changes, and new or background information. Clitic-VSO order, however, conveys the main event line. This type of distinction between the two orders supports Payne's analysis. Nevertheless, I believe that this is not incompatible with the claim that the syntactically underlying order is SVO. I should point out that the arguments for a syntactically underlying order say nothing directly about pragmatic markedness, only that both SVO and clitic-VSO are well-motivated syntactically.[29]

[29] On the other hand, if SVO is the underlying word order, and if word order universals are really generalizations about underlying order (although it is not always clear what these are meant to be generalizations about), then Yagua violates no word order universals, contrary to what some (e.g. D. Payne 1986) have claimed.

A problem with adopting VSO as the syntactically underlying word order is that this would not allow us to derive the ungrammaticality of 75:

(75) *S clitic-V O

In the SVO analysis, the clitic-VSO alternate order is a consequence of Case theory. But the VSO hypothesis has no way of deriving this. If we were to posit, for example, a rule of subject fronting, we would have to resort to stipulation to avoid the order in 75. A stipulation such as 'clitics must precede their doubles' might cover the facts, but such a stipulation is hardly more than a restatement of the raw facts and is therefore undesirable.

We might stipulate instead that there is only one preverbal argument position, filled either by the clitic or by an NP subject. But this assumes that Set I clitics occupy NP positions, at once losing the generalizations about word order and coreference captured above by generating clitics under AGR rather than in NP positions. Moreover, as 73 shows, clitics and other phrases may simultaneously occupy preverbal position. These facts reduce the VSO analysis to mere stipulation.

The VSO analysis also wrongly predicts the absence of subject-object asymmetries, since it implies that there is no VP underlyingly (cf. Chung 1983 on implications of VSO as an underlying order). Yet we have seen clear evidence that Yagua does have the subject-object asymmetries expected from a VP. Unlike subjects, direct objects fail to serve as antecedents. The Set I versus Set II clitic division is trivially derived if Yagua has a VP: Set II clitics double NPs dominated immediately by a projection of V (transitive objects and unaccusative subjects), while Set I clitics double all other NPs. Another piece of evidence for VP is the fact that unaccusative subjects differ from other subjects in being doubled by Set II clitics. This is expected under Burzio's 1986 theory of unaccusatives only if Yagua has a VP. Finally, independent theoretical considerations also support the existence of a VP node. Some linguists (e.g. Williams 1980, Emonds 1985, and Safir 1987) have argued that assignment of θ-roles universally depends on a VP-internal versus VP-external distinction. Thus, what the SVO-as-underlying analysis gets without further ado, a VSO analysis can only stipulate.

D. Payne (1986) does offer one syntactic argument in support of her claim that VSO is basic. Payne claims that fronting the object NP into clause-initial position only produces structures of the type O clitic-VS, never *OSV. She argues that if SVO were 'basic', then an otherwise unmotivated rule of Subject Movement to postverbal position would be needed, triggered by Object Fronting, to rule out *OSV. Various potential responses come to mind here, but I will consider only one, since it is sufficient to make my point.

It could be argued that AGR always dominates either a clitic or an **ec**. This would be in fact the most natural assumption within the PPA model. If AGR does dominate an **ec** when no clitic is present, then this **ec** would need to be governed, due to the Empty Category Principle (Chomsky 1981). However, an expression moved to COMP, the governor of AGR (Chomsky 1986a), produces a branching structure, blocking government of AGR by COMP. In this case, AGR may not dominate an **ec** and thus must be filled by a clitic, forcing V Raising and deriving the desired orders. There is insufficient space here to establish

this conclusively. The point, though, is that the arguments raised in D. Payne 1986 for VSO as basic are not unanswerable. Therefore, since the SVO analysis, but not the VSO analysis, can explain all the phenomena discussed in this paper, I conclude that SVO is the most likely syntactically basic, i.e. underlying, word order in Yagua.

CONCLUSION

7. In this study I have provided an analysis of Yagua clitic doubling which not only accounts for constraints on clitic placement but also explains the complementary distribution between SVO and VSO word orders, as well as the unusual facts about Yagua reflexivization—namely, that genitive, oblique, and subject NPs, but not object NPs, may serve as antecedents for reflexive morphemes. I argue that this account is explanatory because it relies on presumably universal principles and parameters, rather than on rules, which are merely formalized stipulations.

Specifically, I have proposed two principles and two sets of parameters. I argue above for the principle of morphological visibility, by which I mean that an expression is visible at Logical Form if it is adjoined to or substituted into an X^0 category. Implications of this principle (first suggested in Everett 1986) are explored in Baker 1988 and Rizzi & Roberts 1989, where it is shown to provide important insights into incorporation phenomena and clitic behavior in French complex inversion structures, respectively. I also argue for the principle that AGR (the syntactic representation of agreement) is not exclusively associated with INFL, as in Chomsky 1981 and other works, but that in some languages it may be generated as a separate node under each maximal phrasal projection, where its primary function is the assignment of Case and other agreement features. Languages such as Yagua, where AGR is generated under all phrasal projections, are labeled multi-AGR languages.

Yagua also supports the crosslinguistic parametrization of nominal clitics defended in Everett 1986, 1987, where it is argued that clitics may vary with respect to whether or not they require Case or a θ-role. Clitics which require Case are [+Case], while clitics which require a θ-role are [+Argument]. Clitics which may not receive a θ-role or Case are labeled [−Argument] or [−Case], respectively. Some clitics may vary with respect to Case or argumenthood and are thus labeled [α Case/Argument], with the value of α determined by Case theory or θ-theory.

Finally, I have argued that AGR must be properly related to its phrasal head and to the relevant argument of the head. This may be accomplished by the appearance of AGR on the head or by AGR connectedness, i.e. by forming a subtree connecting (in a sense derived from Kayne 1983) the indices of AGR, the argument, and the head. This may be a parameter. It explains why, in Yagua, all and only those phrases (NP and S) in which AGR is higher in the tree than the head allow either the head or the argument of the phrase to serve as antecedent for a reflexive c-commanded by the entire phrase. AGR connectedness will have little effect in languages with only a single AGR, such as English (but see Chomsky 1988b). But it raises an interesting empirical question

as to whether other languages manifest reflexive facts similar to those found in Yagua. In any case, the fact that all of these parameters and principles are independently available in Universal Grammar counts in favor of my analysis.

To the degree that this analysis is successful, its dependence on Case theory provides evidence in favor of the only syntactic theory which contains a theory of Case, namely, PPA. The challenge to any other approach to Yagua word order and clitics is to successfully account for this range of facts under a single analysis.

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