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CLITICS, CASE AND WORD ORDER IN YAGUA

Daniel L. Everett

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Introduction

In the Peruvian language, Yagua, whenever a nominal clitic appears in NP, S, or PP, a tautophrasal, coreferent NP may no longer occur in its normal phrase initial position but must instead be placed after its phrasal nucleus, as in (1)-(3):

- (1) a. Pauro púúchu Anita. SUBJECT
 Paul carry Anita
 'Paul carries Anita.'

- b. Sa_i-púúchu Pauro_i-níí_j Anita_j.
 3SGI-carry Paul-3SGII_j Anita_j
 'Paul carries Anita'.
- c. *Pauro_i sa_i-púúchu(-níí_j) Anita_j.
- (2) a. Alchico rooriy. GENITIVE NP
 Alchico house
 'Alchico's house.'
- b. Sa_i-rooriy Alchico_i.
 'Alchico's house.'_i
- c. *Alchico_i sa_i-rooriy.
- (3) a. Nurutu viimu. POSTPOSITIONAL NP
 alligator inside
 'Inside the/an alligator.'
- b. Sa_i-viimu nurutu_i.
 'Inside the/an alligator.'_i
- c. *Nurutu_i sa_i-viimu.

Clitic doubling does not alter the postverbal order of objects, as seen in (1b). Clitics doubling objects differ from the clitics in (1)-(3) in that they are suffixed to their host, do not produce word order changes, and show a lesser degree of attachment to their host than clitics doubling possessors, subjects, or postpositional objects. Further, doubled objects, but not other doubled NPs, are interpreted as definite. Clitics which double objects in Yagua are called Set II clitics. All other clitics are referred to as Set I clitics.

In this paper, I argue that the relationship between Set I clitics and Set II clitics, and the effect of these clitics on word order, present some intriguing problems for theories of syntax, especially as seen in the phenomenon of clitic doubling, the co-occurrence of tautophrasal, coreferent clitic NP pairs associated with a single semantic or thematic (θ)-role. I argue that a careful study of Yagua clitic doubling makes at least the following contributions to linguistic theory:

1. The crosslinguistic parametrization of nominal clitics proposed in Everett 1986, 1987 receives significant support. Simply put, clitics may vary crosslinguistically in whether they require a θ -role or morphosyntactic case (henceforth Case).

2. By establishing that pragmatically unmarked word order (VSO) and syntactically underlying word order (SVO) in Yagua are coexistent, mutually compatible components of Yagua grammar, the concept of basic word order, assumed implicitly by the majority of typological studies, is shown to be of little use, unless defined more precisely in terms of the notions just mentioned. Incidentally, by demonstrating that SVO is the underlying order, then, contrary to the claims of Payne (1986), Yagua violates no typological universals.

3. Yagua Set I clitics are sensitive to otherwise word internal morphophonological processes, such as Vowel Harmony, which do not affect Set II clitics. However, as we will see, there are strong arguments for attaching all clitics in the syntax, i.e., postlexically. This represents a serious problem for models which account for word internal phonology or inflection in the lexicon, e.g. Lexical Phonology (LP. Mohanon 1986, Kiparsky 1985, Pulleyblank 1986) and Lexical-Functional Grammar (LFG. Bresnan 1982). It supports instead the attachment of at least some morphemes in the syntax.

The discussion is organized as follows. First, we survey the basic facts of Yagua clitic doubling and its interaction with word order. Section two presents additional facts about Yagua clitics which must be accounted for. In section three, it is shown that Yagua clitics are nonarguments. In section four, I propose an analysis of the facts in terms of Government and Binding Theory (GB). Section five adduces independent evidence for this analysis from some otherwise puzzling facts of Yagua reflexivization. The implication of this analysis for syntactic typology, and theories such as LP and LFG are discussed in the final sections. Results and major features of this study are summarized in the conclusion.

1 Overview of Yagua word order

D. Payne (1985) notes that it is not immediately apparent whether 'basic word order' is SVO or VSO. Both orders are natural and occur frequently. However, due to the fact that SVO order is more salient in discourse (i.e., it has special discourse functions such as introducing new participants), she concludes that VSO, the less salient order, is 'pragmatically unmarked' and hence the basic word order. Interestingly, however, as we have already seen in (1)-(3) above, there are other differences between these orders which cannot be explained exclusively in terms of pragmatic, discourse related factors.

Payne 1986 observes that full NP arguments are rare in Yagua discourse. When they are absent, however, a corresponding clitic is obligatory:

- (4) a. Sa-juuy.
3SGI-fall
'He/she falls.'
- b. *Juuy.
- (5) a. Sa-siyy.
3SGI-run
'He/she runs.'
- b. *Siyy.

The clitic may be omitted, however, when a full NP complement is present:

- (6) Anita juuy.
'Anita runs.'
- (7) Davi siyy.
'David runs.'

When a NP complement occurs without a coreferent clitic, the required order is preverbal for subject, pronominal for genitive, and prepositional for adpositional objects (henceforth obliques), as in (1)-(3) above. This is further supported by the ungrammaticality of examples like (8)-(10):

- (8) *Juuy Anita.
'Anita runs.'
- (9) *Rooriy Alchico.
'Alchico's house.'
- (10) *Viimu nurutu.
'Inside the/an alligator.'

In light of examples (1)-(10), the analysis of phrasal constituent orders cannot be relegated exclusively to pragmatics. Sharp, constant grammaticality contrasts which are not significantly altered by context are unlikely to be pragmatic in nature. At a very minimum, we must investigate the plausibility of a syntactic account for the above restrictions. Examples like (1) above and (11) below illustrate the fact that objects always follow the verb (except in Left-Dislocation structures, which are orthogonal to our present concerns. See D. Payne 1985:28ff for details).

- (11) a. Rospita suuta Anita.
'Rospita washes Anita.'
- b. Sa_i-suuta Rospita_i-nfi_j Anita_j.
- c. { *Anita Rospita } suuta(-nfi).
{ *Rospita Anita }
- d. *Anita_j sa_i-suuta Rospita_i(-nfi_j).

Subjects, genitives, and obliques (prepositional objects) thus pattern similarly. Only these grammatical functions may be doubled by Set I clitics. As we will see directly, Set II clitics, which double direct objects, are like Set I clitics in that their host must immediately precede their double.¹ Therefore, a grammar of Yagua must contain and, ideally, explain (12):

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

Any grammar of Yagua must express the fact that the direct object always appears to the right of its head (V), while genitives and obliques always precede (unless doubled) their heads, N and P, respectively:

- (13) a. V^o - Object
b. Genitive - N^o(~ clitic-N^o Genitive)
c. Oblique - P^o(~ clitic-P^o Oblique)

That is, verbs always precede their objects while nonverbs (N and P) follow nondoubled complements and precede doubled complements. An attempt to explain (12) and (13) in terms of independently necessary grammatical principles must wait until section four, after all the relevant data has been presented. Let us turn now to consider some more facts about Yagua clitics.

2 Clitics

2.1 Set I clitics

As we have seen, Set I clitics may be prefixed to V, N, and P. They may double subjects, genitives, and obliques. Moreover, both D. Payne (1985) and T. Payne (1983; 1985) note that Set I clitics are 'more closely attached' to their host than Set II clitics. This observation is based on the fact that Set I clitics undergo certain otherwise word internal phonological processes with their host, such as Vowel Harmony, which Set II clitics fail to undergo. D. Payne (1987:7) says that when the 3SG. Set I clitic sa is attached to an /h/-initial root whose first vowel is any other than /o/ or /e/, the vowel of the clitic, /a/, 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/ = orthographical j; /o/ = orthographical u):

- (14) a. Sa-rupiiy (no change) 'He/she walks.'
 b. Sa-jimiiy→Simiiy 'He/she eats.'
 c. Sa-juunay→Suunaay 'He/she cries.'

These examples further show that Set I clitics attach only to the head of the phrase of which their double is the complement. One way of expressing this in GB terms is to say that the host of a Set I clitic must assign a θ -role to the double. To summarize the facts concerning Set I clitics which must be accounted for: (i) they are prefixed to their host; (ii) their host assigns a θ -role to their double; (iii) their host must immediately precede their double; (iv) they undergo word internal phonological processes with their host; (v) when a Set I clitic is present, and only then, the genitive, oblique, and subject NPs must follow N, P, and V, respectively. Otherwise, they precede these elements.

Set I clitics are listed in Table One:²

	<u>SET 1 CLITICS</u>			
	1	1+2	2	3
Singular	ray-	--	jiiy-	sa-
Dual	naay-	vuuy-	saada-	naada-
Plural	nuuy-	vuuy-	jirey-	riy-

TABLE ONE

2.2 Set II clitics

Set II clitics differ from Set I clitics in a number of ways. First, they may only double VP internal NPs. Second, their host need not assign a θ -role to their double. They may thus appear on any word immediately preceding their double. Doubles of Set II clitics are interpreted as more definite, less generic than nondoubled direct objects. Set II clitics are enclitics whereas Set I clitics are proclitics. Set II clitics, unlike Set I clitics, fail to undergo word internal phonological processes with the host. The following examples illustrate these properties:

- (15) Sa_i-puuchu(*-nfi) Pauro_i rooriy(*-nfi)
 3SGI-carry Paul_i house

viimu-nfi_j Anita_j.
 into-3SGII Anita_j
 'Paul carries Anita into the house.'

In (15), we see that the clitic must immediately precede its double, as shown by the ungrammaticality of placing the clitic anywhere else. This is an adjacency restriction. The clitic may be attached to any of the potential hosts in (15), so long as it immediately precedes Anita:

- (16) a. Sa-puuchu(*-nfi) Pauro-nfi Anita.
 b. Sa-puuchu-nfi Anita.

The definiteness of doubled objects is shown in (17) and (18):

- (17) a. Sa-jatu buyaa.
 3SGI-drink manioc:beer
 'He/she drinks manioc beer.'
 b. Sa-jatu-ra_i buyaa_i.

3SGINII

'He/she drinks the manioc beer.'

This example shows that doubling by a Set II clitic produces a definite reading. Example (18) further illustrates the definiteness of doubled objects, seen in the impossibility of doubling a partitive NP:

- (18) a. Jir-rimiy-maa ray-rááva-ta.
 2SGI-spill-perfective 1SGI-poison-partitive
 'You spilled part of my poison.'
 b. *Jir-rimiy-maa-ra_i ray-rááva_i-ta.

3SGINII

Partitive case, marked by -ta, is semantically indefinite and thus cannot be combined with a marker for definiteness (the Set II clitic), since this results in a contradictory specification for the same feature. The facts of Set II clitics and their contrast with Set I clitics is explained in the next section. Set II clitics are summarized in Table Two:

SET II CLITICS

	1	1+2	2	3
Singular	-ray	--	-jiy	-nfi 'animate' -ra 'inanimate'
Double	naay	-vuuy	saada	naada
Reduplicated	nuuy	-vuuy	jirey	-riy

TABLE TWO

Before proposing an analysis of these facts, let us summarize our observations to this point, in order to understand as clearly as possible what we must account for:

1. VSO order occurs if and only if the subject is doubled.
2. SVO order is required for nondoubled, subject NPs.
3. Genitive-N^o order is obligatory when the genitive NP is not doubled.
4. When the genitive is doubled, the required order is clitic-N^o NP.
5. Oblique-P^o order is obligatory when the oblique NP is not doubled.
6. When the oblique is doubled, the required order is clitic-P^o NP.
7. For all clitics, the host must immediately precede the double.
8. The host of a Set I clitic must θ -mark the clitic's double.
9. The host of a Set II clitic need not θ -mark the double.
10. Set I clitics are proclitics.
11. Set II clitics are enclitics.
12. Set I clitics are affix-like in that they undergo word internal phonological processes with the root. They manifest a closer degree of attachment to their host than Set II clitics.
13. NPs doubled by Set II clitics are less generic, more definite in interpretation.
14. A clitic is obligatory (for both sets of clitics) when no double is present, optional otherwise.
15. As per Payne 1983, the requirement that Set II clitics must be right-adjacent to their double indicates a kind of syntactic constituency between the clitic and its double to its right. On the other hand, Set II clitics form a phonological constituent with their host, on their left. The result is what Payne 1983 terms 'wrong way' cliticization. Ideally, this too should follow from independent principles of the analysis.

An additional fact, which has not yet been commented on but which may be seen easily in examples like (18a), is that tense-aspect markers are suffixed whereas subject agreement is prefixed to its host. This is a common fact about Amazonian languages, most of which derive from an

SOV word order historically (Derbyshire 1986). In favor of the GB approach proposed below is that this property of Yagua is derived from independently necessary principles of Case assignment. Let us turn now to consider some specific proposals.

3 Parametrization of Yagua clitics

Although many authors have considered nominal clitics to be nonarguments universally (see especially Borer 1984 and the papers in Borer 1986), at least two researchers have argued that in fact clitics vary crosslinguistically with respect to argumenthood, Everett (1986, 1987) and Aoun (1981). 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 illustrated in (19) and (20) and previous:

(19) Sa_i-dííy Tomása_i-ra_j ravichú_j-iva.
 3SGI-see Tom-3SGINI_i rock-dat_j
 'Tom saw the rock.'

(20) Sa_i-dáátya-nu Pauro_i-níí_j
 3SGI-know-transitivizer Paul-3SGII_j

Antonio_i-ra_k niquee-jada_k
 Antonio-3SGII talk-infinitive
 'Paul teaches Antonio the word.'

The independent referring expressions in these examples (all common or proper nouns) are either the arguments of their clauses, receiving the θ -roles assigned by their phrasal heads or they are appositional, intraphrasal topics in nonargumental (A')-positions³. These are the only possibilities. Whatever the role of the doubled NP, it will severely restrict the classification of the clitic. This is so because a single head may not have two arguments associated with the same θ -role. This restriction is known as the θ -Criterion (Chomsky 1982:6):

(21) θ -Criterion: Each term of LF that requires a θ -role (each argument) [emphasis in original, DLE] is assigned a θ -role uniquely. Each θ -role determined by lexical properties of a head is uniquely assigned to an argument.

Now 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. This latter type of relation is not uncommon. For example, Jeanne 1978 argues that such appositional NPs are found in each major phrasal category in Hopi while Bresnan and Mchombo 1987 note a similar possibility for direct object NPs in Chichewa. One approach to the problem of the status of Yagua clitics with respect to argumenthood is to determine whether or not Yagua doubled NPs are in A-positions. A-positions are defined in Chomsky 1981:47 as:

'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 (at least for VP, NP, PP), we can conclude that these NPs are arguments and therefore by (21) above, that Yagua clitics are nonarguments.

Some of the diagnostics which may be applied to determine whether a given nominal expression is an A- or A'-position are given in Table Three:

	<u>A-positions</u>	<u>A'-positions</u>
Allows bare quantifiers at D-structure	yes	no
Allows extractions	yes	no
Shows weak-crossover effects ⁴	yes	no
Phonologically salient in relation to rest of clause	not usually	frequently
Pragmatically salient	not without special devices e.g. intonation, stress, etc.	usually

TABLE THREE

As indicated, we would expect results of the first three diagnostics of Table Three to be straightforward, 'yes' or 'no'. For the phonological and pragmatic tests, we can only expect that if there are differences in a given language, they will be gradient, tending to cluster as indicated. Therefore, the syntactic criteria provide the strongest and most reliable test for A versus A' positions. Consider as an example the bare quantifier test, using data from English (see Cinque 1984 for data from Italian and references to studies of this property crosslinguistically).

- (22) a. John came.
 b. John, he came.
 c. John he-came.

For many dialects of English, (22b) is grammatical only with a pause between John and he. For other dialects, pause is not necessary, rather the pronominal he may be cliticized to the verb. This has led some (especially Givón 1976) to conclude that the cliticized pronoun in (22c) is actually a form of agreement and that the NP, John, is now the Subject (and not the Topic). However, this hypothesis cannot account for the crossdialectally valid grammaticality judgments which follow:

- (23) a. $\left. \begin{array}{l} \text{Everybody} \\ \text{Somebody} \\ \text{Nobody} \end{array} \right\} \text{ came.}$
 b. $\left. \begin{array}{l} * \text{Everybody} \\ * \text{Somebody} \\ * \text{Nobody} \end{array} \right\} , \text{ he came.}$
 c. $\left. \begin{array}{l} * \text{Everybody} \\ * \text{Somebody} \\ * \text{Nobody} \end{array} \right\} \text{ he-came.}$

The bare quantifiers, everybody, somebody, nobody may appear only in A-positions. In (23a) they appear in Subject, [NP,S] position, and A-position, and the sentence is grammatical. But the sentences in (23b) and (23c) are bad. This is because in both of these cases, the pronoun is the grammatical subject, leaving only an A'-position (COMP or Topic) available for the bare quantifier at D-structure. A pragmatic account of such contrasts will not work, as the following contrasts between Standard Italian and the northern dialects, Trentino and Fiorentino show (from Rizzi 1985):

- (24) *Nessuno lo conosco in questa citta. STANDARD ITALIAN
 nobody him I:know in that city
 'I don't know anyone in that city.'

- (25) Tut l'e capitá de not. TRENTINO
 everything it happens at night
 'Everything happens at night.'
- (26) Nessuno l'a detto nulla. FIORENTINO
 nobody he has said nothing
 'Nobody said anything.'

These examples show that the failure of bare quantifiers to be doubled by clitics in some languages is not a universal pragmatic restriction based, say, on definiteness contrasts between quantifiers and clitics but is a syntactic fact. The most straightforward account of the contrast in (24)-(26) above is that Standard Italian clitics are argumental, preventing co-occurring bare quantifiers from occupying A-positions at D-structure. But for Fiorentino and Trentino, the clitics are nonarguments. Rizzi (1985) shares this conclusion, arguing that the clitics in (25) and (26) are under the AGR(eement) node (following a suggestion in Belletti 1982). This allows the bare quantifiers tut 'all' and nessuno 'nobody' to occur in [NP,S] position at D-structure.

Now, applying this first diagnostic to Yagua, the evidence suggests that bare quantifiers in Yagua can be doubled, indicating that doubles are in A-positions and thus are arguments. Certain quantificational pronouns in Yagua are formed from the numeral tíf 'one' plus a suffix further specifying its meaning:

- (27) a. tíf-tiy 'whoever'
 one-relativizer
- b. tíf 'someone, anyone'
- c. tíf-quii 'one, something (animate)'
 -animate
- d. tíf-ki 'one' (used for jaguar)
 -?
- e. tíi(-)taju 'all, everyone'
 (-)?

Now, consider the following pair of sentences:

- (28) Tíf-tiy_j jiya-sara tóó-va sa_i-súúy
 one-rel_j go-habit jungle-dative 3SG_i-bite
- maa coodiy_i-ntiy-níí_j.
 perfective snake-repetitive_i 3SGII_j
 'Whoever goes to the jungle, the snake has bitten
 him/her too.'

- (29) Teta vurya-a junúuy-ra
 unless 1PLINC-irrealis look-inanimate

vurya_i-a díiy títaju_i.
 1PLINC-irrealis die all_i
 'Unless we look at it, we will all die.'

- (30) Néé -tiy -múy díiy-vay-ríy
 negative-conclusive-negative die-nom:PL-3PL

riy_i-vicha títaju_i.
 3PL_i-live all
 'If they are not dead ones, they are all alive.'

The quantifier títiy 'whoever' is in preverbal subject position in (28), while its morphologically related form, títaju 'all, everyone' is in the normal postverbal position of a doubled NP subject in (29) and (30). In spite of the gloss 'all', títaju is not a floating quantifier. In nondoubled contexts it appears to be restricted to subject, object, and relative head positions, i.e., A-positions, as with English everyone. On the basis of this restriction to A-positions and its grammaticality in doubling contexts, I submit that bare quantifiers in Yagua may be doubled, strongly supporting the assertion that Yagua clitics are nonarguments. Let us now consider evidence from extraction.

- (31) Sa_i-siryi jasiy nuñú_i, coodiy, jááyanú.
 3SGI-scurry there isula, snake, fer-de-lance
 (ant species)

títáyu_i níf-tiy_i sa_i-vicha-sara
 all 3SG-relativizer 3SGI-be-habit

judfa súuy-ra
 hurting bite-3SGINII
 'There scurried up the isula (ant species) the snake, the fer-de-lance, all who (they) are hurting, biting ones.'

Adopting D. Payne's (1985:70ff) analysis of Yagua relative clauses, the relativizer corresponding to English WH-relative words in COMP is níftiy. Now note that níftiy is doubled in (31) by sa-. This can be interpreted in two ways. Either sa- is a resumptive pronoun (a phonologically realized variable), in the sense of Sells 1984, or the relativizer binds an empty category variable (Chomsky 1981:101ff) and sa- is merely a nonargumental, nonresumptive clitic.

The resumptive pronoun hypothesis is unlikely, because it does not explain the failure of nonclitic pronouns to serve as resumptive pronouns as well, as is common in languages with resumptive pronouns. There are no structures in Yagua in which a quantifier directly binds a free pronoun:

(32) * $[_X \text{ max} \dots \text{nf} \text{t} \text{y}_1 \dots \text{nf} \text{f}_1 \dots]$

Under our present assumptions, the grammaticality of (29) and (30) versus the ungrammaticality of (32) is explained by assuming Yagua clitics to be nonarguments whereas Yagua free pronouns are arguments.

Then, since Yagua does not otherwise have resumptive pronouns, I conclude that extraction facts provide additional evidence to that already gleaned from bare quantifier constructions that doubled NP positions in Yagua are A-positions and, therefore, θ -positions. This means once again that Yagua clitics are nonarguments.

I was, not surprisingly, unable to find any examples of weak-crossover in the corpus available⁶. In any case, the evaluation of weak-crossover data requires access to native speaker intuitions about often very subtle contrasts of grammaticality. I will therefore close this section on the argument status of Yagua clitics by considering potentially relevant phonological and pragmatic data, the weaker of the diagnostics listed in Table Three.

Doubled NPs given in examples throughout this paper are not given any special phonological marking, such as pause, extra stress, intonation, etc. to set them off from the other constituents of the phrase. This is of course to be expected if doubled positions are phrasal arguments in A-positions. Phonological evidence is therefore compatible with our assertion 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, all roles with a higher degree of pragmatic salience than subjects, objects, and other A-positions (see Dooley 1982 for a lucid discussion of pragmatic and phonological distinctions along this line in Mbyá-Guarani). However, doubled positions are no more marked pragmatically than nondoubled positions. They are simply interpreted as the subject, direct object, etc. of their phrase. Interestingly, D. Payne (1985:201ff) asserts that clitic-doubled constructions are less salient pragmatically than nondoubled constructions with full NPs. While this is completely consistent with an analysis of doubled positions as A-positions, it would be less likely under the hypothesis that doubled positions are A'-positions. I conclude, therefore, that evidence from bare quantifiers, extraction, phonology, and pragmatics supports the analysis of Yagua doubled positions as A-positions. Consequently, I submit that Yagua clitics are nonarguments. In the following sections, I want to explore the possibility that in spite of their nonargumental status, Yagua clitics nonetheless require Case.

4 Case and word order

4.1 Introduction

To discuss Case, we must first have some understanding of what is meant by Case in GB. Case is one of the licensing conditions on well-formed expressions (Chomsky 1986a). 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 at LF if it has Case (Chomsky 1981:337). This is most obvious in 'free word order languages' such as Greek and Latin, where the morphological case-ending of a nominal expression is crucial to the interpretation of that nominal's θ -role. But, as Chomsky (1988:101ff) says, 'If all languages are essentially alike in their deeper essential nature, we would expect [languages such as, (DLE)] Spanish and English also to have a case system of this general sort.'

Indeed, like Greek and Latin, all languages impose morphological or syntactic restrictions on the relation between phrasal heads and their complements. The restriction is morphological in Greek: an NP object can only be related to a verb if it bears the appropriate case-ending, usually accusative. In English, we might say the restriction is syntactic, strict word-order relations must be maintained, e.g. subject precedes the verb, object immediately follows, etc. Notice, though, that this cannot be reduced to some sort of pragmatic 'confusion-avoidance' principle:

- (33) a. John shot the dog.
 b. The dog was shot.
 c. *Was shot the dog.

The restriction forcing the patient of a passive into subject position, as shown by the contrast between (33b) and (33c) cannot be simply to avoid confusion as to roles, since there is no other argument around to provoke any confusion in either example. We can express the contrast rather by saying that the object in (33c) has no Case, none being available from a passive participle. It must therefore raise to subject position to receive nominative Case. Word order restrictions in English, then, are at least partly the result of Case requirements.

We can subsume Greek-type Case systems and those of the English variety under a single generalization: 'Overtly mark the relation of the complement to its head before LF.' Let us call this marking, whatever form it actually takes (whether word order, morphological endings or a combination of the two), Case. The need for this marking we shall label (following standard practice) visibility. Then, Case is intimately related to θ -role assignment (via visibility) but is nonetheless logically distinct from it.

In Everett 1986, I argue that any nominal may be visible at LF in one of two ways. It may be assigned Case (directly by the head in an A-position or via its chain, as per Chomsky 1981:333ff) or, like incorporated nouns, affixes, and many clitics, it may be visible by virtue of its appearance on a phrasal head (which itself must be licensed or visible at LF by Case-theory, X'-theory, θ -theory, etc. cf. Chomsky 1986a). These options may be formalized as in (34):

(34) Visibility:

- a. Position Visibility: α is position visible if and only if for some $\beta \in X^{\max}$, β is Case-marked and $\beta = \alpha$ or β is a projection of α .
- b. Morphological Visibility: α is morphologically visible if and only if for some $\gamma \in X^0$, γ is position visible and γ does not exclude α .

(35) α is not excluded from γ only if it appears in a. or b.:

- a. [$\gamma \dots \alpha \dots$]
- b. [γ [$\gamma \dots$]]... $\alpha \dots$] (Order irrelevant)

4.2 Case assignment

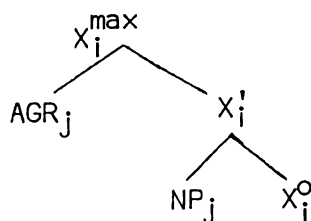
In GB, Case assignment is accomplished under government by coindexation with a Case assigner. Nominative Case is assigned by AGR, genitive Case by N^0 , accusative Case by V^0 , and oblique Case by P^0 . However, the inclusion of AGR in the list of Case-assigners introduces a slight incongruency. It is the only nonhead which assigns Case. AGR is itself a constituent of INFL, the head of S (under most current assumptions, cf. Chomsky 1986b). One might hypothesize that AGR is the head of INFL and hence, ultimately the head of S, but independent motivation for such a move is not apparent. Let us say, rather, that the X^0 head of a projection, such as INFL, may assign Case via its 'appropriate morphological constituent'. This may be the head itself or an AGR node within the head's maximal projection.

4.3 Multi-AGR languages

In Everett 1987, I argue 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, Oiapiti, Pirahã, and Yagua) and elsewhere which seem to manifest agreement between all phrasal heads and their complements. Let us refer to such languages as multi-AGR languages.

In such languages, it is useful to suppose that each X_i^{\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 [AGR, INFL] and V^0 in English and other languages, the AGR node may be discontinuous from its S-structure host at D-structure. In either situation, however, Case will be assigned internal to each X_i^{\max} by an AGR node/morpheme. The kind of Case actually assigned will be determined by government of AGR by the head, X^0 . The governor of AGR determines the Case AGR assigns.

(36)



The order and structure of (36) will be determined by Case assignment and θ -assignment requirements (e.g. government and adjacency), X' -theory, and language-specific peculiarities where relevant (see Travis 1984 for detailed discussion). The coindexations in (36) are forced by X' -theory. AGR assigns Case by coindexation and government to NP.

This account of general features of agreement in multi-AGR languages requires no theoretical apparatus beyond that already required for single AGR languages such as English. It is simply a logical extension of existing assumptions to a relatively unexplored domain. With this much established, let us return to consider Yagua clitics.

We concluded earlier that Yagua clitics are nonarguments, which we can represent informally as [-A(rgument)]. Also, we noted that a likely place to insert [-A] clitics⁸ is under an AGR node (Everett 1987, Rizzi 1985, Koopman 1984 and others). Let us assume for the moment, then, that Yagua nominal clitics are generated under AGR.

But if this is all there is to say about Yagua clitics, that they are nonargumental agreement morphemes, then it is difficult to see how their presence or absence would affect the syntax as drastically as we have observed. In Pirahã, for example, where clitics are nonarguments, inserted under AGR, and do not require Case (Everett 1987), clitics do not materially affect the syntax, aside from identification of empty categories. Their principal role is the overt registration (by coreference) of the head-complement relation.

We have already established that, like Pirahã clitics, Yagua clitics are nonarguments, [-A]. If, however, unlike Pirahã clitics, Yagua clitics required Case, then it would be natural to expect that they would produce a more obvious effect on the syntax than non-Case-requiring clitics, since Case is so tightly restricted by configurational and linear requirements.

Furthermore, under this assumption, any clitic-doubling construction would contain a Case-conflict: the clitic and its double would compete for a single Case assigned by the head⁹. This Case conflict would rule all clitic-doubling structures ungrammatical unless there were some means in Yagua grammar for resolving this conflict¹⁰. I am going to argue in what follows that in fact a solution to this conflict is available from independent, universal principles. Let us begin by considering an analysis of clitic-doubling in VP¹¹.

4.4 Case assignment and doubling in VP

4.4.1 Direct objects. Recall that doubling of a direct object is optional when the direct object is right-adjacent to the verb, required elsewhere.

- (37) a. Sa-púúchu(nf_j) Anita_j.
 3SGI-carry(-3SGII) Anita
 'He carries Anita.'
- b. Sa-púúchu Pauro *(-nf_j) Anita_j.
 'Paul carries Anita.'
- (38) a. Anita ra rumiy(ra_i) buyaa_i yi-iva.
 Anita irrealis spill(-3SGINII) manioc:beer 2SG-DAT
 'Anita will spill manioc beer on you.'
- b. Anita ra rumiy yi-iva *(-ra_i) buyaa_i.

The asterisk preceding the parentheses indicates that the material inside is obligatory.

There are two problems we must deal with. First, how is Case assigned? Second, why must the clitic appear when the object is nonadjacent to the verb? Consider the first question.

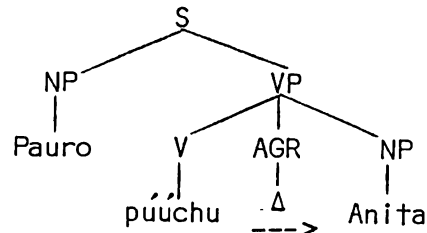
The requirement that objects follow the verb could be expressed in terms of Case:

- (39) Assign Case to the right.

This is natural given that 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 notions, consider a possible structure for VP in Yagua:

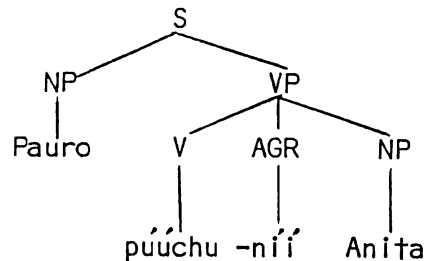
(40)



(-> = accusative Case assignment)

In simple SVO structures, then, accusative Case is assigned to a right-adjacent NP. If, as we are supposing, Yagua is a multi-AGR language and AGR optionally dominates a clitic, then an alternative, more detailed expansion of (40) would be:

(41)



In this configuration, but in no other, the Set II clitic is optional. Let us annotate this as in (42):

(42) When a Case is assigned to a right-adjacent NP, the clitic is optional; otherwise, it is obligatory.

What might account for (42)? As Safir (1981) has argued, in most languages, it is required that Cases be realized¹². The realization of Case is its phonetic implementation, that is, how it comes to be heard. As a set of morphosyntactic restrictions between heads and complements, Case is realizable, as we have noted, via linearity, morphological marking, and/or other ways (such as, perhaps suprasegmental devices). Suppose that in Yagua, Case realization must obey (43):

(43) Yagua Case Realization: A complement must appear right-adjacent to its Case assigner at S-structure.

Suppose, too, that the clitic, even though we are assuming that it also needs Case, may assign Case to the object. This would account for all of the object-doubling facts we have seen to this point.

When the object is right-adjacent to the verb, the verb may assign Case to it directly, by (43). Alternatively, the clitic could assign Case to the object (we have not yet seen how, but we will). Then, whether the clitic does or does not appear, (43) is satisfied. But now, when the object is not adjacent to the verb, it can only satisfy (43) if doubled by a clitic to its immediate left which assigns it Case. If this could be made to work in a satisfactory manner, then the principles of Case assignment (42) and Case realization (43) will account simply for placement and obligatoriness of direct object clitics.

The problem of course is how the clitic could assign Case to the object. Recall our assumption 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. Thus it seems difficult to reconcile our assumption that clitics need Case with the facts¹³

And yet, there is one possible analysis. As I noted in (34), there are two ways that a nominal can be visible: by receiving Case or by appearing on a licensed X^0 category. To say that a given expression requires Case is to say that (i) it must be assigned Case and that (ii) it must be visible at LF. Curiously, perhaps, both of these requirements may be met without necessitating that the expression actually have Case at S-structure. An expression could be assigned Case, acquire morphological visibility, and subsequently allow its Case to be reassigned. Of course, the only kinds of expressions which could acquire morphological visibility are those which may attach to X^0 . Since Yagua lacks a rule of noun-incorporation (which I take to be an arbitrary characteristic; some languages have this rule, others do not), this leaves only clitics and affixes, which I will lump together for now as dependent terms.

Yagua objects may be separated from the verb either by a doubled subject or by movement/placement of the object to the rightmost boundary of the VP. Then, Case assignment, Case realization, and visibility can account for all the facts.

When the object is right adjacent to the verb, the clitic need not occur. If it does, then it must attach to the verb (which is independently visible via predication, as per Rothstein 1983; Fabb 1984). This frees up its Case for reassignment (subject to the same restrictions as initial assignment). When the object is not adjacent to the verb, it cannot receive Case, assuming that Case is assigned after movement, nor have its Case realized via right adjacency to the verb. But if the verb's objective Case were assigned to the clitic, this problem would be eliminated. Assume the general rule Affect- (Lasnik

and Saito 1984), which allows us to move or otherwise change the D-structure characteristics of a nominal expression in any way we please, subject to independent restrictions. Then Case principles will attach the clitic to a X^0 category left-adjacent to its double and reassign its Case to its double (after acquiring morphological visibility) whenever the double is not right-adjacent to the verb¹⁴. This gets us every fact we have noted to this point:

1. Obligatoriness of the clitic when no double is present (Case must be assigned and realized);
2. Optionality of clitic when double is otherwise right-adjacent to the verb (Case realization is satisfied with or without the clitic);
3. Obligatoriness of clitic when double is not right-adjacent to the verb (Case realization can only be satisfied when the clitic is present);
4. Clitic cannot attach to its double (the double is not independently visible);
5. Clitic must attach to the immediate left of the double (Case is assigned to the right);
6. Set II clitic attaches to right edge of host, rather than left edge (direction of Case assignment and adjacency requirements)¹⁵.

We get these facts without having to assume that clitics are inherently different from affixes (for example, tense/aspect markers do not move because they are not involved in Case assignment, not because they belong to a different type of morpheme class. See section seven.) nor that there is some sort of 'wrong-way' cliticization going on (as suggested in Payne 1983). The facts all follow from independent, syntactic Case principles. As we now see, this analysis applies straightforwardly to doubling of indirect objects.

4.4.2 Indirect objects. D. Payne 1985:30 and Payne and Payne 1988 note several facts about indirect object doubling in Yagua. However, what is truly interesting is that all these facts can be expressed by the generalization that the object closest to the verb need not, but may be, doubled (as we have already noted in the context of direct objects), while the object farthest from the verb must be doubled. When the verb is bitransitive, each subcategorized object must be overtly referenced, either through a clitic or an argument NP.

(44) Sa-saay*(-nfi)*(-ra)
 Sub-give-Iobj-Dobj
 'He gives it to him.'

(45) Rodrigo saay-(nfi.) ravichu,-ray.
 Rodrigo give-3SGII rock ₁ 1SG
 'Rodrigo gives me the rock.'

The clitics are required in (44) for the same reason noted for direct objects; the Case must be realized.

restriction against doubling partitive NPs, as in (49b), since partitive Case is inherently nondefinite and thus incompatible with doubling (because this produces definiteness). The fact that a doubled NP must be definite is not uncommon crosslinguistically (Givón 1984:371ff).

I want to suggest an account of this phenomenon which, although highly speculative, nonetheless indicates that the Case-based analysis of Yagua clitic doubling may be on the right track. This proposal is based on work of Adriana Belletti (1988) in which it is argued that the inherent Case of certain verbs is partitive.

In GB, an inherent Case is one which is associated with a restricted range of θ -roles. Such Cases are only assigned when the Case-assigner also assigns a θ -role to the Case-assignee. Genitive and oblique Cases are inherent Cases, for example. (This restriction is known as the Uniformity Condition; see note 9 above. Belletti 1988 and Chomsky 1986a discuss inherent Case in detail.)

Yagua is like many Amazonian languages in that it lacks definite/indefinite articles, or any other obvious formal device for distinguishing definiteness. Thus, it would not be difficult to imagine that if a device existed independently that could be exploited to mark definiteness, the language might take advantage of this.

Now, in GB there are only two Cases which are not inherent Cases, nominative and accusative, which GB labels structural Cases. That is, only these Cases may be assigned even when the assigner does not θ -mark the assignee. Recall that in Yagua, Set I clitics double nonobject NPs. Thus, they may appear on Ns, Ps, and AGR. Although AGR assigns a structural Case, nominative, N and P assign only inherent Cases, genitive and oblique. Thus, Set I clitics are not unambiguously associated with structural Case, but also may reassign/receive inherent Cases. Set II clitics, however, are unambiguously associated with structural Case. That is, since Set II clitics only double objects of V, then any time a Set II clitic appears, a structural Case may be assigned. Because a verb also θ -marks its object, it may assign either a structural Case or an inherent Case, an option unavailable for any other phrasal head.

Now let us suppose that Yagua has exploited these facts in the following way. A verb may assign either an inherent Case, which by hypothesis will be the nondefinite partitive Case, or it may assign a structural Case (accusative). Let us assume that in Yagua the distinction between these Cases will be realized only in the definiteness of the object (verbal inherent Case = nondefinite; verbal structural Case = definite). When there is no Set II clitic, the verb may assign either Case, so nondoubled objects may be either definite or nondefinite. However, since Yagua clitics are nonarguments and since inherent Case may only be assigned to arguments, only structural Case may be assigned to a Set II clitic. But this means that only structural

Case will be available to be (re)assigned to the double of a Set II clitic. To express definiteness via Case, Yagua need only mark inherent V Case as nondefinite (according to Belletti 1988 this is a property of Universal Grammar (UG)) and structural Case as definite (a logical extension of a contrast potentially available in UG). Then any NP doubled by a Set II clitic will receive structural Case and, therefore, a definite interpretation.

This will not apply to Set I clitics because they are not unambiguously associated with a structural Case assigner. The Yagua child would have no clear data available to learn this distinction, since Set I clitics with Ns and Ps would have to receive an inherent Case, while Set I clitics with AGR would receive structural Case.

The restriction against assignment of inherent Cases to nonarguments may be enforced for Set II clitics at all levels of the grammar since verbs may assign either inherent Case or structural Case. But for Set I clitics, since N^os and P^os only assign inherent Case, this could only be enforced subsequent to the clitics' acquisition of morphological visibility. I assume therefore, that for Set I clitics at least, the Uniformity Condition is only checked at Logical Form.

While this account is incomplete, it is sufficient to show that the present analysis is not only compatible with these facts, but is able to point to an explanation of this set of facts in terms of Case in UG. Since this same Case subcomponent of GB has informed our entire analysis, this looks like a very promising avenue of inquiry. Therefore, I conclude that definiteness facts offer intriguing potential support for my analysis of Yagua clitics.

4.6 Summary

We can sum up the facts about object doubling:

- (51)
- a. Case must be realized in Yagua.
 - b. Case is always assigned to a right-adjacent NP.
 - c. Case realization is always the appearance of the Case assigner left-adjacent to the Case bearer at S-structure.
 - d. Yagua Set II clitics are [-A, +C].
 - e. As nonarguments unambiguously associated with V, a structural Case assigner, Set II clitics are assigned structural Case.
 - f. Therefore, NPs doubled by Set II clitics must receive a definite interpretation.

4.7 Unaccusative subjects

This analysis also applies across the board to that class of intransitive subjects which are doubled by Set II clitics, as in (52)-(53) (see note 17 also):

(52) Machíturu-numaa(nfí) Antônio_i.
 teacher-now(3SGII) _i Antônio_i.
 'Antônio is now a teacher.'

(53) Machíturu-numaa-nfí.
 'S/he is now a teacher.'

T. Payne 1985:105ff specifically relates the class of intransitive verbs taking Set II clitics, which he labels S_o clauses, to unaccusative verbs, referring to Relational Grammar as his source. He notes that for Yagua, as for many languages, there exist 'stative/nonvolitional' subjects which are treated 'morphosyntactically just like transitive objects'. Payne 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 crosslinguistically with unaccusatives (Burzio 1986; Davies 1986). He also observes that many verbs only optionally take S_o subjects and may instead take S_a subjects (i.e., those with Set I clitics, cf. section 4.8.1 below), depending on their discourse function. This will not concern us here, however.

Given the lack of detailed information available on these verbs, and their close correspondence semantically and syntactically to unaccusative verbs, I will assume here that S_o clauses are just unaccusative clauses. When the subject is postverbal, it is in the VP object position and thus may (optionally, for the same reasons of Case realization noted above) be doubled by a Set II clitic. When unaccusatives appear postverbally, the preverbal position is obligatorily filled₁₇ by a 'presentational' word (Payne's terminology) such as múúy 'there'

4.8 Case, subjects, possessors, and obliques

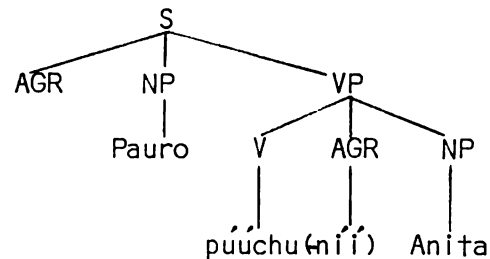
4.8.1 Subjects. Let us begin this section by reviewing the facts to be accounted for. We want to know (i) why doubling by a Set I clitic forces the double to appear to the right of the head, whereas nondoubled NPs appear to the left; (ii) why Set I clitics undergo word-internal processes such as Vowel Harmony, while Set II clitics do not; (iii) why the host of a Set I clitic, like that of a Set II clitic must precede the double; (iv) why Set I clitics only attach to the phrasal head. I argue in this section that the analysis developed for Set II clitics will account for all of these facts with the additional information that Set I clitics appear to the left of their host, a fact for which there is a reasonable historical explanation (cf. section seven below).

Consider once again examples of subject doubling:

- (54) a. Pauro púúchu Anita.
'Paul carries Anita.'
- b. Sa-púúchu Pauro-níí Anita.
'Paul carries Anita.'
- (55) a. Tomása_i dííy yi_i-íva.
Tom_i see COR-DAT
'Tom sees himself.' (lit: 'to himself')
- b. Sa_i-dííy Tomása_i yi_i-íva.
'Tom sees himself.'

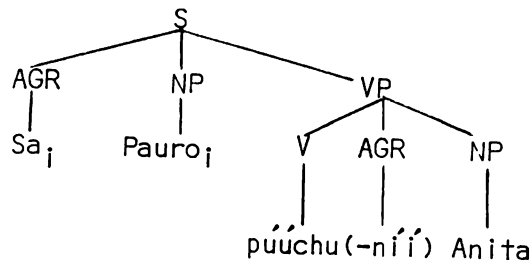
If we treat Set I clitics as AGR and assume that Case in Yagua is assigned to the right, just as we did for Set II clitics, then we derive a structure along the lines of (56):

(56)



AGR then assigns Case to the right both in VP (accusative Case) and under S (nominative Case). Now, if a clitic is inserted under sentential AGR, as in (57), since the clitic needs Case, a Case-conflict arises:

(57)

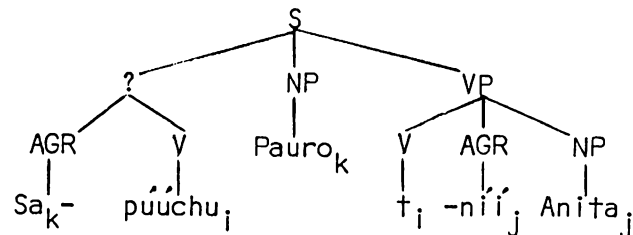


Both the clitic sa and the NP Pauro are competing for a single Case (nominative). If AGR assigns Case to sa, then Pauro fails to receive Case and vice-versa. As with Set II clitics, to resolve this conflict, we need recourse to morphological visibility, so that the Set I clitic may reassign its Case to the subject.

Recall from definition (34) above that an expression can only acquire morphological visibility if it is attached to an independently visible host. Thus, the clitic cannot attach to its double since this would fail to resolve the Case conflict. Fortunately, a natural host for AGR is available, the verb. It is a well-known fact that AGR generally must occur on the verb by S-structure. Also, since the verb is visible independently via predication, the Case-conflict in (57) can be resolved by attaching the clitic to the verb, either by lowering the clitic or by raising the verb.

The first option, clitic-lowering, must be rejected since then the clitic's nominal Case would still not be available for assignment to the [NP,S] position. This is because Case in Yagua must always be assigned rightward, as we have seen. But if the clitic lowered, its double would occur to its left and Case could not be assigned. The only option, therefore, is for the verb to raise to INFL/AGR position. As argued in Chomsky 1986a and Travis 1984, V-to-INFL movement is a rather common operation crosslinguistically. This would derive the correct orders:

(58)

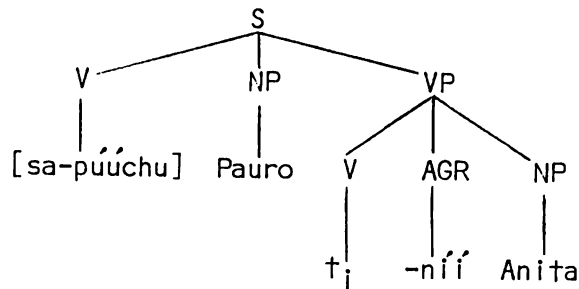


Sa may now attach to the verb, freeing up its Case for reassignment to the immediate right. But there is still a problem. The verb intervenes between the clitic and the [NP,S] position. Thus, the Case assigner and Case assignee are not adjacent. But if the clitic were actually included in its host, then it would in fact be adjacent to its double. This is so since it would then in effect be part of the verb. We defined exclusion in (35) above. Inclusion may be defined as:

(59) Inclusion: α includes β only if every segment of α dominates β . (Chomsky 1986b:7ff)

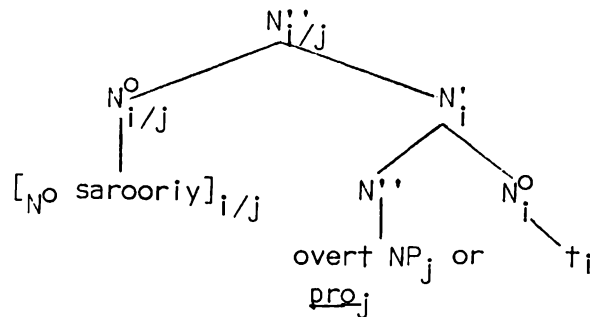
This will mean that when V moves to AGR it does not Chomsky-adjoin to AGR but, rather, sister-adjoins to AGR, which will subsequently cliticize to V (on the attachment of inflectional morphemes in general, the reader is referred to Emonds 1985:243ff). Thus the structure of (58) will be in fact as in (60), subsequent to cliticization:

(60)



A final comment will complete our analysis of subject-doubling. Since the clitic bears an index prior to cliticization, this index will percolate up to the maximal projection of its containing X^0 . This is a consequence of the fact that the index of the clitic just is an index of X^0 , since the clitic is part of X^0 . For example, the structure of a NP with doubling would be as follows (NP structure is discussed in the next section):

(61)



As we see in section 9 below, this makes some interesting predictions which strongly support the present analysis¹⁸.

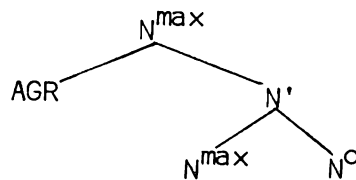
We thus account for why (i) Set I clitics are more closely attached to their hosts than Set II clitics (otherwise they would be nonadjacent to their double for questions of Case assignment), undergoing word internal processes with their host; (ii) SVO is obligatory without a clitic but (iii) VSO is obligatory with a clitic. Let us now turn to consider doubling of possessors and adpositional objects. The analysis just developed for subject doubling applies virtually without modification within NPs and PPs.

4.8.2 Possessor doubling. If Yagua indeed is a multi-AGR language, then it will have the following properties: (i) each X^{\max} projection will dominate an AGR node; (ii) agreement morphemes will be inserted under AGR; (iii) Case may be assigned by AGR, as the 'appropriate morphological constituent' of the head. As with AGR, INFL, and V in many languages, (iii) may apply whether or not AGR and the head of its phrase form a continuous constituent at D-structure.

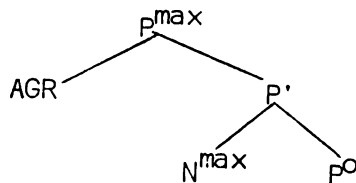
We assumed that nominative and accusative Cases are assigned to the right by AGR. I maintain this assumption here. This will mean that AGR appears to the left of the NP complement in NPs and PPs. If we also assume that trees are always binary, then structures like (62a) and (62b) are derived:

(62)

a.



b.

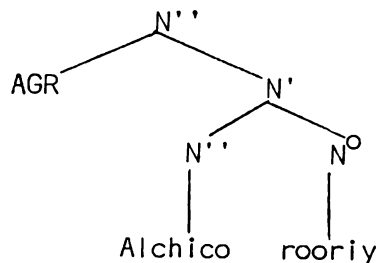


If we do not assume that all trees are binary, the configurational relations will not be so straightforward. For the sake of this discussion, I will assume binary trees.

Consider a NP with a nondoubled possessor:

(63) a. Alchico rooriy.

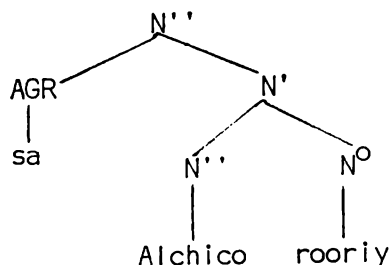
b.



Alchico receives genitive Case from AGR. Genitive Case is thus assigned to the immediate right, maintaining uniformity of assignment

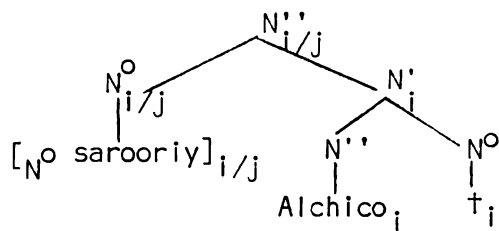
for nominative, accusative, genitive Case. But now suppose a clitic is inserted:

(64)



Sa must acquire morphological visibility or the Case conflict between sa and Alchico will produce ungrammaticality. This can be resolved in the same way as nominative Case. Allow N^0 to move to AGR and formally include AGR. Then sa's genitive Case will be freed up and able to be reassigned to Alchico via the standard means of government, coindexation, to the immediate right:

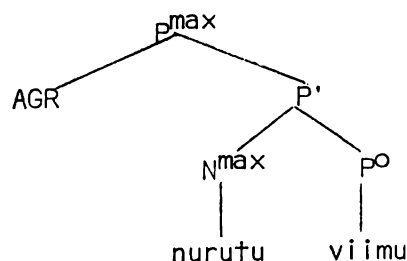
(65)



The same analysis may be used for doubling in PPs.

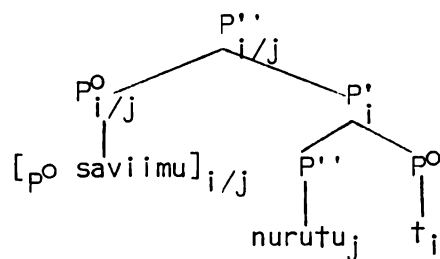
4.8.3 Postpositional phrases. I assume the following derivations for doubling in PPs. The reader is referred to the preceding section for details.

(66)



(67) a. Sa-viimu nurutu.

b.



4.8.4 Conclusion. We have been successful in accounting for a wide range of intriguing facts of Yagua clitic doubling. Further evidence in favor of the hypothesis defended above is adduced in the next section from reflexives and coreference forms. Because this entire analysis depends on the assumption that Yagua clitics are [+C,-A], its success is to be understood as supporting this type of classification. The crosslinguistic classification of clitics according to the parameters of Case and Argumenthood derives from findings in Everett 1986 and 1987. The interaction of these two features predicts exactly four types of clitics crosslinguistically. The reader is referred to the references just cited for details. The upshot of this is that the study of Yagua clitics gives important new information to studies of clitic types allowed in UG.

5 Reflexives

A crucial component of the above analysis is that the index of Set I clitics must percolate to the X^{\max} projection of their host. This is motivated by Case assignment and evidenced by the degree of attachment of Set I clitics¹⁹. However, if the index of the clitic does indeed percolate to the X^{\max} node of its host, then since the index of the clitic = the index of the double, NPs doubled by Set I clitics should have an extended c-command domain, namely, that of their containing phrase (given the indexings in the preceding examples). Possessors and obliques will therefore c-command the same material as their dominating (maximal) PP or NP²⁰. Since index percolation is not motivated for Set II clitics, object NPs should not have the same c-command domain as their VP. If all indices are referential indices (Chomsky 1981; Williams 1980), these predictions should be testable by the behavior of the relevant elements relative to the binding theory.

For example, can possessors and oblique NPs serve as antecedents to elements outside of (but within the c-command domain of) their dominating NP or PP? The expectation is that they can only if they are doubled²¹.

A further bit of introductory comment which must be covered is what is actually bound by the antecedent. Recall that Yagua clitics are not arguments. This means that the reflexive clitic is not itself the argument bound by an antecedent (or θ -assigned by its phrasal head). I will assume for purposes of discussion that clitics always license empty category (ec) arguments in the position of their double when no overt NP is present (this is also required by the θ -criterion since the clitics cannot themselves receive the θ -role assigned obligatorily by the verb). 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, +an, +argument], that is the nonovert counterpart of lexical reflexives such as himself, themselves, etc. The possible need for such a category is mentioned in Everett 1987 and in Saxon 1986. I am assuming in fact a structure like (68) for clitic doubling constructions:

- (68) ...clitic...NP_i/pro_i...
 (Where clitic and NP_i/pro_i refer to a single θ -role.)

The NP/pro in (68) is the double of the clitic, as defined above.

There are two types of anaphoric (or coreferential to use T. Payne's (1985:46ff) terminology) clitics in Yagua, corresponding to Set I clitics and Set II clitics, respectively.

According to T. Payne 1985:44ff, the Set I coreference clitic, iyi-yi-, indicates (obligatory) coreference between the argument so marked and another argument which can be doubled by a Set I clitic

(possessor, oblique, and subject). The Set II coreference clitic, -yù, indicates coreference of an object (again, though, the only possible antecedents are possessors, obliques, and subjects). jfy-/yf- is most commonly used to refer to possessors. Examples of jfy-/yf- are:

(69) [_S Núúdyá_i -jiya-numáá [_{NP} jfy_i -rooriy-mu-jù]].
 1PLEX-go-now COR-house-LOC-DIR
 'We are going to our house.'

(70) [_S Sa_i -púúchi-níí Anita [_{NP} jfy_i -rooriy-mu]].
 3SG-carry-3SGII Anita COR-house-LOC
 'He carries Anita into his house.'

These first two examples show the binding of jfy-/yf-, itself doubling a NP object, by the subject. The next two examples show binding of this morpheme from arguments of NP and PP, respectively.

(71) [_S [_{NP} Sa_i -rooriy pro_i -mu] jfy_i -púúchi-níí Anita].
 3SGI-house LOC pro COR_i-carry-3SGII Anita
 'In his_i house he_i carries Anita.'

(72) [_S [_{PP} Naada_i -jinchaju pro_i]
 3DL-upon_i pro COR-lie
 jfy_i -tiryo sa-viimu koodiy].
 3SGI-inside snake
 '(Those) two lie upon each other in the snake.'

In T. Payne 1985:44ff, the principal syntactic restriction on coreference is that the antecedent must precede the double. This is not sufficient, however, since VP objects may not be antecedents even when they precede. Given the device of index percolation and the fact that it does not occur with direct objects, it seems that an additional condition is necessary: the antecedent must c-command the anaphor²².

(73) Conditions on antecedents of anaphors in Yagua:
 (i) The antecedent must precede the anaphor;
 (ii) The antecedent must c-command the anaphor.

However, it may be possible to eliminate condition (73i), precedence. In all the examples where jfy-/yf- is bound by a preceding possessor or oblique, this argument has arguably been fronted for pragmatic effect, such as focus. Moreover, if we assume that focus is accomplished in Yagua by adjunction to S, then we will have the following inference:

1. A subject c-commands everything in S because it is immediately dominated by S.
2. A preceding possessor has been adjoined to S (note that it is

certainly out of its D-structure VP position). Therefore, its c-command domain is also S.

3. Then, since there is no evidence that a preceding NP may be an antecedent if it fails to c-command the coreference clitic (given index-percolation), we may restate (73) as (74):

(74) Condition on Yagua coreference: The antecedent must c-command the anaphor.

But (74) is obviously just a fact about Universal Grammar. This means that we have eliminated the need for any language specific statement about Yagua coreference. It is all explainable via Case theory. This would also explain why the coreference clitic may not precede its antecedent: the antecedent would no longer c-command the anaphor. That these otherwise surprising facts are actually predicted by the present analysis is to be understood as strongly supporting this analysis. A potential problem for this analysis is raised, however, when we consider examples such as (75) and (76):

(75) Sa_i-jutay-jásiy yí_i-a jiyá.
 3SGI-say-PROXI COR-IRR-go
 'He_i said (that) he_i will go.'

The coreference clitic in (75) doubles the subject position of an embedded, indirect speech clause. This would appear to violate the Binding Conditions, since it seems to allow an anaphor to be unbound in its governing or binding category, S. However, it is crucial to note that the coreference clitic jíy-/yí- may only double subjects of tensed clauses in indirect speech. It has been argued by some (cf. Kayne 1983; Picallo 1984, and others) that certain 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 jutay 'say', then the binding category for indirect speech clause subjects will be the matrix clause. This follows under the notion of binding category defended in Chomsky 1986:171ff:

(76) Binding Category:

Where I is an indexing, β a domain, α an anaphor, and γ a governor of α .

For some β , α must be bound in β , where β is the least CFC containing γ for which there exists an indexing J Binding Theory (BT)-compatible with (α, β) .

I is BT-compatible with (α, β) if α is bound in β under I.

β is a Complete Functional Complex (CFC) if all the grammatical functions compatible with a head dominated by β are coindexed with β . (See also Johnson 1987:354).

Let us assume that the CFC for the coreference clitic on the subject of the indirect speech clause will be the main clause, since indirect speech clauses are coindexed with the matrix verb. This will

signalling a 'thematic break', T. Payne 1985:6ff) does not affect the reflexive reading at all.

- (81) Sa_i-rooriy-mu sa_i-juva-siy-yù_i /_i.
 3SGI-house-LOC 3SGI-strike-PAST1-REFL
 (i) 'In his_i house, he_j struck him_i.'
 (ii) 'In his_i house, he_j struck himself_j.'
- (82) Sa_i-rooriy-mu jiy_i-súúy-yù_i.
 3SGI-house-LOC COR_i-bite-REFL
 'In his_i house, he_i bit himself_i.'

These facts about possible antecedents for reflexive provide striking confirmation of the notion of index-percolation which results from the Case-based analysis of Yagua clitic-doubling proposed in section four above. Before closing, it would be useful to show clearly that objects cannot be antecedents. Both D. Payne 1985:152 and T. Payne 1985:46ff state this prohibition explicitly, providing examples like (83):

- (83) Sa_i-suuta-nfi_j Anita_j jiy_i/*_i-rooriy viimu.
 3SGI-wash-3SGII Anita_j COR_i-house inside
 'S/he washes Anita inside his/her house.' (house = Anita's)

Such examples are out because the object NP Anita fails to c-command the anaphor jiy-.

I would like to turn now to consider some theoretical and typological implications of this analysis.

6 Underlying versus basic word order

6.1 Underlying word order

This analysis has assumed that the underlying word order of Yagua is SVO. It is worth considering the alternative hypothesis that VSO, the other frequently occurring word order, is underlying rather than VSO.

The hypothesis that VSO is the underlying word order fails to derive the ungrammaticality of (84) below in any enlightening way:

- (84) *S clitic-V 0

The VSO hypothesis fails here because (i) it can only stipulate that clitics and their doubled NPs may not co-occur preverbally; (ii) even if VSO is underlying it still has to allow for an alternate word order or derivation in which the subject appears preverbally, due to the frequent occurrence of SVO order.

In the SVO analysis, the clitic-VSO alternate order is a straightforward consequence of Case theory, as we have seen. But the VSO hypothesis has no way of deriving these facts. If it posited, for example, a rule of subject fronting, it would have to resort to stipulation to avoid the order in (84). A stipulation such as 'clitics must precede their doubles' might cover the facts but it is hardly more than a restatement of them and therefore much less desirable than an explanatory account.

Another stipulation might be that there is only one preverbal position available, to be filled either by the clitic or by a NP subject. But this depends on the highly dubious assumption that Set I clitics occupy NP positions. We have already seen that Set I clitics are part of the verb since, among other things, they undergo word internal Vowel Harmony with the verb. Thus, clitics do not occupy full word positions (A or A' positions in GB). But if this is so, the VSO analysis is hard-pressed to explain why they and full NP subjects cannot both occupy preverbal position. Moreover, as examples like (72) above show, clitics and other phrases, e.g. PPs may in fact occupy preverbal position simultaneously. This renders the restriction against simultaneous co-occurrence of clitics and subject NPs in preverbal position a stipulation at best.

Another difficulty for the VSO analysis is that, without additional assumptions, it predicts the absence of subject-object asymmetries since it implies that there is no VP underlyingly (see Chung 1983 for discussion of the implications of claiming that VSO is an underlying order). Yet we have seen clear evidence that Yagua does have the type of subject-object asymmetries we would expect if it had a VP; (i) the failure of direct objects to serve as antecedents; (ii) the entire Set I versus Set II clitic class division, which can be credited simply to 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; (iii) unaccusative subjects differ from other subjects in being doubled by Set II clitics, exactly what is expected by the theory of unaccusatives (Burzio 1986) if Yagua has a VP; (iv) theory internal considerations also argue for the existence of a VP node: θ -role assignment arguably depends on a VP-internal versus VP-external distinction universally (cf. Williams 1980, Emonds 1985, Safir 1987).

Thus, what the SVO-as-underlying analysis gets without further ado, a VSO analysis can only stipulate or ignore (the arguments for a VP). I conclude, therefore, that the evidence strongly supports the assertion that SVO order is underlying and that this²⁵ assertion is conceptually and empirically superior to the VSO hypothesis.

Before concluding, however, we need to consider the single syntactic argument given (Payne 1986) that VSO is basic. Payne 1986 observes that fronting the object NP into clause initial position only produces structures of the type 0 clitic-VS, never *OSV. Payne claims

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. For example, recall that Case Realization, (43) above, requires all arguments to be right adjacent to their Case assigner at S-structure. Let us break this into its two components: (i) all arguments must be adjacent to their Case assigner at S-structure; (ii) all arguments must be right adjacent to their Case assigner at S-structure. Assume that (i) holds for all arguments, but that (ii) holds only for sentence internal arguments. A rule such as Object Fronting (highlighting or topicalizing the object) may violate the finer constraint of directional adjacency, (ii), for pragmatic effect but not the stronger, more general nondirectional adjacency requirement, (i). Then, when the object raises to S initial position, the verb (its Case assigner) must also raise (Set II clitics may not leave the VP and hence could not be used to save the construction). If V Raising, a sentence internal rule, requires sentence internal motivation, then a Set I clitic must appear under AGR, forcing V Raising, simultaneously satisfying the adjacency constraint on the object (which holds, presumably at S'). This will allow only the order O clitic-VS, just as desired.

An alternative account would be that AGR must be governed when it does not dominate a clitic (due to the Empty Category Principle). By hypothesis, an object (or any other material, cf. examples like (72) above) moved to COMP, the governor of AGR (cf. Chomsky 1986a), would produce a branching structure, blocking government of AGR by COMP. Then, when COMP is branching, AGR may not dominate an ec and thus must be filled by a clitic, forcing V Raising and deriving the desired orders (I assume here that AGR is never null but always dominates a clitic or an ec). It would take more space than can be justified here to argue conclusively for either of these hypotheses. The point to be made, though, is that the argument raised by Payne 1986 for VSO as underlying is not a strong one. At the same time, the arguments for SVO are.

6.2 Basic word order

In spite of the above arguments on underlying order, D. Payne 1985 offers rather convincing arguments that the pragmatically unmarked word order in Yagua is clitic-VSO. For example, in Yagua discourse, SVO order is always used to introduce new participants, thematic changes, or other new information. It is also used to express background information. Clitic-VSO order, however, is used in the body of the discourse to convey the main event line and is not associated with new information. This type of distinction between two orders supports Payne's analysis. The arguments for a syntactically underlying order have nothing directly to say about the issue of pragmatic markedness. All they tell us is that both SVO and clitic-VSO are well-motivated syntactically²⁶. If D. Payne is correct in her claim that clitic-VSO order is the pragmatically basic word order, and yet the underlying

syntactic order is SVO, as argued here, then an interesting situation arises: underlying order and pragmatically unmarked order may be coexistent, mutually compatible, but nonequivalent in a single language. That is, a language may have, as does Yagua, more than one kind of 'basic word order', depending on whether the focus is pragmatics or syntax. But this means that the notion of 'basic word order', assumed to be a unitary notion in most typological studies, is in fact imprecise and in need of further qualification. It is necessary to state generalizations explicitly in terms of either underlying or pragmatically unmarked order. Since basic word order fails to distinguish these two notions, it itself is of little use and should be avoided as a scientific term.

It is also worth noting that, contrary to Payne 1986, Yagua violates no word order universals under this account (e.g. genitive-head noun order, postpositions, and suffixation which would be difficult to account for if Yagua were VSO). The conclusion here then 'solves' the apparent typological strangeness of Yagua by providing detailed, independently justified arguments that Yagua is not VSO.

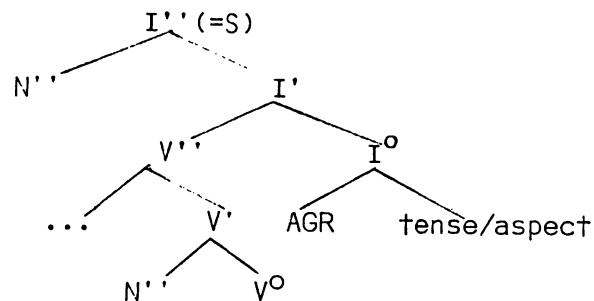
7 Some diachronically oriented speculation

Like most Amazonian languages (Derbyshire 1987), Yagua word order has certain features which seem to indicate that it was historically SOV. For example, it has postpositions, the genitive precedes the NP head, subject agreement morphemes attach to the left edge of their host (V) and tense/aspect morphemes attach on the right edge of the verb.

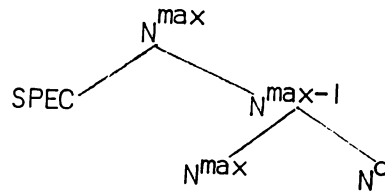
If we assume that Yagua word order was SOV at an earlier period, the above facts are expected for theoretical reasons. Generally, perhaps always, Case in SOV languages is assigned uniformly to the left (cf. Travis 1984). The X'-structure of such languages is as in (85):

(85)

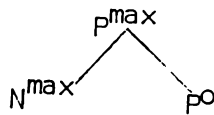
a.



b.



c.



Case will be assigned to the immediate left in all X' projections from X^0 to N^{max} , thus accounting for the fact that OV order, postpositions, and genitive- N^0 orders are generally found in the same language.

The obvious problem for this is the assignment of nominative Case from I^0 to subject, [N^{max}, I^{max}], position. If adjacency is assumed once again as a constraint on Case-assignment, then nominative Case assignment will be routinely blocked in SOV languages, unless the Case-assigner, AGR (tense and aspect are not generally assumed to play a direct role in Case assignment), raises and adjoins to a position right-adjacent to the subject (the subject cannot lower for numerous reasons, e.g., the Empty Category Principle and the Binding Conditions). If AGR is realized by an independent term (i.e., if it is not a clitic or an affix), then it will occur in second position in SOV languages. If, as GB theory maintains, AGR, not tense or aspect, is the relevant Case-assigning portion of I^0 , then there is no motivation for raising tense or aspect along with AGR. Assuming that, as a dependent term, tense/aspect must attach to a host then the simplest solution is to allow it to attach leftward to the first host, thus deriving the fact that tense and aspect are verbal suffixes in SOV languages. Now, if AGR is a dependent term, and we assume that I^n and V^n are both [+V, -N], then the logical host for AGR, if it is sensitive to features, is the verb. After assigning nominative Case, then, AGR attaches to the first [+V, -N] morpheme boundary it encounters, immediately predicting it to be a verbal prefix.

This also accounts for the fact that Set I clitics attach to the left, while Set II clitics attach to the right. D. Payne 1985:32,151ff observes that the object often appears at the right periphery of the VP, as we have also seen in various examples above. Let us suppose that the language was indeed SOV at an earlier stage but that it then developed the rule of rightward object movement, transporting the object from preverbal position to the right of the verb (adjoining to V or VP). This would be very much like the synchronic rule of 'Heavy-NP Shift' that is observed in many SOV languages of the Amazon (e.g. Pirahã) and elsewhere. At this juncture, we may hypothesize, [+V] Case began to be assigned to the right, eliminating the need for the rightward movement rule, allowing the object to be generated directly in postverbal position, effectively changing the language to SVO, and perhaps forcing Set II clitics to change from proclitics to enclitics in order to assign Case to the postposed object. If we further suppose that the pressure to maintain unidirectionality of Case assignment forced all Cases to be assigned to the right, we begin to develop an interesting account for the present system, including the prefixal status of Set I clitics (they did not need to become enclitics initially because there was no rule comparable to Object Postposing for other arguments) versus the suffixal status of Set II clitics.

If this reasoning is on the right track, it suggests that the morphological asymmetry noted by typologists, that tense and aspect go on one side and agreement on the other, may turn out to have a syntactic explanation, rather than require the postulation of a distinct rule component to handle the derivations (see Baker 1988 for more suggestions on the morphology-syntax interface).

One other observation should be made. If dependent terms of agreement are not sensitive to features and if they are not [+C], then they will not be prohibited from attaching to their doubles as are Yagua clitics. If a dependent term did attach to its double rather than to the head of its phrase, this would result in the situation described by Nichols 1986 for so-called 'dependent marking' languages. Therefore, there really is no mystery that some languages mark agreement on the head while others mark it on the complement. This would be epiphenomenal, deriving from the theories of Case and syntactic features. Moreover, it is worth investigating, in light of these results, whether or not the criteria proposed by Zwicky and Pullum 1983 for distinguishing between affixes and clitics are derivable.

8 Implications for lexical theories

The analysis proposed above, whereby Yagua clitics attach to their hosts in the syntax, is incompatible with theories which derive inflection in the lexicon, such as Lexical-Functional Grammar (LFG) and Lexical Phonology (LP). The problem is especially acute for LP since Set I clitics undergo otherwise word internal processes which Set II clitics fail to undergo. In LP, this can only be explained if Set I

clitics attach in the lexicon. On the other hand, my account is able to derive these facts straightforwardly without positing lexical strata, by means of independently required principles of Case theory.

While various suggestions come to mind as to how one might treat Yagua clitics in LP or LFG, there are severe problems for any framework that would require Set I clitics to attach in the lexicon. I believe that these problems are in fact insurmountable:

1. VSO versus SVO word order alternations.
2. The derivation of distinctions between Set I and Set II clitics.
3. Index percolation and the derivation of Yagua reflexive facts.

The Case-based analysis derives all of these facts, as we have already seen. Let us review the facts and why they are problematic:

Clitic-VSO order is derived in my account from SVO order by V-to-AGR raising, motivated by the need for the AGR clitic to receive Case. However, if Set I clitics appear on their hosts at D-structure, they will already be morphologically visible (see (34) above) and there will thus be no motivation for the verb to move. Also, SVO order with no clitic on the verb would be syntactically indistinguishable from the ungrammatical order S clitic-VO, since both would have the same structure: S_[V(clitic) V]0. The syntax could not tell whether or not the material in parentheses is present. Since neither LFG nor LP can account for this fact, the present account is preferable.

The present analysis derives the Set I versus Set II clitic distinctions as to degree of attachment to the host via the adjacency requirement on Case-assignment (see section four above). A lexical analysis could only stipulate this distinction by placing the two types of clitics in different strata. That this is nothing more than a stipulation is clear: the situation could easily be reversed. Neither LFG nor LP would have any independent reason to prohibit the opposite ordering, attaching Set II clitics earlier than Set I clitics.

If the clitic were part of the host at D-structure, the syntax would have no way to assign an independent index to it. This is because, as argued by Simpson 1983, bracket erasure renders subparts of words opaque to the syntax (also known as the Lexical Integrity Hypothesis). At D-structure, for example, under LFG or LP, sa-púúchu 'S/he carries...' would have the structure in (86):

(86) [_V sapúúchu] 'S/he carries...'

There is no sense, given such a representation, in saying that sa bears an index. In fact, it would be impossible to claim this in either LFG or LP. Therefore, neither LFG nor LP is able to predict the reflexivization facts of Yagua which the present analysis captures under

the independently required device of index-percolation (motivated, again, by the adjacency requirement on Case-assignment).

I conclude, therefore, that clitic-doubling in Yagua presents a serious challenge to theories in which inflectional morphemes are attached to their hosts in the lexicon.

9 Conclusion

I have argued in this paper that the wide variety of facts associated with clitic doubling in Yagua results from Case theory (which includes the notion of morphological visibility), the parametrization of Yagua clitics as [+C,-A], and the notions of inclusion and exclusion. All of these concepts and principles are independently available in UG.

To the degree that this analysis is successful in accounting for the facts, its heavy dependence on Case theory provides evidence in favor of the only syntactic theory which contains a theory of Case, namely, GB. The focus on Case makes comparison with other theories lacking such a subcomponent interesting since it is unlikely that this array of facts could be given such a unified analysis any other way.

NOTES

*Yagua is spoken by approximately three thousand individuals in northeastern Peru. It is the only extant member of the Peba-Yaguan family. Detailed studies of Yagua grammar are D. Payne 1985, T. Payne 1985, and Payne and Payne 1988. I want to thank Tom and Dorrie Payne for their careful work on Yagua, without which the present study would not exist, and for discussions on the analyses and data presented here. Thanks also to audiences at the Working Conference on Amazonian Languages at the University of Oregon, the University of California, San Diego, and the University of Pittsburgh. Sole blame for the analyses and interpretations of the data below must, unfortunately, be attributed to me. 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. As more articles appear on Amazonian languages, it is hoped that attention will also be drawn to the plight of the speakers of these languages who often stand in imminent danger of losing their traditional lands to Western economic interests.

1. I will not count the clitic in determining adjacency, so that in V-clitic NP, V is adjacent to NP. Reasons for this appear as the discussion progresses.

2. Coreference clitics are omitted here. See section five.

3. Jelinek 1984 claims that doubles in some languages are nonargumental, appositive to the true arguments, the clitics. I will interpret this to mean for those languages that the doubled NPs are in A'-positions.

4. Weak crossover refers to '...structures containing a pronoun P referentially dependent on a wh-trace (or a QR-trace) when wh-movement (or QR) has taken place from some A-position A* to some A'-position A'* such that A'* c-commands both P and A* and neither P nor A* c-command the other' (Sportiche 1985:467).

5. Sells 1984:15 defines a resumptive pronoun as '...a pronoun that is operator bound.'

6. 'Corpus' here refers to all the references to Payne in the bibliography.

7. See DiSciullo and Williams 1987:25ff, for arguments that words may have multiple heads, such that α may be the head of X^0 for feature F_1 and β the head of X^0 for feature F_2 .

8. Borer's (1984) complement-matching proposal is another way of expressing the role of clitics in agreement, although she does not state this explicitly.

9. Heads assign a single Case, as expressed in the Uniformity Condition (Chomsky 1986a): 'If α is an inherent Case-marker, then α Case-marks NP if and only if α θ -marks the chain headed by NP'. Although verbs are not strictly inherent Case assigners, it would nevertheless not be possible to allow them to assign Cases to expletives (such as Yagua Set II clitics) and arguments simultaneously. This would render the expletive 'visible' at LF independently of a lexical head. Such an expletive would not be able to enter into a chain with an argument NP which already has Case since a chain may only bear a single

Case. But an expletive which neither enters into a chain nor is interpreted via its relation to a head will at once require an independent interpretation (since it is visible) but will have none (it is not itself an argument). Thus, an expletive assigned Case by a verb in this fashion would violate the principle of Full Interpretation (Chomsky 1986a) and is not allowed. Therefore, verbs may only assign Case to a nominal if it is an argument or in a θ -chain.

10. See Jaeggli 1982, Borer 1984, and Everett 1986 on Spanish clitic doubling, the Case conflict produced, and its resolution.

11. See section six for evidence for a VP node in Yagua.

12. What Safir 1981 really intends is that the licensing of pro be interpreted as epiphenomenal, a result of whether or not a language allows a Case to go unexpressed. Even if his arguments on pro do not go through, the proposal that Case is obligatorily manifested phonetically, except where otherwise parametrized, seems a valid one of direct relevance here.

13. See note 9 on why Vs cannot assign Case to certain expletives.

14. Visibility, (34), does not allow the clitic to attach to its double since the double is not independently visible.

15. A Set II clitic will not be included since this extra degree of attachment would not be motivated. One way to conceive of inclusion is movement-via-substitution whereas being neither included nor excluded is adjunction. I assume that inclusion is only allowed if motivated.

16. My purely syntactic account differs from that of Payne and Payne 1988, which analyzes indirect and direct object interrelations in terms of a notion of definiteness. The reader is referred to that work for an alternative analysis. Since I am able to account for all the facts they record, plus a number of others, without need for formally undefined terms (in their usage) like indefiniteness, I consider the syntactic analysis superior. I suspect that the 'pragmatic' effects they note are epiphenomenal, although space does not allow further discussion of this issue.

17. This unaccusative structure, where the single argument receives structural Case (as shown by the Set II clitic) is at once a problem for 'Burzio's Generalization' (Burzio 1986:185ff), that unaccusative verbs do not assign Case, and Belletti's hypothesis that unaccusatives only assign inherent Case. But there is just too little data on these structures to press the issue here. Note, too, in examples like (52) and (53) that Case may be assigned in equatives even in the absence of an overt verbal element. I have no comment on this except to speculate that Case in equatives results from the relation of predication between the predicate nominal and the unaccusative subject.

18. 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, Chomsky 1982:6ff) if unlike categories may not bind each other (the 'offending' index is on a V), or alternatively, if only arguments were 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} . The Binding Conditions are:

Binding Conditions:

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.

C(onstituent)-Command:

α c-commands β if and only if the first branching node which dominates α dominates β or α is X^0 and β is in the maximal projection of α .

19. Index percolation is only motivated (and only possible) if the clitic is outside its host at D-structure. See section eight.

20. The c-command domain for Yagua subjects, as in other languages, will of course always be S, whether or not the subject is doubled.

21. Neither possessors nor obliques should be able to bind at D-structure. D. Payne 1985:183ff presents evidence from causatives that subjects may bind at D-structure. This is permitted by my analysis since doubling of subjects, as mentioned in note 20, does not affect the subjects' c-command domain.

22. I have found no clear data on the possibility of c-command within VP, but see example (83).

23. T. Payne 1985:46ff notes that there are examples of jfy-/yfi- used in isolated clauses or with antecedents outside their S^{\max} in text material. But, since he also notes that these are infrequent and that native speakers tend to edit such clauses so as to place the antecedent in the same clause as the anaphor, I will consider such examples to be performance errors.

24. See Hale 1973 for arguments that clitics may attach to O-morphemes (or empty categories).

25. Other potential underlying orders are not considered since they do not appear at S-structure and would therefore involve absolute neutralization.

26. The clitic adds extra information (person, number, animacy) which helps identify its double, the true argument. That the clitic thus aids in communication by redundant specification might explain its lower pragmatic markedness. If this is correct, then the syntactic phenomenon of agreement might indeed have direct pragmatic relevance. I will not speculate further on this here, however.

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