

ARGUMENT EXPRESSION AND CONSTITUENT ORDER VARIATION IN APURINÃ (ARAWAK)¹

Sidney da Silva Facundes
SUNY/UFPA

1. Introduction

In this paper I discuss the properties of constituent order variation in Apurinã and what it can tell us about the issue of basic constituent order and word order correlations. Apurinã has been one of the rare languages cited in the literature as having OSV as basic constituent order (cf. Pickering 1974, Longacre 1976, Pullum 1980 and Mallinson and Blake 1981). Beside myself (cf. Facundes 1994a), Pickering (1974) and Aberdour (1985) are the only linguists who have worked on the issue of constituent order in Apurinã based on their own field research.² The analysis presented in this paper covers data from various Apurinã communities. Unless otherwise noted, all the structures illustrated in this paper have been attested in texts. Also unless otherwise noted, the analysis on core grammatical relations and constituent order presented in sections 2 and 3 is based on data gathered in several field visits to the Apurinã communities, starting from 1989. Section 4 is where the descriptive results of the previous sections are combined and some conclusions are drawn on the issue of basic constituent order, word order correlation and change. Also in this section, a general discussion on the strategies used in establishing a basic constituent order is presented. Section 5 presents a brief conclusion.

There are two main descriptive findings described for the Apurinã language: first, when only the few cases of clauses with co-occurring NP-subject and NP-object are examined, we find that while evidence from grammatical structure can be constructed as support for OSV as basic order, direct evidence from frequency and indirect evidence from pragmatics can be constructed as support of SV-oO as basic order. None of these alternatives, however, seem to provide any new insights into the workings of the language. Second, when the clauses with only one NP-subject/object are also considered, SV and V-oO appear as the most frequent types attested, but other word order patterns in the language follow the OV typological pattern. From these two descriptive findings, one theoretical issue is raised: *Is it possible to find any*

¹ Apurinã belongs to the Apurinã-Piro-Iñapari subgroup of the Arawak family, and is spoken mostly along streams, lakes and tributaries of the Purus river in the northwestern Amazon region of Brazil (see Facundes 2000a,b). The research that led to this paper was supported by the Conselho de Desenvolvimento Científico e Tecnológico (CNPq/Brazil) and by the Wenner-Gren Foundation and Incorporation. I am indebted to Matthew Dryer, David Zubin, Colette Grinevald and Doris Payne for comments on earlier version of this paper. All mistakes found in this paper are, however, my own.

² For a more complete collection of the published and manuscript references on Apurinã, see Facundes (1994b) and Facundes (2000b).

resolution to the conflicting results generated by grammatical structure and frequency plus pragmatics as to what the basic constituent order is? The preliminary results shown in this paper suggest that while there is no theory independent advantage in relying only on grammatical structure to assign OSV or SV-oO as basic order for Apurinã, it is the case that if the relevant grammatical structures are constructed as evidence for OV as basic order, then other word order correlations found in the language are partly explained.

2. Core grammatical relations

The idea that languages to a certain extent tend to have *grammatical relations*, in addition to and, independently of, *semantic* and *pragmatic* ones, is rather old in linguistics; notions such as subject and object are easily seen as part of prescriptive grammars. As Comrie (1989:66) puts it, ‘there are also syntactic relations contracted between a noun phrase and its predicate, which, however closely they may correlate with semantic or pragmatic relations, cannot be identified with them’. It is for noticing the importance of the notion of subject in various of the so-called *Universal Generalizations*³, that Keenan (1975a, 1976) first proposed a cluster of properties (The Subject Property List) for the definition and identification of subjects in basic simple sentences across languages. It is generally this cluster of subject properties upon which other studies (e.g. Van Valin and LaPolla 1997, Givón 1995, Comrie 1989) have based their definition and/or their identification procedure for grammatical relations. It is this cluster of properties (or, more specifically, those applicable to the Apurinã grammar) that are used in Facundes (2000b) to motivate the notions of core grammatical relations in Apurinã.

One of the properties that distinguish grammatical subject from grammatical object in Apurinã is the *Bound Pronominal Marking System*. The bound pronominal markers constitute a system of pronominal-like elements that are phonologically attached to the verb. In the examples in (1-2) both the subject and object paradigms are illustrated. In these examples the underlined elements are the bound pronominal markers plus their corresponding (coreferential) NP-subject/object. In (1a), for instance, the bound pronominal marker ‘suffixed’⁴ to the verb is *-i*, and it is coreferential with the post-verbal *independent pronoun* for second person singular which expresses the object.

³ Such as, for example, the Accessibility Hierarchy (later published in Keenan and Comrie 1977), the Functional Succession Principle (later called Relational Succession Law, published in Perlmutter and Postal 1983), and the Advancement Continuity Principle (cf. Johnson 1974, Trithart 1975 and Keenan 1975b)

⁴ The terms ‘suffixed’ and ‘prefixed’ are here placed in ‘scare’ quotes to flag certain ‘non-affixal’ properties they have. These are discussed in Facundes (2000b) and are beyond the scope of this paper.

- (1) *a* S V-o O
nota etama-i pite
 1SG see-2O 2SG
 'I see you.'
- b* S V-o O
pita etama-no nota
 2SG see-1SG.O 1SG
 'You see me.'
- c* S V-o O
uwa etama-ro owa
 3SG.M see-3F.O 3SG.F
 'He/It sees her/it.'
- d* S V-o O
owa etama-ru uwa
 3SG.F see-3M.O 3SG.M
 'She/it sees him/it.'
- e* S V-o O
ata etama-ru unawa
 1PL see-3M.O 3PL
 'We see them.'
- f* S V-o O
hite etama-wa ata
 2PL see-1PL.O 1PL
 'You (pl) see us.'
- g* S V-o O
uwa etama-i hite
 3SG.M see-2O 2PL
 'They see you (pl).'

Notice in these examples that the bound pronominal markers are coreferential with post-verbal pronouns rather than with the pre-verbal ones. This correlation between post-verbal subject and object pronouns and bound pronominal markers on the verb is described extensively in the next section. The additional examples in (1) show pronominal forms which refer to different grammatical persons.

In the examples in (2), the bound pronominal markers 'prefixed' to the verb are in cross-reference with the independent pronouns expressing the subject. So, in (2a), the bound pronoun 'prefixed' to the verb is *n-*, and it is coreferential with the post-verbal independent pronoun *nota* for first person singular which expresses the subject. The other examples in (2) illustrate the same for the different grammatical persons.

- O s-V S
 (2) a *pīte n-etama nota*
 2SG 1SG-see 1SG
 'I see you.'
- O s-V S
 b *nota p-etama pīte*
 1SG 2SG-see 2SG
 'You see me.'
- O s-V S
 c *owa ø-etama uwa*
 3SG.F 3SG.M-see 3SG.M
 'He/it sees her/it.'
- O s-V S
 d *uwa ø-etama owa*
 3SG 3SG.F-see 3SG.F
 'She/it sees him/it.'
- O s-V S
 e *unawa a-etama ata*
 3PL 1PL-see 1PL
 'We see them.'
- O s-V S
 f *ata h-etama hīte*
 1PL 2SG-see 2PL
 'You (pl) see us.'
- O s-V S
 g *hīte ø-etama uwa*
 2PL 3SG.M-see 3SG.M
 'He sees you (pl).'

We may observe that the examples in both (1) and (2) show that independent personal pronouns do not encode formally the subject-object distinction; instead, this distinction is marked by the bound pronominal forms in the verb. So, in (1a) we know that *pīte* expresses the logical object because it is coreferential with the bound pronominal marker *-i* in the verb, and that *pīte* expresses the logical subject in (2b) because it is coreferential with the bound pronominal marker *p-* in the verb. The same distinction, varying only for the persons each independent pronoun refers to, can be seen throughout the examples given in (1-2).

Table 1 lists the set of bound pronominal markers that are ‘prefixed’ to the verb and the set of bound pronominal markers that are ‘suffixed’ to the verb, the subject-object distinction, as well as the person, gender and number features they encode.⁵

PERSON	SUBJECT		OBJECT	
	SG	PL	SG	PL
1	<i>nu-/n-</i>	<i>a-</i>	<i>-no</i>	<i>-wa</i>
2	<i>pu-/p-</i>	<i>hi-/h-</i>	<i>-i</i>	<i>-i</i>
3M	<i>u-/ø-</i>	<i>u...-na</i>	<i>-ru</i>	<i>-ru</i>
3F	<i>o-</i>	<i>o...-na</i>	<i>-ro</i>	<i>-ro</i>

Table 1: Bound pronominal system⁶

Table 2 lists the set of independent pronouns and the person, gender and number they encode:

PERSON	SUBJECT/OBJECT	
	SG	PL
1	<i>nota</i>	<i>ata</i>
2	<i>pite</i>	<i>hĩte</i>
3M	<i>uwa</i>	<i>unawa</i>
3F	<i>owa</i>	<i>unawa</i>

Table 2: Independent pronominal system

From the above it appears that, while bound pronominal markers encode subject-object, the same cannot be said about the independent pronouns. This is an important piece of information, since it shows that grammatical relations are overtly encoded by means of the bound pronouns, rather than by means of the independent pronouns. Further evidence for the existence of grammatical subject and grammatical object in Apurinã are given in Facundes (2000b), where detailed descriptive and analytical properties are presented. In that paper I show among other things that the subject-object asymmetry is also marked in reflexive constructions, as well as in relative, causative and passive clauses.

3. Constituent order variation

In the previous section, I referred to some of the grammatical properties that justify making the subject versus object grammatical distinction in Apurinã. This section is divided in four parts covering the issues generally associated with constituent order variation: *syntactic and morphological structure, frequency distribution, discourse-*

⁵ Note that the use of bound pronominal forms to distinguish subject and object, only applies to non-stative verbs. Stative verbs split into two classes: one that takes subject pronominal markers and another that takes object pronominal markers.

⁶ The morphophonemic alternations of subject markers are simplified here, a more complete description can be found in Facundes (1996).

pragmatics, and *word order correlations*. In the first part I describe the positions in which subject and object occur in a clause in relation to the verb and to one another, and I examine the bound pronominal marking patterns on the verb and their correlation with the clausal distribution of the NP-subject versus the NP-object. In the second part, I present the frequency distribution of the constituent order types found in the language. In the third part, I outline some preliminary notes on discourse and pragmatic factors that may or may not be involved in the use of the various constituent order types. Finally, in the fourth part, I discuss other patterns of word order correlation in the language.

Only simplex clauses will be considered in the present analysis of constituent order variation. Moreover, where applicable, some of the examples and claims expressed in this paper will be contrasted with those found in the works of Pickering (1973 and 1974), Aberdour (1985), as well as Facundes (1994a).

3.1. Syntactic and morphological properties of constituent order types

The syntactic and morphological properties considered in the next subsections correspond, respectively, to the distribution of the NP-subject and NP-object in the clause, and to the patterns of bound pronominal marking on the verb as they correlate with the use of NP-subject and NP-object. Before proceeding to present the factors related to constituent order attested in Apurinã, however, let me briefly mention one phenomenon that the language lacks. *Gapping* (as defined in Ross 1970) cannot be found in Apurinã. As already noticed by Pickering (1974), the notion of gapping does not apply to Apurinã for ‘Apurinã appears not to exhibit any gapping behavior’ (Pickering 1974:1). In (partly) translating Ross’ examples such as the following (1a, 2a in Ross 1970:250)

- | | | | | | | | | | | |
|-------|----------|------------|---------------|-------------|------------|---------------|-----|--------------|------------|-------------------|
| | S | V | O | S | V | O | S | V | O | |
| (3) a | <i>I</i> | <i>ate</i> | <i>fish</i> , | <i>Bill</i> | <i>ate</i> | <i>rice</i> , | and | <i>Harry</i> | <i>ate</i> | <i>roast beef</i> |
| | S | V | O | S | ___ | O | S | ___ | O | |
| b | <i>I</i> | <i>ate</i> | <i>fish</i> , | <i>Bill</i> | ___ | <i>rice</i> , | and | <i>Harry</i> | ___ | <i>roast beef</i> |

Pickering claims that in sentences with repeated verbs such as *nhika* ‘eat’ in (4) ((1a) in Pickering 1974:1), the repeated verb cannot be omitted.

- | | | | | | | | | | |
|-----|--|--------------|-------------|--------------|--------------|-------------|--------------|--------------|-----|
| | O | S | V | O | S | V | O | S | V |
| (4) | <i>ximakunota</i> | <i>nhika</i> | <i>kimi</i> | <i>Pedro</i> | <i>nhika</i> | <i>kema</i> | <i>Jaimu</i> | <i>nhika</i> | |
| | fish | I | eat | corn | Peter | eat | tapir | Jim | eat |
| | ‘I ate fish, Peter ate corn, Jim ate tapir.’ | | | | | | | | |

As the next examples show (1b and 1c in Pickering 1974:1), the omission of the repeated verb will otherwise make the construction ungrammatical:

- | | | | | | | | | | |
|-------|--------------------------------------|-------------|-----|-------------|--------------|-----|-------------|--------------|--------------|
| | O | S | ___ | O | S | ___ | O | S | V |
| (5) a | <i>*ximaku</i> | <i>nota</i> | ___ | <i>kimi</i> | <i>Pedro</i> | ___ | <i>kema</i> | <i>Jaimu</i> | <i>nhika</i> |
| | fish | I | ___ | corn | Peter | ___ | tapir | Jim | eat |
| | (I ate fish, Peter corn, Jim tapir.) | | | | | | | | |

b	*ximaku	<i>nota</i>	<i>nhika</i>	<i>kimi</i>	<i>Pedro</i>	_____	<i>kema</i>	<i>Jaimu</i>	_____
	fish	I	eat	corn	Peter	_____	tapir	Jim	_____
	(I ate fish, Peter corn, Jim tapir.)								

As Pickering rightfully concluded, gapping is, thus, of no use in analyzing constituent order in Apurinã.

3.1.1. Clauses with co-occurring NP-subject and NP-object

If we only consider clauses in which subject and object co-occur as NPs, we can describe Apurinã as a language that has *semi-free constituent order variation*. This is so because, of the six logically possible constituent order types in a language,

i.e. SOV SVO VOS
 OSV OVS VSO

five types can be attested in the elicitation of Apurinã sentences:

i.e. SOV SVO VOS
 OSV OVS *VSO

and at least four of them are attested in Apurinã texts:

i.e. SOV SVO *VOS
 OSV OVS *VSO

The next examples are illustrative of each type. Example (6) shows the subject preceding the object when both subject and object are pre-verbal (i.e. SOV). (7) shows the object preceding the object when object and subject are pre-verbal (i.e. OSV). (8) shows the pre-verbal subject co-occurring with the post-verbal object (i.e. SVO). (9) shows the pre-verbal object co-occurring with the post-verbal subject (i.e. OVS). (10) shows the object preceding the subject in post-verbal position (i.e. VOS). Finally, (11) shows that it is not acceptable for the subject to precede the object in post-verbal position (i.e. VSO). In all these examples subject and object are, for convenience, expressed as independent pronouns. As further data will illustrate in the subsections below, the facts are the same when subject and object are expressed as lexical NPs.

- (6) S O V
 ata uwa maporoka
 we it root.up
 'We pulled it up'
- (7) O S V
 uwa ata maporoka
 it we root.up
 'We pulled it up'

- (8) S V-o O
owa maporoka-ru uwa
 she root.up-3SG.M.O it
 'She pulled it up'
- (9) O s-V S
uwa o-maporoka owa
 it.M 3SG.F.S-root.up she
 'She pulled it up'
- (10) s-V-o O S
a-maporoka-ru uwa ata
 1PL.S-root.up-3SG.M.O it.M we
 'We pulled it up'
- (11) s-V-o S O
 **a-maporoka-ru ata uwa*
 1PL.S-root.up-3SG.M.O we it.M
 'We rooted it up'

In the examples above I have ignored the presence of the bound pronominal forms attached to the verbs (represented as lower-case 's' and 'o'). These forms and their relation to constituent order variation will be discussed in the following subsections. What I wish to underscore here is the fact that except for VSO, all clausal constituent order patterns are acceptable in the language. Furthermore, of the five order types attested in the elicitation of transitive clauses, only the orders VOS and VSO are not attested in text material.

3.1.2. Pre- versus post-verbal subject/object-NPs

In any order type in which there is a post-verbal NP functioning as subject or object, there has to be also a bound pronominal marker attached to the verb that is coreferential with the post-verbal subject or object. In contrast, in any order type in which the NP-subject/object is pre-verbal, no bound pronominal marker that cross-references NP-subject/object can be found on the verb.⁷ Examples such as those given in (6-11) have already illustrated the bound pronominal marking forms cross-referencing some of the independent pronouns. The following examples in (12-14) show the same bound pronominal marking elements also cross-referencing lexical NP-subject/object in post-verbal position. Thus, in (12), the NP-subject *hâtakoro* 'girl' occurs pre-verbally with no corresponding coreferential marker on the verb; whereas, the NP-object *aôtu* 'umari (fruit)' occurs post-verbally and is cross-referenced by the bound pronominal marker *-ru*.

⁷ It is true, however, in my database (as it was in Aberdour's 1985) that some rather marginal exceptions can be attested in text material.

- (12) S V-o O
hãtakoro apa-nanu-ta-ru aõtu
 girl fetch-PROG-V.ST-3SG.M.O umari.(fruit)
 ‘The girl is fetching umari (fruit).’

In (13), the NP-object *txipokoru* ‘fruit’ occurs pre-verbally with no corresponding bound pronominal marker in the verb, while the post-verbal nominal NP-subject *hãtakoro* ‘girl’ is cross-referenced by the bound pronominal marker *o-*:

- (13) O s-V S
txipokoru o-txima-ãpo-ta-pe hãtakoro
 fruit 3SG.F.S-eat.fruit-RANDOM-VBLZ-PFTV girl
 ‘The girl would go eating fruit.’

In (14), both the post-verbal NP-subject, *suto* ‘woman,’ and NP-object, *uwa* ‘it,’ are cross-referenced on the verb by, respectively, the subject bound pronominal marker *o-* 3SG.F.S and the object bound pronominal marker *-ru* 3SG.M.O.

- (14) s-V-o O S
o-txa-ru uwa suto
 3SG.F.S-do-3SG.M.O it woman
 ‘The woman did it.’

In (15), both NP-object, *kema pitxi* ‘tapir’s penis,’ and NP-subject, *unawa* ‘they,’ occur pre-verbally with no corresponding bound pronominal marker attached to the verb. The example in (16) follows the same pattern as the one in (15).

- (15) []O S V AUX
oposo kema pitxi unawa muna txa
 then tapir penis they bring AUX
 ‘Then they brought the tapir’s penis.’

- (16) O S V
maku ata apa
 brazil.nut we fetch
 ‘We gather brazil-nut’

As expected, the sentences in (17-20) are ungrammatical, since there is a bound pronominal marking on the verb coreferential with the pre-verbal nominal.

- (17) O S s-V
 **uwa ata a-maporok*
 it we root.up
 (We rooted it up)
- (18) O S V-o
 **uwa ata maporoka-ru*
 it we root.up-3M.O
 (We rooted it up)

- (24) S O V
 ata uwa maporoka
 it we root.up
 We rooted it up.

Aberdour (1985) also reports cases of SOV clauses in texts, be it that in her data SOV is only found in reported speech.

3.1.4. Constituent order resolution in potentially ambiguous sentences

In Facundes (1994a) I described clauses without bound pronominal markers attached to the verb. In principle, unless semantics or discourse-pragmatics made it clear who the subject or object was, such clauses would be ambiguous as to their interpretation of who did what to whom. In clauses such as the following in (25), semantics and/or discourse-pragmatics would suffice to provide the correct interpretation of the clause. This is true since *'I ate the food'* expresses a trivial and natural event. *'The food ate me'*, on the other hand, would require a conception rather distinct from the way the event of 'eating' is normally conceived in the Apurinã world of natural events – which, of course, could be licensed by the specific context of mythological stories but less likely in the context of everyday language.

- | | | | |
|--------|---------------------|-------------------|--------------|
| | O | S | V |
| (25) a | <i>nhipoko-ru</i> | <i>nota</i> | <i>nhika</i> |
| | food-UNPOSS | 1SG | eat |
| | 'I ate the food.' | | |
| | (*The food ate me.) | | |
| | S | O | V |
| b | <i>nota</i> | <i>nhipoko-ru</i> | <i>nhika</i> |
| | 1SG | food-UNPOSS | eat |
| | 'I ate the food.' | | |
| | (*The food ate me.) | | |

Clauses such as those in (26) could have a default interpretation in which the man is thought to be a hunter, and, since more stories are about the hunters than about the hunted animals, the hunter would more typically be interpreted as the subject of the clause. Here however, one just needs to change the perspective of the person uttering the clause (to e.g. one in which the tapir escaped because it saw the man and ran away) for the second interpretation to be more natural. That is, a minor addition of contextual specific information here would suffice to change the default interpretation.

- | | | | |
|--------|--------------------------|-------------|--------------|
| | O | S | V |
| (26) a | <i>kema</i> | <i>kuku</i> | <i>etama</i> |
| | tapir | man | see |
| | 'The man saw the tapir.' | | |
| | 'The tapir saw the man.' | | |

	S	O	V
b	<i>kuku</i>	<i>kema</i>	<i>etama</i>
	man	tapir	see
	‘The man saw the tapir.’		
	‘The tapir saw the man.’		

In example (27), however, there is nothing semantically associated with *Mipatu* or *Mipake* to make either of them ‘the one who sees’ or ‘the one who is seen.’ There is no pragmatic default interpretation, as far as I can tell, that can be associated with *Mipatu* or *Mipake*, as the two individuals are cousins who live in the same village. Thus, in this example, neither semantics nor a default pragmatic interpretation can be used as clues as to what the correct interpretation of the clause is. In Facundes (1994a), I used similar data to argue that OSV was the default interpretation for examples that lack semantics or default pragmatic properties that could resolve the ambiguity. Indeed, it is true that some speakers choose OSV as default interpretation when ambiguity cannot be resolved by semantics and pragmatics. However, now it is also clear that the strategy used to resolve ambiguity varies across different speakers. I have not been able to confirm OSV as default order for more than a handful of speakers.

	O/S	S/O	V
(27)	<i>mipatu</i>	<i>mipake</i>	<i>etama</i>
	Mipatu	Mipake	see
	‘Mipatu saw Mipake’		
	(*)‘Mipake saw Mipatu’		

The fact that I was not able to reproduce with various speakers the same behavior in which OSV is interpreted as the default constituent order suggests that OSV cannot be considered as an order type that is syntactically structured. That is, there is no general syntactic template such as OSV in Apurinã that can override semantic or pragmatic information. As a consequence, it would appear that the various types of constituent order patterns are more likely to be motivated by discourse-pragmatic factors. If that were the case, it would be natural for speakers to vary when evaluating clauses with certain ambiguities as to ‘who did what.’

3.2. Frequency distribution of constituent order types

On the basis of the data provided above, we can conclude that there are 5 transitive and 2 intransitive general clausal constituent order types in Apurinã, as listed in table 3. (Since the presence of AUX is structurally optional, it has been omitted here. Also omitted is the recipient object.) Table 3 summarizes the information on the bound pronominal markers and on the optionality property of post-verbal nominals:

TRANSITIVE			INTRANSITIVE	
O S V	O s-V (S)	s-V-o (O) (S)	S V	s-V (S)
S O V	S V-o (O)	*s-V-o (S) (O)		

Table 3: Clausal constituent orders

In the remaining of this subsection, I will present a text frequency count based on 8 texts that include 3 traditional narratives, 1 personal narrative, 2 procedural texts, and 2 dialogs. The total number of clauses in the 8 texts is 745 units. No significant difference in text genera has been attested, which, thus, justifies lumping them together here. That is, when the texts are considered individually, no contradictory numbers appear. Lexical and pronominal subject/object are not distinguished in the counts presented below. I have ignored such a distinction for the purpose of this paper because the dominant distribution of lexical subject and lexical object is not different from the dominant distribution of pronominal subject and object respectively. Furthermore, in analyzing constituent order types, I only considered clauses with verbal predicates. As a result, out of 745 clauses, 244 nominal or attributive predicates were excluded from the count, thus leaving 501 clauses with verbal predicates. The next table shows the numbers for clauses with no NP-subject/object, clauses with only one NP-subject/object, and clauses with both NP-subject and NP-object co-occurring. As table 4 shows, a little more than half of all clauses have at least one NP-subject/object. The second most frequent type is that in which there is no NP-subject/object. In only 8.6% of all clauses we find NP-subject and NP-object co-occurring.

V	V, NP	V, NP, NP	Total
200 (39.9%)	258 (51.5%)	43 (8.6%)	501 (100%)

Table 4: General types of clauses

If we first consider the 43 clauses in which subject and object co-occur, the types of clauses are distributed as given in table 5.

SV-oO	OSV	SOV	Os-VS	s-V-oOS	s-V-oSO	Total
33 (76.8%)	8 (18.6%)	1 (2.3%)	1 (2.3%)	0 (0%)	0 (0%)	43 (100%)

Table 5: Clauses with both subject and object

As seen in the table above, SV-oO occurs with frequency of 76.8% and is by far the most frequent type of clause with co-occurring subject and object; OSV comes in second place with frequency of 18.6%; SOV and Os-VS come in third both with 2.3%. s-V-oOS and s-V-oSO do not occur in any of the texts investigated.

The next table shows the number for pre- versus post-verbal subject. There is an unequivocal tendency for subjects to occur pre-verbally rather than post-verbally.

S#V	s-V#S	Total
155 (91.2%)	15 (8.8%)	170 (100%)

Table 6: Clausal order of verb and subject

Table 7, on the other hand, shows that post-verbal (rather than pre-verbal) position is dominant for object. The higher frequency of post-verbal over pre-verbal object, however, is not as dominant as the higher frequency of pre-verbal over post-verbal subject.

O#V	V-o#O	Total
62 (40.5%)	91 (59.5%)	153 (100%)

Table 7: Clausal order of verb and object

The following list summarizes the most important figures, to which we shall return when discussing the issue of basic versus dominant constituent order in Apurinã:

- (i) Clauses with co-occurring subjects and objects are the least frequent general types of clauses found in texts, i.e. 8.6%;
- (ii) among such types of clauses SV-oO is the most frequent type, i.e. 76.8%;
- (iii) also among such clauses, co-occurring post-verbal subject and object have not been attested;
- (iv) pre-verbal subjects are much more frequent than post-verbal ones, cf. 91.2% versus 8.8%; and,
- (v) post-verbal objects are more frequent than pre-verbal ones, cf. 59.5% versus 40.5%.

3.3. *The discourse-pragmatics of constituent order variation*

No clear-cut association between the discourse-pragmatic status of the information being encoded and the constituent order type used to encode such information has been as yet established for Apurinã. In work in progress, a text-distributional study is being developed based on the methodology formulated in Givón (1983, 1988, 1992, 1995). The preliminary results suggest a complex interaction of discourse-pragmatic functions beyond what Referential Distance and Topic Persistence can describe, but for which such measurements can be useful heuristic tools.

The low frequency of clauses with NP-subject/object, especially when NP-subject and NP-object co-occur in the same clause, requires that a larger corpus of texts be used in analyzing discourse-pragmatic factors involved in constituent order variation. Nevertheless, the fact that no clear relationship can be observed between discourse-pragmatic factors and the type of constituent order used suggests the unlikelihood that a single constituent order type can be convincingly associated with a single (unmarked/neutral) discourse-factor.

3.4. Word order correlations

In the previous subsections, the distributional properties described are those of NP-subject and NP-object in relation to the verb and to one another. The next paragraphs illustrate the order patterns which, from a typological point of view, tend to correlate with the basic clausal constituent order pattern. The choice of the correlational pairs that are verified in Apurinã follows from attested Greenbergian cross-linguistic correlations (Greenberg 1963), revised in Dryer (1988, 1991, 1992).⁸

3.4.1. Noun and adpositions

The grammatical functions generally performed by prepositions or postpositions are marked in Apurinã by ‘suffixal’ forms attached to nominal elements. These bound postpositional forms are phonologically attached to (derived and non-derived) nouns and independent personal pronouns, but their semantic scope is the NP rather than the noun or pronoun element.⁹ The examples in (28) illustrate the *Goal Directional* marker *-mokaru*, attached to the NP elements *aiko* ‘house’ and *takataru* ‘oven’, respectively:

- | | | | |
|--------|--|------------------|--------------------|
| | s-V | AUX-o | GOAL |
| (28) a | <i>a-muna-ka-pe-ta</i> | <i>txa-ru</i> | <i>aiko-mokaru</i> |
| | 1PL-bring-INTENS-pulp-VBLZ | AUX-3M.O | house-DIR.GOAL |
| | ‘We brought the (manioc) pulp to the house.’ | | |
| | GOAL | V | s-AUX-o |
| b | <i>oposo takataru-mokaru</i> | <i>oka-pe-ta</i> | <i>a-txa-ru</i> |
| | later oven-DIR.GOAL | throw-pulp-VBLZ | 3PL-AUX-3M.O |
| | O | | |
| | <i>komuru-pe</i> | | |
| | manioc-pulp | | |
| | ‘Then we throw the (manioc) pulp into the oven.’ | | |

The examples in (29) show the postpositional form *-ã* attached to *umamaru katu* ‘branch of jenipapo tree’ and to *esota-txi* ‘(unpossessed) grater’ to mark *Locative* and *Instrumental* phrases, respectively.

- | | | | |
|--------|--|------------------|--------------------------|
| | []S | V | []LOC |
| (29) a | <i>epi hãtako-ro</i> | <i>oka-pe-wa</i> | <i>umamaru katu-ã</i> |
| | two youth-F | throw-PFTV-REFL | jenipapo branch-INST/LOC |
| | ‘Two women jumped up onto the branch of the tree of jenipapo.’ | | |

⁸ Adjectives are not discussed here for two reasons: first because most property referring words in Apurinã behave as a subtype of intransitive verbs, and, second, because Dryer (1988 and 1992) has already shown that ‘there is no evidence for any universal relationship between the order of adjective and noun and the order of object and verb’ (Dryer 1988, 185-217).

⁹ The syntactic status of postpositional bound forms, as well as others of their grammatical properties, are described in detail in Facundes (2000b) and, for space constraints, cannot be reproduced in this paper.

3.4.3. Genitive and possessed nouns

A detailed description of *Genitive* constructions can be found in Facundes (1995). The elements in genitive constructions have a fixed distribution, the possessor always precedes the possessed noun. In the examples in (32a), the possessed noun is marked by the possessed marker *-te*, and the genitive pronoun *nota* ‘1SG’ precedes the possessed noun *kanawa-te* ‘canoe.’ In (32b) the genitive element is the noun *mipa* ‘Mipa,’ which again precedes the possessed *kanawa-te*.

- GEN N
- (32) a *nota kanawa-te*
 1SG canoe-POSSED
 ‘My canoe’
- GEN N
- b *mipa kanawa-te*
 Mipa canoe-POSSED
 ‘Mipa’s canoe’

In the next pair of examples, the possessed noun is *māka* ‘clothes,’ which is not overtly marked for possession. Again the genitive pronoun (cf. 33a) and the genitive noun (cf. 33b) precede the possessed noun.

- GEN N
- (33) a *nota māka*
 1SG clothes
 ‘My clothes’
- GEN N
- b *suto māka*
 woman clothes
 ‘The woman's clothes’

3.4.4. Clause and adverbial subordinator

Adverbial subordinators also have a clear distribution, either they occur ‘suffixed’ to the verb of the subordinate clause or, if phonologically independent, they occur in the beginning of the adverbial subordinate clause. The first pair of examples illustrates the *Temporal* adverb *-sawaku* ‘when/during.’ As both examples in (34) show, the temporal marker occurs attached to the left-most element of the subordinate clause. In (34a) the bound temporal marker is attached to *u-payaka* ‘it’s soft,’ and in (34b) the same marker is attached to *ōtu* ‘day’

- | | | | | |
|--------|---|--------------------|---------------|-------------------|
| | [s-V-ADV] | s-V | AUX-o | O |
| (34) a | <i>u-payaka-sawaku</i> | <i>a-makatxaka</i> | <i>txa-ru</i> | <i>komeru-pe.</i> |
| | 3SG.M-be.soft-TEMPORAL | 1PL-take | AUX-3M.O | manioc-pulp |
| | ‘We take the manioc pulp when it’s soft.’ | | | |

- [s-V N-ADV] S V
 b *n-apoka õtu-sawaku owa su-pe.*
 1SG-arrive day-TEMPORAL 3SG.F go-PFTV
 ‘She left the day when I arrived.’

In the next examples the *Reason/Cause* adverbial subordinator *kotxi* ‘because’ occurs at the beginning of the subordinate clause. *kotxi* precedes the subordinate clause in (35a) and in (35b).

- s-V [ADV s-V]
 (35) a *nu-su-peka kotxi nu-sãpaka-peka.*
 1SG-go-PFTVbecause 1SG.S-be.tired-PFTV
 ‘I am going because I am tired.’
- S V-o [ADV O S V]
 b *kona nota sa-ru kotxi maku ata makatxaka*
 not 1SG go-3O.M because Brazil.nut 1PL take
 ‘I am not going because we (need to) gather Brazil nut.’

From the above it follows that, while independent adverbial subordinators occur at the beginning of subordinate clauses, bound adverbial subordinators occur attached to the last element at the end of the clause.

3.4.5. Verb and postpositional phrase

Postpositional phrases can precede or follow the verb. This is illustrated by associative constructions in the next examples, where *suto-kata* ‘with the woman’ follows the verbal construction *nu-su-pe* ‘I went’ in (36a), but precedes it in (36b).

- s-V PP
 (36) a *nu-su-pe suto-kata*
 1SG-go-PFTV woman-ASSOC
 ‘I went with the woman.’
- PP s-V
 b *suto-kata nu-su-pe*
 woman-ASSOC 1SG-go-PFTV
 ‘I went with the woman.’

3.4.6. Main and auxiliary verbs

The order *Main Verb-Aux Verb* is rigid. That is, when main and auxiliary verbs co-occur, the former always precedes the latter. In the next examples the auxiliary verb *txa* follows the main verbs *apoka* ‘arrive’, in (37a), and *etama* ‘see’, in (37b).

- V s-AUX
 (37) a *apoka i-txa watxa*
 arrive 3M.SG.S-AUX today
 ‘He arrived today.’

- S V AUX-o
b mipa etama txa-no
 Mipa see AUX-1SG.O
 ‘Mipa saw me.’

3.4.7. Main and subordinate clauses

The order of *Main* and *Subordinate* clauses is variable. The subordinate clause can precede or follow the main clause. In (38) the subordinate clause is marked by *-sawaku*, and in (39) the subordinate clause is marked by *kotxi*. By comparing example (38) to (34a), and example (39) to (35a), we can note that both sequences of clauses, i.e. main-subordinate and subordinate-main, are found in the language.

- (38) s-V AUX-o O [s-V-ADV]
a-makatxaka txa-ru komeru-pe u-payaka-sawaku.
 1PL-take AUX-3M.O manioc-pulp 3SG.M-be.soft-TEMPORAL
 ‘When it’s soft, we take the manioc pulp’
- [ADV s-V] s-V
 (39) *kotxi nu-sâpaka-peka nu-su-peka.*
 because 1SG.S-be.tired-PFTV 1SG-go-PFTV
 ‘Because I am tired, I am leaving.’

3.4.8. Summary

Summarizing the patterns of word orders described above and relating them to the general typological correlations associated with OV versus VO languages, we reach the following results given in table 8:¹⁰

Construction	OV	VO
Noun – Postp. Suff.	+	
Manner Adv – V	+	
Gen – N	+	
Clause – Subordinator	+	+
V – PP	+	+
Main V – Aux	+	
Main Clause – Subord. Clause	+	+

Table 8: Word order correlations

Although in all the pairs examined above we find OV patterns, three pairs split correlating with both OV and VO.

¹⁰ Whether there is a preferred or unmarked order for those pairs whose elements vary in their distribution still remains an open question.

4. Basic constituent order and word order change in Apurinã

It has been a common assumption in the linguistic literature that basic clausal constituent order is a notion that can be syntactically motivated. However, works such as Hawkins (1983), Comrie (1989), Mithun (1992) (first published as Mithun 1987), and Hale (1992), among others, have acknowledged the existence of languages which lack a basic clausal constituent order. Although Hawkins states that (in his sample of languages) ‘the undecidability of basic word orders is the exception rather than the rule’ (1983:14), he also notes that ‘[t]he biggest problem for a notion of basic word order is to be found in the ordering of the arguments of the verb at the sentence level’ (1983:12). Comrie argues that for a number of languages the assignment of a basic constituent order ‘is more complex or even, perhaps, impossible’ (1989:89). Mithun provides some detailed evidence to conclude that in pragmatically based languages ‘the order of constituent does not reflect their syntactic functions at all, but rather their pragmatic functions’ (1992:58). Hale shows that ‘Warlpiri has free word order in the sense that no *particular* order is necessarily projected in syntax’ (1992:79; although Hale makes some suggestions within a version of a Generative Grammar to explain his results). In this section, before presenting any conclusion on whether Apurinã has a basic clausal constituent order, I will review the criteria normally used by various authors in determining a basic constituent order for a given language, then I will discuss the validity of such criteria for the Apurinã data presented above. Mithun (1992) has proven to be the most complete work in terms of the criteria discussed and the references cited on the issue; hence, most of the references cited below on basic constituent order are also found there.

4.1. Criteria used in determining a basic clausal constituent order

In general the criteria used by various authors, including Mithun (1992), in arguing for a basic clausal constituent order can be grouped in three distinct categories: namely, *structure-based*, *frequency-based*, and *pragmatics-based* criteria.¹¹

4.1.1. Structure-based criteria

Structurally based criteria take into account formal or behavioral morpho-syntactic properties that motivate a specific configurational/distributional clause structure. This particular clausal structure can then be distinguished from other non-basic clausal structures by general principles of markedness, by the generalizations resulting from establishing a specific clause structure as basic, or, perhaps, by both.

One structure-based criterion is the choice of a specific constituent order as basic because it allows for *a simple overall syntactic description of the language* (cf. McCawley 1970). That is, the choice of a particular structure as basic produces the simplest generalization about the grammar of constituent order (variation) in the

¹¹ These are roughly equivalent to Mithun’s (1992:46) *descriptive simplicity*, *statistical frequency*, and *pragmatic neutrality*.

language. One potential problem with this criterion is that the simplest generalization may explain little about a language unless it reveals properties of the language that would be otherwise undetected.

Another structure-based criterion often used is morphological marking (cf. Hawkins 1983). Following this criterion, *the least morphologically marked order will be basic*. Obviously, this criterion can only be applied in languages where constituent order types can be associated with morphological marking, or in languages where not all of the constituent order types can be associated with morphological markings.

A third criterion in the same category states that the basic order type will be the one preferred in potentially ambiguous clauses (cf. Chomsky 1965). Mithun (1992:21), however, describes data in Cayuga (Iroquoian) wherein no preferred reading can be found for potentially ambiguous sentences.

A fourth criterion sometimes used in determining a basic order type is based on clues from other aspects of the grammar. Hale (1992:69-73), for example, argues that *tonal phrasing, determiner allomorphy* (in addition to *extraction rules*) can be used to motivate a verb-final basic order type in Papago (Uto-Aztecan). It would be interesting to see the extent to which certain phonological properties coincide with syntactic structure. After all, if it is clear that phonological words, for example, do not necessarily coincide with syntactic words, it remains to be shown in other languages that phonological rules are reliable strategies to be used in helping to identify syntactic structure.

4.1.2. Frequency-based criteria

A frequency-based criterion generally consists of simply choosing as basic the most frequent constituent order type attested in texts (cf. Hawkins 1983:13, Dryer 1989, 1995, 1997)¹². Hawkins distinguishes an order that occurs with ‘greater frequency [...] in attested samples of the relevant language’ from an order that is ‘more frequent within the grammatical system of the language’ (Hawkins 1983:13). The major question that arises with regard to the frequency criterion is how much more frequent [than the other(s)] a constituent order type needs to be in order to be considered basic. Moreover, Mithun (1992:46) raises the problem of languages for which the more frequent constituent order type is only slightly more frequent than other order types.

Mithun refers to Dryer (1983) when mentioning *statistical frequency* as another criterion. Mithun, however, concludes that ‘[e]stablishing a fundamental order on the basis of a slight statistical advantage in a comparatively rare construction seems unnecessary, unless it can provide some significant descriptive or typological advantage’ (1992:46).

¹² Mithun (1992:15) also mentions Dryer (1983), and Dryer (1995:105) cites Greenberg (1963), both as works where the frequency criterion is used in determining a basic constituent order.

More recently, Dryer (1989, 1995 and 1997) has provided evidence for a strong correlation between the most frequent constituent type and other word order patterns attested in various languages. In Dryer (1997:71), the author equates the two (i.e. ‘basicness’ and frequency dominance) by defining ‘basic word order of two elements as the most frequent order of those elements in the languages’. Aware of the problem that small differences in frequency can pose to a frequency-based criterion in determining a basic constituent order, Dryer (1989:70) makes the following assumption: ‘where one order is twice as frequent as any other order that is sufficient basis for treating the order as basic’. I will return to this assumption when examining the basic constituent order in Apurinã.

4.1.3. *Pragmatics-based criteria*

Perhaps the most common pragmatics-based criterion is the one where basic constituent order is determined by pragmatic markedness. The general idea is to choose as basic the least pragmatically marked or most neutral constituent order type. Of course, the main problem is how to determine what is least marked pragmatically or most neutral. Mithun (1992:47) refers to Pullum’s (1977:266) suggestion that discourse-initial sentences would be the most neutral, since in such cases there would be no preceding context. Mithun, however, reminds us that discourse-initial sentences would actually make an unusual corpus of highly marked situations precisely for the absence of any preceding context.

Mithun (1992) also refers to Chomsky (1965:107), Greenberg (1963) and Pullum (1981) in mentioning another pragmatics-based criterion, namely that ‘simple, declarative, active clauses with no complex verb or noun phrases’ (Mithun 1992:16) would be assumed to be the neutral constituent order. This criterion could make it even harder to find actual examples of clauses with simultaneous natural textual occurrences of subject and object in languages for which such clause types are already rare. If one chooses to elicit such clauses in these languages, then the data (already unnatural) should at least be verified with a significant number of speakers.

Finally, works such as Thompson (1978), Mithun (1992), Hale (1992), Payne (1992) (among others) have described the so-called *pragmatic word order languages*. In these languages the distribution of constituent order is determined by discourse-pragmatic factors (rather than morpho-syntactic ones). As far as a basic constituent order reflects syntactic properties in any way, it seems difficult to talk about basic constituent order for these languages. Mithun’s (1992:50-51) conclusion about this type of languages (which she calls the *pragmatically based ordering languages*) seems to be that one of their properties is *the lack of a basic constituent order*. Aside from determining whether Apurinã has a basic constituent order, in the next subsections I will also refer to the issue of whether Apurinã fits into the class of pragmatically based ordering languages or not.

4.2. *Is there a basic clausal constituent order in Apurinā?*

In the previous subsection various strategies to determine a basic constituent order have been discussed. It seems clear that it is difficult for any single strategy to be applied successfully to every language. Perhaps, a cluster of the properties discussed above can be used with better results, if not to define, at least to identify basic constituent order in various languages. What I will do here is to focus on the three general categories discussed above, i.e. structure-based, frequency-based, and pragmatics-based criteria, and see what the results for each category will be, and then compare these results cross-categorially. Because I have not presented a detailed analysis of the pragmatics of constituent order variation, it is not possible to say whether Apurinā has the pragmatic properties of a pragmatically based ordering language. Nevertheless, by comparing the grammatical properties of Apurinā with those Mithun (1992) presents as the typological properties of pragmatically based ordering languages, I will be able to present some preliminary results on how Apurinā fits into the typology of pragmatically versus syntactically based ordering languages.

4.2.1. *Applying the criteria for basic constituent order to the Apurinā data*

On the grounds of structure-based criteria, the results on basic constituent order are as follows:

- (40) *a* OSV competes with SOV in being basic because both are the least morphologically marked orders (attested in texts), since they are not accompanied by any pronominal marking on the verb;
- b* the fact that VSO is not attested in text material and is rejected in elicitation by some speakers also can be regarded as evidence for OSV over SOV; it is probably more appropriate to say that what the extremely rare co-occurrence of post-verbal S and O suggests is that if both S and O co-occur, they should be in pre-verbal position.
- c* ambiguous sentences could rule in favor of OSV, but only in the grammar of (perhaps, the idiolect) of a few speakers, which in no way can be used to represent the language as a whole.

Thus, if any of the structure-based properties of constituent order can be used for anything, it is to serve as evidence for OSV as basic constituent order. Next, the results on the frequency-based criteria are presented:

- (41) With text frequencies being SV-oO=33 (76.8%), OSV=8 (18.6%), SOV=1 (2.3%), Os-VS=1 (2.3%), s-V-oOS=0 (0%), s-V-oSO=0 (0%), SV-oO is by far the most frequent order type attested in the language. OSV comes only in second place.

Thus, on the grounds of frequency SV-oO is the most basic order type. As to pragmatic neutrality, the preliminary results can be summarized as follows:

- (42) There is no positive evidence that OSV is in any way a pragmatically unmarked type. Instead, to the extent that frequency can be associated with markedness or pragmatic neutrality (cf. Dryer 1989 for languages that have been argued to present potential problems for this association, and cf. Dryer 1995 and 1997 for arguments in favor of this association), the fact that SV-oO has the highest frequency suggests that it is pragmatically unmarked and, thus, neutral, while the opposite would be true of OSV.

Therefore, when applying the criteria generally used in assigning a basic constituent order to the data presented here, we find that there is a conflict of results. While structure-based criteria can be constructed as evidence for OSV as basic, frequency-based criteria and, indirectly, pragmatics-based criteria point to SV-oO as the basic order type. In formal discussions on constituent order variation in the Generative literature (such as e.g. Hale 1992), it is promptly assumed that the grammatical (i.e. structure-based) criteria are the only ones relevant. However, if we are not bound to the principles or assumptions of a Generative framework, but, instead, are more interested in explaining the workings of the specific language under analysis, it is not clear that by simply assuming that grammatical structure prevails, we gain any new insight into the workings of the language that would be gained otherwise, or, as Mithun (1992) puts it, that we gain ‘some significant descriptive or typological advantage’ (1992:46). At the current stage of our understanding of the language, no such an advantage can be presented without some controversy. (However, see subsection 4.2.3 below.)

4.2.2. *Apurinã and the typology of pragmatically vs. syntactically marked language*

As I already mentioned above, although I cannot discuss here the pragmatic properties of Apurinã, some of the grammatical properties can be presented.¹³ The structural properties that Mithun (1992:59) presents for pragmatically based languages include ‘full sets of obligatory bound pronouns’ that ‘bear the primary grammatical relations to their verbs’; separate noun phrases that ‘typically serve more as appositives to the bound pronouns than as primary arguments themselves’; in terms of word order typology, ‘[m]ost of the implicational universals that come out of such typologies are simply inapplicable’; finally, it seems that Mithun also implies that a pragmatically based language would also lack a basic constituent order type.

As far as bound pronouns are concerned, Apurinã does have them, but they are to a certain extent of a restricted occurrence since they are in complementary distribution with pre-verbal coreferential NPs. Nevertheless, it was based on these properties that I have argued in Facundes (1994a) that, from a functional point of view, core

¹³ I will discuss here only the properties postulated for pragmatically based languages, assuming that such properties are absent in syntactically based languages.

arguments in Apurinã can be formally encoded as pre-verbal NPs or as pronominal bound forms on the verb. As a result, post-verbal NPs which are coreferential with the bound pronominal forms are nothing but appositions to these bound forms. With reference to word order typology, however, most of the data presented in 3.4 show that the word order patterns in Apurinã follow pretty closely the order of the OV type of language rather than that of the VO type. Furthermore, as noted in Dryer (1989) and (1995), even the so-called pragmatically based languages show OV/VO word order correlations. (See more on the issue of word order types in the next subsection). Finally, as to the lack of basic constituent order, as we saw in the previous section, the strategies normally used to identify basic constituent order give conflicting results, i.e. OSV versus SV-oO.

A reasonable conclusion then is that, even in the absence of a detailed description of the discourse-pragmatics of constituent order variation in the language, Apurinã exhibits properties that can be associated with both a syntactically and a pragmatically based type of language.

4.3. Is there a basic constituent order change going on in Apurinã?

The results of the analysis of constituent order variation in Apurinã presented in this paper match some but not all of the results presented in Pickering (1974) and Aberdour (1985). Pickering (1974) focused his analysis on the structure-based criteria in claiming that OSV is the basic constituent order in this language; he only states that OV was more frequent than V-oO, and that SV was more frequent than V-sS to support his OSV claim, providing, however, no numbers. Aberdour, on the other hand, underscores the low frequency of OSV in texts to question Pickering's claim. Aberdour reports 158 (91.3%) for SV, and 38 (66.7%) for OV in a corpus of 5 texts (four traditional stories and one third person narrative of factual occurrence) where 447 clauses are counted. Both Pickering's and Aberdour's results were part of the reason for Derbyshire (1986) to conclude that Apurinã patterned as O...V.

The results presented in 3.2 are, thus, somewhat different from those found with the previous authors. If we consider subject and object, independently of whether they co-occur in the same clause, we find that SV (155 or 91.2%) and V-oO (91 or 59.5%) predominate over s-VS (15 or 8.8%) and OV (62 or 40.5%). In the data reported by Pickering and Aberdour, SV predominates, thus similar to the data considered in this paper. The difference is that in Pickering and Aberdour OV outnumbers V-oO, whereas here the opposite is true.

In terms of the word order correlations presented in Dryer (1991, 1992, 1997) for OV versus VO languages, we have seen in table 8, repeated below as table 9, that all of the seven pairs of correlation considered follow an OV pattern, while only three of those pairs also follow a VO pattern.

Construction	OV	VO
Noun – Postp. Suff.	+	
Manner Adv – V	+	
Gen – N	+	
Clause – Subordinator	+	+
V – PP	+	+
Main V – Aux	+	
Main Clause – Subord. Clause	+	+

Table 9: Word order correlations

In terms of these word order correlation patterns, it is important to refer to Dryer (1989, 1997). Dryer suggests that once a dominant constituent order pattern becomes twice as frequent as the second most frequent pattern, the word order correlation patterns tend to change in the (typological) direction of the new dominant pattern. In Apurinã, the current data point to V-oO occurring 1.5 (i.e. 91/62) times as frequent as OV, whereas Aberdour's data pointed to OV occurring exactly 2.00 (i.e. 38/19) times as frequent as V-oO. So, while Aberdour's results give the OV pattern precisely twice as frequent as the V-oO, the results presented here give the V-oO pattern only 1.5 times as frequent as the OV pattern. Thus, both Aberdour's results and the ones presented in this paper conform to Dryer's prediction in complementary ways.

Returning to the issue of constituent order, I have argued above that there is not a descriptive or typological advantage in choosing OSV as basic solely on grounds of structural criteria. However, if we assume that high frequency generally reflects grammatical properties, and using Dryer's claim that the frequency of OV and VO is only relevant for word order correlations when the frequency of OV minimally equals two times the frequency of VO (or vice-versa), then it seems plausible to assume that if the frequency requirement is not reached, the grammatical properties generally associated with high frequency may not have changed as yet. That is, unless OV becomes twice as frequent as VO, the grammatical properties correlating with OV have not changed overall.¹⁴ If that is the case, the grammatical structures that can be constructed as evidence for OV in Apurinã would not have changed overall, since V-oO is less than twice as frequent as OV. Therefore, it follows that the grammatical properties of OV presented above (e.g. lack of bound pronominal marking on the verb etc.) are still reliable reflections of the 'basicness' of OV. As a consequence, OV can be defined as basic on the basis of these grammatical properties and independently of word order correlations found in the language. Moreover, once OV is independently defined as basic, it can explain the word order correlations found in the language. In this fashion it then becomes descriptively and typologically advanta-

¹⁴ This is not to claim that high frequency can be equated to grammar but, instead, that even as a byproduct of grammar and discourse-pragmatics, within the threshold minimally established as 'twice as frequent,' high frequency can be a good diagnostic for grammatical properties that are still valid to define 'basicness.'

geous to assign OV as basic, while the same argument cannot be made for OSV or SV-oO.

Although further data need to be obtained, it is nonetheless plausible to draw the following preliminary conclusion (assuming Dryer's association of the most frequent constituent order with the other word order correlations in a language). On the basis of the information provided by Pickering (1974) and Aberdour (1985) and on the basis of the dominant word order patterns seen in table 9, one may say that the most frequent constituent order type in Apurinã has changed from OV to V-oO. This idea is supported by the frequency and word order correlation facts described in this paper. Moreover, it is also clear that, as illustrated by the data above, the change to V-oO has not yet affected other word order patterns in the language. That is, most of the word order correlation patterns still follow an OV type. One question which, in order to be answered, requires further research, is whether the VO word order patterns represent patterns which have recently developed in the language.

Finally, perhaps the most obvious question is how it is possible for a language to be predominantly OV around the year 1985 and dominantly V-oO less than 15 years later. It still is not possible to rule out the possibility that the results presented by Aberdour (1985) were an artifact of the types of texts she based her analysis on. Although the data used here include a larger variety of texts, the size of the corpus still needs to be increased before text genera specific properties can be completely discarded as motivating the results. Nonetheless, a plausible preliminary hypothesis (requiring further investigation) is that the process of word order change of Apurinã has taken place in the context of language contact with the Portuguese language, and that this contact not only influenced but might also have speeded up the rate of change toward VO – not by coincidence the Portuguese dominant pattern. If we can confirm that the change in the dominant order pattern was influenced by Portuguese, we can also speculate that the reason other word order patterns in the language still follow an OV (rather than VO) pattern may be due to the language contact situation. That is, it may be that the fact that V-oO is only 1.5 times as frequent as OV is not the reason (or not the only reason) for the current word order patterns attested in the language; it may be that this type of language change (as do others) in language contact situations produce grammatical changes that go against the more common typology of the synchronic stage of various grammars.

5. Conclusion

The goal of this paper was to present an analysis of constituent order variation with respect to subject and object in Apurinã. Issues related to text frequency, basic constituent order and word order correlations were examined. Structure-based, frequency-based and pragmatics-based criteria were presented as the three general categories of strategies commonly used in assigning a basic constituent order to any given language. When such criteria are applied to the Apurinã data we find that discourse-pragmatics and frequency factors conflict with structural factors in determin-

ing a basic constituent order. While the latter provide evidence for OSV, the former provide evidence for SV-oO, and no insights into the language are reached by choosing either as basic. Structure-based criteria can, nevertheless, yield evidence for OV as basic constituent order, which provides insight into why the language follows an OV typological pattern. When Apurinã is contrasted with the pragmatically based type of languages proposed by Mithun (1992), we find that some of the structural properties observed for those languages are also found in Apurinã, although the particular discourse-pragmatic properties associated with constituent order variation still need to be fully described in this language.

The data also allow us to postulate a preliminary hypothesis that the language is undergoing a process of change under the influence of the contact with Portuguese, where the former dominant OV pattern reported in Pickering (1974) and Aberdour (1985), and which would explain the OV typological word order patterns, is changing into V-oO. Consequences of this change for other word order correlation patterns, however, are not yet observable. The diachronic as well as the language contact related aspects of the analysis require further investigation. An important step in the analysis, omitted in this paper, refers to the discourse-pragmatic roles involved in constituent order variation and the syntactic encoding of core arguments. Although this step is crucial in understanding what determines the constituent order variations found in the language, the preliminary results indicate that the issue is rather complex, and requires further research.

References

- Aberdour, K.
 1985 'Referential Devices in Apurinã Discourse', in: David Fortune (ed.) *Porto Velho Working Papers*, SIL, Brasília, pp. 43-91.
- Chomsky, Noam.
 1957 *Syntactic Structure*. The Hague: Mouton.
 1965 *Aspects of the Theory of Syntax*. Cambridge, Mass.: MIT Press.
- Comrie, Bernard.
 1989 *Language Universals and Linguistic Typology. Syntax and Morphology*. Chicago: The University of Chicago Press.
- Derbyshire, C. Desmond.
 1986 'Comparative Survey of Morphology and Syntax in Brazilian Arawakan', in: Derbyshire and Pullum 1986.
- Derbyshire, C. Desmond and Pullum Geoffrey K. (eds.)
 1981 'Object Initial Languages. *IJAL* 47, 3: 192-214.
 1986 *Handbook of Amazonian Languages*, vol. 1. Berlin: Mouton de Gruyter.

Dryer, Matthew.

- 1983 'Coos Word Order', Paper presented at the Western Conference on Linguistics, University of Oregon, Eugene.
- 1988 'Object-Verb Order and Adjective-Noun Order: Dispelling a Myth', *Lingua* 74, 185-217.
- 1989 'Discourse-Governed Word Order and Word Order Typology', *Belgian Journal of Linguistics* 4: 69-89.
- 1991 'SVO Languages and the OV:VO Typology', *Journal of Linguistics* 27: 442-482.
- 1992 'The Greenbergian Word Order Correlations', *Language* 68,1: 81-138.
- 1995 'Frequency and Pragmatically Unmarked Word Order', in: Downing and Noonan (eds.) *Word Order in Discourse*, Amsterdam: John Benjamins, pp.105-135.
- 1997 'On the Six-Way Word Order Typology', *Studies in Language* 21, 1: 69-103.
- Facundes, Sidney da Silva.
- 1991 Split Case-Marking in Apurinã (Arawakan) (ms.)
- 1994a 'Constituent Order Variation in Apurinã (Arawakan)', in: Margareth Langdon (ed.) *Survey of California and Other Languages, Report 8, Proceedings of the Meeting of the SSILA, July 2-4, 1993 and the Hokan-Penutian Workshop July 3, 1993*, pp. 59-74.
- 1994b *Noun Categorization in Apurinã*, Unpublished M.A. thesis submitted to the Department of Linguistics, University of Oregon, Eugene, Oregon.
- 1995 'Possession an Unpossession in Apurinã (Maipuran)', in: *Proceedings of the Language South of Rio Bravo*, A Parasession to the 1995 Annual LSA Meeting at Tulane University, New Orleans, Louisiana. Electronic version at <http://spgr.sppt.tulane.edu/LSoRB/Proc/Facundes.html>.
- 1996 The Making of the Apurinã Writing System (ms.)
- 2000a 'The Comparative Linguistic Methodology and Its Contribution to Improve the Knowledge of Arawakan', Paper prepared for the Conference on Comparative Arawakan Histories, Panama, May 23-28, 2000.
- 2000b *The Language of the Apurinã People of Brazil*, Ph.D Dissertation: SUNY-Buffalo.
- Givón, Talmy.
- 1983 *Topic Continuity in Discourse: A Quantitative Cross-Language Study*, TSL 3. Amsterdam: John Benjamins
- 1988 'The Pragmatics of Word-Order: Predictability, Importance and Attention', in: Hammond et al. (eds.) *Studies in Syntactic Typology*. Typological Studies in Language 17, 243-284. Amsterdam: John Benjamins.
- 1992 'On Interpreting Text-Distributional Correlations: some Methodological Issues', in: Payne, ed. 1992.
- 1995 *Functionalism and Grammar*. Amsterdam: John Benjamins.

- Greenberg, Joseph H.
 1963 'Some Universals of Grammar with Particular Reference to the Order of Meaningful Elements', in: Greenberg (ed.) *Universals of Language*. Cambridge, MA: MIT Press.
- Hale, Ken.
 1992 'Basic Word Order in Two 'Free Word Order Languages'', in: Payne (ed.), pp. 63-82.
- Hawkins, John.
 1983 *Word Order Universals*, New York: Academic Press.
- Johnson, David
 1974 Prepaper on Relational Constraints on Grammar, Unpublished manuscript, Mathematical Sciences Department, T.J. Watson Research Center, IBM, Yorktown Heights, NY.
- Keenan, Edward L.
 1975a 'Some Universals of Passive in Relational Grammar', in: *Chicago Linguistic Society*, 11, Chicago: University of Chicago.
 1975b 'The Logical Diversity of Natural Languages', Paper presented to the Conference on the Origins and Evolution of Language and Speech.
 1976 'Toward a Universal Definition of Subject', in: Ch. Li (ed.)
- Keenan, Edward L. and Bernard Comrie.
 1977 'Noun Phrase Accessibility and Universal Grammar', *Linguistic Inquiry* 8: 63-99.
- Langacker, Ronald W.
 1969 'Pronominalization and the Chain of Command', in: Reiber and Schane eds. Li, Charles (ed.)
 1976 *Subject and Topic*, New York: Academic Press.
- Longracre, R.
 1976 *An Anatomy of Speech Notions*, Lisse: Peter de Ridder Press.
- Mallinson, Graham and Barry J. Blake
 1981 *Language Typology; cross-linguistic studies in syntax*, North-Holland Linguistic Series, 46. Amsterdam: North-Holland Publishing Company.
- McCawley, James D.
 1970 'English as a VSO Language', *Language* 60: 286-299.
- Mithun, Marianne.
 1987 'Is Basic Word Order Universal?', in: Russell S. Tomlin (ed.) *Coherence and Grounding in Discourse*, pp. 281-328. Amsterdam: John Benjamins.
 1992 'Is Basic Word Order Universal?', in: Doris L. Payne (ed.) *Pragmatics of Word Order Flexibility*, pp.15-61.
- Payne, David.
 1991 'A Classification of Maipuran (Arawakan) Languages Based on Shared Lexical Retentions', in: *Handbook of Amazonian Languages*. Vol. 3, pp.355-517.

- Payne, Doris L. (ed.)
 1992 *Pragmatics of Word Order Flexibility*, Amsterdam: John Benjamins.
- Perlmutter, David M. (ed.)
 1983 *Studies in Relational Grammar I*, Chicago: The University of Chicago.
- Perlmutter, David M. and Paul M. Postal.
 1983 'The Relational Succession Law', in: Perlmutter 1983.
- Pickering, Wilbur.
 1971 'Apurinã Grammar, *Arquivo Linguístico No. 008*. Brasília, D.F. SIL.
 1973 'Command in Apurinã, *Arquivo Linguístico No. 006*. Brasília, D.F. SIL.
 1974 'Gapping and Constituent Order in Apurinã, *Arquivo Linguístico No. 005*. Brasília, D.F. SIL.
- 1977a 'Relativização em Apurinã', *Série Lingüística* 7:127-140.
 1977b 'Interrogativos Apurinã', *Arquivos de Anatomia e Antropologia* III:101-117.
- Pullum, Geoffrey K.
 1977 'Word Order Universals and Grammatical Relations', in: Cole and Sadock, (eds.) *Grammatical Relations, Syntax and Semantics* 8, New York: Academic Press.
- 1980 'Syntactic Relations and Linguistic Universal', in: *Transactions of the Philological Society*, 1980, 1-39. Oxford: Basil Blackwell.
- 1981 'Object Initial Languages', *IJAL* 47:192-214.
- Reibel, David A., and Sanford A. Schane.
 1969 *Modern Studies in English*, Englewood Cliffs, New Jersey: Prentice-Hall.
- Ross, John Robert
 1970 'Gapping and Order of Constituents', in: Manfred Bierwisch and Karl Erich Heidoph (eds.) *Progress in Linguistics*.
- Thompson, Sandra.
 1978 'Modern English from a Typological Point of View: Some Implications of the Function of Word Order', *Linguistische Berichte* 54:19-35.
- Trithart, Lee.
 1975 'Relational Grammar and Subjectivization Rules', in: *Papers from the 11th Chicago Linguistic Society Meeting*.
- Van Valin, R., Jr, LaPolla, R.
 1998 *Syntax: Structure, Meaning and Function*, Cambridge Textbooks in Linguistics, Cambridge: Cambridge Press.

Abbreviations

ADV	Adverb	M	Masculine
AFFECT	Affected	NMLZ	Nominalizer
ASSOC	Associative	O	Object
AUX	Auxiliary verb	PASS	Passivizer
BEN	Benefactive	PFTV	Perfective
CAUS	Causativier	PL	Plural
COL	Collective	POSSED	Possessed
DESID	Desiderative	POSSOR	Possessor
DISTR	Distributive	PROG	Progressive
DIR	Directional	RANDOM	Random action/event
EMPH	Emphasis	REC	Reciprocal
F	Feminine	REFL	Reflexivizer
FRUST	Frustrative	RELZ	Relativizer
HAB	Habitual	Rt	Root
HYPOTH	Hypothetical	SG	Singular
IMPFTV	Imperfective	S	Subject
INCH	Inchoative	UNPOSS	Unpossessed
INST	Instrumental	V	Verb
INTENS	Intensifier	VBLZ	Verbalizer
INTRZ	Intransitivizer	V.ST	Verb stem
LOC	Locative		