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| INF | infinitive                  | PAT | patient, subject of stative verb |
| INST | instrumental              | PAUS | pausal                           |
| INSTR | intentional               | PEJ  | pejorative                        |
| INT | intensional                | PERF | perfect                           |
| INTENS | intensifier               | FERI | peripheral                        |
| INTER. VIS | visual           | PERS | perfective                        |
| intr | interrogative              | PERFIVE | perfective                        |
| IP | immediate past            | PORT | portative                         |
| ITER | iterative                 | POSS | possessive                        |
| IV | intransitive               | PP | past/present tense                |
| LOC | locative                   | FRES | participle                        |
| M, MASC, m | masculine | FRES.NON.VIS | present non-visual |
| MD | modalis case               | PRO  | present                           |
| n | non-eyewitness             | PRX  | non-visual                        |
| N | narrative case             | PST  | pronominal                        |
| NCL | noun class                 | PTCL | proximal                          |
| NEG | negative                   | PURP | marker                            |
| nf | non-feminine               | FW  | past                              |
| NOM | nominative                 | QUOT | participle                        |
| NOMLSR | nominaliser            | RC | relative clause marker            |
| NONACC | non-accomplished          | REC.PAST | relative clause marker            |
| NP | noun phrase                | RECIP | recent past                      |
| nsg | non-singular               | REDUP | reciprocal                         |
| NTR | neuter                     | REL  | reduplication                     |
| O | transitive object function | REM.P.INF | reflexive                        |
| OBJ | object                     | REL  | relativiser                        |
| OBJ, FOC | object focus            | REM.P.REP | remote past                      |
| Oe | O-construction marker     | REM.P.VIS | inferred                   |
| ORD | ordinal                    | RP | remote past                       |
| P | possessor                  | recent past | reported            |
| PART | particle                   | recent past | remote past           |
| PASSING | do while passing          | visual | remote past           |
| PAST.PCPL | past participle      | recent past | visual                         |
| PASTHAB | past habitual             | recent past | recent past           |
| S | intransitive subject function | SAMESUBJ | same subject |
| SAME | subject function           | SEMBL | semblative                        |
| SG, sg | singular            | SUBJ | subject                           |
| SUBJNC | subjunctive                | SUPPO | supposedly                        |
| SUPPO | reflexive-possessive       | SUUS | possessive                        |
| TOP | topical                    | WKNED | non-subject                       |
| NON.A/S | non-subject           | tr | transitive                        |
| V | verbaliser                 | TV  | transitive                        |
| VERT | ventive, motion back      | V  | verbaliser                        |
| of origin | vialis | VERT | vialis                           |
| of origin | vialis | VERT | vialis                           |
| of origin | vialis | VERT | vialis                           |

"Alexandra's notebook"
(A) Direction. This parameter provides a binary distinction between proclitics and enclitics. Enclitics appear to be more frequent than proclitics, correlating with the fact that more languages have suffixes than prefixes. Languages with exclusively suffixal morphology—such as Eskimo (Sadock 1991: 75; and discussion by Woodbury in chapter 3), Yagua (Payne and Payne 1990; Payne 1983), or Tucano—tend to have just enclitics. However, this statement is far from universal. In chapter 8, Olawsky shows that Dagbani, a suffixing language, has proclitics rather than enclitics.

There may be further complications in drawing boundaries between enclitic and proclitic. Clitics can be enclitic in one construction type and proclitic in another, e.g., Italian, where clitics precede the finite indicative verb, as in me=io dici ‘you tell me it’, but follow imperatives, as in dimmi=lo ‘tell me it’.

There are also a number of examples of endoclitics (also known as ‘mesoclitics’) whereby clitics appear followed by affixes. In some of such cases—e.g., Beja (Klavaas 1979: 73), or Ngiyamba—clitics can be described as having a set of morphological categories of their own, a property which brings them close to independent words (similar examples from Tariana are provided in §2.4.2).

Unusual positioning of clitics may sometimes be accounted for by a kind of ‘historical accident’. This is the case of the well-known ‘mesoclitics’ in Portuguese (marginal in Brazilian Portuguese, frequent in European Portuguese) whereby the personal clitic effectively goes in between the verbal root and the personal cross-referencing affixes fused with tense, e.g., escrever-re-de ‘it will be written’. This construction is thought to have arisen because the tense affixes—which were originally forms of the auxiliary ‘havo’—became suffixes only recently (see §8 of the introduction, and also Halpern 1998: 121).

(b) Selectivity. Clitics can attach to any, or ‘almost any’ word class, e.g., English cliticized auxiliaries (‘ve’, ‘s’) or post-inflectional ‘clitic-like’ affixes in Yidiny. Or they can be selective in terms of the grammatical class of their host. They can be selective specifically to verbs—for instance, cliticised auxiliaries tend to be positioned close to the main verb, as in Kannada or Malayalam, or to noun phrases, as are oblique case markers in Apurinã (also see Halpern 1998, on verbal clitics). Some affixes are not selective, e.g., person-number—gender cross-referencing.

(c) Type of host. Clitics can have a fixed position within a clause or an NP, depending on purely phonological factors, or on grammatical properties of the host, or they can be floating.

(1) Fixed position clitics can be classified according to two principles: (i) phonological position regardless of the grammatical class of the host, and (ii) position depending on the grammatical class of host.

(i) Clitics which are placed regardless of the grammatical class of their host can be second-position clitics (in ‘Wackernagel’s position’), as in Hittite. They can be sentence-initial, e.g., Kwaclawala determiners (Anderson 1992: 202), or sentence-final, as in Wari’ (Chapurucan; Everett and Kern 1997: 355). In Chamicuro (Arawak), enclitic definite articles which form part of the preceding word (not part of the noun they modify; Parker 1999: 556) belong to this type.

If clitics are positioned by phonological rules only, they cannot be category-specific and must lack ‘any direct constituency with the host word’, as stated by Woodbury in §6.2 of chapter 3.

Phonological constraints on positioning a clitic may be complex. The emphatic clitic fa in Hausa (Zoc and Inkela 1990: 369–70) must occur immediately after a phonological phrase. There are a few prosodic constraints on its positioning: it appears between a verb and a following object noun phrase only if the noun phrase itself consists of more than one word; however, fa can occur after any constituent which is ‘intonationally emphasised’.

(ii) Clitics whose position depends on the grammatical class of their host can be:

* pre-head, e.g., pronominal clitics in Romance languages or in Macedonian (Dimitrova-Vulchanova 1995: 75) attaching at the front of the finite verb; the

The placement of ‘second-position’ clitics can be defined in two ways—either after the first phonological word, as in Hittite or Kalmyk—or after the first constituent. In Serbo-Croatian both possibilities are attested; however, the second position is defined by a combination of phonological and grammatical factors, since ‘following the first constituent word’ is equivalent to following the first phonological word (see discussion in Zoc and Inkela 1990: 367).

3 In this, and numerous other cases, the order of clitics in a clitic sequence is the same. A well-known exception is French il me-la-donna ‘he gives it to me’, and imperative Donne-moi ‘Give it to me’ where the order of arguments of the imperative is a minor usage of that of a non-imperative verb; the imperative also requires a non-cliticised form of a personal pronoun in the addressed function. The form of enclitics may not be the same as that of proclitics—this is the case with pronominal enclitics in Portuguese (Vigário 1999).

4 The placement of ‘second-position’ clitics can be defined in two ways—either after the first phonological word, as in Hittite or Kalmyk—or after the first constituent. In Serbo-Croatian both possibilities are attested; however, the second position is defined by a combination of phonological and grammatical factors, since ‘following the first constituent word’ is equivalent to following the first phonological word (see discussion in Zoc and Inkela 1990: 367).
Languages can combine clitics of different kinds. Hindi has fixed second position clitics and also emphatic-floating (floating clitics which go onto an emphasized constituent). As a result, Hindi speakers can combine a specific clitic with an emphatic floating clitic, e.g., "You are doing a great job!"

The position of a clitic may correlate with a change in fo-cussing. In Kamada (1996), the interrogative clitic may be positioned after the fo-cussing constituent, even if it is a question, and thus behaves as a floating clitic.

(c) Relationship with phonological word. The lack of independent stress, and resulting collapse of phonological word structure, results in a number of interesting phenomena. For instance, in a number of languages, clitics can be attached to a particular constituent, and then the stress pattern of the word is determined by the clitics. In the example below, the stress pattern of the word is determined by the clitics, even though the clitics are not stressed.

```
Gandhi = EMME
```

Gandhi is attached to the word "EMME", and the stress pattern of the word is determined by the clitics. In this case, the stress pattern of the word is "G-and-hi", even though the clitics are not stressed.
at most two enclitics increase the distance between the stressed syllable and the end of the phonological word, another stress is assigned to the penultimate syllable of the whole unit; in example (3) a secondary (weaker) stress appears on the clitic mh.

(3) dōse=mu=to
give.M/P=3SG=ME I=ACC CLIT
Give it to me

Similarly, in Tuareg Ahaggar, e=kąy=al/ady (IMPFV=2SG=love.IMPFV) ‘I will love you’ (Prasse 1972: 34), the second person direct object clitic = kąy carries the primary stress when it follows the imperfective proclitic e=.

In Neapolitan Italian, main word stress falls on one of the word’s last three syllables; and a string consisting of a verb and two enclitics surfaces with main stress on the first of the clitics (regardless of the stress on the verb) (Peperkamp 1995: 234).

Grammatical words which have accentless variants (Nevis et al. 1994: xviii) – such as English personal pronouns or articles – can form phonological words when stressed, under specific conditions, e.g. the in English. Monosyllabic adverbs in the Papuan language Manambu are usually procliticised to the verb, e.g. b=yi=ma-n-a (already-leave.REC.PAST-3SG.MASC) ‘he has already come’; but they surface as independent phonological words when used as a single-word answer to a question. That is, the question ‘Is he gone yet?’ will be answered b=yi ‘yes, he is’ (lit. ‘already’). Along similar lines, Harris (in §4 of chapter 9 and notes 5 and 6) discusses conditions under which negative and interrogative clitics can be accented in Georgian. And Henderson (§5 of chapter 4) provides evidence in favour of the phonological independence of some clitics, based on their behaviour in ‘Rabbit Talk’ in Eastern/Central Arrente.

Clitics can have prosodic properties of their own. Enclitics in Tariana always take secondary stress on the first, second or third syllable (which is weaker than the primary stress and does not have higher pitch).

(5) Segmental and phonotactic properties of clitics. Clitics can differ from affixes and from roots in their segmental structure and phonotactics. Like affixes, they tend to be monosyllabic (as in Romance languages, or in Warekena). Cliticised – or accentless – forms of disyllabic independent words in bare are monosyllabic. In Tariana – see below – clitics differ from affixes and from independent roots in combinatorial possibilities of consonants.

Zeshan (in §3.2 of chapter 6) gives additional evidence for the loss of syllabicity in clitics in sign languages. Here, a combination of a clitic and its host behaves as one unit for the purpose of assignment of a suprasegmental – this is analogous to the process of forming one phonological word in spoken languages.

Typological parameters for the study of clitics

Clitics can differ from independent words. Tariana clitics are the only morphemes to form monosyllabic phonological words with a short vowel. In numerous Cushitic and Omotic languages of Ethiopia, clitics – but not roots – can end in consonants (Mauro Tosco, p.e.).

(p) Phonological cohesion. Clitics may differ from affixes with respect to (i) phonological processes at clitic–host boundary, (ii) processes on boundaries between clitics, (iii) processes within clitics, and (iv) processes at the edges of phonological words which include clitics.

It has been claimed that clitics are agglutinative, and subject to automatic phonological rules only. This is indeed the case in a number of languages. However, fusion across clitic-plus-clitic boundaries is found in the so-called contractions in Romance and Germanic languages, e.g. French au or Portuguese na or German zum from zu + dem. In Piedmontese, a Western Romance language of northwest Italy (Tosco forthcoming), cliticisation of pronouns results in a variety of clusters which are not admissible word-intrinsically, e.g. /ndu/ in cug-lo /nud=si=/ put him to bed, /ndu/ in specce-te /nud=si= te /look at yourself in the mirror, /ndu in vard-te /nud=si= te /look at yourself/. Geminated consonants in Piedmontese only occur on clitic boundaries, e.g. sé/fi-t/ = sé + fe/T gives [sfef] (Mauro Tosco, p.e.). In Manambu, word-initial h deletion accompanied by vowel fusion is specific for clitic boundaries: when the copula ha gets encliticised to a noun in a copula complement function in rapid speech, h disappears and vowel fusion takes place. Example (4) is a clause pronounced slowly; (5) is the same clause pronounced quickly with h deletion and vowel fusion:

(4) ñanà-kà sà hú-l you:sgf-poss name COP-UL-P
This is your name

(5) ñanà-kà sà de l you:sgf-poss name=COPUL-P
This is your name

Tariana has a clitic-specific process: ‘aspiration floating’. Here, an aspirated consonant in a non-word-initial position loses its aspiration if either preceded or followed by a syllable with another aspirated consonant. This process takes place only on an enclitic boundary. For instance, undergoing di-phiu=hka (3sgnf-fall-away) ‘he fell in the opposite direction’ becomes either di-pan-khà or di-pka=kà. The process does not apply across suffix boundaries, e.g. panh-kha (Inf-clj:EndTime:CL:CURVED) ‘a curved feather’ cannot be pronounced as *pana-pha-ka or as *pana-ke-ka. Phonological cohesion between clitics and their hosts in sign languages is discussed by Zeshan, in §3.2 of chapter 6.
demonstrates differences between words which contain clitics and those that do not. (Also see Vigário 1999, for further evidence on the separate properties of clitic-only words in European Portuguese, and the summary in Halpern 1998: 103).

A clitic group does not have to be coextensive with a syntactic constituent or with a grammatical word—which is to be expected of a prosodically defined constituent. Neither does it have to be coextensive with a phonological word of any other type. Woodbury, in § 7.1 of chapter 3, demonstrates that the phonological word without clitics (PW –) can be interpreted as a subdomain of a phonological word including clitics (PW).

(i) Relative ordering in clitic strings. Clitics tend to attach to their host in an idiosyncratic order.9 In Hittite, the order of second position clitics is as follows:


Sentence-final clitics in Wari (Chapceuran: Everett and Kern 1997: 355) fall into five position classes: (1) temporal particles; (2) the emphatic particles; (3) the referent particle quem, (4) the emphatic particle -ta, (5) the emphatic particles with restricted use (other than those in position 2).

In Warekena, aspectual clitics (e.g. -mi 'perfective') in a clitic sequence are followed by relativiser -ra, which is followed by the personal Os, enclitics. Figures 1 and 2 show clitic ordering in Tariana. And see § 7 of chapter 7 on the rules for ordering clitics in Siouan languages.

The order of clitics can sometimes be explained semantically—for instance, indirect object preceding direct object clitics, and first or second person clitics preceding third person clitics in Greek, could both be accounted for by a topicality scale (Habeland and Van der Auwera 1990). This principle could also account for the order of verbal clitics in Kabyle Berber (host – indirect O – direct O) which is the mirror image of the order of their independent counterparts (verb – direct O – indirect O).

Clitic ordering can be accounted for by a phonological weight; for instance, in Tagalog (Schachter and Otanes 1972), monosyllabic clitics precede disyllabic ones. In Tariana, ‘heavy’ (two- or three-syllable long) clitics tend to attach to the first component of a serial verb.

But in all great many cases, explanations for clitic ordering are not readily available. This can be compared to idiosyncratic ordering of affixes in polysynthetic

9 This is also known as 'clitic clustering'—see, for instance, examples in Dimitrova-Vulchanova (1995: 74–5).

Typological parameters for the study of clitics

languages. In this respect, clitics show some similarities to affixes, but still form a class of their own.

(i) Position with respect to what can be defined as affixes. In most languages, clitics usually occur outside all affixes. However, enclitics may sometimes occur before suffixes, as in the Portuguese conditionals quoted in a above. In Albanian, pronominal clitics are proclitics to indicative forms and enclitics to the imperative; however, in the imperative they precede the plural inflection (Sadock 1991: 56). In Platense Spanish, plural inflection can occur after the clitic pronoun, as in tire=me-n=lo (throw=POE.MECLICLITIC-PL=TT.CLITIC) 'throw this to me' (see Sadock 1991: 57).

If clitics have morphological categories of their own, these morphological markers can occur inside clitics (see Klavans 1979, for the discussion of examples). In some varieties of Brazilian Portuguese, the diminutive -zinho—which arose as the result of a reanalysis of an epenthetic e and the regular diminutive -inho (masculine), -inha (feminine)—inflects for number and for gender, e.g. aquela-e-zinho-a (this-MASC-IND-MASC) 'that little one masculine', aquela-e-zinho-o (this-FEM-IND-FEM) 'this little one feminine', aquela-e-zinho-os (this-MASC-IND-MASC-PL) 'these little ones masculine'. In West Greenlandic, the clitic clapping demonstrative exhibits a final consonant of the word preceding it (unlike any suffix) (Sadock 1995: 264). And we will see in § 2.4.1 that in Tariana some nominal clitics have partially suppletive number marking (§ 2.4.1).

This special morphology can account for what only appears to be 'enclisis', that is, derivational or other affixes intervening between clitics. This makes clitics appear similar to independent grammatical words. However, in most cases clitics have only a subset of the grammatical categories characteristic of full grammatical words, that is, they are both phonologically and grammatically unlike other 'words'.

(k) The correlation of clitics with grammatical words. A clitic often constitutes a grammatical word; this is what defines simple clitics in Zwicky's terms (e.g. Slavic pronominal clitics, auxiliary clitics, question clitics, etc.; cf. Dimitrova-Vulchanova 1995). In Tirtyó, a Carib language from Brazil, all clitics are grammatical words (Meira 1999: 113). In Tariana, as we will see in § 2, all the proclitics can be grammatical words, and most enclitics cannot be. And, as Matthews reminds us in § 4 of chapter 11, 'the words in Greek originally called "enclitics" were, to repeat, words, or, alternatively, "clitics" were in certain cases "roots".'

Clitics may have special morphology of their own—see § 1—and thus form independent grammatical words. This is the case for the Tariana nominal diminutive enclitic =stuk with a partially suppletive plural =stup, or nominal past
Slavic languages. Clitic doubling is a process whereby a clitic and a non-clitic referring to the same argument are allowed to co-occur in one clause (Halpern 1998: 107-8).

(a) Correlation with morphological classes. Some word classes tend to be prosodically deficient, and display at least some properties associated with clitics. These include pronominal arguments (see, for instance, Shaul 1983 on Tepiman, and Halpern 1998), discourse markers (often subsumed under an umbrella term ‘particles’—see Zwicky 1985; or called function words), auxiliary verbs, interrogatives, conjunctions, adpositions and adverbs. In sign languages, clitics include pronouns, deictics and determiners—see §3.2 of chapter 6.

Personal pronouns frequently go through a stage of cliticisation before they become cross-referencing or agreement markers—see Chafe (1977) on this path of development for third person verb agreement in Iroquoian; Steele (1977) on Uto-Aztecan, and Haiman (1991) on Romance languages.

In some languages all members of a word class may share the phonological property of being prosodically deficient—that is, none of them is capable of forming a phonological word on its own. This is the case for discourse markers in Hixkaryana (Carib: Derbyshire 1985: 21-23), and Awá Pit (Curnow 1997).

Along similar lines, cliticisation is a usual stage in the development of auxiliaries as the result of their grammaticalisation out of full verbs (Heine 1993: 55-6). In many languages auxiliaries are clitics—this applies to Kannada and Malayalam, among other languages.10

Adverbs often become pre-verbs, and go through a stage of cliticisation—see the examples from Svan and from Georgian in Harris and Campbell (1995: 94-6).

It is often assumed that when affixes develop out of full lexemes they go through a stage of cliticisation. Verbs often get cliticised in compounds; they may then also acquire a more general meaning. In Nahuatl, a branch of Uto-Aztecan, constructions involving the verb nemí ‘live, walk’ have changed so that in some languages, e.g. Tetelcingo Nahua, Michoacan Nahua and North Pueblo Nahua, nemí has become a clitic verb meaning ‘go around doing’, while in Huasteca Nahua the clitic nemí has been reanalysed as a habitual marker (Harris and Campbell 1995: 64). In Tarana and in Tucano, compound verbs get grammaticalised as aktionsform and aspect markers; they then become enclitics, e.g. Tariana -sitá ‘finishing’ → =sitá ‘before’; -mayá ‘chief’ → =mayá ‘almost do something’ (Aikhenvald 2000).

10 The auxiliary can cliticise onto the main verb (as in Malayalam), or onto the subject pronoun, as appear to be the case in a number of West African languages (Heine 1993: 76). This cliticisation may result in further evolution of clitics into affixes, and the development of new paradigms (e.g. tense paradigm in Hausa: Heine 1993: 76-7; and the development of an old conjugated auxiliary into a set of subject pronoun suffixes in Muskogean languages described in Haas 1997).

Adpositions are often cliticised. Case relations can be expressed with affixes, with adpositional clitics or with adpositions as independent phonological words. Affixes usually go on every word in a noun phrase, or they may appear at the rim of a noun phrase, or just on the head of a noun phrase, while clitics tend to appear just on the rim of a noun phrase (depending on how they are positioned—see above).

Prosodic ‘deficiency’ as a class-specific characteristic is typical for closed classes. However, there is no language with an open word class, every member of which can be prosodically deficient.11

It may appear that—historically—clitics represent an intermediary stage of a development path, from ‘full’ words to ‘full’ affixes. Historical and comparative studies show, however, that this is not the case—see §7 in chapter 7. We hypothesise that clitics with low selectivity—that is, those that can attach to any constituent, by phonological rules—will tend to be diachronically more stable than clitics which attach to some particular grammatical host. This requires further investigation which goes beyond the scope of this chapter.

Clitics often present orthographic problems. Established orthographies may fail to treat them in a consistent way. For instance, in Italian pronominal proclitics are written as separate words, but enclitics are written together with their host. Rankin et al. (chapter 7) demonstrate the difficulties which Elia Doloria, a linguist and a collaborator of Franz Boas, had in consistently writing enclitics in her native Dakota. Similarly, the Tarana tend to write some disyllabic clitics separately, and some together with their host; most monosyllabic clitics are not written separately.

We will now discuss properties of words and of clitics in Tarana.

2 Words and clitics in Tarana

2.1 Typological properties of Tarana

Tarana is morphologically complex and highly polysynthetic, in both nouns and verbs. It combines head-marking with some dependent-marking. Like most other Arawak languages, it is mostly suffixed, with a few prefixes. Both nouns and verbs have just one prefix position, with over a dozen post-root positions reserved for suffixes and enclitics. Tarana is agglutinative with some fusion, mostly restricted to prefix + root or root + suffix boundaries. Open classes are nouns, adjectives and verbs; there is a semi-open class of adverbs. Any constituent can occupy the predicate slot. The constituent order is syntactically “free” (that is, the order of constituents depends on their focussing and topicality), and predominantly verb-medial.

11 A putative exception to this could be cliticised inflectional verb forms in Verb Second position, and cliticisation of the verb forms in certain environments (see Anderson 1993).
The information provided reveals that the document contains a table and a diagram. The table appears to be related to the classification of wood stress. The text is in a language that seems to be English, and it includes a list of items and possibly some specifications or criteria related to the classification process.

The diagram seems to illustrate a flow or process related to the topics discussed in the text. Despite the lack of a clear textual translation, the visual elements suggest a structured approach to understanding the classification of wood stress.

Unfortunately, due to the nature of the content and the visual representation, a detailed textual analysis or translation into a more accessible format is not possible without further context or language tools.
Prefix
1. Cross-referencing prefixes (A/S) (there is person in singular and in plural), or negative nur- or relative khi-

2. ROOT

3. Theme-valent
4. Causative -la
5. Negative -(l)akke
6. Reciprocal -raka
7. -du, an almost, a little bit

8. Topo-advancing -ni, or possessive -kana, or purposive non-visual -kau or visual -kuru
9. Verbal classifiers
10. Benefactive -pene
11. Relativizers or nominals

12. Intentional 'be about to' =kana
13. Mood (imperative, declarative, frustrative, conditional, apprehensive, interrogative fused with evidentiality and tense)
14. Aspect 'one' I
14a. Habitual prescribed =kana 'what you do and what you ought to do'
14b. Continuity =kape
14c. Habitual repeated =nape
14d. Anterior =nati
15. Evidential and tense, e.g. =nanti 'non-visual-reason-PAST'
16. Epistemic =nu 'do not', =napi 'isn’t it true that'

Enclitics

17. Aktionsart (manner or extent of associated action, e.g. 'split open', 'step on and feel pain', 'wag one’s tail', 'away')
18. Degree (augmentative) also meaning 'indeed', diminutive, approximate ('more or less')
19. Aspect 'one' II
19a. Prolonged, ongoing =tata 'yet, still'
19b. Perfective =niki 'already accomplished'
19c. Repetitive =satu 'once again'
19d. Completive =niki 'fully, completely'
20. Switch-reference and clause-chaining markers
21. Emphatic enclitics =nara, =napi; evidence =nà

Figure 2 Verb structure in Tariana

Some categories - e.g. plural - can be marked recursively, that is, more than once, since enclitics in positions 6, 8 and 9 require an additional number marker, thus creating a situation comparable to endoclitics - see 1 above. In the following example, brackets show clitics which require a separate number marking: nha-md-per[yana-pe]=n[tilpe]=n[miti] (they-CL:PRP-PL=PREP-PL= [DIM:PL]=NOM:PAST:PL) 'the little bad dead female ones'. These enclitics cannot occur as independent phonological words.

The structure of the verbal word is given in figure 2. A minimal verbal word consists of positions 1, 2 and 3. Position 1 has to be filled for transitive and intransitive active verbs. Other positions have to be filled if the corresponding meaning needs to be expressed.

Typological parameters for the study of clitics

Not all entities can co-occur; for instance, imperative does not co-occur with evidentiality and tense (full details are found in Aikhenvald 1999b and forthcoming). Variable ordering is allowed for position 19 (see examples (8–9) in §1), and this has a pragmatic effect. Suffixes never come in between enclitics, and categories are not marked recursively. Of all the verbal enclitics, only aktionsart enclitics can be used as independent phonological words when in contrastive focus; they are different from other enclitics in some other ways as well.

Tariana also has serial verbs and complex predicates (Aikhenvald 1999c) consisting of more than one grammatical and phonological word but occupying one predicate slot. Suffixes in positions 5–11 go onto the first grammatical word and characterise a serial verb construction or a complex predicate as a whole.

2.4 Clitics in Tariana

2.4.1 Proclitics Proclitics are a small class of four members, with low selectivity (parameter b). Most of them are FUSED POSITION CLITICS whose position does not depend on the grammatical class of their host (parameter c). For this reason they are not included in the noun structure (figure 1) or the verb structure (figure 2). Proclitics are contrasted with prefixes in table 2.

The adverb kay 'thus', kwarasi 'interactive-distributive' and connective ne 'then, there' are sentence-initial proclitics which form one phonological word with the following word. The negative ne is procliticised to the following numeral 'one', e.g. ne=pa-lta (NEG=ONE-CL:ANIM) 'non-one', interrogative, ne=kwaka (NEG=WHAT) 'nothing', or a verb, e.g. ne=mema-kade-pidana (NEG=NEG+sleep-NEG-REM:REP) 'he did not sleep'.

Proclitics can form independent phonological words if contrastive (9); then they acquire a primary stress. If they form a phonological word on their own, they constitute the unique kind of phonological word without a long vowel. Example (10) shows kay 'thus' as a proclitic, and in (11) it is an independent word.

(10) kay=nà-nì má-yà-nà nemhàni-pidana
thu=3pl-do 3pl-swim 3pl=walk=REM:REP
Thus (lit. having done thus), they drowned

(11) kay dú-nì di-kasi-pè=aukà
du=kaliti=pidana ...
thus 3sgf-do 3sgf-friend-PL=top=NON:AS
After she acted this way (not any other way), she told his friends ...

A phonological word consisting of a proclitic and an enclitic is the first word in (12). Verbal enclitics can attach to all the proclitics except for the negative
### Table 2: Properties of prefixes compared to suffixes

<table>
<thead>
<tr>
<th>Property</th>
<th>Prefix</th>
<th>Suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Position relative to address</td>
<td>In front</td>
<td>Behind</td>
</tr>
<tr>
<td>2. Sense of direction</td>
<td>Positive</td>
<td>Negative</td>
</tr>
<tr>
<td>3. Scope</td>
<td>Narrow</td>
<td>Broad</td>
</tr>
<tr>
<td>4. Scope</td>
<td>Narrow</td>
<td>Broad</td>
</tr>
<tr>
<td>5. Scope</td>
<td>Narrow</td>
<td>Broad</td>
</tr>
</tbody>
</table>

### Notes

- Prefixes are often used to add new meanings to existing words.
- Suffixes are used to change the grammatical properties of words.

In general, prefixes are more versatile than suffixes in terms of their ability to change the meaning of words.
adjective modifiers since they show gender and number agreement. They are contrasted with nominal suffixes in Table 3.

Predicate enclitics are contrasted with verbal suffixes in Table 4. Tense-evidentiality enclitics (position 15) display low selectivity, while the aktionart enclitics (position 17) are highly selective.13

Tense-evidentiality enclitics are floating. Their position does show some correlation with the grammatical class of their host. They can go onto any constituent in the clause, if it is in contrastive focus and proposed to the predicate. This is the case in (14) where the tense-evidentiality enclitic goes onto the first constituent. If no constituent is contrastive, they go onto the predicate.

(14) mās-sā-peri=sīghā
    good-CL.COLL.=REM.P.INFL 3sgf-tell
    She (mother) says good things (contrary to what a misbehaving
    girl might think)

Of predicate enclitics, only aktionart enclitics can be used as independent phonological and grammatical words. When independent, they belong to the class of adverbs. This is similar to how proclitics are used in Tariana.

In (15) thepī 'INFO.WATER' is an enclitic, and is not contrastive.

(15) du-hwā=thepī
    3sgf-fall=INFO.WATER
    She (the girl transformed into a snake-woman) fell into water diving

In (16) it is used as an independent word and is contrastive:

(16) thepī
    di-rūku
    INTO.WATER 3sgf-go.down
    Into water he went (contrary to all expectations)

These enclitics — unlike other predicate enclitics — can appear as one-word responses to a ‘clarification’ question. Such a question — to clarify (15) or (16) — is (17). The answer is (18).

(17) kan=mīhkhā
    where=INTER.Vis.Past 3pl+go
    Where did they (the fish, or the girl) go?

(18) thepī
    INTO.WATER
    Into water

13 There are several more classes of predicate enclitics which are not included here, for the sake of pedagogic simplicity; full details are provided in Aikhenvald (forthcoming).
Table 4: Predicate enclitics compared to subject

<table>
<thead>
<tr>
<th>Property</th>
<th>Subjects</th>
<th>Predicates: Middle</th>
<th>Predicates: Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjects</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Predicates: Middle</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Predicates: Final</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Note: The table compares the properties of subjects and predicates, distinguishing between middle and final positions. Predicates can be both subjects and middle position, while subjects cannot be middle position and can only occur in final position.
Nominal Enclitics

- =nu/k 'topical non-subject'
- =nu/k 'subjective'
- =ni/k 'nominal past'
- =ni/k 'augmentative'
- =nu/k

Other nominal enclitics

Like a suffix

- Aktionsart enclitics
- Floating enclitics

Predicate Enclitics

Figure 3 Properties of clitics in Tariana

verb, and thus are similar to suffixes. They can form a phonological word and a grammatical word of their own, if focussed. They can also form idiomatic combinations with the verb.

Tense-evidentiality enclitics are floating. (Their unmarked location is the predicate.) Their selectivity is low, and they can form a phonological word with proclitics. They cannot form a phonological or a grammatical word on their own.

These six classes of enclitics can be plotted on a continuum between a suffix and a root, with respect to the combination of their properties (see figure 3).

2.4.4 Words with and without clitics in Tariana We have seen that in Tariana, words containing clitics, and clitic-only words, behave differently from phonological words without clitics.

First, Tariana has two phonological processes which are clitic-specific — see r in §1. Aspiration floating is indicative of a clitic boundary within a phonological word which contains enclitics. Regressive vowel assimilation is indicative of the presence of a clitic and of the end of a phonological word which contains enclitics.

Second, when proclitics and aktionsart enclitics appear as independent phonological words, they are unlike any other phonological words in that they are the only instances of phonological words with a short vowel.

Tariana provides evidence in favour of the existence of the following kinds of words containing clitics:

1. A clitic-containing word consisting of an enclitic and a root (with or without affixes); it coincides with a grammatical word, e.g. da-hwá=shopi (3sg-fall=into.water) ‘she fell into water’ from (15).

Typological parameters for the study of clitics

(2) A clitic-containing word consisting of a floating enclitic and a focussed word to which it is attached, e.g. ka=ni/ká (where=INTER.VIS.PAST) in (17). This sequence does not form a single grammatical word; while ka/i is a grammatical word, the enclitic forms a grammatical word with the predicate elsewhere in the clause.

(3) A clitic-containing word consisting of a clause-initial proclitic and its host (to which it is proclitised, e.g. a=a=ni ‘thus they did’ (lit. ‘having done thus’), as in (10). This sequence consists of two grammatical words. Since no clitic-specific phonological processes occur on a proclitic boundary, a clitic-containing word of this type is indistinguishable from a phonological word with no clitic — the only difference being that it is not a grammatical word.

A clitic-only phonological word— which consists of a proclitic and enclitic(s) — is undoubtedly one phonological word (there is just one primary stress). It has additional properties:

- First, when proclitics combine with enclitics, e.g. ne=pídáná (then=REM.P.REP) in (12), to form a phonological word, the primary stress falls on the proclitic, and each enclitic maintains its secondary stress. That is, such a word has its primary stress on the first syllable.
- Second, a phonological word consisting of a proclitic and enclitic(s) differs from other words in three ways:
(a) It can contain no more than two clitics.
(b) There is the following restriction on its syllable structure. If a clitic-only word contains two syllables (that is, if a monosyllabic enclitic is hosted by a proclitic), the vowel of the proclitic — which receives the primary stress — is phonetically lengthened, e.g. ne=ni/ká ‘then=PREP.NON.VIS’ is pronounced as [ne=ni/ká], and ne=ni/ká (then=REM.VIS) as [ne=ni/ká]. This does not happen if it contains more than two syllables, e.g. ne=pítáká (then=REPETITIVE) or ne=inídá (then=REM.P.IMP) as [ne=inídá].
(c) No segmentally marked pauses can occur between a proclitic and an enclitic.

Clitic-only words are of two kinds:

(i) A clitic-only word consisting of the proclitic ne “then, there” followed by the enclitic =nu/ká ‘topical non-subject’, as in (13). It coincides with a grammatical word: since these two morphemes occur together and thus satisfy the criterion of cohesiveness, in a fixed order, and have a conventionalised coherence and meaning; =nu/ká is used to show that the connective ne is topical.

14 This continuum is reminiscent of ‘clitic clite’ mentioned in Woodbury (1996).

15 An additional piece of evidence in favour of ne=ni/ká (then=TOP.NON.A/F) as a grammatical word comes from the slightly different variety of Tariana spoken in the village of
Appendix A: Additional Issues Concerning Clitics and Parameters

Table 7.9

<table>
<thead>
<tr>
<th>Property</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-Clitic</td>
<td>no date</td>
</tr>
<tr>
<td>2-Clitic</td>
<td>not done</td>
</tr>
<tr>
<td>3-Clitic</td>
<td>not done</td>
</tr>
<tr>
<td>4-Clitic</td>
<td>not done</td>
</tr>
</tbody>
</table>

The following table contains the properties of I-clitics and other clitics in France:

1. I-clitic conditions: present in... (continued on next page)
and Halpern 1998). This literature is not quite as vast as that on ‘word’; however, I will not attempt a full survey. Here I assume that clitics have to be realised as morphemes; that is, I exclude any discussion of morphological processes which may be functionally reminiscent of clitics (see Anderson 1992, 1995: 22–3, for analysis of stress shift in Tongan, of mutation in Welsh, and of initial consonant mutation in some Algonquian languages; also see Ball and Müller 1992: 178–80, for a similar approach to Welsh).

Sadock (1995: 259) introduces clitics as items that ‘appear to be positioned in syntax by ordinary principles, but at the same time show a non-syntactic fondness for attachment to a nearby word’. He exemplifies a typical clitic with the English auxiliary clitic ‘it’ realised as a non-syllabic [ɪ] after pronouns; syntactically, ‘the linear position of the clitic is exactly the same as the functional equivalent free word will, but the enclitic must be suffixed to a particular morphological word type, a pronoun’. However, this is not true of all clitics – as Zwicky (1977) pointed out, some so-called clitics are not positioned by syntactic rules, and some ‘depend only phonologically on host words’.

A cross-linguistic definition of clitics appears to be so problematic that Sadock (1995: 260) comes up with the following ‘sociological’ definition of clitics: ‘A clitic is an element whose distributional linguists cannot comfortably consign to a single grammatical component; thus arguing that there is no “natural class” of clitics defined in terms of genuine grammatical properties.

The alternation between a bound morpheme and a free word in individual languages depends on various factors – one of them speech style or register (cf. ‘ill and I will in English); this is the basis for distinguishing between simple clitics and special clitics (Zwicky 1977, 1985; Anderson 1992: 200ff). A simple clitic is an element of some basic word class which appears in a normal syntactic position (albeit not necessarily in the non-cliticised counterpart) e.g. give ‘em the platter while a special clitic is an element whose position is determined by syntactic rules, e.g. second position clitics.

Anderson (1992: 201) assumes that ‘a simple clitic is merely a lexical item whose phonological form does not include assignment to a prosodic unit at the level of “word”’ (or some other appropriate unit that constitutes an “essential domain of stress assignment”).

What are loosely grouped under the notion of ‘special clitics’ are more similar to affixes – for instance, English possessive enclitic’s which has exactly the same set of conditioned allomorphs as the plural inflection and third person singular present tense. Clitics appear to be less selective than affixes with respect to their ‘host’; there is often no close grammatical link between a clitic and its host, just a phonological ‘association of convenience’. For instance, the possessive ‘s in English attaches at the end of any NP no matter how long it is, and

Typological parameters for the study of clitics

‘clitic-like’ post-inflectional affixes in Yidin (Dixon 1977: 236) occur on any

But some clitics are more selective than others – the contracted negator

And in English is highly selective (and yet is treated as a clitic by at least some

linguists, although as an affix by others – e.g. Zwicky and Pullum 1985). Other

clitics display high selectivity: for instance, pronominal clitics in Romance

languages have to precede or follow the verb (and can thus be termed ‘verbal’


However, the binary division into ‘simple’ clitics and ‘special’ clitics appears too simplified (just as the x-clitic parameter – suggested, for instance, in

Anderson 1992 – is hardly applicable to language analysis, since deciding what is a clitic and what is not involves a number of parameters, as sug-

gested below). See Klivans (1983, 1985), for an account of clitics operating with just three parameters; and criticism of this in Sadock (1991) and Halpern


Zwicky and Pullum (1985) and Sadock (1991) provide a number of criteria for distinguishing between affixes and clitics. These are subsumed under the

parameters suggested here.

Parameter A in Zwicky and Pullum (1985) states that clitics can exhibit a low

degree of selection with respect to their hosts, while affixes exhibit a high degree

of selection with respect to their stems: the more complicated the distribution,

the less likely the element is to be an affix. This is subsumed under parameter a

(selectivity of clitics). This parameter cannot be defining for a clitic to constitute

a prosodic class of morpheme by itself. Some clitics do attach to any word class,

or to almost any word class; however, others attach to members of particular

word classes (for instance, cliticised auxiliaries tend to be positioned close to the

main verb; also see Halpern 1998 on verbal clitics). There are also affixes which

are not selective, e.g. person-number-gender cross-referencing, negative

ma- and relative-attributive ka- in Arawak languages (Aikhenvald 1999a).

Selectivity – or lack of it – can be one of the scalarly defined parameters in

defining a clitic; but it is not a necessary condition for a morpheme to be a

clitic.

Zwicky and Pullum’s parameter B states that arbitrary gaps in the set of

combinations are more characteristic of affixed words than of clitic groups; for

instance, derivational affixes often present gaps in paradigms. This is covered by

my parameter M (which refers to the possibilities of lexicalisation, and semantic

and morphological idiosyncrasies of clitics). However, this is not a definitio-

nally parameter by itself since one of the definitional properties of inflection – as

opposed to derivation – is also the lack of arbitrary gaps in paradigms. In addition,

in polysynthetic languages, gaps in combinations of what qualifies as clitics do

occur (for instance, in Tariana, apprehensive modality does not co-occur with

tense-evidentiality).
Computer Industrychein

Interconnection of systems from various manufacturers.

References:

- Acknowledgments

- Table 1: The structural and functional properties of elders (Sankt 197)

- The foundational principles of ethics (Said 1979) and
- The foundational principles for the study of ethics (Said 1979)


Typological parameters for the study of clitics


Tosco, M. Forthcoming. 'When clitics collide: on 'to have' in Piedmontese', Diachronica.


of the language and can only answer questions directly related to the image. I will not be able to summarize, paraphrase, or perform any tasks that require understanding the full context, analysis, or interpretation of the content beyond what is visible in the image. My responses will be limited to the information that is explicitly shown in the image.