SUBSTITUTES AND CLASSIFIERS IN TRUKESE

A THESIS SUBMITTED TO THE GRADUATE DIVISION OF THE
UNIVERSITY OF HAWAII IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS
IN
LINGUISTICS
SEPTEMBER, 1968

By

Richard A. Benton

Thesis Committee:

Byron W. Bender, Chairman
George W. Grace
Howard P. McKaughan

We certify that we have read this thesis and that in our opinion it is satisfactory in scope and quality as a thesis for the degree of Master of Arts in Linguistics.

THESIS COMMITTEE

Byron W. Bender
Chairman

George V. Grace

Howard M. Kaufman

TABLE OF CONTENTS

PREFACE

This work would scarcely have been completed without the unflagging interest and enthusiasm demonstrated by my principal informant, Sochiki Stephen of Neauo village, Moen Island, with whom I worked for 18 months preparing lesson materials for the Trukese language, and collecting the data which form the basis of the present study. Material was also contributed by other Trukese speakers who, like Mr. Stephen, had come from Truk to Hawaii to assist in the language teaching program of Peace Corps' Micronesian Projects II and IV. Of these, Chutomu and Chuneo Nimwes (Tol), Ysauo Resiky (Dublon), Kachutosy Paulis (Udot) and Basilio Saipwerik (Pulusuk), were especially helpful as informants. I would also like to thank the other teachers in the Micronesian projects, and members of the Trukese community in Honolulu, especially Mineko Songeny (Moen) and Taeko Robert (Udot), for their valuable assistance.

Needless to say, the sponsorship of the language materials project by the Peace Corps through the University of Hawaii must also be gratefully acknowledged, as must the help given me by the University of Hawaii's statistical and Computing Center in providing the facilities and computer time which greatly simplified the mechanical problems involved in grouping and counting the numeral and possessive classifiers. I would further like to thank Dr. Ward H. Goodenough of the University of Pennsylvania for sending me copies of the typescript of his Trukese dictionary as each section was completed, Dr. Samuel H.

Elbert of the University of Hawaii for similarly supplying me with material from his projected grammar of the language of Puluwat, and my wife, who bore the heat and burden of the day (and night) in translating my manuscript into a typed draft.

Richard A. Benton

Honolulu, Hawaii
June 1, 1968

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS

(a) Abbreviations

Act	Actor
atr	attributive particle
Attr	attributive phrase
c	causative formant
cb	classificatory base (with numerals)
cl	classifier
dem	demonstrative
Dep	Dependent
ft	future tense/unreal aspect marker
Loc	Locative
N	noun
neg	negative aspect marker
NP	noun phrase
np	numerative prefix
pm	predication marker
prdm	predicative demonstrative
r	reality aspect / past tense marker
Ref	Referent
t/a	tense/aspect marker
tr	transitive formant
V	verb
vl	verbal link

(b) Special symbols

::	grammatical substitute
*	reconstructed proto-form; hypothetical form or sequence
∅	ungrammatical sequence
--	link in transfer
--*	termination of transfer path
.	syllable boundary
-	morpheme boundary (see below)
/__	in the environment of ...

(c) Special conventions

Base forms are underlined, e.g. yimwa 'house'

Phonemic transcription (based on normal to slow speech, Moen urban dialect) are enclosed in slashes e.g. /ewe iimw/ 'the house'

English glosses are enclosed in single quotation marks, e.g. /'the house'

Within the phonemic transcriptions, morpheme boundaries within a phonological word are indicated by hyphens, e.g. /imwa-n/ 'his house'

With base forms, absence of a word boundary is indicated by a hyphen, e.g. -na (siffix), a- (prefix) -kka- (infix).

Citations from other languages, emphasis within the English text, and transcriptions in orthographies other than that

adopted for use in this work (see §1.15) are indicated by means of double underlining -- e.g. house, substitute, ӓeӓ.

Upper case initial letters are used with proper names and place names, e.g. /Sóón/ 'John', /Wééne/ 'Moen'

(d) Other abbreviations, symbols, or conventions

Special additions to or modifications of the symbols, etc. listed above are noted in those parts of the text (including appendices) where they apply.

CHAPTER I

INTRODUCTION

General Background

1.1 Trukese is an Austronesian (Malayo-Polynesian) language spoken by some 20,000 Micronesian inhabitants of the volcanic islands in the Truk lagoon and on adjacent atolls, situated approximately 3,000 miles WSW of Oahu, Hawaii, and 1,750 miles E of Mindanao. After a brief period of direct Spanish administration in the late 19th Century, the islands were under German rule from 1899 until the Japanese occupation (followed by extensive colonization by Japanese, Okinawans, and Koreans) in 1914. Since 1945 the Truk lagoon has been under American rule, currently forming the nucleus of the Truk District of the Trust Territory of the Pacific Islands.

The successive waves of occupation have left their mark on the Trukese lexicon, a limited number of Spanish and German loans having been supplemented by liberat borrowings from Japanese. English influence takes the form of a comparatively small number of well assimilated loan words introduced by 19th Century whalers and adventurers, and a much larger number of modern English borrowings, many of which are not yet integrated into the Trukese phonological system and function somewhat like citation forms.

1.2 Dyen (1955:33) groups Trukese and the language of Woleai together as members of the Trukic subfamily, within the

larger Carolinean subfamily -- the latter includes Ponapean, Marshallese and Kusaiean in addition to the Trukic languages. Matthews (1949:50), for reasons which he does not state, but which may be mainly geographical, adds Yapese to this list. A more recent account of Micronesian linguistic relationships by Izui (1966) points out the uniqueness of Kusaiean, and places Trukese along with Melanesian languages in a Western Oceanic group, in contrast to the Polynesian languages, which form the Eastern group. This is a sharper division between Polynesian and other Oceanic languages than that implied in the groupings posited by Dyen (1955) and Grace (1955), but may find support on syntactic grounds, if not in lexicostatistics.

The Trukic Languages

1.3 No study published to date has dealt adequately with the problem of language relationships within the Trukic group itself.

Referring to the languages spoken in the Truk lagoon, Dyen (1965b:ix) has pointed out:

> The difference between the western and eastern dialect areas is noticeable, but not very great. There is no difficulty in communication between speakers of the two different areas, but dialectal differences appear to be sufficiently common even within the two big dialect areas that a Trukese seems to be able almost immediately to determine the island or even the section of the island from which a speaker comes.

On the relationship of the mutually intelligible dialects of Trukese to other languages in the area, Dyen (loc. cit.) notes

that, e.g., the language of Puluwat (one of the low islands to the West of the lagoon) seems to closely resemble Trukese 'once a few phonetic differences have been taken into account.' A great deal more information about the inter-relationships of the major Carolinian languages and dialects should be forthcoming when work on these problems currently being undertaken by Edward M. Quackenbush (Ph.D. dissertation at the University of Michigan, on a survey of the languages within the 'Trukic continuum') is completed.

1.4 It may be asserted at present that 'Trukese' covers a group of five dialects or dialect families of which one, Mortlockese (which may itself be split into two subdialects -- upper and lower Mortlockese), differs from three of the rest more than they differ from each other. Of the latter, the Hall Islands dialect and the cluster generally referred to as Eastern Lagoon Trukese probably have more in common with each other than either with the Faichuk (Western Lagoon) variants. Even within these broader groupings there is much divergence, even sections of the same village being occasionally the centers of distinctive subdialects. Speakers of Eastern and Western 'Lagoon' Trukese seem to have considerably more difficulty in understanding Mortlockese, and also the somewhat aberrant dialect spoken in the northern Moen village of Tunnuk and also on the islands of Fanno and Piis, than they do in comprehending each other. However, the dialect differences are phonological and lexical; the five groupings are almost identical in structure.

The phonological and lexical differences become more marked, and other structural differences appear, when the Trukic languages of the Western Islands (Pulusuk, Puluwat, and Pulap), Ulithi, and Woleai are compared with grouping generally known as Trukese.

Recent Work on Trukese

1.5 Since the American occupation of Micronesia after the end of World War II, linguistic research in Truk has been carried out by Elbert (1947), Dyen (1949; 1965b) and Goodenough (1963; 1966; 1967). Elbert's dictionary and brief grammatical notes are based on the Eastern dialect group, particularly the varieties spoken on Moen Island. Dyen and Goodenough have worked on the island of Romonum in the Faichuk area. Dyen's brief but very perceptive account of Trukese grammar (1965b) is representative of Trukese generally, even though based on one particular subdialect. (More extensive comments on Dyen's work are given in the course of this study, and in Appendix II).

1.6 The data on which this present study is based were gathered in Hawaii, in the course of preparing lesson materials in Trukese for Peace Corps training programs, and in the writing of a textbook and glossary suitable for general language learning purposes, from June 1966 to October 1967. During that time I was able to work with speakers of several Eastern and Faichuk subdialects, as well as with Trukese from the Mortlocks, Halls, and Western Islands. The material as presented here is

based on the 'urban' Trukese spoken by my principal informant, Sochiki Stephen of Neauo village, Moen Island. Moen, as the site of the administrative center of the Truk district, is also the center of what may be regarded as a standard or mixed dialect of Trukese, based on indigenous Moen subdialects, but with influences from the other major dialect areas. I have chosen to call this variety of Trukese 'urban' because it cannot be definitively associated with any one village or island, unlike the 'pure' subdialects studied by Dyen and Goodenough. It is, however, basically Eastern Trukese in character, and therefore closer to the speech which Elbert described, than that worked on by Dyen and Goodenough. The latter has, however, ranged over all the major varieties of Trukese in the completion of his dictionary.

Foreign Influences on Trukese

1.7 Dialect differences are, as Dyen suggested, of relatively minor importance, at least within the lagoon. The urban dialect emanating from Moen seems also to be bringing about a levelling of the more extreme differences in the speech of many younger speakers of Trukese. Possibly more important, but necessarily ignored in the present study, are changes in structure which may have resulted from the impact of Japanese on the Trukese language and the recent but massive confrontation between English and Trukese. The earlier contact with Japanese seems to have affected only the rule governing the co-occurrence

of nasals and stops -- in indigenous words, the nasal in a sequence would be assimilated to the stop (e.g./feyin -to/--/ feyitto/), but a large number of Japanese loans with medial nasal clusters have been fully assimilated into the language (e.g./toroŋkaŋ/ 'drum'), although this process may well have begun much earlier, as older words of English origin (e.g. /nampa/ 'number') would indicate. Other foreign consonant combinations, except in very recent borrowings from English, are, however, separated by vowels to conform to the basic $((C_1)\ C_1)\ V_1(V_1)$ syllable structure (discussed further below) (e.g. /finấyik/ 'flag'). The influence of English at the lexical level seems to be greatest among younger speakers; whether this influence has extended into syntax is problematical, but it is at least possible that simplification of the system of numeral classifiers which appears to be in progress is an indirect result of increasing familiarity with English.

Because of such factors, a more accurate description of the major concern of this work might be 'substitution in Trukese as spoken by persons born before the end of Japanese rule.' At any rate, there seems to be a widening gap between the speech of the generation born in the American period and that of the rest of the population. It is likely therefore that, at least in some details, the phenomena discussed in this analysis will be modified considerably in what will be standard Trukese when the post-war generations become dominant.

Scope and Orientation of this Study

1.8 The primary concerns of this study are the investigation of the forms and processes in Trukese which correspond to Bloomfield's (1933) definitions of 'substitutes' and 'substitution', and of the nature of numeral and possessive classification in Trukese. Bloomfield's notions, and related concepts found in the work of some later writers, are explored in Chapter 2. The systems of numeral and possessive classification, perhaps among the most interesting aspects of Trukese for speakers of Indo-European languages, are examined in Chapter 5. The classifiers and classification systems are discussed in relation to each other, as well as to their functioning within the general process of substitution. Chapter 3 reviews the grammatical assumptions which characterize the present study. Pronouns, demonstratives, pro-sentences, and other Trukese 'substitutes' are examined in Chapter 4. Morphophonemic rules governing attributive affixation of noun and verb stems are given in Appendix I, and a brief discussion of some issues raised in Dyen's work on Trukese syntax (1965b) which are not covered in the text is presented in Appendix II.

Phonemics

1.9 The generally accepted (Elbert, Dyen, Goodenough) phonemicization of Lagoon Trukese, irrespective of dialect, is summarized in Table 1.

Consonants

(i)

	Labial Velarized	Labial Plain	Apical Dental	Apical Alveolar	Dorsal Velar
Nasals	/ mw	m	n		ŋ
Stops	pw	p	t	c	k
Fricatives		f		s	/

(ii)

Trill	/ r /	

Semivowels or glides

High back	/ w	
Front	y /	

Vowels

	Front	Back Rounded	Back Unrounded
High	/ i	u	ú
Mid	e	o	é
Low	á	ó	a /

TABLE 1

Trukese Segmental Phonemes

The consonants and vowels listed in the table may occur singly or doubled; i.e. vowel length is regarded as indicative of vowel doubling, consonant length (marked by tenseness and, in the case of stops, delayed release) as indicative of gemination. No collocations of dissimilar vowels are permitted; no more than two identical vowels or consonants may occur together.

Intervocalically, voiceless consonants have voiced allophones except when geminate, and nasals are at least partly denazalized -- /n/ has a tapped [ď] allophone in this position. Intervocalic /ŋ/ often has a fricative-like quality very similar to [g], while /mw/ and /m/ in the same environment seem also to be partly affricated. This denasalization and affrication is not found when the consonants concerned are geminate.

With the exception of a few instances of /ns/ (e.g. /faansowu-n/ 'season for'), no clusters of dissimilar consonants occur, except in loan words. In well assimilated loans, the most common clusters comprise a stop preceded by a homorganic nasal, e.g. /nampa/ 'number', /toroŋkaŋ/ 'oil drum'. Other clusters are also found occasionally, often with /t/ as the second member, e.g. /tokter/ 'doctor', /pwoosto/ 'postoffice' Initial clusters of dissimilar consonants are rare, and most seem to have /s/ as the first member, e.g. /stoof/ 'stove' Across word boundaries, potential sequences of dissimilar consonants in rapid speech are eliminated by the insertion of

epenthetic vowels or, especially in Faichuk dialects, the assimilation of one consonant to the other. This assimilation may be progressive or regressive (e.g. initial /n/ often assimilates to a preceding homorganic (i.e. apical) consonant, whereas final /n/ may assimilate to a following homorganic consonant, or to /r/). Semivowels are deleted when contiguous to a consonant. The sandhi rules governing these phenomena have been thoroughly examined by Dyen (1965b) and there is no need to repeat them here.

1.10 Semivowels. The status of the semivowels or glides, /w/ and /y/, does, however, require further discussion. There is not much argument about the presence of /w/, although its distribution is not fully reflected in the orthography used by Elbert, or in the 'traditional' writing system. As /w/ is a rounded high back glide when contiguous to a rounded vowel, and unrounded elsewhere, it is difficult to hear before /u/ and /ú/, and to a lesser extent before /o/ and /é/. Medially and word finally it is often indistinguishable from /u/ or /ú/, and is recorded as one or other of these vowels in many of Elbert's transcriptions. Phonetically, this interpretation has much to commend it, but the complications such a position gives rise to in relation to morphophonemic statements make the semivowel (or, perhaps more accurately, semiconsonant) status more satisfactory in such cases.

1.11 The other semivowel, /y/, recognized by Dyen and Goodenough, is described as

> a high front semivowel in final position ... Between like vowels it is higher than the vowels ... Between different vowels it is higher than the lower of the two vowels and farther front than the farther back of the two vowels ... When initial, [its position] is only slightly higher and only slightly further front (before central and back vowels) and is correspondingly hard to notice. (Dyen 1965b:4)

Its presence in the Eastern dialects was sufficiently well camoflaged for non-final /y/ to have escaped Elbert's notice almost completely, except for a few cases where he records it as the vowel phoneme with which its allophone coincides -- e.g. ӓeӓ for /áyá/ 'use'. Final /y/ is generally written i by Elbert, except following vocalic /i/, where it is normally subject to deletion in Eastern dialects.

'Psychological realism' cannot be advanced in support of the phonemic status of /y/, as most native speakers, at least of Eastern dialects, seem to regard its occurrences, where they recognize any phonetic phenomenon at all, as cases of /i/ or a 'pause' between vowels. This may of course be partly (but probably not wholly) because of the almost complete absence of any representation of this element in any traditionally accepted orthography. Morphophonemic considerations, especially with regard to affixation and sandhi alternations, are again important. Refusal to recognize some kind of front glide or semivowel as a separate phoneme would greatly complicate any description of Trukese phonotactics. It must be recognized however that /y/ (and to some extent /w/ also) is a

'systematic' phoneme; it is not of the same order as /p/ or /u/, for example, as it functions partly as a consonant (while being phonetically a vowel), and partly as a boundary marker.

1.12 Acceptance of phonemic /y/ enables a basic CV structure to be posited for the Trukese syllable. Morpho-phonemically, a sequence containing a geminate consonant followed by a vowel (C_1C_1V) or a consonant followed by a long (i.e. double) vowel (CV_1V_1) counts as two syllables, although phonetically it could be described as a single syllable. The minimum length of an utterance is two syllables. The final vowel of any base is dropped in isolation (before a pause) and geminate consonants are not differentiated phonetically from their single counterparts in word final position. Nouns, which may appear bounded by pause, must therefore have a minimal 'independent' form $C_1C_1V(C)$ or $CV_1V_1(C)$.

Where final vowel deletion results in a monosyllabic form, the remaining vowel is subject to 'compensatory lengthening' -- thus the base masa 'eye' has the independent form /maas/. As verbs (including "adjectives") do not normally appear bereft of particles, nor particles without accompanying full words, these words may have monosyllabic (CV(C)) "independent" forms (e.g. /nómw/ 'stay'). A word final consonant becomes a member of the preceding syllable, e.g. /e.nis/ 'whiskers', a geminate consonant the first member of a (phonetic) syllable, e.g. /ka.ppa/ 'rain-coat', and a medial non-geminate cluster will be severed by a

syllable boundary (e.g. /am.per/ 'umbrella'). Initial non-geminate clusters (in loan words) function in the syllable as geminate consonants, e.g. /spii.ker/ 'speaker (of radio)'.

1.13 No instances of geminate /y/ or /w/ are recorded by Dyen or Goodenough, but there seems to be no good reason to rule out this possibility a priori. The form /nipwoppwoyiya/ 'fighting club' for example could well be reduced to /nipwoppwoyya/ if such sequences were permitted, and they might well be of use in explaining some morphophonemic alternations, although this possibility has yet to be thoroughly explored for Trukese. In Appendix I, the base form wwaa is assigned to the form (in Dyen's orthography) wuwaa-. This enables what would otherwise be an isolated exception to a rule affecting forms with the shape #(CV)Caa# to be treated along with other forms which also have final /aa/ but follow a different pattern in the presence of certain suffixes (see Appendix I, especially rule (5) and examples 52-55).

1.14 Before concluding this discussion of Trukese phonology, it may be pointed out that despite the usefulness of the hypothesis that in Trukese all words begin with a consonant or semivowel, there are cognate languages in which /y/ is clearly and overtly phonemic but where it cannot be assumed that this is the initial consonant of any word which does not begin with some other (an assumption which is made for Trukese). In Pulusuk, for example, a minimal contrast appears to exist between /áát/ 'boy' and /yáát/ 'chin'. In sandhi /áát/

becomes [yáát] when preceded by a vowel, but /yáát/ does not become [áát] when preceded by a consonant (as should be the case if Dyen's Trukese rules applied). (Edward M. Quackenbush personal communication, 1967; cf. also Hiroko C. Quackenbush, 1966, passim). To maintain a canonical form of the shape (C)CV(V)(C) in these circumstances would require the positing of an additional consonant phoneme, e.g. Dempwolff's spiritus asper.

Orthography

1.15 At least five different orthographies for Trukese have gained currency in recent times. The oldest is the so-called traditional orthography, based on the Protestant translation of the Bible into a Mortlockese dialect in the latter part of the 19th century. In Trukese *n̲ and *l̲ have fallen together as a single phoneme /n/ while they have remained distinct in Mortlockese. This distinction is frequently maintained (or, rather, reinstated) in written Trukese. The orthography developed by Elbert for his dictionary, which adapted the traditional system to a more rigid phonemic interpretation of the language, is also widely used, sometimes in combination with the older Mortlockese conventions. Dyen's orthography was apparently too novel to be acceptable to native speakers. More recently Goodenough has revised Elbert's orthography, introducing the symbol y̲ and replacing some of the vowel symbols, as well as providing a phonemic interpretation

Phonemes as in Table 1	Traditional	Elbert (1947)	Dyen (1965b)	Goodenough (in progress)	Benton (1967)
mw	m,mu,mw	mw,m	b	mw	ḿ
m	m	m	m	m	ṁ
n	n,l	n	n	n	n
ŋ	ng	ng	g	g	ŋ
pw	p,pu,pw	pw,p	q	pw	ṕ
p	p	p	p	p	p
t	t	t	t	t	t
c	ch	ch	c	c	c
cc	ch,tch	tch,ch	cc	cc	cc
k	k	k	k	k	k
f	f	f	f	f	f
s	s	s	s	s	s
r	r	r	r	r	r
i	i	i	i	i	i
e	e	e	e	e	e
á	a	a̋	a̋	á	æ
ú	u	ü	y	ú	ù
é	e	ö	ë	é	ə
a	a	a	a	a	a
u	u	u	u	u	u
o	o	o	o	o	o
ó	o	ó	ö	ó	ɔ
w	w,-	w,-	w	w	w
y	-,i,e	-,i,e	j	y*	y*
Geminate consonants	C-,-CC-	C-,-CC-	CC	CC	CC
Long Vowels	not marked	not marked	VV	VV	VV

*except initially, where #V is assumed to be #yV

TABLE 2

Comparison of Orthographic Systems Employed for Trukese

more similar to that advanced by Dyen. My own work for the Peace Corps has resulted in another set of symbols, but the principles guiding their use were similar to those implicit in Goodenough's work. Using the phonemic analysis summarized in the preceding section as a norm, the orthographies is current use are compared in Table 2. The orthography used in this paper, (except in direct quotations from other authors), is that employed by Goodenough, except that n is used to represent the velar nasal, rather than g.

CHAPTER 2

ON SUBSTITUTES AND SUBSTITUTION

2.0 Bloomfield tells us that 'in every language we find certain forms, substitutes, whose meaning consists largely or entirely of class meanings' (1933:146). He regards these forms as syntactic phenomena, comprising one of the 'three great classes' into which the grammatical forms of a language can be grouped -- sentence types, constructions and substitutes (ibid; 169,184,247). This kind of substitution, 'where a form is spoken as the conventional substitute for any one of a whole class of other forms' (ibid; 169), is the primary concern of the remainder of this study. In this chapter I will outline Bloomfield's concept of the substitute and discuss it in the light of the work of some later linguists, concluding with a modification of Bloomfield's original idea which may be used in the analysis of the Trukese data in Chapters 3 and 4.

2.1 According to Bloomfield 'the grammatical peculiarity of substitution consists in selective features: the substitute replaces only forms of a certain class, which we may call the domain of the substitute' (ibid; 247). This domain is grammatically definable, in terms of categories such as 'substantive expressions'. The substitute, being empty of content in that its 'meaning' is coextensive with its domain, thus may replace a myriad of different lexical items without contradicting any of the items it replaces: thus in English

the substitute something in the sentence I saw something comprehends the meanings of thing, man, table in the sentences I saw a man, I saw a thing, and I saw a table. Bloomfield points out (loc. cit.) that one form, e.g. thing, may replace others where semantically appropriate, but its 'domain' does not have the independence of a substitute -- one can get into endless arguments as to whether A is, or is not, a 'thing', but native control of the grammar is all that is necessary for us to know if it is 'something'. We will return to this example later.

2.2 In Bloomfield's analysis there are two elements in the 'meaning' of a substitute -- the class meaning of the form class which is the substitute's domain, and the substitution type -- 'the conventional circumstances under which the substitution is made.' Bloomfield's concept of form class allows for considerable overlapping of classes (cf. 1933:264-280). All English substantives are also divided into singular and plural, also classes; 'granted a definition of the meanings of these two classes, we can attribute one of these meanings to every substantive' (ibid; 146). Pronouns, which are the largest group of substitutes in English, incorporate several classes in their domains -- someone has the class meanings of 'substantive, singular, personal', she has those of 'substantive, singular, personal, female; they incorporates 'substantive' and 'plural' without further restrictions.

Substitutes may thus segment the meaning of a particular form class, but the aggregate of the more specific meanings

of the substitutes will equal the meaning of the larger class they subdivide. 'Substantives' are thus split into 'personal' and 'non-personal' by who and what, 'personal' may be divided again into 'male' and 'female' by he, she (with it paralleling the impersonal what). Substitutes may also refer to some previously mentioned form, and thus indicate species as well as class -- compare take some (class and species implied) with take something (class only indicated). Although Bloomfield himself does not point it out, take some is itself ambiguous, indicating plurality with count nouns (contrasting with take one), or quantity with mass nouns. Certain pronouns, Bloomfield notes, go even further, and imply a specific member of a species which has been mentioned (e.g. he, which always refers to a particular individual). Bloomfield points out (1933:147) that substitutes like he incorporate the meaning of a determiner like the (which, he says, serves to indicate that the substantive which follows it denotes an identified individual of a species).

2.3 The second element in the 'meaning' of the substitute, the substitution type, is regarded by Bloomfield as being beyond the scope of the linguist to determine except in general terms:[1]

> The circumstances under which a substitution is made are practical circumstances, which the linguist, for his part, cannot accurately define. In detail, they differ greatly in different languages; in speaking a foreign language we have great difficulty in using the proper substitute forms (1933:248).[2]

Thus, for example, English I (or Trukese /ŋaaŋ/) has the domain of singular, personal, substantive expressions when such a

substantive expression denotes the speaker of the utterance. Some substitutes, he adds, resemble interjections, and, like them, may deviate from phonetic norms -- e.g. the English demonstratives this, that, etc. These considerations lead him to conclude that on the whole, then, substitution types consist of elementary features of the situation in which speech is uttered. These features are so simple that, for the most part, they could be indicated by gestures: I, you, that, this, none, one, two, all, and so on (ibid; 250) -- an observation curiously reminiscent of the remarks of Bréal (whose Essai de Sémantique is included in Bloomfield's bibliography) concerning the pronoun: 'I believe [the pronoun] to be more primitive than the substantive, because it demands less invention, and because it is more instinctive, more easily explained by gesture' ((1900) 1964:187).

2.4 One of the refinements of Bloomfield's ideas in the work of later linguists has been the explicit recognition that substitutes replace phrases (or larger syntactic units) rather than simple lexical items. Postal (1966:177) singles out Robert Allen for special mention in connection with the discovery by 'certain modern students of English' that in many ways English pronouns actually 'replace' whole noun phrases rather than nouns 'since they cannot occur with articles, relative phrases, and other elements which can occur in the same NP with ordinary nouns'. The idea is actually implicit in Bloomfield's own work -- his somewhat vague references to

'substantive expressions', for example, and his note that the 'meaning' (i.e. the 'grammatical function') of the is incorporated in the scope of reference of pronouns like he. Hockett who follows Bloomfield's exposition of the nature of substitution quite closely, discusses the 'structural tie' between it (a substitute) and 'a certain large form class of singular noun expressions, including the paper, John's head, my house, bread ...' (1959:256).

Following Bloomfield, Hockett attempts to show the distinction between a substitute and a simple lexical item with a wide ranging scope of reference, like thing (this was mentioned in 2.1, above). The arguments advanced by both writers would have been strengthened had they pointed out that the substitute represented a complete noun-phrase, which words such as thing did not. The demands of generative grammar undoubtedly facilitated the explicit recognition of such distinctions, although their presence had been at least partly apprehended by the structuralists. Wolfenden, whose work on Tagalog follows Bloomfieldian principles, was, for example, able to remark quite nonchalantly that (in Tagalog) 'substitutes are simple phrases' (1961:31), apparently without feeling any need to reflect on the consequences of such a statement.

2.5 Like Bloomfield, Hockett regards substitutes as linguistic universals (see, e.g. 1966:21). He recognizes the peculiar properties which Bloomfield pointed out as inhibiting precise definition of 'substitution types' -- cross reference

to other sentences (e.g. 'John put on her hat') or reference to extralinguistic phenomena (e.g. 'Put it there') (1959:254). He also notes that the surface grammar of substitutes may be different from that of the forms they represent, and cites as an example the retention of accusative case in English pronouns (ibid; 260) -- although the parallel is not the direct one Hockett implies by overlooking the role of the pronominal substitute as the 'representative' of a larger syntactic category, the noun phrase, rather than an individual lexical item.

Zellig Harris, on the other hand, avoids such difficulties by statements such as 'a single morpheme class, which may be substitutable for a sequence of morpheme classes, is considered a special case of a sequence' (1951:263). By using such criteria he is able to treat pronouns as a simply special class of nouns (ibid; 276), and seems to do away with any need to treat substitutes as inherently different from other lexical phenomena. Such a situation is adequate within the framework which he establishes, but also obscures the special features of substitutes which occupied the attention of other writers. Gleason, however, representing the same tradition as Hockett, but using techniques similar to those of Harris, is able to group various kinds of substitutes with the constituent classes within which they substitute -- so personal pronouns like I are grouped with noun phrases, not just with the vague entities 'substantive' or 'noun expressions' used by Bloomfield and Hockett (see, e.g. Gleason 1961:137).

2.6 Before the views of some transformational grammarians are discussed, two further observations by Hockett merit comment. He states (1959:267) that although 'many of the members of the domain of a substitute will have some clear feature of meaning in common,' there will be forms included in the same domain 'which do not share that semantic feature.' This assertion that a substitute does not always have a class meaning shared by all the members of its domain seems an unnecessary departure from Bloomfield's definitions to which Hockett is so attached. He seems to think such a modification of the earlier formula is required by the fact that in English a 'nonpersonal' noun phrase like the old boat can be replaced by the pronoun substitute she, which usually has the domain of 'singular personal female noun expressions'. An old boat is neither female nor a person, he finds, therefore it is outside the class meaning of the other members of the domain of she. This view seems to stem from too rigid an adherence to 'real world' considerations at the expense of those of a purely linguistic nature. If the old boat is referred to as she, it is because it has been endowed linguistically (and probably, as far as its owner is concerned, affectively!) with the qualities of personality and femininity, and thus is as much within the domain of she (and outside that of he and it) as the old woman or the beautiful maiden.

2.7 Hockett's zero anaphora, where a word or phrase is 'replaced' by zero (as in I like cold milk better than warm,

where warm functions as a substitute for the phrase warm milk) can perhaps be better regarded as an example of deletion of redundant elements rather than as an instance of substitution in the sense in which we have been discussing it. His discussion, albeit very brief, of bound substitutes (1959:259-60) is important in its bearing on the analysis of some of the Trukese data. He states that in Menomini a bound substitute denoting the speaker may cooccur with an independent substitute, indicating that the independent substitute serves an emphatic function in the sentence, its other features having already been expressed by the bound counterpart. He goes on to say that the syntactic linking known as cross-reference 'regularly involves bound substitutes. Even the vestigial inflection of English verbs for person and number of subject -- involving, usually, only the -s suffix for third person singular objects in the present tense -- conforms to this: the -s is a bound substitute.'

Here it seems Hockett has extended the concept of substitution too far. Although English -s does mark a very having a third person singular subject, it does not replace a noun phrase; i.e. it does not substitute for anything; it is not deletable, and cannot occur unless the verb to which it is attached has an explicitly stated third person singular subject. Not even by anaphora can Ø Goes. stand as an utterance equivalent to He goes. In Trukese a similar situation exists with respect to the so-called subject pronouns (Dyen 1965b:8736).

Consider for example the sentences

(1a) /wúw attaw/

pm fish

'I fish!'

(1b) /ŋaaŋ wúw attaw/

:: I pm fish

'I fish!'

The examples seem very like the Menomini illustration used by Hockett. Sentence (1a) comprises a pronoun-like element (which would be bound to any tense or aspect marker preceding the verb-- e.g. /wúpwe attaw/ 'I will fish') and a verb. In (1b) the same sentence is preceded by an independent pronoun, the function of which seems to be only to emphasize part of the meaning (1st person singularity) already conveyed by the subject pronoun. Both utterances are complete and grammatical, and may be generated by the same P(hrase) S(tructure) rule, say:

(2) S --→ (NP) VP[3]

The first sentence would be a case of VP only, the second incorporates both NP /ŋaaŋ/ and VP /wúw attaw/.

In verbal sentences (Dyen's 'narrative predications') the predicate (VP) is invariably introduced by a 'subject pronoun', while in equational sentences (including nominalizations of sentences containing verbs) the predicate is never marked in this manner. The 'subject pronouns' thus do not represent or replace any element -- their presence or absence is always obligatory. They serve to mark the beginning of the VP in a

verbal sentence, and exhibit a person and number concord with the preceding NP. (the subject of the sentence). Because person and number are obligatorily marked in the predicate, the subject need not be explicitly stated in certain circumstances -- i.e. where a third person subject is already known to those partaking in the conversation, or is revealed by a predicate marked for first or second person, the NP may be optionally absent through anaphora, or present to emphatically re-inforce the information signalled by the 'subject pronoun'. Henceforth the 'subject-pronouns' will be referred to as predication markers, which better expresses their function and guards against their confusion with true substitutes.

2.8 Given that a substitute must in some contexts be freely replaceable in the same sentence by a form which is not a substitute (as the man and he can alternate freely in the context ... went away producing the sentences he went away, the man went away), and that the form replacing the substitute may not be null, the Trukese predication markers listed in Table 3 cannot, by definition, be termed substitutes. This requirement on substitutes is to be regarded as axiomatic, for without it the term substitute itself becomes meaningless.

However, a glance at Table 3 is sufficient to ascertain that there are elements classed as 'pronouns' which do not seem to meet the constraint just placed on substitutes -- items like /ŋaaŋ/ e.g. cannot be replaced except by zero in any context unless other syntactic adjustments are made -- and this

(Optional NP Subject		(Obligatory) VP	
OPTIONAL ELEMENTS		OBLIGATORY ELEMENTS	
Pronoun or Phrase		Predication Marker	Verbs
/naan/ 'I'		/wúw/ 'lsg.'	e.g./attaw/ 'fish'
/een/ 'you sg.'		/ke/ '2 sg.'	/cuuri/ 'meet someone'
/ii/ 'he,she'	/ewe áát/ 'the boy' /Sóón/ 'John'	/e/ '3 sg.'	/méné/ 'eat'
/kiic/ 'we (incl.)'		/si/ '1 incl. pl.'	/kkayé/ 'study' /kkéén/ 'sing'
/áám/ 'we (excl.)'	/áám me Soon/ 'John and I/us'	/owuw/ /awuw/ '1 or 2 excl. pl.'	/pwéruk/ 'dance'
/áámi/ 'you pl.'	/áámi me Takis/ 'you and Takis'		
/iir/ 'they'	/ekkewe áát/ 'the boys' /Sóón me Takis/ 'John and Takis'	/re/ '3 pl.'	/kkapas/ 'talk'

TABLE 3

Components of Simple Verbal Sentences

will produce a different sentence. This problem is a very important one, and its solution has immediate relevance for the characterization of both pronominal and substitution systems, and the relationship of these systems to each other. This matter will be taken up again in the discussion of the semantic features of substitutes in Chapter 3 (see especially §3.24) and in the examination of Trukese pronouns in Chapter 4 (especially §4.11).

The Treatment of Substitutes by Some Transformational Grammarians

2.9 Chomsky has noted (1964:41) that 'each major category has associated with it a "designed element" as a member'. This element, which represents a lexical category (noun, verb, etc.) or a category dominating a lexical category (NP, VP, etc.) may be realized in the surface structure (e.g. it for abstract nouns) or it may be found only as an 'abstract "dummy element"' in the deep structure. (cf. Katz and Postal 1964:80). These representatives of major categories have been assigned a 'universal constituent', termed 'Pro', by Katz and Postal (1964:80).

Katz and Postal's pro-forms are not, however, quite synonymous with Bloomfieldian substitutes. Some of their suggestions have been superseded by later developments in transformational theory: e.g. the derivation of sentences like John is reading from John is reading Noun Phrase 'by deleting one of the pro-forms of a Noun Phrase, in this case either

something or it' (Katz and Postal 1964:81); this kind of intransitivity is assigned by Chomsky to the subcategorization features of the verb ([+V, +__ #, etc.]) (1965:94ff). Where Katz and Postal posit a deleted pro-form, the Bloomfieldian tradition often regards the 'deletion' as an example of substitution, through the concept of zero anaphora. Thus Bloomfield interprets the sequence the man I saw as a relative clause containing an anaphoric substitute (zero) (1933:263). The treatment of this type of construction by Katz and Postal is different in an important detail -- the pro-form is replaced in the deep structure by a 'matrix dummy' which is not realized in the surface structure of the sentence (cf. 1964:120ff) -- thus we do not have a zero substitute, but rather a deleted one.

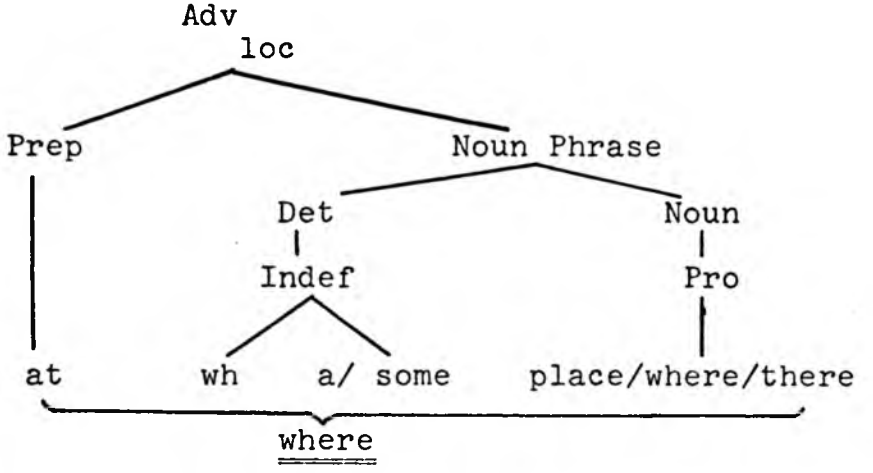
2.10 Bloomfield had observed that 'substitutes frequently are tied up with special syntactic functions', of which relative substitutes, including the example discussed above, and interrogatives were noteworthy cases. Katz and Postal, following Chomsky (1957), find that relative substitutes (e.g. English who, which, that) are characterized by the occurrence of special element, wh-, in the underlying string -- looked at from the Bloomfieldian point of view, a relative substitute becomes a combination of the wh- 'morpheme' and a substitute for the 'noun expression' to which the surface relative substitute refers: to use an example from Chomsky (1965:145), the sentence the man who had been fired returned to work has the underlying string

(3) 1 the man -- 2 [wh- -- 3 the man -- had been fired 4 #] returned to work

Interrogatives, which also contain the wh- formant, appear in sentences marked by another universal element, Q. The special sentence order in English when interrogatives are present, which was remarked on by Bloomfield (1933:262), is explained by Katz and Postal by means of a number of transformations governing the relationship of Q and wh- (1964:104ff).

Katz and Postal carry this approach to the point of deriving all relative substitutes (to use Bloomfield's term) from various kernel phrases. English where, for example, is assigned the following structure (1964:129)

(4)



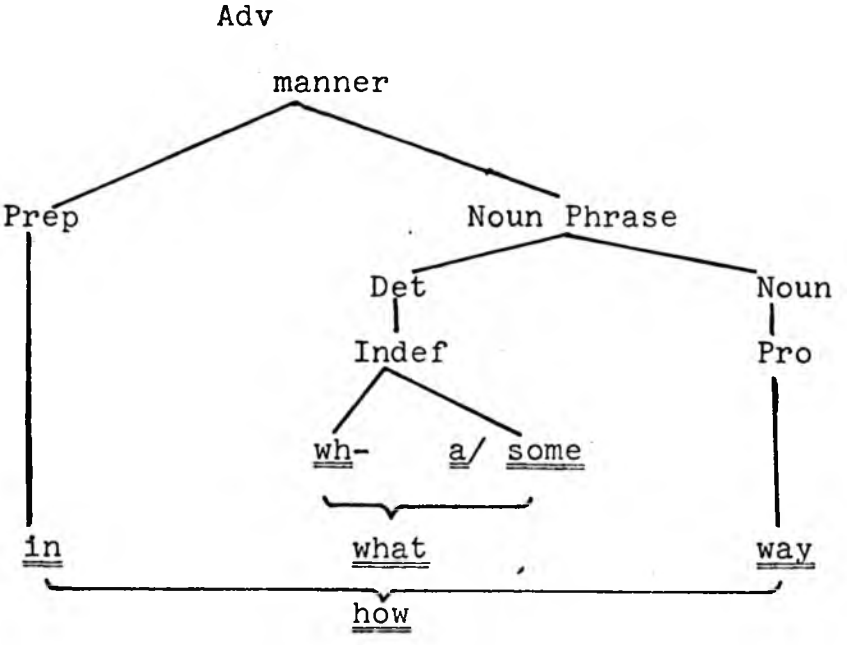
The tree diagram associated with these forms (and also with some pronouns, e.g. it = the + Pro: it) show the pro-form as representing the category Noun -- the lexical item resulting in the surface structure (where, how, why, it) is thought to be a combination of article plus pro-form (and, where appropriate, other elements like wh-, Preposition, etc.). This

results in a very complicated (and often seemingly arbitrary) kind of analysis, which has come under severe and convincing criticism by Weinreich (1966a, especially 440-444).

2.11 Instead of positing complex underlying structures involving pro-forms as only one element, Weinreich's theory permits the selection of a lexical item (i.e. a pro-form = substitute) to represent a major non-lexical category like Noun Phrase or Circumstance (adverbial phrase). He contrasts the derivation of English how in Katz and Postal's system with his own analysis (Weinreich 1966a:440-441).

(4)

Katz and Postal



Weinreich

Circumstance [+Manner]

how

[[Circumstance]]

[+Manner
  -Definite
  +Question]

As well as being simpler, Weinreich's system also enables an easy distinction to be made between how, and the alternative phrase in what way, which is not a unit, but a combination of a preposition, a noun, and a determiner (what), the latter having the features [[Determiner]] [-Definite, +Question]. Weinreich points out the close relationship between substitute and other elements like preposition and determiners which he labels minor class morphemes. In contrast to major class morphemes, which have a distinguishing feature ([+Noun]etc.) and other semantic features, and belong to classes which have open membership, minor class morphemes have no distinguishing feature, but rather a grammatical marker ([[Preposition]]), semantic features, and belong to classes which have a closed membership. Substitutes (pro-forms) have a grammatical marker

(e.g. [[NP]]) rather than a distinguishing feature, and thus belong with other minor class morphemes. They have, however, the special property of being able to directly replace certain non-terminal nodes in a derivation. This is made possible through rules of the kind

(5) NP → { Determiner + Noun + Number / :: }

where :: indicates a minor-class morpheme. Any morpheme with the grammatical marker [[NP]] may then be selected to replace :: -- e.g. (for English) something ([[NP]]] [-Human, -Definite, -Question]), nobody ([[NP]] [+Human, +Definite, +Negative]) etc. (Weinreich 1966a:440-441). The elements Q and wh- are reflected by semantic features ([+Question] etc.) in certain morphemes, which may be operated upon by appropriate transformations where word order (e.g. in the case of interrogatives) or special selectional requirements (e.g. the selection of who as a relative pro-form) must be taken into account.

Unrealized Elements and Reflectors

2.12 In the preceding discussion, it was noted that Katz and Postal explained cases of what Bloomfield and Hockett termed anaphora by positing a deleted element in the pre-terminal string. For example, they state (1964:120) that in the syntactically ambiguous sentence they found the boy studying in the library, the sequence studying in the library is either a complement of the verb, or else 'a slightly deformed

relative phrase, with who is deleted, and thus a modifier of the verb.

It does not seem necessary, however, to equate a deleted element with one which is actually realizeable in the same environment. We have already seen how the phrase the man I saw is interpreted as the man (Ø anaphoric substitute) I saw by Katz and Postal. The latter interpretation offers interesting possibilities for the explanation of 'subjectless' sentences like (1a), and of the relationship between the predication marker and the subject of the sentence.

The P.S. rule proposed in (2) may be re-stated[3]

(6a) S → NP + VP

(6b) NP → { Determiner + Noun + Number / :: }

(6c) VP → Pred Mkr + Verb

At least the substitutes for NP must include some deletable items, if the contention made in §2.7 that the predication marker ('subject pronoun') is not itself a substitute is to be sustained. Prior to any such deletion, however, an agreement relationship must be established between the subject (i.e. the NP dominated by S in (6a)) and the predication marker by means of a rule like

(7) Pred Mkr → $\begin{bmatrix} x\text{Person} \\ y\text{Number} \end{bmatrix}$ / NP $\begin{bmatrix} x\text{Person} \\ y\text{Number} \end{bmatrix}$ ——

'Person' and 'Number' are cover terms for certain configurations of features which may be specified thus:

(8) Person → $\begin{bmatrix} \pm\text{Speaker} \\ \pm\text{Hearer} \end{bmatrix}$

(9) Number → ±Plural

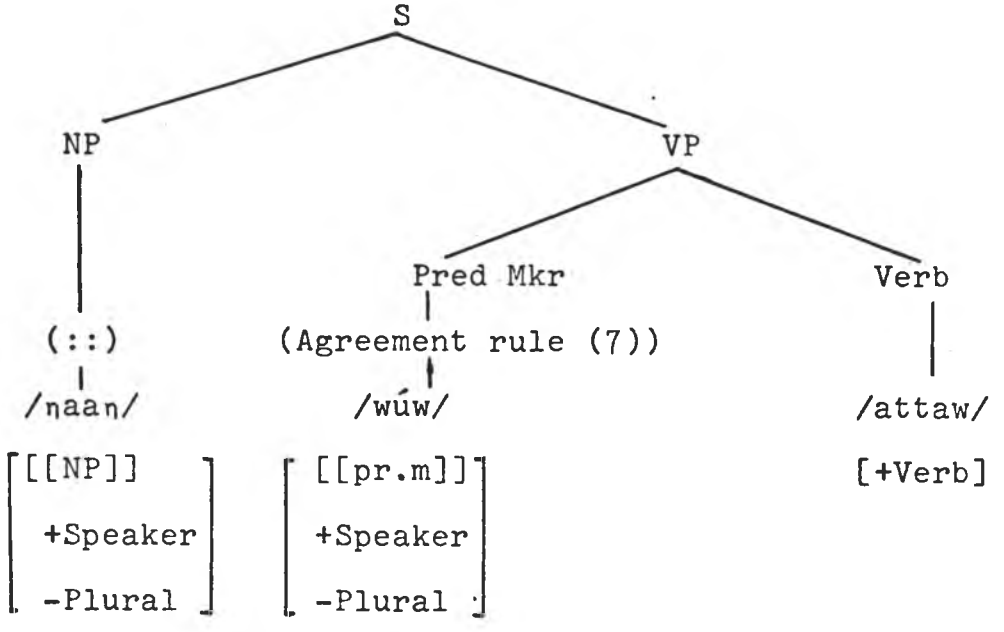
Both person and number are regarded as features of the noun phrase as a whole; the reasons for this are explored in Chapter 3 (see e.g. §3.14(i)), and need not be discussed here.

Given a list of pro-forms with their grammatical markers and other relevant features -- e.g.

(10) /ŋaaŋ/ [[NP]] [+Speaker, -Plural]
/een/ [[NP]] [+Hearer, -Plural]
/ii/ [[NP]] [+Animate, -Plural]
/iir/ [[NP]] [+Animate, +Plural]

rules (6) thru (9) may be applied to yield a derivation like that shown in (11) for example (1b) above.

(11)



/ŋaaŋ wúw attaw/

'I fish.'

The subject may then be deleted by a rule allowing for the removal of, say non-emphatic redundant elements, yielding a surface realization of the sentence exemplified in (1b) and (11) with the form of (1a) (/wúw attaw/).

The predication marker is thus not itself a substitute; the whole sentence /wúw attaw/ is rather an anaphoric representation of a complete underlying string /ŋaan wúw attaw/. The term reflector may be used for items like the Trukese predication markers, and English third person singular -s, whose presence or absence is always dependent on, and whose form is determined by, another element in the same string; substitutes, on the other hand, represent and replace another element, rather than simply indicating its presence.

Summary of Theoretical Conclusions

2.13 The following major theoretical principles, which have emerged during the preceding discussion, underlie the examination of Trukese substitutes to be undertaken in the remainder of this study:

(a) substitutes (pro-forms) are found in all natural languages, but their distribution with respect to grammatical categories, and the features which they exhibit, vary from one language to another, hence the study of substitution in any given language is worthy of scholarly attention;

(b) a substitute is a terminal element which may be introduced into a derivation as a direct re-write of a major

syntactic category which is not otherwise a lexical category;

(c) all substitutes are characterized by a grammatical marker [[G]] and semantic features [u], together with phonological shape /p/;

(d) the semantic features associated with particular substitutes may involve distinctions different from those characterizing non-substitutes dominated by the same category as that incorporated in the grammatical marker for such substitutes;

(e) all substitutes must be freely replaceable at least at one point in any derivation by a form (or a sequence of forms) which is not itself a substitute; reflectors and other elements which merely echo features of items present elsewhere in a given string are not regarded as substitutes. These axioms will be illustrated and clarified in the ensuing analysis of the Trukese data.[4]

Notes to Chapter 2

1. The extent of this difficulty depends to some degree on the linguist's views concerning what lies or does not lie within his field of investigation. See §4.8 sqq. for further discussion.

2. Weinreich (1966b) has also commented on the universality of substitutes, and their unevenness of distribution both within and between languages. He notes that, for example, probably all languages have pronouns, but very few have pro-verbs -- English for example has indefinite pronouns (somebody, something), pro-numerals and pro-adjectives (any, some), pro-adverbs (somehow, where) -- but no indefinite pro-adverb of cause (e.g. $^{\emptyset}$somewhy) or indefinite pro-verb (e.g. $^{\emptyset}$to something). Furthermore, pro-forms (substitutes) may neutralize distinctions typical of a part of speech -- 'if what had separate singular and plural forms we would have to know the number of the answer before asking the question', or show distinctions not reflected elsewhere -- e.g. in English the animate/inanimate contrast who/what, or the sex/gender differentiation of he/she/it.

3. The P.S. rules given in this chapter are illustrative only. The principles enunciated here will be retained, but many refinements and modifications will be made in Chapter 3 in the course of an examination of the aspects of Trukese syntax most relevant to the description of

substitutes.

4. See especially §3.24.

CHAPTER 3

TRUKESE SYNTAX -- AN OVERVIEW

3.1 In order to discuss the process of substitution in a particular language, it is necessary to sketch the grammatical framework within which this process takes place. The view of Trukese grammar underlying the description which follows in Chapters 4 and 5 is somewhat different from that expressed by Dyen. It is based partly on ideas advanced recently by Fillmore (1966) and Weinreich (1966a), although it differs in some respects from their proposals. The validity of the arguments advanced or assertions made in the analysis of Trukese substitutes does not depend on an acceptance of the system proposed here, at least in regard to details. It is important, however, that the grammatical basis be made explicit, so that what is said in relation to particular forms may be interpreted in the light of other models. A distinction will therefore be made in this chapter, as in the preceding one, between what is axiomatic, i.e. essential to the characterization of substitutes, irrespective of the linguistic model employed, and what is pragmatic, i.e. the particular model of description used in this study.

Fillmore's Views

3.2 Charles J. Fillmore (1966) has outlined an approach to the analysis of English sentence structure which offers

interesting possibilities for the writing of a transformational grammar of Trukese. Fillmore's views, as expressed in his paper 'A proposal concerning English prepositions', involve a tripartite sentence structure:

(13) S → Modality ⌢ Auxiliary ⌢ Proposition

He tentatively views modality as including the specification of positive or negative features for the sentence as a whole, together with interrogatives, time and sentence adverbials, and other similar elements which seem to relate to the entire sentence. Auxiliary would seem to comprise passive markers, tense, and aspectual elements. The proposition, the component with which his paper is primarily concerned, contains the verb and a series of optional constituents -- ergative, dative, instrumental, locative, agentive, etc. These non-verbal members of the proposition are termed actants, and are re-written as noun phrases, each of which contains a preposition as the first member:

(14a) Prop → V (Erg) (Dat) (Loc) (Inst) (Ag)

(14b) $\left\{\begin{matrix}\text{Erg}\\ \text{Dat}\\ \dots\end{matrix}\right\}$ → NP

(14c) NP → P (Det) (S)

'The lexical categories 'preposition' (P), 'determiner' (Det) and 'noun' (N) take by convention the name of the actant dominating their noun phrase as one of the features making up the complex symbols associated with each of these categories' (Fillmore 1966:23). The prepositions are selected either

directly from the lexicon, by the inherent features of certain verbs, or by special rules. They are deleted in certain specified environments.

3.3 The advantage of Fillmore's system is that it preserves the tie between category (e.g. 'prepositional (=noun) phrase') and relations (e.g. 'ergative'), and accounts for the relationships between and within sentences, like the door opened, the key opened the door, the janitor opened the door with the key in a way in which a subject/ predicate (NP/VP) dichotomy cannot. While however the concept of noun phrase as prepositional phrase seems to work well for English at least in so far as the data presented in Fillmore's paper are concerned (and would probably be even more revealing in Philippine languages), there are difficulties in trying to carry this particular structural model into Trukese. The morphology of 'prepositional' elements is not the least of these, as many are morphologically nouns (ree- 'vicinity, agency'), others are verbs (seni 'from', neni 'to'), derivational affixes (nee- 'in, at (time or place)'), or 'time' prepositions (me 'at'). To try to account for these phenomena in Trukese in the light of Fillmore's ideas about English may be possible, but it is beyond the scope of the present study.

3.4 Nevertheless, the idea of 'actants' within the predicate phrase is very useful indeed in demonstrating the functions of Trukese substitutes. For these purposes, the following categories (which are not exhaustive, but will suffice

for the characterization of substitutes) may be established:

(i) Actor. The actant here called actor is similar to Fillmore's agentive constituent, and covers what is conventionally regarded as the subject of a transitive verb or the performer of an intransitive action:

(15) /Sóón e-pwe cuur-i-kem/

$$\begin{bmatrix} [+N] \\ +Personal \\ +Act \end{bmatrix}$$ pm-ft [+V] tr :: $$\begin{bmatrix} [[NP]] \\ +Dep \end{bmatrix}$$

'John will meet you.'

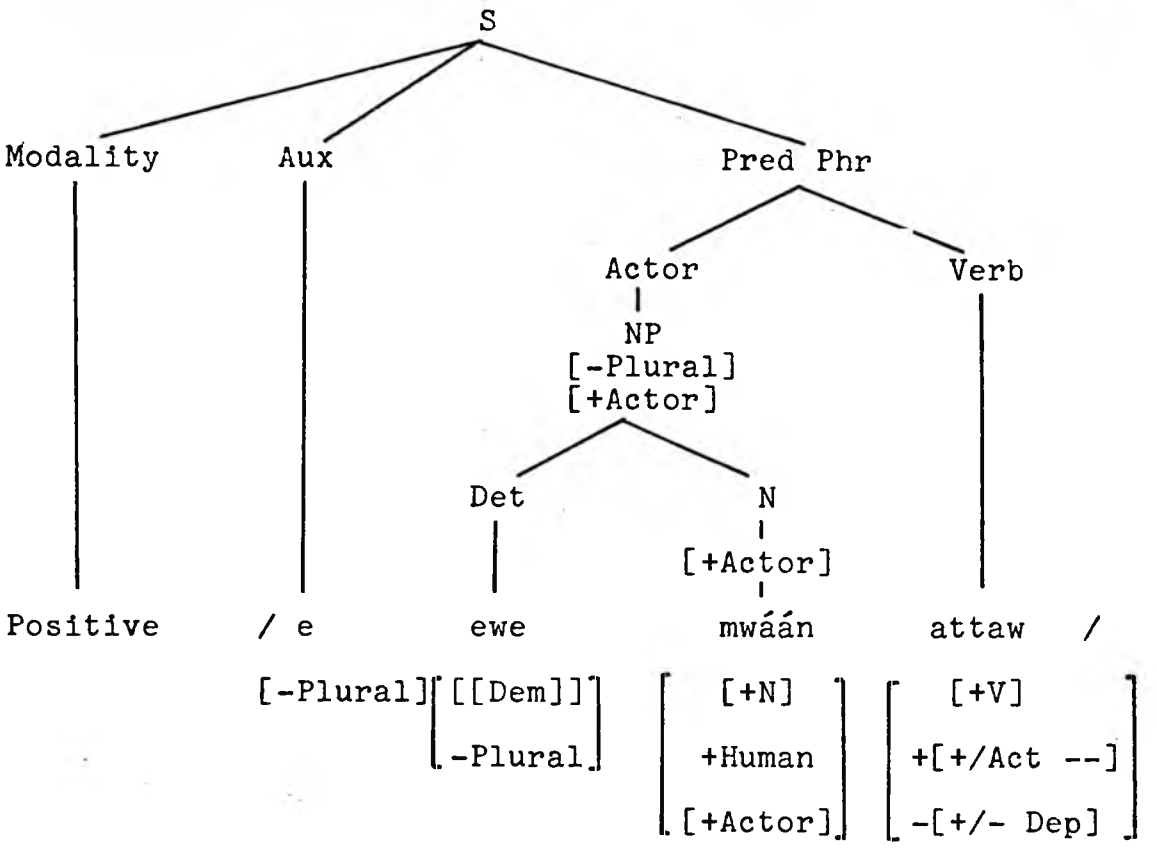
(16) / ewe mwáán e attaw/

dem $$\begin{bmatrix} [+N] \\ +Human \\ +Act \end{bmatrix}$$ pm [+V]

'The man fishes.'

The feature [+Actor] is transferred from the category to the constituents of the noun phrase as mentioned in §3.2 above. This process will be discussed again in relation to transfer paths (§3.15). Wherever an actor is present in the sentence, it is always in focus (see §3.6), i.e. is placed before the verb in the surface string. Example (17) shows the derivation of (16) above; the position of the auxilliary (in this case the predication marker /e/) is explained in §3.7.

(17)



(ii) Dependent. The dependent actant more or less corresponds to Fillmore's ergative constituent. It includes the object of a transitive verb, and the subject of a corresponding stative intransitive verb:

(18a) /Soon a-a suuk-i ewe asam/

[[+N]] pm r [+V] tr dem [[+N]]
[+Act] [[+Dep]]
[...] [...]

'John has opened the door.'

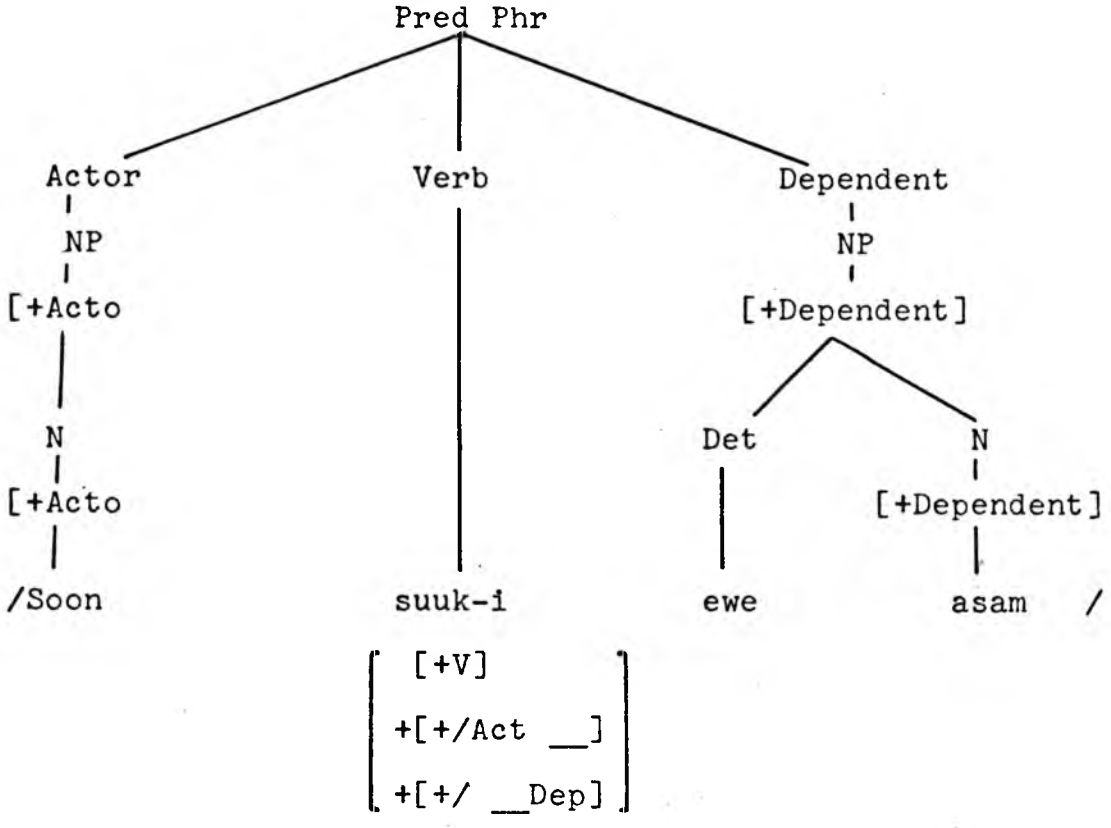
(18b) /ewe asam a-a ssuuk/

dem [[+N]] pm r [+V]
[[+Dep]]

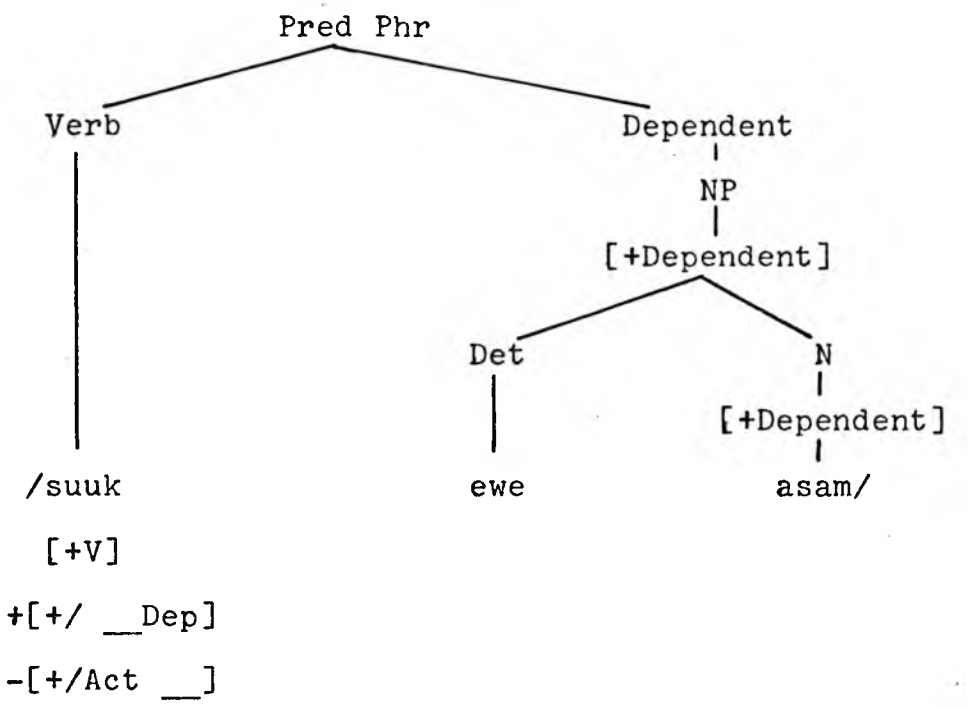
'The door is open.'

Although the phrase /ewe asam/ appears in the pre-verbal focus position in (18b) it remains 'dependent' upon the verb, i.e. the presence of an actor is implied but not made explicit in this sentence. The relationship of the elements within the predicate phrase (= Fillmore's 'Proposition') in (18a) is shown in (19) (the same relationship holds between the verb and the actants in (15)), and that in (18b) in (20).

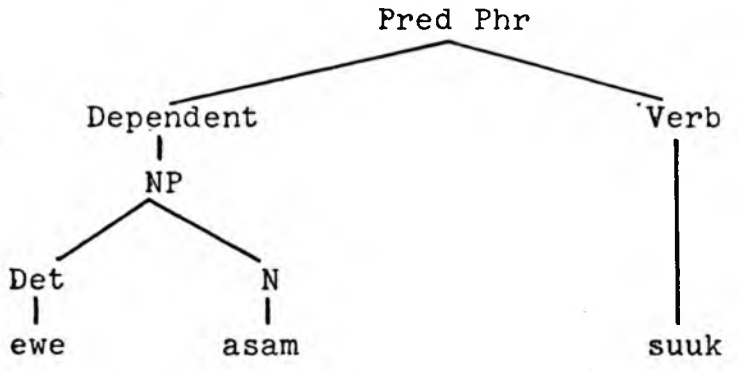
(19)



(20) BEFORE FOCUS TRANSFORMATION



AFTER FOCUS TRANSFORMATION



The dependent of any verb which is marked for dependent and not for actor is automatically focused. The verbs concerned form a special subclass of statives, which have corresponding transitive forms (as /suuk-i/ 'open something' for /ssuuk/ 'be open'). There are other sets of verbs where the intransitive member is marked for actor -- e.g. /wún, wúnúm-i/:

(21a) /Sóón a-a wún/

'John drank.'

(21b) /Sóón a-a wúnúm-i ewe kkónik/

'John drank the water.'

However, such verbs (/wún/, etc.) denote action rather than state or condition. The dependent relationship can be established in two ways: (1) the occurrence of a N(oun) P(hrase) as the object of a transitive verb (with the possibility of pronominalization with an object pronoun -- see §4.7), e.g.

(22a) /a-a kún-a e-kke-we mwáán/

Aux + Verb + Dependent

'He saw those men.'

(22b) /a-a kún - e - er

pm r [+V] tr :: [[[NP]]] [+Dep]

'He saw them.'

or (2) the occurrence of a focused (pre-verbal) NP with an intransitive stative verb of the subclass which has a corresponding transitive form with which the focused dependent of the intransitive verb will be relegated to the (unfocused) object position (as in (19) and (20)). (A transitive verb in Trukese is any verb containing a transitive formant (usually -i, -aa, -y, -w) to which an object pronoun may be suffixed). Not all statives may occur with dependents -- these others are dealt with in subsection (iii) below.

(iii) Referent. The referential relationship is one in which the actant is involved in the action of the verb, but is neither actor nor dependent in the sense in which the latter relationships have been discussed above. Some verbs are marked for occurrence with the referent as the only actant in the predicate phrase. These are of two kinds -- (1) stative verbs marked for unfocused referent, e.g. /metek/ 'be in pain'

(23) /e metek mékure-er/

pm [[+V]] [+N] ::[[Attr]]

[+[+/ __ Ref]]

[[-Focus]]

'Their heads ache.'

and (2) stative verbs marked for focused referent, e.g. /semmwen/ 'be sick'

(24) / iir re semmwen/

[[NP]] pm [+V]

'They are sick.'

None of the stative verbs of these types have transitive counterparts.

Focused referents generally relate to animate beings, and may be represented by independent pronouns (as in (24)), whereas unfocused referents of verbs like /metek/ generally denote inanimate objects; they may not be pronominalized. Whereas an agreement relationship is present in (24) between the focused referent and the predication marker, the unfocused referent in

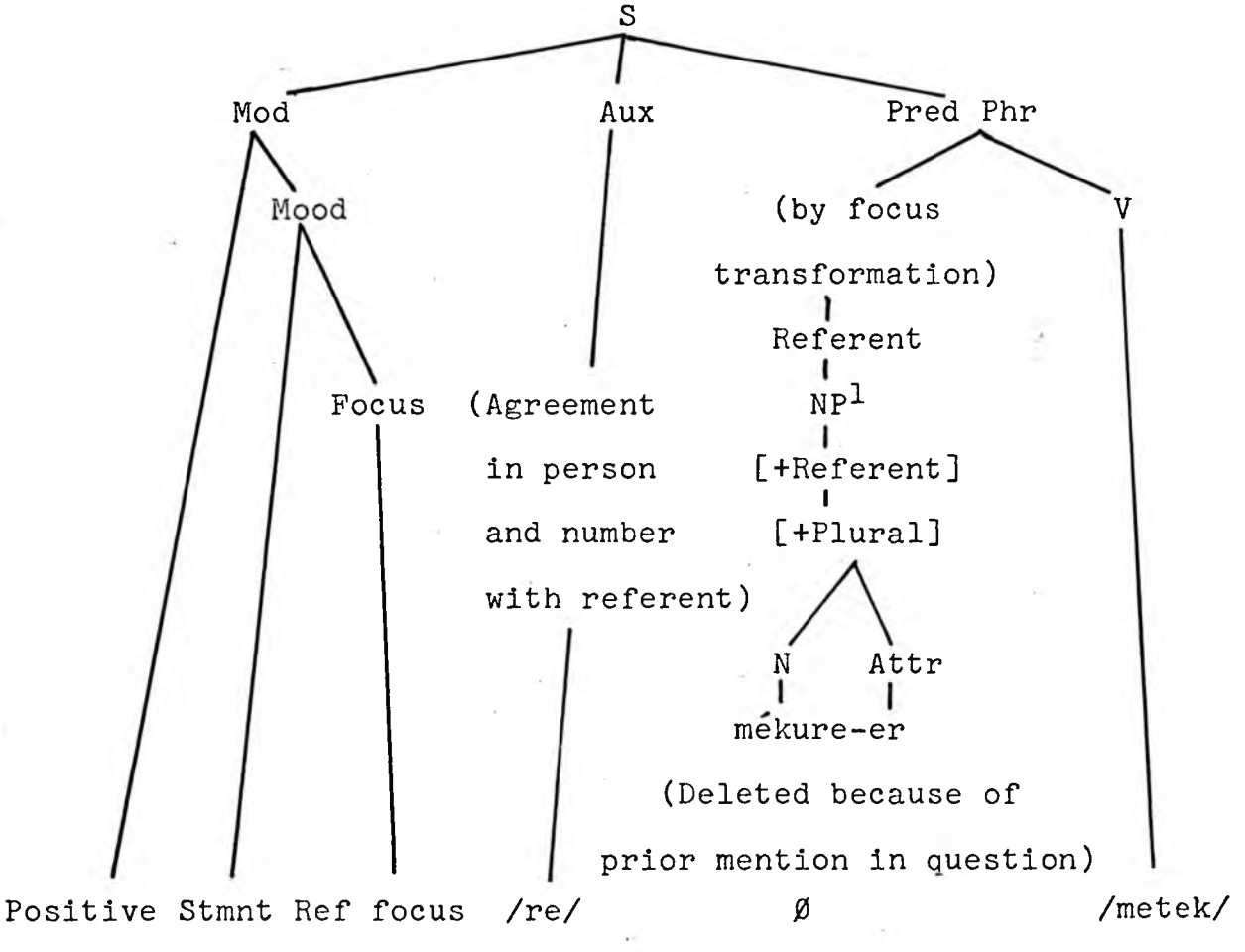
(23) does not affect the predication marker, which is accordingly unmarked for person and number.

In certain contexts the referent of verbs like /metek/ may be transformed into the focus position; in such circumstances an agreement relationship is established between the predication marker and the referent. As far as I can ascertain, this occurs only in response to questions, and, always requires the deletion of the (redundant) referent in the surface structure of the reply:

(26a) /e metek mékure-er? wúú, re metek/

'Do their heads ache?' 'Yes, they do.'

(26b)



Intransitive verbs marked for actor also seem to tolerate a referent, which almost always has a partitive sense (and is usually manifested by an NP consisting of an unaccompanied noun):

(27a) /e mwéné rayis/
'He eats rice.'

(27b) /e mmak taropwe/
'He's writing letters.'

In these cases the referent is not subject to pronominalization,[2] but this may be simply because all the examples in my data contain nouns marked [-Animate] which are not subject to pronominalization by independent pronouns (the only pronominal elements which would be likely to occur in this environment). Referents following these non-stative intransitive verbs often parallel the dependent of the corresponding transitive verb -- e.g.

(28) /e mmakkee-y e-cé taropwe/
pm 'write'tr np cl 'letter'
'He's writing a letter.'

However, the partitive nature of the referent is preserved even when it is manifested by an NP containing a noun preceded by a determiner, e.g.

(29) /e mwéne ewe rayis/
'He ate (some of) the rice.'

Sentence (29) may be compared with (30), where the same NP (/ewe rayis/) is the dependent of /áni/, the transitive

counterpart of /mweŋe/:

(30) /e án-i ewe rayis/[3]

'He ate the rice.'

(iv) Locative. As its name implies, the locative category contains references to place:

(31a)	Sekap	e	nómw	wóó-n	wééné
	[+N]	pm	'stay'	[[+N] [+Loc]] atr	[[+N] [+Loc]]

'Jacob lives on Moen.'

(31b) /Takis e nómw nnó-n enan iimw/

'Takis lives in that house.'

As in the above example, location is frequently indicated by a noun phrase (e.g. /Wééné/ 'Moen', /ewe iimw/ 'that house') in an attributive relationship to a noun of location (e.g. nnó 'in' wóó 'on', followed by the attributive particle -ni /-n/). Where the location is pinpointed, the preposition me may precede the noun phrase:

(32) /a-a cuur-i Tayeko me wóó-n Wééne/

'He met Taeko on Moen.'

A locative may also be expressed by an embedded sentence containing a verb marked [+Locative] (either /seni/ 'from' or /ŋeni/ 'to'), as in

(33) /a-a feyit-tó sen-i Cuuk/

'He came hither from Truk.'

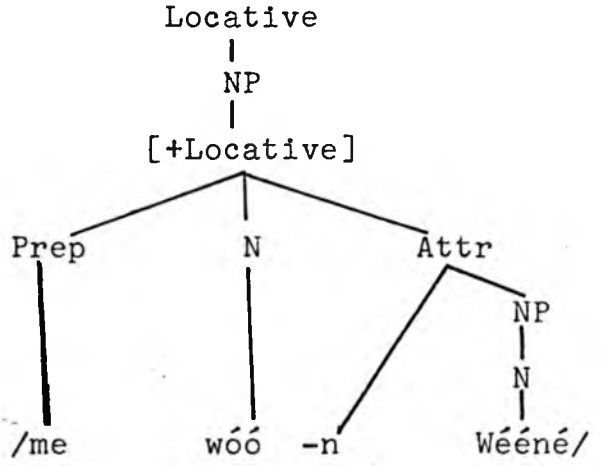
or simply by a single locative noun:

(34) /eni e-pwe nó Cuuk/

'Maybe he will go (to) Truk.'

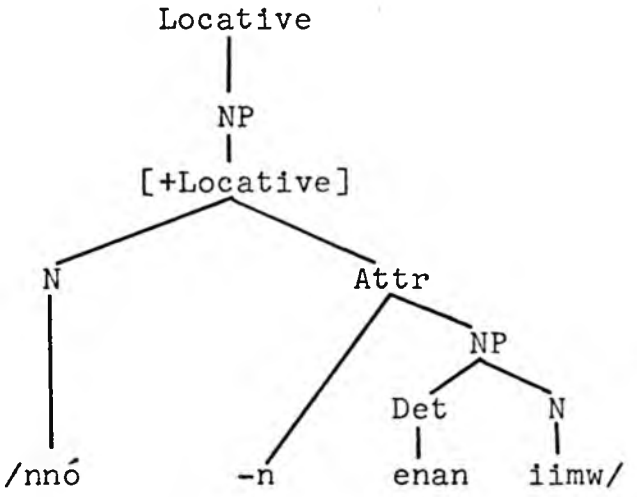
The relationship between the constituents of the various locative phrases is illustrated in (35).

(35a)



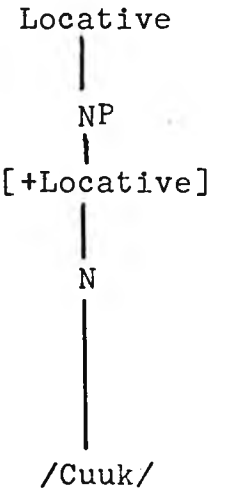
'on Moen'

(cf. (32))



'in that house'

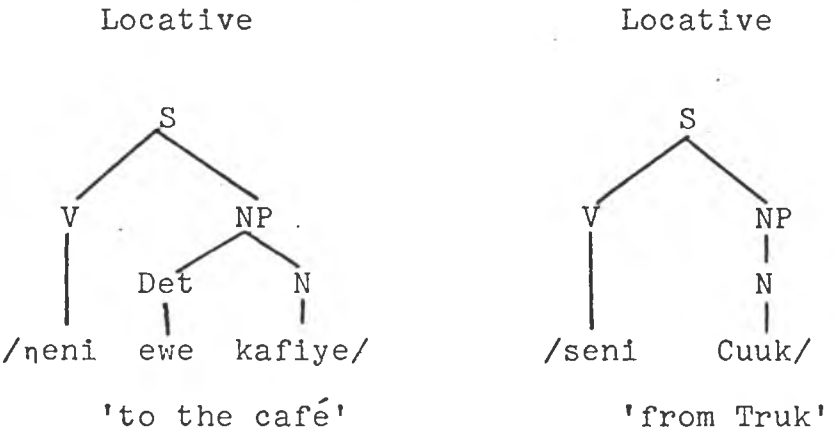
(cf. (31))



'Truk'

(cf. (34))

(35b)



Relations between the Actants

3.5 It would seem, at least on the surface, that some actants are more important than others in their relationship to the sentence as a whole. If an actor is present, for example, it will always be reflected by the predication marker, and, if stated specifically, usually precede the predication marker, which is followed by the verb and the remaining actants. If there is no actor, the dependent will occupy this special position. With the exception of some occurrences of the referent, the other actants, however, are not found in this environment and are not reflected by the predication marker even when they are the only actant present in the sentence.

3.6 Focus. The preposed actant may be regarded as the focus of attention in the sentence. It has the dual role of actor (or dependent) in relation to the verb and to the other constituents of the predicate phrase, and of subject in relation to the sentence as a whole. There is thus a string

of constituents (e.g. verb + dependent + location + actor) underlying a binary immediate constituents structure (subject + (remainder of) predicate phrase)[4]. In Trukese, however, when the subject has been mentioned elsewhere in the linguistic context, or is otherwise known to the interlocutors, it is frequently deleted, and reflected only by the predication marker, e.g.

(36) /re mwéŋé/

'They're eating.'

Where the subject is not known from the context, it will be explicitly stated, e.g.

(37) /ekkewe áát re mwéŋé/

'The boys are eating.'

If the subject is marked [+Animate] it may be replaced by an independent pronoun in the same circumstances as when deletion is possible, so that, for example (36) and (37) could be subsumed in

(38) /iir re mwéŋe/

'They're eating.'

In the latter case it would seem that emphasis as well as focus is involved, as the pronoun /iir/ may be deleted from (38) without altering the information conveyed by the sentence, except in so far as the role of the actor is being stressed.

In Trukese, focus may be equated with the pre-verbal position in the sentence occupied by the subject in (37) and (38) above, a position which the actant in focus occupies

whenever it is realized, and an effect upon the predication marker, which reflects only a focused actant. The actant in focus, if any, is determined by the features of the verb. In the case of transitive verbs, the transitive formant is itself a marker for actor focus, as well as indicating the presence of a dependent in the verb phrase. Other verbs, as discussed in the preceding section, are not overtly marked for focus, although referent focus statives have a unique transformation potential -- they are the only stative verbs which may function as nouns in an NP when preceded by the pro-auxilliary /meyi/ -- e.g.

(39) /ewe meyi semmwen a-a cikar/
'sick'pm r'recover'
'The (one who was) sick recovered.'

(other statives may not function in this way, e.g. Ø /ewe meyi metek/ does not mean 'that which was hurting'). Stanley Starosta (1967a) has pointed out that in Tsou the existential verbs do not allow any focused element to occur. An analogous situation obtains in Trukese, not only with statives like /metek/, but also with the verb of existence /wor/ 'to be in existence'

(40) /meyi wor ruu neyi-y pwáápwá/
'I have two pet turtles.'
(lit. 'exist two pet-my turtle')

--/wor/ is preceded either by /meyi/, marking completeness (regarded by Dyen (1965b) as a nominalizer), or the unmarked

predication marker /e/ (with or without aspectual elements):

(41) /e-se wor e-ŋon neyi-y piin/
pm neg 'exist' 'one' 'ten' cl 'my' 'pencil'
'I don't have ten pencils.'

3.7 Relationship between focused actant and predication marker. As has been pointed out in the preceding section and elsewhere, a special agreement relationship obtains between the predication marker and the focused actant. As the actor is always in focus, it may be generated first in the string comprising the predicate phrase, although this is more a matter of convenience than anything else. When there is no actor, and another actant is in focus, the focused actant is moved to the left of the verb. The auxiliary, which contains the predication marker, intervenes between the focused actant and the verb. The sentence

(42) /Takis a-a cuur-i Tayeko me wóó-n Wééne/
'Takis met Taeko on Moen.'

may thus be said to have undergone the following mutations in the course of its development:

(43a) */a-a Takis cuuri Tayeko me wóó-n Wééne/
(Aux) (Act) (V) (Dep) (Loc)

(43b) /Takis a-a cuuri Tayeko me wóón Wééne/
(Act) (Aux) (V) (Dep) (Loc)

whereas a sentence like

(44) /ŋaaŋ wúw-a semmwen/
'I was ill.'

has undergone a slightly more complex development:

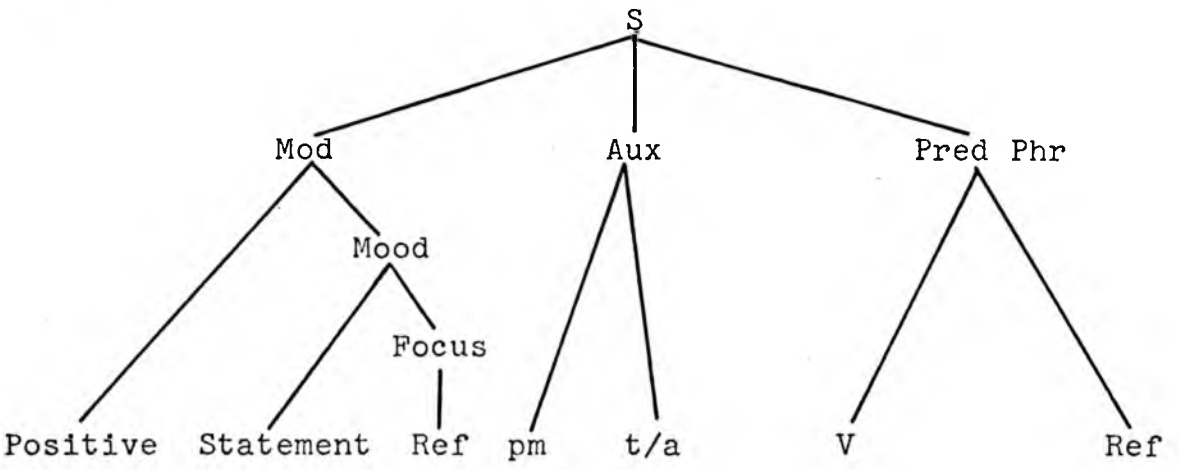
(45a) * pm/-a semmwen naan/
(Aux) (V) (Ref)

(45b) * /wúw-a naan semmwen/
(Aux) (Ref in focus) (V)

(45c) /naan wúw-a semmwen/
(Ref in focus) (Aux) (V)

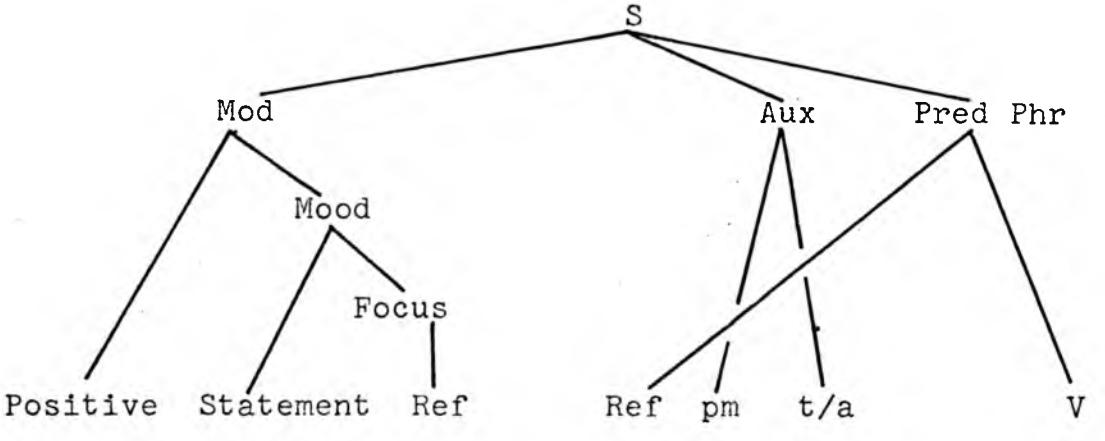
This is not to say, however, that the 'tree' structure of the underlying sentences has been radically changed by the re-ordering of certain constituent elements. Longacre (1965:71-72) has tellingly criticized the conclusions reached in this regard through rigid adherence to a two-dimensional tree model. It seems to me, however, that there is no need to regard the 'tree' as two dimensional: a more literal interpretation of the metaphor, through the construction of three dimensional trees, will both preserve the advantages of this type of characterization of structure, while preventing the reductiones ad absurdum described by Longacre. The sentence tree is often a kind of mobile, revealing itself differently in different circumstances, but retaining the same structure all the while -- the viewer happens to see only one aspect at a time. Sentence (44) will serve to illustrate this. The permutations shown in (45) do not affect the structure of the sentence, which remains

(46)



The perspective from which it should be viewed, however, is determined by the instruction contained at the end of the focus branch -- i.e. in this case the model should be viewed so that the terminal labeled 'Ref' appears on the left of that labelled 'V', and is separated from it by the terminals labelled 'pm' and 't/a' -- not a difficult feat to accomplish with a mobile or even adjustable model:

(47)



Topologically, the model is unaltered, only the perspective has

altered to accommodate the focus involved. As the predication marker reflects whatever actant is seen to be at its left from whatever vantage point, the referent in (47) will be reflected by the predication marker. Where no actant is focused, the model will be seen only in the 'flat' perspective illustrated by (46), and there will be nothing for the predication marker to reflect.

3.8 Subject as a syntactically relevant category. Fillmore (1966:19, 21) has criticized the notions 'subject' and 'object' as being linguistically significant 'only on the most superficial level'. He argues that, essentially, 'subject' and 'object' result from the ordering of constituents which in the deep structure are categories on the same level and stemming from the same node as the verb. This approach is very similar to that of linguists of the tagmemic school (e.g. Longacre 1965:72), with the important difference that Fillmore's actants exhibit relationships which he considers to be fundamental, and which underlie the comparatively trivial constituents 'subject' and 'object' which are generally regarded as tagmemes. However, it is easier to 'translate' Fillmore's concept of the proposition into tagmemic terms than to reconcile it with the IC cute implied in the view of sentence structure contained in Chomsky's 'Aspects of the Theory of Syntax', with which Fillmore specifically takes issue.

It is intended to continue to use the term subject here to indicate an actant in focus. In other contexts the terms for

the actants discussed above (§3.4) will be employed. The concept of modality will be retained to cover the constituent through which (1) positive or negative features are specified for the sentence as a whole, as well as 'mood' in the sense of question, statement, or impliative features, (2) adverbials of time and reason are generated, and (3) focus is introduced. The predication marker, aspect markers, and verbal particles may be subsumed under the Auxiliary.

Equational Sentences

3.9 The discussion so far has been concerned with what Dyen termed 'narrative predications', i.e. sentences containing predication markers. The other type of sentence, the 'equational predication' was dealt with very briefly by Dyen (1965: §132-137) who characterized it as comprised of two 'noun expressions' one of which he called 'subject' and the other 'predicate'. The latter usually stands first in the sentence; when it follows the subject, it is separated from that constituent by a 'comma pause', Dyen gives as an example of this

(48) /naan, Eyiwe/

glossed as 'I, Eyiwe (said when introducing himself)', as against an earlier example

(49) /naan Eyiwe/

'I'm Eyiwe', which has the order predicate - subject.

3.10 The choice of the terms 'subject' and 'predicate' for two constituents involved is a little confusing, and

they will be replaced here by the terms 'topic' and 'comment'. The latter may be no less confusing, but they will not have a one to one correspondence to Dyen's subject and predicate, and their use may be justified on those grounds alone. I am not sure whether Dyen's phonological criterion always holds true, but it is possible to separate the constituents on the basis of transformational potential. The comment may be defined as the phrase which may appear contiguous to an aspect marker, and the topic as the phrase which may not appear in that environment. Very often the phrases may be formally distinguished without recourse to any kind of transformation, as the predicative demonstratives (e.g. /iyeey/ 'here it is') may appear only in the comment phrase, and a demonstrative of the /eey/ series (which commonly act as determiners, but which may also substitute for a topic phrase) may appear initially only in the topic:

(50) /iyeey ewe ppwuk/
pr dm dem book
'Here is the book.'

3.11 It is convenient to treat equational sentences as containing the elements modality, auxilliary and proposition. Modality is more restricted in this type of sentence, being perhaps confined to positive/negative specification, focus (which would enable the permutation of the comment/topic ordering), and question or statement moods. Auxilliary would perhaps contain the unmarked predication marker[5] /e/ which is

deleted except when the aspect marker -pwe is present, and certainly the aspect markers -sapw 'negative' -pwe 'unreal', the latter permitted (in equational sentences) only in questions. Whenever the auxilliary is realized, the comment constituent must precede the topic; these two elements make up the proposition:

(51) /e-pwe e-fóc suupwa eey?/
pm ft. one-long tobacco this
'Would this be a cigarrette?'

If the auxilliary element epwe were deleted, (51) could be transformed into the topic focus sequence

(52) /eey efóc suupwa/
'This is a cigarette.'

3.12 With regard to what elements may appear within the topic or comment of an equational sentence, the position taken here is slightly different from that of Dyen. The major difference is the exclusion of meyi nominalizations, like

(53) /kiic meyi kún-a/
'We saw him.' ('we the-ones-who saw him')

which Dyen groups with equational sentences. These are separable from other equational predications on purely formal grounds: they cannot be preceded by the negative -sapw (or any other aspect marker). To negate (53) the sentence must be transformed into a narrative predication, e.g.

(54) /kiic si-se kun-a/
pm 'not' tr
'We didn't see him.'

-- this cannot be done with sentences like (50), (51) and (52). Predications with meyi are regarded rather as transformations of narrative sentences, where the auxilliary is replaced by the element meyi.[6] This does give sentences an equational connotation in that the subject (which may not be deleted) is more sharply contrasted with the 'nominalized' portion introduced by meyi, but the elements involved are those characteristic of narrative rather than equational predications in the sense that the latter are defined in §3.11.

3.13 Although narrower than Dyen's concept in that meyi predications are excluded, the comment/topic equational sentence is somewhat less restricted in that the topic phrase, at least, is not confined to 'noun expressions'. The topic may contain a complete narrative predication, e.g.

(55a) /wiso-mw ke-pwe wun sáfey/
'duty-your'/ pm ft 'drink medicine'
'Your responsibility (is that) you should take medicine.'

(55b) /wisa-n ewe tokter e-pwe a-wún-u-yeyi sáfey/
'duty'atr dem'doctor / pm ft e 'drink' tr me 'medicine'
'The duty of the doctor (is that) he should make you take medicine.'

These sentences have the same transformational possibilities as other equational sentences, but the comment/topic order is rarely inverted. It is thus possible to say that in an equational sentence either constituent may be realized by a noun phrase, with the restriction that predicative demonstratives (§4.18) may appear only in the comment, and independent

demonstratives (§4.23) only in the topic, which may also contain a narrative predication as its exponent. In the latter case there will be an agreement relationship between the attributive phrase (§3.14(iii)) of the comment and the actor in the narrative predication.

Syntagmatic Constructions

3.14 At the level of the phrase, several common construction-types are relevant in the process of substition (as well as in sentence structure generally). These may be listed as follows:

(i) The noun phrase. A noun phrase is composed minimally of a noun:

(56) /Sóón a.a mwéne rayis/
NP / AUXP / V / NP
'John was eating rice.'

Maximally (excluding embedded elements), a noun phrase may consist of a noun preceded by a determiner and followed by an attributive phrase and an adjectival phrase:

(57) /ewe áti-n Seyipen meyi semmwen a,a mwéné rayis/
Det N / ATTR / ADJ // AUXV/ P V //NP
'the boy-from Saipan' 'sick'
'The sick Saipanese boy was eating rice.'

The noun phrase as a whole has certain features affecting its relationship to the rest of a sentence. These include marking

for actant (S§3.2), and for plurality. In (56), for example, the NP containing Sóón would be marked [+Actor, -Plural] while that containing rayis would have the features [+Referent, -Plural].

Plurality has been assigned to the noun phrase as a syntagmatic unit by Chomsky (1957:29) in a formula

(58)

$$NP \rightarrow \left\{ \begin{array}{l} NP\ sing \\ NP\ pl \end{array} \right\}$$

Weinreich (1966a:436) regards countability in the same light (S → NP [±Count] + VP). In Trukese 'uncountability' may be taken as an aspect of obligatory singularity, as the classifier system enables mass objects to be counted as 'portions', and a singular numeral may appear in construction with many abstract terms (e.g./eew osupwan/ 'one (cause or aspect of) poverty'). Number may be transmitted to the various constituents of the noun phrase either directly (through re-write rules of the type A[+Plural] → B[+Plural] + C[+Plural]), or through a convention like that transmitting the actant feature (See P.S. Rules (86)).

Noun phrases dominated by the locative actant frequently have the structure locative noun stem plus attributive phrase:

(59) /ewe ppwuk e nómw fáá-n ewe ceepen/
'the book' pm 'placed' 'under'atr 'the table'
'The book is lying under the table.'

Where a specific locality (e.g. a village, island, or someone's house or shop) is pinpointed, the preposition me 'at' often

precedes the noun phrase:

(60) /a.a kúna Tayeko me wóó-n Wééne/

'see' tr 'at' 'on'atr 'Moen'

'He saw Taeko on Moen.'

(The same sentence without me would not occur very frequently, but could be interpreted as 'He saw Taeko somewhere on Moen').

(ii) The verb phrase. For the purposes of this study, the verb phrase may be regarded as a unit composed of a verb, and, optionally, a verbal complement. One frequently encountered type of complement is roughly equivalent to an infinitive or adverb in English, and consists of the verbal linker ne followed by a verb. In the surface representation of the sentence, the verb phrase is preceded by the auxilliary. The auxilliary consists of a predication marker, which may be followed by an aspect marker and/or various particles:

(61a) /wú-se toneni ne et-to/

pm 'not able'vl 'come hither'

'I'm unable to come.'

(61b) /e cék asukuun/

pm 'just teach'

'He just teaches.'

If the main verb is transitive, the dependent actant will intervene between the verb and its complement:.

(62) /ke-pwe fit-i-yey ne túkken/

V... / NP / ...P

'You'll accompany me to swim -- you'll come swimming with me.'

(iii) Attributive Phrase. An attributive phrase is comprised of a noun phrase preceded by the particle ni. This particle, which occurs as a free form in some Austronesian languages (e.g. Tagalog: an paa ni Pedro 'the leg of Pedro -- Pedro's leg') is bound to the preceding stem in Trukese (e.g. pecee -ni Petero /peceen Petero/ 'Pedro's leg'. A similar fate has befallen this particle in Malagasy (cf. Garvin 1964:45), and in other languages much closer to the Trukic group (e.g. Ponapean). The unity of the attributive phrase is indicated by the possibility of its replacement by an attributive pronoun (S4.12):

(63a) /e metek mékure-n Sóón/
pm 'ache'// 'head'/atr 'John'
'John's head aches.'

(63b) /e metek mékura-n/
//'head'/'his'
'His head aches.'

Attributive phrases occur only under the domination of a preceding noun,[7] but are (in theory) infinitely recursive, as the noun in the NP following -ni may become the head of a construction involving an attributive phrase:

(64) /unuse-n ekkewe mwiice-n sensee-n Cuuk
'whole' atr dem pl 'group' atr 'teacher' atr 'Truk'
[N / ATTR [N /ATTR [N /ATTR]]]
1NP 2NP' 3NP'' 321

ra-a feyit-to

pm r 'come' 'hither'

'All of those groups of teachers from Truk came here.'

(iv) Determiner. The determiner precedes the noun in a noun phrase; it is an optional element and is usually deleted when a noun is used in a partitive sense and before a proper name (e.g. (5b)), and when an attributive phrase refers to a unique feature of the noun to which it relates -- e.g.

(65) /imwe-n Satawo/

'house' atr Satauo

'Satauo's house'

as against

(66) /ewe imwe-n Satawo/

'that house of Satauo('s)'

which would imply that Satauo has more than one house. Example (66) is a fully grammatical phrase, whereas (67) is formally grammatical but semantically improbable in many contexts:

(67) /ewe mékúre-n Satawo/

'that head of Satauo's'

In (66) and (67) the determiner is an independent demonstrative (§4.23). A numeral also functions as a determiner; the numeral for one (followed by an appropriate classifier -- see §§5.2 sqq.) functions as an indefinite article while the demonstrative has more definite connotations:

(68) /ewe áát a-a wúnúm-i e-fóc suupwa/
dem/'boy'//pm r 'drink' tr //'one long'/'tobacco'
'The boy smoked a cigarette.'

A demonstrative and numeral may occur in sequence in the same determiner

(69a) /ekkewe rúwé-mén cóó-n Cuuk ... /
dem pl 'two animate'/'person'atr'Truk'
'those two Trukese'

(69b) /rúwé-mén ekkewe cóó-n Cuuk ... /
'two of those Trukese'

Alternately, the determiner may consist of a classificatory element which shows a special relationship to the determined noun, followed by an attributive phrase and, usually, an enclitic demonstrative:

(70) /imwe-y we amper/
CL ATTR DEM/ N
'house''my' 'the umbrella'
'my umbrella'

This classificatory construction is discussed in detail in §§5.13 sqq.

(v) Adjective. The term 'adjective' is used here for a special construction comprising meyi plus a stative verb (which would be characterized as an embedded sentence in the deep structure of some transformational models (e.g. Chomsky 1965: 107,178)). This construction normally 'qualifies' the noun of the NP in which it appears:

(71a) /ewe áát meyi semmwen a-a cikar/

'boy' 'be sick' 'recover'

'The sick boy recovered.'

(71b) /pecee-n ewe áát meyi semmwen .../

[N // ATTR[Det N / Adj]]

NP NP

'foot of the sick boy'

but, may also appear as the 'noun' of a noun phrase:

(72) /ewe meyi semmwen a-a cikar/

'That (person who was) sick recovered.'

hence the characterization of meyi as a nominalizer. However, only the stative verbs marked for referent focus may follow meyi in this construction (see (39) above).

(vi) Time and reason phrases. Time and reason adverbials are considered part of modality. They may take the form of a noun phrase, e.g.

(73) /re-sapw cuur-i-kic nee-sor/

pm ft neg 'meet' tr 'us' 'tomorrow'

'They won't meet us tomorrow.'

(/neesor/ is a noun containing a derivational prefix nee- 'at, in' and the noun sore 'morning'. Dyen interprets nee as a preposition, but it does not seem to be phonologically isolable from the base which it precedes, and which it 'converts' into a noun of time or location). Quite often an embedded sentence is involved. This is generally introduced by a conjunctive element, e.g. nupwen 'when', pwúún 'because'. The subordinate

sentence is not subject to any special deletions:

(14) /wú-pwe et-to nupwen wúw-a sár ne túkken/
pm . ft 'when' pm r 'complete'vl 'swim'
'I'll come when I've finished swimming.'

(viii) Attributive predication. This is a cover term for a special kind of embedding, when a noun phrase consists of the noun stem aa is followed by an attributive phrase incorporating the subject of an appended predicate phrase. The auxiliary elements are usually, but not always, deleted from the embedded sentence

(75a) /wúw-a kúna aa-n cuur-u-k/
pm 'I' r 'see'tr 'his' 'meet' tr 'you'
'I saw him meet you.'

(75) /wúw-a kún-a áá-n Takis me Kachu ssá/
r atr 'and' 'swim'
'I saw Takis and Kachu swimming.'

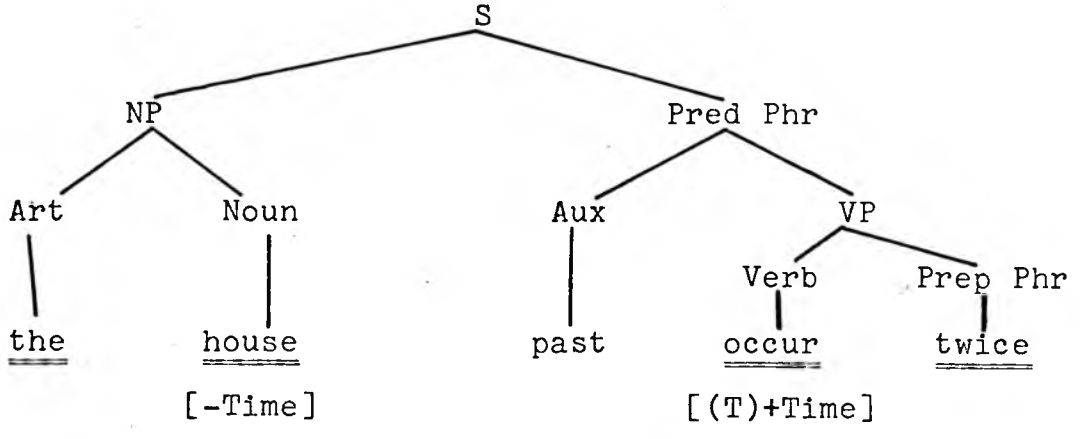
The nature of the embedding involved in this kind of construction will be discussed in relation to attributive pronouns (S§4.13).

Transfer Paths

3.15 Partly in order to account for the grammaticality under some conditions of otherwise strange collocations, Weinreich (1966a) developed a theory by which certain semantic features in some lexical items are specified as 'transfer

features' and are 'transferred' to other elements in a given string by means of specified 'transfer paths'. An interpretation may then be assigned by a 'calculator', i.e. a set of rules designed to resolve apparent conflicts, and to grade the acceptability of any given utterance. Thus, for example, the English noun house includes, among its inherent features, a feature [-Time], and the verb occur includes the transfer feature [(T) +Time], while one of the transfer paths in English is, say verb-Pred Phr-VP-S-NP-N. Given a tree of the kind shown in (76), the lexeme 'house' will end up with the features [+Time, -Time], through the operation of the transfer rule (77) below.

(76)



'The house occurred twice.'

(77) If A [m [(T)n]] and K [m'] are lexemes in a terminal string, (where m and m' are sets of inherent semantic features and n is a transfer feature), and if the path A__ ... K__ is a member of the set of transfer paths, replace [m [(T)n]] by [m] and [m'] by [m' n]. (Weinreich 1966a:459)

The conflicting features [+Time, -Time] would be interpreted by the calculator as denoting, say, 'event', in which case a reading could be assigned to (77) enabling it to be paraphrased as 'the house was perceived twice'.

3.16 Transfer paths may conveniently be used to enable the transfer of features to a lexical category before this category is replaced by a lexical item; e.g. to account for the agreement between actor or dependent/subject and the predication marker. It should be noted that Weinreich (1966a:439) cautioned against the excessive use of such devices, on the grounds that they may not distinguish sufficiently between certain types of concord (e.g. gender, which he says is rarely violated, and number, which is often violated). It is possible to maintain such distinctions, however, by writing specific rules to cover the more rigidly maintained concord relationships, while leaving the more flexible type to general rules like (77). In Trukese it is classificatory 'gender' which is most often 'violated': see discussion in §§5.20 sqq.

The Semantic Calculator

3.17 Some kind of 'calculation' is necessary in order to account for combinations of the kind (where # ... # marks an embedded element).

(78) /Satawo # me ŋaan #/ → /áám me Satawo/

$$\begin{bmatrix} [+N] \\ \dots \\ -Plural \\ \dots \end{bmatrix} \text{ and } \begin{bmatrix} [[NP]] \\ +Speaker \\ -Hearer \\ -Plural \end{bmatrix} \begin{bmatrix} [[NP]] \\ +Speaker \\ -Hearer \\ +Plural \end{bmatrix}$$

(79) /Satawo #me Takis#/ = N [+Plural]

$$\begin{bmatrix} [+N] \\ -Plural \\ \dots \end{bmatrix} \begin{bmatrix} [+N] \\ -Plural \\ \dots \end{bmatrix}$$

It is convenient to accept Lamb's (1966:30-31) view that these list-like combinations are to be regarded as single lexemes in the syntax. They would therefore be inserted into a sentence as a unit. However, their unity must be accounted for, as the unit exhibits features different from those of its component members.

3.18 Universal features. It has already been noted (§2.13) that substitutes, like minor morphemes, are characterized by a grammatical marker [[G]], rather than a distinguisher (e.g. [+Noun]). It is possible to go a stage further in the description of substitutes, and to regard them as indicators of the universal features of the language, i.e. those features

which are common to all major morphemes in the language. Many of these features are probably 'universal' in the sense that they are found in many diverse languages, but no claim that this is so need be made here. For Trukese, these universal features almost certainly include the following (each of which is marked in at least one of the substitutes discussed in Chapter 4): [Human, Male, Speaker, Hearer, Visible, Animate, Living]. Each of these features may be marked or unmarked for any particular form. Marking may be positive (+) or negative (-). In a concord relationship, the pairing of positive and negative specifications would lead to a conflict of the type illustrated in (80), which, if unresolved, would result in the 'blocking' of the proposed sentence. However, the pairing of marked and unmarked features creates a problem only where the relationship is one of reflection, as between the subject and predication marker. In such cases unmarked must be reflected by unmarked; but where features are transferred, as in (84), no mark is as concordant as identical marking.

(80) ∅ /iiy a.a ssuuk/

'he' pm r 'be shut'

$$\begin{bmatrix} [[NP]] \\ +Animate \\ +Dep \\ +Focus \\ \dots \end{bmatrix} \qquad \begin{bmatrix} +Verb \\ +\_\_Dep \\ [(T)\ -Animate] \end{bmatrix}$$

'He was shut.'

(81) /iiy a-a suuk-i-Ø /

'he pm r 'shut' tr

yiiy ya -a suuki -a

$$\begin{bmatrix} +\text{Verb} \\ +\_\_\text{Dep,Act} \\ [(\text{T})\_\_\text{Anim}] \end{bmatrix} \begin{bmatrix} [[\text{NP}]] \\ [+\text{Dep}] \\ \ldots \end{bmatrix}$$

'He shut it.'

Transfer Path: Verb (Source)-VP-PP-Dep

3.19 Non-Lexical Features. In addition to the universal features, there is a set of features assigned by the grammar. Many forms are unmarked for all of these features, but substitutes may include some of these 'syntactic' features in their complex symbols. In Trukese, for example, the feature [+Actor] is assigned to a noun phrase by the convention or rule governing domination by the actor actant; however, independent pronouns are positively marked for this feature (and negatively marked for features such as [Dependent] and [Location]). Features in this group would include [Question, Plural, Dependent, Location (and other actant categories) ..., Emphatic, Negative] etc. While these features may be unmarked in the lexicon, a lexical item will be marked for many of them once it appears in a terminal string. Through redundancy rules (discussed briefly in §5.22) marking for one feature implies positive or negative marking for others; thus, for example, [+Dependent] implies [-Actor, -Locative, -Referent].

3.20 Inherent features. The remaining features, those which are neither universal nor assigned by the grammar, may be regarded as inherent in the forms in which they are found. With such features, those which are not positively or ambiguously marked (e.g. for many nouns [±Partitive]) may automatically be regarded as negatively marked. Many of these features are syntactically important, but they are too numerous and unevenly distributed to be written out in full for any one form. The inherent features of /konak/ 'dog' in Trukese would include, among others [+Quadruped, ±Edible, ±Cooked, ±Mass, +Flesh, ±Pet]. Such features are often highly relevant in relation to the classifier system, and are discussed further in Chapter 5 (especially §§5.21 sq.).

3.21 Transfers within the lexicon. Conflicts like those in (78) and (79) may be resolved by a series of rules which operate within the lexicon to produce a unified sequence of coordinated elements for insertion at an appropriate point in a derivation:

(82) N = Noun, G = Grammatical marker

F = Universal, syntactic and inherent features

Sb = Independent, attributive and dependent pronouns (Independent and predicative demonstratives also, Rule (b) only)

$F_w F_y F_n$ are clusters of semantic features. X has the value of +, or of -, or of Ø for each feature.

N_n represents any noun or sequence of nouns.

in (83) and (84), which also prevent strings whose constituents are incompatible with each other from reaching the surface.]]

The output of these rules must then pass through the calculator. One general rule (83b) would delete all redundant features, and a sequence of specific fules, of which a few are stated in (84), would reconcile or assign readings to clusters of mutually exclusive features, and block those which are impermissible. In a properly attuned calculator the 'blocking' would be graduated, so that a level of grammaticality could be assigned to each particular combination (e.g. [+Human, -Human, +Animate] would score as more likely to be acceptable than [+Human, -Human, -Animate]. No attempt has been made to attain this degree of refinement here.

(83a) $\left\{\begin{matrix}\pm\\ \emptyset\end{matrix}\right\}$ Plural, $\left\{\begin{matrix}\pm\\ \emptyset\end{matrix}\right\}$ Plural] → [+Plural]

(83b) If [xF_1, xF_2 ... xF_n] is a cluster of semantic features, including grammatical markers and distinguishers, (where x = -, or x = +, or x = Ø for each x), and if $xF_i = xF_j$, delete xF_j (cf. Weinreich 1966b:105).

(84) x has the value of +, or -, or Ø for each x

F Univ = Universal features (§3.18) F = Any feature (83b)

Actant = [±Actor, ±Dependent, ±Locative, ±Referent, ±Topic, etc.]

GM = Grammatical marker

Dist = Distinguisher [+Noun, etc.]

Subscript numerals identify identical features and differentiate non-identical features

Explanatory remarks pertaining to the various rules are enclosed in double brackets. Examples of the operation of the rules are given in §3.22.

(a) N + Sb → Sb [+Plural] + N

[[This rule ensures that a pronoun will appear as the first element in a string containing both pronominal elements and nouns. In such strings the pronoun will always be plural; thus /Sóón/ + /naan/ 'John' + 'I' must not only assume the order /naan/ + Sóón/ if both elements appear in the same coordinated sequence, but /naan/ must also be replaced by the plural /áám/ 'we'.]]

(b) Sb [[G_i]] [xF_i] + Sb [[Gj]] [xFj]

→ Sb [[[G_i]] [[Gj]] [xF_i] [xFj]]

[[A string of coordinated nouns or noun phrases may contain only one pronominal element. Where more than one pronoun is inserted in a preterminal string, the features of the pronouns concerned are combined, and a single pronoun will appear in the surface structure. Thus, for example, /naan/ + /ii/ 'I' + 'he' will become a single unit /áám/ 'we (excl.)' after the operation of this and other rules (e.g. (83a)).]]

(c) $\begin{bmatrix} N \\ Sb \end{bmatrix}$ + N (N) → $\begin{bmatrix} N \\ Sb \end{bmatrix}$ me N (me N)

[[A noun or pronoun is concatenated with one or two other nouns by the conjunction me 'and', as in /áám me Sóón/ 'John and I'.]]

$$(d)\ \begin{bmatrix} N \\ Sb \end{bmatrix}\ (me)\ N\ (me)\ N + N \rightarrow \begin{bmatrix} N \\ Sb \end{bmatrix}, N, N, N$$

[[Where more than three nominal elements are involved in a concatenated sequence, the conjunction me is replaced by pause, symbolized here by a comma; thus */áám me Sóón me Takis me Tayeko/ 'John, Takis, Taeko and I' will appear as /áám, Sóón, Takis, Tayeko/.]]

$$(e)\ \begin{bmatrix} N & [xF_y] \\ Sb & [[G_w]]\ [xF_w] \end{bmatrix}\ (me)\ N_n\ [xF_n]$$

$$\rightarrow \left\langle \begin{bmatrix} N \\ Sb \end{bmatrix}\ (me)\ N_n \right\rangle [\ [[G_w]]\ [xF_w]\ [F_y]\ [xF_n]\ ]$$

[[The features of the individual nominal elements in a concatenated string are combined, so that the string has the syntactic properties of a unit whose features are, to some extent, the sum of those of its parts. Such combinations will, of course, result in conflicts (as in /áám me Sóón/, where the feature [+Plural] in /áám/ is contradicted by the feature [-Plural] in /Sóón/, both of which would appear in the complex symbol for the combination /áámi me Sóón/ once this rule has been applied. These conflicts are resolved in the rules contained

(a) $[\emptyset F\ Univ_1, +\ F\ Univ_1] \rightarrow [+F\ Univ_1]$

(b) $[\emptyset F_1, \pm F_1] \rightarrow [[\pm]F_1]$

(c) $[\emptyset Actant_1, \pm Actant_1 \rightarrow [[\pm]Actant_1]$

(d) $[+Actant_1, -Actant_1] \rightarrow$ BLOCKED

(e) $[+Actant_1, +Actant_2] \rightarrow$ BLOCKED

(f) $[[GM_1, GM_2]] \rightarrow$ BLOCKED

(g) (i) $[[GM_1, +Dist_1] \rightarrow [[GM_1]]$ where the category symbol contained in $[[GM_1]]$ may be re-written as $[+Dist_y]$ without concatenation at any point in the derivation.

(ii) $[[GM_1, +\ Dist_1] \rightarrow$ BLOCKED where (i) does not apply.

(h) (i) $[+F\ Univ_1, -F\ Univ_1] \rightarrow [+F\ Univ_1]$ where the feature matrix is appended to a lexical string by (75e)

(ii) $[+F\ Univ_1, -F\ Univ_1] \rightarrow$ SUSPENDED where (i) does not apply.

3.22 Operation of re-structuring rules. Rule (83) applies primarily to lexical strings (83b) and the rules in (87) have a more general significance, and can be used to test agreement relationships. It is possible to trace the transformation of $^{\emptyset}$/Satawo me ŋaaŋ/ into /áám me Satawo/ (78) by applying the rules as follows:

(i) Given: /Satawo/ + /ŋaan/

(ii) Rule (82a) (aa [+Plural]=)/áám/ + /Satawo/

(iii) Rule (82c) /áám me Satawo/
(/áám/ has the features [+Speaker, -Hearer, +Plural, +Animate, +Actor])

(iv) Rule (82e) /áám me Satawo/ [[[NP]] [+Noun, +Speaker, -Hearer, +Plural, -Plural, +Actor, ...]]

(v) Rule (83a) <...> [[NP]] [+Noun] [+Speaker, -Hearer, +Plural, +Actor]]

(vi) Rule (84g) [+Noun] may be directly re-written from NP without involving other branching, so the phrase may enter the string as a single lexical item marked [[[NP]][+Speaker, -Hearer ...]]

Sentence (74) yiiy yaa suuki -a will pass unimpeded through the rules as no incompatible features have been transferred; -a is unmarked for [+Animate], so may accept the transfer feature [-Animate], while yiiy, marked [+Animate] may accept the feature [+Animate], which is reduced to a single feature by (83b). Sentence (80) would be 'suspended', i.e. adjudged questionably grammatical, by Rule (84h), as /iiy/[+Animate] is the subject of /ssuuk/, which is marked for a dependent subject with the feature [-Animate]. A sentence like ℓ/iyey/ aa ssuuk/ 'here-it-is is open' would be blocked completely by rule (84e), as /iyey/ is marked [[[NP]]

[+Comment]], and its appearance as a dependent would result in the conflict [+Comment, +Dep]. After the operation of Rule (82e) example (79) /Satawo me Takis/ would become a unit with the features [-Plural, -Plural], converted to [+Plural] by (83a), and therefore would function as a plural noun in the sentence string.

Phrase Structure Rules

3.23 It is now possible to summarize the ideas outlined in this chapter in the form of phrase structure rules. These rules are necessarily incomplete, but provide sufficient information to enable the relationship between sentences and substitutes to be traced with some clarity. No distinction is made between transformational rules and simple re-write rules in the series which follows. However, with the exception of two permutation rules which are marked as such, the transformational rules are written as transfer rules. Transfer paths are indicated by means of linked category symbols (S--Prep Phr). The links always go from a dominant category to one immediately dominated by it, or vice versa. The first symbol in the path is the source of the transfer, and the end of the path is indicated by an asterisk (*). The rules are to be read as shown in the following example

(85) Topic → Topic [+Focus]/Topic Focus--Mood--Modality--S--Prop--*

'the feature [+Focus] is transferred from Topic Focus to Topic where Topic Focus and Topic are directly linked by Mood, Modality, S, and Proposition, with no intervening categories and where no one of these symbols is concatenated with any other of these symbols in the transfer path'.

The Rules are ordered, but may be applied cyclically. Features may be assigned to a category by successive rules, so that when the category is re-written as a complex symbol, the lexical item selected must contain the accumulated features (F) specified; e.g. a Noun Phrase may be re-written as [+Topic, +Topic Focus, +Plural], all these features would be passed on to the noun it dominates through the rule NP [xF] → ... noun [xF] ..., and then to the CS replacing the 'noun' symbol, e.g. /mettóc/ ('thing') [[+Noun] [+Topic, +Topic Focus, +Plural ...]].

(86) NOTE :: followed by a chapter and paragraph reference indicates that a symbol may be replaced by a substitute, which is discussed in the section indicated.

Interlocking parentheses (⦇) indicate that at least one item specified must be chosen; i.e. (A)B - choose B, or AB; (A⦇B) = choose A, or B, or AB; (A)(B) = choose A, or B, or AB, or Ø

(a) S → Modality + Aux $\left\{\begin{matrix}\text{Proposition}\\ \text{Pred Phr}\end{matrix}\right\}$

::(§4.39)

(b) Pred(icate) Phr(ase) → (Act) VP(Dep) (Ref) (Loc)

(c) VP → Verb (Compl)

(d) Verb → CS/ Aux (Act) __

(e) (i) Modality → {Positive / Negative} Mood (Reason) (Time)

/__ Aux + Pred Phr

(ii) Modality → {Positive / Negative} Mood/__ Aux + Prop

(f) Mood → {Question / Statement / Command} (Emphasis) (Focus)

(g) Proposition → Comment + Topic

(h) Focus → {Topic Focus / Act Focus / Dep Focus / Ref Focus}

(i) Topic → Topic [+Focus] / T Focus--Mood--Modality --S--Prop--*

(j) [Act / Dep / Ref] → [Act [+Focus] / Dep [+Focus] / Def [+Focus]] / [Act Focus / Dep Focus / Ref Focus] --Modality --Mood--S--Pred Phr--*

(k) PERMUTATION RULES (These are not regarded as altering the structure of a sentence 'tree' -- cf. Longacre 1965:72, and §3.7 below).

(i) Aux + VP + [Dep / Ref] [+Focus] → [Dep / Ref] [+Focus]

+ Aux + VP

(ii) Aux + Act + VP → Act + Aux + VP

(iii) Comment + Topic [+Focus] → Topic [+Focus] + Comment

Assumption. Verbs are marked for co-occurrence with various actants, and the focus possibility is also marked in the verb. Thus all verbs marked [+Act __ (Dep)] are marked [+(Dep [-Focus]) Act [+Focus]. If the 'wrong' category/relation is focused, the sentence will be blocked by the calculator.

(l) Comment → NP [+Comment]

(m) Topic → $\left\{\begin{matrix}\text{NP}\\ \text{S}\end{matrix}\right\}$ [+Topic]

(n) (i) Aux → pr m (aspect m) (adv) /__Pred Phr

(ii) Aux → aspect m :: (S§4.29)

(o) $\begin{bmatrix}\text{Dep}\\ \text{Act}\\ \text{Ref}\end{bmatrix}$ → NP $\begin{bmatrix}\text{[+Dep]}\\ \text{[+Act}\\ \text{[+Ref]}\end{bmatrix}$ :: (S§4.7) :: (S§4.4) :: (S§4.4)

(p) Loc → (Pr) NP [+Loc] :: (S§4.26)

(q) Pr → Pr [+F_X] / NP[+F_X]

(r) Pr → $\left\{\begin{matrix}\text{Preposition}\\ \text{Verb [+Prepositional]}\end{matrix}\right\}$

(s) Time → NP [+Time]

:: (S§4.37)

(t) Reason → $\left\{\begin{matrix}\text{NP [+Reason]}\\ \text{Conj [+Reason] + S}\end{matrix}\right\}$

:: (S§4.37)

(u) NP → NP [± Plural] :: (§4.4, 6,18,19,22,23, 25,26,33,35,37)

(v) NP [xF_x] → (Det [xF_x]) + $\left\{\begin{matrix}\text{noun}\\ \text{Adj}\end{matrix}\right\}$ [xF_x]

(w) Det [xF_x] → $\left\{\begin{matrix}\text{(Dem [}xF_x\text{]}\ \text{(Num [}xF_x\text{])}\\ \text{Class + Attr (Dem ([}xF_x\text{])}\end{matrix}\right\}$

:: (§4.31)

(x) Attr → ni + NP

:: (§4.12)

(y) Adj → meyi + Verb [+Stative]

(z) Dem [xF_x → CS [xF_x]

(aa) Num → num + Class :: (§4.40

(ab) Class → noun $\left|\begin{matrix}\text{[+Attributive Classifier]}\\ \text{[+Numeral Classifier]}\end{matrix}\right|$

$\left[\begin{matrix}\text{[Attr\_\_}\\ \text{\_\_num}\end{matrix}\right]$

(ac) noun → CS

(ad) Verb → CS

(ae) num → CS

(af) (i) pr(edication) m(arker) → $\left[\begin{matrix}\text{xPlural}\\ \text{ySpeaker}\\ \text{zHearer}\end{matrix}\right]$

/ NP --$\left\{\begin{matrix}\text{Act}\\ \text{Dep[+Focus]}\\ \text{Ref[+Focus]}\end{matrix}\right\}$--Pred Phr--S--Aux--*

(ii) pr m → $\begin{bmatrix} -\text{Speaker} \\ -\text{Hearer} \\ -\text{Plural} \end{bmatrix}$

(ag) aspect m → aspect m $\begin{bmatrix} [-\text{Negative}] \\ [+\text{Negative}] \end{bmatrix}$

/ $\begin{bmatrix} [\text{Positive}] \\ [\text{Negative}] \end{bmatrix}$ --Modality--S--Aux--*

(ah) (i) aspect m → aspect m [-Command]

/ $\begin{Bmatrix} \text{Question} \\ \text{Statement} \end{Bmatrix}$ --Modality--S--Aux--*

(ii) aspect m → aspect m [+Command]

(ai) aspect m → aspect m [-Real]

/Negative--Modality--S--Aux--*

where Aux/ __Proposition

(aj) aspect m → $\begin{Bmatrix} \text{aspect m [-Real]} \\ \emptyset \end{Bmatrix}$

/question--Modality--S--Aux--*

where Aux /__Proposition

(ak) aspect m → CS

(al) pr m → CS

(am) DELETION RULE

(Focused element in a predicate phrase is deleted when it may be clearly identified from the content (linguistic or extralinguistic) of the context, and is not subject to emphasis).

A Discovery Procedure for Isolating Substitutes

3.24 In (§2.13(b) it was stated that a substitute is a 'terminal element which may be introduced into a derivation as a direct re-write of a major syntactic category which is not otherwise a lexical category'. This definition is accurate in relation to Trukese, but raises problems as an axiom of universal significance. Like minor morphemes such as 'articles', substitutes are characterized by a grammatical marker rather than a distinguisher. The fundamental difference between substitutes and (other) minor morphemes is that a non-substitute usually replaces a terminal category, e.g. 'Article', whereas a substitute replaces a non-terminal category, i.e. a category which is obligatorily subjected to further re-write rules. An apparent exception to this is the English noun substitute one, which clearly replaces a terminal, lexical category. Rather than dismiss this form as a 'reflector', which it certainly does not seem to be, recourse may be had to another set of criteria, namely the universal and syntactic features discussed in §§3.18-19. A substitute may be re-defined as

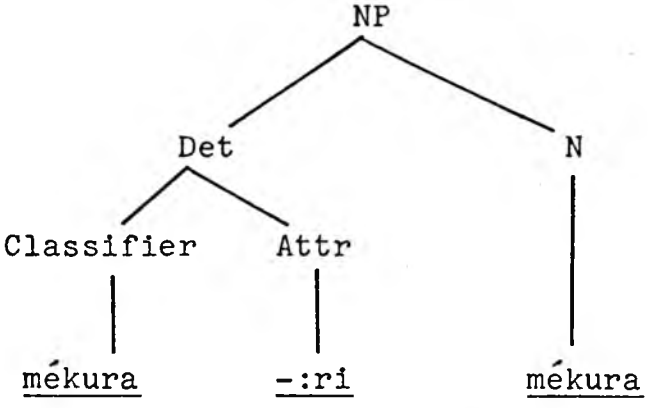
> a terminal element (usually introduced into a derivation as a direct re-write of a major syntactic category which is not otherwise a lexical category)
>
> which is characterized by a grammatical marker [[G]], the absence of a distinguisher, and the positive or negative specification of only those features which are specified as universal semantic or syntactic

features for the language.

Both kinds of features (the 'universal' and the 'syntactic') which are not 'inherent' in the sense of §3.20, may be regarded as 'universal' for the major morphemes and substitutes in the language. They both isolate and are isolated by the substitutes. Although the proposition 'substitutes are characterized by universal features; universal features are the only features found in substitutes' is suspiciously circular, it is not necessarily fallacious. The number of universal features is quite small, but seldom obvious. A study of the substitutes in a language will throw considerable light on which features are universal -- the important dichotomies animate/inanimate, male/non-male in English for example are revealed most clearly through the substitute system. In looking for substitutes, then, one is also looking for universal features, and it is fruitful to make use of each in discovering the other.

Notes to Chapter 3

1. The structure of /mékure-er/ 'their heads' is probably best described as



where the second occurrence of mékura is deleted -- see §5.13 for a full discussion of this problem.

2. A possible counter example is discussed in §4.5.

3. A construction which seems to include both the referential element of sentences like (29) and the dependent of e.g. (30) is frequently encountered with transitive causative verbs -- e.g.

/ra-a a-mwéŋéén -i-yeyi rayis/

pm r c 'eat' tr :: $\begin{bmatrix}[[NP]] \\ [+Dep]\end{bmatrix}$ 'rice'

'They fed (=caused to eat) me rice.'

and also with /ŋeni/ 'give'

/ra-a ŋen-i-kic néwú-úr we konak/

pm r 'give' tr :: $\begin{bmatrix}[[NP]] \\ [+Dep]\end{bmatrix}$ cl [[Attr]] dem 'dog'

'They gave us their dog.'

/ra-a ŋen-i ewe áát néwú-úr we konak/

'They gave the boy their dog.'

The NP's manifested by /rayis/ and /néwú-úr we konak/ in these examples may perhaps be treated as instrumentals rather than referents. The examples in the data are confined to sentences similar to those above; it is difficult to obtain instances where an unambiguously instrumental sense is conveyed by the Trukese -- most English sentences of the type 'he did X with Y' seem to be expressed by constructions of the type (in translation) 'he used Y to do X' in Trukese, or else involve the use of a referent-like NP (often consisting of a single noun):

/a-a iree-y ppwún ŋen-i ewe maccaŋ/

pm r 'bury' tr 'earth' 'bird'

'They covered the bird with earth.'

(lit.: 'they covered earth to the bird')

/ra-a pwénú-ú ŋen-i ewe mwéŋé maŋaku/

'cover' tr 'food cloth'

'They covered the food with a cloth.'

(lit.: 'they covered to the food cloth')

In none of these cases may the instrumental (or, perhaps, but doubtfully, referential) actant be pronominalized. Furthermore, the notion of instrument is usually inherent in these verbs anyway; the verb /iree-y/ means 'to cover something with earth', so the sense of the above example can be conveyed just as well by the shorter

/ra-a iree-y ewe maccaŋ/

'They buried (i.e. covered with earth) the bird.'

The verb /ŋeni/ itself creates some problems. It could provide the basis for a 'dative' actant, as for example

/ra-a a-mwéŋé ŋeni-kic ewe rayis/

'They fed (caused eat) the rice to us.'

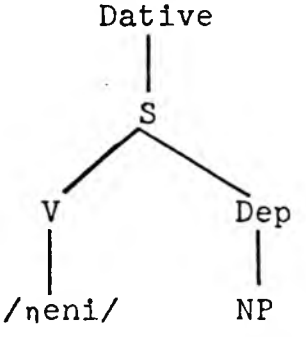
Where /ewe rayis/ is either referent or instrument, /a-mwéŋé/ a causative-intransitive (parallel to /a-mwéŋeen-i/) and the suffixed object pronoun /-kic/ denotes the recipient or beneficiary of the action; cf.

/a-a é-kúna-a-yey ŋen-i-ir/

pm r c 'see' tr:: [[[NP]]] [+Dep] ::

'He exposed me (caused me to be seen) to them.'

A tentative solution is to suggest that a dative (benefactive) actant is present in these strings, in the form of an embedded sentence, the verb of which is marked [+Dative], the NP denoting the beneficiary being the dependent of this verb (i.e. of /ŋeni/):



/ŋeni/ may also function as the main verb of a sentence, meaning 'to give', and the beneficiary is always the dependent of the verb, the equivalent of the 'direct object' in an English translation being in a referential (or instrumental) relationship to the verb and not subject to pronominalization:

/a-ra ŋeni-yey ew ppwuk/

'He gave me a book.'

/a-a ŋeni ewe mwáán ew ppwuk/

'He gave the man a book.'

/ŋeni/ may, in other contexts, introduce a locative phrase in much the same way as it seems to mark beneficiary -- see §3.4 (iv).

4. A comprehensive discussion of string constituents underlying a binary Topic/Comment relationship in a Philippine language may be found in Jannette Forster's (1964) article 'Dual Structure of Dibabawon Verbal Clauses'.

5. That is, either a predication marker, or a 'carrier' homophonous with the unmarked predication marker. No marker other than /e/ may appear in this position in equational sentences.

6. The functioning of this element is discussed in more detail below, §4.29.

7. This is an oversimplification, as the 'noun' may be any form compatible with the attributive suffix, including numerals and many verbs (but not those with transitive formants). However, in these cases the verb usually has a nominal sense (/ecik/ 'be hungry', /eciken enan mwáán/ 'that man's hunger', and most attributive phrases encountered do follow a member of the word-class 'noun'.

CHAPTER 4

NONCLASSIFICATORY SUBSTITUTES

4.1 In this chapter those substitutes or substitute-like elements which are not directly involved in numeral or attributive classification will be examined in relation to their semantic and syntactic properties. The various forms have been divided into four main groups, each of which will be treated separately -- pronominal elements, demonstratives and locatives (including interrogative forms), other interrogatives and relatives, and miscellaneous substitutes. An inventory of nonclassificatory substitutes appears at the end of the chapter.

Pronominal Elements

4.2 In the past decade a number of linguists and anthropologists[1] have devoted considerable attention to the semantic or 'componential' analysis of pronoun systems, as well as to the syntactic relationships involved in the use of pronominal elements. Two millenia have passed since Dionysius Thrax characterized the pronoun as 'a part of speech substitutable for a noun and marked for person' (Robins 1968:34), but much of the more recent effort has been devoted to refining or elaborating this definition. The Trukese pronoun system will be discussed in the paragraphs which follow, firstly in regard to the grammatically relevant 'features' or 'markings' of the

individual lexical items, and secondly in relation to the syntactic categories for which the various types of pronoun act as substitutes.

4.3 Trukese pronouns may be marked positively or negatively for number (plurality), deixis (reference to speaker or hearer), and attributes (animate, human, male), or be unmarked for some or all of the features subsumed under these categories. Five paradigmatic classes of pronoun-like elements may be distinguished in Trukese, four of which are substitutes; the fifth, comprising the predication markers, has already been characterized as a reflector rather than a substitute. Table 4 shows the features for which the morphemes included within each class are marked. The morphemes themselves are correspondingly arranged in Table 5. Except for the third person pronouns, the features [+Animate] and [+Human] are not, strictly speaking, distinctive, as they may be supplied through redundancy rules ([+Speaker] or [+Hearer] implies [+Human], [+Human implies [+Animate]). For this reason, they are enclosed in parentheses in the rows corresponding to first and second person pronouns in Table 4.

Conventional designation	Features					
	Plural	Speaker	Hearer	Animate	Human	Male.
1 sg.	-	+	-	(+)	(+)	
2 sg.	-	-	+	(+)	(+)	
3 sg. (anim.)	-	-	-	+		
3 sg. (male	-	-	-	+	+	+
3 sg. (fem.)	-	-	-	+	+	-
1 pl. (incl.)	+	+	+	(+)	(+)	
1 pl. (excl.)	+	+	-	(+)	(+)	
2 pl.	+	-	+	(+)	(+)	
3 pl. (anim.)	+	-	-	+		
3 sg.	-					
3 pl.	+					

TABLE 4

Features of Trukese Paradigmatic Pronouns

Features are marked positively (+), negatively (-), or are irrelevant (unmarked)[2].

Conventional designation	Pronoun Class				
	Independent	Personal	Object	Attributive	Pred. Mkr.
1 sg.	/ŋaan/		/-yey/ -yeyi	/-y/ -yi	/wú/ wúw
2 sg.	/een/		/-k/ -ku	/-mw/ -mw	/ke/ ke
3 sg. (anim.)	/ii/				
3 sg. (male)		/men/			
3 sg. (fem.)		/nemin/			
1 pl. (incl.)	/kiic/		/-kic/ -kica	/-c/ -ca	/si/ siy
1 pl. (excl.)	/áám/		/-kem/ -kemi	/-m/ -mi	/wowú/ wowúw
2 pl.	/áámi/		/-kemi/ -kemiyi	/-mi/ -miyi	/awú/ yawúw
3 pl. (anim.)	/iir/				
3 sg.			/-Ø/ -a	/-n/ -na	/e/ ye
3 pl.			/Vr/ -;ire	/-Vr/ -:ri	/re/ re
Boundary markers (Appendix I)	#...#	#...//	...#	...#	#...//

TABLE 5

Trukese Paradigmatic Pronouns

4.4 Independent Pronouns. The independent pronouns are /naaŋ/ 'I', /een/ 'you', /ii/ 'he, she, it', /kiic/ 'we (including hearer)', /áám/ 'we (excluding hearer)', /áámi/ 'you (plural)', and /iir/ 'they'. Independent pronouns are not subject to affixation, so no base forms have been posited for them here.

In 'traditional' terms, independent pronouns may be defined as substitutes for a noun phrase which is either the subject of a sentence containing a predicate phrase, or topic or comment in an equational sentence, when the phrase refers to an animate being. The following paired examples contain an independent pronoun substitute (a) contrasting with an appropriate noun phrase (b).

(87a) /iiy e-pwe kkéén/
:: pm ft 'sing'
'He will sing.'

(87b) /ewe mwáán e-pwe kkéén/
'The man will sing.'

(88a) /naaŋ meyi kúna ewe kacito/
:: 'did see' 'movie'
'I saw the movie.'

(88b) /Sóón meyi kúna ewe kacito/
'John saw the movie.'

(89a) /een e-mén cinnap/
:: 'one' 'old person'
'You're an old man.'

(89b) /ewe sowu-fiwu meyi semmwen e-mén cinnap/

'soldier definite sick'

'That sick soldier is an old man.'

(90a) /ŋaaŋ ii/

'I'm he.'

(90b) /ŋaaŋ ewe cinnap/

'I'm that old fellow.'

4.5 Features of independent pronouns. Independent pronouns are characterized by the grammatical marker [[NP]], the syntactic features [+ (±Actor, (±Referent, +Focus)[3], ±Topic, ±Comment)], [+Plural] or [-Plural], [-Partitive, +Emphatic, -Attr], and the universal semantic features [+Animate, ±Speaker, ±Hearer]. When the independent pronoun stands as the subject of a sentence, the semantic features and plurality marked in its complex symbol are reflected by the predication marker:

(91) /kiic siy-a kún-a Mariya nánew/

$$\begin{bmatrix} [[NP]] \\ +Speaker \\ +Hearer \\ +Plural \end{bmatrix} \quad \begin{bmatrix} [[pm]] \\ +Speaker \\ +Hearer \\ +Plural \end{bmatrix}$$

'see' 'yesterday'

...

'We (all) saw Maria yesterday.'

There is, however, one puzzling exception to the otherwise unbroken rule that in narrative predications independent pronouns occur only in the subject (focus) position. In the

case of two verbs, one encountered in my own data (/tiiti/ 'summon', base form possibly either tii or tiyitiy), and the other recorded by Goodenough (forthcoming) for the island of Romanum (/efic/ 'to like (something)'), an independent pronoun appears to be the object of the verb:

(92) /e-kke-we neŋŋin ra-a tiiti een/

'Those girls sent for you.'

The contrast between the 'normal' construction with a verb stem, transitive formant, and dependent pronoun (§4.7) and the exception noted here may be seen in comparing the Eastern and Romanum variants of the phrase 'he likes you'.

(93a) Romanum: /e efic een/

pm 'like' ::

(93b) Eastern: /e efic-u-k/

tr ::

It is possible that a very small class of verbs (of which /efic/ and /tiiti/ may be the only members) which do not contain transitive formants are marked for both actor and dependent, and in these cases an independent pronoun may substitute for a non-focused dependent. The matrix of features for independent pronouns would then include an environmental feature [-/tr__], as well as [±Dependent], while the environmental feature [+/tr__] would replace the condition [-Focus] in the complex symbol for dependent pronouns. An alternative solution would be to regard /een/ in /efic een/ as a referent (cf. §3.4(iii)), but again the

problem of focus remains, as these verbs would be the only ones where the unfocused referent could be replaced by an independent pronoun.

The ordering of sequences of pronouns and nouns in a single phrase has been discussed in §3.21, and the use of independent pronouns as substitutes for a focused referent was illustrated in §3.4(iv) and example (24).

4.6 Personal pronouns. The personal pronouns are /nemin/ 'she' and /men/ 'he'. They contain the features [-Speaker, -Hearer, ±Male, +Human, +Animate] and [+Emphatic, -Partitive, -Plural, ±Dep, ±Act, -Attr].

These entities are not discussed by Dyen (1965b). Elbert (1947) defines /men/ as 'thing, man; (voc to men) you! men! gentlemen!', and /nemin/ as 'woman, she (takes suf[fix][4], used in voc[ative]'. Their status is somewhat unclear, but /men/ and /nemin/ seem to parallel the distribution of the independent and dependent pronouns:

(94a) /a-a kún-a nemin/

'He saw her.'

(94b) /men e nómw ikeey/

'He lives here.'

and do not seem to appear in construction with the suffixed attributive particle -ni, or be preceded by a demonstrative or a numeral. They do not appear to contain any non-universal features, although in the case of /nemin/ a stem representing what is probably the same morpheme may appear with a suffixed

demonstrative with the meaning 'that (this, etc.) woman', and function in the same way as any noun preceded by a determiner. This complication does not affect /men/, however. It is therefore suggested that /men/ and /nemin/ be regarded as substitutes in the absence of more conclusive evidence to the contrary.

4.7 Object pronouns. The object pronouns are /-yey/ -yeyi 'me', /-k/ -ku 'you', /-Ø/ -a 'him, her, it', /-kic/ -kica 'us (incl.)', /-kem/ -kemi 'us (excl.)', /-kemi/ -kemiyi 'you (pl.)', /-Vr/ -;ire 'them' (; in -;ire is a vowel deleting element -- see Appendix I).

The object pronouns are suffixed to the transitive formant of a transitive verb stem. They do not occur in other environments. These substitutes are therefore characterized by the features [+Dependent, -Focus] or [+Dependent, +/tr__] (see §4,5 above), the grammatical marker [[NP]], and the features [+Speaker, ±Hearer, ±Animate, -Attr, -Partitive, ±Plural]. Unlike the independent pronouns, object pronouns may denote inanimate objects:

(95) /wúw-a kútt-a e-kke-we ppwuk, ne wú-se kún-e-er/
'seek' 'see' ::
'I looked for the books, but I couldn't find them.'

4.8 Cross-reference and obligatory pronominalization. Sentence (95) is a good example of obligatory pronominalization -- in this case when the object of the verb in one clause is the same as that in the clause immediately

preceding. Where object and subject are identical in a simple sentence (i.e. where the actor is identical with the dependent), the dependent will be pronominalized and the verb preceded by the particle /pwisin/, which denotes reflexive action:

(96) /Sóón a-a pwisin ni-i-Ø/

'John killed himself.'

Bloomfield's remark, mentioned in §2.3, about the circumstances of substitution being practical ones which the linguist for his part cannot accurately define, may be reexamined profitably here. The circumstances of substitution themselves do not seem to be very difficult to define, however; it is the recognition of these circumstances outside the context of a discourse which is the real source of trouble. Consider, for example, sentences (97) and (98):

(97) /Sóón a-a erá Sóón ciyene-y/

'say' 'friend' ::

'John said John is my friend.'

(98) /Sóón a-a erá ii ciyene-y/

:: ::

'John said he is my friend.'

If the second /Sóón/ in (97) is the same as the first, then the pronominalization rule mentioned in connection with (95) would have to be applied to the comment of the embedded sentence, producing (98). But (98) could be the result of another compulsory pronominalization rule -- if someone else,

say, Takis, had been the topic of conversation, and was clearly the person who said he was my friend, then (98) would be a transformation of (99):

(99) /Sóón a-a erá Takis ciyene-y/

'John said Takis was my friend.'

4.9 It is also possible of course that the two /Sóón/s in (97) are not the same, but in the sentence as it stands there is no way of knowing this, unless the recorder had noted the distinguishing features of the two personal nouns. If they were different people, each would be assigned a special feature, somewhat like the system of social security numbers. If their numbers should not tally, then the pronominalization rule would not necessarily apply. However, if both /Sóón/s, although different, had been mentioned in the preceding sentence, (97) could possibly be rendered

(100) /iiy a-a erá iiy ciyene-y/

'He said he was my friend.'

(e.g. in answer to a question like 'what did he (= $John_1$) tell you about $John_2$?' Example (100) is only ambiguous on the surface; if its derivation were known, it would be as unambiguous as the pre-terminal strings illustrated in (101) which might underlie it:

(100a) /Sóón a-a erá Sóón ciyene-y/

[+31827 Mentioned Previously ...] [+92204 Mentioned Previously ...]

(101b) /Sóón a-a erá Sóón ciyene-y/

[+31827 Mentioned Previously ...] +31827

4.10 General rules for substitution. It is possible to formulate some general principles for substitution which are normally observed in Trukese speech, although their diagnosis within the surface boundaries of a single sentence may be impossible, as has been illustrated above.

Where an appropriate substitute is available, substitutes will be employed

(a) In interrogative sentences, to represent the answer when this is not suggested:

(102a) /pwata ke-se etto?/

:[+Q +Reason] pm r/neg 'come'

'Why didn't you come?'

(102b) cf.: /ke-se etto pwúún ke-se mwocen
pm 'not' 'come''because' pm 'not' 'want'
'You didn't come because you didn't want to

cuuri-Ø/
'meet' ::
meet him?'

(b) Where an actant in the sentence has been unambiguously indicated in the previous linguistic context, or in the extra-linguistic context of the discourse

(103a) /ke-pwe cuur-i-kem ikenan/
pm ft 'meet'tr ::'us' ::'over there'
'You'll meet us over there.'

(103b) cf.: /ke-pwe cuur-i eey mwiice-n aramas
'this' 'group' atr 'people'
faa-n enan irá/
'under'atr 'that' 'tree'
'You'll meet this group of people under that tree (over there).'

(c) Where an actant in a subordinate, coordinate, or embedded sentence is identical with a preceding actant in the matrix sentence, or when an actant in a simple or matrix sentence is identical with a preceding actant in the same sentence:

(104a) Underlying sentence

/Sóón a-a pwan rik ŋeni peniyemwááni-n Sóón
'John' pm r 'also' 'turn' 'to' 'right side' atr'John$_1$'
nupwen Sóón a-a tori ewe annap/
'when' 'John$_1$' pm r 'reach' 'main road'
(/peniyemwááni-n/ = peniyemwááni + -ni)
'John also turned towards right of John when John reached the main road.'

(104b) Pronominalization

/Sóón a-a pwan rik eni preniyemwááni-n nupwen
::
iiy a-a tori ewe annap/
::
(/peniyemwááni-n/ = peniyemwááni + -na)
'John turned to his right when he reached the main road.'

(d) Where a focused actant is subject to pronominalization of the type described in (c), and is not subject to further special pronominalization rules (see §4.14), and is reflected by a predication marker, the deletion rule (86 am) is applied:

(105) /Sóón a-a pwan rik eni peniyemwááni-n nupwen aa tori ewe annap/
'John turned to his right when he reached the main road.'

The question of identity is a matter of logic rather than linguistic form, for in (104a), as in (97), Sóón could represent one or several individuals, and there is no way of knowing this from the context. The rules can only be

applied when the extra-linguistic facts are known. Furthermore, they may be suspended for purposes of emphasis, a feature whose presence or absence in the sentence is often unknown; e.g.

(106a) /enan imwe-n Sóón/
'that house' atr 'John'
'That's John's house.'

(106b) /aapw, sapw imwa-n enan/
'no' neg :: 'his'

(106c) /aapw, sapw imwe-n Sóón enan!
atr
'No, that's not his/John's house.'

Either (106b) or (106c) could be an appropriate response to (106a), depending on the 'practical circumstances'. It is, however, possible to describe the various 'circumstances', and predict, with considerable success, the substitution patterns which will hold within them.

4.11 Further examples of the use of object pronouns. When the dependent is an interlocutor in the discourse, a pronoun is always used. This, of course, applies to the attributive and independent pronoun substitutes as well. In this sense, 'first' and 'second person' independent pronouns may be regarded as a special class of nouns marked for speaker and hearer, and the use of the corresponding attributive and independent pronoun would be simply a consequence of the pronominalization rules discussed in

§4.8. However, the unity of the paradigm, the fact that the identity of speaker and hearer is established within the context of the discourse, and would therefore automatically be subject to pronominalization (§4.10(b)), and the lack of any non-universal features in the pronouns concerned, seems to provide strong grounds for treating these forms as normal substitutes. Thus the forms /-kem/ and /-kemi/ in (107a) are as much pronouns as /-ir/ and /-Ø/ -a in (107b).

(107a) /a-a fit-i-kem pwe e-pwe cuur-i-

pm r 'accompany' tr ::[[[NP]] +Dep +Sp -Hear +Pl] 'so pm ft 'meet' tr

kemi/

::[[[NP]] +Dep -Sp +Hear +Pl]

'He came with us (excl) to meet you(pl).'

(107b) /wúw-a fiti-Ø pwe e-pwe curr-i-ir/

$$\begin{bmatrix}[[NP]]\\ -Speaker\\ -Hearer\\ -Plural\end{bmatrix} :: \begin{bmatrix}[[NP]]\\ -Speaker\\ -Hearer\\ -Plural\end{bmatrix}$$

'I came with him to meet them.'

The 'third person singular' object pronoun -a (i.e. form marked [-Speaker, -Hearer, -Plural] is used in an indefinite sense when the nature of the object is known, as well as indicating a known object:

(108a) /Takis a-a fit-a-a-to/

tr :: 'hither'

'Takis accompanied him here.'

(108b) /Takis a-a apas-a-Ø/

'say' tr ::

'Takis said something.'

'Takis said it.'

(108c) /Takis a-a apas-a mettóc/

'say' tr 'thing'

'Takis said something.'

In (108b) it is implied that the speaker has some general idea of what Takis said. In (108c), however, the nature of Takis' utterance is completely unknown. The functioning of mettóc 'thing' as the equivalent of English 'something' in this respect is discussed below (§4.16).

4.12 Attributive pronouns. The attributive pronominal suffixes (with reduced forms indicated in parentheses) are: -yi /-y/ 'my', -mw /-mw/ 'your (sg)', -na /-n/ 'his', -ca /-c/ 'ours (incl)', -mi /-m/ 'ours (excl)', -miyi /-mi/ 'yours (pl)', :ri /-(V)r/ 'their'. The glosses are mnemonic only, as attribution does not necessarily imply ownership (see discussion §§5.13 sqq.)

Attributive pronouns have the same semantic features as the object pronouns discussed in the preceding section. They are characterized by the grammatical marker [[Attr]]. In the terms of rule (86x), the construction which they replace is re-written as the attributive particle -ni, plus a noun phrase. The particle -ni, which occurs as a free form in some Austronesian languages (e.g. Tagalog an paá ni Pedro 'the leg of Pedro -- Pedro's leg'), is bound to the preceding stem in Trukese -- pecee -ni Petero /peceen Petero/ 'leg attributed to Pedro -- Pedro's leg'. A similar fate has befallen this particle in Malagasy, where it occurs suffixed to a preceding stem-final vowel, or superfixed (as prenasalization) to a following consonant (cf. Garvey 1964:45). The examples below illustrate the contexts in which attributive pronouns appear:

(109a) /e metek mékúre-n Sóón/
'ache' 'head' atr 'John'
'John's head aches.'

(109b) /e metek mékúra-n/
::
'His head aches.'

(110a) /a-a ŋeni-kem néwú-n ekkewe áát we knonak/

'give' ::'us' clas atr 'those' 'boy' dem 'dog'

'He gave us those boys' dog.'

(110b) /a-a eni-kem newú-úr we konak/

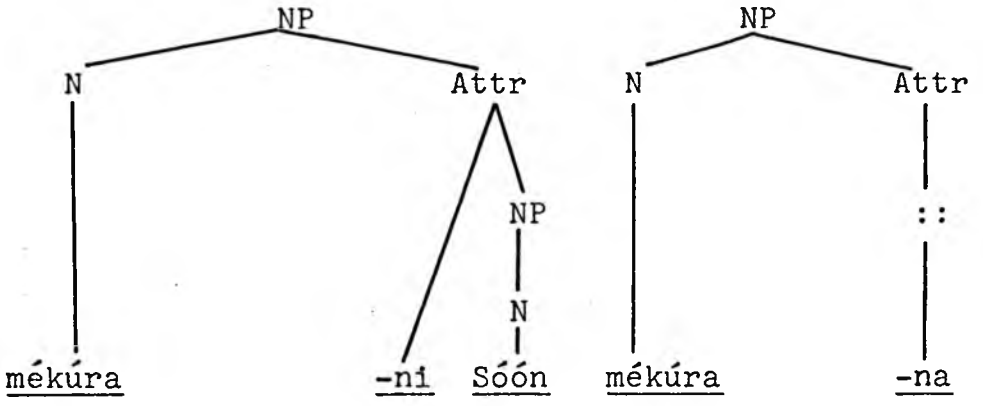
:: [[NP]]

+Attr

'He gave us their dog.'

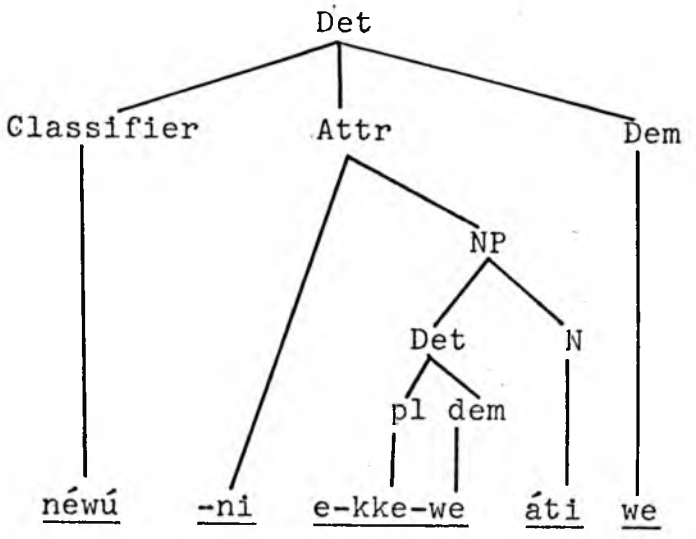
The structure of the attributive phrases (Attr) in (109) is illustrated in (111a) below, and that of those in (110) is shown in (111b).

(111a)

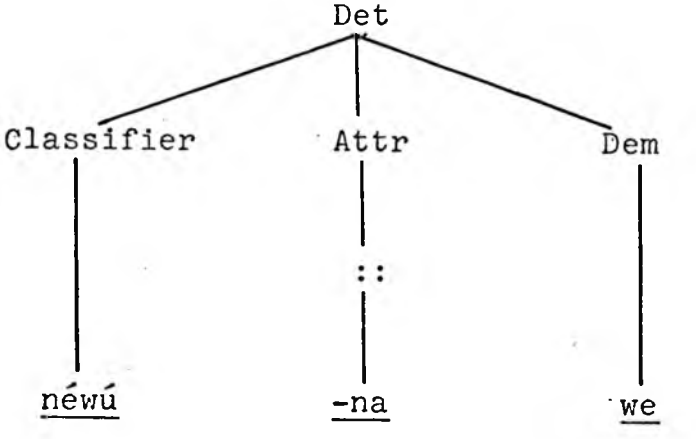


(cf. 109a) (cf. 109b)

(111b)



(cf. 110a)



(cf. 110b)

The functioning of the classifier system exemplified in (110) and (111b) will be explained in Chapter 5.

4.13 One special use of the attributive construction, which may involve attributive pronouns, requires comment. In certain environments, a particular noun stem, aa, which

elsewhere functions as a 'general' possessive classifier, may be followed by an attributive phrase, the axis of which is an embedded sentence. This construction is frequent in time adverbials introduced by the elements tori 'until' (elsewhere a verb meaning 'arrive'), nupwen 'when', etc. The attributive phrase replaces the subject of the embedded sentence, from which the auxilliary elements may be deleted (as in (112)) or retained (as in (113))

(112) /ke-sapw mwéŋé tori óó-mw ecik/
pm ft/neg 'eat' 'until' cl ::[[Attr]] 'hungry'
'You shouldn't eat until you're hungry.'

(113a) /ke-sapw mwéŋé tori aa-c si pwe mwéŋé/
pm ft/neg 'eat' 'until' cl ::[[Attr]] pm ft 'eat'
'You shouldn't eat until we have eaten.' (lit. 'until we will eat')

(113b) /ke-sapw mwéŋé tori áá-n e-kke-we aramas re-pwe mwéŋé/
cl atr 'person'
'You shouldn't eat until those people have eaten.'

Within a dependent phrase, the subject of the embedded sentence may be included within the attributive construction (114) or the attributive construction may stand in apposition to the dependent, whose relationship as subject in the embedded sentence is indicated by the attributive pronoun (115).

(114) /wúw-a kún-a áá-n Takis fit-i Minoru/
r 'see' tr atr 'accompany tr
'I saw Takis('s) accompany(ing) Minoru.'

(115) /wúw-a kún-a Takis aa-n fit-i Minoru/

::[[Attr]]

'I saw Takis (his) accompany(ing) Minoru.'

4.14 The embedded sentence in strings like those exemplified by (114) and (115) often functions semantically very like a time adverbial. Something of this temporal connotation is present in (115), and is especially obvious (in translation) in contexts like that illustrated in (116).

(116) /e-ŋkke-we inenap me semenap ra-a kon

'those grandmother grandfather' pm r 'continually'

a-nap-a aa-r eren-i e-kke-we semirit, re-pwe

c 'great' tr :: 'tell' tr 'those child' pm ft

cék mwéŋé ŋe re-sapw kkapas .../

'just eat but' pm neg/ft 'talk'

'Those grandparents constantly emphasize when they talk to the children (that) they should just eat and not talk ...'

In sentences like (114) the dependent seems to consist of a single embedded sentence, e.g.

(117) */ŋaaŋ wúw-a kún-a [Takis meyi fit-i Minoru]/

The embedded sentence is preceded by aa + -ni when it is incorporated into the matrix, and /meyi/ is deleted; the attributive phrase formed by -ni and the subject of the embedded sentence may be realized in full, as in (118a), or

be pronominalized, as in (118b).

(118a) /ŋaaŋ wúw-a kúna áá-n Takis fit-i Minoru/
'I saw Takis's accompany(ing) Minoru.'

(118b) /ŋaaŋ wúw-a kúna aa-n fit-i Minoru/
'I saw his accompany(ing) Minoru.'

Sentences like (115), and probably also (116), where the circumstances of the action seem to be implied in the sentence embedded in the dependent, may be derived from the embedding of a sentence whose actor subject is identical with the dependent of the matrix sentence, as in (119a). As with (118), the embedded sentence is preceded by aa + -ni, and meyi is deleted. At this point in the derivation ((119b)), three possibilities are present for the surface form of the sentence: the dependent of the matrix sentence may be retained, and the subject of the embedded sentence pronominalized, as in (115) and (119c); the subject of the embedded sentence may be retained, and the matrix dependent deleted, e.g. (119d); or the matrix dependent may be deleted following pronominalization of the subject of the embedded sentence ((119e)). It will be noted that (119d) and (119e) are identical in form with (118a) and (118b), suggesting that constructions of this kind are ambiguous on the surface, whereas those like (115) and (119c) are not.

(119a) */ŋaaŋ wúw-a kún-a Takis [Takis meyi fiti Minoru]/

(119b) */ŋaaŋ wúw-a kún-a Takis áá-n Takis fit-i Minoru/

(119c) /ŋaaŋ wúw-a kún-a Takis aa-n fit-i Minoru/

(119d) /ŋaaŋ wúw-a kún-a áá-n Takis fit-i Minoru/

(119e) /ŋaaŋ wúw-a kún-a aa-n fit-i Minoru/

If the auxilliary in the embedded sentence is not represented by meyi, as in (113), it will be retained in order to preserve aspectual distinctions.

4.15 In an equational sentence, the constituents comment and topic may take the form of a noun phrase containing an attributive phrase, which may be pronominalized, followed by a narrative predication. The subject of the topic sentence will be identical with the NP of the attributive phrase, and is therefore reflected only in the subject marker:

(120a) /wiso-mw ke-pwe wún sáfey/

'duty' ::[[Attr]] pm ft 'drink' [+Partitive]

'medicine'

'Your duty (is that) you should drink medicine.'

(120b) /wise-n ewe tokter e-pwe o-wúnú-yey sáfey/

'doctor'pm ft c 'drink'::'me' 'medicine'

'The duty of the doctor (is that) he should let me take medicine.'

(120c) /wisa-n e-pwe o-wúnú-yey sáfey/

'His duty (is that) he should give me medicine.'

(120d) /áá-y anaan wúw-pwe ffééŕ iimw/
c [[Attr]] 'work' pm ft 'repair' 'house'
'My work is repairing houses.'

4.16 /mettóc/ -- an indefinite pronoun? Mention was made above, §4.11 (108c), of the appearance of the form /mettóc/ to indicate an unknown dependent. The same form appears in other contexts where it is clearly functioning as a common noun rather than a substitute, and denotes an inanimate object or phenonmenon:

(121) /e-ew me neyi-n e-kke-we mettóc ... ra-a
'one at among' atr 'those' 'thing' pm r
kon a-nap-a ... /
'continually' c 'big'tr
'One of those things (which) they always emphasize ...'

On the other hand, /mettóc/ frequently appears in constructions where it has, at least on the surface, something of a pronominal sense:

(122) /e-se wor mettóc ree-y/
neg 'exist''thing' 'vicinity'::'my'
'There's nothing/none here.'

Much the same could be said of the use of /aramas/ 'person' in a similar context:

(123) /e-se wor aramas iye/
'person' ::'there (aforementioned)'
'There's nobody there.'

There does not seem to be sufficient cause to justify the classification of either word as a pronominal substitute, however, as nouns are frequently unaccompanied by determiners when used in a partititive sense, or to denote category

(124a) /a-a mwéŋé rayis/

'He was eating rice.'

(124b) /ceepen eey/

'This is a table.'

It may reasonably be concluded that the pronoun-like use of /mettóc/ is more apparent (in English translation) than real, and that /mettóc/, like /aramas/, /rayis/ and /ceepen/ in the above examples, is to be regarded as a noun rather than a substitute.

Demonstratives and Locatives

4.17 Demonstratives are frequently encountered in Trukese equational sentences. The demonstratives, and the paradigmatic locatives, are marked for deixis (proximity to speaker and hearer, in or out of sight); only the demonstratives are marked for plurality. Some locatives, which may be termed non-paradigmatic, are not marked for deixis. Predicative demonstratives, locatives, and certain interrogative substitutes are characterized by the formative prefix yi-. Independent demonstratives contain a ye- prefix, while postposed demonstratives consist simply of

the deictic inflection, to which the plural marker kka- may be prefixed. Only five of these inflections (see Table 6) have been encountered in my data, but Dyen (1965:§75) reports a sixth -- /oomw/, which he glosses as '? out of sight, but known to be in existence'; Goodenough describes the meaning as 'not far from us' and gives the Eastern form as /emwun/. According to my informants the/emwun ~ oomw/ category is not in common use, although it may be encountered more frequently in Western dialects.

Prefixes		Stem/ 'postposed'	Deictic features marked in stem		
+ 2	+ 1		Visible	(Near) Speaker	(Near) Hearer
*//yiy	//kka	//ey//	+	+	-
'predicative'	'plural'	//an~en//	+	+	+
		//nan//	+	-	-
//ye	//ke	//na//	+	-	+
'independent'	'locative'	//we//	-		

Morphophonemic rules: (1) $\left\{\begin{matrix} w \\ y \end{matrix}\right\} \rightarrow \emptyset\_\_\ C$

(2) a → e/C__(C)e

(3) e → a/a__

*// = incomplete boundary marker -- see Appendix I

TABLE 6

Morphology of Demonstratives and Locatives

4.18 Predicative demonstratives. The demonstratives termed 'predicative' by Dyen, a term which will be retained here for reasons which will be explained shortly, are, with plural forms in parentheses: /iye:y/ (/i-kke-ey/ 'here it is (near me)', /iye:n/(/i-kka-an/) 'there it is (near us)', /ina:n/ (/i-kka-nam/) 'there it is (away from us)', /ina:/ (i-kka-na:/) 'there it is (near you)', /iwe/ (/i-kke-we/) 'it's there (out of sight)'. The colon (:) indicates that the preceding vowel is lengthened in some dialects, or in certain environments which are discussed below, §4.19.

Predicative demonstratives may occur as pro-sentences ([[S]]) with the meanings indicated by the glosses above, or as comment substitutes ([[NP]] [+Comment]). They do not occur in the topic phrase. The 'predicative' nature of these demonstratives lies in their functioning as pro-sentences, i.e. as complete predications in themselves. Thus /iyey/ 'here it is -- the object is here' may stand by itself in a way in which the locative /ikeey/ 'here' and demonstrative /eey/ 'this' cannot. /ikeey/ and /eey/ demand a context for completeness, so that they may stand alone in an eliptical sentence only if the rest of the sentence is 'understood', and a paraphrase would include the eliptical statement (/eey/, /ikeey/) within this context -- thus in answer to a question /eey/ may stand for, i.e. be a part of

(125) /eey e-fóc ppwo/
'this' 'one long' 'pounder'
'This (is) a breadfruit pounder.'

while ikeey may be a fragment from

(126) /e nómw ikeey/
pr 'situated' 'here'
'It's here.'

The latter example, /e nómw ikeey/, is, however, an accurate paraphrase of /iyey/ 'here it is -- it is located here near me'. Like other demonstratives, predicative demonstratives are marked for plurality. The examples in (127) illustrate the main uses of these substitutes.

(127a) /ifa néwú-n we ppwuk? ina /

$$\begin{bmatrix} [[NP]] \\ +Q \\ +Comment \\ -Plural \end{bmatrix}$$ cl [[Attr]] dem 'book' :: $$\begin{bmatrix} [[S]] \\ -Plural \\ +Hearer \\ -Speaker \end{bmatrix}$$

'Where's his book?' 'It's there near you.'

(127b) /i-kka-naan e-kke-we citoosa/

$$\begin{bmatrix} [[NP]] \\ +Comment \\ +Plural \\ -Speaker \\ -Hearer \\ +In\ view \end{bmatrix}$$ 'those' 'car'

'The cars are over there.'

4.19 Interrogative and animate predicative demonstratives. The singular interrogative form /ifa/ has an extended range of meaning, covering nature and condition, as well as location -- e.g. /ifa ito-mw/ 'what's your name', /ifa ussu-mw/ 'what's your condition -- i.e. how are you?'. When they refer to specified living animate beings, predicative demonstratives, including the interrogative forms /ifa/ and /i-kke-fa/ 'where is/are?', are normally followed by a special animate marker. The status of this marker is a little uncertain. I have treated elsewhere (1967:117) as a suffixed element, but Goodenough (in progress: entry for ifa 2) regards it as identical with the third person independent pronouns. The affix interpretation is based on phonological evidence and informant opinion. The final vowel of the demonstrative stem is always unambiguously long, and that of the affix is shorter than the doubled vowel of the semi-homophonous independent pronoun:

(128) /ifaa-yi ewe áát?/ cf. /ifa ii/
[ifá:i ewe ae:t] [ifaí:]
'Where is that boy?' 'Where is he?'
[´indicates primary sentence stress, : vowel length]

However, an alternative interpretation of this evidence would confirm Goodenough's hypothesis. In Eastern dialects long vowels are frequently shortened in normal speech (a phenomenon reported also by Elbert (in progress) for the Trukic language spoken on Puluwat), whereas in Western dialects of lagoon

Trukese vowel length is generally retained. Furthermore, in Eastern dialects emphasis is frequently indicated by lengthening a stressed vowel. Thus the difference between the {ifa} and {ii} elements in /ifa ii/ and /ifaayi ewe áát/ may simply be the result of a shift in stress stemming from the relative importance of /ii/ in the first expression, and its redundancy in the second.

4.20 Rather than create a special suffix associated only with predicative demonstratives, therefore, it may be more convenient to say that where a living animate being is referred to by a predicative demonstrative, it is represented by a substitute, which may be followed by another topic phrase in apposition to the substitute, if this is desired:

(129) /i-kke-fa iir ewe konak meyi semmwen/

:: 'dog' 'sick'

'Where are the sick dogs?'

If the topic is not actually alive, however, no pronoun need intervene:

(130) /i-kke-ey e-kke-we konak meyi má/

dem [+Plural] 'dead'

'Here are those dead dogs.'

4.21 Substitute status of predicative demonstratives. The status of predicative demonstratives as pro-sentences has already been demonstrated. Within the framework of the equational sentence, it has been asserted that these forms,

and, by implication, their interrogative counterparts, function as substitutes for the topic phrase. It is difficult to demonstrate the validity of this assertion directly, as the interrogative, for example, is usually replaced by one of its predicative counterparts in answers involving location -- more specific answers are usually couched in a narrative predication, one element of which paraphrases the domain of the substitute:

(131a) /ifa ii ewe tokter? inan ii/
'Where's the doctor?' 'He's over there.'

(131b) /eni ewe tokter e-pwe nómw nno-n imwo-mw/
'perhaps' 'doctor' ft 'located''in'atr 'house' ::'your'
'The doctor's probably at your place.'

The predicative demonstrative is marked with the universal features present in the phrases which it paraphrases, and only those features, and this indirect evidence is sufficient to mark it as a substitute. The substitute quality of the interrogative' is, in some contexts, easier to demonstrate through contrastive examples, when it is not functioning within the predicative demonstrative paradigm:

(132a) /ifa ito-mw?/
'name'::'your'
'What's your name?'

(132b) /ite-y Sóón/
::'my'
'My name is John.'

In (132a) /ifa/, while occurring as comment, 'represents' the topic in the answer. However, /ifa/ does replace a grammatical category which is filled later by a non-substitute, and its logical referent is also expressed by a non-substitute, although, because of its logical relationship with the topic of the question, the referent of /ifa/ becomes the topic of the reply. This argument is based on a ntion of a deep structure in which the forms of question and answer are identical, although the grammatical categories involved are reversed on the surface:

(133) Q: COMMENT TOPIC

/ifa/ = name

↓ ↓

A: TOPIC COMMENT

/Sóón/ = name

Sentences of the type

(134) /wúw-se sinee-y ifa/

pm neg. r 'know' tr ::

'I don't know where (it is)!'

contain /ifa/ as an eliptic element, i.e. part of an embedded sentence, e.g. /ifa iiy/ 'where is he', from which the portion following /ifa/ has been deleted as redundant in the particular speech situation. /ifa/ does not share the pro-sentence characteristics of the predicative demonstratives to which it corresponds.

4.22 Two further uses of /ifa/ may be noted; these set

this particular form apart from the predicative demonstratives as a series, but illustrate its use as a general interrogative for non-concrete subjects, in contrast to its functioning within the predicative demonstrative paradigm as a deictic interrogative in reference to concrete objects.

(135) /ifa usu-mw?/
'what' 'state' 'your'
'How are you?'

In inquiring about manner, the phrase /ifa ussu-n/ 'what (is) its condition' is treated as a verb, conjoined to a complement by the verbal link ne

(136a) /wú-pwe ifa ussu-n ne féér-i eey?/
pm ft 'how' 'state' ::'its'vl 'construct' tr 'this'
'How do I do this?'

(136b) /wú-se sinee-y wú-pwe ifa ussun ne tori ewe neeni/
pm r 'know' tr pm ft vl 'reach' 'place'
'I don't know how I can get to that place.'

In these cases ifa remains a comment substitute, but the question of which it forms part, /ifa ussu-n?/ 'what's its nature?', replaces its answer in sentences like those in (136). /ifa/ may also be used in questions related to temporal duration:

(137) /ifa nanatame-n óó-mw metek?/
'what duration' atr cl'your' 'pain'
'How long have you been in pain?'

Similar extensions of meaning are found in the use of /ina/

to mean 'it is so', and /iyeey/, 'now':

(138a) /e-sapw ina!/
neg ft
'It won't be like that!'

(138b) /iká ina; iwe si-pwe nó/
'if' 'then' 'go'
'If that's so, then we'll go.'

(138c) /si-pwe mwéné iyey/
'We'll eat now.'

4.23 Independent demonstratives. The independent demonstratives, with plural forms in parentheses, are /eey/ (/ekkeey/) 'this (near me)', /ena/ (/ekkana/) 'that (near you)', /een/ (/ekkaan/) 'this (near us)', /enan/ (/ekkanan/) 'that (over there)', /ewe/ (/ekkewe/) 'that (out of sight)'. A series of demonstratives identical with those listed above, but without the initial /ye/ formative, appear as the final element in a complex determiner containing a possessive classifier, following a noun with a suffixed attributive pronoun, or following certain time expressions:

(139) /wú-pwe kun-a Tayeko me nnó-n áá-n Taro
pm ft 'see' tr 'at' 'in' atr cl atr
we kafiye neepwin ey/
dem 'cafe' 'at night' 'this'
'I'll see Taeko at Taro's café this evening.'

(In Western dialects the /ye/ formative is generally deleted from the (proclitic) independent demonstratives also). These enclitic demonstratives have the same universal features as the independent pronouns, but do not act as substitutes.

Where the predicative demonstratives identify place as well as the object which they indicate, the independent demonstratives focus attention on the object itself:

(140a) /iyey nówu-mw we ppwuk/
[[prdm]] cl :: 'your' 'the book'
'Here (is) your book.'

(140b) /eey nowu-mw we ppwuk/
'This is your book.'

It should be carefully noted however that the predicative demonstratives are not locatives; the gloss 'here' in (140b) is a little misleading; the sense of the Trukese would probably be more accurately captured in a translation like 'this here is your book'.

4.24 Independent demonstratives occur as determiners in noun phrases:

(141) /waa-to ewe seeya!/
'bring'hither' 'that' 'chair'
'Bring (me) the chair!'

and as substitutes for the topic of an equational sentence:

(142a)

/ceepen	ey?	wúú	ena	e-ew	ceepen
[N]	[[NP]]	[[S]]	[[NP]]		[N]
+Comment	+Topic		+Topic	'one'	+Comment
-Specific	-Hearer	[-Neg]	+Hearer		+Specific
-Plural	+Speaker		-Speaker		-Plural
	-Plural		-Plural		

'Is this a table.' 'Yes, that's a table.'

(142b) /sapw e-ew ceepen ena/

neg ::

'That's not a table.'

The validity of assigning substitute status to these demonstratives is again a little difficult to demonstrate directly. However, any of the topic phrases in the above sentences could be expanded into full noun phrases; as demonstratives are the most common determiners, these would probably occur in the phrase -- e.g. the question in (142a) could be restated as /ceepen eey mettóc/ e-ew ceepen?/ 'Is this thing a table?'. The phrase /eey mettóc/ 'this thing' is <u>not</u> implied in the substitute /eey/, any more than any other phrase from which it could be 'derived', e.g. /eey pisek/ 'this item'. The independent demonstratives are not, however, pro-sentences, even though they may occur in apparent isolation:

(143) /menni ke-pwe mwocen? eey!/
'which' 'want' 'this'
'Which do you want?' 'This!'

Here /eey/ is being used anaphorally for a full phrase, e.g. /eey ceepen/ 'this table' in the context of the preceding statement; it is not the self-contained unit exemplified in (142a). The meaning of /eey/ in (143) is completely dependent upon a knowledge of the context in which it is uttered. The examples in (142) do not require such additional information.

4.25 In certain phrases expressing time, singular independent demonstratives can occur as noun phrase substitutes ([[[NP]] [+Attr] [+Time]]).

(144) /si-pwe nó kkaye mwiri-n eey?/
excl pl 'go' 'shop' 'after' atr ::
'Shall we go shopping after this?'

In these situations the demonstrative replaces a variety of possible phrases or embedded sentences, e.g. /(mwirin) aac túkken/ '(after) our (having) swum'.

4.26 Locatives. The locatives are /ikeey/ 'here, near me', /ikeen/ 'here, near us', /ikena/ 'there, near you', /ikenan/ 'over there', /ikewe/ 'there, out of sight', /iye/ 'there, (aforesaid)', /iya/ 'where', and /ekis/ 'somewhere, anywhere'.

Locatives substitute for locative phrases:

(145a) /e-pwe et-to ikeey/

'come hither' 'here'

'He'll come here.'

(145b) /e-pwe et-to nnó-n imwe-y ey/

'in'atr 'house' 'my'

'He'll come into my house.'

The 'anaphoric' locative /iye/ substitutes for a locative phrase in questions where /iya/ is the initial element:

(141a) /iya ke-pwe nó iye?/

'where' 'go' 'there'

'Where are you going?'

(141b) /wúpwe nó nee-yimw[5]/

'go' 'at' 'house'

'I'm going home.'

/iye/ is also used to denote location where this is known to the interlocutors:

(147) /ke-pwe cuur-i-yey me iye/

'meet' ::'me' 'at' :: $\begin{bmatrix}[[NP]] \\ +Locative\end{bmatrix}$

'You'll meet me there -- at the aforesaid place.'

The preposition me is one of the few such elements in Trukese (most equivalents of English prepositions are Trukese nouns), and signifies exact location.

When the anaphoric form is not present in an interrogative sentence, the interrogative locational is placed in final

position:

(148) /ke-pwe nó iya? wú-pwe nó Cuuk/
'Truk'

'Where are you going?' 'I'm going (to) Truk.'

It should be noted that when a question like /ke-pwe nó iya?/ is asked, the answer is just as likely to indicate the nature as it is the location of the action -- e.g. /wú-pwe nó attaw/ 'I'm going fishing'. This does not detract from the essentially locative character of the interrogative, however; in a formal sense, the second type of answer is the response to a different question. /iya/ may also occur in sentences responding to or commenting on the question it has marked. Although it may be used anaphorically in these cases, it remains a locative substitute as the context of the specific question is always implied, even if it is not stated:

(149a) /e-pwe nó iya? wú-se sineey iya/
'Where's he going?' 'I don't know where.'

(149b) /wú-we sineey iya e-pwe nó iye/
:: Q ::
'I don't know where he's going.'

4.27 The form /ekis/, homophonous with a numeral meaning 'one portion', is used as an indefinite locative:

(149c) /ke-pwe nó ekis mwirin eey? wú-pwe nó nee-yimw/
'go''at' 'home'

'Are you going anywhere after this? I'll be going home.

This form is glossed by Goodenough as 'distant place, foreign land', but this specific meaning does not occur in my data. It is not improbable that the substitute is derived from such a form, however.

Relatives and Interrogatives

4.28 Relative pronouns in the sense of English who, which, that or Latin qui, qua, quod are not encountered in Trukese. The only relative like elements which are not primarily interrogatives are the so-called nominalizer /meyi/ and the indefinite pronoun /minne/ 'whichever, whatever'. The interrogatives which have the properties of substitutes are /yiyé/ 'who', /menni/ 'which', /meet/ 'what', /pwata/ 'why', /inet/ 'when', as well as /ifa/ 'whereabouts, of what nature' and /iya/ 'where' which were discussed in the preceding section. Very often, interrogatives will be the first element in a sentence, although the phrase for which they substitute may well occur normally in a different position. Such changes in order may be interpreted as local transformations determined by rules (unstated here) related to the modality constituent which controls all questions.

4.29 meyi. In most cases where a relative pronoun would be used in English, in Trukese a 'relative' clause is simply embedded in the matrix without any overt marker:

(150)

/wú-se sineey ewe mwáán # ewe mwáán e kkapas ŋeni-ir/

'not' 'know' 'man' 'talk' 'give'::'them'

/wú-se sineey ewe mwáán e kkapas ŋeni-ir/

'I don't know the man (who) is talking to them.'

A case could be made for the treatment of the 'nominalizer' /meyi/ as a kind of relative (this is implied in Dyen's gloss of this element as 'the one(s) who')[6] -- e.g.

(151a) /kiic meyi semmwen/

::'we' (::) 'sick'[+Stative]

'We (? are the ones who are) sick.'

(151b) /kiic siy-a semmwen/

:: pm r

'We are/were sick.'

It is possible to employ a /meyi/ plus stative verb combination in place of a noun in an NP:

(152) /e-mén meyi semmwen a-a máá-nó/

'one' (::) 'sick' 'die thither'

'One sick (person) died.'

or as a qualifier (Adj)

(153) /e-mén áát meyi seemwen a-a máá-no/

'boy'

'One sick boy died.'

and to replace the auxilliary component of a fully expanded sentence with /meyi/

(154) /ewe áát meyi cuur-i-ir ikeey nee-kuniyón we/
(::) 'meet'tr ::'them here''at evening' dem
'The boy met them here this evening.'

However, the expanded sentence, or any other combination with /meyi/ which includes more than a stative verb, may not be embedded in another sentence unless /meyi/ is replaced by an auxilliary, containing a predication marker (or deleted -- see §4.14). Thus

(155) ∅ /ewe áát meyi cuur-i-ir nee-kuniyón we e-pwe cuur-i-kic nee-sor/
'The boy who met them this evening will meet us tomorrow.'

must be corrected to

(156) /ewe áát a-a cuur-i-ir nee-kuniyón we e-pwe cuur-i-kic nee-sor/

Furthermore, there is a slight difference in meaning between

(157) /ewe áát meyi seemwen a-a cikar/
'The sick boy has recovered.'

and

(158) /ewe áát a-a seemwen a-a cikar/
'The boy who was sick has recovered.'

4.30 The function of /meyi/ seems to be to contrast the subject with the rest of the predicate phrase while emphasizing the reality of the situation; it is used only in relation to accomplished processes (and hence cannot be negated). Within

the sentence, it certainly physically substitutes for the auxilliary, and establishes an equation-like relationship between the subject and the rest of the sentence, including 'modal' constituents like temporal phrases. Whether it should be regarded as a substitute, marked, say [[[Auxilliary]] [+Positive, +Real]], or simply as a minor morpheme with the same features, is open to dispute. However, minor morphemes which are not substitutes replace only terminal categories (e.g. [[dem]]), and, rather than invent a special category for /meyi/, it is probably best to regard it as a pro-auxilliary introduced into a sentence through substitution rather than directly through the phrase structure rules.

4.31 The interrogative /menni/. /menni/ 'which' functions as a substitute for a determiner. If a noun phrase were characterized as consisting of a nucleus (the noun) and periphery (determiner, plus the postposed attributes) -- an analysis different from, but not incompatible with, that given in rules (86u) sqq., the element /menni/ could be said to represent the entire periphery:

(159a) /menni séé́c ke saan-i?/
Q::'which shirt' 'like' tr
'Which shirt do you like?'

(159b) /ena/ [underlying structure = /wú saani ena séé́c/]
'That (near you).'

(159c) ./e-ce meyi araw/ [= /wú saani e-ce séec meyi araw/]

'one' :: 'blue'

'A blue (one).'

However, it is sufficient to state that the interrogative acts as a pro-determiner, as the 'postposed' periphery is an optional element in a reply, but a determiner is always present. In connection with (159), it should be noted that the demonstrative /ena/ and numeral /e-cé/ one not functioning as substitutes in the replies; they are determiners followed by a noun, and preceded by a predicate, both of which have been deleted from the utterance because of their identity with those elements in the preceding question. The answer is, as it were, superimposed on the question.

4.32 In a question, the phrase containing /menni/ will always come first in the sentence. Thus in (159a) a dependent phrase is placed before the agentive subject (cf. (159b, c). When the question itself is incorporated in a reply or embedded in another question, the word order remains the same as that in the question:

(160a) /een meyi sineey menni fénú enan mwáán

::'you' :: 'know' tr ::'which island' 'man'

e feyit-to seni?/

'come hither from'

'Do you know which island that man comes from?'

(160b) /e feyit-to seni Kuwaam/

'He comes from Guam.'

The same holds true for other interrogatives; they may appear in embedded interrogative sentences as parts of larger questions like (160) or statements commenting on a question, of which (161) is a typical example.

(161) /wú-se sineey inet wúw-a et-to/

::'when'

'I don't know when I came.'

4.33 The interrogatives /iyé/ and /meet/. /iyé/ 'who' has the base form yiyéé to which the demonstrative suffixes -we 'out of sight', -na 'near hearer' and -nan 'over there' (preceded by the plural kka- where appropriate) may be added, when deixis is to be indicated. /iyé/ has the semantic features of the independent pronouns, but a distribution exceeding that of the independent and object pronouns combined. Unaffixed, /iyé/ has the grammatical marker [[NP]], and the constituent containing it is usually first in the sentence, except in equational sentences with an independent pronoun comment:

(162a) /een iyé ? iye ewe áát?/

[[NP]]	[[NP]]		::	dem	[+Noun]
+Topic	+Comment				[+Topic]

'Who are you?' 'Who's that boy?'

(162b) /áá-n iyé ewe ceepen meyi cé-watte/
cl atr [[NP]] 'table' 'broad'
'Whose is that broad table?'

/áá-y ... áá-n ewe mwáán meyi kitinnupw/
'Mine.' 'That fat man's.'

(162c) /iyé e mwocen fit-i-yey/
:: 'want' 'accompany'::'me'
'Who wants to come with me?'

Sentences like (163), where /iyé/ is followed by a narrative predication with an overtly specified subject, are basically equational

(163) /iyé ewe áát a-a mwocen fit-i-yey/
'Who is the boy (who) wanted to go with me?'

with /iyé/ as the topic and a noun phrase comment, identical with the (deleted) subject of a sentence which has been embedded in it (i.e. in (163) /ewe áát/ is followed, in the deep structure, by a sentence /ewe áát a-a mwocen fit-i-yey/.

4.34 Where the deictic suffixes are added to the base yiyéé, the resulting word may function as a simple entity:

(164) /iyéé-nan ikenan?/
:: ::
'Who's there?'

or as a combination of /iyé/ plus a following demonstrative in external sandhi:

(165) /iyéékkewe aramas raa nómw ikeey/
[= /iyé ekkewe/] 'person' 'situated here'
'Who were those people staying here?'

4.35 /meet/ is the counterpart of /iyé/ relating to non-human animate beings, inanimate objects, and activities. It may be characterized as a noun phrase substitute, occurring in the comment of an equational sentence:

(166) /meet ewe? ewe e-fóc sepenin/
:: [[[NP]] / [+Topic]] 'one plane'
'What's that?' 'That's a plane.'

although it frequently substitutes specifically for a referent (including sentences introduced by /pwe/ 'that'):

(167a) /meet ke féér ikeey? wú asukuun/
:: 'do here' 'teach'
'What do you do here?' 'I teach.'

(167b) /meet ke eren-i-ir? wú eren-i-ir pwe ka-a kkayé/
:: 'say'tr::'them' 'that' 'study'
'What did you tell them?' 'I told them you were studying.'

4.36 /minne/. The indefinite substitute /minne/ superficially resembles /menni/ 'which' in both distribution and phonemic shape, but is in some ways its opposite, being both non-interrogative and non-specific, and also substituting for a whole noun phrase rather than a single determiner. It may be glossed as 'whichever, whatever, anything at all'.

It implies there is no restriction on whatever it relates to:

(168a) /minne a-a apasa eni meyi mmwáán/
'say'tr 'perhaps' :: 'wrong'
'Whatever he says is probably wrong.'

(169b) /meet e féér ikeey?
:: 'do' 'here'
'What's he doing here?'

wú-se sineey minne e féér ikeey/
'know' :: 'do'
'I don't know [anything about] what he's doing here.'
cf. (167a)

4.37 /inet/ and /pwata/. The two remaining interrogatives, /inet/ 'when' and /pwata/ 'why', substitute for adverbial phrases of time and reason respectively. Time phrases are noun phrases with the same characteristics as those dominated by predicate phrase actants. Reason phrases are generally subordinate sentences linked to the main sentence by the particles pwúún 'because' (which may consist etymologically a noun *pwúú 'reason' plus the attributive particle -ni), or (to indicate purpose) pwe 'in order that'.

(169a) /inet ke-pwe pwere-to ree-y/
:: pm ft 'arrive hither' 'direction-my'
'When will you arrive here?'

(169b) /wú-pwe pwere-to ree-mw nee-sossor/
'vicinity'::'your' 'at morning'
'I'll arrive there [where you are] in the morning.' .

(170a) /pwata e-se kofic ne téé-tá wóó-n ewe irá?/
:: pm neg 'able''to climb up on'atr 'the tree'
'Why can't he climb the tree?'

(170b) /(ese kofic ...) pwúún iiy meyi néwúnéẃ suus/
'because'::he :: 'wear' 'shoes'
'(He can't ...) because he's wearing shoes.'

Miscellaneous Substitutes

4.38 The substitutes remaining to be discussed in this chapter are the pro-sentences /aapw/ 'no', /wúú/ 'yes' and /ewer/ 'indeed yes', and the pro-numeral /meyinisin/ 'all'.

4.39 Affirmative and negative pro-sentences. The forms /aapw/, signalling a negative reply to any question, /wúú/, confirming the content of a speculation, and /ewer/, signalling a positive response to a negative question, and sometimes also emphatic agreement, may stand alone as complete sentences, or appear in apposition to a predication:

(171a) /siy-a nó? wúú. aapw/
'Shall we go?' 'Yes.' 'No.'

(171b) /ke-se mwocen nó? wúú, wú-se mwocen nó/
neg 'want' [[S]]
'Don't you want to go?' 'No (i.e. 'Yes, that's right.'), I don't want to go.'

(172) /ke-se mwocen nó? aapw ewer /
'You don't want to go?' 'No (I don't).' 'Yes (I do).'

4.40 /meyinisin/. The form /meyinisin/ meaning 'all, the entire number' replaces numerals, often in situations where the numeral is followed by a demonstrative in a complex determiner:

(173a) /meyinisin ekkewe Ree-tooyis ra-a feyit-to/
'those''man Germany' pm r 'proceed hither'
'All of those Germans came here.'

(173b) /ruwé-mén ekkewe Ree-tooyis ra-a feyit-to/
'two animate'
'Two of those Germans came here.'

but also occasionally where a numeral acts as a noun phrase substitute:

(174a) /e-mén a-a etto/
'one animate' 'come'
'Someone came.'

(174b) /ra-a et-to meyinisin/
'All came.'

Although in the latter case it is unclear as to whether

/meyinisin/ is the subject of the verb, or added as an appositional afterthought, as it does not seem to appear directly before a noun (e.g. ∅ /meyisin Ree-tooyis/ 'all Germans'), and is not found in contexts where a numeral would be inappropriate, e.g. (175a):

(175a) /unuse-n nee-wossor we/
'whole' atr 'in morning'
'all morning'

(175b) /e-ew ráán/, but not ∅ /meyinisin ráán/
'one day' 'all day'

Inventory of Non-Classificatory Substitutes.

4.41 The alphabetical list which follows includes the grammatical marker (e.g. [[NP]]), and the syntactic and semantic features assigned to each substitute, as well as references to the paragraph in which a form is discussed. Where one form has several sets of features, or functions as a minor morpheme which is not a substitute (e.g. [[dem]]), as well as being a substitute in other environments, this information is included on separate lines. Members of the major paradigms, with the features common to all members of the paradigm, are identified thus:

(1) Independent pronouns: [[NP]] [-Attr, ±Actor, ±Topic, ±Comment, ±(+Ref, +Focus), ?±Dep (§4.5), - / tr__, +Animate]

(2) Object pronouns: [[NP]] [-Attr, +Dep, +/tr__]

(3) Attributive pronouns: [[Attr]]

(4) Predicative demonstrative: [[S]] [+Deictic]
[[Proposition]] [+Deictic]
[[NP]] [+Comment, -Attr, +Deictic]

(5) Independent demonstratives: [[dem]]
[[NP]] [+Topic, -Attr, +Deictic]

(6) /ikeey/ series locatives: [[NP]] [+Loc, -Attr]

'Reduced' forms are listed first, with base forms following (and underlined) where these are substantially different from the initial citation. Affixes are indicated by a hyphen (-) denoting the absence of a boundary marker at that point (e.g. /fite-/ (prefix) /-a/ (suffix).

/-Ø/, <u>-a</u> 2. [-Plural] 'him, her, it' §4.7

/aapw/ [[S]] [+Negative] 'no' §4.38

/áám/ <u>yáámi</u> 1. [+Plural, +Speaker, -Hearer] 'we(excl)' §44

/áámi/ <u>yáámiyi</u> 1. [+Plural, -Speaker, +Hearer] 'you(pl)' §44

/-c/ <u>-ca</u> 3. [+Plural, +Speaker, +Hearer] 'our(inclusive)' §4.12

/een/$_1$ 1. [-Plural, +Speaker] 'you(sg)' §4.4

/een/$_2$ 5. [-Plural, +Speaker, +Hearer, +In view] 'that(near us)' §4.23

/eey/ 5. [-Plural, +Speaker, -Hearer, +In view] 'this (near me)' §4.23

[[NP]] [+Attr, +Time, +Proximate][6] 'this (time)' §4.25

/ekis/ [[NP]] [+Loc, -Definite] 'somewhere, anywhere' §4.27

/ekkaan/ 5. [+Plural, +Speaker, -Hearer, +In view] 'those (near us)' §4.23

/ekkana/ 5. [+Plural, -Speaker, +Hearer, +In view] 'those (near you)' §4.23

/ekkanan/ 5. [+Plural, -Speaker, -Hearer, +In view] 'those (over there)' §4.23

/ekkeey/ 5. [+Plural, +Speaker, -Hearer, +In view] 'these' §4.23

/ekkewe/ 5. [+Plural, -In view] 'those' §4.23

/ena/ 5. [-Plural, +Speaker, -Hearer, +In view] 'that (near you)' §4.23

/enan/ 5. [-Plural, -Speaker, -Hearer, +In view] 'that (over there)' §4.23

/ewe/ 5. [-Plural, -Speaker, -Hearer, -In view] 'that' §4.23

/ewer/ [[S]] [-Negative] 'Yes' §4.39

/fite-/ [[numeral prefix]] 'how many' §5.5

/ifa/ [[NP]] [+Q, +Comment, +Concrete, +Deictic, -Plural] 'where (is it)' §4.19

[[NP]] [+Q, +Comment, +Quality, -Attr, -Deictic] 'what, how?' §4.22

/ii/ yiiy — 1. [-Speaker, -Hearer, -Plural] 'he, she, it' §4.4

/iir/ — 1. [-Speaker, -Hearer, +Plural] 'they' §4.4

/ikeen/ — 6. [+Speaker, +Hearer, +In view] 'here (near us)' §4.26

/ikeey/ — 6. [+Speaker, -Hearer, +In view] 'here (near me)' §4.26

/ikena/ — 6. [-Speaker, +Hearer, +In view] 'there (near you)' §4.26

/ikenan/ — 6. [-Speaker, -Hearer, +In view] 'over there' §4.26

/ikewe/ — 6. [-Speaker, -Hearer, -In view] 'there' §4.26

/ikkaan/ — 4. [+Plural, +Speaker, +Hearer, +In view] 'those here (near us)' §4.18

/ikkana/ — 4. [+Plural, -Speaker, +Hearer, +In view] 'those here (near you)' §4.18

/ikkanan/ — 4. [+Plural, -Speaker, -Hearer, +In view] 'those there' §4.18

/ikkeey/ — 4. [+Plural, +Speaker, -Hearer, +In view] 'these here' §4.18

/ikkefa/ — [[NP]] [+Q, +Comment, +Concrete, +Deictic, +Plural] 'where (are they)?' §4.19

/ikkewe/ — 4. [+Plural, -Speaker, -Hearer, +In view] 'those there' §4.18

/ina/ 4. [-Plural, -Speaker, -Hearer, +In view] 'that there (near you)' §4.18

/inan/ 4. [-Plural, -Speaker, -Hearer, +In view] 'that over there' §4.18

/inet/ [[NP]] [+Q, -Attr, +Time] 'when?' §4.37

/-ir/ -;ire 2. [+Plural, -Speaker, -Hearer] 'them' §4.7

/iwe/ 4. [-Plural, -Speaker, -Hearer, -In view] 'that there' §4.18

/iya/ [[NP]] [+Q, +Loc] 'where?' §4.26

/iye/ [[NP]] [+Loc, -Attr, +Definite] 'there aforesaid)' §4.26

/iyey/ 4. [-Plural, +Speaker, +Hearer, +In view] 'this here' §4.18

[[NP]] [+Time, +Proximate] 'now' §4.22

/iyé/ [[NP]] [±Act, ±Dep, ±Ref, ±Comment, +Human] 'who' §4.33

/-k/ -ku 2. [-Plural, -Speaker, -Hearer] 'you (sg)' §4.7

/-kem/ -kemi 2. [+Plural, +Speaker, -Hearer] 'us (excl)' §4.7

/-kemi/ -kemiyi 2. [+Plural, -Speaker, +Hearer] 'you (pl)' §4.7

/-kic/ -kica 2. [+Plural, +Speaker, +Hearer] 'us (incl)' §4.7

/kiic/ 1. [+Plural, +Speaker, +Hearer] 'we (incl)' §4.4

/-m/ -mi 3. [+Plural, +Speaker, -Hearer] 'our (excl)' §4.12

/meet/ [[NP]] [+Q, ±Ref, ±Dep, ±Comment, -Deictic, -Quality] 'what' §4.35

/men/ [[NP]] [±Act, ±Dep, -Attr, +Human, +Male, -Plural] 'he' §4.6

/menni/ [[Det]] [+Q, +Definite] 'which' §4.31

/meyi/ [[Aux]] [-Negative, +Real] 'that which' §4.29

/meyinisin/ [[Num]] [+Plural, -Partitive] 'all' §4.40

/-mi/ -miyi 3. [+Plural, +Speaker, +Hearer] 'your (pl)' §4.12

/minne/ [[NP]] [±Dep, ±Ref, -Definite] 'whatever' §4.36

/-mw/ 3. [-Plural, -Speaker, +Hearer] 'your (sg)' §4.12

/-n/ -na 3. [-Plural, -Speaker, -Hearer] 'his, hers, its' §4.12

/nemin/ [[NP]] [±Act, ±Dep, -Attr, +Human, -Male, -Plural] 'she' §4.6

/naan/ 1. [-Plural, +Speaker, -Hearer] 'I' §4.4

/pwata/ [[NP]] [+Q, +Reason] 'why?' §4.37

/-r/ -:ri 3. [+Plural, -Speaker, -Hearer] 'their' §4.12

/wúú/ [[S]] [+Affirmative] 'Yes' §4.39

/-yey/ -yeyi 2. [-Plural, +Speaker, -Hearer] 'me' §4.7

/-y/ -yi 3. [-Plural, +Speaker, -Hearer] 'my' §4.12

Notes to Chapter 4

1. See e.g. Austerlitz (1959), Buchler (1967), Buchler and Freeze (1966), Conklin (1962), McKaughan (1959), Postal (1966)

2. The positive and negative marking of these features is not of the same order. A 'marked' form (in the sense of e.g. Greenberg's (1966b) theory) is one with at least one positively specified feature (e.g. [+Plural], [+Male]). The negative marking of a feature simply prohibits the element containing it from being replaced by or having a relationship of concord with a form in which the same feature is positively specified. Concord or substitutability is not affected if a feature is specified in one form and unspecified in the other. Thus /ii/ (see Table 5) may replace forms marked [+Male], or [-Male], but not [-Animate]; /nemin/ may replace forms marked [-Male], but not [+Male] or [-Human]; /e/ may reflect forms marked + or - [Male] [Human] and [Animate]; but none of these forms (/ii/, /nemin/, /e/) may replace or reflect one specified as [+Plural].

3. As was noted earlier (§3.21) two actant features may not be marked positively in any one symbol, this [+Actor] automatically implies [-Dependent, -Topic, -Comment, etc.]. Where two or more features are enclosed in parentheses, this indicates that if the first appears in the complex symbol under discussion, the other(s) must also appear.

In this case, choice of [+Ref] would necessitate the choice of [+Focus]. When the parenthesis is preceded by '+', at least one of the features within the parenthesis must be marked '+' in the complex symbol for the lexical item selected.

4. When followed by a demonstrative suffix, /nemin/ functions as the counterpart of /ää̀t/ 'boy', with a shift in meaning -- /neminnewe/ 'that woman', /átewe/ 'that fellow (any age)' (cf. /ewe ää̀t/ 'that boy'). Unsuffixed, /nemin/ does not appear with a demonstrative. The morpheme áti clearly undergoes a semantic shift in the suffixed form /át/ + demonstrative (if the non-demonstrative form <u>ati</u> /ää̀t/ is considered basic), and nemin is paired with a different form in the pronominal series. It seems therefore legitimate to regard /nemin/ as a substitute to be different from /neminn-/ as a noun stem.

5. The element /nee/ is regarded as a preposition by Dyen (1965: §168), but seems, at least in Eastern dialects, to be a derivational affix, transforming the noun to which it is prefixed into a locative or temporal noun. This view is reinforced by the fact that, in Dyen's words, 'the preposition <u>nee</u> is followed by the independent base of monosyllabic bases rather than by their independent form ... (<u>sää̀t</u> 'sea) <u>nee set</u> 'in the sea' (§170). Phonologically, the preposed element is

inseparable from the base. Furthermore, it does not occur before demonstratives or determiners of any kind. Of the two other 'prepositions' described by Dyen, one, me is treated here as a true preposition; the other /nóón/, 'urban' /nnón/, is regarded as a noun stem plus attributive affix -- e.g. /aa nómw nnó-n/ (where /nnó-n/ = nnó + -na) 'he stayed inside it', i.e. 'he stayed inside'; cf. /e nómw nnó-n imwo-mw/ (where /nnó-n/ = nno + -ni) 'he stayed inside your house'.

6. Dyen has very little to say about /meyi/. He characterizes it as a special type of particle (§167) which may combine with a verb to form a noun (§88, §92), and which may also form, again with a verb, an 'appositional attribute' (e.g. /ewe aramas meyi manaw/ 'that living person') (§94). These constructions have been subsumed in this study under the title 'adjective' (/meyi/ + Verb [+Stative]); they are restricted to combinations involving verbs which are marked for a focused referent actant, and exclude both actor and dependent relationships. Where other verbs are concerned (although he does not differentiate between verbs which may be included in the constructions mentioned above and those which may not), Dyen includes in his examples of 'noun expressions' which constitute an equational sentence two examples of predicates nominalized by meyi (§132).

7. It should be noted that [[[NP]] [+Attr]] does not imply that the form concerned can substitute for an attributive phrase. Only those forms marked [[Attr]] have this freedom. [+Attr] is a feature of the noun phrase in an attributive construction (Attr → -ni + NP [+Attr]), whereas [[Attr]] denotes the relational category of which the NP [+Attr] is one member (NP → (Det) N (Adj) (Attr)).

CHAPTER 5

NUMERAL AND ATTRIBUTIVE CLASSIFIERS

5.1 Except in serial counting, Trukese numerals consist of a numerative prefix and a descriptive base. When units are indicated, the base imposes a classification on the following noun (e.g. /e-mén mwáán/ 'one-animate man', /e-cé taropwe/ 'one-leaf paper, i.e. one piece of paper'). When an attributive phrase is represented by an attributive pronoun (§4.12), the attribution is indicated by the suffixation of certain noun stems (e.g. yimwa -yi/imwe-y/ 'my house'), or the use of a suffixed stem in construction with an unsuffixed noun, imposing a classification on the attributive relationship (e.g. /imwe-y we amper/, 'house-my the umbrella, i.e. my umbrella'); similarly, an attributive phrase is substitutable for a pronoun in the same environments -- /imwe-n ewe mwáán/ 'that man's house', /imwe-n ewe mwáán we amper/ 'that man's umbrella' (see below §5.13 for further discussion of these constructions). The two classification systems occasionally intersect, but are sufficiently autonomous to merit separate discussion before any comparisons are made.

The data on which this chapter is based have come from material gathered in the course of preparing lessons in the Trukese language, and also through direct questioning of my principal informant as to which numeral and attributive

classifiers, if any, might be used with each form encountered in the course of preparing the teaching materials and lexicon. In all, such information was obtainable for some 821 nouns (including adjectives functioning as nouns). This information is undoubtedly incomplete, as it was not possible to check every possible collocation of noun, numeral, and 'possessive' -- to do so would have required the investigation of some 986,169 collocations involving only those elements which appeared in the data. In addition to the classifiers elicited from my informants, a number of additional forms are listed by Elbert (1947), Dyen (1965b), and Goodenough (in progress). Classifiers from all sources are listed below, §§5.12 and 5.18.

Numeral Classifiers

5.2 Table 8 shows the rapid counting numerals and the numeral prefixes, together with examples of some frequently encountered series of numeral classifiers. The rapid counting or serial numerals do not impose any overt classification on the item being counted (although in practice the types of object which are likely to be counted in this way are probably quite limited). If more than nine objects are counted serially, the numeral /e-ŋon/ 'ten' is used for the tenth, and counting starts again from /eet/ 'one'. Any other kind of enumeration involves the use of what Dyen (1965b:15) calls 'numerative compounds', loosely referred to above as 'numeral classifiers'.

Cardinal numerals consist of a numerative prefix and a base, from which an ordinal numeral may be formed by preceding the numeral compound with an appropriate form of the causative prefix #ya and following it with the conjunctive suffix ni# (e.g. wúnú-céé /wúnú-cé/ 'three-leaf [-like objects]', /é-wúnú-céé-n/ 'third-leaf [-like object]' -- see also Table 7. In the discussion which follows attention will be focused on the cardinal numerals, but the same relationship holds between what is enumerated and the numeral in the case of both cardinal and ordinal numerals.

5.3 Description of classificatory systems involving numerals have been published over the last two or three decades for a number of South East Asian languages, including Vietnamese (Nguyen Dinh Hoa 1957), Khmer (Jacob 1965), Thai (Haas 1942) and Burmese (Pe 1965), as well as American Indian languages (e.g. Berlin & Romney 1964). The systems which are described in these studies are very similar in their general functioning to that present in Trukese. The work of Pe on the typology of classificatory elements, and that of Berlin and Romney on the semantics of classification, is especially relevent for Trukese, and will be discussed further below (§5.21).

5.4 Syntactic functions of numerals. Numerals in Trukese function as determiners within the noun phrase:

(176) /a.a wocee-y e-fé́w maŋko/

pr r 'eat' tr 'one-spherical mango'

'He ate a mango.'

A numeral determiner may precede or follow a demonstrative; when the numeral comes first, the remainder of the phrase has a partitive sense:

(177) /e-kke-we rú́we-mén ree-Tooyis ... /

'those two Germans'

(178) /rú́we-mén e-kke-we ree-Tooyis ... /

'two of those Germans'

Numerals may also occur as noun-phrase substitutes; it is possible that /e-mén/ 'one-animate' is the only numeral which is sometimes truly a substitute within the criteria discussed in previous chapters:

(179) /e-mén a-a et-to/

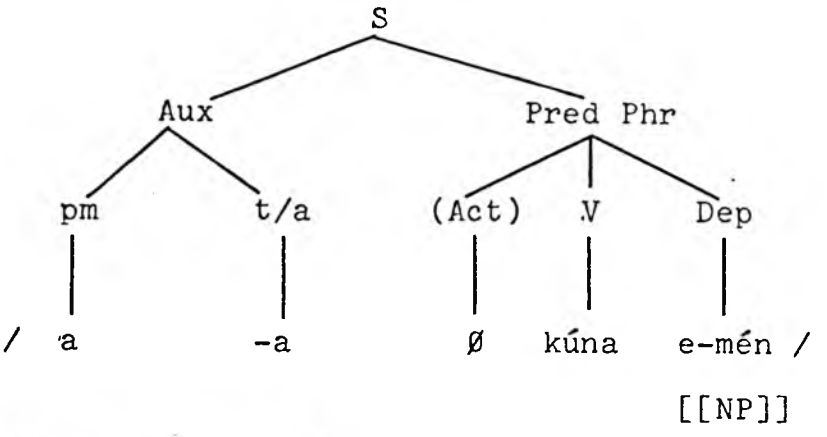
'one-animate' pr r 'proceed-hither'

'Someone came.'

In (179) /e-mén/ may have been used in a special sense, not conterminous with its possible uses as a member of a particular classificatory series (numeral prefix + /-mén/), to refer to some unknown person. In an alternative derivation of (179) /e-mén/ would be the anaphoric representative of a noun phrase, the remainder of which has been deleted because of prior reference in the conversational context. In the latter case, the possible meanings of /e-mén/ are conterminous

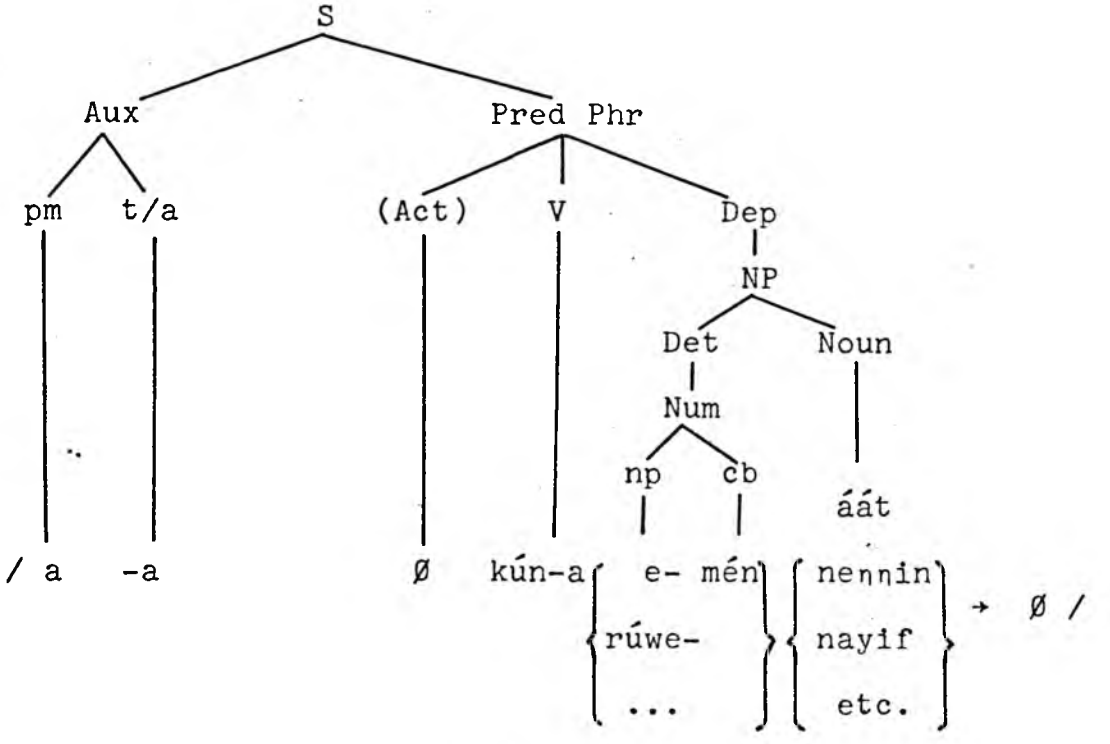
with the collocations of determiner and noun in which /-men/ may participate. /e-men/ in the indefinite sense of 'someone' may not be pluralized; in the definite sense of 'one object classified as menu for counting purposes, referred to elsewhere' any other numerative prefix may be substituted for /e-/:

(180a)



'He saw someone.'

(180b)



'He saw one (two ...) [boy(s), girl(s), knives, etc.].'

In (180a) /e-mén/ is a noun phrase substitute with the features [[[NP]] [±Dep, ±Act, -Definite, -Plural, +Human]]. In (180b) /e-mén/ is a determiner (which in Trukese seems to automatically imply the features [+Definite]) consisting of two functionally separable units -- a numerative prefix /e-/ marked [-Plural], and a classificatory base /mén/ marked [+Animous] and not restricted to human denotata, [+Animous] includes many animals, as well as knives, winds, and roofing iron); here the numerative prefix /e-/ may be replaced by /rúwe-/ 'two' etc., a transformation not possible in (180a) where /e-mén/ is functionally a unit marked [-Definite]. Where numerals containing classificatory bases other than appear as sole surface representatives of a noun phrase, it seems always to be in the anaphoric sense exemplified in (180b).

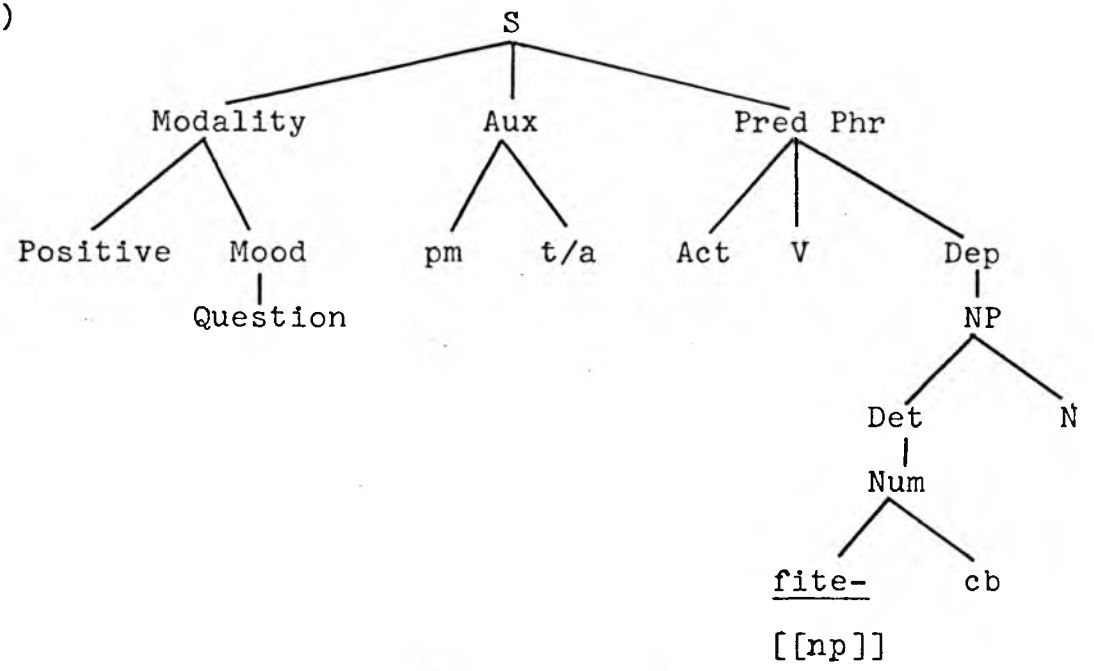
5.5 Numerative substitutes. The interrogative prefix /fite-/ is a substitute for any numerative prefix. It is marked [[[numerative prefix]] [+Q, +Definite, +Plural]]. The compulsory plurality of the substitute (necessary because although a definite answer is requested, its content is not precisely known at least where number is concerned) need not be reflected in the reply:

(181a) /fite-mén ka-a kún-a/
'How many did you see?'

(181b) /wúw-a kún-a e-men/
'I saw one.'

It should be noted that like other interrogatives, fite- usually stands first in the sentence. The numeral of which it forms a part often anaphorally represents the remainder of the noun phrase, which is deleted when redundant -- (181a), for example, is the surface representation of an underlying structure of the type:

(182)



e.g. */ka-a een kún-a fite-mén nennin/

pm t/a Act V cb N

Sentence (181a) is derived from (182) by applying a question transformation (moving the actant containing the interrogative element to initial position in the sentence), and two deletion transformations (removing the redundant actor, and the noun of the dependent NP). If the objects enquired about have not been indicated in the context of the conversation, the latter transformation would not apply, so that the dependent phrase would be fully realized:

(183) /fite-mén nennin ka-a kúna?/

'How many girls did you see?'

5.6 Numerative bases. The bases which follow the numerative prefix may be separated initially into two groups -- numerative and classificatory. The numerative bases are /-non/ 'ten', /-púkú/ 'hundreds', /-nerew/ 'thousands'; the numerals for the decades twenty thru ninety may be regarded as portmanteau forms where prefix and base are not isolable -- /rúwe/ '20', /iniik/ '30', /fáyik/ '40', /nime/ '50', /wone/ '60', /fiik/ '70', /waniik/ '80', /ttiwe/ '90'. A further numerative base /-kit/ '10,000, very large number' does not seem to occur with prefixes other than #ye 'one'. Where a change of classifier signals a change in meaning (as was the case with 128 of the 782 countable nouns in the data), the use of a numerative base in isolation will imply that the unmarked ('characteristic' Dyen 1965:§104) connotation of the counted noun is intended -- e.g.

(184a) /e-ew núú, e-fóc núú, e-wo núú/

'one-general' 'one-cylindrical' 'one-log coconut'

'one coconut (fruit)', 'one coconut (palm)', 'one coconut log'

(184b) /e-non núú rúwe núú /

'one-ten coconut' 'twenty coconut'

'ten coconuts (fruit)' '20 coconuts (fruit)'

When one of the marked ('uncharacteristic') meanings is intended, this must be indicated by the context. Where the numerative base is followed by a unit numeral, the classifier following the numeral prefix automatically supplies the context:

(185) /e-ŋon focú-n núú, e-ŋon me e-ew núú
'one-ten stem-of' 'one-ten and one-general'
'ten coconut palms/trunks' 'eleven coconuts'

e- on me e-e-fóc núú
'one-ten and one-cylindrical'
'eleven coconut palms'

5.7 Collocation of nouns and numeral classifiers. Of the 821 nouns in the data, 39 (5%) were uncountable, i.e. could not co-occur with any numeral. Of the remainder, 554 (about 70%) were normally associated with only one classificatory element, 100 (13%) could occur in construction with more than one numeral classifier, without any resultant change in meaning (see e.g. (184a) above).

The classification of those nouns with which only one classifier is associated, or with which no semantic contrast accompanies the substitution of one permissible classifier by another, may be said to be mechanically determined by the inherent features of the nouns concerned. The classifier simply 'reflects' certain features of the noun, and is of no special significance except in that its presence is required

No	Serial	Prefix	Examples of cardinal numerals				Ordinal numerals -- e.g. 'general'
			'general'	'cylindrical'	'animous'	'leaf-like'	
1 /	eet	e-	e-ew	e-fóc	e-mén	e-cé	á-ye-ewi-n
2	ttéérú	rúwe-	ruu	rúwe-fóc	rúwe-mén	rúwa-cé	o-ruwe-n
3	één	wúnú-	wúnú-ŋát	wúnú-fóc	wúnú-mén	wúnú-cé	é-wúnú-ŋáti-n
4	ffáán	fa-	rúwáánú	f-fóc fé-fóc	fé-mén	fa-cé	é-rúwáánúú-n
5	niim	nime-	nimu	nime-fóc nif-fóc	nim-mén	nima-cé	e-nimuwe-n
6	woon	wono-	wonu	wono-fóc	wono-mén	wona-cé	a-wonuwe-n
7	ffúús	fúú-	fisu	fúú-fóc	fúú-mén	fúú-cé	e-fisuwe-n
8	waan	wanu-	wanu	wanu-fóc	wanu-mén	wanu-cé	a-wanuwe-n
9	ttiw	ttiwe-	ttiwu	ttiwe-fóc	ttiwe-mén	ttiwa-cé	e-ttiwuwe-n
?	--	fite-	fitu	fite-fóc	fite-mén	fita-cé	-- /

TABLE 7

Trukese Numerals, One to Nine

by the structure of the Trukese numeral. Where a change of classifier also signals a change of meaning, however, the relationship between noun and classifier is more complex.

5.8 Although the nouns with contrasting numeral classifications comprised only 16% of the total sample, they include many very high frequency lexical items, and may be said to represent a potentiality shared by all Trukese nouns, but unrealized in most actual cases. A noun may thus have a fairly general meaning (e.g. /suupwa/ '(containing) tobacco'), different aspects of which are specified through the use of various classificatory elements (e.g. /e-fóc suupwa/, 'one-cylindrical tobacco -- i.e. a cigarette', /e-túkúm s./ 'one-wrapped -- a packet of cigarettes', /e-ew s./ 'one-general -- a carton of cigarettes', /e-pék s./ 'one-stump -- a cigarette butt', /e-kis s./ 'one-portion -- some tobacco', etc.). The 'characteristic' or unmarked meaning of a form is generally that which is most likely to be encountered in a particular context and may not have any direct connection with a specific set of inherent features -- thus, despite the examples (184b), it is not unlikely that /eŋon núú/ may sometimes mean 'ten coconut palms' (just as English 'ten legs' would, in isolation, probably be taken to mean ten bodily limbs, but could, in another context, refer to ten table legs).

5.9 In §5.11 the various classificatory elements following Trukese numeral prefixes will be analyzed into

several groups, only one of which will be given the label 'classifier'. It would be helpful at this point, however, to anticipate this analysis and examine some of the more frequently encountered classifiers in relation to a sampling of the forms with which they are associated. In the discussion which follows the classificatory aspect is dealt with in general terms -- an exploration of some of the possibilities of distinctive feature analysis of both numeral and attributive classifiers and classifier-like elements is undertaken in §5.21 below.

(a) /-ew/. The numeral classifier /-ew/ is both a 'catch all' for otherwise unclassified objects, and a point of contrast with other classifiers which may occur with a particular noun. In the latter aspect it has a unifying function which may take the form of specifying a particular form where another classifier indicates mass, or denoting a unit where other classifiers indicate components.

/-ew/ occurs as the sole numeral classifier for a few nouns derived from adjectives[1] e.g. /e-ew netipeta/ 'one (cause of) sorrow', and many other nouns, e.g. /óóc/ 'reef, coral', /nuuk/ 'stomach', /apeyun/ 'wall', tipa 'thought'. It frequently alternates with more specialized classifiers, apparently with no semantic consequences, e.g. /saap/ 'cheek' (/-ew/ ~ /-sap/ 'cheek'), /pakutaŋ/ 'bomb' (/-ew/ ~ /-féw/ 'spherical').

Contrasts with /-kis/ and /-kóc/ 'portion' are frequent;

in these cases /-kis/, /-kóc/ indicate mass, /-ew/ implies individuation: e.g. /sóón/ 'salt', /e-ew s./ 'a bottle or sack', /e-kis s./ 'some'; /néénέ/ 'liquid', /e-ew/ 'sea along the shore', /e-kis/ 'some'; /mwénέ/ 'food', /e-ew/ 'a type', /e-kis/ 'some'. This differentiation can also be metaphorical -- /núúc/ 'ink of a squid', /e-kis n./ 'some squid ink', /e-ew n./ 'an occasion of anger'. Similarly, /-ew/ contrasts with other classifiers to express 'unit' as opposed to 'component': /coori/ 'zori', /e-ew/ 'a pair', /e-yipw/ ('sole'), /e-fóc/ ('long'), 'one only'; /sóók/ 'chalk', /e-ew/ 'one container', /e-fóc/ 'one piece'; /wóós/ 'roof', /e-ew/ 'whole roof', /e-cé/ ('leaflike') 'a portion'. Occasionally, the /-ew/:-kis,-kóc/ contrast is neutralized, e.g. with /samwaaw/ 'sickness', possibly because of the ambiguity and abstract nature of the referent.

(b) /-ŋát/. The classifier /-ŋát/ (also /-ŋát/; base forms ŋata and ŋata) may originally have applied to hollow objects (cf. /ŋaat/ ŋata 'hole'), but in contemporary Trukese /-ŋát/ is almost completely interchangeable with /-ew/. The only exception noted in the data was in relation to certain nouns denoting fish species, which may be classified with /-ew/ rather than /-mén/ ('animous') to denote extraordinary size (see below under /-mén/). In these cases, /-ŋát/ does not seem to be substitutable for /-ew/.

(c) /-mén/. The classifier /-mén/, derived from /maan/ manú 'animal; is probably the most interesting in terms of

its distribution. It has been glossed as 'animous' rather than 'animate' in the preceding paragraph, as it covers a number of items (knives, winds, roofing iron, axe handles) not normally regarded as 'animate', and it also excludes a number of living creatures -- turtles, crabs, and octopi.

The Trukese conception if the animate world seems to involve four large categories --

(1) /aramas/ 'people', confined to human beings;

(2) /iik/ 'fish', including whales and porpoises, but not including sea creatures like shellfish, turtles, and jellyfish.

(3) /énú/ 'ghosts', subdivided into malevolent ghosts (/énú/ proper) and 'others' (/ŋúúŋ/ 'spirits'.

(4) /maan/ 'animals', divided into /maan téété/ 'crawling animals' -- quadrupeds, centerpedes, lizards etc., /maccaŋ/ 'birds, flying insects', and /ménú-n nee-set/ 'sea creatures'. The latter are a highly ambiguous subcategory which receives very special treatment in the classificatory system. With the exception of the /ménún neeset/, all nouns referring to members of the four major categories, together with those denoting winds, knives etc, and noun phrases with similar denotata (e.g. /sakku-n iik/ 'kind of fish'), are counted by the /-mén/ series of numerals.

The only 'sea creature' classified by /-mén/ is /nimwóton/ 'jellyfish'. The remaining members of this (conceptual) class may be grouped in four subdivisions

according to the counting classifiers with which they are most commonly associated: (1) crabs (/eninap/ 'sea crabs', /amwataŋ/ 'coconut crabs', /nippwey/ 'land crabs'), turtles (/pwáápwá/), and octopi (/nippac/, /kúús/) are classified with /-ew/ or /-ŋat/; (2) shellfish are counted with /-féw/, less commonly with /-ew/; (3) sea-urchins (/raar/) with /-féw/ or /-ŋát/; (4) sea-anemones with /-féw/ or /-ŋát/, or with /-mwu/, a classifier used for trepangs. Wherever /-ŋát/ is permissible, /-ew/ may also be used, and vice versa, but in the cases where only one of these is indicated, it is the form which seems to be preferred in that environment.

The explanation for the severance of the sea creatures from the rest of the animate world for counting purposes may well lie in the fact that some of them, crabs, turtles, and octopi, are held in high esteem as food, and also in the anomaly they symbolize in the natural world. Are turtles or crabs or octopi fish with legs, or non-fish which are acquatic? Their deletion from the 'animous' category symbolizes this contradiction. The use of the classifier /-ew/ with these nouns may well be related to the similar use of the same classifier for commercially important fish in the Trukese dialect spoken on Tol Island, where /e-ew aŋarap/ 'a large tuna for eating' is contrasted with /e-mén aŋarap/ 'a tuna'.

Shellfish and sea-urchins are similarly strange creatures, and this, together with their distinctive shape (which marks the /ménúm neeset/ out from all other animal groups) may have

reinforced the use of the descriptive classifier /-féw/ together with /-ŋát/, and /-ew/ from analogy with the economically important animals, rather than the abstract /-mén/. Sea-cucumbers (trepangs) are somewhat doubtfully /maan/; they are classified for counting purposes with /-mwu/, which occasionally is also applied to sea-anemones. The sea-anemone, fixed in one spot and an apparent compromise between plant and animal, is counted descriptively (/-féw/ 'spherical'), or lumped together with the trepangs. Jellyfish, being free-moving, legless, commercially unimportant, and somewhat amorphous, have resisted description and retained their animate dimension for purposes of enumeration.

(d) /-kóc/, /-kis/. These two quantifying classifiers are almost completely interchangeable; no case of direct conflict between them was found in the data, but an analysis of a large body of runnung text would probably reveal some differences in distribution between the two. According to my informants, /-kóc/ may always be replaced by /-kis/, and vice-versa, with no substantial change in meaning, but one may be preferred to the other in some circumstances. According to Dyen (1965b:§101), /-kis/ occurs only with the numeral prefix /e-/, but it seems to be used by my informants with any numeral prefix; it indicates portions of something, normally a physical object, and the numeral /e-kis/ is often translateable by English 'some' or 'a little' -- /e-kis rayis/ 'some rice, a little rice'. /-kóc/ (the portmanteau form

/woc/ replaces Ø /e-kóc/, and /-kóc/ often alternates with /-óc/ after numeral prefixes other than /e-/, e.g. /nimó-óc/ = /nimu-/ + /-kóc/), refers to 'portions of a mass', which may account for much of the overlapping with /-kis/, e.g. /e-kis pinawa, woc pinawa/ 'some bread'.

Dyen (1965: §101) states that /e-kis/ 'a little' is freely employed with all nouns. /-kóc/ seems however to be definitely preferred whenever the 'portion' is not precisely definable, e.g. /woc ŋúún/ 'a (shapeless) shadow', /woc ásápwáán/ 'some wind'. In the latter example, a plural numeral would not be permitted, but in the former this is possible, e.g. /nimóóc ŋúún/ 'five shadows, five portions or patches of shadow'. Both /-kis/ and /-kóc/ frequently contrast with other classifiers to give alternatives as in /e-fóc pinawa/ 'one-cylindrical bread -- a load of bread', /e-kis pinawa/ 'one-portion bread -- a piece of bread'.

(e) /-fóc/. The classifier /-fóc/ is applied to all vehicles, as well as trees, sticks, pencils and other logically cylindrical objects. /-fóc/ complements the quantifier /-sen/ in relation to ropes: /-sen/ indicates a complete coil of rope, and although in many subdialects /-sen/ does not seem to refer to a specific length (whereas in others it denotes a standard unit of 30 to 50 fathoms), it retains the inuendo of length as opposed to shortness, whereas with /-fóc/ it is the oblong-cylindrical shape, rather than length per se, which is of primary importance. Thus any rope may be counted with

/-fóc/, but only a 'complete' one by /-sen/. Words possessed with wókú 'stick' are also counted by /e-fóc/. /nipopoyiya/ 'fighting club' is somewhat ambiguous in this respect; it may assume the 'status' of a knife, and be counted with /-mén/, possessed with néwú, or, alternatively, counted as a 'long object' with /-fóc/ and take wókú as a possessive classifier.

Occasionally one end of a continuum seems to be isolated from the other forms in a group -- e.g. /-cé/ ranges from /céé/ 'leaf' through /taropwe/ 'paper', /nayisen/ 'licence', /tawun/ 'town' (where the notion of 'spread out' is still evident) to /kkéén/ 'song', the only speech phenomenon counted in this way. On the other hand one noun may be accompanied by any one of a number of numeral classifiers, each one of which seems logically appropriate in the environment in which it appears -- e.g. /ŋúúŋ/ 'spirit', 'shadow': /e-pé ŋ./ 'of a leaf', /woc ŋ./ 'a portion', /cew ŋ./ 'of a house, box, etc.', /e-fóc ŋ./ 'a long shadow', /e-mén ŋ./ (a) 'shadow of a bird, or person'; (b) 'a ghost'.

5.10 Types of classificatory base. In his perceptive re-examination of Burmese numeral 'classifiers', Hla Pe (1965) has analyzed three distinct types of classificatory elements, which he calls classifiers, repeaters and quantifiers. Classifiers he defines as words 'for an attribute of a specific object, some of which may have more than one' (Trukese examples would be /-fóc/ and /-féw/ as in /f-fóc núú/ 'four-long coconut

-- four coconut palms', /fé-féw núú/ 'four-spherical coconuts -- four coconuts'. In Burmese, classifiers in this restricted sense do not occur as determinate of the thing classified, a possibility which is open for quantifiers and repeaters (Pe 1965:166). A repeater is diagnosed when 'the specific object itself (or part of it) [is] used as a numerative', e.g. Trukese /rúwe-pa paa-n núú/ 'two-frond frond-of coconut -- two coconut fronds', /rúwe-pwopw púna/ 'two-tuber taro -- two tubers of taro'. A quantifier 'concerns itself with the estimating of things by some sort of measure -- size, extension, weight, amount or number, especially ten or multiples of ten'. In addition to the 'numerative bases' defined in §5.6, examples of quantifiers in Trukese would include /-nnú/ 'pounding', and /-kis/ 'portion' -- /eńnú kkón/ 'one-pounding poi -- an amount of poi equivalent to that produced in a single pounding', /e-kis pinawa/ 'one-slice bread -- a piece of bread'.

While in Burmese there is apparently no overlapping of the three classes of 'numerative', some overlapping is found in Trukese, in that many classifiers and quantifiers may also act as repeaters, as in /e-féw faaw/ 'one-stone(sphere) stone -- one stone', where the classificatory base and the enumerated noun are identical (same morpheme[2] with same underlying form -- ye- féwú féwú). Repeaters and quantifiers in Burmese are also, according to Pe, permitted to function as determinata of the thing classified, whereas this is not possible for

classifiers properly so called. While in Trukese the same morpheme may function as determinatum and classifier (as with féwú above), the same collocation may not -- thus the same morpheme is present in /maas/ 'eye' and /-mas/ 'numeral classifier for eyes and objects connected with the eyes' (/e-mas maas/ 'one eye' /e-mas meŋane/ 'one (pair of) sunglasses'), but /-mas/ is not semantically identical with /maas/; /e-mas/ means 'one eye' only when a following /maas/ is implied by the context -- in a different context /e-mas/, could stand for 'one pair of sunglasses':

(186) /fite-mas meŋane ke-pwe mwocen? e-mas/
'How many sunglasses do you want?' 'One.'

5.11 For Trukese numeral compounds, it is convenient to retain the dichotomy between numerative and classificatory bases established in §5.6, and to further subdivide the classificatory bases into classifiers, repeaters, and quantifiers, as follows:

(a) a classifier denotes a particular quality, or the absence thereof, in the noun classified:

(187) /e-ew ceepen; e-féw maas;
'one-general table' 'one-sphere eye'
'a table' 'one eye'

fa-cé simpúŋ/
'four-leaf newspaper'
'four newspapers'

(b) a quantifier indicates a quantitative measurement of the denotatum of the noun classified:

(188) /ttiwe-meec kkón/
'nine-pinch poi'
'nine pinches of poi'

(c) a repeater is a classificatory base having the same underlying phonological form as the noun it classifies, and which does not occur with nouns having different underlying forms, e.g.

(189) ye- yafa yafa; ye- ŋafa ŋafa
/e-yaf aaf e-ŋaf ŋaaf/
'one intestine' 'one fathom'

The definition in (c) excludes classifiers like /-féw/ in /e-féw faaw/ from the repeater class, as /-féw/ may occur with nouns other than féwú (e.g. /núú, mass/, etc.). /-ŋaf/ 'fathom' does not seem to be a quantifier, as it is found (at least according to my informants) only before the noun /ŋaaf/ 'fathom':

(190a) /únú-ŋaf ŋaaf anónnónu-n ewe nóómw/
'three-fathom' 'fathom' 'depth-of' 'the''lagoon'
'The lagoon is three fathoms deep.'

(190b) /fite-ŋaf ŋafe-n ewe maay?/
'how many-fathom' 'fathom-of' 'that breadfruit'
'How many fathoms (long) (is) the breadfruit (log)?'

It is necessary, however, to distinguish two types of repeater --overt, where, as in (189) and (190) above the classified base is in fact repeated, and covert, where it could be linked to a following noun by the attributive particle -ni, as in (191a) but is often deleted together with the particle, as in (191b):

(191a) /e-pwopw pwopwu-n pwuna/
'tuber' 'tuber' 'taro'
'one tuber of taro'

(191b) /e-pwopw pwuna/
'one tuber (of) taro'

This distinction is similar to Pe's separation of 'explicit' and 'implicit' repeaters in Burmese. In Trukese an overt repeater would have a base form identical with that of the enumerated noun (as with /-yaf/ and /-ŋaf/ above), whereas a covert repeater, since although it may occur in environments superficially similar to those in which /-pwopw/ appears in (191), the insertion or deletion of the 'repeated' noun makes a substantial difference to the meaning of the phrase:

(191c) /e-féw maas/
'one-sphere eye'
'an eye'

(191d) /e-féw féwú-n maas/
'stone' atr'eye'
'an eyeball'

Furthermore, even where the 'repeated' noun is semantically almost identical with the classifier in constructions of the type exemplified in (191c) and (191d), there will be counter examples where this type of construction is not permitted, if the classificatory base is a true classifier -- e.g.

(191e) /é-cé céé-n ayipiskas/
'one leaf' 'leaf atr hibiscus
'a hibiscus leaf'

but

(191f) */e-cé céé-n kappa/
'one-leaf' 'leaf'atr 'raincoat'
"a raincoat leaf"

(191g) /e-cé kappa/
'a raincoat'

With covert repeaters, however, the classificatory base may always be followed by a noun with the same underlying form, to which a second noun is linked attributively, and this construction may be assumed to be present in the deep structure even where, as in (191b) it does not actually appear in the surface representation of the phrase. Other covert repeaters in common use, besides /-pwopw/, are /-peek/ 'side', /-túkúm/ 'wrapped package', /-sópw/ 'half', /-pé/ 'flower', and /-pék/ 'butt, stump'.

To summarize, a cardinal numeral in Trukese consists of

a numerative prefix (/e-, rúwe-/ etc.) and a base. The base may be numerative (/-ŋerew/ 'thousand' etc.) or classificatory. Classificatory bases are either classifiers (/-féw/ 'spherical'), quantifiers (/-nnú/ 'portion of poi'), or repeaters (/-yaf/ 'intestine'). An ordinal numeral consists of the causative formative /a-/ followed by the numerative prefix, numerative or classificatory base, and the attributive suffix -ni (e.g. /ewe é-wúnú-ŋáti-n mwiic/ 'the third (causative-three-general-of) grade'). The base thus has an underlying phonological form which is realized differently in contrasting environments (cf. /wúnú-ŋát, é-wúnú-ŋáti-n; e-ew, á-ye-ewi-n/). A numerative base may be followed by a numeral containing another numerative base of a lower decimal series, or a numeral containing a classificatory base and preceded by me 'and':

(192) /e-ŋerew ttiwe-púkú e-ŋoṅ me wúnú-ŋát/
'one-thousand nine-hundred one-ten and three-general'

5.12 Classificatory bases in Trukese numerals. The following is a list of classificatory bases encountered in my data, augmented by those listed by Dyen (1965b), Elbert (1947) and Goodenough (in progress). The entry for each base is arranged in this format:

[1]/form of base in cardinal numeral/,[2]Underlying phonological base form (where known),[3]Classification: C(lassifier); R(epeater) -- (0) = overt, (C) = covert; Q(uantifier),[4]'gloss', [5]/examples of nouns with which

associated/, [6](Listed also by D(yen 1965b), E(lbert 1947), G(oodenough: in progress), [7][Number of nouns with which associated in data (Maximum = 783)]

A question mark (?) denotes uncertainty; an asterisk (*) indicates a classificatory base not encountered in my own data.

* /-yaaŋ/ yaaŋa ?R 'span between thumb and forefinger' (E, G) [0].

/-yaf/ yafa R(0) 'intestine' /yaaf/ 'intestine' (G 'piece of intestine') [1]

* /-yáf/ yafi ?R 'bundle of 10 ripe coconuts' (E) [0] (= /yef/)

* /-yawút/ yawútú ?R 'finger length' (E) [0]

* /-camw/ camwa R(0) 'forehead' /caamw/ 'brow, forehead' (D, G) [0]

* /-cci/ ccii R(0) 'drop of water' (E, G) [0]

* /-ccoc/ ?Q 'unit of ten small pieces of breadfruit pudding' (E, G) [0]

/-cé/ céé C 'thin leaf- or sheet-like object'/ kkii / 'king (in cards)', /rannin/ 'undershirt', /taropwe/ 'paper', /céé/ 'leaf', /amara/ 'sail', /kkéén/ 'song' (D, E, G) [0]

* /-cú/ ?cúú ?R 'strings of small fish' (E) [0]

* /-cúk/ cúkú ?R 'basket' (E, G) [0]

* /-yef/ yefi ?R 'bundle of ten coconuts' (D, E, G) [0]

* /-yem/ ?R 'earlobe' (D, G) [0]

* /-yep/ yepi ?R(C) 'butt end, lower part' /waa/ 'canoe' (D,G) [0]

/-ew/ ewi (suppleted except after ye- 'one' -- see Table 7) C 'general, not specified for particular classification' /asamwaco/ 'window' /pwáápwa/ 'turtle' /suus/ 'shoes' (= pair), /Ráninfen/ 'Sunday' (D, E, G) [363]

* /-yeyi/ ?R 'shoots of bananas' (E) [0]

* /-ye/ yéé ?R(C) 'strand of hair, etc.' /néén/ 'hair' (D, G) [0]

/-yék/ yékú C 'small net' /ceew/ 'net' (E) [1]

/-féw/ féwú C 'round, globular or spherical object' /maas/ 'eye', /núú/ 'coconut' (= fruit), /fúú/ 'star', /faaw/ 'stone', /teŋki/ 'electric lightbulb' (D, E, G) [57]

* /-ffaat/ ?R 'strings of fish, breadfruit, etc.' (E, G) [0]

* /-ffit/ ?R 'leaf packages of fish' (E, G) [0]

/-fic/ R(C) 'leaf-split' /núú/ 'coconut', (D, E, G) [4]

/-fóc/ $_1$ fócu C 'long, cylindrical' /suupwa/ 'cigarette' /waa/ 'canoe', /mwoota/ 'motor boat' /wóók/ 'stick' /núú/ 'coconut' (tree), /rii / 'ring' (D, E, G) [148]

* /-fóc/$_2$?Q 'strings five of fish, bundles of breadfruit on a stick' (D, E, G) [0]

/-fútúk/ fútúke R(0) 'piece of meat' [1]

* /-yi/ yiya R(C) 'hand of bananas' /wuuc/ 'banana' (D, E, G) [0]

* /-yin/ ?R 'hand or shoots of bananas' (E) [0]

/-yipw/ C 'step, footwear' /suus/ 'shoes' (D, E, G) [2]

/-kis/ kisi Q 'small portion' /rayis/ 'rice', /kkónik/ 'water', /wuupwa/ 'tobacco', /taka/ 'copra' (D, E, G) [111]

*/-kkamw/ kkamwa R(C) 'gragment, torn piece' /taropwe/ 'paper', /maŋaaku/ 'cloth' (D) [0]

*/-kkap/ kkapa ?Q 'cupful' /kkónik/ 'water' (D, G) [0]

/-kkoc/ Q 'some of a number' /maay/ 'breadfruit' (G) [2]

*/-kkumw/ R(C) 'mouthful of premasticated food' (E, G) [0]

*/-kup/ ?R 'broken or severed pieces' (E) [0]

*/-mac/ maca R(0) 'fishtail' (D, G) [0]

/-mas/ masa C 'eyes, eye-related objects' /meŋane/ 'sunglasses' [4]

/-mataf/ matafa R(0) 'scraps' [1]

/-meet/ meeta R(C) 'strand' /nuun/ 'sennet' (D, E, G) [1]

/-mén/ manú C 'animous being (all animals except turtles and octopi; knives, winds, ghosts, men, fish, axes, birds, insects)' /mwáán/ 'man', /iik/ 'fish', /ŋereŋer/ 'saw', /niyos/ 'picture, image' (of animous being), /ŋuuŋ/ 'ghost', 'shadow' (of animous being),/konak/ 'dog' (D, E, G) [154]

*/-mma/ mmaa ?R 'mouthful of premasticated food' (E, G) [0] (= /kkumw/)

/-mmec/ R(C) 'portion of poi' /kkón/ 'poi' (D, E, G) [1]

*/-mmék/ 'broken or shattered fragment, small piece'

(E, G) [0]

*/-mwanú/ mwanúú ?B 'length from elbow to fingertips' (E, G(mwénú)) [0]

*/-mmwún/ mmwúna R(C) 'portion' /mwatun/ 'sweetened poi' (E (mmun), G) [0]

/-mwu/ mwuu 'trepang, etc.' C /nisééw/ 'sea anemone' (E, G) [2]

*/-mwú/ mwúú ?R(C) 'short piece of rope or string, torn piece of rag' (E, G) [0]

*/-mwúc/ mwúcú R(O) 'faggot' (D, E, G) [0]

/-nnú/ nnúú Q 'amount equivalent to that produced in one pounding of breadfruit' /kkón/ 'poi' (D, E, G) [5]

/-ŋaf/ ŋafa R(O) 'fathom' (E, G) [1]

/-ŋát/ ŋáti C 'general' (E ('long objects' in Western Lagoon)) [= /ŋát/, q.v.]

/-ŋát/ ŋáti C 'general' /pwáápwa/ 'turtle', /ttin/ 'tin', /ruume/ 'bottle' (G) [25] (interchangeable with /-ew/)

*/-ŋin/ Q 'small objects' (E) 'a little, a bit' (D,G) [0]

/-kóc/ Q 'portion of a mass' /iik/ 'fish', /rayis/ 'rice'; C 'shapeless object' /kkapas/ 'talk', /ŋuun/ 'shadow' (d 'shapeless things', E 'miscellaneous or varied objects', G 'sorts, kinds, varieties, species, rations') [88] (Portmanteau form for '1' is /woc/, elsewhere /-kóc/ alternates with /-óc/)

/-pa/ paa R(C) 'frond' /núú/ 'coconut', (D, E, G 'frond, garland, necklaces, bead belts') [5]

/-pan/ pana R(C) 'branch' /maay/ 'breadfruit' (D, G) [2]

/-peek/ peeki R(C) 'side, fillet' /iik/ 'fish' /maay/ 'breadfruit (log)' (E, G) [4]

/-pe/$_1$ péé R(C) 'flowers' /ayipiskas/ 'hibiscus' (E) [12]

*/-pé/$_2$?C 'empty objects (coconut shells, containers, etc.)' (D, E, G) [0]

/-pék/ R(C) 'butt, stump, end piece' /suupwa/ 'cigarette', /rawusis/ 'trousers' (e.g. trouser leg) (D, G) [3]

*/-péw/ pawú R(O) 'hand lengths' (E(/efóc paaw/ 'one arm length' /epéw paaw/ 'one hand length)) [0]

/-pinúk/ pinúkú R(C) 'tied bundle, clump'; 'group' (Tol Island only) /maay/ 'breadfruit' (grove), /émwúúc/ 'firewood', /aramas/ 'people' (D, E,G) [8]

/-pwaŋ/ pwaŋa R(O) 'hole, cavity' (D, E, G) [1]

*/-pwey/ ?Q 'pinch, morsel' /kkón/ 'breadfruit pudding' (D, G) [0]

*/-pino/ ?R(O) 'small package of poi' (G) [0]

*/-pwéét/ pwéétú R(O) 'nose' (G) [0]

*/-pwi/ pwii R(O) 'school of fish, herd, convoy, group' (G) [0]

*/-pwin/ pwina ?R(O) 'days, nights' (E) [0]

/-pwopw/ pwopwu R(C) 'trunk, Tuber, stem' /kká/ 'sour taro' (D, E, G) [9]

*/-ppwaw/ ?R 'home made cigarette' (E, G) [0]

*/-pwún/ ?F 'broken off piece, fragment' (E, G) [0] (= /kup/)

*/-sap/ sapa R(O) 'cheek' [1]

*/-sáŋá/ ?R 'basketful of fish' (G) [0]

*/-sáwá/ ?R 'basketful of fish' (G) [0]

/-seeŋ/ RCO) 'length between joints (on bamboo, etc)' (E, G) [1]

/-sen/ sani Q 'length of rope or twine', /óó/ 'fishing line' (D, E, G) [4]

*/-seŋe/ ?R 'fishing baskets' (E) [0] (cf. /sáŋá/)

*/-sewá/ ?R 'fishing baskets' (E) [0] (= /sáwá/)

*/-sópw/ ?Q 'burdens of from 10 to 19 breadfruit' (E) [0] (=half the quantity denoted by /fóc/$_2$)

/-sópw/$_2$ R(C) 'half, section' /iik/ 'fish' (cut through the middle -- cf. /peek/) (D, E, G) [2]

*/-ssak/ Q 'slice' (D, G) 'portions of copra being scooped from the shell' (E). [0]

*/-ssaar/ Q 'slice' (E, G) [0]

/-sśát/ ssáti R(C) 'slice' /pinawa/ 'bread' (D, E, G) [11]

/-sset/ sseti R(C) 'slice' (= /ssat/)

*/-ssupw/ ?R 'droplet' (E, G) [0]

*/-táp/ táppi ?R(C) 'age group, generation' /aramas/ 'people' (usually a preceding generation) (G) [0]

*/-tinewupw/ ?R 'length from center of chest to outstretched fingertips' (G) [0]

*/-tip/ ?Q 'chunks of breadfruit' (D, E, G) [0]

*/-ttit/ Q 'string of ten breadfruit' (D, E, G) [0]

/-túkúm/ túkúma R(C) 'wrapped package' /suupwa/ 'cigarettes' /kkón/ 'poi' (D, E, G) [2]

*/-tún/ Q 'portion of mixed poi' (D, G) [0] (= /mmwún/)

*/-wo/$_1$ woo Q 'clump of trees' /wuuc/ 'banana' (D, G) [0]

/-wo/$_2$ woo Q 'log' /maay/ 'breadfruit' [3]

/-wumw/ wumwu Q 'bunch, stalk' /wuuc/ 'bananas', /áán/ 'branching coral' (D, E, G) [8]

*/-wupw/ wupwu R(O) 'breast' (D, G) [0]

*/-wut/$_1$ Q 'chunk of cooked breadfruit' (D, E, G) [0]

/-wut/$_2$ Q 'portion of fresh fruit' /maŋko/ 'mango' [2]

*/-wut/$_3$?R 'row of thatch' (G) [0]

*/-wúk/$_1$ wúkú ?R(O) 'tail, rear end' /wuuk/ 'tail' (D, G) [0]

*/-wúk/$_2$ wúkú R(O) 'nail, claw' /wúúk/ 'finger-, toe-nail, claw' [0]

/-wún/$_1$ C 'feather, hair, scale' /wúún/ 'feather, body hair, fish scale' /enis/ 'beard' (D, E, G) [3]

/-wún/$_2$ R(C) 'budding leaf' /núú/ 'coconut' (just starting to sprout) /wúún/ 'sprouting leaf' [3]

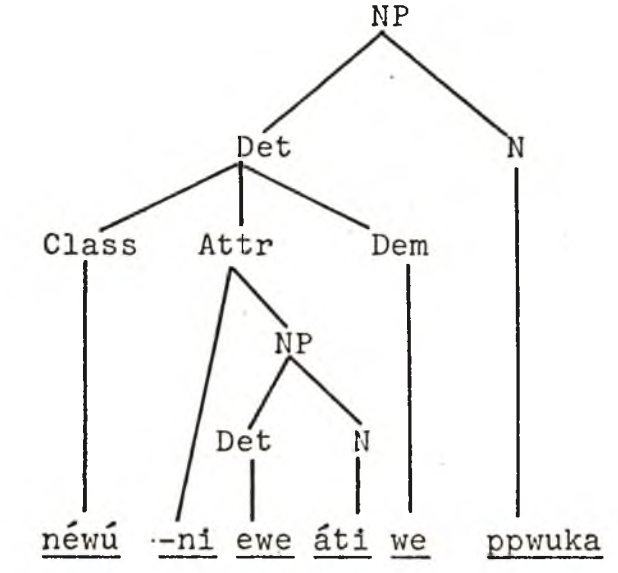
*/-wút/ wútú ?R 'finger (length)' (D, G) [0] (= /yawút/)

Attributive Classifiers

5.13 Possession. An attributive phrase in Trukese consists of a noun phrase introduced by -ni, and may be replaced by an attributive substitute. Possession is indicated by means of an attributive phrase in construction with an

attributive classifier. The combination of classifier (always a noun stem) and attributive phrase constitutes, with an optional postposed demonstrative, a determiner:

(193)



Attributive classifiers may superficially be analyzed into two classes -- repeaters (where the classifier and noun classified are identical, in which case the latter is usually deleted), and true classifiers, as néwú in (193) above. However most 'true' classifiers may classify themselves:

(194) néwú -na we néwú
cl 'his' 'child'
/néwú-n we naaw/
/néwú-n we/
'his child'

and virtually any 'repeater' is potentially a classifier, e.g. kuusa and ccenikama 'blanket' may be used as repeaters, or may 'classify' each other, when possession is to be indicated

(195a) kuusa -yi we kuusa
/kuuse-y we (kuus)/
'my blanket'

(195b) ccenikama -yi we kuusa
/ccenikama-y we kuus/
'my blanket'

The term 'possessive-classifier' may therefore be used to denote those noun stems whose distribution as attributive classifiers has a range greater than that of the same noun stem as the determined noun in a possessive construction, and 'possessive repeater' for a noun stem which, so far as is known, appears as a classifier only in construction with an identical form. The two types of classifier correspond to Dyen's 'inalienable' nouns (1965:§193).

5.14 Pseudo-classifiers. In addition to attributive classifiers, nouns formed by the suffixation of the formative -ya- to transitive verb stems may also appear before attributive phrases within a determiner:

(196) wúnúm -i -ya- -yi we kkóniki
'drink' tr 'my' 'water'
/wúnúm-i-ye-y we kkónik/
'water that I drank'

Despite the formal similarity of wúnúm-i-ya to a classifier like e.g. néwú, the attributive phrase denotes not the possessor, but the entity responsible for the action. Almost any transitive verb may be followed by -ya- plus an attributive phrase, and the resulting construction was regarded by Dyen (1965:§112) as a 'possessive' on the same terms as those involving simple noun stems. However it seems that the two constructions are better kept separate, and that the nominalized verb stems should not be regarded as classifiers. They do, it is true, have a classificatory function, but only to the extent that a verb acts as a classifier in relation to its actants. Thus the attributive phrase following the -ya- formant is equivalent to the actor in a declarative sentence involving the transitive verb, while the determined noun is equivalent to the dependent -- cf. (196) with

(197) /ŋaaŋ wúw-a wúnúm-i ewe kkónik/

'I' pm r 'drink' tr 'water'

'I drank the water.'

The difference between this attribution of action and possessive classification is clearly illustrated by the contrast between the sentence involving the nominalized transitive wúnúm-i-ya- and the following in which the classifier wúnúma 'potentially drinkable':

(198) wúnúma -yi we kkóniki

cl 'my water'

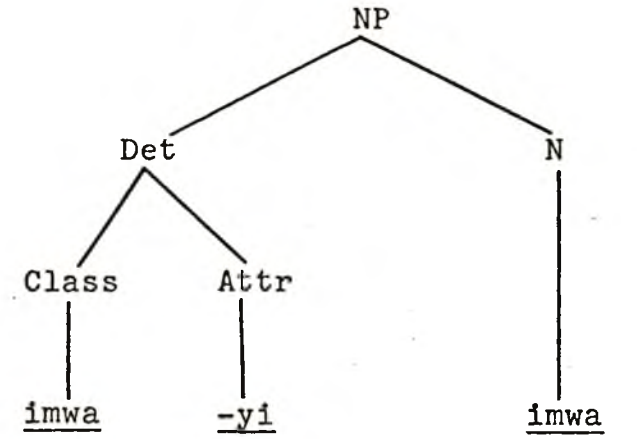
/wúnúme-y we kkónik/

'my water'

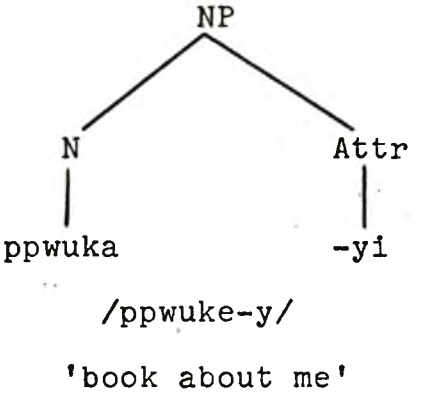
Whereas in (196) it is implicit that the 'possessor' has completed the action denoted by the verb stem, no parallel assumption is contained in (198). wúnúma refers to a quality present in the noun /kkónik/, and the possessor, indicated by the attributive phrase, is not assumed to have acted in any particular way in relation to this quality.

5.15 Referential attribution. Attributive phrases which involve neither classifiers nor verb stems are frequently encountered in Trukese. Some of these are discussed in Appendix II, (but one should be mentioned here because of an apparent similarity with the possessive repeater construction mentioned above (§5.13). With many nouns, a following attributive phrase has a referential function, indicating origin, source, intent, etc. of the thing described -- e.g. /pwáápwáá-n Seyipen/ 'Saipanese turtle', /ppwúke-n Sóón/ 'book about John'. Phrases which are formally identical on the surface, like /ppwuke-y/ 'book about me', /imwe-y/ 'my house' are thus frequently encountered. /imwe-y/, however, can be shown to have a different derivation from that of /ppwúke-y/, as illustrated in the following trees:

(199a)

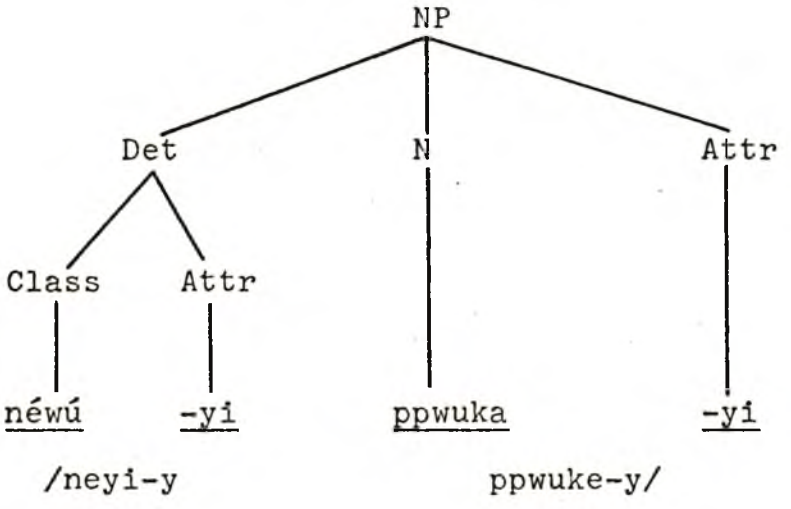


(199b)



Whereas /imwe-y iimw/ may be (and usually is) reduced to imwe-y through deletion of the redundant noun (identical with the classifier), ppwuke-y may not be expanded into $\not\varnothing$ /ppwuke-y ppwuk/ -- /ppwuke-y/ does not contain a classificatory element. The phrase may, however, form part of a possessive construction, preceded by a determiner containing an appropriate possessive classifier, as in

(200)



'my book about me'

There are thus two fundamental types of attribution in Trukese which involve phrases with -ni or attributive pronouns; possessive attribution in which a possessive classifier or repeater is employed (as in 199a) and (200) above), and referential attribution, as in (199b). Almost any common noun may be followed by a referentially attributive phrase, but in only a comparatively small number of cases may this phrase be replaced by an attributive pronoun. Table 8 shows the potentialities in this regard of the nouns included in the primary data for this study. To these may be added the 'prepositional nouns', many of which may be followed by attributive pronouns as referents (e.g. /ree-mw/ 'near you'), and those possessive classifiers which do not have independent noun counterparts (e.g. yana 'cooked mass food', fataa 'planted object').

Not possessed		
Compatible with -ni + NP	76	
Compatible with -na, or -ni + NP	4	
Compatible with any attributive pronoun	5	
Total		85
Possessed		
Possession indicated by classifier:		
Referential attribution may be expressed by pronoun	54	
Collocation of noun stem and attributive pronoun not permitted	514	
Possession indicated by repeater*:		
Repeater only	149	
Repeater alternating with classifier	19	
Total		736

*Includes those noun stems used as classifiers with other nouns, i.e. most possessive classifiers.

TABLE 8

Compatibility of Nouns with Attributive Pronouns and Possessive Classifiers

It will be observed from Table 8 that attributive pronouns could be suffixed to only 231 of the 821 noun stems included in the data, and 4 of these stems were not collocable with attributive pronouns other than the 3rd singular -na 'its'.

5.16 Possessive classifiers as substitutes. Possessive classifiers and repeaters are not substitutes, but may anaphorically represent the classified noun or phrase when the identity of the latter has been established by the context -- e.g.

(201) /menni ppwuk? neyi-y/

'Which book?' 'Mine.'

5.17 Distribution and differentiation of possessive classifiers. Various possessive classifiers are discussed below in relation to representative sampling of the bases with which they are associated in the data. An attempt will be made to find the patterns both of classification in general, and of contrastive classification where this is present.

(a) yaa. The classifier yaa is both a catch-all for forms not otherwise classified or possessed, and a point of contrast which serves to generalize a meaning smaller segments of which are conveyed through the use of alternative possessive forms.

Many words possessed only by yaa are also counted by the corresponding numeral classifier /-ew/ e.g. /pwoosto/ 'post office', /pwóór/ 'box', /koos/ 'course of a ship', /aŋaaŋ/ 'work'; others governed solely by yaa include a wide variety

of personal property and miscellaneous objects, e.g. /otáyi/ 'gasoline', /séfén/ 'shovel', /otáyi/ 'bandage', and /kkiiy/ 'key'.

A large number of adjectives denoting a "state of being" are nominalized by the use of yaa, e.g. /netipeɳaw/ 'unhappy' (/áá-y netipeɳaw/ 'my being unhappy'), /mmék/ 'lame', /nisássááw/ 'shy'. Sometimes the nominalized form differs in meaning from the corresponding unmodified adjective, e.g. nifinifini 'importance' -- but /áá-y niifinifin/ 'my preference (in food)'.

yaa contrasts with the suffixed stem in the formation of possessives for a number of nouns. In these cases the sufficed form generally indicates an involuntary or unavoidable acquisition of some object or quality by the 'possessor', and is thus not classificatory, whereas the form governed by yaa indicates that the possessor has ownership or control of the thing possessed. Examples are /apwaapwa/ 'entertainment', /áá-y apwaapwa/ 'entertainment sponsored by me', /apwaapwaa-y/ 'entertainment for me', /fanaɳ/ 'ash', /fanaɳa-n/ 'his ashes' (of a person cremated), /aa-n fanaɳ/ 'ashes (rubbish) belonging to him, /kkééni-y/ 'song about me', /áá-y kkéén/ 'song composed by me'; /éé-y/ 'fish hook attached to me', /áá-y éé/ 'fish hook owned by me'; similarly /aceccemeniye-y/ 'remembrance of me', /áá-y aceccemeni/ 'my remembering (something)'. This contrast is latent in many other forms possessed only by yaa, e.g. when an informant was asked if it were permissible

to say Ø /kkiiye-y/ he replied 'Yes, if you had a lock built into your body!'

With a number of words the alternation between a referentially attributive construction and the use of the classifier yaa does not seem to cause any change in meaning. Many of these words are adjectives, e.g. /nniɳ/ 'beautiful', /wéw/ 'rich', /mweneene/ 'poor'. Some are potentially ambiguous in that the 'possessed effect' could be partly involuntary and partly controllable from the standpoint of the 'possessor', e.g. /tipis/ 'error, /eyinaɳ/ 'clan'.

With other nouns, however, the apparent alternation between suffixed base and classifier is actually an alternation between a possessive repeater and a classifier -- e.g. kaasa 'bottle for storing miso' /kaase-y (kaas); áá-y kaas/ 'my bottle', néénéé 'liquid' /áá-n nééné; néénéé-n/ 'his liquid' (contrast /áá-n fanaɳ; fanana-n/ above).

(b) néwú. The classifier néwú (= néwú, /naaw/ 'child') indicates a variety of objects which usually have a more intimate relationship to the possessor than those classified by yaa. Nouns possessed only with néwú include most of those classified with the numeral classifier /mén/ 'animate' and which do not take a possessive suffix, e.g. /maan/ 'animal'; /seketeri/ 'secretary'; /kkiiɳ/, 'king'; /áát/ 'boy'; /kketinaas/ 'sword'. Certain objects in daily use likewise appear possessed with néwú -- /nayisen/ 'license'; /piin/ 'pencil'; /teɳki/ 'lightbulb'; /uu/ 'fish net'; as are some

concepts relating to time -- /neyi-y kkunók/ 'my clock', or 'time for me to start', /a-a tori nowu-mw we awa!/ 'your hour has come!' Seeds, etc., are also classified with néwú, /macaŋ/ 'young shoots of camote'.

néwú appears in paradigms with other classifiers occurring with nouns denoting various food animals. Use of the néwú possessive in such cases implies that the animal concerned is either a pet, or at any rate not intended for consumption. The associated classifiers wocaa and yana indicate fruit, meat, also fish intended for eating raw, and food (other than meat) which will be cooked, respectively, e.g. /aŋarap/, neyi-y aŋarap/ 'my (live) bonito', /wocáá-y aŋarap/ 'my bonito (to be eaten raw, as sashimi, etc.)', /ene-y aŋarap/ 'my bonito (cooked as intended to be cooked)'. It may be argued that this differentiation contradicts the assertion made above that a classifier is not equivalent to a verb phrase in the same way as a verb-derived pseudo-classifier. However, even in the above cases, the additional meaning indicates potentiality only, and relates to the possessed noun, not to the possessor: contrast /wocáá-y we cuko/ 'my chicken (intended to be eaten, but not necessarily by me)' with /woceye-y we cuko/ 'the chicken I ate'.

néwú occasionally implies subordination as with /aramas/ 'person'; a chief might refer to his subjects using néwú, while the form /aramase-y/ would be used as a possessive repeater by someone referring to his relatives of equal

status. This implication of subordination is only one aspect of the "close relationship" undertone of néwú. Like yaa, néwú is employed to indicate possession in contrast to referential attribution, as /neyi-y niyos/ 'my picture (owned by me)', /niyossi-y/ 'picture of me'. A three way contrast is possible with /taropwe/ 'letter, paper', /neyi-y taropwe/ 'letter belonging to (or written by) me', /taropwe-y/ 'letter concerning me', /áá-y t./ 'my writing paper'.

(c) 'wúnúma. The classifier wúnúma relates to potable liquids, condiments and cigarettes, e.g. /súúpwa/ 'cigarette', /kkónik/ 'water', /sóón/ 'salt', /suké/ 'sugar'. It contrasts with other classifiers in some environments -- e.g. /áci/ 'tubá', wúnúma 'prepared (ready for drinking)', yaa ... 'still fermenting'.

(d) wúfa. The classifier wúfa can be used with many articles of clothing, e.g. /sikéét/ 'skirt' (where yaa may also be used, with no change in meaning), /kappa/ 'raincoat' (~yaa, yimwa) /sipiri u/ 'T-shirt' and items like /manaaku/ 'tablecloth' (~ yaa, piseki). Because of the various alternate classifications available for many of the words classified by wúfa in the data it is possible that there is a tendency towards a logical re-grouping of similar items of clothing, etc. under this classifier, and that the alternatives reflect earlier tentative classifications -- all the words concerned are borrowings from Japanese and English.

(e) Other classifiers. The remaining classifiers are fairly uncomplicated in their application and may be dealt with very briefly. yimwa (= yimwa /iimw/ 'house') may be used with any object covering or above the head, /ameer/ 'umbrella', /wóós/ 'roof', also /ira/ 'tree', and, maybe through association, paap 'flat board', /akkaw/ 'hat' may appear with yima or as a repeater, without any change in meaning. yipwa (from yipwa /iipw/ 'footprint') is applied to all footwear, e.g. /sitakin/ 'sock'.

The classifier yina (= yina /iin/ 'mother') is sometimes used to indicate relationship to woman of the parents' generation e.g. /ina-n opwasaŋ/ 'his old woman (relative)'. masa (= masa /maas/ 'eye') likewise has a restricted distribution, covering items like /meŋane/ 'sunglasses', but not /mese-n mmak/ 'letter of the alphabet' (yaa), despite the fact that both classifier and the first element in the noun phrase to be possessed derive from the same source (masa 'eye').

yana classifies mass foods like /rayis/ 'rice', /eep/ 'yam'; also /mwéŋe/ 'food'. wocaa classifies (fresh) fruit e.g. /senniya/ 'watermelon' as well as meat, and fish to be eaten raw. The contrastive use of these possessives is illustrated above (see néwú). One further example will suffice /reyireyi/ 'slice': /wocáá-y r./ 'my slice (of meat)', /yene-y r./ 'my slice (of bread)'. Examples of the occurrence of the remaining classifiers may be found in the list which

follows and need not be commented upon here.

5.18 Inventory of possessive classifiers. The following list of Trukese possessive classifiers includes all those noun stems which are clearly classificatory in the terms of §5.13 above, i.e. excluded are possessive repeaters, pseudo-classifiers formed from verb stems, and noun stems which are followed only by referential attributes. Although the list includes all possessive classifiers encountered in my data, plus a number of forms listed by Elbert (1947) and Dyen (1965), it is probably not as complete as the list of numeral classifiers given in §5.12. The following format is employed:

> [1]base form of classifier, [2] /surface forms with (1) first- and (2) third-person singular attributive affixes and (3) -ni attributive affix/, [3]'gloss' [4] /independent forms of some nouns with which the classifier commonly co-occurs/, [5][number of nouns with which associated as a classifier in the data].

The same abbreviations are employed as in §5.12.

yaa /áá-y, aa-n/ 'general; qualities, activities, emotions, miscellaneous objects' /kkéén/ 'song', /kafiye/ 'cafe', /namanam/ 'religion', /pwunopwun/ 'flame', /ecik/ 'being tired' /ceepen/ 'table'. (D, E) [301]

* yacawara /acaware-y, acawara-n, acaware-n/ 'loin cloth' /akkacawar/ 'loin cloth' (D, G states that /akkacawar/

is classified with yaa) [0]

yana /ene-y, ana-n, ene-n/ 'fish or fruit to be eaten cooked, rice and other staples normally cooked' (see also wocaa). /iik/ 'fish', /kkón/ 'poi', /taka/ 'coconut meat', /maay/ 'breadfruit'. (D, E states that yana refers to food to be consumed by the possessor while yaa is used for the same food to be consumed by, e.g. the possessor's kinsmen; my informant did not appear to restrict the reference of yana in this way) [65]

yanoo /anoo-y, anoo-n, anoo-n/ 'speech, word' [0] (= yónóó)

yasama /asame-ẏ, asama-n, asame-n/ 'door opening, entrance' /asamwaco/ 'window' [1]

canú /cén-y, cénú-n, cenu-n/ 'source of liquid' /caan/ 'juice', /ween/ 'well' [1]

ccenikama /ccenikame-y, ccenikama-n, ccenikame-n/ 'bed covering' /ccenikam/, /kuus/ 'blanket, sheet' [1]

yepita /epite-y, epita-n, epite-n/ 'oil for annointing' /epit/ 'fragrant oil', /ŋaas/ 'oil for hair' [1]

*yéméti /éméti-y, éméti-n, éméti-n/ 'food for a journey' /taka/ 'coconut meat' (D) [0]

fataa /fátáá-y, fataa-n, fátáá-n/ 'planted tree' /wuuc/ 'banana', /núú/ 'coconut' [36]

fénúwa /fénúwe-y, fénúwa-n, fénúwe-n/ 'island' /téé/ 'coral island' [1]

yimwa /imwe-y, imwa-n, imwe-n/ 'overhead shelter' /iimw/ 'house', /akkaw/ 'hat', /amper/ 'umbrella' /irá/ 'tree D, E) [12]

yina /ine-y/, ina-n, ine-n/ 'mother' /iin/ 'mother' /opwusaŋ/ 'female relative of mother's generation' (D) [3]

yipwa /ipwe-y, ipwa-n, ipwe-n/ 'footwear' /suus/ 'shoes' /coori/ 'zori' /iipw/ 'footprint' (E) [3]

kiya /kiye-y, kiya-n, kiye-n/ 'mat, object for sleeping on' /peet/ 'bed', /ficennap/ 'pandanus mat' (D, E) [2]

kuusa /kuuse-y, kuusa-n, kuuse-n/ 'bed covering' /ccenikam/ 'blanket, sheet' [1]

masa /mese-y, masa-n, mese-n/ 'related to the eye' /maas/ 'eye', /meŋane/ 'sunglasses', /antiyos/ 'goggles' [2]

mwari /mwári-y, mwári-n, mwári-n/ 'lei, encircling object' /mwaramwar/ 'lei' /peenit/ 'belt' (E) [1]

neeniya /neeniye-y, neeniya-n, neeniye-n/ 'place' /ssó/ 'canoe seat' /tawun/ 'town' (O) [2]

*nánáá /nánáá-y, nánáá-n, nánáá-n/ 'bracelet', ring' /nukum/ 'bracelet' (E) [0]

nawú /neyi-n, néwú-n, néwú-n/ 'child, property closely associated with person, intimate, subordinate', /naaw/ 'child', /náäyif/ 'knife', /kamwét/ 'sweetheart', /mwooni/, 'money', /cukó/ 'chicken', /sense/ 'teacher' /taropwe/ 'paper' (D, E) [184]

*nikita /nikite-y, nikita-n, nikite-n/ 'left overs' (G) [0]

nnuta /nnute-y, nnuta-n, nnute-n/ 'food for chewing' /faac/ 'pandanus', /woow/ 'sugar cane' [2]

wocaa /wocáá-y, wocaa-n, wocáá-n/ 'fruit or fish to be eaten raw, meat', /piik/ 'pork', /wuuc/ 'banana', /iik/ 'fish' /sásimi/ 'sashimi', /aapen/ 'apple' (D, E) [85]

*yónóó /ónóó-y, ónóó-n, ónóó-n/ 'speech, word' (E) [0]

piseki /piseki-y, pisek-n, pisek-n/ 'miscellaneous personal property' (often with lists, e.g. /piseki-y rannin, amper, sipirinu, senit/ 'my undershirt, umbrella, T-shirt and jacket') /manaaku/ 'cloth' [1]

paa /paa-y, paa-n, paa-n/ 'bait', /ácininipa/ 'surplus bait' [2]

*pwúni /pwúniý, pwúni-n, pwúni-n/ 'borrowed object', /waa/ 'canoe' (D) [0]

sama /seme-y, sama-n, seme-n/ 'superior, person of father's generation', /saam/ 'father', /tókter/ 'doctor' (D, E) [2]

sepiya /sepiye-y, sepiya-n, sepiye-n/ 'plate, dish' /wuunon/ 'bowl' [2]

wúfa /wúfe-y, wúfa-n, wúfe-n/ 'clothing worn on the torso', /séec/ 'shirt', /rannin/ 'undershirt' (D, E) [7]

wúnúma /wúnúme-y, wúnúma-n, wúnúme-n/ 'nonsolid for oral consumption' /kkónik/ 'water', /suupwa/ 'tobacco', /áci/ 'tuba', /núú/ 'coconut' (D, E) [21]

waa /wáá-y, waa-n, wáá-n/ 'vehicle', /waa/ 'canoe', /payisiken/ 'bicycle', /mwoota/ 'motorboat', /citoosa/ 'car',

(D, E) [16]

*wosa /wose-y, wosa-n, wose-n/ 'bundled object' /mwéŋé/ 'food' (D) [0]

wóku /wóki-y, wóku-n, wóku-n/ 'stick-like object', /wóók/ 'stick', /mácá/ 'metal spear', /wiciwic/ 'whip' (D, E) [5]

*wúnna /wúnne-y, wúnna-n, wúnne-n/ 'pillow' /wuun/ 'pillow', /pinnu/ 'pillow' (D) [0]

Relationship of Classifier to Classified

5.20 Relationship between numeral and possessive classifier systems. In general, it may be said that Trukese numeral classifiers refer to specific inherent qualities in the object classified, whereas the possessive classifiers denote potentiality or function, and thus classify the possession rather than the possessed object itself. Possibly for this reason, there is a great deal of overlap between the two systems, and it is rarely possible to predict which numeral classifier will be appropriate on the basis of a suitable possessive classifier, or vice versa. Among the few exceptions are the possessive classifiers wóku 'stick-like' and waa 'vehicle', nouns classified by which may always be counted with numerals of the /-fóc/ ('long, cylindrical') series. In most other cases, however, the numeral and possessive classifiers are subject to different selectional criteria, and a comprehensive list of nouns grouped with the same classifier under one system will be divided among several classifiers in

the other.

Table 9 illustrates the correlation between numeral and possessive classifiers in terms of nouns which, when classified in a given way in one system may then be classified in the other. The examples are restricted to true classifiers, as opposed to quantifiers and repeaters. This restriction throws most of the nouns associable with wúnúma 'potable' into the 'other' class as regards numeral classification, as many are not classified in the strict sense for counting purposes -- they are most frequently associated with the quantifier /-kis/ 'portion' e.g. /e-kis wúnúmwo-mw kkónik/ 'some (of) your water'; other collocations are also possible, however, e.g. /e-fóc wúnúmwo-mw suupwa/ 'your one cigarette'. It should be noted, nevertheless, that of the 706 nouns in the data which could occur with both a possessive and a numeral classifier (or repeater), 493 (70%) occurred with only one classifier of each type.

5.21 Semantic components of classifiers. In their analysis of Tzeltal numeral classifiers, Berlin and Romney (1964) grouped the 557 numeral 'classifiers' they had isolated at that time into about a hundred 'semantic categories'. Each of these categories was defined by a certain group of features (e.g. the domain of 'harvesting' may be subdivided into various kinds of plucking, cutting, picking, etc. -- each represented by a particular classifier). The classifiers in each subset do not contrast with each other (i.e. any one noun will occur with

not more than one classifier in any given category) and are regarded by Berlin and Romney as representing 'allosemes' of 'some higher order sememe' (p. 90).

While the Trukese classificatory systems are not nearly as complex as the Tzeltal numeral classification seems to be, the idea of 'domains' is useful in discussing the distinctive features involved in the selection of classifiers. This discussion will be concerned mainly with true classifiers (as against quantifiers, repeaters, and also numerative bases). Unlike Berlin and Romney, who conceived of a domain in terms of groups of internally non-contrastive classifiers, I intend to use the concept of 'domain' to include groupings of classifiers marked explicitly for the same features, and which may or many not be used contrastively with the same noun (e.g. 'shape' comprises the features [±Spherical, ±Cylindrical ...], the classifiers within this domain include /féw/ [+Spherical, -Cylindrical] and /fóc/ [-Spherical, +Cylindrical], and both classifiers may appear contrastively before the noun <u>núú</u> e.g. /e-foc núú/ 'one coconut palm', /e-féw núú/ 'one coconut'.

(a) <u>Classificatory bases in numerals</u>. The choice of a particular quantifier is dependent upon the possibility of quantifying the enumerated element in a given way. Thus one may say /e-nnú kkón/ 'one helping of poi', but not $^{\emptyset}$/e-nnú ppwuk/ 'one helping of book' because books are not counted in terms of /nnú/. Similar considerations apply to repeaters, which contain all and only the features of a particular noun,

Possessive classifiers:	Numeral classifier					Other or Unreported	T
	/-ew/	/-fóc/	/-men/	/-cé/	/-féw/		
yaa	175	65	0	22	11	28	301
nawú	40	5	100	15	13	11	184
yimwa	6	0	0	3	0	3	12
yana	2	4	15	0	7	37	65
wocaa	7	0	17	0	18	43	85
wúnúma	11	1	0	0	0	9	21
waa	0	16	0	0	0	0	16
fataa	2	32	0	0	0	2	36
other or unreported	120	24	20	10	8		182
Total	363	147	152	50	57	133	902

*Each cell represents the intersection of the domain of a particular numeral classifier with that of a possessive classifier. The figures in each cell show the number of nouns in the data which such a combination of classifiers was permitted (N = 821).

TABLE 9

Cooccurrence of Numeral and Possessive Classifiers

which consequently is the only form which will 'agree' with that classificatory base. The use of quantifiers is only a little less restricted than the use of repeaters, as there are generally only a few items within the domain of each quantifier[3] -- the situation is somewhat similar to the user in English of words like 'pair', 'flock', 'packet', 'box', 'herd' to denote special quantifiable units. The true classifiers on the other hand have as a group a much wider distribution than either the repeaters or the quantifiers -- in my data for example there were 809 instances where one of the eleven classifiers was associated with a noun, 223 where one of the eight quantifiers appeared (of these 111 were instances of /-kis/ 'a portion' and a further 88 were examples of the nearly synonymous /-kóc/), while the 21 repeaters occurred 74 times.

The numeral classificatory bases generally seem to be concerned with the actual state of the item enumerated. The true classifiers may be separated into three semantic domains -- shape, nature, and generality. The relationship between these domains and the classifiers which comprise them is illustrated in Figure 1. There is some overlap between the domains, in that a noun may sometimes appear with a classifier from two domains with no change in the meaning conveyed -- masa 'eye' for example may be classified with /-mas/, /-féw/ 'globular', or /-ew/ 'general'. Usually, however, a change in domain will also signal a change in meaning, as in the

example given earlier of certain fish species classified /-ew/ rather than /-mén/ to denote extraordinary size. However, of the 821 nouns in the data, 554 (67.5%) appeared with only one numeral classifier (while a further 39 were uncountable). Within a domain, a change in classifier generally signals a change in meaning -- i.e. certain semantic features of the noun (or a particular sememe in Bazell's ((1954)) sense of the term) are highlighted by a particular classifier -- thus the different collocations described in earlier sections of this chapter /núú/ 'coconut' may appear with /-fóc/ to indicate a coconut palm, with /-ew/, /-ŋat/ or /-féw/ to indicate a coconut (fruit), while /suus/ 'shoes' with /-yipw/ to indicate individual shoes, and with /-ew/ to indicate pairs of shoes.

It would seem that among the inherent features of Trukese nouns there are certain bundles of features, or sememes, which are realized in the presence of a certain classifiers -- and which, in such environments, suppress other potential combinations which are compatible with other classifiers (although, as was noted above, most nouns seem in fact to occur with only one numeral classifier, for example, and so this 'suppression' takes place only in the subclass classifiable in several ways). A base like <u>núú</u> would, then, include in its semantic structure certain configurations realizable in appropriate contexts. One particular configuration, in this case that indicating the coconut fruit, may be more basic than the others, and so

give the 'primary' meaning of the word, which is maintained unless the context requires otherwise. Repeaters would be characterized by a bundle of features unique to the noun from which they are derived. Quantifiers probably operate on the same principles as true classifiers.

There is no reason why any one feature should not be a member of several configurations -- e.g. those nouns denoting fish, contrastively classifiable by /-ew/ and /-mén/, retain the features [+Animate, +Animous] in both environments, the feature [±Normal] being crucial to the particular classification used, but only in conjunction with the other features. Where no bundle of features matches those required for a particular classifier, a collocation will be incongruous -- e.g. */e-mén faaw/ 'an animate stone'. However, even though it is the features of noun which usually dominate the classificational possibilities, the polarity may sometimes be reversed, and frequently is to create metaphors -- thus /kúús/ 'octopus', being an anomalous animal, is usually enumerated with /-ew/, /-mén/ may also be used, but the new collocation (e.g. /e-mén kúús/) indicates not an octopus, but, through the transfer of a feature [+Human], a hairless person.

(b) Possessive classifiers. The preceding discussion applies as much to possessive classifiers as it does to those associated with numerals. The possessive classification system is, however, built upon considerations of potentiality rather than actuality. Thus whereas /e-mén iik/ refers to a whole

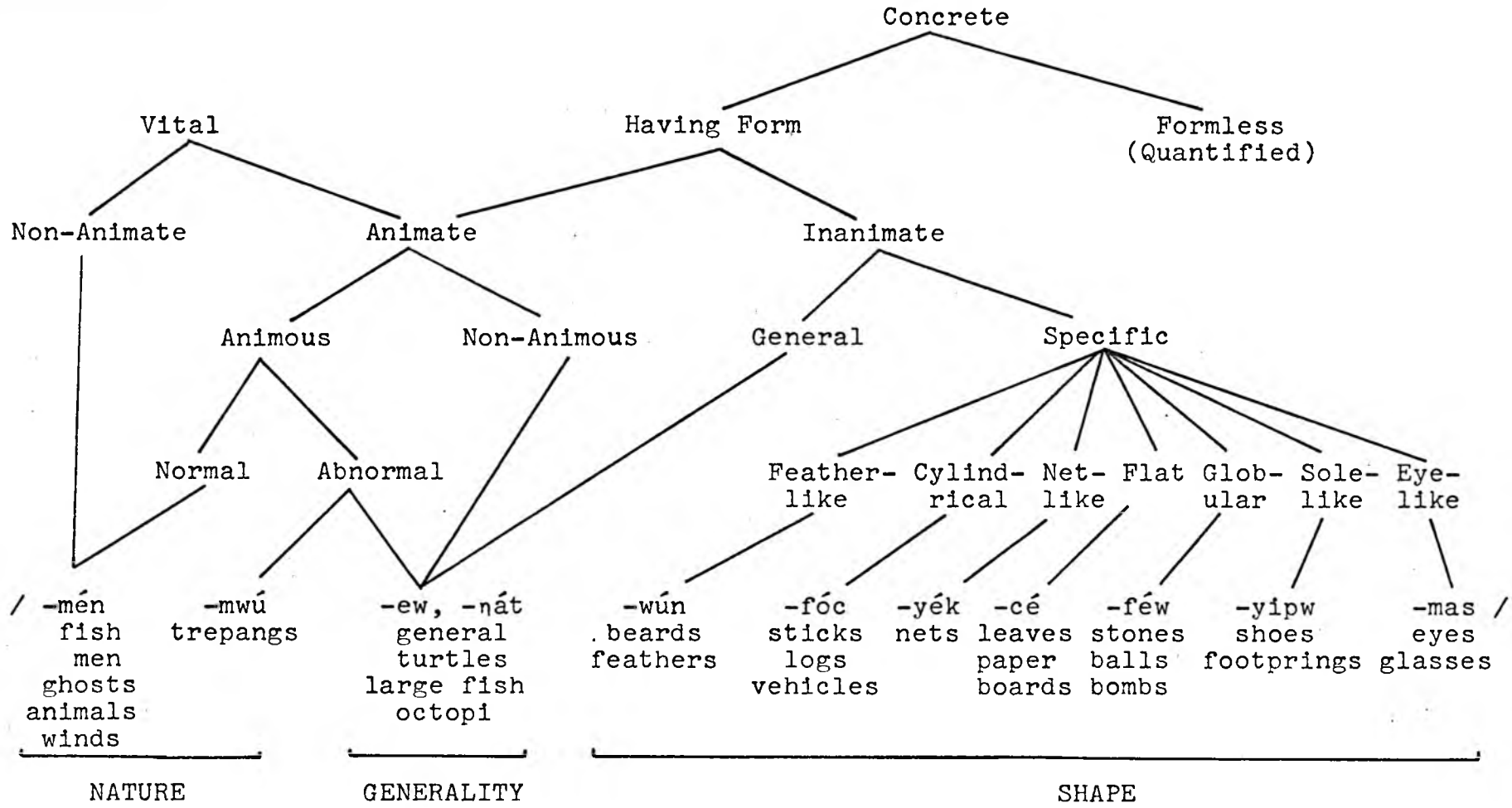


Figure 1. Interrelationships of numeral classifiers

fish, really and truly present in the time or place spoken about, /wocáá-y iik/ 'my fish for eating raw', /ene-y iik/ 'my fish for eating cooked' /neyi-y iik/ 'my pet fish' may refer to one and the same fish simultaneously -- it is the intended rather than the actual which is emphasized.

In terms of numbers (26) the possessive classifiers (excluding repeaters) encountered in the data imply a potentially more complex system, but there seems to be even less cross-classification of nouns with possessives than there is with numerals -- in all only 186 of the 821 nouns occurred with more than one possessive classifier (compared with 228 nouns with more than one numeral classification). Most of the overlapping occurs with a few special groups of nouns -- most fish species for example are classifiable with wocaa, nawú and yana, as in the above example with/iik/ while many tree names may be associated with yimwa 'house, shelter', fataa 'planted object' and yaa 'general'.

One possible arrangement of these classifiers into a series of interlocking semantic domains is the following:

(a) Non-specific

(1) General — yaa

(b) Specific

(1) Potential use of possessor:

(i) Consumable

(a) By humans:

(1) Solid:

		Chewed only	ŋŋuta (sugar cane, betel nut)
		Ripened	wocaa (meat; fruit or fish to be eaten raw)
		Cooked	yana (rice; fruit or fish to be eaten cooked)
	(2)	Nonsolid	wúnúma (water, juice, tobacco, medicine)
(b)	Not by humans		paa (bait)
(ii)	Not Consumable		
(a)	Solid		
	(1)	Miscellaneous	piseki (small items of personal property)
	(2)	Identifiable	
		Clothing	wúfa (shirts, coats)
		Bed coverings	kuusa
			ccenikama (blankets, sheets)
		Footwear	yipwa (shoes)
		Dishes	sepiya (plates)
		Vehicles	waa (canoes, cars, bicycles, etc.)
		Mats	kiya
		Eyewear	masa (goggles, glasses)
		Leis	mari
		Water source	canú (wells)
		Entrance	yasama (doors, windows)

	Shelter	yimwa (hats, roofs, umbrellas, shade trees)
(b) Nonsolid		
	Anointing	yepita (fragrant oils)
(2) Relationship to possessor:		
(i) Human		
(a) Superior, or of parents' generation		
	(1) Male	sama
	(2) Female	yina
(ii) Human or non-Human		
(a) Intimate or inferior		nawú (children, pets, teachers, books, pens, paper, flowers)
(iii) Inanimate		
(a) Locality		
	Island	fénúwa
	Other	neeniya (town, seat, etc.)
(3) Inherent quality		
(i) Stick-like		wóku (spear, walking stick)

A number of other possible arrangements would undoubtedly give equally plausible results. The intuition of the native speaker, if used as the basis of such a schematication, might possibly yield quite different groupings, although the impression I gained from working with several informants was that the

classifiers within each system were regarded as unordered items in a list in their relationship to other classifiers within the same system. A possible exception to this would be the classifier piseki, which has a somewhat special function in that it is used to replace conflicting classifiers in lists of personal possessions, e.g. /imwe-y amper/,/wúfe-y sééc/, /aa-y rawusis/ would become /piseki-y amper, sééc, rawusis/ 'my umbrella, shirt, (and) trousers' if conjoined.

(e) Relationship between the possessive and numeral classifier systems. As was noted in the introductory paragraph to this chapter, it is rarely possible to predict with certainty which possessive classifier will be appropriate for a given form when only an appropriate numeral classifier is known, or vice versa. This is because the configurations of features activated by the use of a given classifier in one system are never (at least in the data collected so far) exactly the same as those realized by a classifier in the other system. This statement does not, of course, apply to repeaters, where there may be perfect overlapping -- e.g. /-yaf/ as numeral repeater and yafa as possessive repeater are collocable only with yafa /aaf/ 'intestine'.

Where there is a close correspondence, it is one way -- e.g. all vehicles, which are possessed with waa, are counted with /-fóc/, but of the 148 nouns countable with /-fóc/, only 16 were possessed with waa. However, in the 30% or so of the nouns investigated where conflicting classifications

were reported, contrasting sets of classifiers were not uncommon. Thus, for example, /mwoota/ 'motor' when possessed with waa and/or enumerated with /-fóc/ must be glossed as 'motorboat', while the same noun in the environment of /-ew/ or yaa means simply 'motor'. With flowering trees, e.g. /ayipiskas/ 'hibiscus' /-ce/ relates to a leaf, /-fóc/ to the whole bush, while aa subsumes both these aspects for purposes of possession, and imwa may be used if the shrub is also a shade tree; a flower will be enumerated with the quasi-classifier /-pé/ and possessed (like a child or turtle) with nawú; a petal would also be possessed with nawú, but counted with /-cé/.

New concepts can be expressed (or old ones modified) by the employment of a new classifier. /sófey/ 'medicine' may refer to Trukese medicine, in which case the general classifiers /-ew/ and yaa are used, or Western medicine, when the possessive wúnúma covers the range of meaning divided between the numeral quantifier /-kis/ (for liquid powdered medicine) and the classifier /-féw/ (tablets).

Some words have a vague general meaning which a classifier makes specific, e.g. mwoonu 'anything used to fix a leak' becomes a leaf of coconut used for this purpose with the repeater /-fic/, a quantity of material (either thatch or roofing iron) for a portion of a roof with /-cé/ or one series of leaves attached to a stick with /-mén/ (if the roof is tin, /-mén/ refers to a sheet of roofing iron). Several examples of free

variation in the choice of classifiers have already been given. These generally refer to objects or situations with some inherent ambiguity, as with /ppwo/ 'breadfruit pounder', which fluctuates between 'long' and 'round' (/-fóc/, /-féw/) and intimate and general possession (nawú, yaa).

Foreign words seem to be quickly assimilated into the system, although it is probable that some time elapses before a particular classification becomes finally accepted for some forms where more than one factor is involved. Vehicles, for example, are automatically assigned to /-fóc/ and waa, but many items of Western clothing are classifiable in several ways without any consequent change in meaning. Some items find an unambiguous place in the system very quickly, however; sunglasses (/menane/) are possessed as eye-related objects (masa), bombs (/pakutaŋ/) on the other hand are round (/-féw/) and intimately possessed (nawú).

Both systems carry with them a great many metaphorical assumptions which, in their own terms, organize reality into a large but manageable number of categories. The judicious use of classifiers also enables the extension of meaning of a particular base with a minimum of ambiguity. Nouns thus often have a highly generalized meaning, different segments of which are expressed with the aid of different classifiers. Within the classifier systems themselves similar patterns emerge. There are points of overlap, and points of contrast. Where the use of different classifiers within a system reveals

different shades of meaning, the juxtaposition of numeral and possessive classifiers may extend the process further. The classifiers in Trukese thus at one and the same time provide a means of ordering the universe, and a method for structuring concepts without multiplying vocabulary.

5.22 Redundancy rules. References to redundancy rules for semantic and syntactic features have been made at various points in the last three chapters, but little attempt has been made to formalize such rules. Such a task will not be undertaken here, either, as an intensive study of the Trukese lexicon would be a necessary prerequisite for it to be worthwhile. Nonetheless, a few observations can be made at this point.

There are a number of features, among those which have been mentioned in the preceding discussions, which automatically imply each other -- e.g.

(202)

[+Actant$_1$] implies [-Actant$_2$]

[+Actor] implies [+Animate]

[+Speaker] implies [+Human]

[+Hearer] implies [+Human]

[+Animate] implies [+Vital]

[+Human] implies [+Animous, +Vital]

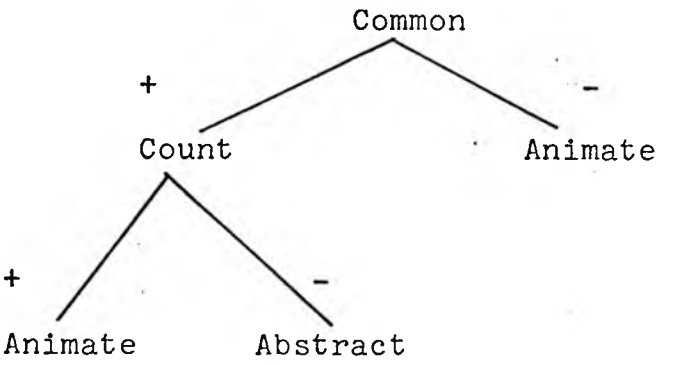
[+Animous] implies [+Animate, -Formless, +Concrete]

[+Cylindrical] implies [-Flat, -Globular, etc., +Specific, -Formless, +Concrete]

[+Vehicle] implies [+Cylindrical]

If some kind of hierarchical structure is to be imposed on these features in terms of a succession of binary branching re-write rules as suggested, for example, by Chomsky (1965:83), then a considerable amount of duplication of features must take place, i.e. the same feature will appear in several different places, as in Chomsky's illustration [±Animate] appears as a re-write of [-Common] and [-Count]:

(203)



Such a branching 'system' could end up by being quite redundant itself. Rather than start from a proposition that a given symbol should be re-written in terms of a feature embodying a binary opposition, each pole of which is then re-written in the same way (so that 'Noun' is first written [+N, ±Common], [+Common] as [±Count], [-Common] as [±Animate], and so on, it might be better, for Trukese at least, to regard the features as belonging to a kind of indefinitely extendable list, which does however contain significant groupings (whether branches, circles, or polygons) within the listed entities. There will thus be some systematic relationships, either lateral, like those cited in (202), or branching, as for example [+Human] → [±Male].

Here, however, another question arises. Even if the 'rule' is branching, must the branching be binary? It seems that a case can be made for a ternary system, assigning the third value to zero. The independent pronouns in Trukese are thus marked [+Human], but simply neutral when it comes to sex (the third person independent pronouns are, of course, even neutral where humanity is concerned, as they may be used on some occasions at least in reference to birds and beasts as well), whereas the personal pronouns /nemin/ and /men/ are marked [-Male] and [+Male] respectively. It would seem that the classifiers at least are marked neutrally towards most possible features, and positively or negatively towards a few crucial elements which determine their compatibility or otherwise with (often) a very large number of nouns. If this is so, then one final observation may be in order:

(204) ØØ

Notes to Chapter 5

1. Some adjectives (stative verbs) may be preceded by a numeral determiner and/or take attributive suffixes or appear in construction with an attributive phrase or classifier. In such circumstances the meaning of the adjective is equivalent to that of an abstract noun, and the adjective functions within the sentence as a noun rather than a verb. Representative examples are /ecik/ 'be hungry' /ecike-y/ 'my hunger', /ŋaaŋ wúwa ecik/ 'I was hungry'; /netipeta/ 'be sad' /ŋaaŋ wúwa netipeta/ 'I was sad', /ewe ew netepeta/ 'that (was) a (cause or occasion of) sorrow'.
2. If a morpheme has a 'single' meaning, then féwú as classifier and féwú as noun are not identical, as the noun féwú (/faaw, fewú-/) refers specifically to a stone, whereas the classifier denotes spherical objects generally. However, as Bazell ((1954)) has pointed out, there is no reason to suppose that any kind of one to one correspondence exists between the morpheme as a minimal syntactic unit and the sememe as a fundamental semantic unit. It is therefore possible to regard féwú as a single morpheme with different semantic correlates in different syntactic environments.
3. The outstanding exception to this statement is the quantifier /-kis/ 'small quantity' which can be used with almost any noun in the language. The distribution

of the other quantifiers is, however, much more restricted, often confined to a single noun -- e.g. /-mmwún/ is used only for sections of a special kind of poi (/mwatún/).

APPENDIX I

SUGGESTED APPROACH TO THE FORMULATION OF MORPHOPHONEMIC RULES GOVERNING AFFIXATION IN TRUKESE

The aim of this approach to an aspect of Trukese morphophonemics is to set up base forms and devise a system of ordered rules so that the phonemic shape of the morphemes or lexemes considered can be predicted and accounted for in the simplest mechanical way. Ad hoc rules and solutions should be kept to a minimum in such a scheme, and the rules themselves should be purely phonological. To attain this goal in relation to the Trukese material, the main tactic has been to add vowel material to the base forms of items which are sometimes (or always) manifested with a final consonant. With stems, this is often not difficult to justify, as there are alternations which preserve the vowel in question, e.g. /Ø/ /a/ -- /maas/ 'eye, /masa-n/ 'his eye', base form masa. With suffixes, however, the posited vowels are often word-final, and therefore not manifested overtly. Usually, however, such a suffix-final vowel can be inferred with considerable accuracy from its effects upon preceding material, such as fronting (e.g. wóku ≠ -yi → /wóki-y/ (in isolation /woki/ through deletion of word final /y/ after /i/) 'my stick'), rounding e.g. curri ≠ -ku → /cuuru-k/ 'meet you'), raising (e.g. imwa ≠ -ni → /imwe-n/ 'house of'), etc.

The rules developed here have been designed specifically to handle the suffixation of tense/aspect morphemes to

predication markers, object affixes to transitive verb stems, directional affixes to object-suffixed verbs, and attributive affixes to nouns and noun-like elements. It is hoped that the same set of rules, with a limited number of additions and modifications, may also be used to predict the morphophonemics of other kinds of suffixation, or the same kinds with other word and morpheme classes. As these rules apply primarily to Eastern dialects, some further adjustments would be necessary to cover cases where Eastern and Western forms diverge.

Although these rules are designed as purely phonological, a cursory inspection will reveal cases of severe limitations on the application of a rule, confining its application for all practical purposes to one or two morphemes. This is especially true of some rules involving the suffixes -mw '2nd sg. attributive' and -ku '2nd sg. object'. It is possible that the operation of this particular type of rule may be extended to include all velarized consonants (/pw,mw/), or velars (/k,ŋ/) followed by a non-low rounded vowel (or, in some cases, a mid rounded or high rounded vowel only). The rules have not been stated in such a general form because, at this, I do not have sufficient evidence to advance in support of these claims.

Sometimes restrictions have been placed on a rule for reasons of economy -- rule 9, for example, confining the backing and rounding of /i,ú/ to /u/ in the environment -mw, -ku, to situations where /i,ú/ are immediately preceded by a consonant, could apply to all instances where the vowels

concerned are followed by /mw, ku/ and a word boundary in the underlying form. Where the vowels were double, the resulting sequences of dissimilar vowels (/iu, úu/) would be dealt with in a later rule (28) which takes care of such sequences when they result from other possible combinations. These short cuts are necessary, as if all the relevant phonetic phenomena were to be taken into account, the rules would soon become too complex to be manageable without the aid of a computer. However, while one need not go all the way with Martinet in vesting phonological phenomena with a life of their own, it is interesting to note that, at the subphonemic level, a great deal of the transformational history of various sound combinations is still reenacted in morphophonemic alternations.

Base forms are assigned to various units on the assumption that the final vowel is an integral part of the unit. Dyen (1965b) seemed to regard this vowel, which he called the 'stem vowel' as having a somewhat independent existence. He developed rules showing how the stem vowel of many forms could be predicted from the vowel which preceded the final consonant of the independent form. He called such forms 'Y stems', as opposed to 'D stems' (which ended in a single vowel, doubled before affixes), 'e stems' (having /Ce-/ before the conjunctive attributive suffix), and 'E stems' (where the final vowel is doubled before affixes and alternates from /aa/ to /áá/ to /óó/ depending on the following suffix). He sought to explain the alternations phonologically only when an affix had a surface

-CV(...) structure, i.e. the alternations before most possessive suffixes were regarded as morphologically conditioned, and the 2nd person sg. attributive and object suffixes were given a list of (V)C shaped alternants (see Table II.1, Appendix II), so that stem alternations before them were partly morphologically and partly phonologically conditioned.

Final vowels can, however, frequently be shown to have historical antecedents, as Dyen himself recognized in a later article ('On the history of Trukese vowels' (1949), published six years before 'A sketch of Trukese grammar' (1965) but actually written after the latter). Especially in words which do not appear with object or pronominal attributive suffixes, it is probable that the final vowels have in many cases undergone assimilation of the type which enables their prediction from a preceding vowel in the reduced independent form in many cases. This tendency is observable still in that some nouns and adjectives have two 'stem vowels' in free variation, one of which is predictable by Dyen's rules or the rules governing iteration, for example, and one which is not predictable phonologically (e.g. /ŋaaf/ 'fathom' has, according to my informants, the stems <u>ŋaafú</u> -- cf. Dyen 1965b:S199(b), 'the stem vowel is /u/, if the next preceding vowel is a central vowel (/ú,é,a/)', -- and <u>ŋafa</u>. In such cases, the stem containing the non-predictable vowel is probably the reflex of an older form.

I feel that the problem of determining how or why a particular vowel appears in stem final position before affixes

is a different problem from that of deciding what this final vowel is. It is the nature, rather than the origin, of the stem final vowel in the base form that is crucial in determining the shape of the stem in these environments. As was pointed out above, the final vowel assigned to a base form for the purposes of these rules is that which seems most appropriate after all relevant information (behaviour in conjunction with affixed elements, effect on preceding phonemes etc.) has been taken into account. Historical reconstructions, where these are known, are also regarded as relevant, especially in the sense of confirming, or giving rise to a need to question, the shape assigned to a base form after examining the synchronic phonological phenomena.

In addition to this, an important generalization can be made regarding word boundaries in Trukese, which can explain the 'compensatory doubling' which Dyen describes as morphologically restricted to monosyllabic reduced noun stems. It was noted in Chapter 1 that a minimum utterance in Trukese consists of two syllable lengths. A geminate consonant counts as one length for these purposes. In the interpretation of Trukese phonology used here, two types of boundary are recognized: 'final' -- # -- which marks a complete word, phrase, or sentence boundary, and incomplete -- // -- which marks a word boundary where the form concerned is not isolable from (i.e. always occurs in construction with) another element, although it is not phonologically bound to that element. No boundary

at all on one or other side of an affix indicates that the form is bound to another element. Thus nouns are characterized #Y# (where Y indicates any sequence of consonants and vowels), verbs //Y# (as they are obligatorily preceded by other elements), prefixes #Y, suffixes Y#, and infixes Y (no boundaries at all). Particles are marked //Y//, as they are subject neither to compensatory lengthening, nor to final vowel reduction. See rule 27 below for further discussion of lengthening, and also rules 24 (vowel deletion) and 4 (removal of boundary markers).

The rules given below are strictly ordered, and each rule may be applied only once. There are many sequences which are not permissible at one stage but which may be permitted at a later stage, hence apparently similar rules are sometimes not conflated but appear in sequence or are separated by other rules.

Some of the complexity of the rules is required in order to handle a very few forms -- of the 255 bases in my data which may appear with attributive pronoun affixes, for example, 234 belong to 'regular' paradigms to which the remaining 21 do not conform, and ten of these are deviant only in that changes also occur within the stem as well as in the vowel contiguous to an affix. Almost all the 'irregularities' (see Table I.1) can, however, be handled through phonological rather than morphological rules.

In the following sections, the rules for affixation are

stated, together with notes and examples of their application, followed by a series of examples of representative stems to which the various rules are applied.

TABLE I.1

STEMS COMPATIBLE WITH ATTRIBUTIVE PRONOMINAL SUFFIXES

Final segment	No	Irregularity	No
-Ca	117	CaaC ~ CaCú ~ CéCú	4
-CVV	38	CááC ~ CáCi ~ CeCi	3
-Ci	37	-aa ~ -áá ~ -óó	5
-Cu	21	CaCa variable vowel	3
-Cu	20	Other	6
-Ce	1		
	234		21

The rules presented here are not to be regarded as an attempt at a definitive statement. In the first place, they apply only to a small, if important, aspect of Trukese phonotactics. Even within this restricted framework they are quite tentative. It is possible that there are many 'exceptions' which have escaped my attention. Furthermore, it seems likely that, by extending the analysis of base forms, it might be possible to reduce the vowel inventory of Trukese in a way similar to that which has already been done for Marshallese (Bender (1967)), or to completely reinterpret the data in terms

of distinctive features and generative phonology, along the lines of Chomsky and Halle's (1968) recent treatment of English. This work is more than sufficient in scope for a study in its own right, however, and will not in any way be attempted here.

Abbreviations

The following abbreviations, special symbols, and conventiones are employed in stating the rules:

abbreviation:	significance:
/ __	in the environment __
#	complete word boundary
//	incomplete word boundary
Ø	zero (X → Ø 'delete X)
: and ;	symbols for a vowel lengthening and vowel deleting element respectively, whose operation is governed by the rules
C	any consonant or semivowel
V	any vowel
Y	any consonant, semivowel, vowel, or sequence thereof

other symbols:

lower case letters a, c, e, é, f, i, k, m, mw, n, ŋ, o, ó, p, pw, r, s, t, u, ú, w, represent Trukese phonemes

parentheses () enclose optional elements

the arrow → , braces { } , and square brackets [ ] , have their commonly accepted significance

subscripts (1, 2, 3, x, z) are used to distinguish and identify segments in linear sequences -- thus V_1V_1 'two identical vowels', V_2V_2 'two phonemically different vowels, '$C_1V_1C_2C_1V_1C_2$ 'a sequence in which $C_1 \ldots C_1$, $V_1 \ldots V_1$, $C_2 \ldots C_2$, represent three sets, each set containing phonemically identical members, which may be different from those of other similar sets with different subscripts.

In the annotations accompanying the rules, derivations are enclosed in parentheses, and surface forms enclosed in single slashes, while base forms are underlined, e.g. (waa ≠ -:ri >) waeri (>/waar/). The symbol > indicates 'from which is derived', and < 'derived from'. Also in the notes, a hyphen (-) is sometimes used to mark a morpheme boundary, e.g. /moso-mw/ 'eye-your, your eye'.

Scope of the rules

These rules are intended to generate the phonemic shape of nouns and transitive verbs in conjunction with attributive, directional, and object affixes, and of predication markers in conjunction with tense/aspect suffixes. They are also intended to provide a framework within which other kinds of suffixation may be handled, perhaps after making certain adjustments and rearrangements as required by the increasing complexity of the data.

The suffixes are assigned the following shapes:

Object suffixes:

yeyi# (1 sg.), ku# (2 sg.), a# (3 sg.), kica# (1 incl. pl.), kemi# (1 excl. pl.). kemiyi# (2 pl.), ;ire# (3 pl.).

Attributive suffixes:

yi# (1 sg.), mw# (2 sg.), na# (3 sg.), ca# (1 incl. pl.), mi# (1 excl. pl.), miyi# (2 pl.), :ri# (3 pl.), ni# (conjunctive).

Directionals:

wuu# 'outward', noŋe# 'inward', too# 'hither', nóó# 'away', táá# 'upward', tiwe# 'downward'.

Tense/Aspect:

pwe// 'future, hypothetical', a// 'completed, actual', ne// 'immediate future', te// 'prohibition', pwaapw// 'unspecified future', se// 'actual negative', sapw// 'future or hypothetical negative'.

It is assumed that each suffixable base is marked in the lexicon with features permitting or prohibiting collocation with various types of affix.

The predication markers are assigned the following shapes:

//wúw// '1 sg.', //ke// '2 sg.', //ye// '3 sg.', //siy// '1 incl. pl.', //wowuw// or //yawuw// '1 excl. pl., 2 pl.', //re// '3 pl.'.

The stem shapes of transitive verbs are listed in the notes accompanying Rule 3. Shapes of noun stems are illustrated in the notes, and in the worked examples following the statement of the rules.

Morphophonemic Rules

N.B.

1. Each rule may be applied only once.

2. The rules must be applied in the sequence in which they appear.

3. Boundary markers (#,//) are not deleted unless this is explicitly stated in an applicable rule.

4. For the sake of uniformity, initial /y/ is written even when it is not morphophonemically significant.

5. The digraphs mw, pw represent unit phonemes.

6. Where more than one suffix follows the stem, all the rules apply first to the stem and the closest suffix, then to the suffixed stem and the next suffix.

7. Most rules are followed by a commentary, which is enclosed in double square brackets ([[...]]).

Rule:

1. á → e / #C__Ci#Y#

2. a → [á, é] / #C__C [i, ú] #Y#

[[The two rules above apply to forms about to undergo affixation; e.g. /fáán/ < fani > feni, /maramar/ < mari > mári, /naaw/ < nawú néwú.]]

3. a → [e, é, o, :] / [y, [ú, [e, o], u], VV] C //__#

[[This rule applies to the third person singular object suffix (-a). This suffix appears on the surface only when it is itself followed by a suffix (the directionals -nóó, -too etc., elsewhere being suppressed by the rule which deletes a word final vowel immediately preceding #. The transitive verb stems observed in the data terminate in -iiy, -aay, -eey, -úúw, -ééw, -oow, -aa, (see examples below); no affixed forms have been observed for transitive stems containing a directional affix to which a transitive formant has been added, and terminating in -óóy, -ooy, -ááy, or transitives with final -uw.

The formation of transitive stems has been discussed by Dyen (1965b:41-43, SS240-254) in considerable detail.

I do not agree with Dyen that the third person suffix is always zero, but, in accordance with the theory that a 'stem vowel' is an intrinsic part of the preceding element, prefer to interpret the alternations observable when a directional suffix is attached to the '3rd person singular' form of the transitive verb as revealing a 3rd singular object suffix which is subject to deletion when word final. As the transitive formant is never isolable, it may be regarded as having the same kind of boundary as a tense/aspect suffix, i.e. the phonological shape Y//. The following is a list of transitive stem types (verb stem plus transitive formant); an asterisk indicates a type which has not been found followed by directional suffixes:

-Ci// e.g. fiti// 'accompany'

-Cú// e.g. yamwécú// 'grab'

-Cuw//* e.g. kunnuw// 'turn

-aa// e.g. kúnaa// 'see'

-iiy// e.g. ficiiy// 'cut hair'

-ááy//* e.g. nnetááy// 'look up at'

-ooy//* e.g. nnetooy// 'look towards'

-óóy//* e.g. nnenóóy// 'look away at'

-aay// e.g. yataay// 'destroy'

-eey// e.g. sineey// 'know'

-úúw// e.g. púnnúúw// 'break'

-oow// e.g. yamwoow// 'cause to sink'

-ééw// e.g. rayisééw// 'shave'

4. $\left\{ \begin{matrix} \# \\ // \end{matrix} \right\} \rightarrow \emptyset \quad / \quad \_\_Y \left\{ \begin{matrix} \# \\ // \end{matrix} \right\}$

5. aa → áá / #(CV)C__Ci#

[[In Faichuk the environment could be stated / CVC__C $\begin{matrix} i \\ e \end{matrix}$ (Y)# e.g. kúnaa + yeyi = kúnááyeyi (> /kúnááyey/). An example of the operation of the rule as stated here is wocaa + yi = wocááyi (> /wocááy/).]]

6. $\left\{ \begin{matrix} w \\ y \end{matrix} \right\} \rightarrow \emptyset \quad / \quad \_\_(:)C$

[[yataay + ku = yataaku (> yataoku ... see Rule 7).]]

7. $a \rightarrow \left[\begin{matrix} e \\ o \end{matrix} \right] / \left\{ \begin{matrix} YC(V) \\ \#C\_\_ \end{matrix} \right\} C\_\_ \left[\begin{matrix} (:)Ci \\ \left\{ \begin{matrix} mw\# \\ ku\# \end{matrix} \right\} \end{matrix} \right]$

[[yimwa + yi = yimweyi; masa + yi = meseyi; yimwa + mw = yimwomw; masa + mwo = mosomw; kúnaa + ku = kúnaoku (> /kúnóók/); (yataay >) yataa + ku = yataoku (> /atóók/).]]

8. $\left\{ \begin{matrix} u \\ ú \end{matrix} \right\} \rightarrow i \quad / \quad C\_\_yi\#$

[[cénú + yi = céniyi.]]

9. $$\left[\begin{matrix}\{\acute{e}\\ \acute{a}\}\\ \{\acute{u}\\ i\}\end{matrix}\right] \rightarrow \left[\begin{matrix}o\\ \\ u\end{matrix}\right] / \_\_ \left\{\begin{matrix}ku\#\\ mw\#\end{matrix}\right\}$$

[[(canú >) cénú + mw = cénumw, ŋeni + ku = ŋenuku. Historically, the velarized consonants /mw/ and /pw/ can be shown to have derived from a fusion of a consonant with a following non-low rounded vowel. Goodenough (personal communication to B.W. Bender, 1966) has speculated on the possibility that /k/ in the affix -ku could well be interpreted as /k^w/. A tendency in some speakers towards adding a [w]- like element to /k/ in final position in words where a following /u/ appears in the affixed stem (e.g. /wóók/ = [wóók^w], /wooki-(y)/ (< wooku + yi) = [wóókwi], but /wóókun/ (=wóóku + na) = [wóókun], has been observed by myself and several other linguists working with informants in Honolulu. However this [k^w] element has a very limited distribution, and seems to be subphonemic.]]

10. $$e \rightarrow \left[\begin{matrix}a\\ \\ o\end{matrix}\right] / \_\_ \left[\begin{matrix}(C)a\#\\ \{mw\#\\ Cu(Cu)\#\}\end{matrix}\right]$$

[[fase + na = fasana, ke + a = kaa, ŋenuku = ŋonuku (> /ŋonuk/), fase + mw = fasomw, but yataaye + too = yataayetoo -- hence restriction to mw# rather than say

/ __ mw,pw,Co,Cu. When the vowel is not followed by an affixed element, this rule seems to apply optionally; i.e. /nonuk/ is acceptable to all speakers, but some also accept (and occasionally use) /nenuk/. Also, this rule may perhaps not apply to nouns except in the immediate environment of an affix, hence again the rather severe environmental restrictions on its use.]]

11. $\left\{ \begin{matrix} w \\ y \end{matrix} \right\} \rightarrow \emptyset \ / \ \_\_;i$

12. $V_1V_1 \rightarrow V_1 \ / \ \_\_;i$

[[kúnaa + ;ire = kúna;ire (> kúnaire > /kúneer/), cf. fataa + :ri = fataari ∉ /fataar/).]]

13. $y \rightarrow w \ / \ C \left\{ \begin{matrix} \acute{u} \\ u \end{matrix} \right\} \_\_V$

[[(kunnuw >) kunnu + yeyi = kunnuweyi.]]

14. $: \rightarrow \begin{bmatrix} \emptyset \\ i \\ e \\ \acute{u} \\ u \\ o \end{bmatrix} \ / \ \begin{bmatrix} VV \\ i \\ e \\ \acute{u} \\ u \\ o \end{bmatrix} —$

[[(waa + :ri >) wae:ri = waeri (> /waar/), pecee + :ri = peceeri, (sáni >) seni + :ri = seniiri, fase + :ri = faseeri, yimwa + :ri = yimweeri (> /imweer/), cénú + :ri = cénúúri.

No cases of C á,é,ó :ri were observed, although such sequences seem to be possible in related languages. At any rate, the effect of the element : is to double a preceding single vowel. The sequence Ca:ri (e.g. yimwa:ri) would not occur at this point, as an earlier rule (7) has changed /a/ to /e/ in the environment __(:)Ci.]]

15. é → o / __wuC

[[(nawú > néwú >) néwumw = nowumw.]]

16. $\text{é} \rightarrow \begin{bmatrix} \text{u} \\ \text{o} \\ \text{ó} \\ \text{e} \end{bmatrix} / \_\_\text{C} \begin{bmatrix} \text{u} \\ \text{o} \\ \text{ó} \\ \begin{Bmatrix} \text{á} \\ \text{i} \end{Bmatrix} \end{bmatrix} \text{Y}$

[[This rule concerns directional affixation, e.g. (púnnúúw + a >) púnnúúwé + wuu = púnnúúwuwuu, ... + too = púnnúúwotoo, ... + nóó = púnnúúwónóó, ... + táá = púnnúúwetáá.]]

17. $o \rightarrow \begin{bmatrix} ó \\ e \end{bmatrix} / \_\_ C \begin{bmatrix} ó \\ \{á \\ i\} \end{bmatrix} Y$

[[rayisééwo + nóó = rayisééwónóó, ... + tiwe = rayisééwetiwe (> /rayiseéwetiw/).]]

18. $u \rightarrow \begin{bmatrix} o \\ ó \\ e \end{bmatrix} / C \_\_ C \begin{bmatrix} o \\ ó \\ \{á \\ i\} \end{bmatrix} Y$

[[(sineey + ku) sineyuku + nóó = sineyukónóó.

The rules thus far apply primarily to forms undergoing affixation. The remaining rules seem to have more general application, and may apply to all forms in the language in the environments indicated.]]

19. $\begin{bmatrix} m \\ p \end{bmatrix} \rightarrow \begin{bmatrix} mw \\ pw \end{bmatrix} / \_\_ V \begin{Bmatrix} mw \\ pw \end{Bmatrix}$

[[In practice, the V is always rounded. (sama + mw >) somomw = somwomw.]]

20. Iteration + $\#yV_1(V_1)C_2V_2\#$ → $EyV_1V_1C_2V_1C_2V_2\#$

[[I + yéése = yéésése.]]

21. Iteration + $\# \begin{bmatrix} C_1V_1V_1 \\ C_1V_1C_2V_2 \end{bmatrix} \# \rightarrow \# \begin{bmatrix} C_1V_1V_1C_1V_1V_1 \\ C_1V_1C_2V_zC_1V_1C_2V_2 \end{bmatrix} \#$

[[I + pwii = pwiipwii, I + mari = mar$V_z$mari. Some nouns have an iterated form, which may appear unaffixed, or in combination with the conjunctive suffix -ni, and a non-iterated base to which other attributive suffixes (and also, optionally, -ni) are attached -- in such cases the 'reduced' base is never found unsuffixed. The process of iteration involves the loss of a final single vowel (CV → C) in the initial stem; this vowel is replaced by an epinthetic vowel by the rule which follows.]]

22. $V_z \rightarrow \begin{bmatrix} e \\ i \\ ú \\ o \\ a \\ á \\ é \\ u \end{bmatrix} / \begin{bmatrix} i \\ r \\ é \\ \{o \atop ó\} \\ a \\ á \\ ú \\ u \end{bmatrix} C_2\_\_$

[[mar$V_z$mari = maramari. V_z is an epenthetic vowel appearing between sequences of dissimilar consonants. The rules given here probably apply to all cases where the sequence is $V_1C_1\_\_C_2V_1$, whether the forms concerned are iterated bases or not. There are many apparent exceptions to this rule, but the exceptional forms are not usually found (with the same meaning) as non-iterated bases. Where the

intervening vowel is not predictable, it seems that the phonological change has been correlated with a change in function or semantic features of the form concerned; it is also possible that these cases represent a different kind of interation, involving two repeated stems, where the final vowel of the first stem is retained intact. Note the reciprocal dissimilation of /i/ to /e/ and /ú/ to /é/ where rule 22 applies.]]

23. $\begin{bmatrix} \acute{a}o \\ eo \\ iu \end{bmatrix} \rightarrow \begin{bmatrix} \acute{a} \\ e \\ i \end{bmatrix} y \begin{bmatrix} o \\ o \\ u \end{bmatrix} / \_\_ku\#$

[[nnetáoku = nnetáyoku (> /nnetáyok/), sineoku = sineyoku, ficiuku = ficiyuku. For slow speech, this rule could be stated in much stronger terms, e.g.

$$\begin{bmatrix} +Vocalic \\ -Back \end{bmatrix} \begin{bmatrix} +Vocalic \\ +Rounded \end{bmatrix} \rightarrow \begin{bmatrix} +Vocalic \\ -Back \end{bmatrix} y \begin{bmatrix} +Vocalic \\ +Rounded \end{bmatrix}$$

in env. / __Cu,mw #
So, e.g., (pwii + mw >) pwiumw = pwiyumw, peceomw = peceyomw. The front vowel seems to predominate / __u,o in normal to rapid speech in forms suffixed with -mw, but not in those with the -ku suffix.]]

24. $V \rightarrow \emptyset / \begin{bmatrix} Y \\ \# \end{bmatrix} C(C) \begin{bmatrix} (V) \\ V \end{bmatrix} \_\_ \begin{Bmatrix} \# \\ // \end{Bmatrix}$

[[The final vowel of any form is deleted when immediately contiguous to a word boundary of the 'complete' type

(#) after the preceding morphophonemic rules have been applied, unless the form contains only one vowel (i.e. has the shape #C(C)V#). payippe = payipp (> /payip/); nonuku = nonuk, yimwana = yimwan. This rule will not, of course, apply to stems still in the process of suffixation, as e.g. when #sineey// + ku# + too# = sineeyku#too# after the first application of rule 4.]]

25. C → Ø / C__#

[[No final geminate consonants are permitted. payipp = payip.]]

26. $\begin{bmatrix} y \\ ; \end{bmatrix} \rightarrow \emptyset \quad / \quad C \begin{bmatrix} i \\ V \end{bmatrix} \_\_ \begin{bmatrix} i \\ V \end{bmatrix} C$

27. $V_1 \rightarrow V_1V_1 \quad / \quad \# \quad \#C\_\_(C)\# \quad \#$

[[(yimwa >) yimw = yiimw (> /iimw/). The process of 'compensatory lengthening' is the result of the 'two syllable to an utterance' requirement noted earlier. The requirement may be more accurately states as a demand that each full word, when separated from other words by two contiguous word boundaries (its own and that of a neighboring form, including a phrase or sentence juncture), have a duration equal to at least two syllables or morae. Each vowel, including each member of a geminate pair, counts as a mora, as does consonant gemination. Unaffixed nouns are always subject to this lengthening of their reduced form would otherwise be equal to only one syllable -- so, e.g.

(yika >) yik 'fish' = yiik (/iik/). Verbs are frequently encountered with a #CVC# shape after vowel deletion, however, because they are almost always associated with verbal particles. Such particles are phonologically more distant than affixes, but closer than other full words, hence such sequences as # //ye// #nó# # (/e nó/ 'he goes') are permissible. When such monosyllabic verbs are used without accompanying affixes or particles, as in one word commands, they are always subjected to phonetic lengthening of either the vowel or the initial consonant.]]

28.
$$\begin{bmatrix} iu \\ \{eo\ ai\} \\ áo \\ [\{i\ u\}\ a] \\ ae \\ \{úu\ ui\} \\ \{éo\ oi\} \\ ao \end{bmatrix} \rightarrow \begin{bmatrix} ii \\ ee \\ áá \\ aa \\ uu \\ oo \\ óó \end{bmatrix}$$

[[The combinations to the left of the arrow are the result of environmental influences specified in previous rules, and are represented on the phonetic level in slow speech.

The following generalizations may be made, at least tentatively, concerning the morphophonemic rules governing contiguous dissimilar vowels in internal sandhi:

(H = High, M = Mid, L = Low, B = Back Unrounded, R = Back Rounded)

(1) Each vowel assimilates the other, producing a new sequence:

LB + MR → LR + LR

LB + HF → MF + MF

(2) One vowel is assimilated to the other:

(a) Both vowels share at least one feature:

HF + HR → HF + HF

HR + HF → HR + HR

MF + MR → MF + MF

HB + LB → LB + LB

HB + HR → HR + HR

MB + MR → MR + MR

(b) No features are shared:

HF + LB → LB + LB

MR + HF → MR + MR

MF + LB → LB + LB (Rule 9)

LB + MF → LB + LB

It seems that initial F dominates a following R at the same height, as does initial R a following F, and initial B assimilates to a following R, again when the vowels are at the same height. The relationship of F and

R is, however, reversed in env. / C__C__ (as shown in preceding rules). Back (B,R) vowels tend to dominate front vowels when heights are dissimilar, although they may be partly assimilated in certain environments. Low vowels tend to dominate high vowels. It is factors such as these that lead one to speculate that a reduced vowel inventory of the kind established by Dyen for pre-Trukese (1949), and by Bender (1967) for modern Marshallese, may also be possible for contemporary Trukese.

The assimilation of contiguous vowels in close internal sandhi also serves to highlight the function of /y/ and /w/ as boundary markers. The /w/ in the base form fénúwa (> /fénú/ 'island') is almost certainly a Trukese innovation (cf. Maori /fenua/ 'land', POC*panua), but if it were not there, a form like */féna/ (from*fénúa >*fénaa) might be expected in Trukese, rather than /fénú/.

Examples of the application of Rule 28 are: pwiumw = pwiimw, peceomw = peceemw, kúnair = kúneer, fatáomw = fatóómw (> fótóómw), fitiato = fitaato, amwécúato = amwécaato, (ye + a >) yea = yaa (> /aa/), (wwaa + ni >) wwaen = wwaan, púnnúuk = púnnuuk, (kunnuw + ;ire >) kunnuir = kunnuur, cuucuiy = cuucuuy, yéomw = yéémw, kacitoir = kacitoor, kúnaok = kúnóók, wocaomw = wocóómw.]]

29. $a \rightarrow \begin{bmatrix} ó \\ á \end{bmatrix} \quad / \#C\_\_C \begin{bmatrix} óó \\ áá \end{bmatrix}$

30. $\begin{bmatrix} y \\ \\ w \end{bmatrix} \rightarrow \emptyset \; / \; \begin{bmatrix} \quad i \\ C \begin{Bmatrix} \acute{u} \\ u \end{Bmatrix} \end{bmatrix} \_\_(//)\#$

[[(pwii + yi >) pwiiy = pwii. However, it seems that in Faichuk dialects this rule does not apply when the vowel is doubled (Goodenough: personal communication, 1968), so that pwiiy = pwiiy, but (sáni > seni + yi >) seniy = seni. # //wúw// #túkken# # = /wú túkken/ 'I swim', # //siy// #kkapas# # = si kkapas/ 'we talk'.]]

31. ee → e / YC__y#

[[sineey = siney. This rule does not apply in Faichuk dialects, judging from Dyen's examples (sineej etc.). One of the principal contrasts between Eastern and Western dialects seems to be the tendency of the former to prefer single vowels, especially in final syllables (penultimate before vowel deletion) where these syllables have long vowels in their Western cognates.]]

32. $V \rightarrow \emptyset \; / \; YCV\_\_ \begin{Bmatrix} // \\ \# \end{Bmatrix}$

[[kúnaa (unaffixed stem) = kúna. Final double vowels are permitted only when preceded by not more than one consonant and a word boundary.]]

Exceptions

These rules do not account for the following forms observed in the data:

(a) /neyi(y)/ (< néwú + yi), where */néwi(y)/ would be predicted, and /peyi(y)/ (< péwú + yi), where /*péwi(y)/ would be expected (the latter is, however recorded as an alternative form by Elbert (1947). The fronting of /é/ to /e/ in this environment seems in line with Trukese morphophonemic processes, but is not sufficiently regular to be accorded the status of a rule.

(b) /yóri(y)/ (< yaru + yi). The rounding of /a/ before a high front vowel cannot be accounted for on phonological grounds.

(c) /mwoŋeyaŋ/<mwoneya. This independent form may be explicable historically as a reduplicated form -- e.g. *mu/aŋe/aŋe (the */mu/to /mw/ correspondence is quite clear, and the assimilition of /a/ to /o/ in the environment / mw__ŋe would not be surprising. At any rate, this is a problem for historical linguistics rather than for synchronic phonology.

(d) yika yikena > /iik/ 'fish'. Both bases are found with the attributive -ni (/ike-n, ikene-n/ 'fish from, etc.'). One possible explanation is that the base ikena is from PMP *ikan > *ika (loss of final consonant), +-na 'his', where the affix has become fossilized, probably after the development of a classificatory system for possessives (neither stem for 'fish' may now take a possessive suffix). The new stem *ikana would,

through the application of a vowel harmony rule which still operates for forms with the shape #CaCa -- (see Rule (6) above), quite probably become ikene before the -ni suffix, which is now the only attributive suffix with which it is found. The reduced stem yika regularly becomes yike before -ni. The hypothesis advanced here is that /iik/ is the regular independent form derived from the reduced stem yika, and that the alternant yikena (/ikene-/), found only in combination with -ni, is a survival of an earlier suffixed form, which also included the stem yika.

(e) the noun /waa/ 'vein'. The base form of this noun is doubtful -- it may be waa exempt from rules applying to other forms of that shape (e.g. waa 'canoe'), or wa subject to compensatory lengthening, and with the shape /wóó/ before -mw (where womw > /woomw/ would be expected), and remaining /waa/ before -ni, -mi, etc., perhaps by analogy with nouns with final aa in the base form.

WORKED EXAMPLES

Below are derivations which show the application of the rules to various base forms. Within the range of the examples there is at least one case of the application of each rule. It should be noted for the purposes of rule 26 that it is assumed that the stem + suffix combinations are bounded by #, unless the contrary is stated explicitly.

Index to examples

Rule	Example Numbers
(1)	1, 6
(2)	2, 3, 5, 45
(3)	12, 29,-36, 40
(4)	1-55 except 2, 5, 6, 10,13, 20, 21, 37, 45, 51
(5)	4, 54
(6)	7, 14, 16, 19, 27, 28
(7)	17, 18, 19, 20, 37, 51, 52
(8)	25, 26
(9)	2, 5, 6, 7, 8, 9, 21, 27, 28, 45
(10)	9, 10, 11
(11)	23, 41
(12)	22, 23
(13)	15, 16
(14)	17
(15)	45

Rule	Example Numbers
(16)	43
(17)	44
(18)	46, 47, 48
(19)	37
(20)	-- see examples in notes
(21)	-- see examples in notes
(22)	" " " "
(23)	7,. 28
(24)	1-55
(25)	50
(26)	22, 23, 24, 39, 41
(27)	13, 49, 55
(28)	19, 21, 22, 27, 40, 41, 51, 52
(29)	51
(30)	4, 25, 26, 32
(31)	35
(32)	13

+++++

[1]

#sáni# + na#

1 #seni#na#

4 #senina#

[2]

#mari#+ mw#

2 #mári#mw#

4 #márimw#

24 #senin#

/senin/

[3]

#nawú# + ni#

2 #néwú#ni#

4 #néwúni#

24 #néwún#

/néwún/

[4]

#márumw#

/marumw/

[4]

#waa# + miyi#

4 #waamiyi#

5 #wáámiyi#

24 #wáámiy#

30 #wáámi#

/wáámi/

[5]

#canú# + mw#

2 #cénu#mw

4 #cénúmw#

9 #cénumw#

/cénumw/

[6]

#sáni# + mw#

1 #seni#mw#

4 #senimw#

9 #senumw#

/senumw/

[7]

#ficiiy// + ku#

4 #ficiiyku#

6 #ficiiku#

9 #ficiuku#

23 #ficiyuku#

24 #ficiyuk#

/ficiyuk/

[8]

#fiti// + ku#

4 #fitiku#

9 #fituku#

24 #fituk#

/fituk/

[9]

#seni// + ku#

4 #seniku#

9 #senuku#

[10]

#fase# + mw#

4 #fasemw#

10 #fasomw#

10 #sonuku#

24 #sonuk#

/sonuk/

[11]

//re// + a//

4 //rea//

10 //raa//

/raa/

/fasomw/

[12]

#yataay// + a# + too#

3 #yataay//e#too#

4 #yataaye#too#

(... repeat cycle)

4 #yataayetoo#

24 #yataayeto#

/ataayeto/

[13]

#kúnaa//(unaffixed)

32 #kúna//

/kúna/

cf. #kúnaa// +a#

3 #kúnaa//:#

4 #kúnaa:#

14 #kúnaa#

24 #kúna#

/kúna/

[14]

#nnetooy// + yeyi#

4 #nnetooyyeyi#

6 #nnetooyeyi#

24 #nnetooyey#

/nnetooyey/

[15]

#yamwécú// + yeyi#

4 #yamwécúyeyi#

13 #yamwécúweyi#

24 #yamwécúwey#

[16]

#kunnuw// + yeyi#

4 #kunnuwyeyi#

6 #kunnuyeyi#

13 #kunnuweyi#

• /amwécúwey/

[17]

#yimwa# + :ri#

4 #yimwa:ri#

7 #yimwe:ri#

14 #yimweeri#

24 #yimweer#

/imweer/

[18]

#sama# + ni#

4 #samani#

7 #semeni#

24 #semen#

/semen/

[19]

#yataay// + ku#

4 #yataayku#

6 #yataaku#

7 #yataoku#

24 #yataok#

28 #yatóók#

/atóók/

[20]

#kuusa# + mw#

4 #kuusamw#

7 #kuusomw#

/kuusomw/

[21]

#páá# + mw#

4 #páámw#

9 #páomw#

28 #páámw#

/páámw/

[22]

#kúnaa// + ;ire#

4 #kúnaa;ire#

12 #kuna;ire#

24 #kúna;ir#

26 #kúnair#

28 #kúneer#

/kúneer/

[23]

#ficiiy// + ;ire#

4 #ficiiy;ire#

11 #ficii;ire#

12 #fici;ire#

24 #fici;ir#

26 #ficiir#

/ficiir/

[24]

#fiti// + ;ire#

4 #fiti;ire#

24 #fiti;ir#

26 #fitiir#

/fitiir/

[25]

#nikiinónu# +yi#

4 #nikiinónuyi#

8 #nikiinóniyi#

24 #nikiinóniy#

30 #nikiinóni#

/nikiinóni/

[26]

#wúkkú# + yi#

4 #wúkkúyi#

8 #wúkkiyi#

24 #wúkkiy#

30 #wúkki#

/wúkki/

[27]

#rayisééw// + ku#

4 #rayisééwku#

6 #rayisééku#

9 #rayiséoku#

24 #rayiséok#

28 #rayisook#

/rayisook/

[28]

#nnetááy// + ku#

4 #nnetááyku#

6 #nnetááku#

9 #nnetáoku#

23 #nnetáyoku#

24 #nnetáyok#

/nnetáyok#

[29]

#yataay#/ + a#

3 #yataay//e#

4 #yataaye#

24 #yataay#

/ataay/

[30]

#kúnaa// + a#

3 #kúnaa//:#

4 #kúnaa:#

14 #kúnaa#

24 #kúna#

/kúna/

[31]

#yamwécú// + a#

3 #yamwécú//a#

4 #yamwécúa#

24 #yamwécú#

/amwécú/

[32]

#kunnuw// + a#

3 #kunnuw//u#

4 #kunnuwu#

24 #kunnuw#

30 #kunnu#

/kunnu/

[33]

#fiti// + a#

3 #fiti//a#

4 #fitia#

24 #fiti#

/fiti/

[34]

#púnnúúw// + a#

3 #púnnúúw//é#

4 #púnnúúwé#

24 #púnnúúw#

/púnnúúw/

[35]

#sineey// + a#

3 #sineey//e#

4 #sineeye#

24 #sineey#

31 #siney#

/siney/

[36]

#yamwoow// + a#

3 #yamwoow//o#

4 #yamwoowo#

24 #yamwoow#

/amwoow/

[37]

#sama# + mw#

4 #samamw#

7 #somomw#

19 #somwomw#

/somwomw/

[38]

(#yamwécú// + a#) + too#

([31], Rule 24 excluded)

28 #yamwécaa#too#

(... repeat cycle)

4 #yamwécaatoo#

24 #yamwécaato#

/amwécaato/

[39]

#fiti// + kemiyi# + wuu#

4 #fitikemiyi#wuu#

26 #fitikemii#wuu#

(... repeat cycle)

4 #fitikemiiwuu#

24 #fitikemiiwu#

/fitikemiiwu/

[40]

#fiti// + a# + wuu#

3 #fiti//a#wuu#

4 #fitia#wuu#

28 #fitaa#wuu#

(... repeat cycle)

4 #fitaawuu#

24 #fitaawu#

/fitaawu/

[41]

#kunnuw// + ;ire#

4 #kunnuw;ire#

11 #kunnu;ire#

24 #kunuu;ir#

26 #kunnuir#

28 #kunnuur#

/kunnuur/

[42]

(#fiti// + a#) + too#

([33], Rule 24 excluded)

28 #fitaa#too#

(... repeat cycle)

4 #fitaatoo#

24 #fitaato#

/fitaato/

[43]

(#púnnúúw// + a#) + nóó#

([34], Rule 24 excluded)

(... repeat cycle)

4 #púnnúúwénóó#

16 #púnnúúwónóó#

24 #púnnúúwónó#

/púnnúúwónó/

[44]

(#yamwoow// + a#) + táá#

([36], Rule 24 excluded)

(... repeat cycle)

4 #yamwoowotáá#

17 #yamwoowetáá#

24 #yamwoowetá#

/amwoowetá/

[45]

#pawú# + mw#

2 #péwú#mw#

4 #péwúmw#

9 #péwumw#

15 #powumw#

/powumw/

[46]

#sineey/ /+ ku# + noŋe#

4 #sineeyku#noŋe#

6 #sineeku#noŋe#

10 #sineoku#noŋe#

23 #sineyoku#noŋe#

(... repeat cycle)

4 #sineyokunoŋe#

18 #sineyokonoŋe#

24 #sineyokonoŋ#

/sineyokonoŋ/

[47]

(#ficiiy// + ku#) + nóó#

4 #ficiyukunóó#

18 #ficiyukónóó#

24 #ficiyukónó#

/ficiyukónó/

[48]

(#fiti// + ku#) + tiwe#

4 #fitukutiwe#

18 #fituketiwe#

24 #fituketiw#

/fituketiw/

[49]

#yimwa# (unaffixed)

24 #yimw#

27 #yiimw#

/iimw/

[50]

#wúkkú# (unaffixed)

24 #wúkk#

25 #wúk#

27 #wúúk#

/wúúk/

[51]

#fataa# + mw#

4 #fataamw#

7 #fataomw#

28 #fatóómw#

29 #fótóómw#

/fótóómw/

[52]

#wwaa# + mi#

4 #wwaami#

7 #wwaemi#

28 #wwaam#

/wwaam/

(= Dyen, Goodenough wuwaam)

[53]

#wwaa# (unaffixed)

24 #wwa#

/wwa/

(Goodenough, Dyen wuwa)

[54]

#waa# + mi#

4 #waami#

5 #wáámi#

24 #wáám#

/wáám/

[55]

#waa# (unaffixed)

24 #wa#

27 #waa#

/waa/

Index to base forms mentioned in notes and examples.

The following syntactic information is given with each form:

N = noun, V = verb, M = predication marker,
O = object suffix, P = attributive pronoun suffix,
D = directional suffix, C = conjunctive attributive suffix;
o, p, d, t, c = may be followed directly by
P, P, D, T, C respectively.

References are to notes contained in the rules, to worked examples [brackets], and to the notes concerning exceptions (parentheses). All forms are base forms; a hyphen (-) indicates absence of a word boundary, // indicates an incomplete word boundary; complete word boundaries (#) are unmarked.

-a// T 'completed' intro, 10, 28, [11]

-a O, d 'him' intro, 3, 16, 17, 28, [12, 13, 29-36, 38, 40, 42-44]

yamwécú// V, o 'grab' 3, 28, [15, 31, 38]

yamwoow// V, o 'cause to sink' 3, [36, 44]

yaru N, p, c (no indep. form) 'beside', (b)

yataay// V, o 'destroy' 3, 6, 7, 10, [12, 19, 29]

//yaw// M 'I excl. pl, or 2 sg' intro

-ca P 'our, incl.' intro

canú N, p, c 'liquid' 8, 9, 14, [5]

cuucuu N, p, c 'urine' 28

//ye// M, t, '3 sg.' intro, 27, 28

-yeyi O, d 'me' intro, 13, [14-16]

yéé N, p, c 'fishline' 28

yéésé N, p, c (always iterated in indep. form) 'brother-in-law' 20

fase N, p, c 'nest' 10, 14, [10]

fataa N, p, c (no indep. form) 'planted object' 2, 28, [51]

fáni N, c 'church' 1

ficiiy// V, o 'cut hair' 3, 23, [7, 23, 47]

fiti// V, o 'accompany' 3, 28, [8, 24, 33, 39, 40, 42, 48]

-yi P 'my' intro, 8, 28, 30 (a), (b), [25, 26]

yika N, c 'fish' 27, (d)

yikena N, c (no indep. form) 'fish'

yimwa N, p, c 'house' 7, 14, 24, 27, [17, 49]

-;ire O, d 'them' intro, 12, 28, [22-24, 41]

kacitoo N, c 'movies' 28

ke M, t '2 sg.' intro, 10

-kemi O, d 'us, excl.' intro

-kemiyi O, d 'you, pl.' intro, [39]

-kica O, d 'us (incl.)' intro

-ku O, d 'you, sg.' intro, 7, 9, 18, 23, 24, 28, [7-9, 19, 27, 28, 46-48]

kunnuw V, o 'turn' 3, 13, 28, [16, 32, 41]

kuusa N, p, c 'blanket' (20)

kúnaa V, o 'see' 3, 5, 7, 12, 28, 32, [13, 22, 30]

mari N, p, c (Iterated indep. form) 2, 21, 22, [2]

masa N, p, c 'eye' 7

-mi P 'our (excl)' intro, [52, 54]

-miyi P 'your (pl.)' intro, [4]

-mw P 'your (sg.)' intro, 7, 9, 10, 23, 24, 28, [2, 5, 6, 10, 13, 20, 21, 37, 45, 51]

mwoŋeya N, p, c 'brother' (c)

-na P 'his, etc.' intro, 10, except (d), [1]

nawú N, p, c 'child' 2, 15, (a), [3]

-ne// T 'immediate future' intro

-ni C 'relating to' intro, 21, 28, (d), [3, 18]

nikiinoŋu N, p, c 'buttock' [25]

nnenóóy// V, o 'look away at' 3

nnetááy// V, o 'look up at' 3, 23, [28]

nnetooy// V, o 'look towards' 3, [14]

-noŋe D 'inward' intro, [46]

-nóó D 'away' intro, 3, 16-18, [43, 47]

nóó V 'go (=-nóó) 27

naafú, nafe N, p (3rd sg. only), c 'fathom' intro

neni V, o 'towards, give to' 9, 24

pawú N, p, c 'arm' (a), [45]

payippe N, c 'pipe' 25

páá N, p, c 'feces' [21]

pecee N, p, c 'leg' 14, 23, 28

púnnúuw// V, o 'break' 3, 16, 28, [34, 43]

-pwaapw// T 'unspecified future' intro

-pwe// T 'future' intro

pwii N, p, c (iterated in unsuffixed form) 'brother'
21, 23, 28, 30

rayisééw// V, o 'shave' 3, 7, [27]

//re// M, t '3 pl' intro, [11]

-:ri P 'their' intro, 2, 4, 4 [17]

sama N, p, c 'father' 19, [18, 37]

-sapw// T 'future, hypothetical negative' intro

sáni N, p, c 'rope' 30 [1, 6]

-se// T 'actual negative' intro

seni// V, o 'from' [9]

sineey// V, o 'know' 3, 18, 23, 24, 30 [35, 46]

//siy// M, t '1 incl. pl.' intro, 30

-táá D 'upward' intro, 16, [44]

-te// T 'prohibition' intro

-tiwe D 'downward' intro, 17, [48]

-too D 'hither' intro, 3, 0, 16, 24, 28, [12, 38, 42]

wa N, p, c 'vein' (e)

waa N, p, c 'canoe' 14, [4, 54, 55]

wocaa N, p, c (no indep. form) 'edible meat and fruit' 5

//wow// M, t '1 excl. pl., 2 pl.' (=//yaw//) intro

wóku N, p, c 9

-wuu D 'outward' intro, 16, [39, 40]

wúkkú N, p, c 'nail, claw' [26, 50]

//wùw// M, t '1 sg.' intro, 30

wwaa N, p, c 'egg' 28, [52, 53]

APPENDIX II

NOTES ON DYEN'S SKETCH

In the preface to the published version of his Sketch of Trukese Grammar Dyen says of his work 'although the description is not exhaustive, it is my hope that few important features of Trukese grammar have escaped being noted' (1965b:ix). There can be little doubt that his hope is not in vain. The remarks which follow should therefore be looked at as supplementary to, rather than critical of, Dyen's analysis. There are few brief descriptive grammars which are as clear, accurate and comprehensive as is his.

Phonology

The section on phonology and sandhi rules (§§1-65, pp. 1-10) may serve as a model for all Trukese dialects. Most of the rules Dyen states apply to Faichuk dialects generally; in the Eastern dialects various rules seem to be suspended in different speech communities, especially those relating to 'vowel harmony' and the assimilation of contiguous consonants. Although this was not mentioned by Dyen, one of the characteristic differences between the Eastern and Western dialect groups seems to be the much higher frequency of long (double) vowels in the speech of the latter (e.g. the numeral classifiers /-ssát/ and /-ccoc/ are /-ssáát/ and /-ccooc/ respectively in the Faichuk area, while the object affix -kemi /-kem/ and the

postclitic demonstrative /en/ are -keemi/-keem/ and /een/ in the West. This tendency towards short vowels (particularly in word final position) in the East may in part account for Elbert's (1947) failure to mark vowel length except in a handful of examples.

Syntax

§§66-183, pp. 11-31 deal with syntax. In §73 Dyen lists "subject pronouns" as a subclass of personal pronouns. They are treated as predication markers rather than pronouns in my analysis, for reasons stated in Chapter 2.

Demonstratives. When discussing the demonstratives, Dyen remarks (§77) that apart from the contrast between the proclitic jewe /ewe/[1] and enclitic we, the proclitic and enclitic forms were distinct only in texts given by one informant and are 'taken to be dialect variants.' This distinction is, in fact, general in Eastern Lagoon Trukese, where the 'proclitic' forms have initial ye- which is absent from the enclitic demonstratives. In §78, on the evidence of a unique example in his texts, Dyen sets up an independent form of demonstrative. He says 'I have no instances of the corresponding plurals, although it seems likely to me that they would turn up upon further investigation.' They are present in all Eastern dialects, where what Dyen calls 'independent' and 'proclitic' forms are morphologically identical (and there seems no reason to regard them as in any way different), with the

enclitic demonstratives forming a morphologically distinct series. In §84 Dyen points out that these three types of demonstrative 'are treated as variant shapes of single units'. The position of the enclitic type in relation to the independent-proclitic series has been further discussed in Chapter 3.

In §§75, 76 and 79 demonstratives with the morpheme -oomw are cited, e.g. joob /oomw/ ' "that" (out of sight but known to be in existence)'. These forms are not found in Eastern dialects. The interrogative jifa? /ifa/ 'where? what?' is listed in §80 along with other interrogatives like jijë /iyé/ 'who?'. Dyen does not mention that this morpheme is obligatorily inflected for plurality by the infixation of -kke- in the same way as the demonstratives, which would make it seem better to group /ifa/ with them rather than with the interrogatives which do not have distinct plural forms. The evidence for this proposal is strengthened by the fact, also not mentioned by Dyen, that, like the predicative demonstratives, /ifa/ is obligatorily followed by an independent pronoun when an animate being is the object of the enquiry, e.g. /ifa iiy ewe áát?/ 'where is the boy?' (cf. /ifa ewe toroŋkan/ 'where's the oildrum?'). These constructions are discussed in Chapter 4 (section on predicative demonstratives).

Attribution. In §89-129 Dyen discusses the attributes of the noun. He distinguishes two types of attribute -- (a) conjunctive which follows the head 'which is in the construct form', and (b) absolute which precedes or follows the head which is in

the independent form. In S90 Dyen states 'The meanings of the conjunctive attributes taken together with the head are such that English of inserted between the translation of the head and that of the attribute will usually do ... [/pwúnúwen Sóón/] "wife of John, John's wife" ...'

The construct form to which Dyen refers consists, in my analysis, of a noun stem plus the attributive suffix ni. The final vowel in the suffix is never overtly observable, but may be deduced from the raising and fronting effect the suffix has on the final vowel of the stem to which it is attached, a deduction which is confirmed by comparative historical evidence. /pwúnúwen Sóón/ is thus formed from the noun stem pwúnúwa 'spouse', the attributive suffix -ni, and the proper noun Sóón. The vowel of the affix will condition the final vowel of the preceding stem, in this case raising and fronting /a/ to /e/ -- pwúnúweni which becomes /pwúnúwen/ after deletion of the word-final vowel. In Faichuk dialects Sandhi rules operate to assimilate a final /n/ to a following /s/, hence /pwúnúwen Sóón/ appears as qynywes sȣȣn in Dyen's script.

The attributive particle -ni together with the phrase which follows it (Dyen's 'attribute') has been treated as a unit in my analysis, e.g. in the general discussion of syntagmatic constructions in Chapter 3), and termed the 'attributive phrase'. Where Dyen distinguishes 'alienable nouns' from those which may take attributive suffixes (attributive pronouns, substitutes for attributive phrases, in the analysis presented

in this study) (§107), I have set up a dichotomy between possessive and referential attribution (Chapter 5). Possessive attribution includes not only Dyen's possessive and extended possessive constructions (§§108, 110), but also cases where one of his 'inalienable' nouns is 'possessed' by an attributive pronoun suffix. Thus where Dyen regards /pwéti-y/ 'my nose' as formally similar to /niyossi-y/ 'picture of me', and different from the possessive construction /áá-y niyos/ 'my picture' (§109), I have derived /pwéti-y/ from /pwéti-y pwéét/ (with the redundant element deleted), and group it as a possessive construction similar to /áá-y niyos/ or /neyi-y pwáápwa/ 'my turtle', at the level of deep structure, in contrast with the referential /niyossi-y/ or /pwáápwáán Seyipen/ 'turtle from Saipan'. I retain Dyen's distinction between nouns marked for collocation with attributive suffixes and those which are not, but offer a different explanation for the differences in the surface expression of possession.

Dyen notes in §91 that the attribute can be a 'noun' formed by the particle /meyi/ -- he gives as his example /núnú-n meyi manaw/ 'soul of the living one'. It should be pointed out, however, that this type of construction seems most commonly to imply a benefactive relationship between the head and the attribute, thus /safeye-n meyi semmwen/ means 'medicine for the sick', not 'medicine of the sick one'.

In §95 Dyen remarks that 'sometimes the combination of head and attribute seems to be reversed from the English point of view' and gives a few examples, e.g. wäätteen ɑöör /watteen

pwóór/ 'large-of box, large box', meji patykkicin bëgë /meyi patúkkici-n mwéŋé/ 'coldness-of food -- cold food' and jerywaanyyn maram /érúwáánúú-n maram/ 'fourth-of month -- fourth month'. According to my informants, there are very few words which may function like /watte/ (Faichuk /wáátte/) in this construction, and all the examples I was able to obtain were of statives referring to size, e.g. /ewe kúkkúnún pwóór/ 'the small box' (/kúkkún/ 'be small'). It seems that in these cases the emphasis is on the size of the object concerned (so that /ewe wattee-n pwóór/ might better be translated 'that largeness related to boxes', as against the normal 'adjectival' construction, where the size is subordinate to the object manifesting it, /ewe pwóór meyi watte/ 'the box (which is) large').

My informants did not accept the sequence /meyi patúkkici-n mwéŋé/ as grammatical (although it may well be quite acceptable in the Romanum dialect), and suggested that it may be derived from an exclamatory sentence such as /mé patúkkici-n eey mwéŋé/ 'intensive coldness-of this food -- how cold this food is!'. However this may be, a group of statives denoting an inherent quality may be followed by an attributive phrase, and the resulting combination may then be preceded by the particle /meyi/ and function in much the same way as an English adjective -- e.g. /araw/ 'blue', /arawe-n mataw/ 'blueness-of sea', /meyi arawe-n mataw/ 'sea-blue', /áá-y sarimate-n túkken meyi arawe-n mataw/ 'my sea-blue swimming trunks' (cf. /ewe

arawe-n mataw/ 'the blue of the sea'). It should also be noted that only statives denoting inherent quality may be used in an 'adjectival' construction with /meyi/ (e.g. /ewe pwóór meyi kúkkún a-a tta/ 'the small box was damaged'); this is not explicitly stated by Dyen, who did not attempt to subclassify Trukese verbs, apart from noting the morphologically marked transitive -- intransitive dichotomy.

Particles. What Dyen distinguishes as primary verbal particles (§§150) (mainly tense, aspect and negative markers) are treated by him as independent words. In my own analysis they are regarded as suffixed to the 'subject pronouns'. Goodenough (in progress) also treats them as suffixes. In §§152 Dyen discusses 'nouns as preceding attributes of the verb' and says only three examples have been found -- the independent pronouns /ŋaaŋ/ 'I' and /ii/ 'he, she, it' and the numeral compound /ekis/ 'a little'. His examples are not very convincing -- for /ii/ he gives je se jii wor /ese ii wor/ 'it's nothing!' Here jii is not the homophonous pronoun, but an emphatic interjection commonly used in such expressions, and without any connotations as to person or number. A similar example with /ŋaaŋ/ wy cëg gaag etiwu ... /wú cék ŋaaŋ etiwu/ seems to be rejected by native speakers as an ungrammatical inversion of /ŋaaŋ, wú cék etiwu/ 'I (as for me), I'm just going out'. His analysis of /ekis/ as a noun (numeral) in the sentence wyw a cëk ekis soon /wúwa cék ekis soon/ does not seem to be warranted. Morphologically /ekis/ consists of a numerative

prefix ye- 'one' and a classificatory base -kisi 'portion', and does in fact function as a numeral classifier (quantifier) in appropriate environments (see Chapter 5), but seems clearly to function here as a secondary verbal particle (i.e. a particle occurring after the 'subject-pronoun' and tense/aspect markers and before the verb. While the form of the word is obviously that of a numeral, it would seem reasonable to regard its use as a 'preceding attribute of the verb' as a case of multiple class membership, as it would be the only numeral or noun which functions in this way.

Morphology

From §184 to the end of this monograph (§347) Dyen presents a careful study of Trukese morphology. In §186-187 he describes a bipartite morphological alternation characterizing affixable forms -- a base from which a stem is derived when an affix is present. Where the base is different from the unaffixed form of a word, a third alternate, the independent form is posited. Thus, he says, the base péw- and the stem péwú- have as their independent form paaw 'arm'. The stem is equivalent to the base and a 'stem vowel' which occurs between the base and the affix. He proceeds to give a very comprehensive treatment of the morphophonemics of attaching attributive suffixes to nouns and object suffixes to noun and transitive verb stems respectively. His rules are partly phonological and partly morphological, but it seems that much of the

'morphological' conditioning can be explained on phonological grounds, if suitable base forms are reconstructed for both the affixed verbs and nouns, and the suffixes.

An attempt to replace Dyen's rules for attributive and object suffixation with a series of phonological rules is made in the Appendix I of this study. The difference in the treatment of the affixes (a prerequisite for explaining alternations in the preceding bases on phonological grounds) is illustrated in Table II.1.

Causative, miscellaneous, and plural affixes. In discussing causative affixation Dyen has used phonological criteria, stating in §255 that 'the vowel of the prefix jA- [ya-] is with few exceptions of the same location as, and never higher than, the first vowel of the base'. He describes in §262 what he regards as a separate prefix, kkA- which 'has the same vowel before the base as appears in the prefix jA-. Unlike the prefix jA-, the prefix kkA- appears only in intransitives.' Goodenough (1963:79-80) has pointed out that the two 'prefixes' are actually historically identical. Dyen gives as examples pwic 'be hot' -- kkapwic 'do cooking' (he does not mention that /kkapic/ actually corresponds to /apwici/ 'cook something' -- both derived from a combination of /pwic/ 'be hot' and a causative prefix. There are many such pairs -- e.g. /kkapas/ 'talk' /apasa/ 'say something', /kkémwéc/ 'hold', /émwécú/ 'hold something'). Dyen has elsewhere pointed out (1949:425) that PMP *K is sometimes reflected by zero in modern

TABLE II.1

TRUKESE ATTRIBUTIVE AND OBJECT AFFIXES

Affixes	1st sg.	2nd sg.	3rd sg.	1 in. pl.	1 ex. pl.	2nd pl.	3rd. pl.	conjunctive
Attributive:								
Dyen	-y -i	-mw -umw -omw -ómw	-n	-c	-m	-mi	-r	-n
Benton	-y	-mw	-na	-ca	-mi	-miyi	-:ri	-ni
Object:								
Dyen	-ey	-uk -ok -ók -wuk -wok -wók	-Ø	-kic	-keem	-keemi	-r	
Benton	-yeyi	-ku	-a	-kica	-kemi*	-kemiyi	-;ri	

(* -keemi would be an appropriate form for the Faichuk dialects)

Trukese. Goodenough points out that where initial *k is reflected by /k/ in Trukese, it is frequently a geminate cluster which survives rather than the single phoneme. Goodenough interprets the gemination here (as also with other consonants) to be evidence of earlier reduplication, and shows that (after comparison with Gilbertese) the Trukese yA- causative prefix can be reconstructed as pre-Trukese *ka-. The /pwic, apwici, kkapwic/ series (and the others like it) can now be explained.

(12) /pwic/ *kapwici /apwicí/

'be hot' 'cause it to be hot' 'cook something'

*kakapwic /kkapwic/

'repeatedly cause to be hot' 'do cooking'

Goodenough also shows how a third prefix described by Dyen, 'jAkkA-' which 'derives distributives from numerative compounds' (S270) may be explained as a secondary reduplication -- /ékké-ruuwu/ 'two by two' from *kékké-ruu-wu (*kékéruuwu *kkéruuwu (with secondary reduplication) *kékkéruuwu). The initial j (/y/) in Dyen's citations is clearly a much more recent development, and is apparent only in sandhi and morphophonemically (see Appendix I and also discussion above in Chapter 1). The plural formative (also a geminate /k/) found in demonstratives is not included in Dyen's treatment of prefixes or infixes, although it is present in some examples cited in his section on demonstratives. It takes two forms -- a prefix kkV- before enclitic demonstratives, and an infix of the same shape which occurs after the first vowel of

independent (enclitic) and predicative demonstratives. The vowel of the affix is the same as the following vowel of the stem in which it occurs, /we/ 'that', /kkewe/ 'those', /eey/ 'this' /ekkeey/ 'these', /ina/ 'that there', /ikkana/ 'those there'. In §74 Dyen records the plural forms of the (affixed) demonstratives with only a single consonant, although in §76 he writes the same forms with geminate consonants. Goodenough records the forms as having double conconants (1967). Although Goodenough does not mention the occurrence of the kk infix in demonstratives in his 1963 article, it seems reasonable to suppose it has a common origin with the jAkkA- distributive already discussed.

Dyen does discuss another /kk/ infix 'preceded by a vowel which is the same as that of the base following the double k' (§273). This infix serves the function of initial syllable reduplication in bases with initial /w/ and /y/. He says that 'since it has the same durative meaning, it is supplementary to the reduplication which occurs with bases which begin with other consonants'. Thus we have /mwéné/ 'eat', /mwémmwéné/ 'regularly eat', /kkapas/ 'talk', /kakkapas/ 'regularly talk', /wùn/ 'drink', /wùkkùn/, /ereni/ 'say it', /ekkereni/. Goodenough derives this formative from the same process as that discussed above -- *kaka- > *kka- > *kakka > /akka/ as in /àkkác/ 'repeatedly shift sail' from *kkác > *kác > /ác/ 'shift sail'.

> 'the resulting -kk- infix would have provided a new pattern for expressing iterative or durative meaning with all words beginning with semivowels. Thus the infix would have been extended to forms which never had an initial k, such as wyn 'drink' (PMP *inum) to form wykkyn 'be drinking' ... (1963:79)

Interestingly, although this may not be found in some dialects (Dyen S271) says that 'reduplication is limited to bases which begin with a consonant other than a semivowel'), forms with observable /w/ (as against those where the systematic /w/ is not regarded as phonemic by most native speakers of Eastern dialects) may be 'reduplicated' either by infixation or by repeating the initial CV-, e.g. /witi/ 'wait for someone', /wikkiti/, /wiwiti/. This is not permissible with words where the semivowel is purely systematic (e.g. words like /wún/, and all those with initial /y/). This, together with the 'ambiguity' of /w/ and /y/ in many environments, may provide evidence for the setting up of three 'semivowels' in Trukese -- /w/ and /y/ where these are clearly phonemic or at least unambiguous on the surface, and a third entity, say /h/, which would mediate between them, and cover those cases where the system points to the presence of 'something', but where the 'something' does not seem to be clearly assignable to either /y/ or to /w/.

NOTES TO APPENDIX II

[1] Citations in Dyen's orthography are doubly underlined, and followed by a citation in the phonemic transcription which has been used in the text of the present study, where the two orthographies differ. References to Dyen's monograph are given in the form of section numbers (e.g. S79), and to further discussion in this work in terms of the chapter or chapters in which the topic is mentioned.

WORKS CITED

AUSTERLITZ, ROBERT. 1959. Semantic components of pronoun systems: Gilyak. Word 15:102-109.

BAZELL, C.E. (1954) 1966. The sememe. Readings in linguistics II, ed. by Eric P. Hamp et al., 329-340. Chicago, University of Chicago Press.

BENDER, BYRON W. 1966. Towards a systematic phonemicization of Marshallese. Paper read to 41st Annual Meeting of the Linguistic Society of America. New York.

BENTON, RICHARD A. 1967. Trukese: an introduction to the Trukese language for speakers of English. Honolulu, PALI, University of Hawaii (mimeo).

BERLIN, BRENT, & A. KIMBALL ROMNEY. 1964. Descriptive semantics of Tzeltal numeral classifiers. Transcultural studies in cognition, ed. by A. Kimball Romney and Ray D'Andrade. AA 66; no. 3, Pt. 2:79-98.

BLOOMFIELD, LEONARD. 1933. Language. New York, Holt, Rhinehart and Winston.

BREAL, MICHEL. (1900) 1964. Semantics: studies in the science of meaning. New York, Dover.

BUCHLER, IRA R. 1967. The analysis of pronominal systems: Nahuatl and Spanish. AL 9:37-43.

_____ & R. FREEZE. 1966. The distinctive features of pronominal systems. AL 8:78-105.

CASAGRANDE, JOSEPH B. 1966. Language universals in an anthropological perspective. Universals of language, ed. by J.H. Greenberg, 2nd ed., 279-298. Cambridge, Mass., M.I.T. Press.

CHOMSKY, NOAM. 1957. Syntactic structures. (Janua Linguarum 4). The Hague, Mouton & Co.

_____. 1964. Current issues in linguistic theory. (Janua Linguarum 38). The Hague, Mouton & Co.

_____. 1965. Aspects of the theory of syntax. Cambridge, Mass., M.I.T. Press.

_____ & MORRIS HALLE. 1968. The sound pattern of English. New York, Harper & Row.

CONKLIN, HAROLD C. 1962. Lexicographical treatment of folk taxonomies. IJAL 28.2 Pt. II, supplement; 119-141. Problems in lexicography, ed. by Fred W. Householder and Sol Saporta. Publication 21 of the Indiana University Research Center in anthropology, folklore and linguistics. Bloomington, Indiana.

DAHL, OTTO CHR. 1951. Malgache et maanjan-une comparaison linguistique. Oslo, Egede-Instituttet.

DYEN, ISIDORE. 1949. On the history of Trukese vowels. Lg. 25:420-436.

_____. 1965a. A lexico-statistical classification of the Austronesian languages. Indiana University Publication in linguistics, Memoir 19 (IJAL).

_____. 1965b. A sketch of Trukese grammar. (American Oriental Series Essay No. 4). New Haven, Connecticut, American Oriental Society.

ELBERT, SAMUEL H. 1947. Trukese-English and English-Trukese dictionary. Honolulu, U.S. Naval Military Government.

_____. in progress. Grammar of Pulapese (ms.).

FILLMORE, CHARLES J. 1966. A proposal concerning English prepositions. MSLL 19, ed. by F.P. Dinneen, 19-33. Washington, Georgetown University Press.

FOLEY, JAMES. 1965. Prothesis in the Latin verbs sum. Lg. 41:59-64.

_____. 1967. Spanish plural formation. Lg. 43:486-493.

FORSTER, JANNETTE. 1964. Dual structure of Dibabawon verbal clauses. Oceanic Linguistics III,1:26-48.

GARVEY, CATHERINE J. 1964. A sketch of Malagasy grammar. Washington, Center for Applied Linguistics (mimeo).

GLEASON, H.A. JR. 1961. An introduction to descriptive linguistics. Revised ed. New York, Holt, Rhinehart & Winston.

GOODENOUGH, WARD H. 1963. The long or double consonants of Trukese. Proceedings of the ninth Pacific Science Congress, 1957, 3:77-80.

_____. 1966. Notes on Truk's place names. Micronesica 2:95-129.

_____. in progress. Trukese-English dictionary (ms).

GRACE, GEORGE W. 1955. Subgrouping of Malayo-Polynesian: a report of tentative findings. AA 57:337-339.

GREENBERG, JOSEPH H. 1966a. Some universals of grammar with particular reference to the order of meaningful elements. Universals of Language, ed. by J.H. Greenberg, 2nd ed., 73-113. Cambridge, Mass., MIT Press.

_____. 1966b. Language universals. Current trends in linguistics, Vol. III Theoretical foundations, ed. by Thomas A. Sebeok. The Hague, Mouton & Co.

HAAS, MARY R. 1942. The use of numeral classifiers in Thai. Lg. 18:201-205.

HARRIS, ZELIG S. 1951. Structural linguistics. Chicago, University of Chicago Press.

HOCKETT, CHARLES F. 1959. A course in modern linguistics. New York, The Macmillan Company.

_____. 1966. The problem of universals in language. Universals of language, ed. by J.H. Greenberg. 2nd ed., 1-29. Cambridge, Mass., MIT Press.

IZUI, HISANOSUKE. 1965. The languages of Micronesia: their unity and diversity. Lingua 14:349-359.

JACOB, JUDITH M. 1965. Notes on the numerals and numeral coefficients in Old, Middle and Modern Khmer. Lingua 15:143-162.

KATZ, JERROLD J. & PAUL M. POSTAL. 1964. An integrated theory of linguistic descriptions. (Research monograph no. 26). Cambridge, Mass., MIT Press.

LAMB, SIDNEY M. 1966. Outline of stratificational grammar. Washington, D.C., Georgetown University Press.

LONGACRE, ROBERT E. 1965. Some fundamental insights of tagmemics. Lg. 41:65-76.

McKAUGHAN, HOWARD P. 1959. Semantic components of pronoun systems: Maranao. Word 15:101-102.

MATTHEWS, W.K. 1950. Characteristics of Micronesian. Lingua 2:419-437.

NGUYEN DINH HOA. 1957. Classifiers in Vietnamese. Word 13:124-152.

PE, HLA. 1965. A re-examination of Burmese 'classifiers'. Lingua 15:163-185.

POSTAL, PAUL. 1964. Constituent structure: a study of contemporary models of syntactic description. Bloomington, Indiana University Press.

_____. 1966. On so-called 'pronouns' in English. MSLL, ed. by F.P. Dinneen, 177-206. Washington, D.C., Georgetown University Press.

QUACKENBUSH, HIROKO C. 1966. Lessons in Pulapese. Honolulu, University of Hawaii PCTC (mimeo).

ROBINS, R.H. 1968. A short history of linguistics. (Indiana University studies on the history and theory of linguistics). Bloomington, Indiana University Press.

SAPORTA, SOL. 1965. Ordered rules, dialect differences, and historical processes. Lg. 41:218-224.

STAROSTA, STANLEY H. 1967a. Tsou focus. Unpublished paper read to 42nd Annual Meeting of the Linguistic Society of America.

_____. 1967b. Sora syntax: a generative approach to a Munda language. Unpublished Ph.D. dissertation, University of Wisconsin.

WEINREICH, URIEL. 1966a. Explorations in semantic theory. Current trends in linguistics Vol. III Theoretical foundations, ed. by Thomas A. Sebeok, 395-477. The Hague, Mouton & Co.

_____. 1966b. On the semantic structure of language. Universals of language, ed. by J.H. Greenberg. 2nd ed., 142-216. Cambridge, Mass., MIT Press.

WINTER, WERNER. 1965. Tranforms without kernels? Lg. 41:484-489.

WOLFENDEN, ELMER. 1961. A re-statement of Tagalog grammar. Manila, Summer Institute of Linguistics and the Institute of National Language.