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MARICOPA MORPHOLOGY AND SYNTAX

University of California, Los Angeles

PH.D.

1980

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UNIVERSITY OF CALIFORNIA

Los Angeles

Maricopa Morphology and Syntax

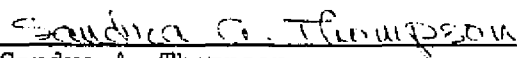
A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Philosophy
in Linguistics


by


Lynn Martha Gordon

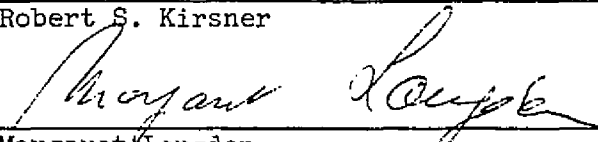
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1980

For Joan Tremblay Gordon and Warren Gordon,
my parents

TABLE OF CONTENTS

| | |
|---|------|
| List of Tables and Figures | vii |
| List of Abbreviations..... | viii |
| Acknowledgements..... | ix |
| Vita | xi |
| Abstract..... | xiii |
| Introduction..... | 1 |
| 0. Phonology and Orthography..... | 6 |
| 0.1 Phonemic Inventory..... | 6 |
| 0.11 Consonants..... | 6 |
| 0.12 Vowels..... | 7 |
| 0.13 Diphthongs..... | 8 |
| 0.2 Word Structure..... | 8 |
| 0.3 Rules and Processes..... | 9 |
| 0.4 Intonation..... | 13 |
| 0.5 Other Orthographic Conventions..... | 13 |
| Footnotes..... | 14 |
| 1. Simple Sentences..... | 15 |
| 1.1 An Introduction to the Verb..... | 16 |
| 1.11 Pronominal Prefixes | 16 |
| 1.12 Verbal Number..... | 21 |
| 1.13 Final Verb Suffixes | 22 |
| 1.2 The Noun Phrase..... | 27 |
| 1.21 Number on Nouns..... | 27 |
| 1.22 Expression of Possession | 29 |
| 1.23 Case Marking..... | 35 |
| 1.24 Locational Nouns..... | 44 |
| 1.25 Oblique Cases..... | 45 |
| 1.26 Oblique Case Markers on Verbs..... | 46 |
| 1.27 Attributive Adjectives..... | 47 |
| 1.28 Demonstratives..... | 48 |
| 1.29 Pronouns | 53 |
| 1.3 Reflexives and Reciprocals..... | 59 |
| 1.4 Conjunction of Noun Phrases..... | 61 |
| 1.5 Possessor Raising..... | 61 |
| 1.6 Negation | 65 |
| 1.61 Simple Negation..... | 65 |
| 1.62 Negation of Nouns..... | 66 |
| 1.7 Word order | 67 |
| Footnotes to Chapter 1..... | 69 |
| 2. The Verb,,,,,..... | 75 |
| 2.1 The Verb Stem..... | 75 |
| 2.11 Medio-passive <u>-v</u> | 75 |
| 2.12 Benefactive <u>-y</u> | 77 |
| 2.13 Causatives..... | 78 |

| | | |
|------|---|-----|
| 2.14 | Number | 81 |
| 2.2 | Final Suffixes | 93 |
| 2.21 | Final Suffixes on Main Verbs | 93 |
| 2.22 | Final Suffixes on Dependent Verbs | 106 |
| 2.3 | Non-final Suffixes | 125 |
| 2.31 | -t- | 125 |
| 2.32 | -nt- | 128 |
| 2.33 | -pa- and -pat- | 129 |
| 2.34 | -hot- | 130 |
| 2.35 | -hpuk- | 131 |
| 2.36 | -haay- | 131 |
| 2.37 | -tam- | 132 |
| 2.38 | -hper- | 133 |
| 2.39 | -ma- | 133 |
| 2.4 | Co-occurrence and Order of Non-final Suffixes | 134 |
| 2.5 | Vowel Alternations in Vowel Final Stems | 135 |
| 2.6 | Prefixes | 137 |
| 2.61 | nyi- | 137 |
| 2.62 | nya- | 137 |
| 2.7 | Clitics | 139 |
| 2.71 | Enclitic -shaa | 130 |
| 2.72 | Proclitics | 141 |
| | Footnotes to Chapter 2 | 152 |
| 3. | Verbs and Auxiliaries | 155 |
| 3.1 | Auxiliaries | 155 |
| 3.2 | BE, DO, SAY and BE LIKE | 157 |
| 3.21 | <u>duu-m</u> | 158 |
| 3.22 | <u>wii-m</u> | 158 |
| 3.23 | <u>'ii-m</u> | 159 |
| 3.24 | <u>'ii-m</u> and <u>wii-m</u> | 164 |
| 3.25 | <u>duu-m</u> , <u>wii-m</u> , and <u>'ii-m</u> | 166 |
| 3.26 | <u>lyvii-k</u> | 180 |
| 3.27 | <u>duu-m</u> , <u>wii-m</u> , <u>'ii-m</u> , and <u>lyvii-k</u> | 185 |
| 3.3 | Locational Verbs | 193 |
| 3.31 | <u>va-k</u> | 193 |
| 3.32 | <u>v'aw-m</u> | 193 |
| 3.33 | <u>dik-k</u> | 193 |
| 3.34 | <u>uuvaa-k</u> | 194 |
| 3.35 | Features of Locational Verbs | 194 |
| 3.4 | Motion Verbs | 197 |
| 3.41 | Main Verbs | 198 |
| 3.42 | Inchoative Auxiliaries | 198 |
| 3.43 | Progressive Auxiliaries | 199 |
| 3.5 | Auxiliaries II | 200 |
| 3.6 | Summary | 201 |
| | Footnotes to Chapter 3 | 202 |
| 4. | Complex Sentences | 204 |
| 4.1 | Expression of Case Relations through Predication | 204 |
| 4.2 | Complement Clauses | 206 |
| 4.21 | Action Nominalizations | 206 |
| 4.22 | Switch Reference Marked Complement Clauses | 212 |

| | | |
|------|--|-----|
| 4.23 | Future Complements of <u>shuupaw-m</u> | 219 |
| 4.24 | Complements of <u>'ii-m</u> | 220 |
| 4.3 | Modification of the Noun | 224 |
| 4.31 | Adjectives | 224 |
| 4.32 | Switch Reference Marked Verbs | 225 |
| 4.33 | Perfective Marked Clauses | 226 |
| 4.34 | Nominalizations | 228 |
| 4.35 | Summary | 236 |
| 4.4 | Temporal Clauses | 237 |
| 4.41 | <u>nya-</u> 'when, while' | 237 |
| 4.42 | 'while' | 240 |
| 4.43 | 'before' | 241 |
| 4.44 | <u>-hpuk-</u> 'first' | 241 |
| 4.45 | <u>-nyk</u> 'prior to' | 242 |
| 4.46 | 'since' | 243 |
| 4.47 | Summary | 246 |
| 4.5 | Reason Clauses | 246 |
| 4.51 | Switch Reference | 246 |
| 4.52 | Switch Reference, Existential Verbs and Demonstratives | 248 |
| 4.6 | Clausal Conjunction | 251 |
| 4.61 | Juxtaposition of Clauses | 251 |
| 4.62 | Existential Verbs in Conjunction | 253 |
| 4.63 | Summary | 261 |
| 4.7 | Conclusions | 261 |
| | Footnotes to Chapter 4 | 263 |
| 5. | Innovation and Grammaticization | 265 |
| 5.1 | Synchronic Variation and Syntactic Change | 265 |
| 5.2 | Multiple Analyses | 273 |
| 5.21 | <u>V-ha-lyvii</u> | 274 |
| 5.22 | <u>-v'ar-</u> and <u>-ly-skiit-</u> | 279 |
| 5.3 | Simplification and Reduction | 281 |
| 5.31 | <u>-uum</u> | 282 |
| 5.32 | <u>-huu'itsh</u> | 288 |
| 5.33 | <u>-k</u> , <u>-m</u> and \emptyset on Realis Q's | 291 |
| 5.34 | Evidentials and Perfectives | 297 |
| 5.4 | Syntactic Change and Grammatical Systems | 304 |
| | Footnotes to Chapter 5 | 305 |
| | References | 309 |

List of Tables and Figures

Tables

| | |
|---|----|
| Chapter 1 | |
| 1 Pronominal prefixes..... | 20 |
| Chapter 2 | |
| 1 Markers and combinations of markers used to derive dual subject stems..... | 82 |
| 2 Markers and combinations of markers used to derive plural subject stems..... | 83 |
| 3 Some <u>-m</u> verbs..... | 97 |
| 4 Some <u>-k</u> verbs..... | 98 |

Figures

| | |
|---|-----|
| Chapter 1 | |
| 1 Structure of the predicate nominal sentence..... | 38 |
| Chapter 2 | |
| 1 Structure of the Verb..... | 191 |
| Chapter 3 | |
| 1 Source construction of existential auxiliaries..... | 172 |
| 2 Postulated source of 'sej' and 'do' auxiliaries..... | 177 |
| Chapter 5 | |
| 1 Quantifier/ existential verbs with clausal subjects--stage 1 | 265 |
| 2 Quantifier/existential verbs with personal subjects copied from clausal subject-stage 2..... | 266 |
| 3 Figure with quantifier/existential auxiliary..... | 266 |
| 4 Source of BE in future complements..... | 286 |
| 5 Original questions structure..... | 296 |

List of Abbreviations

| | |
|---------|--|
| asc | associative case suffix |
| asp | realis aspect/mood |
| dem | demonstrative |
| des | desiderative suffix |
| dist | plural action/object |
| DS | different subject suffix |
| du | dual |
| emp | emphatic suffix |
| empprf | emphatic perfective suffix |
| hr=ev | hearing (auditory) evidential |
| inc | incompletive suffix |
| inf | inferential clitic |
| ir | irrealis suffix |
| loc | locative/directional case suffix |
| neg | negative |
| nom | nominalizer |
| pl | plural |
| pl=oj | plural object prefix |
| poss | possessive prefix |
| prf | perfective |
| ref | reflexive/reciprocal proclitic |
| rel | subject relative clause prefix |
| Q | non-referential prefix |
| Qasp | realis aspect marker in questions |
| Qaug | augment vowel in questions |
| see=ev | seeing (sight) evidential |
| sj | subject case prefix |
| SS | same subject prefix |
| s.t. | something |
| unspec. | unspecified |
| Vaug | augment vowel on nouns |
| Vinc | incremental vowel on verbs |
| 1 | first person |
| 2 | second person |
| - | morpheme or clitic boundary |
| + | joins glosses of inseparable morphemes (e.g. ablaut) |
| = | parts of complex gloss or Maricopa word |
| / | separates subject/object person in gloss |

ACKNOWLEDGEMENTS

Many people deserve my gratitude for their help throughout the production of this dissertation, both for specific suggestions, comments and criticism and for the moral support they gave me.

First and foremost, I am enormously grateful to my advisor Pamela Munro. She demonstrated great talent at that very difficult, yet essential task, constructive criticism. I feel that every comment and suggestion she made went toward making this dissertation better than it ever could have been without them. Her extensive knowledge of Yuman languages and skill at linguistic analysis have been a constant help and source of inspiration. The time and effort she expended in helping and advising me in this work have been prodigious. The grace and kindness she demonstrated in these labors encouraged me beyond measure.

The other members of my committee (Robert Kirsner, Margaret Langdon, Sandra Thompson, Alan Timberlake and William Bright) were responsive, patient and flexible. I thank them for their lengthy comments and suggestions. I am grateful for their cooperation throughout this entire project.

Without my Maricopa teachers, of course, the dissertation could never have been written. But more than this, they made the work pleasant by their kindness and interest. Pollyanna Heath, with whom I have been working for more than three years has been patient, supportive and helpful throughout this time. Her concern for correctness and her care in teaching have eased my way. For more than a year and a half, I have been working with Jasper Donahue, Mr Donahue is a conservative and

careful speaker and a precise and concerned teacher and I am grateful for his skill and interest. I thank Ralph Cameron and Achsah Porter for their help.

I would like to give special thanks to Heather K. Hardy for her interest and discussion we have held and continue to hold (at long distance) about the structure of Yuman, as well as her belief that this would some day get done. Bonnie Glover shared many of the elicitation sessions. Her company, her ear and her comments made her an always valuable addition to these meetings, and I thank her.

I would like to thank my fellow students Linnea Lagerquist and Janet Scott for listening to me rave and refusing to permit me to collapse into a puddle of inertia.

I would like to thank Ma Anand Vimal for helping me type this dissertation (the well typed parts are hers). I am grateful to Vimal and to Anna Meyer for their kind and efficient aid in wading my way through the complex system of bureacrasy.

UCLA and the department of linguistics have supported me and my fieldwork intermittently throughout my graduate career.

I would like to thank the faculty and my fellow students in the department for providing a wide, varied, stimulating (and sometimes irritating) environment of ideas.

I would like to thank my parents and my brothers for their emotional (and physical) support, and neverending faith in me.

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- 'Types of Adverbial and Modal Constructions in Tolkapaya' with Heather K. Hardy, International Journal of American Linguistics 46 (1980):183-196
- '-k and -m in Maricopa' in UCLA Papers in Syntax #8 (University of California, Los Angeles), 1980
- 'Maricopa Relative Clauses' in Occasional Papers in Linguistics #7 (Southern Illinois University, Carbondale), 1980

Chem'ivillu' (Let's Speak Cahuilla) by Katherine Siva Sauvel and Pamela Munro, co-edited with Brent De Chene et al. (forthcoming, 1980)

'"Role Dominance" and Pragmatic Structure' with Pamela Munro, Language
(to appear)

ABSTRACT OF THE DISSERTATION

Maricopa Morphology and Syntax

by

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Doctor of Philosophy in Linguistics

University of California, Los Angeles, 1980

Professor Pamela L. Munro, Chair

This is a descriptive grammar of Maricopa, a member of the River branch of the Yuman language family. The purpose of this study is to provide a detailed and accurate description of presentday Maricopa morphology and syntax and to examine the historical development of a number of verbal constructions found in Maricopa (and related languages).

A short sketch of Maricopa phonology is presented, including the phonemic inventory, the structure of the word, the processes (in broad outline), and the intonation patterns.

The basic morphology and syntax of the Maricopa simple sentence is described. The elements of the verb are briefly introduced. The structure of the noun phrase is presented in detail, including the structure of the nominal stem, pronouns, demonstratives, adjectives, possession and case marking. Possessor raising (a process which affects the structure of the simple sentence) is introduced. Negation, of both

nouns and verbs, is discussed. Word order within the sentence is described.

The verb is then described in detail. The structure of the stem is presented. The stem deriving morphemes include the medio-passive suffix, the benefactive suffix, the causative markers, and the number markers. The system of number marking on Maricopa verbs is presented in some detail; the morphology is set out and the semantics of the derivation is discussed. Verbs in Maricopa can be derived to indicate whether their subjects are dual or plural; whether the action or state expressed by the verb is repeated; or whether the object of the verb is plural. The complex system of final aspect marking on the verb is presented. The affixes used to mark subordinate verbs are also examined, including the switch reference suffixes and other suffixes found on dependent verbs. The distribution of -k and -m in Maricopa as both realis suffixes and switch reference suffixes are examined and found to be distributed lexically, as well as conditioned by the features which typically control switch reference.

The structure of more idiosyncratic verbs, i.e., the existential verbs, locational verbs and motion verbs, is presented. The syntax of auxiliary constructions is analyzed and auxiliary verbs are distinguished from main verbs in morphological and syntactic features.

Complex sentences are examined in terms of the semantic relationships between the clauses of the sentences and the morpho-syntactic expression of those relationships. Nominalization and switch reference are used in a number of different subordinate clauses including complement clauses; modification of the noun; and adverbial clauses. A number

of subordinate clauses are described. Finally, the syntax of clausal conjunction is presented in detail. Clauses in Maricopa are conjoined co-ordinately only by subordinating both clauses to a third verb; otherwise clauses can only be related to each other by subordinating one to the other. Thus, all sentences in Maricopa which have more than one clause involve subordination.

The historical development of a number of verbal constructions is considered. It is demonstrated that some constructions are subject to multiple analyses: some forms function as both main and auxiliary verb in the same construction; and some forms as both auxiliary verbs and affixes on the main verbs. Sources for these multiple analyses are postulated, their historical development presented, and the consequences for the synchronic grammar considered. A number of constructions which have undergone 'simplification' are examined, and their historical origins postulated. This chapter is devoted to considering the issue of grammatical change which 'simplifies' individual sentences, while complicating the grammar.

Introduction

My primary goal in writing this dissertation was to provide an accurate descriptive grammar of Maricopa, including aspects of simple and complex sentences. Secondly, I was interested in what synchronic variation in Maricopa and differences between Maricopa and the Yuman languages closely related to it might suggest about the historical development of modern Maricopa and about the nature and consequences of certain kinds of syntactic change.

The grammar is organized into five chapters and an introductory phonological sketch:

(0) Phonology and Orthography presents the phonemic inventory, the structure of the Maricopa word, some phonological processes and the practical orthography used in this dissertation.

(1) Chapter 1: Simple Sentences presents the basic morphology and syntax of the simple sentence. The essential inflectional elements of the verb are briefly introduced. The structure of the noun phrases is analyzed. Possessor raising (a process which affects the assignment of case roles, in particular the assignment of the subject case) is introduced. Negation is discussed and demonstrated to be different for negating nouns and negating verbs. Word order in the simple sentence is presented: the unmarked word order and the word order in topicalized sentences.

(2) Chapter 2: The Verb describes the structure of the verb in detail. The derivational processes which produce new verb stems are described: the medio-passive morpheme; the benefactive morpheme; the causative morphemes; and, most complicated and extensive, the number markers. Verbs

can be derived to indicate whether their subjects are dual or plural; whether the action or state expressed by the verb is iterated (simply repeated or habitual); or whether the object of the verb is plural. The aspect-mood system as expressed by the final suffixes on main verbs is described. Some of the final suffixes found on verbs of subordinate clauses are described, including the assignment of the switch reference suffixes. Non-final suffixes, prefixes, and clitics are also presented.

(3) Chapter 3: Verbs and Auxiliaries is devoted to a number of verbs which can be used as main verbs, in modal constructions, and as auxiliary verbs. The nature of the auxiliary verb in Maricopa is defined and its features described. The morphological idiosyncrasies of the existential verbs, locational verbs, and motion verbs, both as main and auxiliary verbs, are presented.

(4) Chapter 4: The Complex Sentence examines the semantic relationships which hold among clauses of the same sentence and the morpho-syntactic expression of those relationships. The uses of nominalization and switch reference in subordinate clauses are discussed; both are used in complement clauses, in modifying the noun, and in adverbial clauses. The nature of conjunction of clauses is discussed and it is demonstrated that in Maricopa all sentences which contain more than one clause involve subordination. (This does not preclude the possibility of co-ordinating two clauses, instead it requires that they be subordinated to a third clause if the clauses are to be structurally parallel.)

(5) Chapter 5 Innovation and Grammaticization analyzes the historical development of a number of verbal constructions internally and by comparison with closely related languages. This chapter is devoted to the examination of fixed constructions as historically derived from more productive forms; of variant constructions which are in the process of changing from one internal structure to another (and which presently have aspects of both structures); and of the processes of 'simplification' which reduce hierarchical structure in individual sentences while adding complexity to the syntactic system.

Maricopa

Maricopa is a native American language of the Yuman family (Hokan stock). It is most closely related to Yuma (Kwtsaan) and Mojave; in fact, it is sometimes considered mutually intelligible with Yuma. More distantly it is related to the Pai languages (Hualapai, Havasupai, Yavapai and Paipai), the California-Delta languages (Cocopa and Diegueno) and Kiliwa.

Maricopa is spoken on two reservations in Arizona, near Phoenix, the Salt River Reservation (Lehi) and the Gila River Reservation (Laveen). I think there may be dialect differences between the speakers from these two reservations, however, since all my consultants have been from Laveen, I have no evidence about these differences. The Maricopas share both reservations with a considerably larger number of Pimas. The Pimas and the Maricopas have lived in adjoining communities near the confluence of the Gila and Salt Rivers since before the coming of the Spanish.

Harwell (1979) estimates that there are about 150-200 members of the Lehi community and about 300 members of the community near Laveen. It is difficult for me to estimate how many speakers there are, though the youngest speaker I have personally met was in his twenties.

Maricopa is not an extensively described language. Spier (1933) published an ethnography of the Maricopa people (or peoples) in which he presented some lexical material and a number of traditional texts (in English translation). Later, Spier published comparative Havasupai and Maricopa lexical items and two parallel texts.

Castetter and Bell (1951) in their study of Yuman agriculture presented a number of Maricopa lexical items for agricultural terms: plants, lands and natural phenomena.

Wares (1968) in his study of comparative Yuman phonology gave a brief sketch of the phonemic inventory of Maricopa and presented some Maricopa words in his cognate lists.

Harwell (1976) wrote the only paper . . . on Maricopa syntax exclusively. Though Maricopa appears occasionally in comparative Yuman papers (cf. Munro (1973b), (1978), Langdon (1978b) etc.), this is the only paper which deals with Maricopa alone. This short paper is concerned with a number of uses of the verb 'say' as an auxiliary verb. I present much of the same data, though my analysis is not identical.

Sunn and Harwell (1976) present a connected text of oral history of the Maricopa (it deals with the origins of the Maricopa people). This, together with the two texts presented by Spier (1946), provides three texts collected about thirty years apart.

As you can see from this sketch the literature on Maricopa per se is rather sketchy. The related languages are much more extensively

documented, Halpern's (1946-1947) meticulously detailed presentations of Yuma provide a strong basis for further work on Yuma (and of course I used it in examining Maricopa and Munro's many works on Mojave, including the grammar (1976a), provide a different kind of basic foundation. I hope that this dissertation begin to fill this gap in the description and analysis of Maricopa,

The data base for this dissertation comes from several speakers of Maricopa. My primary teacher is Pollyanna Heath, with whom I work on a regular weekly basis. We use standard elicitation techniques, collecting both isolated sentences and connected texts (traditional and personal narratives, recipes, imagined dialogs, etc). We have been working together since April, 1977. Less regularly, though in longer and more concentrated sessions, I work with Jasper Donahue. Mr. Donahue, a conservative and meticulous speaker, enjoys lexical work and sentence elicitation. We have been working together since April 1979 at the Gila River Reservation (with the kind permission of community of District 7 of the Gila River Reservation). To a more restricted degree I have worked with Ralph Cameron (sentence elicitation, lexical work and some narrative) and with Achsah Porter. To all of these people I owe an enormous debt of gratitude.

Phonology and Orthography

0.1 Phonemic Inventory

0.1.1 Consonants

The inventory of consonants in Maricopa is

| | | | | | | | | | |
|------------|-----|---|----------------------|----------------|----------------|----------------|---|----------------|---|
| stops: | p | t | ṭ | k ^y | k | k ^w | q | q ^w | ? |
| affricate: | | | ṭ ^y c | | | | | | |
| fricatives | | | | | | | | | |
| voiceless: | (f) | s | ṣ | x | x ^w | | | | |
| voiced: | v | ʒ | | | | | | | |
| nasals: | m | n | n ^y | (ŋ) | | | | | |
| laterals: | | l | l ^y | | | | | | |
| trill: | | r | | | | | | | |
| glides: | w | | y | | | | | | |

/f/ is found only in borrowed words (e.g., [kafe] 'coffee' from Spanish).

/ŋ/ is found only in borrowed words (e.g., [naraŋk] 'orange' from Spanish).

[ŋ] is found as an allophone of /n^y/ as well. [ŋ] is represented in the orthography by ng.

This inventory is the same as that presented by Wares (1965) except that it makes a distinction between dental /t/ and alveo-palatal (sometimes retroflex) /ṭ/. This distinction is noted in Mojave by Kroeber (1911) and Munro (1976a) and in Yuma by Halpern (1946a) among other Yuman languages. /ṭ/ in Maricopa is found only in post-stress position. /t/ has unrestricted distribution. The contrast bears little functional load. Some examples of the two sounds can be compared in

| | | | |
|-----------------------|--------|--------------------------------------|---------|
| [mæx ^w ét] | 'bear' | [n ^y i:x ^w ét] | 'blood' |
|-----------------------|--------|--------------------------------------|---------|

[xəmə́t] 'pumpkin' [má.t] 'land'

Both these stops, /t/ and /ṭ/, are represented in the orthography by t. The non-final suffixes -t- (emphatic), -nt- ('again') and -pat- ('too') all contain a dental /t/. The non-final suffix -hot- [xot] (intensifier, 'very') contains the back /ṭ/.

/s/ is a retroflex voiceless fricative which varies in place of articulation from the alveolar ridge to the hard palate (depending on the speaker). /s/ is written in the orthography as sh.

The voiceless velar fricatives /x/ and /x^w/ are represented orthographically as h and hw, respectively.

/r/ is an alveolar trill, which is also realized as a tap in pre-stress position.

/c^v/ is a voiceless palatal affricate, represented orthographically as ch. The voiced interdental fricative /ð/ is written as d. Glottal stop /ʔ/ is written as '. In the orthography all superscripts are lowered to the line, e.g., /n^v/ is written ny. All the other orthographic symbols are the same as the symbols listed above as phonemes.

1.2 Vowels

The vowel inventory of Maricopa is

| | | | |
|---|----|----|----|
| i | i: | u | u: |
| e | e: | o | o: |
| a | | a: | |

Maricopa has a five vowel system, like the other River languages (Langdon, 1976). Aside from the five vowels which differ in quality, there is a phonemic length distinction. Thus, there are ten phonemic vowels.

The length contrasts are exemplified in

| | | | |
|-------------------|---------------|--------------------|----------------|
| [vəʒ <u>í</u> k] | 'there' | [vəʒ <u>í</u> :k] | 'come+asp' |
| [ʔə <u>vé</u>] | 'snake' | [ʔə <u>vé</u> :] | 'mouse' |
| [v <u>á</u> k] | 'sit+asp' | [v <u>á</u> :k] | 'come+asp' |
| [i:ʒ <u>ó</u>] | 'face;eye' | [i:ʒ <u>ó</u> :] | 'tooth' |
| [k <u>ú</u> pu:m] | 'be hole+inc' | [k <u>ú</u> :pu:m] | 'be holes+inc' |

The vowels are represented in the orthography by the symbols listed above, except that long vowels are written as sequences of two identical vowels (e.g., [i:] is written as ii).

1.13 Diphthongs

The diphthongs found in Maricopa are

| | | | |
|----|-----|----|-----|
| ey | e:y | ew | e:w |
| ay | a:y | aw | a:w |
| oy | o:y | ow | o:w |
| uy | u:y | | |

These, like vowels, are represented orthographically by the symbols listed here, except that the long diphthongs are represented by a sequence of two identical vowels followed by a glide (e.g. [e:y] is written as eey).

1.2 Word Structure

Most Maricopa words follow the general Yuman pattern described in Langdon, 1970a. The root consists of a vowel which can be preceded or followed by a consonant.

ROOT: (C) V (C)

The root may be preceded and followed by various derivational affixes forming a larger stem. Most of these derivational affixes are single

consonants (though a few are vowels); this results in a stem of the structure:

STEM: C+C+...(C) V (C) +C...

Inflectional morphemes are then added to the stem,

0.3 Rules and Processes

1. Stress is assigned by rule on the final vowel of the root. This is the same general rule found in other Yuman languages. Wares (1965:22) noted "Stress falls on the last syllable of the non-suffixed word in most Yuman languages and remains on the same syllable after suffixation."

Some examples of stress assignment are

[xó^htIk] hot-k (good-asp)

[mæxó^htIk] m-hot-k (2-good-asp)

[x^wétxotIm] hwet-hot-m (red-very-asp)

Note that primary stress falls on the root of the word, no matter what prefixes or suffixes occur.

2. In Yuma and Mojave, word initial vowels have an obligatory and distinctive onset. In Yuma as noted by Halpern (1946a:30) "Initial vowels are pronounced with an aspirated attack." About Mojave, Munro (1976:2) says: "Vowel-initial words pronounced in isolation have a marked aspirated onset which is indistinguishable from the consonantal phoneme h. Such onset h's unlike the underlying ones (usually) are lost when words run together in rapid speech." Vowel-initial words thus contrast in both Yuma and Mojave with ?-initial words.

In Maricopa, such an aspirated onset for initial vowels is possible, but it is never obligatory. Generally, it is distributional, rather than phonetic facts, which enable one to distinguish between vowel initial

and glottal stop initial words. Glottal stop initial words will retain their ʔ when a prefix is added, vowel initial words won't. Moreover, vowel initial words vary between an [h] and a [ʔ] onset as shown in the following example:

[hi:mák] ~ [ʔi:mák] iima-k (dance-asp)
 (as opposed to [ʔi:mák] '-iima-k (1-dance-asp))

3. Vowel or 'schwa' epenthesis is one of the most difficult problems in Yuman phonology. It is difficult to distinguish epenthetic from phonemic vowels in many cases and it is difficult to discover and describe the interlocking set of rules which produces the epenthetic vowels.

A brief sketch of this system of rules for Maricopa can be given here. This represents a mere glance at some of the rules which work in Maricopa to insert epenthetic vowels (neither all the rules nor any of the rules in detail are presented here).

The shape of the epenthetic vowel is determined by its environment. If a vowel is inserted before or after a palatal or alveolar consonant, it is [i] or [I]. If the vowel is inserted before [w], then the vowel is [o] or [u]. If the vowel is inserted before a glottal stop, then the vowel has the same quality as the vowel following the glottal stop. Everywhere else the epenthetic vowel varies between [ə] and [I]. (Yumanists often refer to all these epenthetic vowels as 'schwa'.)

A word initial nasal followed by a homorganic stop or affricate is optionally syllabic. No epenthetic vowel is inserted after a syllabic nasal. An initial liquid or nasal followed by a clitic boundary is also syllabic. Syllabic liquids, like syllabic nasals, are not followed by epenthetic vowels.

A vowel is inserted into most initial clusters of two [-syllabic] segments, as exemplified in

[mɔm̩i:] m̩di (owl)
 [mɔx̩n̩k] m̩han-k (like-asp)
 [ʔɔm̩x̩n̩k] '-m̩han-k (l-like-asp)

There are no sequences of three or more [-syllabic] sequences anywhere; a vowel is always inserted in any such cluster.

Only certain consonants can form a cluster. If different consonants which cannot form a final cluster occur in sequence, then an epenthetic vowel is inserted, as in

[p̩kɔm̩] p̩ak-m (fall-asp)
 [p̩a:l̩^vɪm̩] p̩aaly-m (many-asp)

Some sequences of consonants are final clusters. It appears, however, that epenthetic vowels are also inserted in these clusters in some situations, depending on other features of the structure of the word. Compare the sequences of

[d̩u:s̩k] d̩uush-k (be+du-asp)
 [u:d̩u:s̩k] uuduush-k (be+pl-asp)

4. s optionally becomes t before another s¹. If the dissimilation does not occur, then [ɪ] is inserted between the fricatives. 'iipash-sh (men-sj) can be realized as [ʔi:p̩áts̩] or [fi:p̩ás̩ɪs̩].

5. Sequences of identically oral consonants (other than s) in final or medial position result in long consonants. mdiily-lya (bake-des) is realized as [mɔd̩i:l̩^va]; nak-k (sit-asp) is realized as [nák:],

6. When c̩ is preceded by any segment except s̩ and followed by any unstressed segment except s̩, then c̩ is realized as s̩. The word for 'chew',

for example, is chmnyaa-k (chew-asp) which is realized as [č̣mIn^yá:k]; if a prefix precedes the č̣, as in m-shmnyaa-k (2-chew-asp) [mIṣmIn^yá:k], then č̣ is realized as ṣ.

Optionally, in the speech of less conservative speakers, word initial č̣'s followed by an unstressed segment other than ṣ vary with ṣ's,

7. Unstressed u: is optionally reduced to o; unstressed i: is optionally reduced to e.

8. Optionally, when a labialized consonant occurs before another consonant and epenthetic u can be inserted between the two consonants,

Labialized consonants are delabialized before round vowels and before labial consonants.

9. n^y can optionally become ŋ before a velar or post-velar consonant.

If the ŋ is preceded by a morpheme boundary, then ɪ is inserted before it (even if it occurs after a vowel). Thus, sequences of the phonological shape /-n^yk/ can be realized phonetically as either [-n^yɪk] or [-ɪŋk],

10. w is inserted between a back vowel and any other vowel (including an identical back vowel),

y is inserted between a front vowel and a following back, round vowel.

Thus, yu-uum (see-inc) is realized phonetically as [yú:wu:m]; soo-uum (eat-inc) is realized phonetically as [só:wu:m]; maa-uum (eat-inc) is realized phonetically as [má:wu:m]; and uuaay-m (give+pl-asp) is realized as [u:wá:yɪm].

Examples with front vowels include sii-uum (drink-inc) which is realized as [sí:yu:m] and mnye-uum (sweet-inc) which is realized as [mIn^yé:yu:m].

0.4 Intonation

Intonation in declarative sentences is characterized by falling pitch at the end of the sentences. In questions, intonation consists of final rising pitch.

0.5 Other Orthographic Conventions

In the discussion of the phonological inventory the symbols which are used to represent the phonemes in the practical orthography were presented. Certain non-phonemic sounds and allophonic variation are represented orthographically as well, while other non-phonemic features are never represented orthographically.

The orthography reflects

- (1) the optional variation between u and o and between i and e;
 - (2) the change from ch to sh;
 - (3) delabialization and epenthetic u associated with labials;
 - (4) the change of sh to t;
 - (5) the change of ny to ng (and its associated i after morpheme boundaries);
- and
- (6) syllabic laterals as a sequence of vowel + lateral.

The orthography does not reflect

- (1) stress;
- (2) h or ? onset to vowel initial words;
- (3) epenthetic glides;
- (4) epenthetic vowels (except as noted above); and
- (5) long consonants (long consonants are written as sequences of identical consonants).

Footnotes

¹ Langdon (personal communication) has pointed out that this rather odd looking rule is entirely natural given the historical development of Maricopa phonology. The source of most /s/'s in Maricopa is a proto-Yuman /^vc/ (as reconstructed in Wares 1965). The change of ^vc to t before another ^vc is far more natural a process (more clearly motivated in the direction and source of the change).

Chapter 1

Simple Sentences

1. In Maricopa, as in the other Yuman languages, the usual word order is SOV.

- (1) 'iipaa-ny-sh sny'ak-a wik-k 'The man helped a/the woman'
man-dem-sj woman-Vaug help-asp
- (2) mhay-ny-sh qwaq tpuy-m 'The boy killed a deer'
boy-dem-sj deer kill-asp

The unmarked order of noun phrases within a clause is subject first. The order of noun phrases can vary due to processes which affect the focus of attention within the sentence. The verb, on the other hand, is always clause final.¹

The role of a noun phrase within the predication is indicated by a case suffix which is attached to the end of the entire noun phrase. In (1) above, 'iipaa 'man' is marked with the subject suffix -sh (after the demonstrative suffix -ny).

A sentence may consist of just a verb stem and its affixes. A verb is inflected for the person of its subject and, if the verb is transitive, of its object as well. Aside from these pronominal prefixes, a verb in a declarative sentence usually bears other affixes, at least a final suffix indicating the mood and aspect of the verb (e.g. -k on the verb in (1) is a final suffix indicating the verb is indicative realis). There are a number of other affixes which can be assigned to a verb stem. These affixes provide pragmatic and additional aspectual information about the predication. These affixes as well as the

rest of the structure of the Maricopa verb are discussed in detail in Chapter 2.

1.1 An Introduction to the Verb. The essential elements of the verb are the pronominal prefixes, the verb root and the final aspect marking suffixes.

1.1.1 Pronominal Prefixes

1.1.1.1 An intransitive verb, as mentioned above, is assigned a prefix which reflects the person of its subject.

When the subject of the verb is third person, then the verb has no prefix.

- (3) hmii-k 'He is tall, she is tall, it is tall'
tall-asp
- (4) sper-m 'He is strong'
strong-asp
- (5) ashvar-k 'He sang, is singing'
sing-asp
- (6) iima-k 'He danced, is dancing'
dance-asp

'- indicates a first person subject. The use of '- as the first person prefix is always possible when the subject of the verb is first person. However, in the speech of some Maricopas ' is no longer an obligatory marker of first person subject on verbs under certain phonological conditions. ' can be omitted by these speakers from verb forms which begin with consonants. Vowel initial verbs which have first person subjects are always prefixed with '-.

- (7) '-hmii-k 'I am tall'
I-tall-asp

- (8) '-sper- m 'I am strong'
 I-strong-asp
- (9) '-ashvar-k 'I sang, am singing'
 I-sing- asp
- (10) '-iima- k 'I danted, am dancing'
 I-dance-asp

Since the third person form of the verb is unmarked and many verbs allow the omission of the first person prefix '-, for many verbs the first person and third person forms of the verb are homophonous. Aside from just depending on context to disambiguate these forms, overt pronouns can be used.

- (11) nyaa hmii-k 'I am tall'
 I tall-asp

In (11) the verb is unmarked, but the independent pronoun makes only a first person reading possible.

Intransitive verbs with second person subjects have m- as their pronominal prefix.

- (12) m-hmii-k 'You are tall'
 2-tall-asp
- (13) m-sper- m 'You are strong'
 2-strong-asp
- (14) m-ashvar-k 'You sang, are singing'
 2-sing- asp
- (15) m-iima- k 'You danced, are dancing'
 2-dance-asp

On imperative verbs, the pronominal prefix is different from a single second person prefix. Imperatives have k- in place of m- as their pronominal prefix.

- (16) k- ashvar-k 'Sing!'
 imp-sing- asp
- (17) k- iima- k 'Dance!'
 imp-dance-asp
- (18) k- mii-m 'Cry!'
 imp-cry-asp
- (19) k- v'aw- m 'Stand up!'
 imp-stand-asp

1.112 Transitive verbs agree with both their subject and their object in person. Again, this person marking is accomplished by means of pronominal prefixes.

When the object of the verb is third person, there is no object marking on the verb. The verb only has a pronominal prefix signalling the person of the subject. When the object is third person, therefore, the subject pronominal prefixes are the same as the intransitive pronominal prefixes.

- (20) '-wik- k 'I helped him'
 I-help-asp
- (21) m-wik- k 'You helped him'
 2-help-asp
- (22) wik- k 'He helped him'
 help-asp
- (23) k- wik- k 'Help him!'
 imp-help-asp
- (24) '-aaham-m 'I hit him'
 I-hit- asp
- (25) m-aaham-m 'You hit him'
 2-hit- asp

(26) aaham-m 'He hit him'
hit- asp

(27) k- aaham-m 'Hit him!'
imp-hit-asp

The first person prefix ' ' can also be omitted from transitive verbs under the same conditions under which it can be deleted from intransitive verbs (as discussed in 1.1.1.1).

If the object of the verb is not third person, then other pronominal prefixes are used, depending on the person of the subject and object.

(28) ny- wik- k 'I helped you'
1/2-help-asp

(29) 'nym-wik- k 'You helped me'
2/1-help-asp

(30) ny- wik- k 'He helped me'
3/1-help-asp

(31) m- wik- k 'He helped you'
3/2-help-asp

(32) 'nyk- wik- k 'Help me!'
imp/1-help-asp

(33) ny- aaham-m 'I hit you'
1/2-hit- asp

OR

3/1-hit- asp 'He hit me'

(34) 'nym-aaham-m 'You hit me'
2/1- hit- asp

(35) m- aaham-m 'He hit you'
3/2-hit- asp

OR

2/3-hit- asp 'You hit him'

(36) 'nyk- aaham-m' 'Hit me!'
 1/imp-hit- asp

As can be seen in the examples above, some prefixes do not uniquely specify one subject or subject-object relationship (even when the full system is used, i.e. when ' is not deleted). There is quite a bit of homophony in this system;² ny- indicated both third person subject-first person object and first person subject second person object. In actual discourse, context, the use of independent personal and demonstrative pronouns and the use of certain verbal suffixes all help to determine the referents of the pronominal prefixes.

Table 1: Pronominal Prefixes

| | | intransitive | | transitive | | |
|------------|---|--------------|--|------------|----|----|
| | | object: | | 1 | 2 | 3 |
| subject: | 1 | ' | | - | m- | ' |
| | 2 | m- | | 'nym- | - | m- |
| | 3 | ∅ | | ny- | m- | ∅ |
| imperative | | k- | | 'nyk- | - | k- |

1.113 There is not much variation in the form of the pronominal prefixes. The omission of ' has been discussed in 1.111. 'nym- (second person subject-first person object [2/1] prefix) and 'nyk- (imperative-first person object prefix) have alternate forms nym- and nyk- respectively. These variants are used when the pronominal prefix follows another prefix. Compare the pronominal prefixes (which do not have ') in (37) and (38) with the pronominal prefixes in (34) and (36) (which do have ').

(37) nyi- nym-yuu-k 'You saw us'
 pl=oj-2/1-see-asp

(38) nyi- nyk- yuu-k 'See us!'
 pl=oj-imp/l-see-asp

1.12 Verbal number. The translations given for examples (3) through (36) have all been singular. All the verbs in these sentences are unmarked with respect to number, be it of subject or object. These verb forms can be used when the subject is not singular (and if the verb is transitive when the subject and/or object is not singular).

1.121 There are specific forms which can be used when the subject of the verb is plural and usually another form when the subject is dual. Maricopa appears to be the only Yuman language which regularly and systematically makes a synchronic distinction between verbs which have a plural subject and those which have a dual subject.³

- (39) '-iima- k 'I danced'
 l-dance-asp
- (40) '-imash- k 'We (two) danced'
 l-dance+du-asp
- (41) '-ashuumash-k 'We (plural) danced'
 l-dance+pl- asp
- (42) yuu-k 'He saw it'
 see-asp
- (43) yoov-k 'They (two) saw it'
 see+du-asp
- (44) uuyoov-k 'They (plural) saw it'
 see+pl-asp

1.122 Verbs less regularly are marked for the number of their object. Verbs can only distinguish plural from unmarked objects (rather than

dual and plural, as with subjects). The forms given above in examples (20)-(36) are all unmarked for the number of their objects. The forms given in (37) and (38) are marked as having plural objects; the verbs in these examples are marked with the plural object prefix nyi- (discussed in section 2.51).

- (45) nyi- qaas- k 'He called them'
 pl=oj-call- asp
- (46) nyi- qaash- k 'They (two) called them'
 pl=oj-call+du-asp
- (47) nyi- uuqaassh-k 'They (plural) called them'
 pl=oj-call+pl- asp
- (48) uulyesh-m 'He broke it'
 break- asp
- (49) uushlyesh- k 'He broke them'
 break+dist-asp

The verbal number system in Maricopa is morphologically and semantically complex. It is presented in detail in section 2.14.

1.13 Final Verb Suffixes. There is a complicated system of marking aspect and mood in Maricopa clauses. It employs a wide range of affixes, auxiliary verbs and subordination strategies.

The main verb of a sentence in Maricopa must be marked with a final aspect-marking suffix. These suffixes include -k, -m, -ksh, -sh, -uum, -ha, -lya, -ksha, -sha among others. These are described in detail in 2.2.1. Here I will briefly introduce -k, -m, -sh, -ksh, -ha and -uum.

1.131 All the examples cited up to this point have verbs which are marked with -k or -m as a final suffix. -k or -m mark the declarative

verbs to which they are affixed as simple realis indicative. The speaker is presenting the information as fact, not as possibility, inference or preference. A verb marked with -k or -m expresses an action, state or event which is taking place in the present or has taken place in the past. This description is limited to simple declarative sentences; in complex sentences -k and -m play roles in the switch reference system (see section 2.221).

In Maricopa, the selection of -k or -m as a final main verb suffix is lexically determined based on the morpheme which immediately precedes the final suffix. This morpheme may be the verb root or any of a number of non-final suffixes.

- | | | |
|------|---------------------|---------------------|
| (50) | aaham- <u>m</u> | 'He hit him' |
| | hit- asp | |
| (51) | aaham-nt- <u>k</u> | 'He hit him again' |
| | hit- too-asp | |
| (52) | aaham-hot- <u>m</u> | 'He really hit him' |
| | hit- int-asp | |
| (53) | hot- <u>k</u> | 'It is good' |
| | good-asp | |
| (54) | hot- haay- <u>k</u> | 'It is still good' |
| | good-yet- asp | |
| (55) | hot- hot- <u>m</u> | 'It is very good' |
| | good-int-asp | |

In examples (50) and (53), it is the verb root which determines which suffix the verb takes; in (50), the final suffix is -m, while in (53) it is -k. In examples (51), (52), (54) and (55), it is the non-final suffix (-nt-, -hot- and -haay-) which determines the choice of the final suffix. -k is the more commonly occurring suffix, since all

non-final suffixes except -hot- 'intensifier' take -k as their final indicative suffix.

-k and -m are also found as the final suffix on imperatives (cf. (16)-(19), (23), (27), (32), (36) and the following).

(56) k- yem-k 'Go!'
 imp-go- asp

(57) k- tpuv-m 'Kill it!'
 imp-kill-asp

This use of -k and -m is not semantically congruent with their use on simple declarative verbs. The verb of a command must be marked with -k or -m (when it is not an existential auxiliary). An order cannot logically be interpreted as realis, since an order is not given after the act it expresses has occurred. Moreover, it is not neutral since it always expresses the desire of the speaker. Obviously, on imperatives -k and -m are neither indicative nor realis.

The other River languages, Mojave and Yuma, also employ -k and -m as simple indicative suffixes (under somewhat different conditions)⁴ and as final suffixes on imperative verbs.

- (Mo) (58) isvar-k 'He sings'
 (59) k-isvar-k 'Sing!'
 (60) ulyes-m 'He breaks it'
 (61) k-aay-m 'Give it to him!' (Pamela Munro, pers. com.)
 (Yu) (62) k-ayerə-k 'He flies'
 (63) k-ayerə-k 'Fly!'
 (64) alyapa:-m 'He is mistaken' (Halpern, 1947c)
 (65) k-astu:-m 'Gather it!' (Halpern, 1976)

The distribution of -k and -m is discussed in greater detail in sections 2.211 and 2.221.

1.132 Another set of realis suffixes is -sh and -ksh. They are found on past and present stative verbs and on verbs expressing completed actions.

- (66) hwet-sh 'It is red'
red- prf
- (67) 'nym-yuu-sh 'You saw me'
2/1- see-prf
- (68) v- 'daw- ksh 'We-two are here'
dem-1-sit+du-lprf
- (69) '-yuu-ksh 'I saw it'
1-see-lprf

In most cases, -sh is interchangeable with -k or -m.

- (70) mpis '-aaham-sh 'I just now hit him'
now 1-hit- prf
- (71) mpis '-aaham-m 'I just now hit him'
now 1-hit- prf
- (72) puy-sh 'He died, is dead'
die-prf
- (73) puy-k 'He died, is dead'
die-asp

-sh is in complementary distribution with -ksh. -ksh is found on verbs which would take -k as their simple indicative realis suffix and which have first person subjects (cf. (68), (69) and the following).

- (74) '-mhan-ksh 'I like it'
1-like-lprf

- (75) '-aashham- ksh 'I beat him up'
 l-hit+dist-lprf

Since -ksh can only be suffixed to forms which could take -k as their final suffix, it is impossible to say, for example,

- (76) *'-aaham-ksh 'I hit him'
 l-hit- lprf

as aaham-m 'to hit' is a form which requires -m as its final realis suffix. The distribution of these forms is discussed in detail in section 2.215 and a historical source for this distribution is presented in section 5.4.

1.133 The two final suffixes -uum and -ha are used on verbs to express simple future.

- (77) m-wik- uum 'He will help you'
 2-help-inc
- (78) kwes- uum 'It is turning brown'
 brown-inc
- (79) naly-uum 'It is going to fall'
 fall-inc
- (80) ny- aay- ha 'I will give it to you'
 1/2-give-ir
- (81) uuv'aw-ha 'It will rain'
 rain-ir
- (82) '-wesh- ha 'We (two) will go'
 1-go+du-ir

The semantic differences between these two suffixes are discussed in detail in sections 2.212 and 2.213. Generally, however, one can note that -uum can be used on verbs which express actions or states

which have already begun as in (79), thus supporting the 'incompletive' gloss used.

1.2 The Noun Phrase. A noun phrase consists of, at least, a noun or pronoun stem and a case suffix.* (A noun stem consists of a noun root with its derivational affixes or of a stem derived from a verb root.)

A more elaborate noun phrase can consist of a noun possessed by another noun (with appropriate marking), or modified by an attributive adjective or a demonstrative adjective (or all of these). The case marking suffix is attached to the final element of the noun phrase.

Possessor noun phrases precede the possessed noun. Attributive and demonstrative adjectives follow the noun they modify. Demonstrative adjectives follow attributive adjectives. The demonstrative suffix precedes the case marking suffix; a noun can only be marked with a demonstrative suffix or modified by a demonstrative adjective, but not both. The order of elements in the noun phrase can be schematized as:

Possessor NP - Nstem - Attributive Adjective - { Demonstrative Adjective / Suffix } - Case Suffix

or

Pronoun stem - case suffix

1.21 Number on nouns. Noun roots like verb roots are unmarked for number. Unlike verb roots, however, most nouns do not have alternate forms reflecting plurality. Those nouns which have specifically plural forms do not have distinct dual forms. Like verbs, those nouns which do have overtly plural forms are often used in their unmarked forms in plural contexts. (The marking of plurality is never obligatory.)

The nouns which have plural forms are all animate and most are human. The most common marker of plurality is quantitative or qualitative ablaut⁵ of the stem vowel, alone or in combination with some other marker.

| | | |
|------|--------|------------------|
| (83) | mhay | 'boy' |
| (84) | mhaa | 'boys' |
| (85) | mshhay | 'girl' |
| (86) | mshhaa | 'girls' |
| (87) | humar | 'child' |
| (88) | humaar | 'children' |
| (89) | nchen | 'older sibling' |
| (90) | nchiin | 'older siblings' |
| (91) | hat | 'dog' |
| (92) | haat | 'dogs' |

Another plural marker is the -sh suffix. This suffix is found only in combination with other plural markers (including ablaut).

| | | |
|------|---------|-------|
| (93) | 'iipaa | 'man' |
| (94) | 'iipash | 'men' |

Another marker which is found with -sh is sh/t-. (sh/t- is affixed before the first consonant immediately preceding the root vowel, if the stem has a consonant before the root vowel;⁶ otherwise, it is affixed before the root vowel.)

| | | |
|------|----------|-------------|
| (95) | akoy | 'old woman' |
| (96) | ashkoysh | 'old women' |

sh/t- is also found with -sh and ablaut of the root vowel and with ablaut alone.

- (97) nkwi 'uncle'
 (98) ntkwish 'uncles'
 (99) kur'ak 'old man'
 (100) kursh'aak 'old men'

If sh/t- is infixed after a prefix ny- of the stem, then it has the shape ch-.

- (101) sny'ak 'woman'
 (102) snych'aak 'women'

1.22 The expression of possession.

1.221 The intransitive pronominal prefixes are also used as possessive pronominal prefixes on inalienably possessed nouns, such as body parts and kinship terms.

- (103) '-iishaaly 'my hand'
 1-hand
 (104) m-iishaaly 'your hand'
 2-hand
 (105) iishaaly 'his hand'
 hand
 (106) '-shcha 'my younger brother'
 1-younger=brother
 (107) m-shcha 'your younger brother'
 2-younger=brother
 (108) shcha 'his younger brother'
 younger=brother

1.222 kw- is used as a pronominal prefix to indicate an indefinite possessor. When this prefix is attached to a noun, it means that the

item expressed by the noun is possessed by someone unknown to the speaker.

- (109) kw- ihuu 'somebody's nose'
 unknown-nose
- (110) kw- shcha 'somebody's younger brother'
 unknown-younger=brother

1.223 The possessor can be explicitly expressed in an independent noun. The noun which expresses the possessor has no case suffix and immediately precedes the possessed noun. Thus, a possessive construction can consist of two or more nouns (or an independent pronoun and a noun (or nouns)), with only the last noun case marked (for the role of the NP in its clause).

- (111) Bonnie s'aw 'Bonnie's baby'
 Bonnie offspring
- (112) 'iipaa iime 'the man's leg'
 man leg
- (113) Bonnie s'aw iime 'Bonnie's baby's leg'
 Bonnie offspring leg

Most articles of clothing are treated as inalienably possessed nouns (with a pronominal prefix directly affixed to the root).

- (114) l-haav 'my shirt'
 l-shirt
- (115) m-kpur 'your hat'
 2-hat
- (116) Bonnie avhay 'Bonnie's dress'
 Bonnie dress

1.224 Many nouns do not have possessed forms of this kind. ny- is prefixed to the stem of some nouns (including nouns which one would expect to be inalienably possessed and many alienably possessed nouns) to form a possessed noun. Then, the pronominal prefixes can be affixed to this new possessed stem.

(117) 'ny- va 'my house'
 1-poss-house

(cf. (118) va 'house')

(119) m-ny- kur'ak 'your husband'
 2-poss-old=man

(cf. (120) kur'ak 'old man')

(121) 'iipaa ny- hat 'a/the man's dog'
 man poss-dog

(cf. (122) hat 'dog')

kw- is also used on these forms when the possessor of the item expressed by the noun is unknown.

(123) kw- ny- shyaal 'somebody's money'
 unknown-poss-money

(cf. (124) shyaal 'money')

Some body parts are prefixed with ny- 'possessed',⁷ as in

(125) 'ny- miivii 'my shoulder'
 1-poss-shoulder

(cf. (126) miivii 'shoulder')

(127) 'ny- miipuk 'my neck'
 1-poss-neck

(cf. (128) miipuk 'neck')

Some nouns can be marked as possessed either with or without ny-.

- (129) ' -ny- shlymak 'my back'
 1-poss-back
- (130) '-shlymak 'my back'
 1-back
- (131) ' -ny- shyaal 'my[^] money'
 1-poss-money
- (132) '-shyaal 'my money'
 1-money

1.225 Possession of animals other than dogs is expressed by naming the animal and following that noun with the word ny-hat [poss-dog] (with an appropriate pronominal prefix indicating the person of the possessor). If the possessor is expressed as a noun, it precedes the noun which expresses the animal possessed. ny-hat in this construction has a more general meaning than 'possessed dog'; it appears to mean 'possessed animal, pet.'

- (133) qwaqt ' -ny- hat 'my horse'
 horse 1-poss-dog
- (134) m-ntay posh ny- hat 'your mother's cat'
 2-mother cat poss-dog
- (135) 'iikway m-ny- hat 'your cow'
 cow 2-poss-dog

1.226 All other nouns (none of which are inalienably possessed) have possession expressed by following the possessed noun with nywish or (ny)uwish (appropriately inflected for the person of the possessor). If the possessor is expressed separately, it precedes the noun referring to the possessed item.

- (136) kwar'o m-ny- wish 'your knife'
 knife 2-poss-have+nom
- (137) kwnho '-ny- wish 'my basket'
 basket 1-poss-have+nom
- (138) sny'ak tiiwamtör ny- wish 'the woman's car'
 woman car poss-have+nom

Some nouns which can have their possessed forms constructed in other ways (though not inalienably possessed items) can have possessed forms using this construction.

- (139) shyaal m-uuwish 'your money'
 money 2-have+nom

(cf. (131) and (132))

kw- can be prefixed to nywish or (ny)uuwish to mean, as above, that the item expressed by the noun is possessed by some unknown person.

- (140) ma kw- ny- wish 'somebody's milk'
 milk unknown-poss-have+nom

1.227 In many cases, the number of the possessor noun is marked on the possessed noun (or in the possessive construction). -sh is suffixed to the noun stem to indicate that its possessor is plural.

- (141) '-iime 'my leg, legs'
 1-leg
- (142) '-iime-sh 'our legs'
 1-leg-pl=poss
- (143) '-ny- hat 'my dog'
 1-poss-dog
- (144) '-ny- hat-sh 'our dog'
 1-poss-dog-pl=poss

In each of these cases, the possessed noun is marked with the plurality of the possessor, even though it is unmarked for the number of its own referent.

(ny)uuwish is a nominalized form of wii-m 'to have, own'; the whole construction is a relative clause. (135) above means more literally "the knife you have". In possessed cases using (ny)uuwish the plurality of the possessor (subject of the relative clause) is reflected on the nominalized verb.

The number of the possessor noun is not always marked on the possessed noun, however:

(146) snych'aak-ny- a naw 'those women's friend/friends'
 women- dem-Vaug friend

The marking of the plurality of the possessor on the possessed noun suggests that the relationship between the possessor and the possessed is parallel to the relationship between the subject and the verb. Halpern (1942) proposed that Yuma kinship terms are best analyzed as verbs (in fact, as transitive verbs meaning 'have (someone) as a relative, call (someone) a relative'. The reasons for this analysis are (1) the elaborate plural marking system found with this set of nouns and (2) the actual use of these terms as verbs of simple sentences. Both these features are found in Maricopa as well. Kinship terms can be used as verbs without any derivational morphology, as in

(147) nyaa vany '-nkyew- k 'That is my grandmother'
 I that 1-grandmother-asp

Note that the subject of (147) is nyaa 'I' (the possessor in the English translation).

Langdon (1978a) goes farther in her analysis. She postulates that all possessive constructions are nominalized clauses. Kinship terms and body parts are themselves verbs. In Maricopa, certain articles of clothing are also verbs, as in

(148) '-kpur-k 'I have, am wearing a hat'
l-hat- asp

She argues that ny- is a verbal prefix meaning 'to be possessed of'⁹ which is used to derive verbs from base nouns (which are then nominalized). This accounts for the use of the subject prefixes on the possessed nouns. She reconstructs this system for Proto-Yuman. The Maricopa facts are in line with those she presents in this paper for the rest of Yuman to support this argument.

1.23 Case Marking. The grammatical role filled by a noun phrase within a predication is signalled by the case suffix at the end of the noun phrase. The use of these case markers differs when the noun phrase is pronominal or ends in a demonstrative stem from when they are simply affixed to a noun. This introduction is devoted to the use of these case markers on simple nouns, not pronouns, not independent demonstratives, not clauses (filling nominal roles). The pronouns are discussed in sections 1.282 and 1.29.

The noun case markers found in Maricopa are:

- sh = subject, predicate noun
- ∅ = object (direct and indirect), possessor, subject of predicate nominal and nominalized clauses
- m = comitative, instrumental, 'about, on the topic of', 'by way of' directional
- li = locative (at) and illative (to/toward)

-ly = locative (in/on) and illative (into/to)

-k = general locative and directional

1.231 -sh is suffixed to the syntactic subject of the clause, whether the verb is transitive or intransitive.

(149) sny'ak-sh ashvar-k 'The/a woman sang'
woman- sj sing- asp

(150) 'iipaa-ny- sh m- yuu-k 'The man saw you'
man- dem-sj 3/2-see-asp

Subject marking is not used on the syntactic/semantic subjects of relative clauses or nominalized clauses. The subjects of these subordinate clauses are unmarked.

(151) 'iipaa k- raw-sh hot- k 'The man who is running is good'
man rel-run-sj good-asp

(152) 'iipa ny- ashuuham-sh hot-k 'The man's hitting me is good'
man 3/1-hit+nom- sj good-asp

In both these cases, the subject of the subordinate clause is unmarked; the clause itself is, however, marked (on its last element, the verb) for the role of the entire NP within the matrix clause (in both (151) and (152), subject). These constructions are detailed in 4.3 and 4.33.

Except in certain clearly defineable constructions (as in (151) and (152) above, and in section 1.4) the semantic/syntactic subject is case marked, regardless of whether it is human or non-human, animate or inanimate, definite or indefinite, old or new information, generic or specific, volitional or non-volitional.

(153) mat- v- sh 'or'or-m 'The world is round'
earth-dem-sj round- asp

- (154) ha- sh tushtush i- m 'Water is dripping'
 water-sj drip say-asp
- (155) chyer-sh muly-k 'Birds have wings'
 bird- sj wing-asp
- (156) posh-sh puy-k 'A/the cat died'
 cat- sj die-asp
- (157) h'a- ny- sh vqor-k 'The tree bore (fruit)'
 tree-dem-sj bear-asp
- (158) posh-sh ny- shkyew-k 'A/the cat bit me'
 cat- sj 3/1-bite- asp

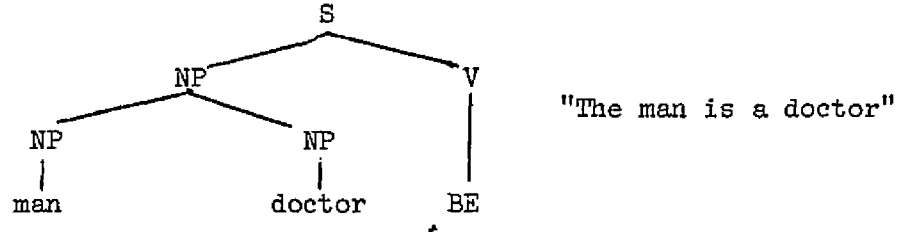
In predicate nominal constructions, however, -sh is suffixed to the second (predicate) noun. The first (or subject) noun is usually unmarked.

- (159) mmdii-ny- a chyer-sh duu-m 'Owls are birds, the own is a
 owl- dem-Vaug bird- sj be- asp bird'
- (160) 'iipaa-ny- a kwsede-sh 'The man is a doctor'
 man- dem-Vaug doctor-sj

(It is always possible when the two noun phrases are third person and the aspect mood is realis, to omit the verb duu-m 'to be' as in (160).)

The historical explanation offered for the predicate nominal structure in Yuman by Munro (1977) accounts quite nicely for this construction in Maricopa. This explanation accounts for the otherwise anomalous case marking distribution by postulating an underlying structure for predicate nominal sentences in which the two nouns form a subject clause subordinate to the main verb 'be' which is used existentially, rather than copularly.

Figure 1: Structure of the Predicate Nominal Sentence



This analysis accounts for the case-marking, since, as noted above, some subordinate clauses, particularly those which themselves take case marking, do not allow the marking of their subject. Thus, the first noun is unmarked as the subject of a subordinate clause and the second noun is unmarked just because it is the last element of a subject clause and therefore, the bearer of the morphology which marks the role of the clause.

The only thing to note here about Maricopa is that there is a tendency--not overwhelming, but certainly observable--to treat the first noun of a predicate nominal sentence more like the subject of an ordinary simple sentence. Specifically, there is a tendency for the first noun (as well as the predicate noun) to be marked with the subject suffix -sh. Munro (1977) notes that this innovation of subject marking of the first NP of a predicate nominal sentence is a general Yuman tendency.

(161) Joe-sh 'iipaa-han- sh duu-m 'Joe is a real man'
 Joe-sj man- real-sj be- asp

(162) '-ny- kur'ak- sh pakyer-sh duu-m 'My husband is a cowboy'
 l-poss-old=man-sj cowboy-sj be- asp

Aside from predicate nominal sentences and nominalized and relative clauses, there are other constructions in which the logical subject is not marked with -sh. There are some idioms in which the subject is never marked with -sh (in fact, no noun in the clause is ever marked with -sh).

- (163) mat 'en- k 'There was an earthquake, lit. the
earth move-asp earth moved'
- (164) '-iiwa ep i- sh 'I am surprised, lit., my heart was
l-heart startle-asp startled'

While both these examples (163) and (164) have a semantic subject, there is no noun phrase which is marked with the subject suffix -sh.

1.232 Noun phrases in a number of roles in the sentence have no final case suffix. These noun phrases can be zero-marked or they can be marked with an augment vowel a (if the NPs are consonant final).

In possessive constructions, the possessor nouns are always unmarked for case.

- (165) 'iipaa-ny-a ny- va- ny- sh vtay-m 'That man's house is big'
man-dem-Vaug poss-house-dem-sj big-asp

As indicated above (section 1.231), the first (or subject) noun phrase in a predicate nominal sentence is typically unmarked.

- (166) mhay-ny-a '-schaa- sh suu-m 'The boy is my younger
boy-dem-Vaug l-younger=bro-sj be-asp brother'
- (167) '-nchiin nyaly'aam-sh duush-k 'My older brothers (2)
l-older=bro Indian- sj be+du-asp are Indians'

This assignment of case marking (as well as usual occurrence of zero pronominalization [see section 1.292]) can result in ambiguity in the reading of the relationship between the unmarked noun and the subject marked noun in a predicate nominal sentence.

- (168) snych'aak-ny-a naw- sh uuduush-k (a) 'They are those
women- dem-Vaug friend-sj be+pl- asp women's friends'

or

- (b) 'Those women are
friends'

The relationship between the unmarked and the case marked noun in (168) is interpretable as possessor-possessed (as in a) or as predicate nominal subject-predicate noun (as in b).

The object of the verb (whether the direct object or the dative object) also has no case suffix.

(169) Bonnie-sh 'iipaa-ny- a mhan-k 'Bonnie likes that man'
 Bonnie-sh man- dem-Vaug like-asp

(170) 'l-n'ay '-ukshnaav- k 'I talked to my mother'
 l-mother l-tell+dist-asp

(171) 'iipaa-ny- sh qwaq kyaa- m 'The man shot a/the deer'
 man- dem-sj deer shoot-asp

A verb can have both a dative and an object; in that case both the dative and the object are unmarked as in (171).

(171) Heather-sh Pam kwnho aay- m 'Heather gave a basket to Pam'
 Heather-sj Pam basket give-asp

In sentences like (171) and (172) following, the verb agrees not with the semantic object, but with the semantic dative (which, unlike the semantic object, is typically animate (human, even)).

(172) Pam-sh kwnho m- aay- m 'Pam gave you the basket'
 Pam-sj basket 3/2-give-asp

Givon (1976:165) notes that "in all languages in which the accusative and dative objects are equally casemarked (or un-marked), dative agreement takes precedence over accusative agreement". He accounts for this by the greater inherent topicality of datives over direct objects (based on features like humanness, animateness, definiteness, etc.).

There is one other set of unmarked NPs in simple sentences. These are oblique NPs which are not marked with one of the case suffixes yet to be presented as discussed in section 1.25.

1.233 -m has a number of case marking functions. This case marker is cognate to the Yavapsi -m which Kendall (1976b) calls 'associative'. It marks instrumental NPs and comitative NPs.

(173) Lynn-sh 'ii- m hat ashham- 'k 'Lynn beat the dog with a
Lynn-sj wood-asc dog hit+dist-asp stick'

(174) Grace-sh Bonnie-m uudav- k 'Grace is with Bonnie'
Grace-sj Bonnie-asc be=with-asp

-m marks the NP expressing the material from which something is made.

(174) haav dany hcho- m chew-k 'He made this shirt from
shirt this cotton-asc make-asp cotton'

-m marks the NP expressing the subject matter about which something is talked, sung or otherwise communicated.

(175) 'iipash va- sh shyaal-m 'Those men always talk
men that-sj money-asc about money'
chuukwaar- t- k
talk+dist+pl-emp-asp

(176) shyaal-m '-ashvar-k 'I sang about money'
money- asc l-sing- asp

-m also marks the NP expressing the item for which something is done.

(177) shyaal-m '-iima- k 'I dance for money'
money- asc l-dance-asp

-m also has locational and temporal functions. -m is used to mark the NP expressing the place by way of which one comes or goes.

(178) m-ny- va- a- m '-dii- k 'I came by way of your house'
2-poss-house-dem-asc l-come-asp

The -m marked noun does not express the place at which the motion originates nor the place which is the goal of the motion.

-m is used to mark NPs expressing the time at or during which something happens.

(179) nyaa-m ar'oy-k 'He plays during the day'
 day-asc play- asp

Though -m can be suffixed to noun phrases used in a wide range of semantic roles, its interpretation is rarely ambiguous. The use of the m- marked noun phrase is inferred from the semantic features of the noun itself and the verb of the clause in which the NP occurs. The locational, temporal, instrumental and source uses of -m are restricted to inanimate nouns. All these nouns have different features which restrict their possible interpretation (e.g., it is impossible to interpret a noun like nyaa 'day' locatively even if it were in a clause with a verb of motion). Comitatives can only be animate (and, moreover, in Maricopa are used exclusively with the predicate uudav 'be with, accompany'). Topics of communication are not restricted to any particular class of noun, but can only be used with the class of predicate which express some kind of communication.

The only kind of -m marked noun which raises difficulties is the -m marked goal NP, which is not restricted to any particular class of NP (though typically it will be inanimate) or to occurring with any particular kind of predicate. Thus, (176) is ambiguous between the reading given and a goal reading 'I sing for money'.

1.234 -ii is used as a case suffix to indicate the location at which an action occurs or toward which the action is directed. It is

typically used with verbs of motion and position.

- (180) h'a- sj ha- s- ii v'aw- m 'The tree is by the water'
tree-sj water-dem-at stand-asp
- (181) 'iipaa-ny- sh va- ny- ii vaa- k 'The man came to the house'
man- dem-sj house-dem-at come-asp

1.235 -ly is another locative/illative suffix. Like -ii it is used to indicate location at which action occurs or toward which movement is directed. -ly indicates location in someplace or motion into someplace. -ii, in contrast, does not specify this 'insiderness'--instead it means something is at or in the vicinity of someplace or moving in some direction.

- (182) va- ny- ly '-yuu-k 'I saw him in the house'
house-dem-in l-see-asp
- (183) 'iipaa-ny- sh Flagstaff-ly yem-k 'The man went to Flagstaff'
man- dem-sj Flagstaff-in go- asp

1.236 -k is a more general locative/directional suffix. It is used with verbs which have some inherent feature of directionality. -k is used with verbs of motion to mark either the place toward which the movement is directed or the place away from which the movement is directed.

- (184) Lynn-sh Yuma-k dii- k 'Lynn came from Yuma'
Lynn-sj Yuma-loc come-asp
- (185) kwes'ul'ul-ny- sh mat- k pak- m 'The apple fell to the
apple- dem-sj earth-loc fall-asp ground'
- (186) ha- k nyvay-k 'He lives near/around the
house-loc dwell-asp water'

Thus, depending on the verb with which the -k-marked NP occurs, -k can mark the NP which expresses the place toward which there is movement, away from which there is movement or in which something is located.

1.24 Locational nouns. More specific locations can be expressed using locational nouns. These nouns refer to specific parts of some larger entity, including the inside or bottom (hwa), top (may), side (kw'ur), outside (t'ar), and back (mak). The larger entity is expressed by the noun which possesses one of these locational nouns. The locational noun is case marked for the role of the NP in the clause.

Typically these nouns are found in locative constructions, marked with locative/directional suffixes.

(187) mhaa-sh h'a hwa- s- ii uuv'o-k 'The boys are standing
 boys-sj tree bottom-dem-at stand+pl-asp under a tree'

In (187) -ii is suffixed to a locational noun which means 'bottom, inside' which is possessed by the noun expressing the location. In this case, the locational phrase would be more literally translated 'at the tree's bottom'. Some more examples include:

(188) '-nchen- sh shyaal vii 'My brother put the money
 l-old=sib-sj money rock under the rock'
 hwa- ny- ly chaa-m
 bottom-dem-in put- asp

(189) Lynn-sh hat-ny- a may-k yem-k 'Lynn went over the dog'
 Lynn-sj dog-dem-Vaug top-loc go- asp

(190) onyor-sh kwnho hwa- v- ii va- k 'The book is inside the
 book- sj basket bottom-dem-at sit-asp basket'

(191) lames may-ii mat-k 'It is dirty on top of the
 table top-at dirty table'

- (192) h'a- sh ha kw'ur-ii v'aw- m 'The tree is by the water'
 tree-sj water side- at stand-asp

These nouns may occur in other case roles too:

- (193) lames hwa- ny- sh lyesh-k 'The bottom of the table
 table bottom-dem-sj break-asp broke'
- (194) lames may-sh mat- k 'The top of the table is
 table top-sj dirty-asp dirty'

1.25 Oblique cases. Oblique case marking (-m, -k, -ly, and -ii) is optional. Since the relationships these affixes indicate are mostly transparent (inferrable from the features of the NPs to which they are suffixed and the predication in which they are found), the absence of these affixes does not result in much ambiguity or processing difficulty.

- (195) Pam-sh 'ii hat-ny- a aaham-m 'Pam hit the dog with a
 Pam-sj wood dog-dem-Vaug hit- asp stick'
- (196) vakpaly '-yem-ksh 'I went to Phoenix'
 Phoenix l-go- lprf
- (197) kwnho lames '-shvaw-k 'I put the basket on the
 basket table l-put- asp table'

It is always possible to mark the oblique NP with an appropriate suffix (unlike the ditransitive sentences like those in (171) and (172) in which both the dative and the direct object are always obligatorily zero-marked). Thus, paraphrases of (197) are

- (197') kwnho lames-ly '-shvaw-k 'I put the basket on the
 basket table-in l-put- asp table'
- (197'') kwnho lames-k '-shvaw-k 'I put the basket on the
 basket table-loc l-put- asp table'

I have recorded no simple Maricopa sentences which have more than five NPs (not including possessor or conjoined NPs).¹⁰ If the

predication involves more than five roles, other verbs are obligatorily used to make the relationship between the NP and the rest of the predication explicit. This use of a verb to 'carry' an oblique NP is found in sentences with far fewer than five NPs. This construction is used to make explicit the relation between some oblique NP and the remainder of the predication.

(198) va- ly '-uuva- k 'ashvar-k 'I sang in the house'
 house-loc 1-be=loc-SS 1-sing-asp

(Note that the first verb in this sentence is marked with a suffix to show that it has the same subject as the other verb in the sentence. This is part of the 'switch reference' system which is discussed in detail in section 2.221.)

This construction contributes to the ease of processing in these sentences since there is typically a very low upperbound on the number of noun phrases found in a clause.

1.26 Oblique Case Markers on Verbs. There is a tendency in Maricopa for the oblique case markers to move off the end of the NPs to which they would appropriately be affixed and cliticize to the verb.¹¹

(199) tdish mat ily-k- shvaw-k 'Plant the corn in the ground'
 corn earch in- imp-put- asp

(200) mat tdish ily-k- shvaw-k 'Plant the corn in the ground'
 earth corn in-imp-put- asp

(201) Heather-sh va- ny- a k- dii- k 'Heather came from the
 Heather-sj house-dem-Vaug loc-come-asp house'

(202) 'ii hat nym- '-aaham-m 'I hit the dog with a stick'
 wood dog dem+asc 1-hit- asp

In some cases, the detached case marker is being reinterpreted as part of the verb stem. The verb ev-k 'to bother, work' regularly occurs with an -m marked instrumental oblique NP. In the meaning, 'to work, to do a job' ev-k is regularly used with the unspecified oblique object 'ayuu-m. This -m is undergoing reanalysis as part of the verb stem.

'ayuu+m#ev ⇒ 'ayuu#m-ev ⇒ 'ayuu#mev¹²

(203) 'ayuu-m k- ev- k 'Work!'
s.t.-asc imp-work-asp

(203') 'ayuu k- mev- k 'Work!'
s.t. imp-work-asp

This reanalysis is supported by several features of this particular construction. First, the unspecified object morpheme 'ayuu¹³ which regularly occurs with this verb must always immediately precede the verb, so the original change involves little more than a boundary shift. (This is unlike the structure found in (199-202), where the oblique NP can occur apart from the verb.) Another feature of 'ayuu which encourages the reanalysis is that it typically occurs without any marking (case or demonstrative suffixes). It is usually found as the unmarked object of a verb.

1.27 Attributive adjectives. Intransitive verbs in their unmarked form (with no nominalizing morphemes) can be used as attributive adjectives within a noun phrase. These adjectives are typically (but not exclusively) stative verbs which refer to such things as number, color or size.

(204) kwes'ul'ul havshuu chqaw-m 'He ate a green apple'
apple green eat- asp

- (205) piipaa srap-sh vakpaly tev-k 'There are five people in
 person five-sj Phoenix be- loc+pl Phoenix'
- (206) 'iipaa hmii sper- sh ny- wik- k 'A tall strong man helped me'
 man tall strong-sj 3/1-help-asp
- (207) ha pily-a 'nyk- aay- m' 'Give me some hot water'
 water hot- Vaug imp/l-give-asp
- (208) '-iime lyesh-v- sh rav- k 'My broken leg hurts'
 l-leg break-dem-sj hurt-asp

Nouns can be modified using the same verbs in two other ways: (1) with relative clauses (as in (209), discussed in 4.331); and (2) with switch reference marked subordinate clauses (as in (210), as discussed in 4.32).

- (209) 'ii ku- lyesh-sh mat- k pak- m 'The broken stick fell down'
 wood rel-break-sj earth-loc fall-asp
- (210) Pam-sh va- sh hmuk- m yuu-k 'Pam saw three houses'
 Pam-sj house-sj three-DS see-asp

Another way to modify a noun is with another noun. The modifier follows the head, as in the following.

- (211) qwaqt nymaroy '-chwe-k 'I made a toy horse'
 horse toy l-make-asp
- (212) hat sny'ak-ny- sh haav-k 'The female dog came in'
 dog woman- dem-sj enter-asp
- (213) qwaq 'iipaa-sh v- yem-k 'A/the male deer left'
 deer man- sj dem-go-asp
- (214) posh haan- sh s'aw ataw-k 'The mother cat is licking her
 cat parent-sj baby lick-asp baby'

1.28 Demonstratives. The demonstratives consist of suffixes, (fully stressed) stems and prefixes.

- 1.281 The demonstrative suffixes are: -ny 'anaphoric, definite, generic'
-s 'distant, out of sight'
-v 'near, at hand'

These suffixes are attached to the noun stem, before the case suffix. -ny has been exemplified throughout the examples up to now.

(215) 'iipaa-ny- sh hmii-k 'The man is tall'
man- dem-sj tall-asp

(216) va- ny- k m-dii- k 'You came from the house'
house-dem-loc 2-come-asp

An NP which is not marked with any demonstrative (including -ny) is not necessarily indefinite. Definiteness is a product of context. Unmarked noun phrases can be indefinite, generic or definite. The unmarked form of a word is neutral with respect to definiteness and specificity, just as it is neutral with respect to number.

A noun phrase marked with -ny is definite or generic. These two uses are distinguished by context. These two uses parallel the English the in a sentence like 'The owl is a bird'. It is possible to find two readings for this sentence: (1) this particular owl is a bird; and (2) part of the definitions of owls is that they are birds. Compare the following two Maricopa sentences which are structurally parallel.

(217) mmdii-ny- a chyer-sh 'Owls are birds, the owl is a bird'
owl- dem-Vaug bird- sh

(218) 'iipaa-ny- a kwsde- sh 'The man is a doctor'
man- dem-Vaug doctor-sj

Due to the semantics of the noun phrases involved, the generic reading for (217) seems obvious, whereas the definite reading for (218) is more likely.

-s is used on noun phrases which refer to items at a great distance or out of sight of the speaker and hearer.

(219) mat- s- sh chhot lyvii- k 'This land looks beautiful'
 earth-dem-sj good+dist be=like-asp

(220) Lynn-sh ny- va- s- ii yem-k 'Lynn went to her house'
 Lynn-sj poss-house-dem-at go- asp

-v is used on noun phrases which refer to items near or in sight of the speaker. This range begins with the speaker himself/herself; the body parts of the speaker are marked with v in examples (222) and (223) below--it is difficult to get nearer to the speaker than that. The cat, referred to in example (221) was halfway across the room from the speaker and the hearer.

(221) posh-v- sh ii'ily- k 'This cat has fleas'
 cat- dem-sj be=infested-asp

(222) '-iimat-v- sh hot- k 'This body of mine is good,
 l-body- dem-sj good-asp I feel well'

(223) hlyshma-sh '-iime-v- ii nak-k 'There is a fly on my leg'
 fly- sj l-leg- dem-at sit-asp

1.282 The demonstrative roots are: da 'near'
va 'medial'
aas 'distant, out-of-sight'
aany 'anaphoric, definite'

The demonstrative prefixes are: v- 'near'
s- 'distant'
ny- 'neutral, anaphoric'

The demonstrative stems are in order of distance from the speaker:

| | |
|------------|-------------------------|
| <u>vda</u> | 'near, in hand' |
| <u>da</u> | 'near' |
| <u>va</u> | 'medial' |
| <u>sva</u> | 'distant' |
| <u>aas</u> | 'distant, out of sight' |

aany is 'anaphoric, generic' and does not refer to distance from the speaker.

The demonstrative stems can serve as deictic pronouns and adjectives. They are case marked using the suffixes discussed above in the section on case marking. There are two sets of these demonstratives: (1) vda, da, va and sva; and (2) as and any. These two sets are distinguished from each other by the shape of their unmarked forms. Using da as a typical example of the first set and as as a typical example of the second set, the inflected demonstratives can be illustrated and compared.

| | set 1 | set 2 |
|-------------|---------|--------|
| subject | dash | aassh |
| object | dany(a) | aas(a) |
| associative | dam | aasm |
| 'at' | dii | aasii |
| 'in' | dily | aasly |
| locative | dik | aask |

The most obvious difference between these two sets is the fact that the object form of (1) has a ny not found in any of the other forms of the demonstrative. The other two demonstratives aas and aany do not

have an extra ny on their object form. These two differ from the other set in one other way--their stems are consonant final. The first set has vowel final stems; the vowel found is dependent on the case marking. The vowel is a except in the forms which have exclusively locative/ directional suffixes--ii, ly, and k. In these forms, the vowel is ii. This vowel is clearly not part of the case marker, since when these case markers appear on vowel final noun stems, the vowel does not change.

- (224) va 'house' valy 'into a house'
 vak 'from a house'

1.283 The demonstrative stems are used as pronouns.

- (225) aany-sh puy-m 'He died'
 def- sj die-asp
- (226) vany-a '-yuu-k 'I saw this one'
 med- Vaug l-see-asp

These stems can also be used as demonstrative adjectives. As adjectives, they are always the final element in the NP and therefore bear the case marking.

- (227) posh sva- sh shmaa-m 'That cat is asleep'
 cat dist-sj sleep-asp
- (227) alyshay da- sh aakyat-m 'These scissors cut it'
 scissors thsi-sj cut- asp
- (229) chyer vany-a shviily-sh hmaaly-m 'That bird's feathers are
 bird med- Vaug feather-sj white- asp white'

In (229), the demonstrative adjective is found within an NP--it is marking the possessor within the larger possessor-possessed form. The vanya is final to the NP of the noun which it is modifying, chyer 'bird'.

1.284 The demonstrative prefixes are also found as prefixes on certain verbs. They can be attached to the existential verbs duu-m 'be', wii-m 'do', 'ii-m 'say' and to motion and position verbs like yem-k 'go', uuvaa-k 'be located', va-k 'sit', dii-k 'come', etc.

(230) aany-sh y- wii-m 'He did it this way'
 def- sj dem-do- asp

(231) va- sh y- yem-k 'That one went away'
 med-sj dem-go- asp

The use of these demonstrative prefixes on verbs is presented in detail in sections 3.251, 3.35 and 3.41.

1.29 Pronouns. This section presents the personal pronouns and the non-referential pronouns (indefinite and interrogative) which, along with the demonstrative pronouns already presented, exhausts the set of pronouns.

1.291 There are first and second person pronouns. There are no personal pronouns for the third person. Demonstrative pronouns are used for third person pronouns.

The personal pronouns are unmarked for number. I have no recordings of specifically plural pronouns and I have been unable to elicit any. Typically, the personal pronouns refer to singular entities.

The personal pronouns do not have forms marked with the case suffixes -ii or -ly. -ii and -ly are not used on animate nouns or personal pronouns. Animate noun phrases are not used as locations or directions. If one wants to say, e.g., 'I went to you or from you', the personal pronoun is not used to express the location. Instead, a phrase like m-iimaat-ii 'at your body' or a clause like mat m-uuvash-ii 'the place you are sitting' can be used to express the direction.

-k is found on personal pronouns marking dative objects of verbs of emotion or feeling.¹⁴

(232) nyip-k ny= mshray-m 'He is mad at me'
me- loc angry=at- asp

(233) nyip-k ny= yuuhot-k 'He is nice to me'
me- loc nice=to- asp

The pronouns in the four cases in which they occur are

| | first person | second person |
|-------------|--------------|---------------------|
| subject | 'nyaash | mansh ¹⁵ |
| | 'nyaa | |
| object | 'nyip | many |
| associative | 'nyipm | manym |
| locative | 'nyipk | manyk |

The first person pronouns commonly (in the speech of all the Maricopas I have heard) are used without the initial glottal stop.

In Maricopa the choice of stem distinguishes between the subject and object forms (as well as the subject suffix -sh). Less conservative speakers regularly use nyaa or 'nyaa instead of 'nyaash as the subject form of the first person pronoun.

(234) nyaa(-sh) many ny- yuu-k 'I saw you'
I (-sj) you 1/2-see-asp

Here are some other examples of personal pronouns used in sentences:

(235) man-sh nyip 'nym-aaham-m 'You hit me'
you-sj me 2/1- hit- asp

(236) nyip '-nchen- sh ar'oy-k 'My brother played'
me '-old=sib-sj play-asp

(237) many-a m-naw- sh v- yem-k 'Your friend left'
you-Vaug 2-friend-sj dem-go- asp

In contrast to the pronouns in the sentences above, the use of pronouns in the following sentences is neither emphatic nor "redundant".

- (238) Pam-sh many-m ashvar-k 'Pam sang about you'
Pam-sj you-asc sing- asp
- (239) Pam-sh nyip-m ashvar-k 'Pam sang about me'
Pam-sj me- asc sing- asp
- (240) nyip-k m-wom- k m-nyuuv-k 'You fought on account of
me- loc 2-do+m-SS 2-fight-asp me'
- (241) many-k '-wom- k '-nyuuv-k 'I fought on account of you'
you- loc 1-do+m-SS 1-fight-asp

1.292 First and second person pronouns used as subjects, possessors and objects (which trigger verb agreement) do not have to occur in the sentence as independent pronouns. Instead, the agreement (verbal and possessive) is sufficient to express who is playing these roles. This fact is demonstrated in examples throughout this chapter (cf., e.g., (7-10), (12-15), (28-36), (103-104), (106-107)). Independent pronouns must be used when the NP is in an oblique role (where no verbal or nominal agreement expresses the person of the referent). Thus, in (232), (233), (2378), (239), (240) and (241), the independent pronouns are obligatory (since they would not be recoverable otherwise).

In the third person, once a referent has been established through context, independent pronouns (demonstrative, this time) are not obligatory. In the third person, in fact, pronouns are somewhat less obligatory since in oblique case roles the third person can be expressed by cliticizing the case marker to the verb (only one case marker per verb) and the omission of any pronoun or noun phrase implied a third person reference inferrable from context (discourse or physical context).

Case-marking clitics are discussed in section 1.26 and 2.625.

The use of independent pronouns is not particularly emphatic or rare. The occurrence of first or second person pronouns is common; the use of the demonstrative pronouns is somewhat rarer. Personal pronouns are found in all roles, since the agreement system (section 1.11) is somewhat less than uniquely referring, this is helpful in processing; however, they are also used in contexts which are unambiguous.

(242) man-sh m-sper- m 'You are strong'
 you-sj 2-strong-asp

The second person subject pronoun is often used in imperative sentences.

(243) man-sh k- v'aw- m 'Stand up'
 you-sj imp-stand-asp

1.293 The non-referential pronouns are interpreted as interrogative or indefinite in questions and as indefinite in statements.

The question in Maricopa is marked by rising intonation and by the structure of the verb. The range of verbal structures is discussed in section 5.33. One simple way to inflect the verb of a present-past question is to omit the final realis suffix (if the verb does not have a second person subject). If the verb is consonant final, ii is suffixed to it. If the verb is vowel final, the final vowel is lengthened.

The pronoun which means 'who; someone' is mki (ki).¹⁶

subject:

(244) mki-sh hav- ii 'Who came in?' or 'Did someone come in?'
 who-sj enter-Q

(245) ki-sh hav- ii 'Who came in?' or 'Did someone come in?'
 who-sj enter-Q

(245) mki-sh hav- sh 'Someone came in'
who-sj enter-prf

object:

(246) mkiny ashham-ii 'Who did he beat up?' or
whom beat- Q 'Did he beat someone?'

associative:

(247) (m)kiny-m nyuuv-ii 'Who is he fighting about?' or
who- asc fight-Q 'Is he fighting about someone?'

locative:

(248) mkiny-k wom- k nyuuv-ii 'Who is he fighting on account of?'
who- loc do+m-SS fight-Q or
'Is he fighting on account of someone?'

mki/mkiny in these cases is restricted to humans. As with the demonstratives of the first set (da, va, vda and sva section 1.282), the object form of this pronoun has a ny not found in the subject form. However, the ny is found in the oblique case forms above in (247) and (248).

Another interrogative/indefinite pronoun appears to be related to mki, mkip which means 'which one; some one (of a closed set)'. This pronoun is not restricted to general human reference. It can be used to refer to any entity belonging to some small set which is not specifically referred to. As with mki, the initial m can be omitted.

Subject:

(249) kip- sh m- aaham-ii 'Which one hit you?' or
which-sj 3/2-hit- Q 'Did someone (of them) hit you?'

(250) mkip- sh kyaa- m 'Someone of them shot him'
which-sj shoot-asp

object:

(251) mkip kyaa 'Which one did he shoot?'
which shoot

- (252) mkip kyaa- m 'He shot someone (of them).'
 which shoot-asp

This interrogative can also be used adjectivally to mean 'which'.

- (253) va kip chew-ii 'Which house did he build?'
 house which make-Q

associative:

- (254) mkip- m '-puy-uum 'Someday I will die'
 which-asc l-die-inc

locative:

- (255) mkip- k man- k duu 'Which place did he come from?'
 which-loc arise-SS be

- (256) mkip- k man- k duu-m 'He came from somewhere'
 which-loc arise-SS be- asp

'at':

- (257) mkip- ii man- k duu 'Where did he start at?' (which place)
 which-at arise-SS be

'in':

- (258) mkip- ly yem-ii 'Which place did he go?'
 which-in go- Q

mki when marked with the locative suffixes (suffixed directly to the stem) does not have an animate meaning. Instead it means 'where'-- 'to/in/at/from what place'.

- (259) Pam-sh mki- ly yem-ii 'Where did Pam go?'
 Pam-sj where-in go- Q

- (260) mki- i puy-ii 'Where did she die?'
 where-at die-Q

- (261) 'iipaa-ny- sh mki- k shdamp-ii 'Where did the man go?'
 man- dem-sj where-loc face- Q

kawish means 'what; something'.

- (262) danya kawit-sh duu 'What is this?'
this what-sj be
- (263) kawish chew-ii 'What did he make?'
what make-Q
- (264) hat-a kawish-m ashham- ii 'What did he hit the dog with?'
dog-Vaug what-asc hit-dist-Q
- (265) kawit-sh Anaheim maa-m 'Something ate Anaheim'
what- sj Anaheim eat-asp
- (266) kawish '-yuu-k 'I saw something'
what l-see-asp
- (267) mhay-sh kawish-m ar'oy-k 'The boy played with something'
boy- sj what-asc play-asp

kawish only occurs subject marked, associatively marked or unmarked.

It never occurs in the locative oblique cases. mki is used in these cases.

| | mki 'who' | mki 'where' | mkip 'which' | kawish 'what' |
|-------------|-----------|-------------|--------------|---------------|
| subject | mkish | - | mkipsh | kawitsh |
| object | mkiny | - | mkip | kawish |
| associative | mkiny-m | - | mkipm | kawishm |
| locative | mkinyk | mkik | mkipk | - |
| 'at' | - | mkii | mkipii | - |
| 'in' | - | mkily | mkiply | - |

1.3 Reflexives and reciprocals. Reflexive and reciprocal reference is expressed the proclitic mat (derived from imaat 'body') immediately before the verb.

- (268) mat-'-aaqar-m 'I cut myself'
ref-l-cut- asp

- (269) mat-m-chev- k 'You doctored yourself'
ref-2-treat-asp
- (270) 'iipaa-ny- sh mat-yuu-k 'The man saw himself'
man- dem-sj ref-see-asp
- (271) 'iipash-sh mat-tuupooy- k 'The men killed themselves'
men- sj ref-kill+pl-asp 'The men killed each other'
- (272) mshhaa-ny- sh mat-uuyoov-k 'The girls saw each other'
girls- dem-sj ref-see+pl-asp 'The girls saw themselves'

When the subject of the verb is singular, only a reflexive reading is possible for mat (as in (268-270)). When the subject is dual or plural, mat is ambiguous between a reflexive and a reciprocal meaning as in (271) and (272).¹⁷

Note that mat triggers \emptyset object agreement on the verb. It always occurs immediately before the verb and is invariant in form regardless of the person of the subject. The reciprocal/reflexive reading always refers back to the subject.

maatm 'own, self' is used emphatically and to express reflexive readings in other roles (other than object).

- (273) maatm s'aw-a daw- k 'He picked up his own baby'
own baby-Vaug take-asp
- (274) maatm '-ii'e '-aakyat-m 'I cut my own hair'
own l-hair l-cut- asp
- (275) Jeni-sh maatm chkwily-k 'Jeni made it all by herself'
Jeni-sj own sew- asp
- (276) maatm '-n'ay- sh ny- shqam-m 'My own father slapped me'
own l-father-sj 3/l-slap-asp

Note that maatm, unlike mat, is never obligatory. It is used in possessive constructions, where the possessor is already marked on the

possessed noun. It is used to emphasize the subject which is already marked on the verb (and which is independently present). maatm is a particle (invariant like mat, but not fixed in position). Maatm, unlike mat, is not restricted to reference to the subject of the sentence. In (276) it refers redundantly and emphatically to the speaker (not the subject of the sentence).

1.4 Conjunction of Noun Phrases. The typical method of conjoining two noun phrases which refer to entities which are acting together or being acted on together is by using a separate verb to express the relationship between the two nouns. Typically, this verb is uudavk 'to be with, to accompany'. This complex uudav construction is discussed in sections 2.221 and 4.1.

Another way to conjoined NPs is to simply list the noun phrases. The case marker must occur on the final noun in the conjunction.

(277) qwaqt kosh iikway-sh mat- ly uuv'o- k 'The horse, the pig,
horse pig cow- sj earth-in stand+pl-asp and the cow'

All the noun phrases can be marked with the case suffix.

(278) nyiihwet-sh '-avhay-v- ii '-iishaaly-v- ii
blood- sj l-dress-dem-at l-hand- dem-at
duush- k
be+dst-asp

(279) Bonnie-sh Pam-sh Heather-sh mkip-ly ayem- sh 'Bonnie, Pam and
Bonnie-sj Pam-sj Heather-sj which-in go+pl- aj Heather (sepa-
rately) went
somewhere'

1.5 Possessor "Raising". In the section on subject case marking, it was mentioned that there is a construction in which a noun other than the semantic subject is marked as the syntactic subject. This construction has been described for Mojave by Munro (1976b).

Possessor raising is a process by which the possessors of the subjects of certain kinds of predicates can become the syntactic subjects of those predicates. This relationship is the one that holds between sentences like (280) and (281) below.

(280) many m-ii'e-ny- sh nyiily-k 'Your hair is black you have
you 2-hair-dem-sj black- asp black hair'

(281) man-sh m-ii'e m-nyiily-k 'You have black hair'
you-sj 2-hair 2-black- asp

In (280) the semantic subject of nyiily-k 'black' (i.e., the noun referring to the item which actually is black) is the syntactic subject. ii'e 'hair' is marked with the subject suffix -sh; many is the unmarked possessor and does not trigger verb agreement. In (281), the second person pronoun is in the subject case, it triggers verb agreement and the word of ii'e 'hair' is unmarked for case. The semantic relationships between the elements of the clause remain the same--'you' have 'hair' and 'the hair' is 'black'. In (281) the subject has more prominence--it is the focus of attention in the clause --than it has as the possessor in (280) (where its referent is the same).

As pointed out to me by Margaret Langdon (personal communication), the semantic subject in a sentence like (281) is behaving as though it has become incorporated into the verb. Its position is fixed immediately before the verb, it cannot be marked with any suffixes (compare (280) and (281)), note the difference in demonstrative marking; in (280) there is a demonstrative suffix on the subject, while in (281) no suffix can appear on ii'e. Moreover, as pointed out by Pamela Munro (personal communication), ii'e cannot be omitted from (281) as one might expect to be possible were it an independent NP. Thus, this process results in a

fixed construction analogous to the relationship in English between 'My eyes are blue' and 'I am blue-eyed'.

My use of the term raising differs from the traditional use of this term. These definitions refer to the moving of an element from a subordinate clause to a higher clause. "A raising rule will be defined as one that moves some constituent C from a lower clause to a higher clause..." (Langacker, 1974: 631). In these clauses, the semantic possessor of some subject NP is used as the syntactic subject, rather than the semantic subject of some subordinate clause. However, it has been discussed in section 1.227, that the expression of possession in Maricopa (as in other Yuman languages) can be analysed, at least historically, as the nominalization of clause whose subject is the possessor. Historically, therefore, the possessor is the subject of the possessed noun, and thus might be viewed as being raised from a subject clause to the main clause. Perhaps a better synchronic argument would be the analogy with more traditional raising rules--the NP is "raised" out of a construction and assumes the role played by the whole construction in the more transparent form. The construction from which the NP is "raised", however, is not synchronically a clause. Possessor raising is also used in Munro and Gordon (to appear) to refer to a parallel, but much more productive process in Chickasaw.

The predicates involved in Maricopa possessor raising are all intransitive verbs. The semantic subject noun phrases are all inalienably possessed (body parts, kinship terms, clothing and time words).

Possessor raising is common in clauses whose main verbs are numbers. In the Yuman languages, numbers are verbs whose subjects are the items being enumerated.

(282) m-shhuk-k 'There are ten of you'
2-ten- asp

(283) 'iipash-sh hmuk- k 'There are three men'
men- sj three-asp

If the items being enumerated are possessed, either the items or the possessor can be the surface subject of the number verb.

(284) 'iipaa iishaaly-sh shent-k 'The man has one hand'
man hand- sj one- asp

(285) 'iipaa-sh iishaaly shent-k 'The man has one hand'
man- sj hand one- asp

(286) many m-mataam+sh hvik-k 'You are two years old, lit.
you 2-year- sj two-asp your years are two'

(287) man-sh mataam m-hvik-k 'You are two years old'
you-sj year 2-two- asp

In support of the argument that the semantic subject is incorporated into the verb in the possessor-raised sentence, note that the semantic subject can be totally invariant, without even the prefix noting the possessor as mataam 'year' is in (287).

It is possible for this kind of clause to have no syntactic subject (i.e. for no NP to be marked with -sh or trigger verb agreement).

(288) m-iito- ny- sh rav- k 'Your stomach hurts'
2-stomach-dem-sj hurt-asp

(288') m-iito m-rav- k 'Your stomach hurts'
2-stomach 2-hurt-asp

(288'') m-iito rav- k 'Your stomach hurts'
2-stomach hurt-asp

(288''') *m-iitoo- ny- sh m-rav- k 'Your stomach hurts'
2-stomach-dem-sj 2-hurt-asp

1.6 Negation. Negation is accomplished in several different ways depending on what is being negated.

1.61 Simple Negation. A clause is negated by putting negative markers on the predicate.¹⁸ If the predicate is a verb, then obligatorily the verb is marked with both a proclitic waly- or aly- and a suffix -ma.

(289) chii-sh hahan-ly aly-dik- ma- k 'The fish aren't in the river'
fish-sj river-in neg-like-neg-asp

(290) waly-'-tpuy-ma- k 'I didn't kill him'
neg- l-kill-neg-asp

(291) 'iipaa-sh waly-'-do-ma- k 'I am not a man'
man- sj neg- l-be-neg-asp

The vowel in the negative suffix is lost before a number of non-final suffixes (the non-final suffixes are presented in section 2.3).

(292) Heather-sh waly-yuu-m- haay-k 'Heather hasn't seen it yet'
Heather-sj neg- see-neg-yet- asp

Some verbs have alternate stems which are used with a number of non-final suffixes of which -ma 'negative' is one. An example of this is the stem for 'be' in example (291) above. The unmarked form of 'be' is duu-m, the form of negatives and some other suffixed forms is do. All the verbs which have alternate forms occurring in the negative have vowel final stems and the alternation involves a change in that vowel. In the case of 'be' the change is from uu to o; (as in this case) when the alternation occurs, the alternate forms have shorter (and with some verbs lower) vowels.

When both aly- and a case marker (see section 1.26) are cliticized to the verb, the order is negative clitic before case clitic.

(293) Heather-sh va- aly-k- di- ma- k 'Heather didn't come from
Heather-sj house-neg-loc-come-neg-asp a house'

(294) Yuma waly-ly-yem-m- haay-k 'He hasn't gone to Yuma
Yuma neg- in-go- neg-yet- asp yet'

When both the negative clitic and the reflexive clitic occur before the verb, either clitic can occur first.

(295) waly-mat-'-sh'ot-ma- ksh 'I didn't hurt myself'
neg- ref-l-hurt- neg-lprf

(296) mat-aly-'-sh'ot-ma- ksh 'I didn't hurt myself'
ref-neg-l-hurt- neg-lprf

1.62 Negation of Nouns. In predicate nominal constructions, the predicate noun can bear the negative morphemes.

(297) aly-'iipaa-ma- sh (duu-m) 'She is not a man'
neg-man- neg-sj be- asp

When a noun is negated, as in the predicate nominal construction, the proclitic can be omitted. That is, negation can be accomplished by the suffix -ma alone occurring on the noun.

(298) m-ntay- ma- sh 'That is not your mother'
2-mother-neg-sj

(299) nyip '-ny- kur'ak pakyer-ma- sh 'My husband is not a cowboy'
me l-poss-old=man cowboy-neg-sj

As the examples above show, the (possible) omission of aly- is sensitive to whether the item negated is a noun or a verb. A main verb cannot be negated without aly-. This kind of negation (omitting the negative proclitic) can be used on the verb of an action nominalization and on attributive adjective action nominalization.

(300) harav uusish- ma- sh hot- k 'Not drinking liquor is good'
liquor drink+nom-neg-sj good-asp

- (301) 'iipaa sper- ma- sh ny- aaham-m 'A weak (lit. not strong) man
 man strong-neg-sj 3/1-hit- asp hit me'

1.7 Word order. The first sentence of this chapter was a statement about word order in simple sentences. The unmarked word order in Maricopa is SOV. This order has been exemplified throughout this chapter. It is noted at the beginning of this chapter that the order of noun phrases before the verb is not fixed.

The position before the subject is used for topics.

- (302) va vany-a nyip '-n'ay- sh chew-k 'That house was built
 house that-Vaug me l-father-sj make-asp by my father'
- (303) 'ii dany Pam-sh hat-a aly-nym- aaham-ma- k 'This is not
 wood this Pam-sj dog-Vaug neg-dem+as-hit- neg-asp the stick Pam
 hit the dog
 with'

Heavy NPs can also be found before the subject, without the change in focus of attention which occurs when simpler noun phrases are found in this position. Heavy NPs include conjoined NPs, clausal NPs (complements) and relative clauses.

- (304) Pam Allen JP nyaa nyi- '-yuu-ksh 'I saw Pam, Allen and JP'
 Pam Allen JP I pl=oj-1-see-lprf

The order of noun phrases after the subject appears to be free without reflecting much in the way of emphasis, focus or topicality.

- (305) Heather-sh ma Bob aay- m 'Heather gave Bob some milk'
 Heather-sj milk Bob give-asp
- (305') Heather-sh Bob ma aay- m 'Heather gave Bob some milk'
 Heather-sj Bob milk give-asp

Munro (1974) noted that in Mojave the unmarked order of indirect object and direct object is indirect object first. This appears to be mildly true in Maricopa. When, for example, the subject is focussed on, the order of NPs volunteered by the speakers is indirect object first

(though the alternate order is always acceptable).

- (306) Pam-sh (wii-m) nyip '-nchen kpura aay- m 'It was Pam who gave
Pam-sj do- m me l-old=sib hat give-asp my brother the hat'

There is no fixed order for oblique noun phrases.

- (307) Pam-sh 'ii- m hat-ny- a 'aaham-m 'Pam hit the dog with a
Pam-sj wood-asc dog-dem-Vaug hit- asp stick'
- (308) Pam-sh onyor lames-ii chmii-m 'Pam put the book on the
Pam-sj book table-at put- asp table'
- (309) Pam-sh hat-ny- a 'ii- m aaham-m 'Pam hit the dog with a
Pam-sj dog-dem-Vaug wood-asc hit- asp stick'

Footnotes to Chapter 1

¹Maricopa is more rigid in this respect than some other Yuman languages. Langdon (1970:174) notes that in Diegueno, for example, "Not infrequently, a subject or object phrase may appear after the predicate, usually separated from it by a pause". Munro (1974:21) describes the occurrence of NPs after the verb in Mojave, "A slightly more emphatic type of word order change...involves the movement of an NP to a position at the end of the sentence following the verb."

Maricopa is like Tolkapaya Yavapai (for example), which "is rigidly verb final" (Hardy, 1978:14).

²Hinton and Langdon (1976) reconstruct the historical development of the pronominal prefixes (specifically for Diegueno, but more generally back to proto-Yuman). These subject-object prefixes are the result of two waves of pronoun incorporation (first subjects, then objects), followed by certain regularization and phonological processes which have resulted in the systems (with all this homophony) found in the Yuman languages today.

³In Diegueno (Langdon (1970a)) and Cocopa (Crawford (1966)) as well as Yuma (Halpern (1947b)), the regular morphological distinction is between collective and distributive plural subjects. In Havsupai (Hinton (1977)) and Tolkapaya Yavapai, there is apparently a remnant distinction only between dual and plural subjects.

In some speaker's usage for one form, there seems to be a collective-distributive distinction in Maricopa. This distinction still overlaps with a dual/plural distinction. The verb I have observed this for is nyvay-k, 'to dwell in'.

- (i) LA '-nyvaysh-k 'e- sa haa-k '-nychuvay-k
 LA 1-live+du-SS say-adv loc 1-dwell+?- asp
 'We-2 live in LA but we live in different places'

This is the only verb I have seen which behaves this way and it only behaves this way for certain speakers.

⁴In Mojave (Munro (1976a)), -k and -m can apparently be used relatively freely on any verb as an indicative suffix. In Yuma (Halpern (1947b) and Slater (1977)), the situation is somewhat different. As described by Halpern, there is a closed set of verbs which number only 21 which obligatorily are marked with -m as the 'present-past indicative'. These verbs (and many more) behave similarly in Maricopa. According to Slater (1977), some of these verbs can be marked with -k in Yuma; others cannot be marked with -k; the distinction is part of a greater system Slater proposed for Yuma in which the choice of -k or -m is based on the focus of the utterance. (-k suggests focus on the subject and -m on other elements of the utterance.) I have seen no evidence of such variation in Maricopa.

⁵Ablaut of the root vowel is used in Maricopa (and the other River languages) in deriving plural forms (of both nouns and verbs), nominalized forms of verbs and causative verbs. Halpern (1956) devotes some space to showing the different ablaut patterns in Yuma.

Langdon (1976a) presented a set of rules to account for the ablaut pattern found in Yuma. Yuma like the other River languages and the Pai languages has a five vowel system which Langdon (1976a) determined is derived from an original three vowel system. The qualitative ablaut found in Yuma is (following Langdon (1976a)) the result of a quantitative ablaut system and combinations of the stem vowel with following -y suffixes participating in certain sound changes.

In Maricopa, quantitative and qualitative and both quantitative and qualitative ablaut patterns are found. A list of the vocalic ablaut which I have seen (or rather heard) in Maricopa follows.

Ablaut of the Root Vowel

| | | | | |
|----|---|--------------------|----------|--------------|
| i | v | i: a | i: v | i e e: |
| e | v | i a i: a: | e: v | e |
| a | v | a: | a: v | a e |
| o | v | u: | o: v | a: |
| u | v | u: | u: v | o o: |
| ey | v | a:y | | |
| ay | v | a:y a a: | a:y v | ay |
| oy | v | o:y | | |
| uy | v | o:y | | |
| ew | v | aw a | | |
| aw | v | a:w o: | | |

⁶This affix is found as a number marker on both nouns and verbs. t- is affixed after n (as in (98)), t and sh (as exemplified in verbs

(ii) ttuupuum-k 'burn v.t. plural' from tpom-m 'burn'

(iii) mshtraash-k 'be angry dual' from mshray-m 'be angry'

but not after r (as exemplified in (100)). t is also found before s as in

(iv) ts'osh 'babies' from s'aw 'baby'

ch- as noted later in the text is found after ny-. sh- is found elsewhere. Before sh- it is difficult to determine whether the affix is sh- or t-, since there is a phonological rule which turns sh into t before sh.

It is difficult to determine exactly where this affix should be placed. Typically, as noted it is found before the first consonant preceding the root vowel, but this is not always the case. Langdon (1970: 110) in discussing the distribution of the cognate affix in Diegueno noted "In multiple prefix stems where a non-initial prefix stem is a palatal, c is infix into the non-plural stem directly after the palatal prefix, in all other cases it is infix after the first prefix of the non-plural stem." This is the typical position in Maricopa, though as in Diegueno, there are exceptions and reanalyses.

⁷None of the body parts to which I have seen ny- affixed are vowel initial (thus, none of them begin with the body part prefix ii). Typically, ny is prefixed to body parts which have first person possessors and it is not affixed with other possessors (though it can be).

⁸ny-wish looks like a nominalized verb (wii-m 'to do, have') prefixed with ny.

(iv) va '-wii-m 'I have a house'
house l-do- asp

ny-wish can be marked with aspect suffixes and itself be used as a main verb.

(v) va '-ny- wish- k 'I have a house'
house l-poss-have+nom-asp

This is in keeping with the argument which follows (in section 1.227) proposing that ny is used to derived verbs from nouns (thus, ny verbalizes the nominalized verb wish or uwish) (cf. Langdon (1978a)).

⁹This prefix is probably not productive in this verbalizing use in Maricopa; however, there is evidence that it was used this way. Consider the following examples.

(vii) nyaa-sh mat dany '-ny- mat- k 'I own this land'
I- sj earth this l-poss-land-asp

(viii) hat vtay '-ny- hat-k 'I have a big dog'
 dog big l-poss-dog-asp

Neither mat nor hat can themselves serve as verbs--only with ny can these be verbs, and transitive verbs at that.

¹⁰In Munro and Gordon (to appear) it is noted "In many languages the number of clauses which might be needed to translate an NP-heavy English clause is a much greater one, and the corresponding density of NPs per clause is invariably lower than the English maximum." The highest number of arguments I have seen in any Maricopa clause is 5: a verb which normally takes a subject, object and indirect object can occur with an added locative and instrumental, for example.

(ix) va- s- ly Pam-sh iishaaly-m uunyor Allen
 house-dem-in Pam-sj hand- asc book Allen
 aay- m 'Pam gave Allen the book with her hand'
 give-asp

Typically, however the number of nouns per verb is much lower than this.

¹¹These are considered clitics rather than prefixes because they do not trigger the phonological change from ch to sh (see rule 6 in section 0.3). Compare

(x) 'nym-shkyew-k 'You bit me'
 2/l- bite- asp
 (xi) nym- chkyew-k 'He bit with it'
 dem+asc-bite- asp

On the other hand, they are not independent words since they bear no stress and do participate in the gemmination process (see rule in the phonology and orthography section).

(xii) nym- mdiily-k [nyIm:di:l^vIk] 'He made bread with it'
 dem+asc-bake- asp

¹²The identical process is attested in Yuma (Langdon (1976b)) and Mojave (Munro (1976a)).

¹³ayuu can serve as an independent noun in case-marked and demonstrative-marked forms meaning 'thing' (used to refer generally to a specific, but unnamed entity or to refer to some item the speaker does not wish to specify). As an independent noun, it is full stressed.

(xiii) 'ayuu-ny- sh havshuu-k 'The thing is blue'
 thing-dem-sj blue- asp

¹⁴I have been unable to elicit -k on nouns which are dative objects of verbs of emotion or feeling.

(xiv) Pam(*-k) ny=m-hot- k 'You were nice to Pam'
 Pam - 2-nice=to-asp

(xv) sny'ak-ny- a } ny=mshray-m 'He is made at that woman'
 woman- dem-Vaug }
 *sny'ak-ny- k }
 woman-dem-loc }

¹⁵In the subject form of the second person pronoun, the stem final consonant (the consonant before the case suffix -sh) which is ny in the other words is n. This is no general phonological process which dissimilates ny to n before sh, since the -ny demonstrative suffix often appears before the -sh subject suffix. When this sequence occurs, it is realized as [n^ys] or [n^yIs].

(xvi) va- ny- sh hmaaly-m 'The house is white'
 house-dem-sj white-asp
 [van^yIs]

However, the second person subject pronoun is never pronounced [man^yIs].

¹⁶I can't account for the variation between the mki - ki variation found in these forms. It appears to be the case that either form is always acceptable. I do not know what factors play a role in determining which is used in individual utterances.

¹⁷It is possible to distinguish between a reflexive and a reciprocal reading in a sentence like (270). mat-ku-shiint-sh (ref-rel-one+pl-sj) can be put in as the final element of the subject NP or in place of the subject NP; if this element occurs in the sentence only a reciprocal reading is possible. This portion of a relative clause can occur after a plural noun or in place of a noun. It cannot appear after noun phrases conjoined by uudav 'accompany'.

(xvii) 'iipash. mat-ku-shiint- sh mat-tuupooy-k
 men ref-rel-one+pl-sj ref-kill+pl-asp

(xviii) mat-ku- shiint-sh mat-'-yoov- k 'We-w saw each other'
 ref-rel-one+pl-sj ref-l-see+du-asp

¹⁸Other forms of expressing negation include:

Never. There is a complex construction used to assert something has never happened or will never happen. In this construction there is a higher verb aly-'aa-ma-k (neg-hear-neg-asp), to which the event which did not occur is subordinated.

(xix) man-sh m-shmaa-m aly-m-'aa- ma- k 'You never sleep'
you-sj 2-sleep-m neg-2-hear-neg-asp

(xx) Bonnie '-yuu-k waly-'aa- ma- k 'I never see Bonnie'
Bonnie 1-see-SS neg- hear-neg-asp

This construction has been described for Mojave (Munro (1976a)),

Non-existence. To assert that something does not exist, the verb kuvar-k 'be none' is used.

(xxi) mash-sh kuvar-k 'There is no food'
food-sj none- asp

(xxii) 'ishnyoy-sh kuvar-k 'There are no ghosts'
ghost- sj none- asp

kuvar-k is a verb which allows possessor raising. Then it is used to express that "(someone) does not have (something)."

(xxiii) man-sh shyaal m-kuvar-k 'You have no money'
you-sj money 2-none- asp

Chapter 2

The Verb

2. The verb in Maricopa consists of (at least) the verb stem, the appropriate pronominal prefix and a final suffix. These essential elements were sketched briefly in section 1.1. Aside from these elements, the verb may also include proclitics, prefixes, non-final suffixes and an enclitic.

2.1 The Verb Stem. The verb stem consists of the verb root and the derivational morphemes which affect the root. These morphemes consist of the medio-passive suffix, the benefactive suffix, a system of causative markers (including prefixes, suffixes and vocalic ablaut), and the number markers (which reflect the number of the verb's subject and object and the number of occurrences of the action expressed by the verb, and which consist of prefixes, suffixes and vocalic ablaut).

2.11 Medio-passive -y. -y can be added to many verb roots to give a passive or stative reading to the verb. In many cases, the direct object of the non-derived root is the subject of the new -y marked stem.

(1a) nyik-ny- a mkip- sh tsmvey-k 'Someone wound the rope up'
rope-dem-Vaug which-sj wind- asp

(1b) nyik-sh tsmveyv-k 'The rope is wound up'
rope-sj wind+MP-asp

(2a) nyaa '-ny- shyaal '-shnaly-k 'I lost my money'
I l-poss-money l-lose- asp

(2b) '-ny- shyaal-sh chnalyv-k 'My money is lost'
l-poss-money- sj lose+MP-asp

(3a) 'iipaa-ny- a mkip- sh shuupaw-m 'Someone knows that man'
 man- dem-Vaug which-sj know- asp

(3b) 'iipaa-ny- sh shuupawy-k 'That man is known, famous'
 man- dem-sj know+MP- asp

Langdon (1970a:97) described the cognate Diegueno suffix p as meaning "be in a state resulting from a self-induced or spontaneous action or event." In examples (1)-(3) it is difficult to determine whether the state is brought about by some external force or whether it spontaneously arose (without an external agent). Some pairs of transitive roots and intransitive derived (-y) marked forms are clearly related in the medio-passive way described above. The intransitive form means to be in a state from a self-induced action in these cases. The two verbs nyave-k 'to marry (a wife)' and chuy-k 'to marry (a husband)' are highly constrained as to the nature of their respective subject and object. chuy-k 'to marry (a husband)' must have a female subject and a male object.

(4a) 'iipaa-ny- sh sny'ak-ny- a nyave-k 'The man married the woman'
 man- dem-sj woman-dem-Vaug marry-asp

(4b) *sny'ak-ny- sh 'iipaa-ny- a nyave-k 'The woman married the man'
 woman- dem-sj man- dem-Vaug marry-asp

(5a) sny'ak-ny- sh 'iipaa-ny- a chuy- k 'The woman married the man'
 woman- dem-sj man- dem-Vaug marry-asp

(5b) *'iipaa-ny- sh sny'ak-ny- a chuy- k 'The man married the woman'
 man- dem-sj woman- dem-Vaug marry-asp

When these two verbs have -y suffixed to the root, their selection properties do not change. nyavev-k, like nyave-k 'to marry (a wife)', requires a male subject; chuyv-k, like chuy-k 'to marry (a husband)' requires a female subject.

- (6a) 'iipaa-ny- sh nyavev- k 'That man is married'
 man- dem-sj marry+MP-asp
- (6b) sny'ak-ny- sh chuyv- k 'That woman is married'
 woman- dem-sj marry+MP-asp

Suffixing -y to these roots makes the new stem intransitive and stative, but not passive. The object of the transitive root is not the subject or the new intransitive stem, in contrast with (1)-(3).

2.12 Benefactive -y. This suffix is limited (apparently, lexically) in occurrence (like the medio-passive suffix -y). In Yuma, as Halpern (1947a.) described, -y is restricted to occurring after vowels and w. This restriction is not the same in Maricopa, though the suffix most typically occurs in this environment. This suffix is sometimes accompanied by ablaut of the stem vowel (if the root is vowel final). This morpheme is used to derive a new verb stem which takes as its object the NP which expresses the person or persons for whose benefit the action is taken.

- (7a) '-nychen- sh tra- k 'My (older) brother lit a fire'
 l-old=sib-sj light=fire-asp
- (7b) '-nchen- sh ny- tray- k 'My (older) brother lit
 l-old=sib-sj 3/1-light=fire+ben-asp a fire for me'
- (8a) hanmo '-tspa-k 'I fried a chicken'
 chicken l-fry- asp
- (8b) hanmo ny- tspay- k 'I fried chicken for you'
 chicken l/2-fry+ben-asp
- (9a) va chew-k¹ 'He built a house'
 house make-asp
- (9b) va ny- chewi- k 'He built a house for me'
 house 3/1-make+ben-asp

- (10a) kwnho poov- k 'He wove a basket'
 basket weave-asp
- (10b) kwnho ny- poovi-k 'He wove a basket for me'
 basket 3/1-weave-asp
- (11a) wii-m 'He did it'
 do-asp
- (11b) m- wey- k 'He did it for you'
 3/2-do+ben-asp

(Note in (9b) and (10b) that the benefactive suffix is i when it follows a consonant. I am following Halpern (1947a) in considering this suffix to be underlyingly -y, rather than -i.

The most commonly occurring benefactive verb is wey-k 'do for' (from wii-m 'do'). It is often used to signal the role of a benefactive argument in a sentence.

- (12) kwnho nyip '-ntay '-wey- k '-uukuy-k 'I sold baskets
 basket me 1-mother 1-do+ben-SS 1-sell- asp for my mother'
- (13) ny- wey- k '-iima- ha² 'I will dance for you'
 1/2-do+ben-SS 1-dance-ir

The benefactive verb is marked with a suffix -k signalling that it has the same subject as the main clause. The switch reference system in which this -k plays a role is presented in section 2.221.

The benefactive suffix is only affixed to stems which cannot have human direct objects (and thus, could never be marked with an object pronominal prefix unless the stem is derived using, for example, the benefactive suffix).

2.13 Causatives. The primary morphemes used to derive causative stems are ch-, t-, and uu-. -y, -sh and ablaut of the root vowel are

secondary morphemes, used only along with one of the causative prefixes. The prefixes can appear along, in combination with one of the suffixes and/or ablaut and with each other.

The most productive causative prefix synchronically is the prefix t-, either alone or in combination;

(14) Some causatives derived by t alone

| | | | |
|---------|------------|------------------|---------------|
| kul-k | 'long' | <u>tkul</u> -k | 'make: long' |
| puy-k | 'die' | <u>tpuy</u> -m | 'kill' |
| hchur-k | 'cold' | <u>thchur</u> -k | 'make cold' |
| nyaaq-k | 'funny' | <u>tnyaaq</u> -k | 'make fun of' |
| piny-k | 'warm' | <u>tpiny</u> -k | 'make warm' |
| sar-k | 'spill vi' | <u>tsar</u> -k | 'spill vt' |

(15) Some causatives derived by t- and ab laut

| | | | |
|-----------|------------|------------------------------|----------------------------------|
| 'or'or-m | 'round' | <u>t'ur'ur</u> -k | 'roll into balls, make round' |
| hot-k | 'good' | <u>thuut</u> -k | 'make good' |
| kwlshaw-k | 'be clean' | <u>kw^llsha</u> -k | 'clean v.t.' |

(16) Some cuasative derived by t- and -sh

| | | | |
|--------|--------------|-------------------|---------------|
| mii-m | 'cry' | <u>tmiish</u> -k | 'make cry' |
| mnye-k | 'sweet' | <u>tmnyesh</u> -k | 'sweeten' |
| hay-m | 'wet' | <u>thaysh</u> -k | 'make wet' |
| sat-k | 'dry up vi.' | <u>tsatsh</u> -k | 'dry up v.t.' |

(17) Some causatives derived by t-, ablaut and -sh

| | | | |
|---------|-------------------|---------------------|--------------|
| hwet-k | 'red' | <u>thwaatsh</u> -k | 'make red' |
| nyily-k | 'black' | <u>tnyiilysh</u> -k | 'make black' |
| s'aw-k | 'be an egg, baby' | <u>ts'osh</u> -k | 'lay an egg' |

-t is not used with any of the other causative prefixes; it is used with each of the secondary markers except -y.

ch- is found typically on verbs of motion and position (especially when it is the only causative marker on the verb.

(18) Some causatives derived by ch- alone

| | | | |
|--------|----------------|------------------|-------------------|
| man-k | 'awake, arise' | <u>ch</u> man-k | 'waken, raise' |
| yem-k | 'go' | <u>ch</u> yem-k | 'send' |
| naly-k | 'fall' | <u>ch</u> naly-m | 'make fall, lose' |
| v'aw-m | 'stand' | <u>ch</u> v'aw-k | 'make stand, put |
| nak-k | 'sit' | <u>ch</u> nak-k | 'make sit' up' |
| yer-k | 'fly' | <u>ch</u> yer-k | 'make fly' |

(19) Some causatives derived by ch- and -sh

| | | | |
|---------|----------|---------------------|-----------------|
| chpa-m | 'go out' | <u>chsh</u> pash-k | 'put out' |
| iipay-k | 'live' | <u>ch</u> iipaysh-k | 'bring to life' |

ch- is also used with the primary causative marker uu-.

| | | | |
|-------------|---------------|--------------------|-----------------|
| (20) vesh-k | 'run' | <u>chuu</u> vesh-k | 'drive' |
| ev-k | 'be bothered' | <u>chuu</u> ev-k | 'make bothered' |

uu- can be used as the only causative marker in a derived causative.

| | | | |
|------------|-------------|-------------------|--------------|
| (21) kup-k | 'be a hole' | <u>uuk</u> up-m | 'dig a hole' |
| lyesh-k | 'break vi' | <u>uuly</u> esh-m | 'break vt' |
| dop-k | 'tear vi' | <u>uud</u> op-m | 'tear vt' |
| hmii-k | 'tall' | <u>uuh</u> mii-k | 'raise' |

The causatives in (14)-(21) are all derived from intransitive verbs; many, though by no means all, of the non-causative verbs are those which take non-human subjects.

All the verbs which are causative forms derived from transitive verbs are derived using the suffix -y along with other causative markers.

(22) Some causatives derived by uu-, ablaut and -y

| | | | |
|-------|--------------|-----------------|-------------------|
| 'ii-m | 'say' | <u>uu'</u> ey-k | 'make say' |
| sii-m | 'drink' | <u>uusey</u> -k | 'make drink' |
| soc-k | 'eat (meat)' | <u>uusoy</u> -k | 'make eat (meat)' |
| maa-m | 'eat' | <u>uumay</u> -k | 'feed' |

(23) A causative derived by ch-, uu-, ablaut and -y

| | | | |
|-------|-------|--------------------|------------------|
| yuu-k | 'see' | <u>chuu</u> yooy-k | 'make see, show' |
|-------|-------|--------------------|------------------|

The five verbs listed in (21) and (23) are the only transitive verbs I have seen which have derived causative forms. Most transitive

verbs do not have derived causative forms--to express a causative of a transitive verb a periphrastic construction must be used.

The subject of the non-causative verb is expressed as the direct object of the causative verb.

- (24) man-sh m-puy-uum 'You are going to die'
 you-sj 2-die-inc
- (25) nyaa many ny- tpuy- uum 'I am going to kill you'
 I you 1/2-die+cs-inc
- (26) nyaa mii-m 'I cried'
 I cry-asp
- (27) 'nym-tmiish-k 'You made me cry'
 2/1- cry+cs-asp
- (28) nyaa many ny- yuu-k 'I saw you'
 I you 1/2-see-asp
- (29) Pam-sh nyip many ny- shuuyooy-k 'Pam showed you to me,
 Pam-sj me you 3/1-see+cs- asp made me see you'

2.14 Number. In Maricopa different forms of the verb can be used if the subject of the verb is dual or plural. If the subject of the verb is singular (and the action is not repeated or habitual), then the unmarked form of the verb is used. If the subject is either dual or plural, the verb can be unmarked or it can explicitly reflect the number of its subject. Most verbs have forms which can be derived from the unmarked forms to distinguish whether their subjects are dual or plural. The set of morphemes used to express the number of the subject is complicated and (for the most part) the distribution of the individual markers appears to be lexically determined.

Many verbs have two stems--one stem is neutral with respect to how many times the action has occurred (which is usually interpreted as meaning the action has only been done one time) and the other stem is specified to mean the action has been repeated or habitual (this will be called "plural action"). This, of course, represents an aspectual difference. However, the plural action form is obligatorily used when the object of the action is to be marked as plural (since the action is committed at least once on each object).

2.141 The markers used on the verb to derive dual and plural stems are: uu-, t/sh-, a-, n-, ablaut of the root vowel, -sh and -v. Some of these markers can be used alone on the verb root, while others can only be used in combination with other number-marking morphemes.

In Table 1, the dual subject markers are presented, the primary markers, the secondary markers (those marked with *) and combinations of markers.

Table 1: Markers and combinations of markers used to derive dual-subject stems

| <u>prefixes</u> | | <u>suffixes</u> | <u>combinations</u> |
|-----------------|----------------|-----------------|----------------------------------|
| <u>uu-</u> | vocalic ablaut | <u>-sh</u> | ablaut + <u>sh</u> |
| <u>n-</u> | | <u>-v*</u> | ablaut + <u>v</u> |
| <u>t/sh-*</u> | | | <u>n</u> + ablaut |
| | | | <u>uu</u> + ablaut |
| | | | <u>t/sh</u> + <u>uu</u> + ablaut |
| | | | <u>t/sh</u> + ablaut + <u>sh</u> |
| | | | <u>t/sh</u> + ablaut + <u>v</u> |

*These affixes occur only in combination with other markers listed (see column headed combinations).

Table 2 presents the plural subject markers, the primary markers, the secondary markers (those marked with *) and combinations of suffixes.

Table 2: Markers and combinations of markers used to derive plural-subject stems

| <u>prefixes</u> | | <u>suffixes</u> | <u>combinations</u> |
|-----------------|----------------|-----------------|--|
| <u>uu-</u> | vocalic ablaut | <u>-sh*</u> | <u>uu</u> + ablaut |
| <u>a-</u> | | <u>-v*</u> | <u>uu</u> + <u>sh</u> |
| <u>t/sh-*</u> | | | <u>uu</u> + ablaut + <u>sh</u> |
| | | | <u>uu</u> + <u>y</u> |
| | | | <u>uu</u> + ablaut + <u>y</u> |
| | | | ablaut + <u>sh</u> |
| | | | <u>t/sh</u> + <u>uu-</u> |
| | | | <u>t/sh</u> + <u>uu</u> + ablaut |
| | | | <u>t/sh</u> + ablaut |
| | | | <u>t/sh</u> + <u>uu</u> + ablaut + <u>sh</u> |
| | | | <u>a</u> + ablaut |
| | | | <u>a</u> + ablaut + <u>sh</u> |
| | | | <u>t/sh</u> + ablaut + <u>sh</u> |
| | | | <u>t/sh</u> + <u>uu</u> + ablaut + <u>y</u> |

*These affixes only occur in combination with other markers listed (see column headed combinations).

Some of the morphemes have restricted usage which can be neatly described. a- is used to derive only plural stems, while n- is used to derive only dual stems. Most verbs which have duals derived with n- have plurals derived by a-.³ All these verbs belong to the class of verbs of motion and position (though not all verbs of motion and position belong to this morphological class). Some verbs which have n- duals and a- plurals are presented in (30).

(30)

| | | | | | |
|--------|------------|-----------------|---------------------|-----------------|-----------------------|
| yem-k | 'go' | <u>nyem</u> -k | 'go+dual' | <u>ayem</u> -k | 'go+plural' |
| chen-k | 'descend' | <u>nchen</u> -k | 'descend+ dual' | <u>achen</u> -k | 'descend+ plural' |
| vdii-k | 'approach' | <u>vndii</u> -k | 'approach+ dual' | <u>vadii</u> -k | 'approach+ plural' |

In (31) there are verbs which have a- marked plurals and a- marked duals (rather than n- marked duals).

(31) Some other verbs with a- plurals and a + ablaut plurals

| | | | | | |
|----------|---------|-------------|-----------------|-------------------|----------------|
| kman-k | 'start' | kmaan-k | 'start+dual' | <u>akman</u> -k | 'start+plural' |
| knam-k | 'go=to' | knaam-k | 'go=to+dual' | <u>aknaam</u> -k | 'go=to+plural' |
| nak-k | 'sit' | naak-k | 'sit+dual' | <u>anaak</u> -k | 'sit+plural' |
| skyiny-k | 'flee' | tsuukyany-k | 'flee+ dual' | <u>askyiny</u> -k | 'flee+plural' |

Finally, a- can occur with both ablaut and a -sh suffix as in ashpaash-k 'go=out+plural' from chpa-m 'go=out' (dual: uushpaa-m).

uu- can be affixed to the unmarked form to indicate that the subject of the verb is dual or plural. As a plural marker, uu- is affixed before the consonant which immediately precedes the root vowel (or before the root vowel itself, if the root is vowel initial),⁴ As a dual marker uu- is usually stem initial.

(32) Some verbs which have uu- plurals

| | | | | | |
|---------|--------|-----------|-------------|-------------------|---------------|
| qaas-k | 'call' | qaassh-k | 'call+dual' | <u>uugaas</u> -k | 'call+plural' |
| aay-m | 'give' | aaysh-k | 'give+dual' | <u>uaay</u> -m | 'give+plural' |
| lyuly-k | 'cook' | lyulysh-k | 'cook+dual' | <u>uulyuly</u> -k | 'cook+plural' |
| 'av-k | 'hear' | 'avsh-k | 'hear+dual' | <u>uu</u> 'av-k | 'hear+dual' |

(33) Some verbs which have uu duals

| | | | | | |
|---------|---------|-------------------|--------------|-------------|----------------|
| kuly-k | 'climb' | <u>uukuly</u> -k | 'climb+dual' | ashuukuly-k | 'climb+plural' |
| shmaa-m | 'sleep' | <u>uushmaa</u> -m | 'sleep+dual' | atshmash-k | 'sleep+plural' |
| v'oo-k | 'walk' | <u>uuv'oo</u> -k | 'walk+dual' | vuu'osh-k | 'walk+plural' |

Only a very small number of verbs have dual forms derived using uu- alone, but a large number of plural forms are derived this way.

Quantitative and qualitative ablaut was introduced in section 1.21. Ablaut in Yuma was meticulously presented by Halpern (1946a) and in Yuman generally by Langdon (1976a) Ablaut of the root vowel is a common number marker, both alone and in combination with all the other number-marking morphemes.

(34) Some verbs which have ablaut plurals

| | | | | | |
|---------|------------------------|-----------|----------------|----------|------------------|
| 'oh-k | 'cough' | 'ohsh-k | 'cough+dual' | 'uuh-k | 'cough+plural' |
| uuyey-k | 'breathe' ⁵ | uuyeysh-k | 'breathe+dual' | uuyaay-k | 'breathe+plural' |
| hot-k | 'good' | | | huut-k | 'good+plural' |
| hwet-m | 'red' | | | hwaat-k | 'red+plural' |

(35) Some verbs which have 'ablaut duals

| | | | | | |
|---------|--------------|----------|----------------|------------|------------------|
| puy-k | 'die' | pooy-k | 'die+dual' | uupooy-k | 'die+plural' |
| chich-k | 'rob' | chiish-k | 'rob+dual' | uuchiish-k | 'rob+plural' |
| haw-k | 'shatter vi' | haaw-k | 'shatter+dual' | uuhaaw-k | 'shatter+plural' |

Many verbs have plural forms which have both a uu prefix and ablaut of the root vowel. The plural forms of the verbs exemplified in (35) are all derived using these affixes.

The most typical way to derive plural verb stems is by prefixing uu to the root with or without ablaut of the stem vowel. Some more examples of verbs whose plurals are derived using uu and ablaut are listed in (36):

(36)

| | | | | | |
|--------|----------|----------------------|---------------------------|-----------------------|-----------------|
| wey-k | 'do=for' | weysh-k | 'do=for+dual' | uuiiy-k | 'do=for+plural' |
| man-k | 'arise' | maan-k | 'arise+dual' | uumaan-k ⁹ | 'arise+plural' |
| nak-k | 'sit' | naak-k | 'sit+dual' | uunaak-k ⁹ | 'sit+plural' |
| ruv-k | 'dry' | ruuv-k | 'dry+dual' | uuruuv-k | 'dry+plural' |
| chew-k | 'make' | chewsh-k | 'make+dual' | uuchaw-k | 'make+plural' |
| 'uk-k | 'shout' | 'uksh-k ⁸ | 'shout+dual' ⁶ | uu'uu-k | 'shout+plural' |
| yoq-k | 'vomit' | yuuqsh-k | 'vomit+dual' | uuyuuq-k | 'vomit+plural' |

The -sh suffix alone is primarily found on dual stems. The dual stems for the verbs which forms their plurals either with uu or with ablaut or with both are usually formed with the -sh suffix alone or in combination with ablaut of the root vowel. The -sh suffix (which may occur as the only derivational marker or together with ablaut of the stem vowel) is the most common marker found on dual stems. Consider the duals of the verbs listed in (36) and (34) as well as the following.

(37) Some verbs which have -sh duals

| | | | | | |
|-----------|-----------------|--------------|----------------------|---------------|------------------------|
| chaa-k | 'read' | chaash-k | 'read +dual' | uuchash-k | 'read +plural' |
| duu-m | 'be' | duush-k | 'be+dual' | uuduush-k | 'be+plural' |
| chmnyaa-k | 'chew' | chmnyaaash-k | 'chew+dual' | chmuunyash-k | 'chew +plural' |
| nyvay-k | 'live=in' | nyvaysh-k | 'live=in +dual' | nyshuuvay-k | 'live=in +plural' |
| amel-k | 'wear =belt' | amelsh-k | 'wear=belt +dual' | ashuuil-k | 'wear=belt +plural' |
| nmak-m | 'leave' | nmaksh-k | 'leave+dual' | ntuumaak-k | 'leave +plural' |
| uukup-m | 'dig' | uukupsh-k | 'dig+dual' | shuukuup-k | 'dig +plural' |
| uulyesh-m | 'break vt' | uulyeshsh-k | 'break+dual' | ashuulyaash-k | 'break +plural' |

(38) Some verbs which have ablaut + -sh duals

| | | | | | |
|----------|---------|-------------|------------------|---------------|----------------|
| chaa-m | 'put' | chash-k | 'put+dual' | uuchash-k | 'put+plural' |
| wii-m | 'do' | wish-k | 'do+dual' | uwish-k | 'do+plural' |
| 'ii-m | 'say' | 'ish-k | 'say+dual' | uu'ish-k | 'say+plural' |
| tpuy-m | 'kill' | tpooysh-k | 'kill+dual' | tuupooy-k | 'kill+plural' |
| tshnyo-k | 'paint' | tshnyuush-k | 'paint +dual' | tshuunyuush-k | 'paint+plural' |
| kyaa-m | 'shoot' | kyash-k | 'shoot+dual' | uukyash-k | 'shoot+plural' |
| maa-m | 'eat' | uumash-k | 'eat+dual' | uumaav-k | 'eat+plural' |

No plural stems I have seen are derived by suffixation of -sh by itself. There are two verbs which have plural stems derived using only -sh and ablaut.

(39)

| | | | | | |
|--------|---------|----------|--------------|----------|----------------|
| vtay-m | 'big' | | | vtash-k | 'big+plural' |
| v'aw-m | 'stand' | uuv'aa-k | 'stand+dual' | v'aash-k | 'stand+plural' |

A large number of verbs have plurals derived using uu in combination with -sh with or without ablaut of the root vowel. Many such verbs were exemplified in (36) and (37). These two ways of deriving plural stems are common (though not as common as plurals derived using either uu or uu + ablaut, with no -sh).

(40)

| | | | | | |
|---------|---------|----------|--------------|-------------|----------------|
| chmii-m | 'put' | chmish-k | 'put+dual' | chuumiish-k | 'put+plural' |
| kmii-m | 'bring' | kmish-k | 'bring+dual' | kuumiish-k | 'bring+plural' |

(41) Some verbs which have uu + ablaut + sh plurals

| | | | | | |
|-------|------------|---------|---------------------|--------------------|-----------------------|
| she-k | 'name' | shesh-k | 'name+dual' | <u>uushiish</u> -k | 'name+plural' |
| daa-k | 'pick' | daash-k | 'pick+dual' | <u>uudash</u> -k | 'pick+plural' |
| paa-m | 'lie=down' | pash-k | 'lie=down +dual' | <u>uupash</u> -k | 'lie=down +plural' |

-y is also used as a suffix to derive duals and plurals. -y is never used as the only derivational morpheme signifying number. It is used in combination with ablaut, with uu- and with both uu and ablaut. Only one verb I have seen uses ablaut + y to derive its dual form.

(42) yuu-k 'see' yooov-k 'see+dual' uuyoov-k 'see+plural'

The verbs which have plural forms derived with -y are a very small set. Those which have derived plural forms which are marked with -y and the prefix uu- with or without ablaut of the stem vowel are exemplified in (42) above and (43).

(43) Some verbs which have uu (+ablaut) + y plurals⁷

| | | | | | |
|-------|--------------|--------|--------------|------------------|----------------|
| maa-m | 'eat' | mash-k | 'eat+dual' | <u>uumaav</u> -k | 'eat+plural' |
| soo-k | 'eat (meat)' | sosh-k | 'eat+dual' | <u>uusaav</u> -k | 'eat+plural' |
| sii-m | 'drink' | sish-k | 'drink+dual' | <u>uuseev</u> -k | 'drink+plural' |

Another affix which is never used alone as a marker of dual or plural subjects is the prefix t/sh-. It is often used in conjunction with the uu prefix.

(44) Some verbs which have t/sh- + uu- plurals

| | | | | | |
|----------|-----------|------------|--------------------|---------------------|----------------------|
| nyvay-k | 'live=in' | nyvaysh-k | 'live=in +dual' | <u>nyshuuvay</u> -k | 'live=in +plural' |
| tduly-m | 'hide' | tdulysh-k | 'hide+dual' | <u>ttuuduly</u> -k | 'hide+plural' |
| kshnay-k | 'pinch' | kshnaysh-k | 'pinch+dual' | <u>kshtuunay</u> -k | 'pinch+plural' |
| knaav-k | 'tell' | knaavsh-k | 'tell+dual' | <u>kshuunaav</u> -k | 'tell+plural' |

t/sh- and uu- are also used with ablaut of the root vowel to derive plural stems:

(45)

| | | | | | |
|-------------|-----------------|---------------|----------------------|-----------------|----------------------|
| amel-k | 'wear =belt' | amelsh-k | 'wear =belt+dual' | ashuumily-k | 'wear=belt +dual' |
| nmak-m | 'leave' | nmaksh-k | 'leave+dual' | ntuumaak-k | 'leave +plural' |
| uukchiish-k | 'steal' | uukchiishsh-k | 'steal+dual' | uukshuuchiish-k | 'steal +plural' |
| chqash-k | 'tickle' | chqashsh-k | 'tickle +dual' | chshuugaash-k | 'tickle +plural' |

Some verbs use t/sh- and uu- along with the -sh suffix to derive plural forms.

At least one verb has a dual derived using t/sh- + uu- + ablaut. This verb is skyiny-k: 'flee from', tsuukyany-k (dual) and askyiny-k: (plural).

Two verbs combine t/sh- + uu- + ablaut with the -y suffix to form their plurals.

(46)

| | | | | | |
|----------|-----------|------------|--------------------|--------------|----------------------|
| vshqwe-k | 'dislike' | vshqwish-k | 'dislike +dual' | vshtuugwey-k | 'dislike +plural' |
| mshdi-k | 'fear' | mshtdav-k | 'fear+dual' | mshtuuday-k | 'fear+plural' |

Note that the dual form of the second verb on this list is formed using t/sh- + ablaut + -y (it only differs from the plural because it does not have uu-). The dual of the first verb on the list is formed in a very typical way--ablaut + -sh.

Some verbs mark their plurals with t/sh- + uu- and -sh (see (47)). Some use all these markers as well as ablaut of the root vowel (see (48)).

(47)

| | | | | | |
|---------|-----------|----------|----------------|--------------|----------------------|
| iima-k | 'dance' | iimash-k | 'dance+dual' | ashuumash-k | 'dance+plural' |
| hshpa-k | 'scratch' | hshpaa-k | 'scratch+dual' | hshtuupash-k | 'scratch +plural' |

(48)

| | | | | | |
|----------|---------|-------------|--------------|---------------|--------------------|
| mshray-m | 'angry' | mshtraash-k | 'angry+dual' | mshtuuraash-k | 'angry +plural' |
| hlkwaa-k | 'hunt' | thlkwesh-k | 'hunt+dual' | thluukwesh-k | 'hunt +plural' |
| hkyev-k | 'cross' | hnkiy-k | 'cross+dual' | hshuukiish-k | 'cross +plural' |

Note that the duals of the first two verbs in (48) are formed using the t/sh- prefix, ablaut and the -sh suffix. In some verbs, these affixes are used to derive the plural form (see (49)).

(49)

| | | | | | |
|-----------|------------|-------------|--------------|---------------|--------------------|
| uulyesh-m | 'break vt' | uulyeshsh-k | 'break+dual' | ashuulyaash-k | 'break +plural' |
| shmaa-m | 'sleep' | uushmaa-m | 'sleep+dual' | atshmash-k | 'sleep +plural' |

t/sh- and ablaut are used to derive a number of plural stems, as in (50).

(50)

| | | | | | |
|-----------|--------|-------------|-------------|-------------|---------------|
| hmii-k | 'tall' | | | hshmee-k | 'tall+plural' |
| ar'oy-k | 'play' | ar'oysh-k | 'play+dual' | tar'ooy-k | 'play+plural' |
| shuupaw-m | 'know' | shuupawsh-k | 'know+dual' | tshuupaaw-k | 'know+plural' |
| uukup-m | 'dig' | uukupsh-k | 'dig+dual' | shuukuup-k | 'dig+plural' |

This description does not exhaust the full range of possibilities of occurrence of these markers, but gives a fair notion of the complexity of this morphological system. It would be wrong to assume that all the verbs have invariant dual and plural forms (among speakers or for the same speaker). The verb 'sit' nak-k for example, is found in (31) and in (36) with two different plural forms.

The major distinction in number marking in Maricopa appears to be dual vs. plural. This is different from Yuma, in which, as Halpern (1947b) points out, the opposition is between collective plural and distributive plural.⁸ If we examine sentences which differ only in

whether the relation is collective or distributive plural, we find no regular distinction along those lines signalled by the number morphology.⁹

- (51) 'iipash-sh va- nya nychuuwiish-k 'Those men own that
 men- sj house-dem own+pl- asp house'
- (52) 'iipash kw- shiint-sh va- nya 'Each of those men
 men rel-one+pl-sj house-dem owns a house'
 nychuuwiish-k
 own+pl- asp
- (53) Pam-sh Heather uudav- k pan 'Pam and Heather ate
 Pam-sj Heather accomp-SS bread three pieces of bread
 (between them)'
 hmuk- m mash- k
 three-DS eat+du-asp
- (54) Pam-sh Heather uudav-k pan 'Pam and Heather each
 Pam-sj Heather accom-SS bread ate three pieces of
 bread'
 hmuk- hper-m mash- k
 three-each-DS eat+du-asp

Note that in (51) and (52) where the subjects are plural, the main verbs are plural, regardless of whether the action is performed collectively (as in (51)) or distributively (as in (52)). The only difference in the two sentences is the presence of a plural form of the verb shent-k 'be one' in the distributive sentence.

In examples (53) and (54), in which the subjects are dual, the main verbs again are the same. Both verbs are dual forms. The distributive meaning in (54) is conveyed by hper, a non-final suffix attached not to the main verb, but to the cardinal verb hmuk 'be three' (which quantifies the amount of bread). No distributive or collective sense can be contributed by the number marking on the main verbs (since the

two verbs are identical). This morphology can only reflect whether the verb is dual (as in (53) and (54)) or plural (as in (51) and (52)).

2.142 Several affixes are used to mark that the activity expressed by the verb is repeated or habitual or that the object of the verb is plural. These forms are what Halpern (1947c) refers to as 'distributive object'.

With those transitive verbs, which have plural action stems, the plural action stem is used when the object of the verb is plural (with or without the plural object prefix nyi-).

(55) nyaa mhaa-ny- a nyi- '-aashham-k 'I hit the boys'
 I boys-dem-Vaug pl=oj-'-beat- asp

(55')*nyaa mhaa-ny- a (nyi-) '-aaham-m 'I hit the boys'
 I boys-dem-Vaug (pl=oj)I-hit- asp

(Even if only one blow was struck in the action described in (55) the plural action form must be used with a plural object.)

The plural action stem is also used if the action is distributed over space.

(56) shyaaly nypaav-ii ta'ur-ii lames-ii 'He put the money on
 money bed- at chair-at table-at the bed, on the
 chash- k chair and on the
 put+dist-asp table'

(57) nyiiwhet-sh '-avhay-v- ii 'There is blood on
 blood- sj l-dress-dem-at my dress and on my
 '-iishaaly-v- ii duush- k¹⁰ hands'
 l-hand- dem-at be+dist-asp

One way to derive these plural action stems is by prefixing t- or sh- to the unmarked form.¹¹

| | | | | |
|------|-------------|-----------|---------------|--------------------|
| (58) | shtev-m | 'remove' | tshtev-k | 'strip' |
| | ash'en-m | 'poke' | tsh'en-k | 'poke repeatedly' |
| | tqam-m | 'touch' | ttqam-k | 'touch repeatedly' |
| | chqam-m | 'slap' | tshqam-k | 'slap repeatedly' |
| | taqs-k | 'jump' | shtaqs-k | 'jump around' |
| | aakyat-m | 'cut' | aashkyet-k | 'cut up, whip' |
| | kii'ak-m | 'kick' | ksh'ak-k | 'kick repeatedly' |
| | aaham-m | 'hit' | aashham-k | 'beat up' |
| | 'ayuu rav-k | 'be sick' | 'ayuu shrav-k | 'be sickly' |

Other plural action stems are derived using -sh alone or in combination with the sh- prefix (sometimes with uu- as well).

| | | | | |
|------|---------|---------|-------------|--------------------------------|
| (59) | shmaa-m | 'sleep' | shmaash-k | 'be a sleepyhead, sleep a lot' |
| | maa-m | 'eat' | maash-k | 'eat often' |
| | mii-m | 'cry' | shmiish-k | 'be a crybaby, cry a lot' |
| | iima-k | 'dance' | ishmash-k | 'be a dancer, dance a lot' |
| | wii-m | 'cook' | shuuwiish-k | 'be a cook' |

Other plural action stems are derived using ablaut of the stem vowel along with the sh- prefix and sometimes along with uu-, as well.

| | | | | |
|------|----------|----------|-------------|----------------|
| (60) | uukwer-m | 'hunt' | uushkwiir-k | 'be a hunter' |
| | otoh-m | 'gamble' | uushtuuh-k | 'be a gambler' |
| | wik-k | 'help' | shuuwiik-k | 'be helpful' |

The transitive verb pairs listed in (58), (59) and (60) have distinct unmarked and dual subject forms, but their plural subject forms are identical. Compare:

| | | | | | | |
|------|---------|-------|-----------|------------|--------------------|------------------|
| (61) | aaham-m | 'hit' | aahamsh-k | 'hit+dual' | <u>aashuuham-k</u> | 'hit +plural' |
|------|---------|-------|-----------|------------|--------------------|------------------|

with

| | | | | | | |
|------|-----------|------------------|-------------|-------------|--------------------|-------------------|
| (62) | aashham-k | 'beat, hit+dist' | aashhamsh-k | 'beat+dual' | <u>aashuuham-k</u> | 'beat +plural' |
|------|-----------|------------------|-------------|-------------|--------------------|-------------------|

This is true of all the transitive forms which have both unmarked and derived habitual forms. It is not, however, true of the intransitive verb pairs. Compare:

(63)

'ayuu rav-k 'sick' 'ayuu ravsh-k 'sick+dual' 'ayuu uuraav-k 'sick
+plural'

with

(64)

'ayuu shrav-k 'sickly' 'ayuu shravsh-k 'sickly +dual' 'ayuu shuuraav-k 'sickly
+plural'

Intransitive verbs which have derived plural action stems as well as unmarked stems maintain the distinction through the whole subject number system.

2.2 Final Suffixes. There are a number of final suffixes which are used on verbs of main and subordinate clauses in Maricopa. There are final suffixes which are restricted to occurring on main clause verbs and final suffixes which are restricted to occurring on subordinate clauses. These suffixes mark the aspect and mood of the clause to which they are affixed. Some final suffixes on verbs of dependent clauses mark the relationship between the two clauses while others are sensitive to other features of the two clauses (whether the clauses have the same or different subjects, what the temporal order of the events expressed by the clauses is, etc.).

2.21 Final Suffixes on Main Verbs. Many of these suffixes were introduced in section 1.13 in some of their use on verbs of independent clauses. Some of these affixes are used on verbs of subordinate clauses in ways transparently related to their use on verbs of main clauses (some of these are discussed in Chapter 4).

2.211 On the main verbs of declarative sentences, -k and -m mark the verb as simple realis indicative. The information in the sentence is presented as fact without any hint as to its source or any doubt of its veracity. The event or state which the verb expresses is completed if the action is punctual and either completed or on-going if the action is not punctual.

- | | | |
|------|---|--|
| (65) | 'lipaa-ny- sh puy-k man- dem-sj die-asp | 'The man died, is dead' |
| (66) | mhay-ny- sh ny- aaham-m boy- dem-sj 3/1-hit-asp | 'The boy hit me' |
| (67) | nyaa '-ashvar-k I l-sing- asp | 'I am singing' or 'I sang' |
| (68) | mhay-ny- sh ny- aashham-k boy- dem-sj 3/1-hit- asp | 'The boy is hitting me (rep)' or 'The boy hit me (repeatedly)' |

If an action is punctual (as those expressed in (65) and (66)), the verb can only have a completed reading if it is suffixed with a realis suffix. If a verb is durative or iterative, then it can have either a completed or on-going interpretation when marked with a realis suffix. This is a reasonable outcome of the fact that a punctual action is realis when it is accomplished. The momentaneous nature of a punctual action entails that its onset and its accomplishment are inseparable. A progressive punctual verb is unaccomplished or unrealis or iterative. In Maricopa, puy-k 'die' and aaham-m 'hit' are punctual (non-iterative) verbs.

On the other hand, a durative event or state is to some extent accomplished when it is begun. Its onset and completion are separable; from its onset a certain amount of the event or state is real. Thus,

(67) and (68) can be interpreted as completed or on-going (past or present progressive). All the realis suffix implies is that some portion of the event or state has held or is holding. If any portion of a punctual action holds, all of it must hold. Contrast (66) and (68); the difference reflected is that the verb in (68) is marked as iterative (and, therefore, extendable over time), while in (66) the verb is only interpreted as punctual (realis, and therefore, completed). In (65) the verb is puy-k 'to die', death is real only when one has died; on the other hand, the verb in (67) is ashvar-k 'to sing', the moment one has sung even one note, the singing is real.

-k and -m can be used to express what a simple present expresses in English, a realis habitual or generic sense.

- | | | |
|------|---|--|
| (69) | '-kpur- k 1-wear=hat-asp | 'I wear a hat' or 'I am wearing a hat' or 'I wore a hat' |
| (70) | qwaqt-sh shlymak 'ii horse-sj back wood pay- k carry-asp | 'The horse carries/is carrying/ carried wood on its back' |
| (71) | chyer-sh uuyaar-k bird- sj fly+pl-asp | 'Birds fly' or 'Birds are flying/flew' |
| (72) | hat-sh chkyew-k dog-sj bite- asp | 'Dogs bite' or 'A dog is biting/bit him' |

These are again realis forms; in each case, at least some instances of the action expressed must have already occurred.

To summarize:

| If the unmarked stem takes: | then the dual can take: if derived by | | then the plural can take: if derived by | |
|-----------------------------|---------------------------------------|----------------------|---|----------------------|
| | prefix only | suffix and/or ablaut | prefix only | suffix and/or ablaut |
| <u>-m</u> | <u>-m</u> | <u>-k</u> | <u>-m</u> | <u>-k</u> |
| examples: | | | | |
| shmaa-m 'sleep' | uushmaa-m | | | atshmaash-k |
| aay-m 'give' | | aaysh-k | uuaay-m | |
| duu-m 'be' | | duush-k | | uuduush-k |
| <u>-k</u> | <u>-k</u> | <u>-k</u> | <u>-k</u> | <u>-k</u> |
| examples: | | | | |
| wik-k 'help' | | wiksh-k | | uuwiik-k |
| kuly-k 'climb' | uukuly-k | | ashuukuly-k | |

As noted in section 1.13, the choice of -k or -m as a final aspect marker is lexically determined by the morpheme immediately preceding the final suffix. The non-final suffixes condition the distribution of -k and -m just as the verb stems do (if they are contiguous to the final suffix). All the non-final suffixes except -hot- 'intensifier' select -k as a final realis suffix; -hot- selects -m.

There are a number of verbs whose unmarked stem takes -m but whose derived dual, plural and distributive (plural action) stems take -k. No verb whose unmarked stem takes -k has a form derived using number markers which takes -m. No dual or plural forms which are derived using suffixes or ablaut of the root vowel can take -m as their final realis suffix.

Causatives which are derived using a suffix or ablaut of the stem vowel must take -k as their final realis suffix. However, causatives derived using prefixes only can take either -m or -k depending on

the individual lexical item. (It is not however determined by what the stem from which the causative is derived takes. Consider, puy-k 'die' and tpuy-m 'kill'; pom-k 'burn' and tpom-m 'burn (transitive)'; kul-k 'long' and tkul-k 'lengthen'. Note however, I have recorded no cases of a verb where the simple form takes -m and the causative (derived only with prefix(es)) takes -k.)

I have been unable to determine any feature or set of features whether phonological, syntactic or semantic, which distinguishes -m verbs from -k verbs. In Tables 3 and 4 below some typical -m and -k verbs are presented. Note that these verbs include both active and stative, transitive and intransitive, basic and derived forms.

Table 3: Some -m Verbs

| I: Existential | III: Active Intransitive | V: Active Transitive | VI: Derived Causative |
|-----------------------------|-----------------------------|---------------------------|--------------------------|
| duu 'be' | paa 'lie down' | aaham 'hit' | twa 'grind' |
| wii 'do' | pam 'fall down' | chqaw 'eat ₁ ' | tpuy 'kill' |
| 'ii 'say' | shmaa 'sleep' | maa 'eat ₂ ' | truuv 'dry' |
| | horhor 'shatter' | sii 'drink' | uukup 'dig' |
| | v'aw 'stand' | aay 'give' | uulyesh 'break' |
| | | kyaa 'shoot' | chman 'awaken' |
| | | kvnav 'lift' | |
| | | uuaay 'give plural' | |
| II: Stative Intransitive | IV: Stative Transitive | | |
| kwesh 'brown' | shuupaw 'know' | | |
| 'or'or 'round' | shdaw 'wait for' | | |
| vtay 'big' | | | |
| hay 'wet' | | | |

Table 4: Some -k Verbs

| I: Stative Intransitive | | III: Stative Transitive | | V: Derived Causative | |
|----------------------------|---------|----------------------------|------------|-------------------------|----------------|
| mathay | 'windy' | lyvii-k | 'be like' | uuhmii | 'raise' |
| shay | 'fat' | uuhay | 'know how' | tnyaaq | 'make fun of' |
| hmii | 'tall' | haav | 'wear' | tsar | 'spill' |
| nyiily | 'black' | yuu | 'see' | thuut | 'make be good' |
| hot | 'good' | shmdii | 'not know' | uumay | 'feed' |
| | | | | chnak | 'make sit' |
| | | | | chyem | 'sent away' |
| | | | | tmnyesh | 'sweeten' |
| II: Active Intransitive | | IV: Active Transitive | | | |
| ashvar | 'sing' | soo | 'eat' | | |
| iima | 'dance' | aashham | 'beat' | | |
| nak | 'sit' | chew | 'make' | | |
| lyesh | 'break' | aashkyet | 'whip' | | |
| puy | 'die' | wik | 'help' | | |
| chnyi | 'lie' | pay | 'carry' | | |

The examples given in Tables 3 and 4 show that the same semantic categories are represented for each set of verbs, except the existential verbs which all take -m. (On the other hand, lyvii 'be like' which shares some morphological and semantic features with the existential verbs takes -k as its final realis suffix.)

Another kind of derived form (other than plural/dual and causative stems) is the verb stem derived from a noun. One way to derive a verb from a noun is to suffix to the noun, which gives a verb meaning 'to have the quality of that noun'. This derives stative, intransitive verbs. In Table 3 column II there is an example of this, hay-m 'wet' derived from ha 'water'. In Table 3, in column I, there is another example of the same process, mathay-k 'windy' derived from matha 'wind'. These two verbs are clearly derived by the same process, yet one is an -m verb, while the others is a -k verb.

It is clearly not a phonologically based distribution, since it is possible to find pairs of homophonous stems which differ only in the assignment of final realis marker. These pairs include:

| | | | |
|---------|-----------------|---------|------------------|
| shmaa-m | 'sleep' | shmaa-k | 'dream' |
| chaa-m | 'put' | 'chaa-k | 'read, count' |
| waa-m | 'do to someone' | waa-k | 'drive' |
| chem-m | 'put' | chem-k | 'make a mistake' |

2.212 The incompletive suffix -uum is used to indicate that the action or state expressed by the verb to which it is affixed is incomplete, future, habitual, hypothetical or contrary to fact. All of these are different cases of an action or state which is not completed, from actions which are undertaken but not finished (yet), to actions which are repeated or states which still hold and are therefore not finished, to events which have not yet begun or will never begin.

(73) vii- ny- sh naly-uum 'The rock is going to fall'
 fall-dem-sj fall-inc

(74) '-nchen- sh 'ayuur maa-haay-uum 'My brother just started
 1-old=sib-sj s.t. eat-yet- inc to eat'

-uum is used on punctual verbs to express what a present progressive expresses in English, or as a simple future.

(75) puy-uum 'He is going to die' or
 die-inc 'He is dying'

-uum typically is the affix used to express future. In non-nominalized clauses, the usual marker of futurity real or possible is -uum.

(76) qwaqt ny- aay- uum 'I will give you a horse'
 horse 3/l-give-inc

(77) m-mhan-uum 'You would like it'
 2-like-inc

-uum is used to mark verbs to express ability to carry out the action expressed by the verb.

(78) nyaa '-iima-uum 'I can dance'
 I l-dance-inc

-uum is used to mark verbs to express some state or less typically action is still holding.

(79) '-ny- va- v- sh vtay-uum 'My house is big'
 l-poss-house-dem-sj big- inc

(80) kwsede-sh duu-uum 'He is a doctor'
 doctor-sj be- inc

(81) nyiidawm '-shma- t- uum 'I sleep sometimes'
 sometimes l-sleep-emp-inc

Finally, -uum is suffixed to a verb to mark that the action or state the verb expresses is contrary to fact or hypothetical.

(82) anylyviim m-vaa- kis 'nym-yuu-uum 'If you had come
 yesterday 2-come-cond l/2- see-inc yesterday, I would
 have seen you'

(83) aas-m ny- yuu-sa aly-ny- wik-ma- yuum 'Even if I had
 dem-as l/2-see-adv neg-l/2-help-neg-inc seen you then, I
 would not have
 helped you'

-uum is used in a number of auxiliary constructions (presented in Chapter 3) and subordinate clauses (presented in Chapter 4).

2.213 -ha is an irrealis suffix. It is used typically in cases in which no part of the action or state expressed by the verb is realized. This suffix is found throughout the Yuman language family (in its appropriate phonological realization) in irrealis contexts. In Yuma, the languages most closely related to Maricopa, -ha is found marking simple futures (Halpern, 1947c). In Maricopa, -ha can be used to mark

simple future, though it is far more usual for it to be used to signal an exhortative or contrary to fact sense.

- (84) haat nyi- ttpooy- nt- ha 'It might kill dogs too'
 dogs ploj-kill+dis-too-ir
- (85) taqs-ha 'Let him jump;
 jump-ir
- (86) vakpaly-ly '-nyem- ha 'Let's go to Phoenix'
 Phoenix-loc l-go+du-ir (dual)
- (87) anylyviim m-vaa- kis 'nym-yuu-ha 'If you had come yester-
 yesterday 2-come-cond 2/l-see- ir day, you would have
 seen me'
- (88) kwsede-sh aly-ny- uuman-m- sa 'Even if the doctor had
 doctor-sj neg-3/l-cure-neg-adv not cured me, I would
 have recovered anyway'
 '-iimat hot- nt- ha
 l-body good-too-ir

-ha is also used to mark irrealis (future, possible or obligation) nominalizations including action nominalizations and relative clauses (see section §.23 and §.34). -ha unlike -uum can occur followed by another final suffix, -sa 'adversative' to contrast something to an irrealis event.

2.214 -lya is used to mark the verbs of main assertative clauses as expressing an event which is the desire of the speaker. These desires can be possible of realization or impossible of realization.

- (89) m-we-lya 'Please do it, I wish you would do
 2-do-des it'
- (90) 'nym-wik- lya 'I wish you would help me'
 2/l- help-des
- (91) qwaqt-sh '-do-lya 'I wish I were a horse'
 horse-sj l-be-des

- (92) anyiyviim vdik '-dii- lya 'I wish I had come yesterday'
yesterday here l-come-des

-lya is used on the verbs of questions to ask about unrealized actions.

- (93) kawish '-we-lya 'What can I do?'
what l-do-des
- (94) mkiny '-uudav- k '-wesh- lya 'Who should I go with?'
whom l-accomp-SS l-go+du-des
- (95) kawish ka-m-'i- m ny- wik- lya 'Why should I help you?'
what Q- 2-say-m l/2-help-des

The response to such a question has a main verb which ends in -ha 'irrealis' (rather than -lya 'desiderative').

- (96) Q: Pam-sh kawish we-lya 'What can Pam do?'
Pam-sj what do-des
- A: Pam-sh tortii-ha 'Pam can make tortillas'
Pam-sj make-tortilla-ir

This distribution of meanings is found also in Mojave with -lya marking desideratives in statements and a range of irrealis states in questions (Munro, 1976a). It is difficult to determine the semantic basis for this distribution. However, it seems possible that the desiderative sense is basic and in questions the desiderative sense refers to the desire of the addressee. 'should' and 'can' could be interpreted as 'what you wish'. Then (93) would have as a paraphrase 'What do you wish me to do?'; this would account for the presence of -ha in the answers of such questions--it would be used in its exhortative sense.

2.215 -ksh/sh, -ksha/sha, -k'yuu/'yuu and k'a/'a are presented here together because they share some elements of meaning and they share distributional characteristics.

-ksh/sh as noted in the first chapter is used to mark past or completed actions and states which have held or are presently holding. -ksha/sha also marks completed actions and realis states, but appears to be more emphatically assertative (as might be expressed with 'do' support in English) as in

(97) v- '-yem-ksha 'I did go away'
 dem-l-go- lempprf

as compared with the more stative, less emphatic -ksh/sh

(98) v- '-yem-ksh 'I was gone'
 dem-l-go- lprf

-k'yuu/'yuu and -k'a/'a are evidentials; they mark the source of the information the speaker expresses in the sentences. -k'yuu/'yuu marks a verb which is in a clause which the speaker is asserting on the basis of first hand knowledge gained through having observed the action or state expressed by the clause. If the subject of the clause is first person, this evidential reading is more obvious (and less central) and the suffix is used to express that the action or state (encoded in the clause) has actually occurred. Similarly, -k'a/'a is used to mark that the clause asserted by the speaker is from the speakers first hand knowledge gained through having heard the action. Usually, though not always, -k'a/'a is used on verbs of communication or of qualities strongly associated with sound. Thus, in the examples above though mii-m 'to cry' is not solely a verb which expresses the making of some sound, it is strongly associated with the making of noise. Although 'crying' is not necessarily accompanied by noise, in Maricopa (as in English) it is often used not just in the sense of 'weeping' but also in the sense of uttering some sound. Thus, for example, the noise birds make is 'crying', as in the following examples.

(99) mmdii-ny- sh mii-m 'The owl hooted'
 owl- dem-sj cry-asp

(100) chyer-sh mii-m 'A bird sang'
 bird- sj cry-asp

Again, like -k'yuu/'yuu, -k'a/'a when used on a first person verb has less an evidential meaning than a strong assertiveness about the actual occurrence of the action expressed by the verb. -k'a/'a is much less likely to be used with a first person subject (in general it is less common than -k'yuu/'yuu with any verb form). Possibly the most typical place this suffix is found is on verbs of 'saying' which are addressed to the speaker.

(101) Pam-sh 'i- m nyip ny- mhan-k ii- 'a 'Pam told me she
 Pam-sj say-m me 3/1-like-k say-hr=ev likes me'

In (101), the verb is not marked with a first person pronominal prefix to indicate that the speaker is the addressee in the sentences; however, if the verb is marked with an evidential suffix (usually -'a, though sometimes -'yuu), the saying is assumed to have been addressed to the speaker. What is 'heard' or 'seen' is the action expressed by the verb to which the evidential is affixed, in the case of e.g. (119), it is the crying which the speaker has heard, in the case of (101) it is the speech of the subject (rather than the complement clause) which is directly witnessed by the speaker. These suffixes are presented in Chapter 5, where a diachronic explanation is proposed for their form and distribution.

-ksh/sh was described in section 1.32. There it was noted that the form with the -k- occurred only of -k verbs with first person subjects. All other verb forms (-m verbs and non-first person verbs) are

marked with the suffix which does not have the k. This distribution is the same for each of the four pairs of suffixes listed above. -k'yuu, -k'a and -ksha, like -ksh, mark only -k verbs which have first person subjects. -'yuu, -'a and -sha, like -sh, are suffixed to any -m verb and to any verb which does not have a first person subject.

| <u>-k</u> verbs | | | |
|-----------------|---|-----------------------------|----------------------|
| (102) | v- 'yem- <u>ksha</u> dem-1-go- <u>1 erpprf</u> | 'I left' | } <u>-ksha/sha</u> |
| (103) | v- m-yem- <u>sha</u> dem-2-go- <u>empprf</u> | 'You left' | |
| (104) | v- yem- <u>sha</u> dem-go- <u>empprf</u> | 'He left' | |
| (105) | '-iima- <u>k'yuu</u> 1-dance- <u>1=see=ev</u> | 'I danced' | } <u>-k'yuu/'yuu</u> |
| (106) | m-iima- <u>'yuu</u> 2-dance- <u>see=ev</u> | 'You danced' (I saw you) | |
| (107) | iima- <u>'yuu</u> dance- <u>see=ev</u> | 'He danced' (I saw him) | |
| (108) | '-ashvar- <u>k'a</u> 1-sing- <u>hear=ev</u> | 'I sang' | } <u>-k'a/'a</u> |
| (109) | m-ashvar- <u>'a</u> 2-sing- <u>hear=ev</u> | 'You sang' (I heard you) | |
| (110) | ashvar- <u>'a</u> sing- <u>hear=ev</u> | 'He sang' (I heard him) | |

| <u>-m</u> verbs | | | |
|-----------------|--|-------------------------------|----------------|
| (111) | '-aaham- <u>sha</u> 1-hit- <u>empprf</u> | 'I hit him' | } <u>-sha</u> |
| (112) | m-aaham- <u>sha</u> 2-hit- <u>empprf</u> | 'You hit him' | |
| (113) | aaham- <u>sha</u> hit- <u>empprf</u> | 'He hit him' | |
| (114) | '-kyaa-' <u>yuu</u> 1-shoot- <u>see=ev</u> | 'I shot him' | } <u>-'yuu</u> |
| (115) | m-kyaa- ' <u>yuu</u> 2-shoot- <u>see=ev</u> | 'You shot him' (I saw you) | |
| (116) | kyaa-' <u>yuu</u> shoot- <u>see=ev</u> | 'He shot him' (I saw him) | |
| (117) | '-mii-' <u>a</u> 1-cry- <u>hear=ev</u> | 'I cried' | } <u>-'a</u> |
| (118) | m-mii-' <u>a</u> 2-cry- <u>hear=ev</u> | 'You cried' (I heard you) | |
| (119) | mii-' <u>a</u> cry- <u>hear=ev</u> | 'He cried' (I heard him) | |

2.22 Final Suffixes on Dependent Verbs. These suffixes include only those which mark the relationship between two verbs or give some other information about the two clauses. All of the affixes discussed in 2.21 are also used on verbs of subordinate clauses (these are presented in Chapter 4) with the same (or a transparently related) meaning.

2.221 On the verbs of certain subordinate/non-final clauses of complex sentences, -k is used to signal that the verb has the same subject as the clause to which it is subordinated or which is to the right of it. -m is used to signal that the two clauses have different subjects.

- (120) kafe '-sish- k pastel 'We drank coffee and
 coffee l-drink+du-SS pie ate pie'
 '-mash- k
 l-eat+du-asp
- (121) kafe '-sish- m pastel 'We drank coffee and
 coffee l-drink+du-DS pie they ate pie'
 mash- k
 eat+du-asp
- (122) 'ayuu rav- k yoq- k 'He is sick and threw up'
 s.t. hurt-SS vomit-asp
- (123) 'ayuu rav- m yoq- k 'He_i is sick and he_j
 s.t. hurt-DS vomit-asp threw up'

Switch reference is used in sentences in which two clauses are conjoined, in which one clause is a complement to the other, in which one clause has a temporal, causal or purposive relation to the other. (Though, for example, there are adverbial temporal clauses in which switch reference is not used.) The switch reference marked clause is always either clearly subordinate to the other clause or immediately to the left of it (and usually both). The switch reference marked clauses will be called the dependent clause, since at the very least this clause is dependent on the other clause for determining the final suffix on its verb.

Switch reference was first described and the term was coined by Jacobsen (1967). The system was examined for the Yman languages by Winter (1976) in the detail available at the time. Recently Langdon and Munro (to appear) were able to present a much larger survey of switch reference in Yuman and in other languages.

The description of the switch reference system in Maricopa has so far been simple. If the two clauses have the same subject, then the verb of the dependent clause is marked with -k (as in (120) and (122)). If the two clauses have different subjects, then the verb of the dependent clause is marked with -m (as in (121) and (123)). But, what constitutes identity of subject? Is identity of subject identity of form or of referent? It is clearly not identity of form. The switch reference system cannot be controlled by identity of pronominal prefix on the verbs. Since one marker on the verb may mark the person of both the subject and the object (with transitive verbs), two verbs which have the same subject can have different pronominal prefixes,

(124) nya- ny- yuu-k 'ayuu '-rav- k 'When I saw you, I was
when-1/2-see-SS s.t. 1-hurt-asp sick'

(125) nya- ny- yuu-m 'ayuu '-rav- k 'When he saw me, I was
when-3/1-see-DS s.t. 1-hurt-asp sick'

Moreover, imperatives have a distinct pronominal prefix, k- from the ordinary second person subject prefix m-.

(126) nya- m-iima- k k- ashvar-k 'Sing when you dance'
when-2-dance-SS imp-sing- asp

The most serious problem with equating identity of form with identity of subject arises when a sentence has two clauses with third person subjects. In this case, identity of form is obligatory. Both verbs will be in third person subject form. The usual way to pronominalize third person subject is by deletion. Thus, the switch reference system provides the method for disambiguating sentences which have clauses with deleted third person subjects. The other uses of the switch reference system are redundant since verb agreement will usually suffice to tell whether

or not the two verbs have the same (or different) subjects. (Examples (124) and (125) above show one case where this is not so, due to the homophony of the prefix for first person subject-second person object and that for third person subject-first person object.)

(127) Pam-sh nya- v- yem-k 'ayu rav- k 'When Pam_i left,
Pam-sj when-dem-go- SS s.t. hurt-asp she_i was sick.

(128) Pam-sh nya- v- yem-m 'ayu rav- k 'When Pam_i left,
Pam-sj when-dem-go- DS s.t. hurt-asp she_j/*_i was sick'

Thus, 'same subject' means identity of the referent of the subjects.

What happens when the referents of the subjects overlap but are not identical? Or when the subjects have no referents (impersonals, weather conditions)?

In cases where the subject of one clause includes the subject of the other (as 'we' includes 'I'), the verb of the dependent clause can be marked as having the same or a different subject from that of the main clause.

(129) a) nya- m-kchiiv- m man-sh 'When you (pl) return,
when-2-return+pl-DS you-sj will you (s) eat?'

'ayu m-maa-uum
s.t. 2-eat-fut

b) nya- m-kchiiv- k man-sh 'When you (pl) return,
when-2-return+pl-SS you-sj will you (s) eat?'

'ayu m-maa-uum
s.t. 2-eat-fut

(130) a) 'iipaa-ny- sh nya- nak-k 'When the man sat down,
man- dem-sj when-sit-SS he and his wife ate'

nyave-ny- m uudav- k 'ayuu mash- k
wife- dem-as accomp-SS s.t. eat+du-asp

- b) 'iipaa-ny- sh nya- nak-m 'When the man sat down,
 man- dem-sj when-sit-DS he and his wife ate'

 nyave-ny- m uudav- k 'ayuu mash- k
 wife- dem-as accomp-SS s.t. eat+du-asp

Langdon and Munro (to appear) discuss these constructions in detail. It does not matter what person the two subjects are nor does it matter whether the plural subject is in the dependent clause and the singular subject is in the main clause (as in (129)) or vice versa (as in (130)). As Langdon and Munro (to appear) point out:

In fact, both choices are well motivated within the logic Yuman system. The different-subject choice is the more purely rational: if the two subjects are not totally identical, mark them as different. On the other hand, the choice of same-subject can be justified on grammatical grounds (same person), on formal grounds (same prefix shape), and on semantic grounds, in that the subject of one clause is included in the subject of the other." (p. 8)

As discussed in Langdon and Munro (to appear) and Munro (1980), there is one construction in which this distribution of same/different subject marking in sentences in which one subject includes the other has been totally regularized. This construction is the asymmetrical conjunction of two NPs, using a verb to express the relationship. Parallels of this conjunction construction with different verbs are found in all the Yuman languages. In Maricopa, the usual way to conjoin two NPs is comitatively, using the verb uudav 'to accompany'. Thus, the conjunction is accomplished in a dependent clause of the shape NP(-sh) NP(-m) uudav -SR.¹² The main clause contains what is being asserted about the two 'conjoined' NPs. The subject of the comitative clause is only one of the 'conjoined' NPs (the one marked with the subject marker -sh, with which the uudav 'accompany' agrees in person), while the other NP

in the clause is in an oblique relation to the verb uudav 'accompany'. If the two 'conjoined' NPs are the subject of the matrix verb, then they are both the subject of the matrix verb. When the 'conjoined' is the subject of the matrix verb, the comitative clause must take the same subject marker -k.

- (131) Pam-sh Allen-m · uudav- k 'Pam and Allen ate'
 Pam-sj Allen-as accompany-SS
 'ayuu mash- k
 s.t. eat+du-asp

When the 'conjoined' NP is in any other role in the sentence, including direct object, the clause is marked with -m.

- (132) Pam-sh Allen-m uudav- m 'I saw Pam and Allen'
 Pam-sj Allen-obl accompany-DS
 nyi- '-yuu-k
 ploj-l-see-asp

Notice in (132) above, both Pam and Allen are the object of 'see', since the verb is marked with the (optional) prefix indicating that it has a plural object.

In (131), 'Pam' is the subject of uudav, but 'Pam and Allen' is the subject of mash-k. In (132) 'Pam' is again the subject of uudav, but 'Pam and Allen' is the object of nyi- '-yuu-k.

In weather expressions, the verb of the dependent clause can be marked as having the same or a different subject,

- (133) a) nya- hchur-k uuv'aw-k 'When it is cold, it rains'
 when-cold- SS rain- asp
 b) nya- hchur-m uuv'aw-k 'When it is cold, it rains'
 when-cold- DS rain- asp

It is always possible for the dependent clause to be marked as having the same or different subject when two weather expressions are in the same sentence. However, the distribution of same and different subject markers is different in different situations. In some relationships, either switch reference marker can be volunteered. In others, only one or the other switch reference marker is ever volunteered. The sentences which consist of two weather conditions tend to fall into four groups:

(a) different weather conditions, in unspecified locations--as in

(133) above, the dependent clause can be marked with either -k or -m.

(b) different weather conditions, in different locations--always volunteered with -m on the verb of the dependent clause.

(134) dii ny- uuv'aw-m vakpaly pily-k 'It is hot in
 here when-rain- DS Phoenix hot- asp Phoenix when it
 rains here'

(c) same weather condition, in different locations--always volunteered with -k on the verb of the dependent clause.

(135) vii- s- ly ny- uuvaw-k 'When it rains in the
 mountain-dem-loc when-rain- SS mountains, it rains
 here too'
 dii uuv'aw-t- k
 here rain- ass-asp

(d) different weather conditions, in the same location--always volunteered with -k on the verb of the dependent clause.

(136) vdii ny- uuv'aw-k hchur-k 'When it rains here,
 here when-rain- SS cold- asp it is cold'

Other impersonal phenomenological expressions show less variation. For example, mat en-k 'earth move (literally), be an earthquake', when used in a dependent clause is always marked as having a different subject, regardless of what the subject in the matrix clause is. Thus,

- (137) a) mat nya- en- m dii 'When the earthquake
earth when-move-DS here happened, it rained here'
uuv'aw-k
rain- asp
- b)*mat nya- en- k dii 'When the earthquake
earth when-move-SS here happened, it rained here'
uuv'aw-k
rain- asp
- (138) a) mat en- m mat- sh dop- k 'There was an earthquake
earth move-DS earth-sj tear-asp and the earth split'
- b)*mat en- k mat- sh dop- k
earth move-SS earth-sj tear-asp

What if the sentence has more than two clauses? Which subjects are compared?

- (a) If a clause is subordinate, it is marked with respect to its matrix verb. A verb can be separated from its matrix verb by another clause subordinate to that matrix verb.

- (139) vakpaly '-yem-k '-ntay n'ay- sh 'I am going to
Phoenix l-go- SS l-father mother-sj father's mother
'ayu rav- m '-yaa- uum because she is sick'
s.t. hurt-DS l-visit-asp

- (140) 'iipaa-ny- sh nya- vaa- k 'ayu 'When the man₁ came,
man- dem-sj when- come-SS s.t. he₁ helped me because
'-rav- m ny- wik- k I was sick'
l-hurt-DS 3/l-help-asp

In these sentences (139) and (140), the first verb is marked same subject with respect to the third verb. The intervening verb is part of a clause subordinate to the matrix clause, but neither coordinate with nor dominating the first clause.

(b) When two clauses with different subjects are subordinated equally and in the same way to a matrix verb (coordinate clauses are subordinated to a third clause) and the first and third (matrix) verbs have the same subject, then the first verb can show either -m (with respect to the righthand clause) or -k (with respect to the main clause).

(141) a) nyaa nya- '-ashvar-k 'When I sang and you danced,
 I when-1-sing- SS I was happy'

nya- m-iima- m '-ahshlykoy-k
 when-2-dance-DS 1-happy- asp

b) nyaa nya- '-ashvar-m 'When I sang and you danced,
 I when-1-sing- DS I was happy'

nya- m-iima- m '-ahshlykoy-k
 when-2-dance-DS 1-happy- asp

(c) Finally, if a verb is subordinate to another verb which is subordinate to still another, the switch reference of the first verb is sensitive only to the verb which immediately dominates it.

(142) maat-m ny- va- s- ii 'I found him playing in his
 self-obl pos-house-dem-loc own house'

uuva- k ar'oy-k s- uuva- m '-daw- k
 be=loc-SS play- SS dem-be=loc-DS 1-take-asp

If a clause undergoes a process which causes the semantic subject to be different from the syntactic subject, then it is the syntactic subject which controls the switch reference system. There is a construction in Maricopa in which the possessors of the semantic subject of certain kinds of predicates can serve as the syntactic subject of those predicates. This construction was first described by Munro (1976a) for Mojave.

- (143) a) m-e'e- ny- sh nyiily-k 'You have black hair'
 2-hair-dem-sj black- asp
- b) man-sh m-e'e m-nyiily-k 'You have black hair'
 you-sj 2-hair 2-black-asp

If a sentence like (143a or b) is part of a more complex sentence, it is the syntactic, rather than the semantic, subject which triggers switch reference.

- (144) a) m-e'e- ny- sh nyiily-m 'You are pretty because
 2-hair-dem-sj black- DS
 you have black hair'
- m-shhot m-lyvii- k
 2-pretty 2-look=like-asp
- b) man-sh m-e'e m-nyiily-k 'You are pretty because
 you-sj 2-hair 2-black- SS
 you have black hair'
- m-shhot m-lyvii- k
 2-pretty 2-look=like-asp

In (144a) e'e 'hair' is the syntactic subject of nyiily 'black' but not of the next clause, so nyiily is marked with the different subject -m. In (144b), man 'you' is the syntactic subject of nyiily and of the next clause, so nyiily is marked with the same subject suffix, -k.

In the Yuman languages, numbers are verbs whose subjects are the items being enumerated, as in

- (145) m-shhuk-k 'There are ten of you'
 2-ten- asp

If the items being enumerated are possessed, either the items or the possessor can be the semantic subject of the number verb. These items include such abstractions as units of time, thus

- (146) a) many m-mataam-sh hvik-k 'You are two years old'
 you 2-year- sj two- asp
- b) man-sh mataam m-hvik-k
 you-sj year 2-two-asp

In example (146) the semantic subject is mataam 'year' (it is the 'years' which are 'two'). 'You' is the semantic possessor of 'year'. These semantic relations are syntactically reflected in example (146a) mataam is the subject (and is appropriately marked with the subject suffix -sh); many 'you' is the possessor of 'year' (triggering the m-possessive prefix on mataam). With number verbs, it is possible to 'raise' the semantic possessor of the subject to subject as in (146b). In (146b) the subject is man-sh 'you' (appropriately subject marked and triggering agreement on the verb). mataam 'year' is not marked with the subject suffix in (146b) nor is it obligatorily marked as possessed (it no longer has the second person prefix, m-).

Another related kind of sentence is one in which the possessor of a time word is a clause. This is used to express the duration of some action or state.

- (147) Bonnie-sh Oman-ly yem-m haly'a 'Bonnie will go to
 Bonnie-sj Oman-loc go- DS month Oman for three months'
- hmuk- uum
 three-inc

In this kind of sentence, the time word (which is the logical subject of the number verb) cannot be marked as the subject. This is exactly parallel to the construction found in (146b), with the time word unmarked. It may be clearer when one examines the paraphrase of sentence (148a) in which the dependent clause is explicitly nominalized.

(148) Bonnie Oman-ly uuyem- sh haly'a 'Bonnie will go to Oman
 Bonnie Oman-loc go+nom-sj month for three months'
 hmuk- uum
 three-inc

The important thing to note about the version in (148) is that when the clause is nominalized (and therefore marked with nominal case marking) it is marked as the subject of the main verb. When the verb is not nominalized, it is merely marked with switch reference. When the clause is the subject of the final verb, then the subject clause logically must be marked with -m since the subject of the dependent clause and the dependent clause itself are two different things. A problem arises when one finds that there is a third version of (147).

(149) Bonnie-sh Oman-ly yem-k haly'a hmuk- uum 'Bonnie will go
 Bonnie-sj Oman-loc go- SS month three-inc to Oman for
 three months'

It is difficult to understand why a version like (149) which marks the dependent clause with the same subject suffix -k could occur. However, when one examines sentences in which the subject of the dependent clause is not third person (and therefore causes a personal prefix to appear on the verb), the syntax of this construction becomes clear.

(150) a) man-sh 'ayu m-rav- m ' haly'a 'You were sick for a
 you-sj s.t. 2-hurt-DS month month'
 shent-k
 one- asp

b) man-sh 'ayu m-rav- k haly'a 'You were sick for a
 you-sj s.t. 2-hurt-SS month month'
m-shent-k
 2-one- asp

Examining (150a) and (b) one can see that the syntactic subject of dependent clauses is the same in both versions. However, the syntactic subject of the main verb shent-k is different in the two versions of the sentence. The (a) version has a clausal subject (unmarked on the verb); the (b) version has a personal subject (marked as second person on the verb) which is the same as the subject of the dependent clause.

This shows again that the switch reference system is sensitive to the syntactic, rather than the semantic, roles of the NPs. Moreover, it demonstrates that variation in the choice of 'same subject' and 'different subject' may well reflect that the two sentences (reflecting the variants) may have a different syntactic organization.

The presentation of the switch reference system up to this point has discussed only regular cases. There is a (large) number of verbs in Maricopa which do not participate in the switch reference system. These are the verbs which are discussed in section 2.211 under the label -m verbs. All verbs which take -m as their simple realis aspect marker cannot be marked with -k in the meaning 'same subject'. These verbs (when in a construction where the switch reference system plays a role) are always marked with -m:

- (151) Bonnie-sh 'ayu nya- maa-m onyor 'Bonnie_i reads while
 Bonnie-sj s.t. when-eat-m book she_{i/j} eats.
 chaa-k
 read-asp

In this example, even though the dependent clause verb is marked with -m, the subjects of the two clauses can be the same. They can also be different. The verb is restricted to being marked with -m, so it cannot distinguish between same and different subject.

There is clearly nothing phonological which prevents these verb forms from being followed by -k since there are other morphemes which begin with k which can be suffixed onto -m verbs (e.g. -kis 'conditional', cf. section 2.22⁴ below).

(152) owe '-maa-kis '-mhan-uum 'If I ate berries, I would
berry l-eat-cond l-like-inc like them'

(153) 'iipaa-sh '-duu-kis 'If I were a man, I would
man- sj l-be- cond hit them'

nyi- '- ashham-t- ha
ploj-l-beat- ass-ir

-k verbs take normal switch reference. Thus, -m verb stems which have non-final suffixes (other than -hot 'very', cf. section 2.3 below) between the verb stem and the switch reference suffix, take normal switch reference.

(154) Bonnie-sh 'ayu aly-nya- ma- ma- k 'When Bonnie_i is not
Bonnie-sj s.t. neg-when-eat-neg-SS eating, she_{i/*j}
onyor chaa-k reads'
book read-asp

(155) Bonnie-sh 'ayu aly-nya- ma- ma- m 'When Bonnie_i is not
Bonnie-sj s.t. neg-when-eat-neg-DS eating, she_{j/*i}
onyor chaa-k reads'
book read-asp

Compare the two preceding examples with example (152). In example (152) no suffix intervenes between the verb stem and the final -m of the dependent verb; thus, the dependent verb form does not participate in switch reference. Thus, example (152) is ambiguous, since no information is given as to whether the two clauses have different or the same subjects. Examples (154) and (155) are not ambiguous. The verb of the

dependent clause in both cases has a suffix (-ma 'negative') which intervenes between the verb stem and the final suffix. The final suffix in these dependent verb forms is determined by the switch reference system.

2.222 The verb of a complement clause of 'ii 'to say' and aly'ii 'to think' can be marked in several ways. If the action expressed in the complement clause is realized by the time of the speaking (or thinking) referred to in the main clause, then the verb of the complement can be marked with a final suffix -k. This -k can be suffixed to the verb of the complement regardless of whether the complement and the main clauses have the same or different subjects.

- (156) Grace-sh 'i- m maa-k ii- 'a 'Grace said she ate it'
 Grace-sj say-m eat-k say-hrev
- (157) nyaa 'i- m Pam-sh mdiily maa-k 'i- sh 'I said that Pam
 I say-m Pam-sj bread eat-k say-prf at the bread'
- (158) mhay-sh ny- shopaw-t- k 'The boy thinks he knows
 boy- sj 3/1-know- emp-k me'
 aly'e-t- k
 think-emp-asp
- (159) Pam-sh mii-k '-aly'i-sh 'I think Pam cried'
 Pam-sj cry-k l-think-prf

Note that the complement of 'say' or 'think' can have a verb with the final suffix -k even when that verb is one which otherwise cannot be marked with -k as a final realis suffix or -k as a same subject suffix. In (156), (157) and (159) the verb forms in the complement clauses are all -m verb stems; in this construction, however, they can be, and in the examples here are, marked with -k. This -k clearly is not marking

same subject, as in (157) and (159) the subjects of the complement clauses and the main clauses are different. -k does have some association with realis, since of those clauses which express some realis action or state (as of the time referred to in the main clauses and within the belief of the subject of the main verb) can be marked with -k. This is obviously not the ordinary realis marking -k suffix however, since it can be used on verb forms which are not otherwise marked with the -k suffix to mark realis (i.e. -m verbs).

Munro (to appear) has proposed that this -k is a case marker used to mark the "topic of conversation" which has been extended to marking full quotation clauses. (In synchronic Maricopa the "topic of conversation" NP is typically marked with -m. In Maricopa, however, -m appears to be a very general case marker which could easily absorb functions from other cases.) This seems to be the most likely explanation for this distribution of -k on these complement clauses. This construction is not unique to Maricopa; it is found in the other River languages and in the Pai languages (at least). The occurrence of this construction in both River and Pai languages demonstrates that this construction may be reconstructable to an earlier stage in which -k is the usual case marker for "topic of conversation" NPs.

Complements of 'ii-m 'say' and aly'ii-m 'think' can be marked in other ways. The structure and marking of these constructions is presented in section 4.

2.223 -ly is used on subordinate temporal clauses after the non-final suffix -haay- 'yet'. In its temporal uses -ly seems clearly related to the locative directional suffix -ly 'into, in'. The force of clauses

marked with -haay-ly is "while the action was occurring or the state held". -ly meaning 'within, into' with regard to space is clearly analogous to -ly meaning 'while, within the time that' with regard to time.

- (160) '-ashvar-haay-ly '-nchen- sh 'While I sant, my
 l-sing- yet- in l-old=sib-sj brother danced'
 iima- k
 dance-asp

2.224 -kis is used to mark the protasis of conditional sentences. It is never found in this or any other use on a main verb. It is typically found on the final verb of the protasis of hypothetical or contrary to fact conditionals.

- (161) m-vaa- kis ny- yuu-ha 'If you had come, I would
 2-come-cond 1/2-see-ir have seen you'
 (162) anylyviim '-vaa- kis 'If I had come yesterday,
 yesterday 1-come-cond you would have seen me'
 'nym-yuu-uum
 2/1- see-inc
 (163) 'nym-naw- kis 'nym-wik- uum 'If you were my friend,
 2/1- friend-cond 2/1-help-inc you would help me'
 (164) Allen-sh vaa- kis '-yuu-ha 'If Allen were here, I would
 Allen-sj come-cond 1-see-ir see him'

Less usually it is used to mark the protasis of simple future conditionals:

- (165) m-hav- kis 'nym-yuu-uum 'If you come in, you will
 2-enter-cond 2/1- see-inc see me'
 (166) ny- k'ak-kis m-mii-uum 'If I kick you, you will cry'
 1/2-kick-cond 2-cry-inc

The verb of the protasis of simple future conditionals is usually marked with the prefix nya- 'when' and switch reference (section 2.221 and 2.52).

2.224 -sa is the adversative suffix. It is typically affixed to the first of two clauses which are in contrast.

- (167) 'iipaa-v- sh vtay-sa 'The man is big, but not
 man- dem-sj bid- adv strong'
 waly-spre- ma- yuum
 neg- strong-neg-inc
- (168) '-kwarkwar-k '-daw- t- sa 'We will talk, but I will
 l-talk+pl- asp l-sit+du-emp-adv keep working'
 'ayuu-m '-ev- k v- uuvaa- t- k
 s.t.- as l-bother-SS dem-be=loc-emp-asp
- (169) numar aasnkyet-sa 'Even though the child was
 child cut+dist-adv spanked, he is still bad'
 aly-tr'uy- ma- k
 neg-behave-neg-asp
- (170) shyaal 'nym-aay- sa Pam 'Even if you gave me money,
 money 2/1- give-adv Pam I wouldn't hit Pam'
 aly-aashham- ma- yuum
 neg-hit+dist-neg-inc
- (171) kawish m-'i- m m-va- t- sa 'Whatever you are saying,
 what 2-say-m 2-sit-emp-adv I will still like you'
 ny- mhan-lyskiit-uum
 1/2-like-still- inc

-sa is unique among the final suffixes in that it can follow another final suffix, -ha 'irrealis'. When the contrast is between an unrealized or a contrary to fact event or state and another state, the -sa marked verb is marked with -h-sa 'irrealis-adversative'.

(172) mkii m-uuvaa- h- sa 'Wherever you will be,
 where+at 2-be=loc-ir-adv I will find you'

ny- yuu-uum
 1/2-see-inc

(173) vakapaly '-yem-h- sa' 'Even if I had been in
 Phoenix 1-go- ir-adv Phoenix, I would not have
 helped you'

waly-ny- wik- h- sh waly-do-ma- k
 neg- 1/2-help-ir-sj neg- be-neg-asp

(Note that the -h- 'irrealis' suffix only refers to the reality of the event or state expressed by the verb to which it is affixed. (Note that in both (171) and (172) the main clause expresses an unrealized event or state, however on in (172) is the adversative clause also referring to an unrealized event or state.)

-sa is different from other final suffixes in this section in that it can be used on certain main verbs in a fixed relationship. Affixed to aly'ii -m 'think' it changes the sense of the verb from 'think' to 'hope'.

(174) m-vaa- ly '-aly-'e- t- sa 'I hope you can come'
 2-come-des 1-neg-say-emp-adv

It is typically found on the end of a construction which means 'should, should have' (which has the inference 'but didn't' or 'but won't').

(175) Pam wik- huudaw-t- sa 'I should have helped Pam
 Pam help-should-emp-adv (but I didn't)'

(aly-wo-ma- k)
 (neg-do-neg-asp)

- (176) aly-m-wo-m- huudaw-t- sa 'You should not have done it
 neg-2-do-neg-should-emp-adv (but you did)'
 (m-wii-m)
 (2-do-asp)
- (177) aly-v- yem-huudaw-t⁴ sa 'I shouldn't go'
 neg-dem-go- should-emp-adv

In (175) and (176), the clause in parentheses is not required for the sentence to be complete. It is however, always possible to add to these sentences something which specifically states that what should happen or have happened won't happen or didn't happen without changing the meaning since that is always an entailment of these sentences. (This suggests the -sa found on these forms is merely a fixed use of the adversative -sa, with the same meaning.)

It is only in fixed constructions like those above that -sa is found on the final verb in a sentence. Its basic use and meaning appears to be to contrast two clauses. In fixed places it can be used to contrast a clause/sentence with reality.

2.3 Non-final Verb Suffixes. Non-final verb suffixes follow the verb stem and precede the final suffix. They express a number of aspectual and discourse features.

2.31 -t-. -t- is the most commonly used of the non-final suffixes. It is used to mark that some element in the clause is being focussed on, to denote contrast or repetition of some element (any element) in the clause and it has a syntactically defined function in some auxiliary constructions. -t- is used in a wide number of contexts where there is some kind of general emphasis.

- (178) pes shent-m '-we- t- k 'I have only one dollar'
dollar one- DS l-have-emp-asp
- (179) nyaa shent-k Pam '-mhan-t- k 'Only I like Pam'
I one- SS Pam l-like-emp-asp
- (180) luun- nykuupay-m 'ayuu-m 'I work only on Mondays'
Monday-every- as s.t.- as
'-ev- t- k
l-bother-emp-asp
- (181) '-ashvar-t- uum 'I will just sing'
l-sing- emp-inc

Halpern (1947c) described the cognate affix in Yuma as "-t assertive. The verb form with assertive -t is used in answer to a question, in emphasizing the truth of an assertion and in conveying information previously unknown." (p. 156)

In Mojave, as well, "The meaning of the suffix -t- is quite difficult to capture. Often it seems to be a mild emphatic..." (Munro, 1976:57).

In an attempt to compare the uses of -t- in the Yuman languages, Crook (1976) determined four major functions: (1) as a temporal conjunction (found only in the Pai languages;¹³ (2) as an emphatic morpheme ("This is seen most clearly in the River languages, Mojave, Yuma, and Maricopa... The "emphatic" t is not restricted to the River languages, however; the Inaja dialect of Diegueno has a prefix ti- 'emphatic' which is extremely common in the language. There are also sporadic occurrences of a t morpheme in other languages of the family which may be termed 'emphatic'" [Crook, 1976:39]); (3) as a marker of imperfective aspect on verbs; and (4) as a part of a number of modal constructions,

The final three functions described by Crook are all exemplified in Maricopa.

(a) -t- is often used in a sentence in which some element in the clause is somehow emphasized (as in (178)-(181)).

-t- is used when two clauses or parts of clauses are being contrasted.

(182) va- ny- a aly-chew-ma- k 'He didn't build the
house-dem-Vaug neg-make-neg-SS house, he just painted
it'
hmera tshnoy-t- k
just paint- emp-asp

(183) nyip '-ny- va- ny- sh 'My house is small, but
me l-poss-house-dem-sj I like it'
anoq- t- sa '-mhan-k
small-emp-adv l-like-asp

(184) Pam-sh aly-ashvar-ma- k 'Pam didn't sing, she
Pam-sj neg-sing- neg-SS danced'
iima- t- sh
dance-emp-prf

-t- is also used in sentences in which no obvious contrast or emphasis occurs. -t- is likely to be used in a sentence which has more than one clause with the same subject (except relative and complement clauses).

(185) Pam-sh waly-hot- ma- k any-m 'Pam_i hit Bonnie because
Pam-sj neg- good-neg-SS dem-as she_i is no good'
Bonnie tshqam- t- k wi-m
Bonnie slap=dist-emp-SS do-asp

(186) pan chew-k dany-a chew-t- k 'He makes bread this
bread make-SS dem-Vaug make-emp-asp way'

(b) -t- is used in the imperfective auxiliary construction to turn a simple progressive into a habitual meaning (see section 3.22). Compare:

(187) ashvar-k v- va- k 'He is singing (sitting)'
sing- SS dem-sit-asp

with

(188) ashvar-k v- va- t- k 'He sings a lot, all the
sing- SS dem-sit-emp-asp time (sitting)'

If the auxiliary does not have a -t- suffix, the reading is progressive (as in (187)); if the auxiliary is marked with -t-, its reading is habitual or permanent.

-t- is also often found with -uum 'incompletive' when -uum is marking the verb as expressing an unended state.

(189) da- sh nyoy-t- uum 'He is mean'
dem-sj mean-emp-inc

(c) -t- is used in a number of modal constructions with lyvii, for example (cf. section 3.263).

(190) 'ayuu m-rav- t- k kw- yu- lyvii- k 'He looks sick'
s.t. 2-hurt-emp-SS rel-see-be=like-asp

t has an alternate form ti.

(191) Lynn-sh 'ayuu havshuu ma- ti- uum 'Lynn only eats
Lynn-sj s.t. green eat-emp-inc vegetables'

2.32 -nt-. -nt- is used to mean 'again, too, as well, some more, even'. (All of these express the existence of another occurrence of the action or state another action--either performed by the same person or by another.)

(192) ny- wi-nt- k 'She did it again'
dem-do-again-asp

- (193) '-nychen haav '-s'uly-nt- k 'I washed my brother's
l-old=sib shirt l-wash- again-asp shirt too (as well as
my own'
- (194) '-chaa-nt- uum 'I will read some more'
l-read-again-inc
- (195) posh-sh puy-nt- uumf 'The cat is going to die
cat- sj die-again-inc too'
- (196) man-sh m-yaa-nt- sha 'Even you went'
you-sj 2-go- again-emprf

When the object is modified by some form of the verb shent-k 'be one' and the verb is marked with -nt-, then the meaning is 'do to only one object'. Compare the following two examples.

- (197) Pam '-mhan-nt- k 'I like Pam too'
Pam l-like-again-asp
- (198) many m-shent-m ny- mhan-nt- k 'I like only you'
you 2-one- DS 3/l-like-again-asp

These two meanings seem diametrically opposed; clearly, it is the 'be one' verb which gives the 'only' reading. It is difficult to see, though, why the -nt- which elsewhere always specified some repeated or shared action, would be used in a construction which refers to an action which is specifically limited to one recipient. Note that in this 'only' construction either -t- as in (178) or -nt- as in (198) can be used as the non-final suffix on the main verb.

-nt- like -t-, has an alternate form with an i, -nti-.

- (199) iimat soo-nti- uum 'He is going to eat more meat'
body eat-again-inc

2.33 -pa- and -pat- are two other non-final affixes, which like -nt- implies repetition. -pa- means 'as well as (the subject), along with, also'. It usually implies actual accompaniment, rather than merely committing a similar action.

- (200) nyaa '-yaa-pa- k 'I went along (with someone
I l-go- along-asp previously specified)'

When -pa- is followed by the incompletive suffix -uum, the suffixes combine to make -payuum.

- (201) Pam-sh yaa-pa- y-uum 'Pam will go along'
Pam-sj go- along-y-inc

-pat- also means 'as well as, too'; but, unlike -pa-, it does not imply actual accompaniment.

- (202) va '-chew-m Pam-sh 'I built a house and Pam built
house l-make-DS Pam-sj one too!
chew-pat-k
make-too-asp

Although -pa- rarely if ever combines with -t-, -pat- often does.

- (203) Pam-sh pes shent-m 'Pam has only one dollar too'
Pam-sj dollar one- DS
we- t- pat-k
have-emp-too-asp

- (204) myaa hot- t- pat-k 'I am good too'
I good-emp-too-asp

2.34 -hot-. -hot- is an intensifier meaning 'very, a lot'. Unlike all the other non-final suffixes, when this suffix is immediately followed by the final suffix, the switch reference and final realis suffix is always -m.

- (205) man-sh m-hmii-hot- m 'You are really tall'
you-sj 2-tall-very-asp

- (206) 'mhay-ny- sh ny- aaham-hot- m 'The boy hit me hard'
boy- dem-sj 3/1-hit- very-asp

(207) hot- hot- m 'He is very good'
 good-very-asp

This intensifier is transparently related to the verb hot-k meaning 'good' (as in (207)). Hot-k 'good' is however a -k taking verb stem. This relationship makes it difficult to determine why -hot- is the only non-final suffix which takes -m as its final realis marker, since the verb form which -hot- is derived does not take -m as its final realis marker.

2.35 -hpuk-. -hpuk- is suffixed to a verb to mean 'first'.

(208) Pam-sh vaa- hpuk- k 'Pam came first'
 Pam-sj come-first-asp

(209) Bonnie-sh aly-vaa- hpuk- ma- k 'Bonnie didn't come
 Bonnie-sh neg-come-first-neg-asp first'

(210) mhay-sh do-hpuk- k 'The boy is first'
 boy- sj be-first-asp

-hpuk- does not have an independent verb counterpart in Maricopa.

Some languages do have independent verbs of this shape meaning 'be first'; Mojave (Munro and Brown, 1976) has hipuuk 'be first', Tolkapaya Yavapai (Hardy and Gordon, 1980; Hardy, 1979) has an independent verb (h)puk with the same meaning.

2.36 -haay- means 'still; yet; just'

(211) 'iikway dany shvee-k '-uuvaa- haay-k 'I am still milk-
 cow dem milk- SS l-be=loc-yet- asp ing this cow'

(212) mii-hot- haay-k 'He is still crying hard'
 cry-very-yet- asp

The order of -haay- and the negative suffix -ma- (see sections 1.61 and 2.39) affects the scope of the negation. When -ma- 'negative'

precedes -haay- 'yet' the reading is 'not yet'; when -haay- precedes -ma-, then the reading is 'not still'.

- (213) 'iikway dany aly-shveesh-ma-haay-k 'They=2 haven't
 cow dem neg-milk+du-neg-yet-asp milked the cow yet'
- (214) 'ayuu waly-m- evsh- haay-ma- k 'The=2 are not still
 s.t. neg- as-bother+du-yet- neg-as working'

-haay- is also used to mean 'just now' (usually with some form of mpis 'now', but not always).

- (215) 'ayuu '-maa-haay-ksh 'I just ate'
 s.t. l-eat-yet- lprf
- (216) mpis-han puy-haay-k 'He just now died'
 now- real die-yet- asp

2.37 -tam- means 'this time; now'.

- (217) mpis Bonnie-sh pes shent-m 'This time Bonnie has only
 now Bonnie-sj dollar one- DS one dollar'
 we- t- pat-tam- k
 have-emp-too-this=time-asp
- (218) Pam-sh 'ayuu-m 'Pam is still working now'
 Pam-sj s.t.- as
 ev- haay-tam- k
 bother-yet- this=time-asp
- (219) waly-uuv'aw-ma- tam- uum 'It is not going to rain
 neg- rain- neg-this=time-inc any more'
- (220) waly-'e- m- tam- k 'He didn't say it this
 neg- say-neg-this=time-asp time'
- (221) m-dii- p- tam- uum 'Will you come along this
 2-come-too-this=time-inc time?'

2.38 -hper-. -hper- means 'each'. It is typically used with forms of the verb shent-k 'be one'.

- (222) 'ny-ku- shiint nyaa humar 'Each of us spanked the
 l- rel-one+pl I child child'
 ku- shent '-aashkyét-hper-k¹⁴
 rel-one l-whip- each-asp
- (223) 'iipash-sh ku- shiint-sh 'Each of the (2) men ate'
 men- sj rel-one+pl-sj
 'ayuu mash- hper-k
 s.t. eat+du-each-asp
- (224) mat-cham-k kwnshminy-m 'They all turned it around
 ref-all- SS different-DS (at different times
 (separately))'
 tuuwamp-hper-k
 turn+pl-each-asp

-hper- refers to the individual actions of the subject of the verb to which it is affixed. -hper- is not obligatory to specify that the action is distributive; example (51) exemplifies a clearly distributive sentence in which the 'each' sense is contributed by kw-shiint-sh (rel-one+pl-sj), rather than by any affix on the verb. Many such sentences occur. However, -hper- never occurs in any sentence in which the distributive subject sense is not present.

2.39' -ma-. The negative suffix -ma- was introduced in 1.61 and 1.62. -ma- is the negative suffix. It obligatorily cooccurs with the negative proclitic (w)aly- when affixed to a verb.

- (225) waly-puy-ma- k 'He didn't die'
 neg- die-neg-asp

When -ma- is followed by the incompletive suffix -uum, they combine to form -mayuum (just as -pa- 'too' and -uum 'incompletive'

combine to form payuum, see section 2.33).

- (226) waly-'-tpuy-ma- yuum 'I won't kill him'
 neg- l-kill-neg-inc

When -ma- occurs on a verb form with other non-final suffixes, the order of the suffixes is sometimes determined by what the scope of the negation is intended to be. This is exemplified in the section on -haay-. The 'still' is outside the scope of the negation when the order is -ma-haay-; the 'still' is inside the scope of the negation when the order of the suffixes is -haay-ma-. In most cases, the scope of the negation is determined by whether the other suffix precedes the -ma- or follows it. With a number of suffixes, this makes a meaning difference, thus

- (227) waly-'-aham-ma- hot- k 'I really didn't hit him'
 neg- l-hit- neg-very-asp
- (228) aly-'-aham-hot- ma- k 'I didn't really hit him'
 neg-l-hit-very-neg-asp (hit him hard)'

2.4 Co-occurrence and Order of Non-final Suffixes. Not all the non-final suffixes co-occur. pat 'along' and pa 'too', for example do not co-occur. Of the affixes which co-occur, not all of them occur in a fixed order. Particularly the negative suffix can occur in a number of positions depending on what the speaker intends the scope of the negation to be. If the scope of the negation is intended to include the information provided by the non-final suffix, then the negative suffix must follow the other non-final suffix, otherwise it precedes it (as in (228) where the intensifier is being negated and where the order is hot-ma- 'very-neg'; while in (227) the scope is reversed and the negation is what is being intensified). The order of the non-final suffixes

which seem to be fixed and which I have seen exemplified are:

- (a) haay-tam- 'yet-this=time'
- (b) hot-t-pat- 'very-emp-along'
- (c) t-p-tam- 'emp-too-this-time'
- (d) p-haay- 'too-yet'
- (e) t-nt 'emp-again'
- (f) hot-haay 'very-yet'
- (g) t-pat-tam- 'emp-along-this=time'

The order which can be inferred from these examples is:

| | | | | | |
|---------------|------------|------------------|------------|-------|-----------------|
| <u>hot-t-</u> | <u>nt</u> | <u>-haay-tam</u> | 'very-emp- | again | -yet-this=time' |
| | <u>pa</u> | | | too | |
| | <u>pat</u> | | | along | |

2.5 Vowel Alternations in Vowel-Final Verb Stems. In the first chapter (section 1.61) it was noted that certain verbs have alternate stems depending on the suffix which immediately follows the stem. The verbs which show this variation are all vowel-final stems; it is not the case, however, that all vowel-final stems show this variation. The suffixes fall into three classes.

| Class 1 | Class 2 | Class 3 |
|-------------------------------|-------------------|---------------|
| -k SS; asp | -ha irrealis | -ma- negative |
| -m DS; asp | -ly desiderative | |
| -sh/ksh perfective | -sa adversative | |
| -sha/ksha emphatic perfective | -t- emphatic | |
| -'yuu/k'yuu sight evidential | -hpuk- 'first' | |
| -'a/k'a auditory evidential | -tam- 'this time' | |
| -uum incomplete | -pa- 'too' | |
| -k complement of 'say' | | |
| -kis conditional | | |
| -hot- intensifier | | |
| -nt- 'again' | | |
| -haay- 'yet' | | |

(These suffixes are presented in sections 2.2 and 2.3.)

There are four kinds of vowel final verb stems. There are verbs like yuu-k 'see' which have the same stem regardless of the suffix.

There is only one verb, wii-m 'do', which has a different stem for each class of suffix: wii with a class 1 suffix; we with a class two suffix; and wo with the negative suffix. There are verbs which have one stem for class 1 suffixes and another for class 2 and 3 suffixes, e.g. mii-m 'cry' which is mii with class 1 suffixes and me elsewhere. Finally there are verbs which have one stem for class 1 and 2 suffixes and a different stem for the negative form, e.g. vaa-k 'come' which is vaa with class 1 and 2 suffixes and va with the negative suffix.

All the verbs which have a different stem for class 3 from the one they have for class 1 and 2 are verbs which take -k as their final realis suffix. The stems for class 2 and 3 differ from the stems for class 1 (when they do differ) only in the final vowel. In each case, the vowel is shorter and often lower with the class 2 or class 3 suffixes than with the class one suffixes.

Stem alternations of this kind are reported for Mojave (Munro, 1976a; personal communication) and Yuma (Halpern, 1947c). In both Mojave and Yuma, the reported alternations are all of the kind in which the verb has two stem vowels, one of which occurs with class 1 suffixes and one of which occurs with class 2 and 3 suffixes. The verbs which show this variation in Mojave and Yuma also show the variation in Maricopa. Some verbs which show this alternation in Maricopa are:

| | |
|--------------|------------|
| duu-m/do | 'be' |
| 'ii-m/'e | 'say' |
| sii-m/se | 'drink' |
| mii-m/me | 'cry' |
| maa-m/ma | 'eat' |
| kyaa-m/kya | 'shoot' |
| chmii-m/chme | 'put down' |
| shmaa-m/shma | 'sleep' |
| paa-m/pa | 'lie down' |

Some of the verbs which have variant stem vowels only before the negative suffix -ma- are:

| | |
|----------------|--------------|
| vaa-k/va | 'come' |
| yaa-k/ya | 'go' |
| dii-k/di | 'come' |
| soo-k/so | 'eat (meat)' |
| chnyii-k/chnyi | 'lie' |

2.6 Prefixes. There are three kinds of non-nominalizing verbal prefixes which can occur on any kind of verb. First, there are the pronominal prefixes which were presented in section 1.11. Second, there is nyi- which marks that the verb to which it is affixed has a plural object. Third, there is nya- which marks the verb of a subordinate temporal clause. These affixes when they co-occur, occur in the order: nya-nyi-Person Pro 'when-pl=obj-Person Pro'.

2.61 nyi-. nyi- means 'plural object'. It is affixed immediately before other person marking.

- | | | |
|-------|---------------------------|---------------------|
| (229) | <u>nyi-</u> ny- yuu-k | 'I saw you (pl)' |
| | pl=obj-1/2-see-asp | |
| (230) | <u>nyi-</u> m-aashham- k | 'You beat them up' |
| | pl=obj-2-hit+dist-asp | |
| (231) | <u>nyi-</u> 'nym-uu'av- k | 'You (pl) heard us' |
| | pl=obj-2/1- hear+pl-asp | |

2.62 nya-. nya- means 'when'. Cognates of this prefix are found in all branches of the Yuman family being used to mark subordinate clauses. On the verb of a subordinate clause, this prefix means 'when, at the time that'. The verb of the subordinate clause is marked with appropriate switch reference, if the event expressed in the subordinate clause is realized the time of the event expressed in the main clause.

- (232) pan nya- m-chew-m '-maa-uum 'When you make the
bread when-2-make-DS 1-eat-inc bread, I'll eat it'
- (233) qwaq-ny- sh nya- ny- yuu-k 'When the deer saw me,
deer-dem-sj when-3/1-see-SS it ran away'
vesh-k v- yem-k '
run- SS dem-go- asp
- (234) Bonnie-sh nya- nyi- ny- 'av- hot- m 'When Bonnie
Bonnie-sj when-pl=oj-3/1-hear-very-m listened to us,
she heard'
'av- t- k
hear-emp-asp

From the descriptions of the other Yuman languages which have separate imperative prefixes, I do not know whether those prefixes can co-occur with nya- on the same verb. While it seems pragmatically odd to mark a subordinate adverbial clause with speech act morphology, it is quite possible in Maricopa.

- (235) 'ayuu-m nya- k- ev- k k- ashvar-k 'Sing when you
s.t.- as when-imp-work-SS imp-sing- asp work'

nya- interacts with the ' of the first person subject prefix in an interesting way. Optionally both the a of the 'when' prefix and the ' can be deleted, as in

- (236) 'ayuu ny- maa-m '-kwerkwer-m 'When I eat, I talk'
s.t. when+1-eat-m 1-talk- asp

This means that the first person form of an nya- prefixed verb and the third person form of an nya- prefixed verb can differ only in the presence or absence of the vowel in the 'when' prefix. Compare (236) with (237) in the shape of the temporal prefix.

- (237) Bonnie-sh 'ayuu nya- maa-m kwerkwer-m 'When Bonnie eats,
Bonnie-sj s.t. when-eat-m talk- asp she talks'

Constructions using this prefix are presented in detail in the fourth chapter.

2.7 Clitics. These morphemes are all unstressed elements which have a fixed position with regard to the verb. The enclitic can occur after a lengthy pause and always occurs after a final aspect/mood suffix. It cannot stand alone. The proclitics (which have been introduced in the first chapter) participate in some phonological rules, but not in others (they do not, for example, trigger the change from ch to sh [See section 0.3]). Thus, they do not form a real part of the word phonologically. On the other hand they are clearly not independent elements.

2.71 Enclitic -shaa. -shaa can occur after any main verb marked with the aspect markers -k, -m or -uum. When -shaa 'inferential' follows any verb marked with -k or -m, it adds the sense that the sentence expresses the opinion or belief of the speaker.

(238) m-yuu-k- shaa 'You must have seen it, I think
2-see-asp-inf you saw it'

(239) hatkult-sh i- m- shaa 'It must be a coyote making the
coyote- sj say-asp-inf noise'

When -shaa cliticizes to a verb marked with the incompletive aspect suffix -uum, it adds the sense that the sentence expresses the hope or expectation of the speaker. An expectation can be viewed as the speaker's opinion about an event which has not yet occurred.

(240) Allen-sh vaa- uum-shaa 'I expect Allen will come'
Allen-sj come-inc-inf

-shaa never follows any of the perfective suffixes or the evidential suffixes (since they strongly assert the factuality of the clause in which they occur) nor can it follow -ha 'irrealis' or -lya 'desiderative'. These two latter affixes in themselves mark the sentence in which they occur as reflecting some feeling or desire on the part of the speaker. This clitic can only follow the neutral aspect/mood markers -k, -m and -uum.

This inferential clitic -shaa can be near-homophonous with the emphatic perfective suffix -sha. It differs only in length of the vowel and distribution. The -shaa enclitic can follow -m and -uum as well as -k. The -sha perfective suffix can only occur as -sha or -ksha. The enclitic -shaa follows -k when ever the sentence is marked as the inference of the speaker (no matter what the subject of the final verb is); -ksha the final emphatic perfective suffix only marks first person verbs. However, in the first person these two forms, V-k-shaa(inferential) and V-k-sha (emphatic perfective) could be very similar. However, the only likely reading for such a sentence would be perfective since it is highly unlikely that one would have to make an inference about one's own present or past actions or state, rather than know them for sure. Even if one were only making an inference about oneself, it would be unlikely that one would mark that as background information to the sentence (as one does with this clitic, that is provide as background datum the source of the information contained in the sentence). Thus (241) cannot mean 'I think I threw up'. Only the perfective reading is available.

(241) nyaa '-yoq- ksha 'I threw up'
 I 1-vomit-ksha

To express the meaning of belief or inference about the past actions of the speaker, the speaker must use a separate verb meaning 'think' aly'ii-m, rather than a mere clitic.

(242) nyaa '-yoq- k '-aly'i-sh 'I think I threw up'
 I l-vomit-k l-think-prf

2.72 Proclitics. The five sets of proclitics are (1) mat 'reflexive; reciprocal'; (2) the unspecified object class; (3) (w)aly- 'negative'; (4) reduced body parts; and (5) case markers. Each of these proclitics has been introduced in the first chapter.

2.721 mat is the reflexive-reciprocal proclitic. It is clearly derived from the noun imaat 'body'.

(243) mat-'-kyaa- m 'I shoot myself'
 ref-1-shoot-asp

(244) mat-m-sh'ot-m 'You hurt yourself'
 ref-2-hurt- asp

(245) mat-tpuy-m 'He killed himself'
 ref-kill-asp

The features of this clitic are presented in section 1.3.

3.722 'ayuu is used to express an unspecified inanimate argument, 'ish is occasionally found as an unspecified argument as well.

'ayuu can be an independent noun which can be marked with demonstrative suffixes and case suffixes.

(246) 'ayuu-ny- sh havshuu-k 'The thing is blue'
 s.t.- dem-sj blue- asp

(247) nyaa 'ayuu-m 'aaaham-m 'I hit him with something'
 I s.t.- asc l-hit- asp

'ayuu 'thing' can be used when the speaker does not want to specify a reference for the argument or when it is unimportant.

'ayuu is regularly used with certain verbs and usually used with others when the non-human non-subject argument is unspecified. In most cases of this sort, 'ayuu is unmarked and always occurs immediately before the verb.

- (248) 'ayuu-chaa-k 'He is reading, read'
s.t. - read-asp
- (249) 'ayuu -' -maa-m 'I ate, am eating'
s.t. - 1-eat-asp

3.723 (w)aly- is the negative proclitic in Maricopa. Its distribution was presented in 1.33. Its form is rather curious.

Munro (1973b) proposes a sequence of historical reanalyses by which the case marking and verbal suffix -ly (see sections 1.235, 2.214) becomes the negative prefix (w)aly-. In the development Munro postulates, the Maricopa negative construction (and the Yuma construction as well) has as its historical source a complex sentence. The main clause consists of the negative verb and the subordinate clause is the clause being negated. (The negative verb is marked as having the same subject as the subject of the subordinate clause.) The negated clause is marked with an irrealis suffix, in this case -ly. The structure at this point is:

SBJ₁ - VERB -ly SBJ₁ - NEG - TNS

The -ly suffix is reanalyzed as a prefix on the following negative verb.

SBJ₁ - VERB ly-SBJ₁ - VERB - TNS

Munro notes that this construction is found in modern Yuma.

Yu (250) ~~ke-~~ namak ely-ko- mo- k 'Don't leave' (Munro,
imper-leave in- imper-neg-tns 1973b)

The ly suffix is analyzed as the locative case marking suffix and extended semantically as an irrealis suffix marking complements of a negative verb. Halpern (1947a) noted that Yuma has a final verbal suffix -ly(a) which he calls 'optative'; Maricopa, too, as a verbal suffix -lya a desiderative suffix used to mark the verb of a sentence expressing a desire of the speaker.

The next change consists of the me negative verb becoming a suffix on the lexical verb of the negative clause,

ly-SUBJ-VERB-m-TNS

This final step of predicate raising (moving the lower subordinate verb into the main clause) is what produces the synchronic Maricopa negative.

While I agree with the proposed historical development of this negative, this hypothesis fails to explain two features of the negative construction in Maricopa (and in Yuma). The negative proclitic in Maricopa is waly- or aly-. The quality of the vowel is not i as would be expected were the vowel epenthetic (conditioned by the fact that it precedes a palatal consonant, thus the locative proclitic is ily- with the i produced by assimilation of the epenthetic vowel). The a in this clitic cannot be accounted for by phonological processes.¹⁵ The other problem is the optional w at the beginning of this clitic. The w, like the a, is unaccountable as a product of any phonological process (see section 0.3). None of the processes which produce non-phonemic w's can be demonstrated to be acting here.

This leaves us at a point where we must acknowledge both the w and the a are phonemic. I have heard two proposals for the source of this wa. Munro (personal communication) suggested that this wa may be related to the body part clitic wa meaning 'heart', but it is not clear what semantic purpose 'heart' would serve in negation. Langdon (personal communication) suggested that this wa may be a demonstrative base (like ny in the case marking clitics, sections 1.26 and 2.724). In synchronic Maricopa (and Yuma for that matter), however, w is not found as a demonstrative element (Halpern, 1947c, Langdon, 1968) (see section 1.28); Langdon (1968) reconstructs it as part of the proto-Yuman demonstrative system, however. Another problem with this proposal is the shape of the morpheme. In the other clitics of the shape demonstrative + case=marker the vowel is clearly epenthetic and its quality is determined by the surrounding consonants. As pointed out above, this vowel is not phonologically predictable, and therefore not epenthetic.

I have no explanation for the form of this clitic in Maricopa (or Yuma).

2.724 Body parts. Two kinds of body part clitics can be observed in Maricopa, clitics with the ii body part prefix and totally reduced clitics. The first kind of clitic is found with a wide range of verbs; it is found in constructions in which the verb is intransitive and the subject is the semantic possessor of the body part. The fully reduced clitics are found only in idioms (which are probably the synchronic result of a long established sentence of the type which is still productive, i.e. the 'possessor raised' kind). Many verbs consist of a

verb stem preceded by a reduced noun. Some new verb stems have been produced by reanalyzing the nominal clitic as part of the verb stem.

Some nominal body part clitics are:

| productive | | reduced | |
|------------|---------|---------|---------|
| iiwaa | 'heart' | wa | 'heart' |
| iido | 'eye' | do | 'eye' |
| iiya | 'mouth' | ya | 'mouth' |

In (251) and (252), the body parts are cliticized to the verb, but are not reduced.

- | | | |
|-------|------------------|-----------------------|
| (251) | iiwaa-m-hot- k | 'You are happy' |
| | heart-2-good-asp | |
| (252) | iido-m-nyiiily-k | 'You have black eyes' |
| | eye- 2-black-asp | |

Compare these with the acceptable paraphrases in (253) and (254) in which the body parts are not cliticized.

- | | | |
|-------|--------------------------|-----------------------|
| (253) | m-iiwaa-ny- sh hot- k | 'You are happy' |
| | 2-heart-dem-sj good-asp | |
| (254) | m-iido-ny- sh nyiiily-k | 'You have black eyes' |
| | 2-eye- dem-sj black- asp | |

Some idioms using reduced body part clitics are exemplified in (255) and (256) below.

- | | | |
|-------|-------------------------|-----------------|
| (255) | <u>do</u> - m-tar- k | 'You are blind' |
| | eye-2-blind-asp | |
| (256) | <u>ya</u> - m-k- pet- k | 'You are crazy' |
| | mouth-2-loc-block-asp | |

Munro (1979) discussed such constructions along with a great many other constructions in which, for example, something precedes the agreement on the verb. The morphemes I call clitics here, she refers to as preprefixes in Mojave.

No independent lexical item can occur between one of these clitics and the verb.

- (257) a) anylyviim '-iito- rav- k 'Yesterday I had a
 yesterday l-stomach-hurt-asp stomach ache'
- b) '-iito- v- sh anylyviim rav- k 'Yesterday I had a
 l-stomach-dem-sj yesterday hurt-asp stomach ache'
- c)*'-iito anylyviim rav- k
 l-stomach yesterday hurt-asp

These clitics have different degrees of closeness to the verb. The reduced clitics are more intimately associated with the verb. When both a negative proclitic and a body part proclitic occur in the same clause, their order is determined by the kind of body part clitic found in the sentence. If the clitic is full, then it occurs before the negative proclitic.

- (258) iiwaa- aly-'-pet- ma- k 'I didn't forget'
 heart-neg- l-block-neg-asp

If the clitic is reduced, then the negative proclitic precedes it.

- (259) aly-ya- '-pet-ma- k 'I am not crazy'
 neg-mouth-l-loc-black-asp

2.725 Case marking clitics. Case marking clitics were introduced in section 1.26. These are clitics which are attached to the verb to express some oblique relationship between the verb and some NP in the clause. In the introduction to them given in section 1.26, they were described as 'floating off' the noun phrase to which they logically belong and cliticizing to the verb (a simple reanalysis of word boundaries). This description is oversimplified, though undoubtedly it is accurate as the historical source of this construction. These proclitics are: ily m k, nyk, m and nym.

- (260) va ily-'-nyvay-k 'I live in a house'
house in- l-live- asp
- ((261) va- ly '-nyvay-k 'I live in a house'
house-in l-live-asp
- (262) vakpaly nyk-m-dii- k' 'You came from Phoenix'
Phoenix loc-2-come-asp
- ((263) vakpaly-k m-dii- k 'You came from Phoenix'
house- loc 2-come-asp
- (264) Pam-sh New York k- dii- k 'Pam came from New York'
Pam-sj New York loc-come-asp
- ((265) Pam-sh New York-k dii- k 'Pam came from New York')
Pam-sj New York-loc come-asp
- (266) shyaal nym- '-nyuuv- k 'We fought over money'
money dem+asc-l-fight+du-asp
- ((267) shyaal-m '-nyuuv-k 'We fought over money')
money-asc l-fight-asp
- (268) 'ayuu m- uuiiv- k 'They worked'
s.t. asc-work+pl-asp
- ((269) 'ayuu-m uuiiv- k 'They worked')
s.t.- asc work+pl-asp

These examples certainly raise no problem for the notion that a simple change in the word boundaries accounts for the different variants. In fact, from these examples it is not really entirely evident that any actual change has occurred underlyingly--these may be mere artifacts of the surface phonetics. The evidence presented in 1.26, to recapitulate, is: (1) if the noun phrase which should be marked with the case suffix is preposed (or otherwise moved), the case marking stays on the verb (as in (270)); and (2) if the verb is negated, the negative proclitic will intervene between the case marker and the NP (as in (271)).

- (270) kwnho- ny 'ayuu vqor 'I put the fruit in the
basket-dem s.t. bear=fruit basket'
ily-'-chaa-m
in- l-put- asp
- (271) Pam-sh vakpaly 'Pam didn't go through the
Pam-sj city city'
aly-nym- hwer- k
neg-dem+asc-go=through-asp

These structures (as exemplified in (270) and (271)) can be just the consequence of the reanalysis of the word boundaries. However, these forms are clearly not just the result of a simple movement of the affix from the NP to the verb. If the case marking (and demonstrative marking) on the verb are simple clitics which are part of the NP in some part of the derivation of the sentence, then one would expect that the noun phrase from which it is moved would be without case marking, without demonstrative marking and in the form predicted by the case marking. The ny- part of the nyk and nym proclitics must be accounted for. The original source is clearly the demonstrative -ny. The case marker was reanalyzed with its preceding demonstrative (recall that ny is the most neutral demonstrative suffix). ny is the anaphoric and generic suffix, which makes sense in this case since the noun to which it refers (the "logical" carrier of the case marker) must occur earlier either in the clause or in the discourse. This ny cannot just be moved from the NP because that NP may have another demonstrative marking it.

- (272) 'ii- v- a Pam-sh 'Pam hit the dog with this
stick-dem-Vaug Pam-sj stick' or
'This is the stick Pam hit
hat-a nym- aaham-m the dog with'
dog-Vaug dem+asc-hit- asp

The demonstrative suffix on the oblique NP is not the same as the ny found on the case proclitic (thus, it cannot be copied from the noun phrase or moved from it).

Demonstratives raise another problem for the simple movement analysis. In the discussion of demonstrative adjectives, it was noted that some demonstrative adjectives have different stems depending on the kind of case roles they are playing. Specifically, the consonant initial stems have an i vowel before the locative suffixes (-ly, -ii and -k), and an a before the subject suffix (-sh) and the associative suffix (m) and the unmarked form used for objects and possessors is C+any. If the case proclitics on the verb are merely moved off the appropriate NP, then the structure of that NP should only reflect the absence of that affix, not other morphological changes. This is not the case, however. In cases where a noun modified by a demonstrative adjective or an NP consists of a demonstrative pronoun and that NP is the source of a 'moved' case marker, the demonstrative does not have the stem appropriate to that affix. Instead, the demonstrative is put into its unmarked 'object' form.

- (273) kwnho vany harmo ts'osh 'That's the basket I will
basket that chicken eggs put my eggs in'

ily-'-chaa-uum
loc-1-put- fut

- (274) 'ii dany Pam-sh hat 'This is the stick Pam hit
wood this Pam-sj dog the dog with'

nym- '-aaham-m
dem+asc-1-hit- asp

((275) Pam-sh hat 'ii da- m '-aaham-m 'Pam hit the dog with
 Pam-sj dog stick dem-as l-hit- asp this stick')

(276) vdany ily-'-shvaw-k 'I put it on this'
 this in- l-place-asp

((277) vdi-ly '-shvaw-k 'I put it on this')
 dem-in l-put- asp

but

(278) *vdi ily-'-shvaw-k 'I put it on this'
 dem in- l-put- asp

This suggests that these proclitics are not just moved from the NP onto the verb. Instead there is a syntactic reorganization caused by this movement. A new unmarked object is added to a clause which has a case proclitic. In some cases, in fact, the new object is not unmarked; instead, the case marking occurs both on the NP and on the verb.

(279) kwnho- ny- ly 'ayuu vgor 'I put the fruit in the
 basket-dem-in s.t. bear=fruit basket'
ily-'-chaa-m
 in- l-put- asp

The same construction is found in Yuma (Langdon, 1979b) and Mojave (Munro, 1976a).

5.726 The order of these proclitics has been noted casually for some of them. The negative proclitic occurs before the case marking clitic and the fully reduced body part clitics and after the unreduced body parts. It also follows the unspecified argument clitics. It can either precede or follow the reflexive/reciprocal clitic.

(280) mat-aly-'-sh'ot-ma- ksh 'I didn't hurt myself'
 ref-neg-l-hurt- neg-lprf

(281) waly-mat-'-sh'ot-ma- ksh 'I didn't hurt myself'
neg- ref-l-hurt- neg-lprf

'ayuu precedes the case marking clitics.

(282) 'ayuu- ly-'-shvaw-k 'I put something on it'
s.t.- in- l-put- asp

The other clitics do not co-occur.

Footnotes to Chapter 2

¹chew-k 'make, build' and other verbs expressing means of manufacture (e.g., chkwily-k 'sew', poov-k 'weave') can have a benefactive argument in the clause without the verb being marked with the benefactive suffix. The verb agrees with its benefactive object in person, even though no y appears in the stem.

(i) va ny- chew-k 'He built a house for me'
house 3/1-make-asp

These verbs can also be used with the benefactive verb wey-k 'do for'; thus, another sentence expressing the same set of semantic relationships is

(ii) va ny- wey- k chew-k 'He built a house for me'
house 3/1-do+ben-SS make-asp

²The order of the verbs in this kind of sentence is not totally fixed. The benefactive verb can follow the other verb, but then the benefactive verb has a strong afterthought quality. It is usually preceded by a noticeable pause.

(iii) va chew-k ny-wey- k 'He built a house--for me'
house make-k 3/1-do+ben-k

³I know only one verb which has a dual marked with n-, but which does not have a plural marked with a-. This verb is hkyev-k 'cross', hnkyii-k 'cross+dual' and hshuukyish-k 'cross+plural'. Note that n- is not the only marker of dual in this item; n- is accompanied by ablaut of the root vowel. This is the only form I know in which the dual is formed by n- and ablaut of the root vowel. This, however, is not a perfect example of a dual derived by n- + ablaut since this analysis leaves the loss of the -y unaccounted for.

⁴This is the same pattern of affixation as that found with number markers on nouns (cf. section 1.21). As Langdon (1970a) notes for Diegueno (and as is also true for Maricopa): "True infixation is not present because, according to the view of word formation presented here [cf. section 0.2], it would apply only to an element infixated into the root" (p.53). Thus, the uu- plural marker is prefixed to the root, while as a dual marker uu- is prefixed to the stem.

⁵I assume for expository purposes that if the language has only one form for both dual and plural stems, that stem is plural. In the cases in which the dual column is blank, it is because the plural stem is used.

⁶ yuugsh-k is not the only dual form I have heard for this verb (yog-k 'vomit'). I have also heard from the same speaker yuug-k for 'vomit+dual'

⁷ The examples in (43) seem to form a natural semantic class, though some problems are raised when yuu-k 'see' (42) is added to this morphological set. Moreover, this does not exhaust the verbs of consumption. Another 'eat' verb is chgaw-m; neither the dual (chgaw-sh-k) nor the plural (tshuugaw-k) contains -v.

⁸ The collective/distributive distinction is made in Yuma (Halpern, 1947b), Diegueno (Langdon, 1970a), and Cocopa (Crawford, 1966). Remnant dual/plural distinctions are found in Havasupai (Hinton, 197?) and Tolkapaya Yavapi (Hardy, 1979),

⁹ One speaker makes what looks like a collective/distributive distinction for one verb--nyvay-k 'live at'. nyvaysh-k 'live at+ du' is used to mean 'live together'; nychuuvay-k 'live at + pl' is used to mean 'live in different places' by this speaker. These verb stems, even for this speaker, also have an association with dual and plural.

10

If the verb of these sentences is the only verb in the sentence, then it must be the plural action stem (if there is one). On the other hand, both these sentences have perfectly acceptable paraphrases in which there are repeated instances of the unmarked verb stem,

(iv) shyaal nypaav-ii chaa-m ta'ur- ii chaa-m lames-ii chaa-m
money bed- at put- m chair- at put- m table-at put -asp

'He put the money on the bed, on the chair and on the table'

(v) nyiihwet-sh '-avhay- v- ii duu-m '-iishaaly-v- ii duu-m
blood- sj l-dress-dem-at be- m l-hand- dem-at be- asp

'There is blood on my dress and on my hands'

This paraphrase relationship could be used as evidence in support of the proposal made by Munro (1973a:58) that "plural sentences are probably transformationally derived reductions of (near)-identical sets of conjuncts." Though she was talking about Mojave and about plural subjects, I think this kind of sentence would also fit her description.

¹¹ t/sh- prefixation is the same on verbs as on nouns. These morphemes are typically, though not exclusively, prefixed to roots.

The placement of this prefix seems to be subject to some variation. The same speaker produced both mshdiily-k 'be a baker' and shmdiily-k 'be a baker' from mdiily-k 'bake bread'. The two plural action forms are not distinguishable in meaning (both mean to do baking habitually, whether professionally or otherwise).

¹²The -sh in parentheses is not really optional. Its presence or absence is syntactically conditioned. If the comitative clause is the first 'NP' in the sentence, then the subject of the comitative clause is marked with -sh. Otherwise, it is ususally unmarked. Specifically, the comitative clause comes first if it is the subject or if it is preposed before the subject or if the subject is zero-pronominalized. Since heavy NPs in Maricopa optionally move left, it is not uncommon to have the order OSV if the object is heavy (cf. section 1.7).

The -m in parentheses is optional. In general -m as a case marker can be cliticized to the verb or omitted altogether. Both of these options (as well as simple case marking on the NP) are available in the comitative construction (cf. sections 1.25 and 1.26).

¹³In Tolkapaya Yavapai, t is found as a temporal suffix on subordinate clauses. It can be used to express a wide range of temporal relations (cf. Hardy, 1979; Hardy and Gordon, 1980).

¹⁴The 'ny- prefixed to ku-shiint is a Maricopa prefix used to mark personal nouns (Munro, 1978). As noted by Munro (1978), this prefixed is used on the verbs of subject (kw- marked relative clauses in Maricopa).

¹⁵Note that the in proclitic ly (historically the same affix) has as its epenthetic vowel the predictable [I].

Chapter 3

Verbs and Auxiliaries:
BE, DO, SAY, and BE LIKE;
SIT, STAND, LIE, and BE LOCATED:
COME and GO

3. All the verbs discussed in this chapter can be marked with affixes which cannot be used on other verbs. The verbs presented all participate in modal or auxiliary constructions (or both).

3.1 Auxiliaries. An independent verb can be used as the only verb in a sentence with its full lexical meaning. An auxiliary verb occurs in a simple sentence with a main lexical verb expressing the main predication. An auxiliary verb (unlike a main verb) belongs to the same simple clause as a lexical main verb. As noted by Langdon (1978b:98), "There are also in Yuman languages constructions consisting of sequences of inflected verbs which must be analyzed not as sequences of clauses, but as a single clause." Some auxiliaries occur only as auxiliary verbs and never appear as lexical verbs, e.g., the habitual auxiliary kwish-k, as in

| | |
|----------------------------------|-------------------------------|
| (1) man-sh m-ashvar-ha m-kwish-k | 'You are always singing, sing |
| you-sj 2-sing- ir 2-habit-aap | all the time' |

More problematic are the verbs presented in this chapter which can serve as either independent verbs or auxiliary verbs. The problem lies in determining whether the verb in question belongs to the same clause as a preceding lexical verb or belongs to another (typically) main clause,

One test which serves to determine whether two verbs belong to the same or different clauses is whether the subject of the first verb is the same as the subject of the second. If the two verbs have the

same subject, it is not necessarily the case that the two verbs belong to the same clause. If, on the other hand, the two verbs do not have the same subject, they cannot belong to the same clause--since clearly two predications are present in such a sentence.

Typically, when two verbs share the same subject, they are each marked with a pronominal prefix which indicates the person of their shared subject. The pronominal prefixes do not, however, offer the best evidence that the subject of the first verb is the same as the subject of the second verb (whether lexical or auxiliary). Better evidence comes from the switch reference marking which is dependent entirely on the syntactic structure of the sentence for its assignment. The subject of the first verb can also be the subject of the second verb, without necessarily triggering verb agreement on the second (or auxiliary) verb. This lack of marking on a verb which must have the same subject as the lexical verb (to judge by the assignment of switch reference markers on the auxiliary with respect to a following verb) is also evidence that the two verbs belong to the same clause. Consider, for example, the following sentence of a type discussed in section 3,264 and 5,21.

(2) m-shma- ha lyvii-k 'ish-m-nyoy- k 'You are sleepy and mean'
 2-sleep-ir be-like-SS uns-2-mean-asp

In (2) lyvii 'be like' is not marked with a pronominal prefix, however, the same subject suffix -k indicates that it has the same subject as the following verb 'ish-nyoy 'be mean' (which, of course, has a second person subject, like the preceding lexical verb).

More positive characteristics of auxiliary constructions in Maricopa include some presented in Langdon, 1978b. These properties of auxiliary constructions include

(1) The order of the lexical verb and the auxiliary is fixed in the order--verb + auxiliary. This restriction is not found on lexical verbs--a subject clause and a main verb (semantically) can have different syntactic relations which are reflected in different word order (cf. section 4.223). Verbs which express co-occurring events and which are not in an argument-predicate relationship themselves are not restricted in order either (cf. section 4.6).

(2) The order of the various auxiliaries, when they co-occur, is fixed.

(3) No independent lexical items can occur between a verb and its auxiliaries. This restriction, again, does not hold between clauses or separate lexical verbs,

(3) 'ayuu-m m-ey- m anylyviim hot- sh 'It was good yesterday that
s,t,-asc 2-work-DS yesterday good-prf you worked'

(4) No intonation break occurs between a verb and its auxiliaries,

(5) All the verbs which serve as auxiliaries come from a small, fixed class (most of which--though not all--are discussed in this chapter).

(6) Verbs are not marked with the same morphemes as auxiliaries and as main verbs (wii-m 'do' and 'ii-m 'say', for example, have transitive forms which are never used as auxiliaries),

3,2 BE, DO, SAY, and BE LIKE. duu-m 'be', wii-m 'do', 'ii-m 'say', and lyvii-k 'be like' form a class of verbs which express a number of basic aspects of existence--being itself, action, sound and resemblance to others also in existence (connection with entities outside the self),

The verbs duu-m 'be', wii-m 'do', and 'ii-m 'say' form a tight class. These verbs in particular are all used existentially and as existential auxiliaries and in emphatic particles. They contrast in inferential constructions.

The verbs wii-m 'do' and 'ii-m 'say' form a smaller class. They share morphological features and are found contrastively in "expressive" constructions.

lyvii-k 'be like' can be added to the class of existential verbs to form a larger set of verbs which can all be marked with the non-referential argument prefix ka-. These ka-marked forms are found in both assertions and questions and have an important role in complex questions.

3.21 duu-m 'be'. duu-m 'be' in its most basic sense means 'to exist'.

- (4) shly'ay-sh lames-ii duu-m 'There is sand on the table'
 sand- sj table-at be- asp
- (5) kawit-sh duu-sh 'Something happened'
 what- sj be- prf

It can also be used to assert that someone (or something) did something intransitive.

- (6) 'iipaa-ny- sh duu-m 'The man did it'
 man- dem-sj be- asp

This verb is also found in predicate nominal sentences (cf. section 1.231), as in

- (7) '-ny- hat-sh m-duu-m 'You are my dog'
 1-poss-dog-sj 2-be- asp
- (8) mhaa vany-a '-schcha- sh uuduush-k 'Those boys are my younger
 boys dem- Vaug 1-ynggr=bro-sj be+pl- asp brothers'

3.22 wii-m 'do'. wii-m means 'do' in almost all its occurrences as an independent verb.

- (9) nyaa '-wii-sh 'I did it'
 I 1-do- prf

wii-m can also be used to mean 'to have', as in

- (10) nyaa haav hwet-m wii-m 'I have a red shirt'
I shirt red- DS do- asp

More typically, this kind of ownership is expressed using a derived form of 'do', ny-wi-sh (poss^f-do-dist) (this is discussed in section 1.226).

3.23 'ii-m 'say'.

3.231 The verb 'ii-m usually means 'say' in its occurrences as a main verb.

- (11) ii m-'ii-m 'You said yes'
yes 2-say-asp

It does not always mean exactly 'say' in the sense of 'utter, speak some words'; it can also mean 'mean', as in

- (12) nyaa-sh vany-a 'ii-m 'I meant that one'
I- sj dem- Vaug say-asp

'ii-m can also mean 'make a noise', as in

- (13) kawit-sh 'ii 'What is making that noise?'
what- sj say+Q
- (14) hatkult-sh 'ii-m- shaa 'It must be a wolf making
wolf- sj say-asp-inf that noise'

Thus, 'ii-m can refer in simple sentences to actual communication by speech, to the expressing (without communication) of the semantic content (of some speech) or to producing the physical signal of sound.

Finally, 'ii-m can also be used with a simple nominal object to mean 'want (to have)', as in

- (15) shyaal m-'ii 'Do you want money?'
money 2-say+Q

3.232 'ii-m 'say' is used in a number of special constructions. As an auxiliary with another verb it expresses the idea of 'try' or 'want'. Both verbs in the construction (the main lexical verb and the 'say' auxiliary) are marked with pronominal prefixes which reflect the person of the subject (the lexical verb can be marked for the person of an object as well, though the auxiliary cannot). The main lexical verb is not marked with any final suffix.

- (16) man-sh m-mar m-'ii-hot- m 'You tried hard to win'
 you-sj 2-win 2-say-very-asp
- (17) humar-sh 'ayuu maa 'i- m¹ 'The baby wants to eat'
 child-sj s.t. eat say-asp
- (18) nyaa '-ashvar 'i- m 'I started to sing'
 I 1-sing say-asp
- (19) nyip ny- aaham m-'i- m 'You tried to hit me'
 me 3/1-hit 2-say-asp

Note the range of meaning which can be conveyed by this construction--from mere intent or desire, to attempt, to actual beginning of the action. All four of the examples above (15)-(17) share the meaning that the subject intends to perform some action and that the action is not (fully) realized.

- (20) mat-cham-k qwaq '-uukyash '-uu'ish-k 'We all tried to shoot a
 ref-all- SS deer 1-shoot+pl 1-say+pl-asp^{deer'}

More typically, however, only the first verb is marked for the number of the subject, as in

- (21) mat-cham-k qwaq '-uukyash 'i-m 'We all tried to shoot a
 ref-all- SS deer 1-shoot+pl say-asp deer'

Non-final suffixes can be affixed to either the main verb or the 'say' auxiliary. The suffix is assigned to either the main verb or the auxiliary on the basis of whether the morpheme modifies the attempt

or the action being attempted. In (16), for example, the intensifier -hot- is suffixed to the auxiliary, thus the element being intensified is the attempt, rather than the action. -hot- 'very' could also be suffixed to the main verb, in which case the action, rather than the attempt, would be intensified, as in

- (22) ny- aaham-hot i- m² 'He tried to really hit me'
 3/1-hit- very say-asp

3.233 In another modal construction, the first lexical verb is marked with the irrealis suffix -ha and followed by an uninflected form of 'ii-m 'say'.

This construction is used to mean 'have to' or 'should'.

- (23) ha- ny- sh pily-ha 'i- m 'The water should be hot'
 water-dem-sj hot- ir say-asp
- (24) uuv'aw-ha 'i- m 'It should rain'
 rain- ir say-asp

More specifically, this construction seems to mean that the action or state is the desire of some unspecified people. Thus, (22) was given the alternate translation 'They want it to rain.'

3.234 Another fixed use of the verb 'ii-m 'say' is to express that the information in a sentence is hearsay. In this reportative construction, 'ish, a form of 'ii-m, is followed by the hearing evidential suffix 'a (cf. section 2.215). This form is used exclusively on independent clauses. The construction is used to mean that the speaker is not vouching for the truth of the utterance, instead he or she is merely telling something that has been said to him or her:

- (25) Bonnie-sh chuy- k ish- 'a '(They said, I hear tell)
 Bonnie-sj marry-k say+sh-hr=ev Bonnie got married'

The identification of 'ish (alternatively, ish) as a form of the verb 'say' is based on the phonological similarity to the verb 'say' since this verb has many forms and this form ish resembles a number of other morphemes ('ish 'unspecified object', sh plural/dual suffix, sh tense-aspect suffix, etc.). Morpho-syntactic evidence exists that this construction has the verb 'say' in it at some level. 'Say' is a verb whose complement clause is usually marked with -k (cf. section 2.222), a different morpheme from the -k used in other non-final or subordinate clauses to indicate that the subject of the verb to which it is affixed is the same as the subject of the matrix verb (cf. section 2.221).

Clearly, though, the -k in (26) below does not mark "same subject";

- (26) Bonnie-sh chuy- k uu'ish-k 'They said Bonnie got
 Bonnie-sh marry-k say+pl-asp married (they≠Bonnie)'

Further evidence that this is not the same subject -k as noted in section 2 is that -m verbs (which can never be marked with the same subject marker) can be marked with this -k, as in (27).

- (27) Pam-sh Bonnie tpuy-k uu'ish-k 'They said Pam killed Bonnie'
 Pam-sj Bonnie kill-k say+pl-asp

-m verbs in such complement clauses can also be marked with -m:

- (28) Pam-sh Bonnie tpuy-m uu'ish-k 'They said Pam killed Bonnie'
 Pam-sj Bonnie kill-m say+pl-asp

(This is the only construction which shows variation between -m and -k which does not also demonstrate concomitant differences in syntactic organization or in which there is great indeterminacy as to the subjects of the verbs involved.)

This variation between -k and -m is found on the verb in a reportative construction. Compare the final suffixes on (29) and (30):

- (29) Pam-sh Bonnie tpuy-m 'ish- 'a 'Pam killed Bonnie (I hear
Pam-sj Bonnie kill-m say+sh-hr=ev tell)'
- (30) Pam-sh Bonnie tpuy-k 'ish- 'a 'Pam killed Bonnie (I hear
Pam-sj Bonnie kill-k say+sh-hr=ev tell)'

The reportative form can be marked with other non-final affixes.
It can be emphasized or negated.

- (31) '-kwerkwer-m mat-'-shpe- k '(Somebody told me) I talk'
l-talk- m ref-l-strong-k
'iish- t- 'a
say+sh-emp-hr=ev
- (32) chuy- k waly-'ish ma- 'a 'I didn't hear tell she got
marry-k neg- say+sh-neg-hr=ev married'

3.21 'ii-m 'say' and wii-m 'do'. The two verbs 'ii-m 'say' and wii-m 'do' cannot be marked with an object pronominal prefix without changing the structure of the verb. This change can involve the uses of, e.g., the benefactive -y- suffix (see section 2.12) which generally allows the addition of a benefactive object. The addition of this suffix also adds the benefactive sense associated with the affix. If however one merely wants to use 'say' or 'do' transitively (to express the person to whom something is said or done) and the object is first or second person (i.e., overtly marked on the verb with a pronominal prefix), special forms of the verb must be used.

When the verb 'ii-m 'to say' has occurred in the examples found up to this point, all these uses have been intransitive syntactically. Although they appear to have an object in what is said, the verb cannot agree with anything. If the verb has a non-third person object (in which case it means something like 'say/tell to') then the form of the verb is 'aa-m instead of 'ii-m.

- (33) m- 'aa- m³ 'He said it to you'
3/2-say+trns-asp
- (34) ny- 'aa- m 'He said it to me'
3/1-say+trns-asp
- (35) ny- 'aa- m 'I said it to you'
1/2-say+trns-asp
- (36) 'nym-'aa- m 'You said it to me'
2/1- say+trns-asp

The verb wii-m 'to do' also shows the ii to aa change when it takes an object marked on the verb.

- (37) wii-m 'He did it'
do- asp
- (38) ny- waa- m 'He did it to me'
3/1-do+trns-asp

If the verb has a third person object (which, of course, causes no overt marking on the verb), then usually the 'aa-m form is not used. The 'aa form is never volunteered with a third person object.

- (39) nyaa Heather 'ii-m 'I said it to Heather'
I Heather say-asp
- (40) man-sh Heather m-'ii-m 'You said it to Heather'
you-sj Heather 2-say-asp

In fact it is not even possible for the aa form to be used in some constructions if the verb has a third person object. The aa form is optional when the stem is followed by some non-final suffixes, as well.

3.243 'ii-m 'say' and wii-m 'do' are both found in "expressive" constructions. Langdon (1977a) described expressive 'say' construction in Yuman; she writes (1977a:1) "All Yuman languages exhibit constructions consisting of an uninflected word followed by an inflected form of the

verb which normally means 'to say'." The extensive description of this construction given there for Yuman is identical to what is found in Maricopa in particular. These constructions typically express some sound (or lack of sound), motion (or lack of motion), shape or feeling (sensory input). Not all verbs which express these manifestations are expressive 'say' forms; some are simple lexical verbs. All the expressive 'say' forms are themselves intransitive (though derived forms can be transitive).

- (41) kwer m-'ii-m 'You are quiet'
 quiet 2-say-asp
- (42) h'aa-ny- sh henhen 'i- m 'The tree is shaking'
 tree-dem-sj shake say-asp
- (43) hanye-ny- sh val 'ish- k 'The frogs are round'
 frog- dem-sj round say+du-asp
- (44) hahan-sh shen waly-'e- ma- k 'The river is not long'
 river-sj long neg- say-neg-asp
- (45) m-shlymak-sh saqsaq 'ii 'Does your back itch?'
 2-back- sj itch say+Q

Many of the expressive 'say' forms contain reduplicated uninflected words (as in (42) and (45) above), but not all reduplicated words are in expressive 'say' constructions, nor are all the uninflected words in expressive 'say' constructions reduplicated.

The usual way to causativize an expressive construction is to replace the 'ii-m 'say' part of the construction with wii-m 'do' (or waa-m 'do to'). This construction was first reported by Munro (:1980a) for Mojave.

- (46) kwer ny- waa- m 'I made you be quiet'
 quiet 1/2-do+trns-asp

(47) h'a- nya henhen '-wii-m 'I shook the tree'
 tree-dem shake l-do- asp

This kind of causative involved physical contact between the causer and the agent of the action. It is possible to express causation in these forms without involving physical contact. The causative form of 'say' is used in these forms.

(48) kwer '-uu'ey- k 'I made him be quiet'
 quiet l-make=say-asp

'ii-m 'say' and wii-m 'do' are the only two verbs found as inflected elements of expressive constructions and in these constructions contrast.

3.25 duu-m 'be', wii-m 'do' and 'ii-m'say'. duu-m 'be', wii-m 'do' and 'ii-m'say' share morphological and syntactic features. They participate in several systems, in some constructions in contrast with each other, in other constructions in complementary distribution with each other.

3.251 For one thing, these three verbs share various phonological and morphological features.

All three of these verbs are -m verbs (cf. section 2.211). As noted in section 2.5, these three verbs are members of a restricted group of verbs which participate in ablaut morphologically conditioned by the following suffix. Each of these verbs has a stem in which the vowel is lowered and shortened before class 2 suffixes.

Finally, all three of these verbs can be used with demonstrative prefixes to indicate that the action or state expressed by the verb is 'like this, in this way'

- (49) v- duu-m 'It is like this'
dem-be-asp
- (50) v- '-wii-m 'I did it that way'
dem-l-do- asp
- (51) nyaa '-knaav-k dany v- 'ii-m 'I told it this way'
I l-tell- SS this dem-say-asp

3.252 In addition, 'be', 'do' and 'say' can all be used as "existential auxiliaries". I use this term (cf. Langacker, 1974; Munro, 1976a) as a label to designate the lexically determined auxiliary use of duu-m 'be', wii-m 'do' and 'ii-m 'say'. Such auxiliaries are also referred to as "behavioral" auxiliaries (Emerson and Halpern, 1978; Langdon, 1978b.)

When these verbs are used as existential auxiliaries, they are never marked with demonstrative suffixes. The transitive (aa) forms of 'ii-m 'say' and wii-m 'do' are never used as auxiliaries.

wii-m 'do' is used with active transitive verbs. 'ii-m'say' is used with verbs of communication, sound-making and manifestation (e.g. weather verbs). duu-m 'be' is used with stative verbs and with active intransitive verbs; duu-m is also the default case, in that it can be used with any verb (even those which can also be used with 'ii-m 'say' and wii-m 'do').

- (52) '-ashvar-k '- 'ii-sh 'I was singing'
l-sing- SS l-say-prf
- (53) Pam-sh hanmo tspa-k wii-sh 'Pam fried some chicken'
Pam-sj chicken fry- SS do- prf
- (54) Pam-sh iima- k duu-sh 'Pam danced'
Pam-sj dance-SS be- prf

'ii-m 'say' is used to reflect the noise making or manifestation aspects of the predication. A paraphrase offered for (52), for example, was "That noise was me singing" in which the noise-making aspect of the predication is clearly highlighted. Another way to convey the same information without the emphasis on the noise-making features of the predication is to use the auxiliary duu-m 'be', instead of 'ii-m 'say', as in (55) (compare with (52) above):

(55) '-ashvar-k '-duu-sh 'I was singing'
 l-sing- SS l-be- prf

or to use no auxiliary at all, as in

(56) '-ashvar-k 'I was singing, sang, am
 l-sing- asp singing'

wii-m 'do' reflects the active, transitive nature of the predication. Thus, a paraphrase given for (53) was "Pam was in the act of frying chicken". This sentence can also be expressed using duu-m 'be' as an auxiliary or no auxiliary at all, as in

(57) Pam-sh hanmo tspa-k duu-sh 'Pam was frying some chicken'
 Pam-sj chicken fry- SS be- prf

(58) Pam-sh hanmo tspa-k 'Pam fried, was frying, is
 Pam-sj chicken fry- asp frying some chicken'

duu-m 'be' is the only auxiliary which can be used with either intransitive or stative predicates--thus there is no paraphrase for (58) using either wii-m 'do' or 'ii-m 'say' as its auxiliary.

The realis form of this construction has the first verb marked with the same subject suffix -k. In the reconstructed version of this construction (Langdon, 1978b) only -k is found on the lexical verb. In Maricopa, of course, -m is found on those verbs which do not participate

in switch reference (as contrasted with (50)-(57) whose lexical verbs are -k marked in this construction and which do participate in the switch reference system).

- (59) '-mii-m '-duu-m 'I cried'
 l-cry-m l-be- asp
- (60) '-akshvar-m '-i- m 'I laughed'
 l-laugh- m l-say-asp
- (61) m-tpuy-m m-wii-m 'You killed it'
 2-kill-m 2-do-asp

An auxiliary is marked with the appropriate pronominal prefix to mark it as having the same subject as the lexical verb (which makes the same subject marker on the lexical verb syntactically appropriate). The auxiliary is never marked as having an object.

In Maricopa, the imperatives can also take existential auxiliaries. The choice of auxiliary is determined by the same features discussed above. The existential auxiliary is marked with the imperative subject prefix k- (and no object prefix, as above). The existential auxiliary usually takes no suffix and its root vowel is lowered and shortened, i.e., it is in the stem form used with class 2 suffixes.⁵

- (62) k- yem-k k- do 'Go away!'
 imp-go- SS imp-be
- (63) aly-'nyk- aaham-ma- k k- we 'Don't hit me!'
 neg-imp/l-hit- neg-SS imp-do
- (64) k- ashvar-k k- 'e 6 'Sing!'
 imp-sing- SS imp-say

The existential auxiliaries are also used after verbs marked with the incompletive suffix -uum. A verb marked with -uum and followed by an existential auxiliary has the sense of an action or state which

has shown some sign of beginning without being in any way realised. Again, the same criteria determine the distribution of the auxiliaries and the lexical verb and the auxiliary are marked as having the same subject, as shown by the pronominal prefixes, not switch reference marking on the lexical verb):

- (65) vakpaly-ly '-yem-uum '-duu-m 'I am going (am on my way)
Phoenix-in l-go- inc l-be- asp to Phoenix'
- (66) hanmo '-tpuy-uum '-wii-m 'I am going to kill the
chicken l-kill-inc l-do- asp chicken (said with chicken
and knife in hand)
- (67) m-mii-uum m-'ii-m 'You are going to cry'
2-cry-inc 2-say-asp (your face is all contorted)

If another auxiliary intervenes between the existential auxiliary and the lexical verb, the lexical verb is still what determines the choice of existential auxiliary, not the intervening auxiliary. If a locational auxiliary intervenes, then the existential auxiliary does not have to be duu-m 'be' (as it would have to be, if the locational verb were the main lexical verb of the clause).

- (68) '-ashvar-k v- '-va- k '-'ii-sh 'I am/was singing'
l-sing- SS dem-l-sit-SS l-say-prf

It is possible to use duu-m 'be' as the existential auxiliary in this case just as it is always possible to use duu-m 'be' as the existential auxiliary:

- (69) '-ashvar-k v- '-va- k '-duu-sh 'I am/was singing'
l-sing- SS dem-l-sit-SS l-be- prf

It is interesting to note that the existential auxiliary does not appear to establish the aspect of the sentence. The aspect of the sentence is determined by the aspect-marking on the lexical verb and by the other auxiliaries in the sentence. Thus in (65)-(67) in which the

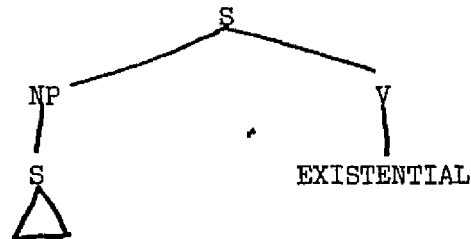
lexical verb is incomplete, the sentence is incomplete, even though the existential auxiliary can be marked as realis or even perfective, as in (65)-(67). The aspect is not unaffected by the presence of the auxiliary since it does add the element of meaning that the event has already begun or that preparation for the event has begun. (65)-(67) can not be interpreted as simple futures the way the same sentences without the existential auxiliaries could be.

The Verb + k existential auxiliary construction has been the subject of some discussion in the Yuman literature. This construction has been analyzed in Mojave (Munro, 1976a and b) and a historical development has been proposed. This auxiliary construction has been reconstructed for Proto-Yuman (Langdon, 1978b) as part of the fuller auxiliary construction and auxiliary system involving locational auxiliaries, as well. Langdon (1978b:100) characterized the Proto-Yuman construction in such a way as to correspond clearly to the Maricopa structure:

There is also a second set of auxiliary verbs consisting of only the verbs normally meaning 'be', 'do' and 'say'. Phrases with 'be' characterize stative sentences, while active ones tend to be separated into those describing verbal behavior (with 'say') and those pertaining to non-verbal actions (with 'do').

In discussing the parallel construction in Mojave, Munro (1976a and b) hypothesized that the historical source of such sentences are sentences in which the existential auxiliary was the main verb and the remainder of the sentence was a subject clause (as in figure 1).

Figure 1: Source Construction:
of Existential Auxiliaries



This tree is proposed as the source of the existential auxiliary construction in Yuman. The proposed development for Mojave (cf. Munro 1976b) involves a stage at which the subject of the subject clause is copied as the subject of the existential verb. Concomitant with this subject raising-copying was the marking of the verb of the subject clause with -k since the two verbs would have the same syntactic subject. Finally, the existential is fully reduced to an auxiliary and a simple sentence is derived from this complex source.

A further proposal by Munro (1976a and b) is that the final aspect marker -k (in Mojave, it would have to be -k and -m in Maricopa) is actually the same subject marker left on the lexical verb when the existential auxiliary is deleted.

Both these hypotheses are supported by Maricopa data. Maricopa provides interesting evidence for the kind of source use of existentials which are not lexically determined by the main verb in the sentence. This will be discussed in detail in section 3.256 after the other constructions of interest are presented. The second claim (that the realis markers are historically switch reference markers) is supported by the structure of the imperative in Maricopa. The use of the final aspect markers -k and -m on imperatives as noted in section 1.13) is

semantically inappropriate since all other uses of these affixes on main verbs indicate that some part of the event expressed by the verb has been realized. However, (65)-(67) demonstrate that the full form of the imperative also contains an existential auxiliary (which does not have to be marked with -k or -m). Thus, the semantics are not strange granted the aspect marking on the existential auxiliary, rather than the main verb is what reflects the aspect of the sentence. The final -k or -m marking is present because of the (synchronically or historically) deleted final auxiliary. Another piece of evidence to support the identity of the switch reference suffix and the final realis suffix is the completely symmetrical assignment of -m as a final aspect marker and of verbs which are -m marked even when followed by a verb with the same subject (section 2.221).

3.253 Another set of forms which uses the existentials and whose distribution is determined by the same rules discussed in section 3.162 for existential auxiliaries is the emphatic form which has the structure:

'ish - PM - EXISTENTIAL - m - k

The existential verb is in the form used with class three suffixes (i.e., the stem vowel is shortened and lowered, as before the negative suffix -ma, see section 2.39). The form always has the same subject as the following lexical verb, suggesting that the final -k is the same subject suffix.

- (70) '-iime 'ish- '-wo-m- k ksha'i-m 'I really put my foot down'
 l-leg unspec-l-do-emp-SS stamp- asp
- (71) iimat-sh 'ish- do-m- k shah- k 'The meat is completely
 body- sj unspec-be-emp-SS spoiled-asp spoiled'

- (72) 'ish- m-'e- m- k m-'i- sha 'You really said it'
 unspec-2-say-emp-SS 2-say-emp_{prf}

In each of these cases (70)-(72) the choice of the existential verb is clearly determined by the same features as the choice of existential auxiliary is.

3.25⁴ Perfect inferentials are formed by following the clause expressing the event or state being inferred with an existential verb which is followed by -nyadawi.⁷

The existential verb in this construction is not determined by the lexical features of the other verb in the sentences. The existential verb instead is selected by features of the inference. If the speaker infers that some event has occurred on the basis of the subject's appearance or his state, then the existential verb is duu-m 'be', as in

- (73) 'iipaa-ny- sh 'ayuu-m ev- k 'That man has been working
 man- dem-sj s.t.- asc bother-SS (I could tell by the way he
 looked)'

duu-nyadawi

be- prf=inf

- (74) m-mii-m m-duu-nyadawi 'You've been crying' (I
 2-cry-m 2-be- prf=inf could, e.g. see the tears)'

If the speaker makes his inference on the basis of the subject's actions, then wii-m 'do' is used, as in

- (75) m-mii-m m-wii-nyadawi 'You've been crying (I could
 2-cry-m 2-do- prf=inf tell, e.g. because you were
 blowing your nose)'

If the speaker makes his inference on the basis of the way the subject sounds, then 'ii-m 'say' is used, as in

- (76) Pam-sh vesh-k 'ii-nyadawi 'Pam has been running (I can
 Pam-sj run- SS say-prf=inf tell, e.g. because she is
 panting)'

- (77) m-mii-m m-'ii-nyadawi 'Pam has been crying (I can
 2-cry-m 2-say-prf=inf tell, e.g. because of her
 voice)'

In (74), (75) and (76), note that the existential verb is marked with a pronominal prefix indicating that it has the same subject as the verb which precedes it. The verb which precedes the existential verb is marked with -k (if possible).

This construction as one can gather from the discussion and the glosses is used to mean that some state or event has held which has present effect (perfect) and which the speaker knows about not from direct observation of the state or event but from inference on the basis of the present effect. The nature of the effect--the basis of the inference--is expressed in the choice of existential verb. The existence of some state, action or sound implies the existence of some earlier event.

3.255 Another way to express an inferential (though not perfect in this case) is with the existential verbs and lyvii-k 'be like' (cf. section 3.254). In this construction the lexical verb expressing the event is marked with the same subject suffix -k, it is followed by an invariant existential verb marked with -sh and followed by lyvii-k 'be like' which has the same subject as the lexical verb.

- (78) 'iipaa-ny- sh puy-k duush lyvii- k 'It looked like that man was
 man- dem-sj die-SS be+sh be=like-asp ^{dead}
- (79) 'ayuu m-rav- k 'ish m-lyvii- k 'You sound sick'
 s.t. 2-hurt-SS say+sh 2-be=like-asp
- (80) m-tpuy-m m-wi-m duu-sh m-lyvii- k 'It looked like you killed
 2-kill-m 2-do-m be- sh 2-be=like-asp ^{him}

- (81) m-tpuy-m wi-sh m-lyvii- k 'It looked like you killed
2-kill-m do-sh 2-be=like-asp him'

An inference about what is going to happen can be made using this construction. In this future inferential construction the lexical verb is marked with the incompletive suffix -uum, in place of the switch reference suffix found in the examples above. The final verb lyvii-k be like is still marked as realis since that verb expresses that the situation seems "to be like" something else--this resemblance is realis.

- (82) m-puy-uum 'ish m-lyvii- k 'You sound like you are
2-die-inc say+ish 2-be=like-asp going to die'
- (83) m-puy-uum duush m-lyvii- k 'You look like you are going
2-die-inc be+sh 2-be=like-asp to die'

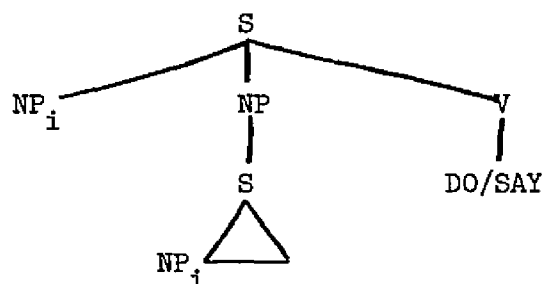
The choice of existential between duush 'be+sh' wii-sh 'do+sh' and 'iish 'say+sh' is determined not by any features of the verb, but by the source of the information being inferred--i.e. if the information is inferred from sound (as in (77) and (80), then 'iish 'say+sh' is used; if the information is inferred from a state (as in (76), (78) and (81)) (the typical source of such information based on the appearance of the situation), duush 'be+sh' is used; and if the information is inferred from a transitive activity (as in (79)) wiish 'do+sh' is used. Further evidence that these existentials are not lexically selected can be found in (78) which contains both an existential auxiliary and an inferential existential (which are different from each other).

3.256 In the previous two sections (3.254 and 3.255) present inferential constructions which employ the existential verbs in ways determined not by the prior verb, as in the existential auxiliary construction, but by the semantics of the situation being conveyed.

In the description of the two inferential constructions above (3.164 and 3.165) there was a suggestion about the possible development of the construction which was reanalyzed as the existential auxiliaries section (3.162). At the point when the full-fledged construction with a higher verb was in use, the existentials were probably not distributed on the basis of the lexical features of a subordinate verb. Instead it seems more likely that at that point the existential verbs were distributed like the existentials in the inferential construction--on the basis of how the information was made manifest. The information can become known to the speaker by being a state, an action or a sound (or other non-viewed manifestation). Typically, of course, a predication expressing a state would only be revealed to exist as a state, an activity as an action and a noise as a sound. This typical association has become a fixed association as part of the auxiliarization process.

I would argue that the source construction for all the existential auxiliaries must have the existential as the main verb and the lexical verb and its arguments as a subject clause (as represented in Figure 1 above) and suggested in Munro (1976a). It might be speculated that 'say' and 'do' as existential auxiliaries have as their source a construction like that in Figure 2.

Figure 2: Postulated Source of 'say' and 'do' auxiliaries



In this construction, the lexical verb and its arguments form an object clause; the subject of the main verb 'say' or 'do' is the same as the subject of the object clause. There are problems with this analysis of the 'say' auxiliary sentences, at least. First, 'say' is used as an auxiliary with impersonal verbs (e.g. weather verbs). In these impersonal constructions it is more apparent that whatever noise is being made is not being made by the subject (since there is none), instead it must be being made by the activity expressed by the lexical verb.

(84) uuv'aw-k 'i- m 'It rained'
rain- SS say-asp

A second argument comes from the structure of object complement clauses of the verb 'say' in Maricopa (and in the other River and the Pai languages (Munro, to appear)). The verbs of complements of 'say', as has been noted (sections 2.222 and 3.23 above), can have verbs marked with -k even if such verbs are -m verbs which can never be marked with the same subject -k. In the existential auxiliary form, with 'ii-m 'say' as its auxiliary, an -m verb cannot be marked with -k

(85) mii-m 'ii-sh 'He cried'
cry-m say-prf

(85')*mii-k 'ii-sh 'He cried'
cry-k say-prf

(Of course, (85') is acceptable in the meaning 'He said he cried'.)

Thus, the 'say' data supports my claim that the existential auxiliary construction (all of it) is derived from a structure like that represented in Figure 1. The structure in Figure 2 might represent an intervening stage between the initial stage as represented in Figure 1 and the modern stage in which the existential verb belongs to

the same clause as the main lexical verb.

The structure of the existential verbs is clearly related historically to the structure found in the existential and inferential constructions in which the existential verb is not determined by the features of the lexical verb. At the point these constructions still reflected a structure in which the existential was an independent verb, the existential verbs were selected by the semantics of the entire situation, not by the features of the lexical verb.

How, then, would the construction change from reflecting the independent semantic information to being solely determined by features of the lexical verb? Clearly there is an association between the semantics of the auxiliary and the semantics of the lexical verb. A verb expressing sound or other manifestation would make its existence known through sound. Typically, then, existential verbs would be associated with different kinds of predicates, perhaps even before the existential auxiliary construction was fully grammaticized. Certainly the copy-raising of the subject of the lexical verb to being subject of the existential verb could be part of this process of grammaticization. In the perfect inferential construction (presented in section 3.254), the existential verb is marked as having the same subject as the lexical verb and the source of the information (state, action, and sound) must come from the subject of the lexical verb. Thus in the perfect inferential construction the subject of the lexical verb is also semantically the subject of the existential verb. In the lyvii existential inferential (cf. section 3.255), the existential verb reflects the source of the inference without necessarily having as its subject the subject of the lexical verb. Thus, one can say

(86) mar-k 'ish lyvii- k 'It sounds like he won'
 win-SS say+sh be=like-asp

when the noise is the shouting of the crowd rather than any sounds emitted by the 'winner'.

In the existential auxiliary construction, the typical association of certain predicates with certain manifestations (as expressed by existential verbs) could easily become grammaticized to the selection of existential auxiliary by features of the lexical main verb.

3.26 lyvii-k 'be like'. lyvii-k 'be like' is in a paradigmatic relationship with the existential verbs in one construction discussed in section 3.27. This verb also participates in a number of complex constructions which express modality. Along with the inferential construction discussed in 3.265, there is another inferential construction which does not involve the existential verbs. There is also a modal construction (comparable in some ways to the 'say' construction presented in section 3.233).

3.261 lyvii-k as the main verb of a simple sentence means 'to resemble, be like'.

(87) nyaa many-a ny- lyvii- k 'I am like you'
 I you- Vaug 1/2-be=like-asp

(88) kwe- ny- sh qwaq lyvii- k 'The cloud is like a deer,
 cloud-dem-sj deer be=like-asp looks like a deer'

The medio-passive (-v marked) form of lyvii-k is used to mean 'fit'. (Unlike other medio-passive forms, lyvev-k 'be live+m=p, fit' is transitive.)

(89) Bonnie haav- sh Pam lyvev- k 'Bonnie's shirt fits Pam'
 Bonnie shirt-sj Pam be=like+m=p-asp

3.262 In more complex sentences, lyvii can be used to express similarity between activities. lyvii-k is used to compare the subject of one predicate to another NP to note similarity of the two entities in performing the action expressed by the predicate, as in

(90) nyip '-nchen- sh chvshhoy-k chyer 'My older brother whistles
me 1-old=sib-sj whistle-SS bird like a bird'

lyvii- k
be=like-asp

Comparisons like that in (90) can be expressed in several ways. The activity can be expressed in a clause which is marked with the same subject suffix and the subject of the main verb lyvii-k 'be like' is the same as that of switch reference marked verb (as in (90)). Alternatively, the activity can be expressed in a relative clause on the subject, as in

(91) 'iipaa kw-ashuuvar- sh hanmo ha- ly '(lit.) The man who is
man rel-sing+nom-sj chicken water-in singing is like a duck;
uuvash lyvii- k the man singing sounds
sit+nom be=like-asp like a duck'

another way to compare to expressions of this kind of equative sense is to compare the subject of lyvii-k 'be like' to a nominalized clause expressing the action, as in

(92) nya- shkwer-k nyip '-n'ay 'He sounds like my father;
when-talk- SS me 1-father (lit.) when he talks, he is
uu'ish lyvii- k like my father's speaking'
say+nom be=like-asp

3.263 lyvii-k 'be like' is used in two kinds of inferentials, to express that the speaker is making a judgement about what is happening or

has happened or will happen on the basis of appearances, rather than on the basis of direct observation or of hearsay. The first of these (which uses existential verbs) was presented in section 3.255 above.

The other kind of inferential also uses lyvii-k 'be like' to convey that the content of the sentence is the inference of the speaker. A kw- marked verb expresses the perceptual source of the evidence on which the judgement is based.

The usual form of the sight inferential is

(93) mat-m-var- t- k kw-i- lyvii- t- k 'You look tired'
ref-2-fail-emp-SS kw-see-be=like-emp-asp

The lexical verb which expresses the inferred event or state is always marked with the emphatic suffix -t-.

This construction bears a clear resemblance to the Yuma form briefly noted in Korwood (1976:79):

Yu (94) John-ts va-yem 'im v-yaa-t kw-lyvii-t
-SUBJ DEM-go intend DEM-go- t ? -like- t

'It looks like John's leaving'

More conservative forms of this construction in Maricopa reveal that in there is a reduced form of yuu 'see' after the kw- prefix.

(95) da- sh hwet-ti-k kw-yu -lyvii- t- k 'This looks red'
dem- sj red-emp-SS kw-see-be=like-emp-asp

Further evidence that forms like (93) have a reduced form of 'see' after the kw- prefix is that when the source of the information is sensory other than sight (auditory, tactile, etc.) the kw- marked form is 'av 'hear, sense'.

(96) mat-m-var- t- k kw-'av lyvii- t- k 'You sound tired'
ref-2-fail-emp-SS kw-hear be=like-emp-asp

The most conservative form of this construction still found in

Maricopa has the lyvii form marked with a subject pronominal prefix which indicates that it has the same subject as the main lexical verb:

(97) 'ayuu-m-rav- t- k kw-'av m-lyvii- t- k 'You sound sick'
s.t.-2-hurt-emp- SS kw-hear 2-be=like-emp-asp

This form suggests that the literal meaning of this sentence is something like 'To one who hears, you are like you are sick.' Since kw- is a relative marked on subject relative clauses (cf. section 4.331), this would not be an unreasonable source for a sentence meaning 'you sound sick.' The problem with this analysis is, however, that Maricopa lyvii-k 'be like' cannot elsewhere take a dative object, only a direct object.

This form is on its way to some degree of grammatical reduction. The 'see' verb is typically reduced from yuu to i. The main verb lyvii is not usually person marked and is cliticized to the end of the kw- marked form. In Yuma, as reported in Norwood, 1976, the kw- is affixed directly to lyvii as in (94).

This construction is still segmentable in Maricopa, since nya- 'when' can be inserted before lyvii, if this construction is used in a temporal clause (also as noted above lyvii-k 'be like' can be person marked).

(98) Bonnie-sh 'ayuu rav- t- k kw-i nya- lyvii- m mat-mchev
Bonnie-sj s.t. hurt-emp-SS kw-see when-be=like-DS ref cure

'-aay- m
1-give-asp

'When Bonnie looked sick, I gave her the medicine'

(99) humar-sh 'ayuu rav- t- k kw-'av- nya- lyvii- m mat-mchev
child-sj s.t. hurt-emp-SS kw-hear- when-be=like-DS ref-cure

'-aay- m
1-give-asp

'When the child sounded sick, I gave here the medicine'

Note that this construction has undergone a certain amount of grammatical simplification. The verb lyvii-k 'be like' does not have to be marked with the grammatical prefix--the lexical verb can be so marked. This means that the lyvii-k is not unambiguously identified as a higher verb--instead, this appears to be a verbal complex which allows the kw- marked construction and lyvii-k form to cliticize to the main verb.

- (100) m-iido nym- m-uuyuu- ny- sh nya- havshuu-k-kw-yu- lyvii- m
 2-eye dem+asc-2-see+nom-dem-sj when-blue- SS-kw-see-be+like-DS
 m-shhot m-lyvii- t- k
 2-good+dist 2-be=like-emp-asp

'When your eyes look blue, you are pretty'

If the inference is about something that will happen in the future, the event is expressed with the verb marked with -ly (elsewhere used as a desiderative suffix, cf. sections 2.24 and 4.24), instead of the same subject suffix -k:

- (101) m-puy-t- ly kw-i- lyvii- t- k 'It looks like you are
 2-die-emp-des kw-see-be=like-emp-asp dying'
 (102) waly-va- m- t- ly kw-'av lyvii- t- k 'It sounds like he is
 neg- come-neg-emp-des kw-hear be=like-emp-asp not coming'

This construction differs from the existential + lyvii construction presented in 3.255. To negate the kw- marked evidential, the lexical verb must be negated:

- (103) aly-hwet-m- t- k kw-yu- lyvii- t- k 'It doesn't look red;
 neg-red-neg-emp-SS kw-see-be=like-emp-asp (lit.) it looks not
 red'

To negate the other kind of inferentiaion (the existential marked form in section 3.255), the lyvii-k 'be like' is negated:

- (104) 'ayuu '-rav- k duush waly-'-lyvi- ma- k 'I don't look sick'
 s.t. 1-hurt-SS be+sh neg- 1-be=like-neg-asp

The existential inferential construction can also be used with an NP instead of a clause as the element which expresses what the situation resembles:

(105) mmdii 'ish m-lyvii- t- k 'You sound like an owl'
 owl say+sh 2-be=like-emp-asp

The major semantic difference between the two kinds of inferentials seems to be the emphasis of the constructions--in the first construction the emphasis is on the sensory powers associated with the inference, thus the inferrer is central; in the existential construction, the activity and its results (or other evidence) are central to the construction, and the existential reflects not the sense of the inferrer, but the state of the evidence on which the inference is based.

3.264 Another use of lyvii-k 'be like' is used in a modal construction expressing that the subject of the verb feels like doing something. The lexical verb is marked with the irrealis suffix -ha. The lyvii-k is typically not person marked.

(106) '-shma- ha lyvii- k 'I am sleepy, feel like sleeping'
 1-sleep- ir be=like-asp

This construction is presented in detail in section 5, 21.

3.27 duu-m 'Be', wii-m 'Do', 'ii-m 'Say' and lyvii-k 'Be Like'

3.271 duu-m 'be', wii-m 'do', 'ii-m 'say' and lyvii-k 'be like' are all used contrastively in one construction. Each of these verbs can be marked with the non-referential prefix ka- to indicate that one of the arguments of the verb does not have a referent (the argument is indefinite or being questioned). This prefix is glossed Q (referring to its use in questions).

ka-duu-m 'be what; be something' is used when the subject of 'be' is non-referential. ka-lyvii-k 'be how many; be not many' is used when the subject is unknown or unspecified (as to number). ka-'ii-m 'say what; say something' is used when the thing said is unknown or unspecified. ka-wii-m 'do what; do something' is used when the action is unspecified or the object of the action is unspecified. In each of these cases ka- indicates that an argument or some other aspect of the predication is unspecified or unknown. All these forms are transparent except ka-lyvii-k 'be how many; be not many' which is difficult to explain since lyvii-k as noted above (section 3.6) typically means 'be like, resemble'. I cannot account for its use, but I can note that it is discussed for Mojave (Munro, 1976a) where this usage raises the same difficulty. lyvii-k is the nearest thing semantically to the other existential verbs (to which this prefix is otherwise limited) and in some ways the most neutral verb that might be used in this meaning (but that hardly seems enough semantic motivation).

The verbs have the structure ka-PM-EXISTENTIAL/lyvii-suffix(es).⁸
 The verbs are marked with a pronominal prefix indicating the person of their subject. In assertions, these forms are exemplified in

- (107) kawit-sh ka-duu-m 'Something happened'
 what- sj Q- be- asp
- (108) kawish ka-m-wii-m 'You did something'
 what Q- 2-do- asp
- (109) kawish ka-'-i- m 'I said something'
 what Q- 1-say-asp
- (110) ka-lyvii- t- k 'There are not to many of them'
 Q-be=like-emp-asp

In questions, these verbs are exemplified in

- (111) kawit-sh ka-do-t- uum 'What would happen?'
 what- sj Q-be-emp-inc
- (112) kawish ka-'-wi-uu 'What shall I do?'
 what Q- 1-do-inc
- (113) kawish ka-m-'e- t- uum 'What would you say?'
 what Q- 2-say-emp-inc
- (114) ka-m-lyvii- k 'How many of you are there?'
 Q- 2-be=like-Qasp

3.272 When the inferential clitic -shaa follows a ka- marked verb, the resulting predication means something like "I don't know S", as in

- (115) kawish ka-m-wii-m- shaa 'I don't know what you did'
 what Q- 2-do- asp-inf
- (116) ka-m-duu-nt- uum-shaa 'I don't know what you'll do next'
 Q- 2- be-again- inc-inf
- (117) ka-m-'ii-uum-shaa 'I don't know what you'll say'
 Q- 2-say-inc- inf
- (118) ka-lyvii- k- shaa 'I don't know how many there are'
 Q-be=like-asp-inf

3.73 Four kinds of questions in Maricopa are inherently or typically complex. All four use ka-V forms as their wh- constituent. All four of these kinds of questions ask about propositions (rather than NP constituents) as pointed out by Pamela Munro (personal communication). In these questions, the question verb inflects for the person of its subject and is marked with appropriate switch reference (where possible). These questions include 'how many, how much' questions, 'when' questions, 'how' questions and 'why' questions.

'How many, how much' as noted in 3.271 above is conveyed using the verb lyvii-k 'be like' prefixed with ka-. Typically, how many is not all that is asked. More usual questions about quantity are these:

(119) piipaa-sh ka-lyvii-k vakpaaly nychuuvay-ii
 people-sj Q-be=likeSS Phoenix live=in+pl-Qinc

'How many people live in Phoenix?'

(120) m-naw- sh ka-lyvii- m m-wii-m 'How many friends do you
 2-friend-sj Q-be=like-DS 2-do-Qasp have?'

(121) shyaal ka-lyvii- m m-wii-m 'How much money do you have?'
 money Q- be=like-DS 2-do-Qasp

'When' is expressed using the verb duu-m 'be' prefixed by the non-referential marker ka- (realized here as k-) and the temporal prefix nya- 'when'.

(122) Pam-sh k-nya- duu-m yem-uu 'When is Pam going?'
 Pam-sj Q-when-be- m go- inc

(123) Daisy k-nya- duu-m m-yuu-k 'When did you see Daisy?'
 Daisy Q-when- be-m 2-see-Qasp

k-nya-duu-m 'when', unlike the other question words discussed in this section, seems to be totally invariant. Person marking prefixes are never used on it. It is never marked with non-final suffixes. No other existential verb is used in it.

'How' consists of the prefix ka- followed by any of the existential verbs (which when possible are marked as having the same subject as the subject of the main verb). 'How' is marked with a personal prefix after ka- and before the existential verb.

This construction is discussed by Munro (1976a). In Mojave the construction is the same, ka-PM-EXISTENTIAL-m. In Mojave, however, the final -m on this form is anomalous, since the 'how' form has the same subject as the clause in which it occurs. In Maricopa, the reason this form is suffixed with -m is clear; -m does not mark different subject, it merely marks that these are -m verb forms. Moreover, in Maricopa these verbs can be marked with non-final suffixes which allow

verbs to participate in switch reference and, therefore, to be marked with the 'same subject' suffix -k:

- (124) ka-m-do-p- tam-k m-iima- k 'How on earth did you dance?'
 Q- 2-be-along-now-SS 2-dance-Qasp
- (125) ka-m-we-t- k m-chew-k 'How are you making it?'
 Q- 2-do-emp-SS 2-make-Qasp
- (126) ka-m-'e- p- tam-k m-ashvar-k 'How on earth did you sing?'
 Q- 2-say-abng- now-SS 2-sing- Qasp

Usually, however, the ka- marked verb does not have non-final suffixes, so the forms are usually -m verbs. The choice of existential verb in the 'how' construction is determined by the features of the main verb--just as it is with existential auxiliaries (cf, section 3.252). The same features control the selection of existential verbs in this construction as well--wii-m 'do' is used with active, transitive verbs (as with (125) above and (129) below); 'ii-m 'say' is used with verbs of communication and noise making (as with (126) above and (130) below); and duu-m 'be' is used with intransitive and stative verbs (as in (124) above and (127) and (128) below).

- (127) ka-m-duu-m m-iima- k 'How did you dance?'
 Q- 2-be- m 2-dance-Qasp
- (128) m-nchen- sh ka-duu-m vaa 'How did your sister get here?'
 2-old=sib- sj Q- be- m come
- (129) ka-m-wi-m m-kyaa 'How did you shoot it?'
 Q- 2-do-m 2-shoot
- (130) ka-m-'ii-m m-ashvar-k 'How did you sing?'
 Q- 2-say-m 2-sing- asp

ka- and an existential verb, as described in section 3.271, can serve as an independent verb meaning 'What happened?', 'What did he do?', 'What did he say?' (or their indefinite, assertive counterparts). Assuming that this is the most basic meaning of this construction, we can

see that it is a reasonable extension of this meaning to get 'how' in more complex constructions. A literal reading of (129) would be 'What did you do (that) you shot it?' In other words, these questions ask what action the subject of the verb took or what happened to him, that he was able to accomplish what the main clause question presupposes he did or will do.

'Why' questions in Maricopa are inherently the most complicated interrogative forms. The most typical form of 'why' questions has a ka- form of 'be' as the complement of 'say'. The 'say' verb has the same subject as the following main verb. Evidence that the 'be' verb is the complement of 'say' rather than in some other relationship is that ka-duu 'Q-be' is marked with the suffix -k (cf. sections 2.221 and 4.24). The only place in which -m verbs can be marked with -k is as the verb of a complement clause of some form of the verb 'say'. Note that the 'be' verb is not marked as having any personal subject.

- (131) ka-duu-k m-'i- m m-vaa-k m-duu-m 'Why did you come?'
 Q- be- k 2-say-m 2-come-SS 2-be- Qasp
- (132) ka-do- t- k m-'i- m m- ashvar- k 'Why are you singing?'
 Q-be- emp-k 2-say-m 2-sing- Qasp
- (133) ka-do-t- k m-'i- m 'nym-shqam-m m-wii 'Why did you hit me?'
 Q- be-emp-k 2-say-m 2/1- slap- m 2-do
- (134) ka-duu-k 'i- m Heather-sh v- yem-m 'Why did Heather leave?'
 Q -be- k say-m Heather-sj dem- go-Qasp

The complement verb in the existential can also be 'say', as in

- (135) ka-'e- t- k m-'i- m m-ashvar-k m-'i- m 'Why are you singing?'
 Q-say-emp-k 2-say-m 2-sing- SS 2-say-Qasp

As with the 'how' forms above, when no suffix intervenes between the verb stem and the final suffix, the 'why' form ends in an -m even though it has the same subject as the following main verb. When, however,

Figure 1:
Structure of the Verb

proclitics-temporal prefix-pl=oj prefix-pronominal prefix-
verb stem-
non-final suffixes- final aspect/mood suffixes- enclitic

a non-final suffix does intervene, giving a verb form which does participate in switch reference, the 'say' verb is marked appropriately with -k 'same subject':

(136) ka-do-t- k m-'e- p- tam-k' 'nym-shqam-m m-wi-m
 Q- be-emp-k 2-say-along-now-k 2/l-slap- m 2-do-Qasp

'Why on earth did you hit me?'

(137) ka-duu-k m-'e- p- tam-k m-tpuy-m m-wi-m 'Why on earth did
 Q- be- k 2-say-along- now-k 2-kill-m 2-do-m kill him?'

The 'say' verb can occur after the main lexical verb. When the 'ay' verb is sentence-final (i.e., not immediately after the ka- marked verb), the ka- marked verb is marked with switch reference with respect to the next verb in the sentence. In other words, since the ka- marked verb does not have the same subject as the lexical verb, it is marked with -m:

(138) ka-do-t- m m-ashvar-k m-'i- m 'Why are you singing?'
 Q- be-emp-DS 2-sing- k 2-say-Qasp

(139) ka-do-p- tam-m m-wii-uum m-'i- m 'Why will you do it?'
 Q- be-along- now-DS 2-do- inc 2-say-Qasp

Finally, a 'why' question can be formed without any 'say' verb at all. The ka- marked verb is then always suffixed with some non-final suffix which enables it to participate in switch reference. The ka- verb is always marked with the different subject -m in this construction (the switch reference marking and the lack of pronominal prefix are what distinguish it from a 'how' form).

(140) ka-do-t- m Polly-sh v- yem-hpuk- k m-duu-m 'Why did Polly go
 Q- be-emp-DS Polly-sj dem-go- firstSS 2-be-Qasp first?'

(141) ka-do-t- m m-me- t⁹ 'Why are you crying?'
 Q- be-emp-DS 2-cry-emp

All of these 'why' questions seem to be based on the typical form

found in (131)-(134). A literal translation of that kind of question would be, for example for (131), 'What did you say happened that you came?' The question form found in (138) and (139) could be literally translated as (for (139)) 'You say what happened so you sang?' Both forms seem plausible paraphrases on which a 'why' question might be based. In both cases the real question is 'what do you claim occurred (that brought this event or state to pass)?' (140) and (141) may be reduced forms of (138) and (139).

3.3 Locational Verbs

The locational verbs, va-k 'sit', v'aw-m 'stand', dik-k 'lie' and uuvaa-k 'be located, move around in', can serve both as independent verbs and as auxiliary verbs.

3.31 va-k 'Sit'. va-k which is glossed 'sit', actually means to be sitting, as opposed to the action of sitting down (the motion is expressed by the verb nak-k)

(142) posh-sh svii va 'The cat is sitting over there'
 cat- sj dem+at sit

The lack of final aspect suffix on the verb in (142) is discussed in

3.351 below.

3.32 v'aw-m 'Stand' v'aw-m refers both to the action of standing up and to the state of being in a standing position.

(143) 'iipaa-ny-sh ny-v'aw- i 'The man is standing there'
 man- dem-sj dem-stand-Vinc

(144) k-v'aw- m 'Stand up'
 imp-stand-asp

3.33 dik-k 'Lie' dik-k refers only to being in some location in a lying position. The action of lying down is expressed by paa-m.

(145) posh-sh svii dik-k 'The cat is lying there'
cat- sj dem+at lie-asp

3.34 uvaa-k 'Be Located'. uvaa-k is used to give a location without specifying the position of the subject--it can be used when the subject is in motion as well as still in a fixed position.

(146) 'iipaa-ny-sh va- s- ly uvaa- k 'The man is in the house'
man- dem-sj house-dem-in be=loc-asp

3.35 Features of Locational Verbs. These locational verbs listed in 3.31-3.31 share both morphological and syntactic features¹⁰ (as well as inherent semantic similarities).

3.351 The locational verbs are morphologically odd in that unlike other verbs, it is possible for these verbs to occur as the main verb of an assertion without any of the final suffixes discussed in section 2.21. If the verb stem is vowel final, no suffix appears (as in (142)); if the verb stem is consonant final, a vocalic increment (-i) is added (as in (143)).

Like the existential verbs, the locational verbs can be marked with demonstrative prefixes (cf. section 3.251). A locational verb can be marked with y- or vny- to indicate position near the speaker, by sii- or sny- to indicate position far from the speaker, and by ny- which is neutral with respect to distance. While it is clearly not obligatory, the zero aspect marking described above appears most frequently with location verbs prefixed with vny-, sny- or ny-. Zero aspect marking does not appear to be possible with location verbs marked with y or sii-. Compare the y- marked locational verb in

(147) 'iipaa-ny- sh v- dik-k 'The man is lying there'
man- dem- sj dem-lie-asp

with the sny- marked position verb in

(148) 'iipaa-ny- sh svii sny-dik-i 'The man is lying way over there'
man -dem-sj dem+at dem-lie-Vinc

3.252 These locational verbs are used as auxiliaries to express that the action or state expressed in the clause is on-going. The positional quality is not neutralized, however; the subject is asserted not only to be performing the on-going action or to be in the on-going state, but also he is asserted to be in the position expressed by the locational auxiliary (cf. (149) and (150)). The lexical main verb can be marked with the same subject marking -k (or with -m verbs, -m) or with the incompletive suffix -uum. If the verb is marked with switch reference, then the subject of the sentence must be in the position expressed by the locational auxiliary at the time of the event.

(149) nyaa '-nak-k vny-va 'I am sitting here'
I l-sit-SS dem-sit

(150) *nyaa '-nak-k vny-v'aw-i 'I am sitting here (standing)'
I l-sit-SS dem-stand-Vinc

As with the existential construction, the lexical verb is marked with -k when the action is realized to some extent and when the verb is a -k verb. If the verb is an -m verb, then the verb is marked with -m or nothing, as in

(151) '-wii-m vny-va 'I am doing it (sitting down)'
l-do- m dem-sit

(152) '-mii v- '-dik-k 'I was crying (lying down)'
l-cry dem-l-lie-asp

As with existential auxiliaries, however, it is also possible to mark the main verb with the incompletive suffix -uum. This is

used to express a future progressive.

(153) nyaa svii nak-uum vny-v'aw- i 'I am going to be sitting
I dem+at sit-inc dem-stand-Vinc

(154) nyaa '-puy-uum vny-'-uuvaa 'I am dying'
I l-die-inc dem-l-be=loc

-k/m on the lexical verb explicitly indicates that some or all of the action is completed at the time of the speech act. -uum on the lexical verb indicates that the event is not yet realized. Durative and iterative actions can have a present progressive reading with -k or -m on the lexical verb (alone or followed by the appropriate locational auxiliary). Non-iterative, punctual acts cannot have such a progressive reading when marked with -k or -m; these verbs must be marked with the incompleted suffix whether alone or with a locational auxiliary (as in (154)) to have a non-completed reading.

Another interesting point about this construction is that the locational auxiliary does not refer to the position of the subject at the time of the event expressed by the main verb. When the main verb is marked as incompleted, the locational auxiliary refers to the position of the subject at the time of the speech act. Note in (153) the lexical verb and the auxiliary would be incompatible if they referred to the same point in time (compare (153) with (150) in which the same two verbs cannot co-occur in these roles).

Locational auxiliaries when marked with the non-final suffix -t- express that the event is habitual. As with the progressive construction, when the clause refers to the present or past, the lexical verb is marked with -k (if it is a -k verb, otherwise it is marked with -m).

(155) nyaa dii '-va- k v- va- k 'I keep sitting here'
 I dem+at l-sit-SS dem-sit-asp

In this construction, the locational auxiliary must reflect the position of the subject at the time of the event expressed by the main verb.

To express the future of the habitual construction, the auxiliary is marked with the incompleted suffix -uum (as in (156)) or with the irrealis suffix -ha (as in (157)).

(156) nyaa dii '-va- k v- va- t- uum 'I will keep sitting here'
 I dem+at l-sit-SS dem-sit-emp-inc

(157) 'ayuu-m '- evsh- k '-uunu- t-ha 'Let's keep working; we-2
 s.t.-asc l-work+du-SS l-be=locdu-emp+ir

In these cases the locational auxiliary must reflect the position of the subject at the time of the event expressed by the main verb, even when the event referred to is in the future.

The locational verbs when used as auxiliaries are still typically marked with demonstratives, person markers, and subject number. The progressive auxiliaries can also occur without a final aspect marker (as in (152) and (153)), just as the independent locational verbs can. Habitual (-t-marked) auxiliaries do not occur without final aspect marking.

As noted in section 3.252 both a locational auxiliary and an existential auxiliary can occur in the same clause. When both occur, the order is locational auxiliary followed by existential auxiliary, just as reconstructed by Langdon (1978b),

(158) '-ashyar-k v- '-ya- k '-'ii-sh 'I am/was sitting singing'
 l-sing- SS dem-l- sit-SS l-say-prf

3.4 Motion Verbs. This section is devoted to the directed motion verbs yaa-k 'go (for some purpose)', yem-k 'go (away, home)', vaa-k 'come, arrive' and dii-k 'come, approach'.

3.41 Main Verbs. When motion verbs are serving as the main verbs of the clause, they can be marked with the demonstrative prefixes, v- 'near' and s- 'far'. These prefixes have somewhat idiosyncratic meanings on these verbs. v- on a verb which indicates motion toward the speaker (i.e., the 'come' verbs) means 'this way, toward the speaker', v- on a verb which indicates motions away from the speaker means 'away (from the speaker) in an unspecified direction.' s- similarly depends on the directionality of the verb for its sense, compare the meaning of s- in

(159) s- dii- k 'He is coming this way'
 dem-come-asp

with that in

(160) s- yem-k 'He is going that way'
 dem-go-asp

In both cases, the demonstrative prefixes appear to emphasize the inherent directionality of the verbs. s-, however, indicates that the subject is not (yet) with the speaker; the subject is seen at a distance.

ny- can also be used as a demonstrative prefix, as in

(161) ny- m-vaa- nt- k 'Here you come again'
 dem-2-come-again-asp

3.42 Inchoative Auxiliaries. Motion verbs are used with intransitive verbs as inchoative auxiliaries. This construction conveys that the action or state expressed by the lexical verb is just beginning. This inchoative construction consists of the main verb marked with the 'same subject' suffix (where possible) followed by yaa-k 'go' or dii-k 'come'¹¹ which is prefixed like the locational auxiliaries with a demonstrative prefix and a person marking prefix. The demonstrative prefix is usually

v-.

- (162) 'ayuu tawsh- ny- sh hwet-m v- dii- haay-sh 'The flower is
s.t. bloom+nom-dem- sj red- m dem-come-yet-prf turning red'
- (163) narangk-sh ma- k v- dii- k 'The orange is getting ripe'
orange- sj ripe-SS dem-come-asp
- (164) m-ruv- k m-yaa-haay-k 'You are getting thin'
2-think-SS 2-go- yet- asp
- (165) nyaa nyiily-k v- '-yaa-k 'I am getting black'
I black-SS dem-l- go-asp
- (166) shay-k waly-v- '-di- ma- k 'I am not getting fatter'
fat- SS neg-dem- l-come-neg-asp

If the event expressed by the lexical verb is punctual and non-iterative, then it is marked with the incompletive suffix -uum, instead of -k or -m.

- (167) puy-uum v- yaa-k 'He is dying'
die-inc dem-go-asp

The aspect of the inchoative action is marked on the auxiliary in this construction.

- (168) piily-k v- yaa- uum 'It is going to get hotter'
hot- SS dem-go- inc

Unlike the locational auxiliaries (which express the position of the subjects of their sentences), the motion auxiliaries do not express actual movement as a physical activity undertaken by the subject of the sentence. (Thus, in (163), the orange is not actually coming anywhere.) These sentences do not indicate actual movement on the part of their subjects. Instead, they suggest motion on the part of the event--the event is progressing rather than the subject.

3.43 Progressive Auxiliaries. Motion verbs are used as progressive auxiliaries with other verbs of motion. In this role, they behave like

locational auxiliaries--(1) they can be prefixed with sny- and vny-, as well as other demonstrative prefixes; and (2) they can occur without any final aspect marking.

(169) nyaa vesh-k vny-yaa-m - i 'I am running'
I run-SS dem-go-dir-Vinc *

(170) Pam-sh vdii didi- uum v- dii- k- shaa 'Pam is on her way here
Pam-sj dem+at come-inc dem-come-asp-inf (I think)'

3.5 Auxiliaries II. As discussed in section 3.1, auxiliary verbs have certain features which reflect their grammaticized status. In auxiliary constructions the order of independent elements is fixed to a much greater extent than in constructions involving independent verbs. No independent lexical item can occur between the lexical verb and its auxiliary or between auxiliaries. Some auxiliaries cannot be used as independent verbs: All these features reflect the dependent status of the auxiliary.

In later sections of this chapter I have presented other features. Some verbs do not have recourse to their full range of morphology when they are used as auxiliaries, e.g., existential verbs are not used with demonstrative prefixes or aa forms as auxiliaries. Other verbs have markers which can only be used on auxiliaries, e.g. motion verbs can only be used with certain demonstrative prefixes when they are used as auxiliaries. When verbs are used as auxiliaries (or in other grammaticized constructions, e.g., ka- marked question forms), they have elements of meaning which are not inferrable from their use as independent verbs--continuous action is not inherent in locational verbs, for example, nor is inchoation inherent in motions verbs. (There is a relationship between the semantic content of the lexical verb and the auxiliary derived from it as can be inferred from the number of

languages which use specific verbs for specific grammatical purposes.)

Another feature of auxiliary verbs is that they do not have the control which main verbs have. For example, features of the main verb determine the choice of existential auxiliary, even when another auxiliary intervenes between the main verb and the existential auxiliary (cf. example (68) in section 3.262). If the auxiliaries were not auxiliaries, but main verbs, there would be no way to explain the difference in existential auxiliary selection after v'aw-m 'stand' when it is a main verb (restricted to duu-m 'be') from when it is an auxiliary (any auxiliary can be used, depending on the features of the main verb).

3.6 Summary. All the verbs discussed in this chapter have special syntactic and morphological features of themselves and in systems with other verbs. This chapter does not exhaust the idiosyncrasies associated with each of these verbs. However, this is the set of verbs which are least typical in terms of morphology and syntax (and of course verb common in discourse)--no other independent verbs share these features with the verbs in this chapter (except verbs derived from the verbs discussed here). Nor does any other set of verbs differ from the typical run of verbs in systematic (or even in particularly eccentric or idiosyncratic ways).

Footnotes to Chapter 3

¹Both 'ii-m 'say' and wii-m 'do' are idiosyncratic in that their stem vowels vary between long and short (unconditioned by the features presented in section 2.5 as affecting vowel length). To a lesser extent, duu-m 'be' also exhibits this variation, I have been unable to discover what conditions this variation.

²'ii-m 'say' is rather strange phonologically, as seen in fn.1. Another odd feature of this verb is that there are forms which do not have the stem initial glottal stop. If the verb has no prefixes, then it varies between a form with the glottal stop and one without, as in

(i) Pam-sh kvar-k i- /'i- m 'Pam said no'
 Pam-sj none-k say- /say-asp:

If the verb has a prefix of any kind, then the glottal stop must be present.

³These aa forms waa-m 'do to' and 'aa-m 'say to' have corresponding short forms used with suffixes of classes 2 and 3 (cf. section 2.5).

(ii) Pam-sh ny- wa- ha 'Let Pam do it to me!'
 Pam-sj 3/l-do+trns-ir

⁴Reduplication in Yuman is discussed in Munro, 1978 in both its phonological and semantic aspects.

⁵It is possible that the existential verbs in this construction have a deleted suffix, possibly -h 'irrealis' which is one of the suffixes which conditions the use of this stem (cf. section 2.5) and which as the irrealis suffix is more semantically appropriate. \emptyset marked verbs typically use the unmarked stem form, as in questions (section 533), main verbs in 'try' auxiliary forms and on verbs of purpose clauses in sentences with yaa-k 'go' or dii-k 'come' as a main verb.

(iii) Pam-sh wii 'Did Pam do it?'
 Pam-sj do

(iv) nyaa '-wii 'i- m 'I tried to do it'
 I l-do say-asp

(v) wii yaa-k 'He went to do it'
 do go-asp

⁶'Say' is also used in another way in imperative constructions.

serves to make an order more emphatic or is used in repetitions of an order. It has the quality that 'Do it I said!' or 'I said do it!' has in English.

(vi) k- yem-k 'i- m 'Go away!
 imp-go-asp say-asp

7

I cannot segment -nyadawi at this time. There are any number of prefixes which begin ny. I know of two independent verbs daw-k 'take' and 'sit-dual'. I really have no idea what this is now.

8

ka-lyvii-k 'how many, how much' is odd because the pronominal prefix can come before or after the ka- as in

(vii) ka-m-lyvii- k 'How many are you?'
 Q-2-be=like-Qasp

(viii) m-ka-lyvii- k 'How many are you?'
 2- Q-be=like-Qasp

The other ka- marked verbs do not demonstrate this kind of variation.

9

Only in why questions can a verb end in an emphatic t. In other questions if a verb ends in a consonant an incremental vowel is added.

10

A feature of these verbs that I do not mention in this section is that each of these verbs is suppletive (some overlappingly) for number of the subject, except for v'aw-m 'stand'.

| | 'sit' | 'lie' | 'stand' | 'be located' |
|----------|-------|-------|---------|--------------|
| unmarked | va | dik | v'aw | uuvaa |
| dual | daw | daw | uuv'o | uunu |
| plural | tiiv | tiiv | vuu'osh | dik |

11

I don't know what features determine the selection of motion verb as inchoative auxiliary. I do know the distribution is not entirely free.

Chapter 4

Complex Sentences

4. This chapter describes in detail a number of sentences which contain two or more clauses.¹ I will discuss the ways in which the clauses are semantically related to each other and how these relationships are conveyed morphologically and syntactically.

4.1 The Expression of Case Relations through Predication. In simple predications, case relations are expressed through the interaction of case marking on the noun and derivational and inflectional markers on the verb. Two cases which are always expressed by case marking on the noun phrase and agreement on the verb are subject and object (cf. section 1.23),

A verb is typically subcategorized for certain arguments--a subject (intransitive verbs), a subject and object (transitive verbs), a subject and two objects (ditransitive verbs), a subject and an oblique object (position verbs), etc. No clause in Maricopa has more than two arguments beyond those for which it is subcategorized.² In most clauses, in fact, there are far fewer arguments. But, the maximum number of arguments in any Maricopa clause is five. This notion was touched on in section 1.25.

When another argument is expressed, another verb is used to express the relationship of that argument to the rest of the predication. Most of the oblique cases can be expressed by either case marking on the NP or by case marking on the NP and a verb which makes the case role more explicit (in some cases). One case presented in detail in sections 1.4 and 2.221 was the use of the verb uudav-k 'be with' to express

a comitative relationship. In fact, this is the only way that such a relationship can be expressed in a sentence which does not have uudav-k 'be with' as its main verb.

- (1) Pam-sh Bonnie-m uudav- k 'ayuu-m evsh- k
 Pam-sj Bonnie-asc be=with-SS s.t.-asc work+du-asp
 'Pam and Bonnie worked; Pam worked with Bonnie'

Other case relationships can be expressed by just case marking or periphrastically with subordinate verbs. Note, as in (1) above and the examples below, that the case expressing verb is marked with switch reference with respect to the main verb. So of the regularly used case-expressing verbs are

- (a) wii-m 'do' used to mean instrumental with, source material
- (2) 'ii '-wi-m va '-chew- k 'I built a house with wood'
 wood l-do-m house l-make-asp
- (b) 'ii-m 'say' used to mean 'for, in order to obtain, about (on the subject of'
- (3) mash 'ii-m 'ayuu-m ev- k 'He works for food'
 food say-m s.t.-asc work-asp
- (4) nyaa Lynn 'ii-m '-ashvar-k 'I sang about Lynn'
 I Lynn say-m l-sing- asp
- (c) wom-k³ used to mean 'be on account of'
- (5) mat- k wom- k mat nyuuv-k 'They fought over land'
 land-loc do+m-SS ref fight-asp
- (d) wey-k⁴ 'do for' used to mean benefactive
- (6) ny-wey-': k '-iima- k 'I danced for you'
 1/2-do+ben-SS l-dance-asp
- (e) various locational and motion verbs used to express location and direction.
- (7) va- ly 'uuvaa- k '-ashvar-k 'I sang in the house'
 house-in l-be=loc-SS l-sing- asp

- (8) Lynn-sh onyer-sh va- ly va- m daw- k 'Lynn found the book in
Lynn-sj book -sj house-in sit-DS find-asp the house'
- (9) '-ny- va- s -k man- k hstat-k 'He crawled from the
l-poss-house-dem-loc arise-SS crawl-asp house'

In all the cases above, the periphrastically expressed argument is marked for its case role in the subordinate clause, rather than any role in the main clause. If the instrumental argument of (2) occurred without the verb wii-m 'do', then it would typically be marked with the associative case suffix -m. Each of the subordinate predicates expresses the relationship between an argument and some argument present in the main clause. In (1)-(7) and (9), the subject of the subordinate clause is the same as the subject of the main clause. In (8), the subject of the subordinate verb is the object of the main verb--note that the subject of the subordinate verb is marked for its role in the subordinate clause (i.e., it is marked with -sh).

These cases are clearly subordinate, since they can be center-embedded, as in (8). The subordinate verb (if it is a -k verb) is marked with appropriate switch reference.

4.2 Complement Clauses. The clauses included in this section are those which express propositions which are used in argument roles in some larger proposition. More specifically, this section is devoted to clauses used as the semantic or syntactic subjects or direct objects of some other verb. These clauses include action nominalizations, switch reference marked clauses, -k marked clauses, desiderative and other irrealis clauses among others,

4.21 Action Nominalizations. A nominalized clause is composed of a

nominalized verb and its arguments.

4.211 Nominalized clauses are used as arguments of other verbs. They can serve as the subject or object of the main verb, as in

(10) ashvar-sh hot-k 'Singing is fun'
sing- sj good-asp

(11) Pam-sh Bonnie uuchuy- h- ny -a 'Pam asked me if Bonnie
Pam-sj Bonnie marry+nom-ir-dem-Vaug was getting married'

ny-kshkwe-k
3/l-ask- asp

In (10), the subject is an unmarked nominalized clause (in this case just a verb). In (11) the object is a nominalized clause which is explicitly marked as irrealis (to signify that the event expressed by the nominalized clause is explicitly not realized).

4.212 An unmarked nominalized verb is one in a clause which is not overtly marked as irrealis. These nominalized verbs can be marked with the prefix uu- and the suffix -sh and often with vocalic ablaut of the stem vowel and occasionally with the prefix sh/t-. Verbs can also be nominalized without any overt markers at all as in (10) above,

The nominalizers are a subset of the markers of verbal number and the causative markers--see sections 2.13 and 2.14. Nominalized verbs can be marked with all or any of these markers. A verb can be nominalized in more than one way, e.g.,

(12) iimash 'dancing' from iima-k 'dance'

(12') ishuumash 'dancing' from iima-k 'dance'

(13) poov 'weaving' from poov-k 'weave'

(13') uupoov 'weaving' from poov-k 'weave'

In (13') the only nominalizer is uu-. In (14) below, there are two nominalizers, uu- and -sh,

(14) nuumaksh 'leaving' from nmak-m 'leave'

In (12') above, the nominalizers are sh-, uu- and -sh. In (15) below, the nominalizers are uu-, ablaut and -sh.

(15) uusish 'drinking' from sii-m 'drink'

Unmarked nominalized verbs are used in action nominalizations in which realization of the event is not an issue (if the event expressed by the nominalization is explicitly not realized, then an irrealis nominalized verb is used) and in relative clauses which refer to realized events or states (see section 4.34).

4.213 Irrealis nominalized verbs are marked with the irrealis suffix -h. These nominalized verbs are never derived using the suffix -sh, which cannot co-occur with -h 'irrealis'.⁵ The other morphemes listed above, however, can be found in irrealis nominalizations (or they can just be marked with -h and no nominalizers):

(16) uuweh 'doing (irrealis)' from wii-m 'do'

(17) ashvarh 'singing (irrealis)' from ashvar-k 'sing'

The form of the irrealis nominalized verb is not predictable from the unmarked form. Irrealis nominalized verbs are used in action nominalizations which express overtly non-realized events, in relative clauses which refer to future or other unrealized events or states (cf. section 4.34), and in a modal construction to express that the event or state in the irrealis nominalization should or must hold,

4.214 The features that differentiate a nominalization from other subordinate clauses are not the markers on the nominalized verb, however, (As noted above, these markers are not obligatory, nor are they distinct from other derivational morphemes.) The features that distinguish

nominalizations are features of the entire clause: (1) the subject of a nominalized clause is typically not marked with the subject suffix -sh⁶; (2) the verb of the nominalized clause is marked with case marking appropriate to the role of the clause in the main clause; (3) the verb of the nominalized clause can be marked with demonstrative suffixes; and (4) a negative nominalization can be marked with just -ma- (i.e., without the waly- negative clitic, just as nouns are negated, cf. section 1.62),

Note the case marking in (18) and (19) on the nominalized verb.

(18) ashvar-sh hot-k 'Singing is good'
sing -sj good-asp

(19) 'nym-ashuham-sh waly-hot-ma- k 'Your hitting me was wrong'
2/1 -hit+nom- sj neg-good-neg-asp

In (20) the subject of the nominalized verb is not marked with the subject suffix -sh. Also note that the negative proclitic waly- is optional on a nominalized verb (just as on a negative noun, cf. section 1.62).

(20) 'iipaa harav (waly-)uusish- ma- shhot- k 'The man's not drink-
man liquor neg- drink+nom-neg-sj good-asp ing is good'

In (21) and (22) the nominalized verbs are marked with the demonstrative suffix -ny- (and as the nominalizations serve as the direct objects of their respective sentences have no case suffix). In (21), note again that the subject of the nominalization is unmarked,

(21) Pam shuumash- ny- a '-tkyet-m 'I cut off (disturbed) Pam's
Pam sleep+nom-dem-Vaug l-cut- asp sleep'

(22) 'ayuu uumaav- h- ny- a tshuudaw-k 'They are waiting to eat'
s,t. eat+pl-ir-dem-Vaug wait+pl-asp

4.215 One way to express obligation or necessity is to predicate an irrealis nominalization (which expresses the obligatory or necessary

event) of duu-m 'be':

(23) hanmo- ny- a m-uusoo- h- sh (duu-m) 'The chicken is for you
chicken-dem-Vaug 2-eat+nom-ir-sj be- asp to eat; you are supposed
to eat the chicken'

(24) mdiily dany Pam uumaa- h- sh duu-m 'Pam is supposed to eat this
bread dem Pam eat+nom-ir-sj 'be- asp bread'

The -h-marked forms are clearly nominalized clauses, (1) The irrealis marked verb often has the derivational morphemes associated with nominalization. (2) The irrealis marked verb is itself marked with the subject case suffix -sh, showing its relation with the main verb duu-m. (3) The subject of the irrealis verb is not obligatorily case marked. (4) The irrealis marked verb can be negated without the negative proclitic waly-, as in

(25) ma- ny m-uuse- h -ma- sh 'The milk isn't for you to
milk-dem 2-drink+nom-ir-neg-sj drink'

(This modal construction, like the predicate nominal construction (cf. section 1.62), can be negated in two ways. The noun or nominalization can be negated (as in (25) above, or the main verb 'be' can be negated, as in

(26) dii m-uuva - h- sh aly-do-ma- k 'You are not supposed to
dem+at 2-be=loc-ir-sj neg-be-neg-asp be here!)

duu-m 'be' is the main verb of the sentence and it does not have a personal subject, as evidenced by the lack of pronominal prefix. Better evidence that the subject of the nominalized clause is not also the subject of the main verb can be obtained from the switch reference marking. If a sentence consisting of this modal construction is used as a subordinate clause to a verb which has the same subject as the nominalized clause, the switch reference indicates that duu-m 'be' has a different subject from the main verb. (In this case, the negative

form of 'be' is used so that the verb can participate in switch reference).

(27) many m-uuya- h-sh waly-do-ma- m/*k m-shuupaw-m
 you 2-go+nom- ir-sj neg- be-neg-DS/*SS 2-know- asp

'You know you aren't supposed to go'

Since the main verb in (27) has the same subject as the nominalized clause, the negative form of duu-m would be marked with -k if duu-m had the same subject as its subject clause.

4.216 Nominalized clauses can serve as the subjects of quantifiers (including numbers) to express the number of times some event has occurred or some state has held, as in

(28) many m-uuwish-sh paaly-k 'You did it many times'
 you 2-do+nom-sj many- asp

If the subject of the quantifier verb is possessed, then either the subject or the possessor of the semantic subject can be the syntactic subject (as discussed in section 1.5) of the quantifier verb:

(28a) 'iipaa-ny-a iishaaly-sh shent-k 'That man has only one hand'
 man- dem-Vaug hand- sj one- asp

(28b) 'iipaa-ny- sh iishaaly shent-k 'That man has only one hand'
 man- dem-sj hand one- asp

(29a) many-a mataam-sh hvik-k 'You are two years old'
 you-Vaug year- sj two- asp

(29b) man-sh mataam m-hvik-k 'You are two years old'
 you-sj year 2-two- asp

To express the duration of some event or state, the clause which expresses the event or state can be nominalized with the duration of the event expressed as the main predication. This construction is parallel to that found in (29b) with the event (nominalized clause) as the semantic possessor of the unit of time which is quantified in the main clause. However, this construction is fixed with the semantic possessor

as the syntactic subject of the quantifier (as the simple nominal is in (29b)).

(30a) 'ayuu-m '-uuev- ny- sh nyaa hmuk- k 'I worked for three days'
s.t.- asc l-work+nom-dem-sj day three-asp

(30b) *'ayuu-m '-uuev- ny nyaa-sh hmuk-k 'I worked for three days'
s.t.-asc l-work+nom-dem day- sj three-asp

(31) Pam Parker-ly uuva- h- ny- sh nyaa hvik-uum
Pam Parker-in be=loc- ir-dem- sj day two -inc

'Pam will be in Parker for two days'

Another version of the same kind of sentence is presented in section 4.222. As in the possessor raising construction, the NP expressing the semantic subject is fixed in form (unmarked) and position (preverbal).

4.22 Switch Reference Marked Complement Clauses. Complements of a number of verbs are marked only with appropriate switch reference, (This, of course, refers only to those verb forms which reflect switch reference, i.e., it excludes -m verbs).

4.221 Subject complements are marked with -m, since the subject of the complement clause is different from the subject of the main clause (the whole complement clause itself).

(32) ashvar-m hot- k 'Singing is good' (Cf, (18) above)
sing- DS good-asp

(33) m-iima- m chhot lyvii- k 'Your dancing is beautiful'
2-dance-DS good+dist be=like-asp

(34) 'ayuu-ly- m-se- ma- m hot-uum 'It will be good for you not
s,t.-neg- 2-drink-neg- DS good-inc to drink'

(35) Bonnie-sh mdiily chew-m mvis-m 'It is easy for Bonnie to
Bonnie-sj bread make-DS easy-asp make bread'

It is difficult to pinpoint any major difference in meaning between nominalized subject clauses as in (18) and switch reference marked subject

clauses as in (32):

4.222 In section 4.216 I showed that nominalized clauses can serve as the subjects of quantifier verbs, as in

(36) 'nym-ashuham- ny-sh hmuk-k 'You hit me three times'
2/1- hit+nom -dem-sj three-asp

Switch reference marked clauses can also serve as the subjects of quantifier verbs,

(37) 'nym-ashham- m hmuk- k 'You hit me three times'
2/1-hit+dist-DS three-asp

(38) 'uk- m hvik-k 'He yelled twice'
yell- DS two- asp

In these cases, the subject clause is predictably marked with -m for different subject. In other cases, however, the subject clause is marked with same subject -k,

(39) 'nym-ashham- k m-hmuk- k 'You hit me three times'
2/1- hit+dist- SS 2-three-asp

(40) 'uk- k hvik-k 'He yelled twice'
yell-SS two- asp

Comparing (38) and (40), the only apparent difference is in the switch reference marking. In checking further, we can see that more than just variation between -k and -m is occurring in these sentences. In (39) not only the verb of the subordinate clause but that of the main clause is marked as having a second person subject. This is not the result of mere copying since the whole personal prefix (object and subject) is not marked on the quantifier verb. The syntactic structure is not consistent with the semantic structure of these sentences, since in no sense, for example, can 'you' (as in (39)) be said to be 'three'; only the action is trebled. In (37) and (38) the semantic relationships are clearly reflected; in (39) and (40), the subject of the subordinate

clause has been raised to being the subject of the quantifier verb as well. Note that the 'raised' NP still plays the role of syntactic subject of the subordinate clause, as well as subject of the sentence.

The apparent raising relation between the two variants of, for example, (37) and (39), suggests that the relationship between the two clauses is more than loose conjunction or subordination. Switch reference marks a number of kinds of clauses including temporal, causal, and enabling clauses whose relationship to the main clause might be the result of inference from a loose conjunction or subordination structure. Other than the English translation what internal evidence is there that the switch reference marked subject clauses actually play the role of subject? Thus, (37) might literally mean 'You hit me and it was three'. The raising relationship between (37) and (39) entails that the switch reference marked subordinate clause is, in fact, the subject of the quantifier verb, since raising consists of taking an argument from a subordinate clause and making it an argument in the main clause--in the same role that the subordinate clause played (in the non-raised version). Thus, the possibility of raising the subject of the subordinate clause in (37) to being the subject of the entire sentence (as in (39)) would seem to argue strongly that the subordinate clause is, indeed, the subject in (37).

Another issue this raising can be used to resolve is the question of whether clauses which have verbs which do not participate in switch reference are subordinate in the same way switch reference marked clauses are. -m verbs participate in raising in ways identical to switch reference marked verbs, except that in the raised version the subordinate verb is still marked with -m, rather than -k;

(41) man-sh m-mii-m hvik-k 'You cried twice' (non-raised)
you-sj 2-cry-m two- asp

(42) man-sh m-mii-m m-hvik-k 'You cried twice' (raised)
you-sj 2-cry-m 2-two- asp

It is worth noting, as well, that examples (37)-(40) demonstrate again that switch reference reflects syntactic, rather than semantic, relations.

Another kind of structure which takes a switch reference marked complement as its (derived) subject is parallel to another structure presented in 4.216. As in those sentences, the time over which some event occurred is expressed as the main clause of the sentence. The event is expressed as the subject of the sentence. The time word (which is the semantic subject of the main verb which is a quantifier) cannot serve as the syntactic subject of the quantifier. The clause which is the semantic possessor of the time unit which is being quantified must be the subject of the quantifier:

(43) nyaa 'ayuu- m '-ev- m nyaa hmuk- k 'I worked for three days'
I s.t.- asc l-work-DS day three-asp

(44) Pam-sh Parker-ly uvvaa- m nyaa hvik-uum 'Pam will be in Parker
Pam-sj Parker-in be=loc- DS day two -inc for two days'

(Compare (44) with (31). Both convey the same message using different subordination strategies.)

Alternatively, (44) can also be expressed with the same subject suffix -k on the subordinate verb,

(45) Pam-sh Parker-ly uvvaa- k nyaa hvik-uum 'Pam will be in Parker
Pam-sj Parker-in be=loc- SS day two- inc for two days'

Such variation between -k and -m on the subordinate verb reflects the fact that in (45) Pam-sh is the subject of both verbs, whereas in (44) it is only the subject of the verb of the subordinate clause. This

raising can be seen more clearly in a sentence of this type which has a second person subject, since second person marking on the verb is obligatory.

(46) man-sh 'ayuu m-rav- m haly'a shent-k 'You were sick for one
you-sj s.t. 2-hurt-DS month ' one- asp month'

(47) man-sh 'ayuu m-rav- k haly'a m-shent-k 'You were sick for one
you-sj s.t. 2-hurt-SS month 2-one- asp month'

It is clear comparing (46) and (47) that the difference between the sentences which have subordinate clauses marked with -m and those marked with -k is more than just a difference in surface marking on the subordinate verb. Clearly, the variation between -k and -m in these sentences appropriately reflects the difference in syntactic relations found in the sentences.

4.223 In some sentence which have verbs which can take a subject complement which is marked with switch reference the syntactic structure is inconsistent with the semantic structure in another way. In this case, the semantic main verb is subordinate and the semantic subject clause is the syntactic main clause. To compare, first consider sentences in which the semantic and syntactic relationships are consistent:

(48) cham m-puy-m shuupaw-v-k 'It is known that you are hungry'
hunger 2-die-DS know- mp-asp

(49) posh-sh mat chkyew-m 'em- p-k 'It is true that the cats are
cat -sj ref bite- DS say+m-mp-asp biting each other'

(50) aly-kchii- ma -m hot-k 'It is good that they didn't
neg-come+pl+neg- DS good-asp come'

It is also possible to convey the same message with the semantic main verb marked with switch reference with respect to the semantic

subject clause and for the semantic main verb to precede the semantic subject clause, as in

- (51) shuupaw-v- m ha- sh havshuu-k 'It is known that water is
know- mp-DS water-sj blue- asp blue'
- (52) 'em- p- m posh-sh mat chkyew-k 'It is true that the cats are
say+m-mp-DS cat- sj ref bit- asp biting each other'
- (53) hot- m aly-kchii- ma- k 'It is good that they didn't
good-DS neg-come+pl- neg- asp come'

or it can be center-embedded within the semantic subject clause, as in

- (54) may da- bh 'em- p- m havshuu-k 'It is true that the sky is
sky dem-sj say+m-mp-DS blue- asp blue'
- (55) mat v- ku- vash da- sh shuupaw-v- m 'or'or-m 'It is known
land dem-rel-sit+nom dem-sj know- mp-DS round-asp that the earth
is round'

4.225 Verbs of perception, knowledge, and preference take complements whose verbs are marked with switch reference. These verbs include yuu-k 'see', 'av-k 'hear', daw-k 'find', shuupaw-m 'know', uuhay-k 'know how' and mhan-k 'like',

- (56) '-nchen- bh uuv'aw-m mhan-k 'My brother likes it to rain'
l-old-sibsj rain- DS like-asp
- (57) kwnho poov-k '-mhan-k 'I like to weave baskets'
basket weave-SS l-like-asp
- (58) man-sh m-ashvar-m '-shuupaw-m 'I know you sang'
you-sj 2-sing- DS l-know- asp
- (59) aly-'-wo-ma- k '-shuupaw-m 'I know I didn't do it'
neg-l-do-neg-SS l-know- asp
- (60) Heather-sh ha- ly t'uup- m '-yuu-k 'I saw Heather swimming'
Heather-sj water-in bathe-DS l-see-asp
- (61) haav havshuu-m haav-k '-yuu-k 'I saw myself wearing a blue
shirt blue- DS wear-SS l-see-asp shirt'
- (62) kawit-sh uuwah-m 'av- ksh 'I heard something howling'
what- sj bark-DS hear-lprf

- (63) '-ashvar-k 'av- k 'I heard myself sing'
 1-sing- SS hear-asp

When the matrix verb of the sentence is a perception verb, then it can be marked as taking a third person object or it can be marked as taking as its object the subject of the subordinate clause without any apparent difference in meaning.

- (64) Bonnie-sh kwarkwar-m nyi- 'av- k 'Bonnie heard them talking'
 Bonnie-sj talk+pl- DS pl=obj-hear-asp
- (65) shyaal m-shduuly-m ny-yuu-ksh 'I saw you hide your money'
 money 2-hide- DS 1/2-see-lprf
- (66) '-iima- k mat '-yuu-k 'I saw myself dance'
 1-dance-SS ref 1-see-asp

In (64) the main verb is marked as taking a plural object; this affix can only be reflecting the number of the subject of the complement clause (no other plural reference is possible). In (65) the main verb agrees in person with the subject of the complement clause (the subject of the complement clause is the same as the object of the main clause). In (68) the subject of the complement clause is the same as the subject of the main clause; the main clause is marked as having a reflexive object. In all the cases above, the subject of the subordinate clause triggers object marking of assorted kinds on the main verb. No other argument can trigger this kind of agreement on the main verb without changing the meaning of the utterance.

- (67) *Pam-sh many m-aashham- m ny-yuu-ksh 'I saw Pam hit you'
 Pam-sj you 3/2-hit+dist-DS 1/2- see-lprf
- (68) *man-sh 'nym-aashham- m mat 'av -ksh 'I felt you hit me'
 you-sj 2/1-hit+dist- DS ref hear-lprf

(67) and (68) cannot have complement readings; instead (67) means 'Pam hit you and I saw you' (not necessarily simultaneously) and (68) means 'You hit me and I felt myself'.

4.23 Future Complements of shuupaw-m 'know'. Switch reference is used exclusively to express events which would be realized at the time when the main verb occurs. shuupaw-m 'know' is the only one of the set of verbs described in 4.225 which cannot take a complement which refers to a future event or state.

The simplest way to express a future complement of the verb shuupaw-m 'know' is to mark the verb of the complement clause with the inpletive suffix -uum:

- (69) Pam-sh iima- uum '-shuupaw-m 'I know that Pam will dance'
 Pam-sj dance-inc l-know- asp
- (70) nyaa '-vaa- uum '-shuupaw-m 'I know that I will come'
 I l-come-inc l-know- asp

The irrealis suffix -ha is never found on complements of shuupaw-m 'know'.

The inpletive suffix -uum can be followed by an invariant form of the verb duu-m 'be'. This use of duu-m is never marked with any pronominal prefixes.⁶

- (71) Pam-sh iima- uum duu-m '-shuupaw-m 'I know Pam will dance'
 Pam-sj dance-inc be- m l-know- asp
- (72) nyaa '-vaa- uum duu-m '-shuupaw-m 'I know I will come'
 I l-come-inc be- m l-know- asp
- (73) man-sh m-iima- uum duu-m '-shuupaw-m 'I know you will dance'
 you-sj 2-dance-inc be- m l-know- asp
- (74) Pam-sh 'nym-wik- uum duu-m shuupaw-m 'Pam knew that you would
 Pam-sj 2/l- help-inc be- m know- asp help me'

This is not the ordinary existential auxiliary construction discussed in section 3,252. Note that the auxiliary in this construction is always duu-m 'be' (it does not vary with the other existential auxiliaries along lexical lines) nor does duu-m 'be' inflect to mark the person of the subject of the lexical verb of the complement clause.

This kind of structure to express unrealized events is found only in complements of the verb shuupaw-m 'know'.

Another way to express a future complement of shuupaw-m is to use a lexical verb without a final suffix followed by an uninflected form of 'ii-m 'say':

- (75) Pam-sh iima 'i- m '-shuupaw-m 'I know Pam will dance'
 Pam-sj dance say-m l-know- asp
- (76) man-sh m-iima 'i- m '-shuupaw-m 'I know you will dance'
 you-sj 2-dance say-m l-know- asp
- (77) 'nym-wik 'ii-m Pam-sh shuupaw-m 'Pam knew that you would help me'
 2/l-help say-m Pam-sj know- asp

((77) also exemplifies heavy NP movement to the left as described in section 1.7.)

This construction, like the one involving duu-m 'be', is unique to future complements of shuupaw-m 'know', 'ii-m 'say' is found in other irrealis forms. A detailed description of 'ii-m used as an auxiliary meaning 'try' or 'intend' is found in section 3,232. This subordinate clause construction differs, however, in that, as with the construction using duu-m, the auxiliary is not marked for the person of the subject of the lexical verb. In the 'try' construction, the 'say' verb is marked as having the same subject as the lexical verb and the first verb (as in the complement construction) has no final suffix:

- (78) man-sh m-mar m-'ii-m 'You tried to win'
 you-sj 2-win 2-say-m

4.24 Complements of Forms of 'ii-m 'Say'

4.241 The most general structure of sentences containing 'say' and a complement has the form: NP say COMPLEMENT say

- (79) Pam-sh 'i- m Allen-sh vaa- uum ii- sh 'Pam said Allen was coming'
 Pam-sj say-m Allen-sj come-inc say-prf

Either of the two instances of say can be omitted. In (80) only the second instance of 'say' occurs; in (81) only the first instance of 'say' occurs.

- (80) Pam-sh kwsede-sh duu-m waly-'e- ma-sh 'Pam didn't say he was a
 Pam-sj doctor-sj be- m neg-say-neg-prf doctor'

- (81) Pam-sh 'i-m 'iipaa vany-a pakyer-sh duu-m 'Pam says that man
 Pam-sj say-m man dem-Vaug cowboy-sj be-asp is a cowboy'

Thus, sentences of this kind can have three paraphrases depending on the number of 'ii-m's in the sentence.

- (82a) Pam-sh 'i- m vaa- uum 'i- m 'Pam said she was coming'
 Pam-sj say-m come-inc say-m

- (82b) Pam-sh 'i-m vaa-uum 'Pam said she was coming'
 Pam-sj say-m come-inc

- (82c) Pam-sh vaa- uum 'i- m 'Pam said she was coming'
 Pam-sj come-inc say-m

Either version of the 'say' verb can be inflected for the person of its object (in which case the as form is used) or marked with any of the non-final suffixes. When the first verb has a non-final suffix which enables it to participate in switch reference, it is marked with -k to indicate that it has the same subject as the following 'say' verb.

- (83) ki-sh 'i- nti- k yaa-uum 'i- nt- sh 'Somebody else_i said
 who-sj say-again-SS go- inc say-again-prf she_{i/j} was coming'

- (84) nyaa shent-ti- k 'e-t- k Pam-sh vaa- uum 'ii-sha
 I one- emp-SS say-emp-SS Pam-sj come-inc say-emp_{prf}

'Only I said Pam would come'

If the sentence occurs in a subordinate form, as in a relative clause, the second instance of 'say' is the obligatory one,

- (85) 'iipaa 'ny-kw-ashham -k 'uu'ish 'The man who I said hit
 man 1-rel-hit+dist-k 1-say+nom me...'

(Relative clauses of this kind are presented in detail in section 4.331.)

4.242 As noted in section 2,222, realis complements of 'say' can be marked with the realis suffixes -k or -m (as determined lexically), as in

(86) Pam-sh 'i- m puy-k 'i- sh 'Pam said he died'
Pam-sj say-m die-k say-prf

(87) Pam-sh 'i-m mií-m 'i-sh 'Pam said she cried'
Pam-sj say-m cry-m say-prf

Clearly, the -k and -m in the examples above must be aspect markers, rather than the switch reference suffixes, since their assignment does not depend on the subjects of the verbs in the sentences.

Alternatively, the complement of 'say' or 'think' (aly'ii-m) can be marked with -k, which as discussed in section 2,222 does not indicate switch reference, nor is it the simple aspect marking -k since it can occur on -m verbs.

(88) nyaa m-mii-k 'ii-m 'I said you cried'
I 2-cry-k say-asp

This -k appears to be the locative case marking -k, as hypothesized in Munro, to appear. The constraints on its use are compatible with a nominal source, -k cannot be used on verbs in complements which are marked with speech act morphology. Thus, for example, if the complement clause is an imperative, then the verb cannot be marked with the case marking -k.

(89) Pam-sh k- maa-m 'i- m 'Pam said 'Eat!'
Pam-sj imp-eat-m say-asp

(90) *Pam-sh k- maa-k 'i- m 'Pam said 'Eat!'
Pam-sj imp-eat-loc say-asp

Irrealis complements can be marked with any appropriate suffix,

irrealis -ha or incomplete -uum.

4.243 In Maricopa, the verb 'ii-m 'say' is used with the proclitic mat 'reflexive' to mean 'pretend'.⁷ The verb of the complement clause is marked with the appropriate realis suffix -k or -m or the final suffix -k 'locative', used only on complements of forms of 'say'.

- (91) 'ashvar-k mat 'i- m 'I pretended to sing'
1-sing-asp ref say-asp
- (92) m-mii-m mat m-'i- m 'You pretended to cry'
2-cry-asp ref 2-say-asp
- (93) hat-sh puy-k mat 'i- m 'I pretended the dog was dead'
dog-sj die-asp ref say-asp
- (94) '-aaham-k mat 'i- m 'I pretended to hit him'
1-hit- loc ref say-asp

4.244 When the verb of the complement of aly'ii-m 'think' (derived from 'ii-m 'say'⁸) or 'ii-m 'say' is marked with the desiderative suffix -ly (cf. section 2.214), it means that the complement expresses the desire of the subject of the main verb.

These desires can be of oneself, as in

- (95) Heather-sh i- m Pam-sh do-ly aly'i-m 'Heather wishes she were
Heather-sj say-m Pam-sj be-des think-asp Pam'
- (96) kwsede-sh m-do-ly m-aly'ii-m 'Do you want to be a doc-
doctor-sj 2-be-des 2-think- Qasp tor?'
- (97) nyaa ny- yuu-ly 'i- m 'I want to see you'
I 1/3-see-des say-asp

or of others, as in

- (98) aly-m-yem-ma- ly '-aly'i-sh 'I don't want you to go; (lit.)
neg-2-go -neg-des 1-think-prf I want you not to go'
- (99) man-sh m-ashvar-ly 'i-shh 'I would like you to sing'
you-sj 2-sing- des say-prf

This construction can be used to express both possible wishes

(wishes which could be realized, as in (96), (97), (98) and (99)) or impossible wishes (wishes that cannot be realized, wishes about impossible desires, as in (95), wishes about the present or past and therefore beyond realization, as in

(100) waly-'-'oh- ma- ly 'i- m 'I wish I didn't have a cold'
neg- l-cold-neg-des say-asp

Unlike the use of the desiderative suffix on main clauses, this construction is not limited to expressing the desires of only the speaker, but can be used to express anyone's wants, desires or hopes. It is semantically transparent to use a higher verb of speaking or thinking with a desiderative complement to express wanting. It is clear, however, that this is not a mere quoting device, i.e. (95) does not literally translate to "Heather thinks 'I wish I were Pam'", since it is clearly possible for the complement to be indirect, as in (96). In (96) the pronominal reference makes it clear the desiderative marked complement cannot be a direct quote.

4.3 Modification of the Noun

4.3.1 Adjectives. There are several ways to modify a noun in Maricopa. Certain intransitive verbs can be used as attributive adjectives, as described in section 1.27.

(101) kwes'ul'ul hayshuu chqaw-m 'He ate a green apple'
apple blue eat- asp

(102) '-iime lyesh-y- sh ray- k 'My broken leg hurts'
l-leg break-dem-sj hurt-asp

These intransitive verbs follow the nouns they modify and when they are the last element of the NP, they bear the appropriate demonstrative and case suffixes of the NP (cf. (102)). The verbs which can be

used this way are typically verbs which refer to such qualities as number, color, shape or size.

4.32 Switch Reference Marked Verbs. The modification of an NP can also be accomplished with an intransitive verb of which the NP in question is the semantic subject, using switch reference. The modifying clause can be embedded to the main clause and marked for same or different subject. (Often just the same kind of verbs which can be used as attributive adjectives can be used as modifiers with switch reference.)

(103) Pam-sh mash lames paaly-m nyi- chash- k
 Pam-sj food table many-DS pl=oj-put+dist-asp

'Pam put the food on lots of tables'

(103) mhay-ny- sh vii- sh paaly-m taav- k 'The boy threw lots
 boy- dem-sj rock-sj many- DS pelt- asp of rocks'

In (103) and (104), the clause whose verb is paaly-k 'be many' is fully embedded in the main clause. In both cases, paaly-'many' is marked with the different subject suffix -m, since in both cases the subject of that verb is different from that of the main clauses. Note that the subject of the subordinate clause does not have to be marked with the subject suffix -sh (as in (102)), although it can be (as in (103)).

In (104) below 'ii 'wood' is marked as the subject of the subordinate clause, while in (105) (a close paraphrase of 104) 'ii 'wood' is marked as the instrumental argument of the main clause. Thus, the NP being modified may appear either as part of the subordinate clause or as part of the main clause in the appropriate case role.

(104) Pam-sh hat 'ii- sh anoq- m nym- aaham-m 'Pam hit the dog
 Pam-sj dog wood-sj small-DS dem+asc-hit- asp with a small stick'

(105) Pam-sh hat 'ii- m anoq- m aaham- m 'Pam hit the dog
 Pam-sj dog wood-asc small-DS hit- asp with a small stick'

If the subject of the subordinate clause is also the subject of the main clause, then it is always marked with the subject suffix -sh (as in (106) below). In this case, it is impossible to determine in which clause the NP belongs to. (Note that the subordinate verb paaly 'many' is marked with the same subject -k as is appropriate since the subjects of the two clauses is the same.)

(106) 'iipash-sh paaly-k aashuham-k 'Many men hit him'
 men- sj many-SS hit+pl- asp

4.33 Perfective-Marked Clauses. There is another way to modify an NP with a clause without nominalizing that clause. As in the switch reference case described above, the non-nominalized clauses described here are marked with verbal rather than nominal morphology and their subjects (when they occur within the clause) are subject marked. This kind of referring clauses employs the emphatic perfective suffixes -ksha and -sha (cf. section 2.215). These clauses can only have past reference (like the switch reference marked clauses, but unlike nominalized clauses). Unlike switch reference marked clauses, -sha marked clauses cannot be embedded and their subjects if they are overtly present in the sentence are always in the -sha marked clause and marked with the subject suffix -sh.

As in their perfective use, -ksha and -sha as markers on relative clauses are distributed according to the subject of the verb to which they are affixed. -ksha can only be suffixed to first person -k verbs; -sha is used everywhere else. The -sha marked clause is sentence initial, the main clause follows, containing a resumptive anaphoric or demonstrative pronoun.

(107) va 'chew-ksha humar-sh aas-ly uuvaa- k ar'oy-k
 house 1-make-lempprf child-sj dem-in be=loc-SS play- asp

'The boy played in the house I built'

(108) 'iipaa-ny- sh m-wik- sha aany-a '-yuu-k
 man- dem-sj 3/2-help-emprrf dem- Vaug 1-see-asp

'I saw the man who helped you'

(109) hat '-aaham-sha aany-sh skiny-k 'The dog I hit ran away'
 dog 1-hit- emprrf dem- sj flee- asp

Aside from the fact that these strings are given as translations for English sentences containing relative clauses, there is other evidence that these strings are single sentences (and not two simple sentences juxtaposed). First, the intonation pattern with which these sentences are uttered does not identify the -sha marked verb as sentence final. Second, the anaphoric pronoun used in the second clause is quite odd if these are merely adjacent sentences. Overt demonstrative pronouns are not very common in Maricopa sentences (particularly in non-oblique roles). These pronouns always occur in sentences containing -sha relative clauses, though they only very rarely show up in sentences linked only by juxtaposition. Moreover, in example (109) above, if it were merely two adjacent sentences, the anaphoric pronoun would not be used since co-reference with the only available third person noun (hat 'dog') would be already established. Consider the following example:

(110) va- s- ly '-ashyar-ksha aany-a m-yuu-k
 house-dem-in 1-sing- lempprf dem-Vaug 2-see-Qasp

'Did you see the house I sang in?'

Again, there is no other available referent for the object of the main verb, so the use of the demonstrative is strange. In this construction, the presence of the demonstrative in the main clause is invariant and obligatory.

Switch reference marked clauses and -sha marked clauses have in common that they main maintain verbal properties (the verb cannot take nominal suffixes to mark the role of the clause in the matrix clause). They differ in that switch reference marked clauses can be center-embedded while -sha marked clauses cannot be, and in that switch reference marked clauses are marked with respect to the main clause, while -sha clauses are not (in fact, one might claim that the main clauses is marked with respect to the -sha clause since the pronoun overtly refers back to the -sha clause).

4.43 Nominalization, Another major way of modifying some noun is to employ one of the two major nominalizing constructions which are typically referred to when relative clauses in Yuman are discussed (cf., e.g., Gorbet, 1976 for Diegueno; Munro, 1976a for Mojave). These constructions are cognate to relative constructions found all over the Yuman family. In both of these constructions, the verb is nominalized (cf. section 4.21 and 4.22) and takes final nominal morphology (demonstrative and case suffixes) and the subject of the relative clauses is unmarked. The two clause types differ as to whether the head of the relative clause is its subject (kw- marked clauses) or plays some other role in the relative clauses (nom-clauses).

4.341 the kw- marked clause is characterized by the relative marker kw- (which can also be realized as ku- or k-, cf. section 0.3) in the position of the subject pronominal prefix on the relative verb. The subject of the relative clause is the head of the relative clause. The final verb of the relative clause is marked for the syntactic role borne

by the NP in the matrix clause. The verb can be overtly marked as nominalized with the markers discussed in section 4.212. The clause has all the features listed for nominalizations in section 4.214 except for the form of negation it takes (as will be discussed below).

- (111) 'iipaa ny-kw-tshqam -sh shmaa-m 'The man who beat me is
 man l-rel-slap+dist- sj sleep-asp asleep'
- (112) nat-sh kwr'ak kw-nyoy-ny-a chkyew-k 'The dog bit the bad
 dog-sj old-man rel-bad-dem-Vaug bite-asp old man'
- (113) 'iipaa ii k-uu'ish-ny-sh puy-k 'The man who said yes died'
 man yes rel-say+nom-dem-sj die-asp

Negative relative clauses, unlike negative action nominalizations, are negated with the negative proclitic obligatorily (and, of course, the negative suffix),

- (114) 'iipaa waly-kw-yem-ma-ny-sh puy-k 'The man who didn't go
 man neg-rel-go-neg-dem-sj die-asp died'

The relative clause (including the head) can readily be found in the position appropriate to its role in the matrix clause, even when, as in (112), that placement results in center-embedding. On the other hand, the clause can be preposed, in which case a resumptive pronoun is typically found in the matrix clause,

- (115) va kw-hayshuu nyaa aas-ly 'uuyaa-k 'ashyar-k
 house rel-blue I dem-in l-be=loc-SS l-sing- asp

'I sang in the house which is blue'

- (116) avhay 'ny-kw-chew-ny-sh nyip '-ntay shuupaw-m
 dress l-rel-make-dem-sj me l-mother know- asp

Note that it is not obligatory that there be an overt head in these clauses; in (116), the relative clause is headless,

If there is more than one relative clause within the same NP, or more than one predicate of which the head is the subject within a single

NP, several constructions are possible. If the two relative clauses are conjoined, then they can each be marked with kw- and with appropriate case marking.

(117) 'iipaa mhwet kw- tpuv-sh humar kw- daw- sh iipaa-k nyikwov-k
 man bear rel-kill-sj child rel-take-sj brave-SS very -asp

'The man who killed the bear and saved the child is very brave'

If the relationship between the two predicates is not conjunction (if one of the predicates is subordinate to the other), other constructions are employed. For example, both verbs can be marked with kw- with only the second verb marked for the case of the NP in the matrix clause.

(118) mhay t'ar k- uuvaa kw- ar'oy-sh m-kshuunav- ly aly'i-m
 boy out rel-be=loc rel-play-sj 3/2-tell+dist-äes think-asp

'The boy playing outside wants to talk to you'

In (118) above, uuvaa 'be located' is not marked with a case marker (even though it modifies the subject of the sentence), nor with a switch reference marker (even though it would be if it were not in a relative clause (cf. (115))). It is, however, marked with kw-, just as the following form of 'play' is.

An alternate way of structuring these complex relative clauses is to mark the first verb for its role in its own matrix clause, as well as with the prefix kw-.

(119) 'iipaa ny-k- wik- uum'k- uu'ish- sh '-ny- va- s- ii'
 man 1-rel-help- inc rel-say+nom- sj 1-poss-house-dem-at

vaa-k
 come-asp

'The man who said he was going to help me came to my house'

Finally, the only the final verb of the relative clause can be marked with kw- and the other verbs are simply marked as they would be if they were in construction with a main clause.

(120) 'iipaa nyip ny- mhan-k k- uu'ish- sh' skiny-k
 man me 3/1-like-loc rel-say+nom-sj flee- asp

'The man who said he liked me ran away'

(121) sny'ak avhay k- hwet-ny- a humar-a ar'oy-k mat- ly
 woman dress rel-red-dem-Vaug child-Vaug play-SS land-in

k- uuvaash- ny- a ntay- sh (duu-m)
 rel-be=loc+nom-dem-Vaug mother- sj be- asp

'The woman wearing the red dress is the mother of the boy playing in the field'

(121) is quite complicated and has several interesting features. If one examines just the NP humara ar'oyk matly kuuvaashnya 'the boy playing in the field', one can see the construction just described--only the second verb is marked in any way as relative.

Another interesting point about this example concerns the first relative clause in the sentence sny'ak avhay khwetnya 'the woman wearing the red dress'. It is clear from this clause that the assignment of the relative morphology depends on the syntactic subject, rather than the semantic subject of the clause. The semantic subject of hwet 'red' is avhay 'dress', not sny'ak 'woman'. The referent of the clause, however, is the woman, not her dress. The verb of the relative clause, hwet, is marked as having its subject as its head. Color verbs belong to a class of predicated which permit the possessor of their semantic subject to appear either as a possessor or as their syntactic subject, i.e. they allow possessor raising (cf. section 1.5), which has occurred in the first relative clause in (121).

Such constructions illustrate a type of relative clause ambiguity not previously noted for Yuman languages. Typically, if the possessor is the head of a relative clause, then it is the syntactic

subject of the relative clause (as in (121) below); if the semantic subject of the relative clause is its head, then the semantic subject is the syntactic subject as well (as in (122) below), where possessor raising has not occurred).

(121) sny'ak e'e ku- hmaaly-sh ny- wik-k 'The woman with the white
 woman hair rel-white- sj 3/1-help-asp hair helped me'

(122) sny'ak e'e ku- hmaaly-sh sily-k 'The woman's white hair is
 woman hair rel-white- sj fall-asp falling out'

Note that in (121) and (122) above, the relative clauses are identical, though the referents differ. This difference reflects the difference in syntactic structure of the two sentences. The syntactic subject is the NP most prominent in its own clause, therefore most easily relativized. This construction further demonstrates that syntactic, rather than semantic, relations control the relation-marking morphology (relative clause structure as well as switch reference). Gorbet (1976) and Munro (1976a) discuss ambiguity in Yuman relative clauses extensively, but only in non-subject (non-kw- marked) relative clauses.

In relative clauses which contain auxiliary verbs either both the main and the auxiliary verb can be marked with kw (as in (123)) or just the auxiliary (as in (124)).

(123) mhay kw- ashvar-k y- kw- v'aw- sh m- wik- uum
 boy rel-sing- SS dem-rel-stand-sj 3/2-help-inc

'The boy who is singing will help you'

(124) 'iipaa mii-m y- k- uuyaash- sh 'ayuu ray- k
 man cry-m dem-rel- be=loc+nom-sj s,t, hurt-asp

'The man who is crying is sick'

Kw- marked relative clauses which refer to future or other unrealized events or states use irrealis nominalized verbs (cf. section

4.213), as in

(125) 'iipaa 'ny-k- kwik- h- ny- sh dii aly-va- ma- k
man l- rel-help-ir-dem-sj dem+at neg-come-neg-asp

'The man who was going to help me didn't come'

4.342 When the head of a relative clause is not its syntactic subject, the clause is never marked with kw-. The clause is nominalized with all the associated features of nominalization (4.214) except nominal negation.

(126) Bonnie-sh va- s- ii uuyem- sh havshuu-k
Bonnie-sj house- dem-at go+nom- sj blue- asp

'The house Bonnie went to is blue'

Note that the head of the relative clause is fully within the relative clause and is marked for its role in the relative clause. The head noun can appear at the beginning of the relative clause, as in

(127) kwnho Bonnie Pam uuaay- a '-yuu-k 'I see the basket Bonnie
basket Bonnie Pam give+nom-Vaug l-see-asp gave to Pam'

If the referent of the relative clause is restricted by a predicatio which determines that only one of the non-subject nouns in the relative clause can be the referent, then any order of the non-subject nouns is possible.

(128a) mvar kwnho ily-m-uuchash- sh m'iily-k 'The flour you keep
flour basket in- 2-put+nom- sj infested-asp in the basket is
infested'

(128b) kwnho mvar ily-m-uuchash- sh m'iily-k 'The flour you keep
basket flour in- 2-put+nom- sj infested-asp in the basket is
infested'

The main verb in (128) is limited to having a certain class of subjects; mvar 'flour' belongs to this class, but kwnho 'basket' does not.

If there is more than one non-subject noun in the relative

clause which could be the head (i.e., if the referent is not uniquely determined by its role in the main predication), then the head usually (or perhaps necessarily) occurs as the first non-subject NP in the relative clause.

(129) mvar kwnho- ly m-uuchash- sh nyikor-k 'The flour you keep in
flour basket-in 2-put+nom- sj old- asp that basket is old'

(130) kwnho mvar ily-m-uuchash-sh nyikor-k 'The basket you keep
basket flour in- 2-put+nom-sj old- asp the flour in is old'

It is difficult to determine whether the ambiguity one might expect among non-subject NPs in the relative clauses ever in fact arises in Maricopa (as in Diegueno (Gorbet, 1976) and Mojave (Munro, 1976a)). More problematic in Maricopa is a sentence like

(131) 'iipaa sny'ak 'aashuuham-sh puy-k
man woman hit+dist- sj die-asp

(131) can mean 'The woman whom the man beat died' given that the NP's are in straightforward SOV order; it could also mean 'The man whom the woman beat died' with the head of the NP fronted to the head of its clause.

As with kw- marked clauses, it is perfectly possible to have a nominalized relative without any overb head at all, e.g.

(132) 'nym-uuaay- ny- sh hot- k 'What you gave me is good'
2/1-give+nom- dem-sj good-asp

(133) hanmo ts'osh ily-'-uuchash-ly '-chaa-m 'I put it in what
chicken eggs in- 1-put+nom-in 1-put- asp I keep eggs in'

Relative clauses which refer to non-realized events use irrealis nominalized verbs.

(134) sny'ak many m-uuwik- h- ny- a shuupaw-m 'He knows the wo-
woman you 3/2-help+nom-ir-dem-Vaug know-asp man who will help
you'

If the relative clause is negative, it is marked with (w)aly-

and -ma:

- (136) maa waly-'-uuse- ma- ny- a Bonnie nyuuwit-sh
milk neg- l-drink~~nom~~-neg-dem-Vaug Bonnie have+nom-sj

'The milk I didn't drink was Bonnie's'

If an NP is modified by two relative clauses, each is marked appropriately for the kind of relative clause it is, but only the final relative clause is marked with the final nominal demonstrative and case suffixes.

- (137) 'iipaa kw- hmi m-uuyuu- ny- a '-naw- sh
man rel-tall 2-see+nom-dem-Vaug l-friend-sj

'My friend is the tall man that you see'

- (138) 'iipaa '-uuyuu sny'ak kw- tpuy- sh matlyhiir-ly dik-k
man l-see+nom woman rel-kill- sj jail- in lie-asp

'The man I saw who killed the woman is in jail'

If the relative clause is complex and the head is not the subject of the higher relative verb, but is the subject of the lower relative verb, two constructions are possible. In both constructions, the higher verb is nominalized. The lower relative verb can be marked with kw-, as in

- (139) 'iipaa sny'ak kw- tpuy- m '-uuyuu- ny- sh matlyhiir-ly dik-k
man woman rel-kill-DS l-see+nom-dem- sj jail- in lie-asp

'The man I saw kill the woman is in jail'

- (140) 'iipaa 'ny-k- aashham- k '-uu'ish-sh sny-v'aw- i
man l-rel-hit+dist-k l-say+nom-sj dem-stand-Vinc

'The man I said beat me up is standing there'

The alternated construction consists of the lower verb appearing as it would if it were not in a relative clause, as in

- (141) 'iipaa ny- shqam- m m-'uu'ish-sh v- 'uuva- k 'The man you
man 3/l- slap -asp 2-say+nom-sj dem-be=loc-asp said hit you is
here'

(142) 'iipaa vaa- ha i- m '- uu'ish- sh svii va- k sny-va
 man come-ir say-asp l-say+nom- sj dem+at sit-SS dem-sit

'The man who I wanted to come is sitting there'

Non-subject relative clauses are ambiguous with action nominalizations (which refer to some event), in those instances in which the matrix verb does not disambiguate the situation with its own constraints. This third kind of ambiguity has been described before (Munro, 1976a).

(143) harav m-uusish- sh waly-hot- ma- k
 liquor 2-drink+nom-sj neg- good-neg-asp

(143) is ambiguous between 'The liquor you drank is not good' and 'Your liquor drinking is not good; drinking liquor is not good for you'. This ambiguity is not generally much of a problem since most Maricopa verbs are limited as to what kind of arguments they can take. The number of matrix verbs which can take either referential or clausal arguments is not large. Moreover, there are other ways of expressing clausal arguments which are not ambiguous in those case where nominalization would be ambiguous (where the discourse would not clear up the problem). Thus, the second reading of (143) could also be conveyed with a switch-reference marked complement clause:

(144) harav m-sii- m waly-hot-ma- k 'Your drinking liquor is
 liquor 2-drink- m neg-good-neg-asp not good; drinking liquor
 is not good for you'

4.35 Summary. There are a number of ways to modify a noun in Maricopa. Two major types of modification can be observed: (1) nominal; in which the verb which modifies the NP takes nominal marking (demonstrative and case suffixes) and in which the subject of the verb cannot be case-marked; and (2) verbal, in which the verb has verbal marking only (it cannot have demonstrative or case marking) and in which the subject of the verb

must be appropriately case marked. The nominal constructions consist of adjectives, kw- marked clauses and nominalized clauses. The verbal constructions consist of clauses containing switch reference marked verbs and -sha marked verbs.

4.4 Temporal Clauses. This section is devoted to sentences which show temporal relationships both simultaneously and sequential between main and subordinate clauses.

4.41 nya- 'When, While'. As noted in section 2.62, nya- can be prefixed to the verb of a subordinate clause to indicate that it expresses an event which is realized prior to or simultaneous with the event expressed in the main clause, when the subordinate verb is marked with switch reference.

(145) pan nya- m- chew-m '-maa-uum 'When you bake the bread,
bread when-2- make-DS l-eat-inc I'll eat it'

(146) Bonnie-sh naw- a nya- yuu-k mii-uum-sha 'When Bonnie sees
Bonnie-sj friend-Vaug when-see-asp cry-inc-inf her friend, she
will cry'

(147) man-sh 'iipaa-ny- a nya- m- yuu-m 'ayuu rav- k
you-sj man- dem-Vaug when-2- see-DS s.t. hurt-asp

'When you saw the man, he was sick'

(148) ny- yuu-k v- '-yem-k 'When I saw it, I left'
when+ l-see-SS dem-l-go- asp

(Note in (148) that nya- 'when' and ' 'first person subject' can be realized as ny-.)

If the nya- marked clause is subordinate to an imperative and it itself has a second person subject, then the nya- clause can have either ordinary second person marking, as in (149) or imperative marking, as in (149').

(149) 'ayuu-m nya- m-ey- k k- ashvar-k 'Sing while you work'
s.t.- asc when-2-work-SS imp- sing- asp

(149') 'ayuu-m nya- k- ev- k k- ashvar-k 'Sing while you work'
s.t.-asc when-imp-work-SS imp-sing- asp

If the temporal clause expresses an event which is not completed at the time of the event expressed by the main clause, the temporal clause is marked with nya- 'when' and the incompletive suffix -uum (in place of a switch reference suffix), as in

(150) 'iipaa-ny- sh nya- ny- kyaa- uum '-skiny-k 'When the man was
man- dem-sj when-3/1-shoot-inc l-flee-asp going to shoot me,
I ran away'

(151) hanmo nya- m-tspa-uum chshay-a k-tpilysh-k
chicken when- 2-fry- inc fat- Vaug imp-heat- asp

'When you are going to fry chicken, heat the oil'

nya- is also used to mark the condition clause of a simple future or simple present conditional sentence.

(152) posh '-nyhat-sh nya- puy-m '-mii-uum 'If my cat dies, I will
cat l-pet- sj when-die-DS l-cry-inc will cry'

(153) Pam-sh ny- va- s- ii ny- uuvaa- k JP vshaw- k
Pam-sj poss-house-dem-at when-be=loc-SS JP care=for-asp

'If Pam is at home, then she is taking care of JP'

(154) nya- hwet- m nyiihwet-sh duu-m- sha 'If it is red, it must
when-red- DS blood- sj be-asp-inf be blood'

nya- can only be used on conditions which have some possibility of being or coming true. nya- is not used on contrary-to-fact conditions, whether present or past. The condition clause of a contrary-to-fact conditional is marked with the suffix -kis, as discussed in section 2.21. Nya- marked conditioned clauses, like temporal clauses, express events realized prior to or contemporaneous with the events or states conveyed in the main (in this case, consequent) clauses.

If the nya- marked clause is itself complex, the right-most verb of the subordinate structure is always marked with nya-.

- (155) va chew-k ny- viir-k '-tshnyu- k 'When I finished building the house, I painted it'
house make-SS when+1-finish-SS 1-paint-asp
- (156) Heather-sh vaa-h nya- m-'i- m vaa-uum 'Heather will come if you want her to'
Heather-sj come-ir when-2-say-m come-inc

Other verbs in the temporal construction can be marked with nya- as well,

- (157) nyaa puy-k nya- 'ish- m ny-'av-'k '-iiwaa waly-hot- ma- k
I die-SS when-say+du-DS when+1-hear-SS 1-heart neg-good- neg-asp
'When I heard that he died, I was sad'
- (158) nya- m- pam- m nya- m- hvik-k' m-mii-uu 'If you fall twice, you will cry'
when-2-fall- m when- 2- two-SS 2-cry-inc

If the verb of the subordinate clause consists of a lexical verb and an auxiliary, then either the lexical verb and the auxiliary can be marked with nya- or just the auxiliary.

- (159) Pam-sh ny-aashham- ha nya- kwish-m mii-m v- uuvaa- .t- k
Pam-sj 3/1-hit+dist-ir when- habit-DS cry-m dem-be=loc-emp-asp
'When Pam hit me all the time, I cried all the time'
- (160) nya- hchor-m v- nya- yaa-m h'aa hmaly-sh hwaat-'k
when-cold-DS dem-when- go-DS tree leaf-:sj red+pl-asp
'When it was getting cold, the leaves turned red'

Durative temporal clauses usually use the progressive construction (cf. section 3.352), with a locational auxiliary. In this construction, usually only the auxiliary is marked with nya-,

- (161) shmaa-haay-k v- ny- dik-m '-nchen- sh 'ayuu-m uuiiv- k
sleep-yet-SS dem-when+1-lie-DS 1-old=sib-sj s,t,-asc work+pl-asp
'While I was still asleep, my brothers were working'

It is possible to mark both the lexical verb and the auxiliary with the nya- prefix.

(162) va- ny- a ny- chew-haay-k ny- uuvaa- k Heather
 house-dem-Vaug when+l-make-yet-SS when+l-be=loc-SS Heather

ny- va- ly '-nyvay- k
 poss-house- in l-live=at-asp

'While I was building my house, I lived at Heather's house'

4.42: 'While'. Another way to express a durative temporal clause is with the suffix -haay-ly, consisting of the nonfinal suffix -haay- 'yet, still' and the locative suffix -ly 'in, into' (cf. section 1.235)). -haay-ly can be suffixed directly to the lexical verb or to a locational auxiliary.

(163) '-ntqor- haay-ly yii shkuuly '-ayaa- k 'When we were small,
 l-small+pl-yet- in rock climbpl l-go+pl-asp we went to climb a
 mountain'

(164) nyaa ny- yuu-k '-uuvaa-haay- ly m-kwnyminy- k
 I l/2- see-SS l-be=loc-yet- in 2-different-asp

'As I was looking at you, you changed'

(165) m-nak-k m-uuvaa-!haay-ly dany nym- k- ev- k
 2-sit-SS 2-be=loc-yet- in dem dem+asc+imp-work-asp

'While you are sitting there, work on this'

(166) '-ashvar-haay-ly '-nchen- sh iima- k 'When I sang, my brother
 l-sing- yet- in l-old=sib-sj dance-asp started to dance'

(167) '-ashvar-haay-k v- uuvaa- haay-ly '-nchen- sh iima- k
 l-sing- yet-SS dem-be=loc-yet- in l-old=sib-sj dance-asp

'While I was still singing, my brother danced'

The event or state expressed by the subordinate clause is durative and extends over the time in which the action or state expressed by the main clause occurs, with the event or state expressed by the subordinate clause extending over a longer period of time than the event expressed in the main clause. This explains the inceptive reading in the main clause in (166), where no inceptive morphology or construction is used.

4.43 'Before'. Like 'while', 'before' clauses also use -haay-⁹. The clauses expressing the action or state subsequent to that expressed in the main clause is negated and suffixed with -haay-ly:

- (168) man-sh aly-m-akoy- m- haay-ly k- ar'oy-k 'Before you get
 you-sj neg-2-old=fem-neg-yet-in imp-play- asp old, play!'
- (169) aly-m-yem- m- haay-ly ny- yuu-ksh 'Before you left, I saw
 neg-2-go-neg- yet- in 1/2- see-lprf you'
- (170) waly-'-va- m- haay-ly 'ayuu '-maa-uum 'I'll eat before I come'
 neg- 1-come-neg-yet-in s,t. 1-eat-inc
- (171) waly-m-yaa-m- haay-ly kwnho ny- poov-uum 'Before you go, I'll
 neg- w-go-neg- yet- in basket.1/2-weave-inc make you a basket'

A literal interpretation of this construction would be 'While event A has not yet occurred, event B occurred'. This use of -haay-ly seems to include the literal sense of -haay-,¹⁰

4.44 -hpuk- 'First'. Another way to express sequential actions is with the non-final suffix -hpuk- (cf. section 2.35). The verb of the temporally prior clause is marked with -hpuk-. The second (main) clause often contains the word nyshmayk 'later'. The temporally prior clause is to the left of the main clause and is marked with switch reference with respect to the main clause.

- (172) Pam-sh 'ayuu-m ey- hpuk-k nyshmayk 'ayuu maa-m
 Pam-sj s.t.-asc work- first-SS later s,t. eat-asp

'After Pam ate, she worked'

- (173) Pam-sh 'ayuu-m ey- hpuk-m Allen-sh nyshmayk 'ayuu maa-m
 Pam-sj s,t.-asc work-first-DS Allen-sj later s,t. eat-asp

'After Pam worked, Allen ate; (lit.) First Pam worked, then Allen ate'

- (174) mash k- ma- hpuk- k v- k- yem-k 'Eat first, then go'
 food imp-eat-first-SS dem-imp-go- asp

4.45 -nyk 'Prior to'. -nyk (which varies with -ingk; cf, section 0.3) can be suffixed to a verb to mean that the action expressed by the verb occurred prior to the action expressed in the main clause,

4.451 If no other event is expressed in the clause, the the -nyk-marked verb must be followed by duu-m 'be'. In these simple sentences, the reading is that the action or state occurred in the past, but is not still occurring.

(175) hatcha '-sii-nyk l-duu-m 'I used to drink wine'
 wine l-drink-prior l-be-asp

(176) m-iima- k s- m-uuvaa-ingk m-duu-m 'You have been dancing'
 2-dance-SS dem-2-be=loc-prior 2-be-asp

(177) 'iipaa-ny- sh humar-ingk duu-m 'The man used to be young'
 man- dem-sj young--prior be-asp

4.452 In complex sentence -nyk is used to mark the verb of a clause which expresses a temporally prior action. This can include simple priority, but it usually entails some kind of contrast between the state of affairs expressed in one clause and that expressed in the other. Usually, the main clause expresses a new state or action which has displaced the state or event expressed in the -nyk clause,

(178) Lynn-sh h'aa kuly-ingk taqs-k chen- k
 Lynn-sj tree climb-prior jump-SS descend-asp

'Lynn jumped out of the tree'

(179) qwaqt-ny-a l-iiy-'-t'or-nyk mat-k ny- ap- k
 horse-dem-Vaug on- l-ride-prior lland-loc 3/l-throw-asp

I tried to ride the horse, but he threw me'

(180) Pam-sh vaa- uum duu-nyk 'ayuu-m ev yaa-t- k
 Pam-sj come-inc be- prior s,t,-asc work go-emp-asp

'Pam was going to come but she went to work'

(Note that in (180) the prior action is a mere intent, as marked by the incomplete suffix on the main verb of the subordinate clause,)

4.453 -nyk is often used to mark a clause which expresses an event which is terminated by the event expressed by the main clause or which is replaced by the main clause.

(181) 'ashvar-k 'uuva- ingk 'nyay- sh vaa- k
 1-sing- SS 1-be=loc-prior 1-father-sj come-asp

'I sang until my father came'

(182) vany kusede-sh duu-nyk vakpaaly yem-k 'That one was a doc-
 dem doctor-sj be-prior Phoenix go- asp tor until he went
 to Phoenix'

(183) nyaa mshdii-nyk nya- m-vaa- m hot- k 'I was afraid until
 I afraid-prior when-2-come-DS good-asp you came, then it
 was ok'

(184) 'ayuu-m '-ev- k '-uuvaa-nyk nya- m-vaa- m '-nmak- ha
 s.t-asc 1-work-SS 1-be=loc-prior when-2-come-DS 1-leave-ir
 'I'll work until you come, then I'll quit'

'Until' in English, like -nyk in Maricopa, is used only when one event or state is displaced by another. This contrast in Maricopa extends over a range of relationships which in English are conveyed by 'but' (as in (179) and (180)) and 'used to be' (as in (175) and (177)). Even in the simple sentences a contrast is implied with the present state of affairs. The translation of (178) makes no explicit contrast; however, the climbing which is prerequisite to the jumping is also displaced by it.

4.46 'Since'. 'Since' clauses are expressed in a number of ways involving forms of the verb man-k 'to arise'. The 'since' clauses is expressed as a locative (typically -ii-marked) argument, and the main clause

follows this entire construction. The 'since' clause can be nominalized or switch reference marked (which can be marked with the temporal prefix nya- 'when'),

(185) nyip 'n'ay 'vee tuupoy-s-ii man- k '-hlykuy-k
me l-father mouse kill+nom-dem-at arise-k l-happy- asp

'I have been happy since my father killed the mouse'

(186) ma '-sii- m nyii- man- k '-iito- v- sh rav- k
milk l-drink-m dem+at-arise- k l-stomach-dem-sj hurt-asp

'I have had a stomachache since I drank the milk'

(187) m-uuyaash- s- ii man- k 'ayuu '-rav- k 'I have been sick
2-go+nom-dem- at arise- k s.t. l-hurt-asp since you left'

man-k 'arise' can as in the examples above be marked with -k.

If, as in (186) or (189) below, the 'since' clause is switch reference marked, the locative (-ii, usually) case marking can be cliticized to the verb or affixed to a resumptive pronoun.

man-k 'arise' can also be marked with -m, without any noticeable difference in meaning.

(188) '-uuvaa- s- ii man- m 'ayuu-m m-ev- k 'You have been
l-come-nom-dem-at arise-m s.t.-asc 2-work-asp working since I
got here'

(189) Pam-sh v- nya- yem-m asii man- m 'ayuu '-rav- k
Pam-sj dem-when- go- m dem+at arise-m s.t. l-hurt-asp

'I have been sick since Pam left'

man-k 'arise' is never marked with any pronominal prefix; it appears to be impersonal in these sentences. The semantic subject of man-k would probably be the main clause of these sentences, as (185) might then be semantically 'My happiness arises at my father's killing the mouse'. However, it is clear that this paraphrase cannot represent the syntactic structure of this sentence. In cases in which the

semantic subject of a verb is clausal and follows its verb, the semantic main verb is marked with switch reference with respect to the following clause (which means it is always marked with -m 'different subject' (cf. section 4.223)). This appears to be a rather special construction in that it allows the man 'arise' to be marked with either -k or -m without that alternation reflecting any change in the syntactic organization of the sentence.

This construction can be used with other nominal elements as the 'since'-time. Ordinary nominal elements can be marked with -k 'locative' in place of -ii 'at',

- (190) kw-tnyam-s- k man- k dii '-wa- k 'I have been sitting
 rel-dark- dem-loc arise-k dem+st-l-sit-asp here since last
 night'

Nominalized clauses can also be marked with the general locative-directional suffix -k:

- (191) ny-uuyuu- s- k man- k 'ayuu '-rav- ly-skiit-k
 1/2-see+nom-dem-loc-arise-k s.t. 1-hurt-in-still-SS

vny-'-uuvaa-'haay-ksh
 dem-l-be=loc-yet- lprf

'I have been sick since I saw you'

'Since' clauses can also be constructed using the derived causative of man-k , chman-k 'make arise, raise'.

- (192) Bonnie-sh elsav- m k shman-k 'ayuu-m ev- k
 Bonnie-sj Saturday- asc loc- raise-k s.t.-asc work-asp

'Bonnie has been working since Saturday'

- (193) m-nchen- sh m-aashham- m as-k chman- k m-mii-m
 2-old=sib-sj 3/2-hit+dist-DS dem-loc raise- k 2-cry-asp

You have been crying since your sister hit you'

4.47 Summary. This exhausts the set of constructions which are specifically related to expressing temporal relations between two (or more) clauses. Simultaneous or sequential events can also be expressed in two juxtaposed clauses, the first marked with switch reference. Such a construction does not explicitly express a temporal relationship, though such a relationship (as well as a number of other kinds of semantic relationships) might be inferred from it. If the actions are sequential then the order of clauses in the sentence must reflect the temporal order of the events.

(194) Pam-sh ashvar-k iima-'k 'Pam sang and (then) danced'
 Pam-sj sing- SS dance-asp

4.5 Reason Clauses. The constructions presented in this section all contain a subordinate clause which gives the reason for the event or state expressed in the main clause. All the structures discussed in this section involve the switch reference system, some use the demonstrative system, and some involve use of existentials.

4.51 Switch Reference. Causally related clauses can be expressed by just linking them with switch reference marking on the first clause (the 'because' clause).

(195) da-sh ma- m '-maa-uum 'I'll eat it because it is ripe'
 dem-sj ripe-DS l-eat-inc'

(196) Bonnie-sh waly-hot- ma- m Pam-sh '-ashkyet- k
 Bonnie-sj neg- good-neg-DS Pam-sj l-cut+dist-asp

'Pam_i whipped Bonnie_j because she_i is bad'

(197) Pam-sh iiwa hot- k ashvar-k 'Pam is singing because she
 Pam-sj heart good-SS sing- asp she is happy'

These data suggest a loose relationship syntactically from which the

semantic relationship can be inferred (since the order of clauses reflects the real world temporal order of the events they express). However, clauses which are causally related have syntactic properties not found in simple conjunction. Like other switch reference marked subordinate clauses in Maricopa 'because' clauses can be center-embedded.

(198) sny'ak-v- sh pily-m puy-k 'That woman died from the heat;
 woman-dem- sj hot-DS die-asp (lit) That woman dies because it
 was hot'

(199) 'iipaa-ny- sh sny'ak-sh '-duu-m aly-ny- mhan-ma- k
 man -dem-sj woman- sj l-be- m neg-3/1-like-neg-asp

'That man doesn't like me because I am a woman'

(200) 'iipaa-ny- sh '-mii-m 'uuvaa- m ny- mshray-m
 man- dem-sj l-cry-m l-be=loc-DS 3/1-angry-asp

'That man is mad at me because I was crying'

Unlike other subordinate clauses marked with switch reference (or for that matter any syntactically subordinate clauses) 'because' clauses can be post-posed with the switch reference intact. These are the only cases in Maricopa in which the switch reference on the final verb refers back to the main verb. Thus, any postposed switch reference marked clause can only be interpreted as having a causal relationship to the main clause.

(201) nchen- sh wik- k v- uuvaa- t- 'k 'ayuu aly-we-ha-lyvii- ma-m
 old=sib-sj help-SS dem-be=loc-emp-SS s,t, neg-do-ir-be=like-neg-asp

'His sister helps him because he can't do anything'

(202) nyaa nyip '- ny- va- ny- a hmaaly-a ' tshnyu-ki sya . . .
 I me l-poss-house-dem-Vaug white-Vaug paint-SS house

nya-sh hayshuu-m
 dem-sj blue- DS

'I painted my house white because that house is blue'

It is clear from the different subject marking found on the final verbs of (201) and (202) that the final clause is subordinate. Another clue that the clauses are transposed is that the order of the clauses does not follow the temporal order of the events they express.

4.52 Switch Reference, Existential Verbs and Demonstratives

4.521. Aside from switch reference marking, sentences can be overtly marked to show that they contain a reason clause. The most elaborate way to express this relationship between the 'because' clause and the main clause is to follow the switch reference marked verb of the 'because' clause with a demonstrative pronoun followed by an existential verb which has as its subject the subject of the main clause followed by the main clause. The demonstrative is usually anaphoric (aany or prefix ny-) and case marked with either the associative suffix -m or the general locative -directional suffix -k. The existential verb is selected by the same features which determine the existential auxiliary (cf. section 3.252); the main verb of the sentence determines the choice of existential in this construction.

(203) nyaa '-iihot-k aany-m wii-m ny- wik- t- k 'I helped you be-
I 1-nice-SS dem-asc do-m 1/2-help-emp-asp cause I am nice'

(204) 'ayuu '-rav- k aany-m '-duu-m yoq- k 'I threw up because I
s.t. 1-hurt-SS dem-asc 1-be- m vomit-asp was sick'

(205) mha-sh kchiiv- m aany-m m-duu-m mat m-var-ik
boys-sj come+pl-DS dem-asc 2-be- m rel 2-fail-asp

'You are tired because the boys came'

(206) '-nchen- sh ny-chshqam- m aany-m 'ii-m '-mii-m
1-old-sib-sj 3/1-slap+dist-DS dem-asc say-m 1-cry-asp

'I cried because my brother slapped me'

(207) JP-sh anoq- haay-m aany-m wi-m ntay-sh tr'uy- haay-k
 JP-sj small-yet- DS dem-asc do-m mother-sj care=for-yet- asp

'Because JP is still young, his mother takes care of him'

-m 'associative' can be used on a nominal argument to express the reason for which something is done, 'as in

(208) shyaal-m '-iima- k 'I dance for money'
 money- asc l-dance-asp

-k 'locative-directional' can also be used on the demonstrative in this construction:

(209) JP-sh anoq- haay-k aany-k duu-m mat aly-tr'uy- m- haay-k
 JP-sj small-yet-SS dem-loc be- m ref neg-care=for-neg- yet-asp

'Because JP is little, he can't take care of himself'

(210) JP-sh anoq- haay-k aang-k wii-m mat aly-tr'uy- m- haay-k
 JP-sj small- yet-SS dem-loc do- m ref neg-care=for-neg-yet-asp

'Because JP is little, he can't take care of himself'

(211) JP-sh anoq- haay-m aang-k duu-m ntay- sh tr'uy- haay-k
 JP-sj small-yet- DS dem-loc be- m mother-sj care=for-yet-asp

'Because JP is little, his mother takes care of him'

-k 'locative-directional' is used on nouns with the verb wom-k 'be on account of' to express that the nouns convey the reason for some action. Thus, both -k and -m are reasonable as case markers in a causal construction. A literal paraphrase for (203), then, might be 'I am nice on account of this I do it I help you,' As with the 'since' temporal clauses a demonstrative element is used to refer back to an entire clause,

These sentences can also occur the the existential duu-m 'be' reduced and cliticized to the following -k marked demonstrative,

(212) sper- m aang-k- uu-m va chew-k e-shaa 'She can build a
 strong-m dem-loc-be-m house make-asp-inf house because she
 is strong'

(212) hmii-k dang-k- duu-m daw- uum 'He is tall enough to take it'
 tall-SS dem-loc-be- m take-inc

4.522 An alternative way to express this kind of causal relation is to use the same construction without the existential verb. In these sentences the case marker on the demonstrative is always -m 'associative':

(213) pily-m aany-m '-hlyshuush-k 'I am sweating because it is
 hot-DS dem-asc l-sweat- asp hot'

(214) Pam-sh waly-hot- ma- k aany-m Bonnie tshqam- t- k wi-m
 Pam-sj neg- good-neg-SS dem-asc Bonnie slap- emp-SS do-asp
 'Pam_i slapped Bonnie because she_i is bad'

(215) '-nchen- sh ny- chshqam- m aany-m '-mii-m
 l-old=sib- sj 3/l-slap+dist-DS dem- asc l-cry-asp
 'I cried because my older brother hit me'

4.523 Still another way to express this kind of causal relationship is to use the same construction without the demonstrative pronoun, but with the existential verb.

(216) 'ayuu '-rav- k duu-m '-ny- va- k '-dik-t- k
 s.t. l-hurt-SS be- m l-poss-house-loc l-lie-emp-asp
 'I stayed home because I was sick'

(217) ny- aahamsh-m duu-m '-mii-m 'I cried because they hit me'
 3/l-hit+du-DS be- m l-cry-asp

(218) '-iiwaa chot- m 'ii- m '-ashvar-k 'I sang because I was hap-
 l-heart good-DS say- m l-sing- asp py'

(219) kwnho m-mhan-m '-wi-m '-chew-k 'I made you a basket because
 basket 2-like-DS l-do-m l-make-asp you wanted one'

3.524 Sentences can occur without any overt causal clause at all, but with the demonstrative pronoun and the existential verb. These sentences are identical to those found in section 4.521 without the initial clause. They are used to express a causal relationship to something already in the discourse.

(220) aany-m duu-m 'ayuu rav- t- k 'That is why he is sick'
 dem-asc be- m-s.t. hurt-emp-asp

(221) aany-m 'i-m mii-m 'That is why he cried'
 dem-asc say-m cry-asp

4.6 Clausal Conjunction. Clauses can be conjoined in Maricopa by simply juxtaposing the two clauses and marking the first clause with appropriate switch reference. Clauses can also be conjoined using a more complex construction involving the existential verbs.

4.6.1 Juxtaposition of Clauses. The simplest way to conjoin clauses is to juxtapose the clauses and mark each clause with the switch reference suffix appropriate to the clause immediately following it and to mark the final verb in the sequence with the aspect or modality marking appropriate to the entire sentence. (This, of course, applies only to -k verbs, since -m verbs do not participate in switch reference marking.) This structure is used to convey that the events were simultaneous, consecutive in the order given or that the order of the events is irrelevant or unknown.

(222) kafe sish- k pastel mash- k 'They-2 drank coffee and
 coffee drink+du-SS pie eat+du-asp ate pie'

(223) kafe sish- m pastel mash- k 'They-2_i drank coffee and
 coffee drink+du-DS pie eat+du-asp they-2_j ate pie'

(224) k-nyaa-k k- yuu-k 'Go and see'
 imp- go-SS imp- see-asp

(225) vii- sh '-nykwii:taav-k tpuy-sh 'A rock hit my uncle and
 rock-sj l-uncle pelt-SS kill-prf killed him'

(226) nyip '-nykwii:vi- sh taav-m puy-k 'My uncle got hit by a rock
 me l-uncle rock-sj pelt-DS die-asp and died'

Even when the sentences has an irreal aspect, the first clause can be marked with switch reference (the switch reference marker

suggests realization at the time of the other event of the sentence, not actual realization at the time of the speech act).

(227) man-sh m-ashvar-m nyaa '-iima- uum 'You will sing and I will
 you-sj 2-sing- DS I l-dance-inc

(228) nyaa '-ashvar-k '-iima- uum 'I will sing and dance'
 I l-sing- SS l-dance-inc

Also when the first clause is imperative, it is switch reference marked with regard to the following clause, as in

(229) k-taemp-m '-nak-uum 'Move over and I'll sit down'
 imp-move- DS l-sit-inc

(230) k-nak-m '-mash- ha 'Sit down and let's eat!'
 imp-sit-DS l-eat+du-ir

If the clauses are incomplete, then they can both be marked with the incomplete suffix -uum and juxtaposed,

(231) '-iima- uum '-ashvar-uum 'I am going to sing and dance'
 l-dance-inc l-sing- inc

Syntactically, the first clause is subordinate to the second clause. The first clause is marked with switch reference (or with -uum which can also mark dependent clauses, cf. section 4.41). When three clauses are conjoined, the first clause is marked with switch reference with respect to the second clause, not with respect to the final clause.

(232) '-iima- k '-ashvar-m Pam-sh ar'oy-k 'I sang and danced and Pam
 l-dance-SS l-sing- DS Pam-sj play- asp played'

An NP can be topicalized in a clause, even when it does not play the same syntactic role in both clauses, cf. (226) in which the direct object of the first clause is preposed. In section 4, 215 I discussed a modal construction in which an irrealis nominalized clause is the subject of duu-m 'be'. If two clauses are co-ordinate would expect them to be syntactically parallel. More explicitly, if two clauses are

co-ordinate and one is nominalized, then the other clause should be nominalized as well. If on the other hand the first clause is subordinate the second clause it would not be surprising the the first clause does not have to be nominalized.

(233) hanmo '-tspa-k '-uumaav- h- sh duu-m 'We have to fry the chicken
 chicken.l-fry- SS l-eat+pl-ir- sj be-asp ken and eat it'

(234) Pam-sh JP 'ayuu uumay-m Allen JP ha-ly aas'uly-h-sh
 Pam-sj JP s.t. feed-DS Allen JP water-in wash- ir- sj

'Pam is supposed to feed JP and Allen is supposed to wash JP'

Conjunction of clauses, like comitative conjunction of NPs, is, therefore, asymmetrical.

4.62 Existential Verbs in Conjunction. Another way to conjoin two clauses is to juxtapose them and subordinate them to anyi-marked existential verb.

4.621 In this construction the first clause is marked with switch reference, the existential verb is marked with an appropriate pronominal prefix and with final aspect and modality marking. Typically, this construction is used when the subjects of the conjoined clauses are the same. The subject of the existential verb is the same as the subject of the conjoined clauses. If the two clauses have the same subject, it is not problematic to determine the subject of the existential verb. The selection of the existential is determined by the same features of lexical verbs discussed when auxiliaries were presented in section 3.252. If the verbs in the conjoined clauses do not share the same features, then duu-m is used as the existential. The existential verb can mark the number of the subject of the lexical verbs, as well as marking its person.

- (235) chap- k sshay-k nyi-duu-m 'He is short and fat'
short-SS fat- SS nyi-be- asp
- (236) mhay-sh m-e'e- v- a shash-k ny-shkyew-k nyi-wi-m
boy- sj 2-hair-dem-Vaug pull- SS 3/1-bite- SS nyi-do-asp
'The boy pulled your hair and bit me'
- (237) '-kwarkwar-k '-ashuuvar-k nyi-'-uu'ish-k 'We talked and sang'
1-talk+pl- SS 1-sing+pl- SS nyi-l-say+pl-asp
- (238) mathay-k piily-k nyi-'i- m 'It is windy and hot'
windy- SS hot- SS nyi-say-asp
- (239) k- ashvar-k k- iima- k nyi-k- duu-m 'Sing and dance!'
imp- sing- SS imp-dance-SS nyi-imp-be- asp

4.622 The existential verb is marked to express the aspect of the entire sentence. If the sentence is incomplete in aspect, then all the verbs can be marked with -uum.

- (240) '-ashvar-k '-iima- k nyi-'-duush-ha 'Let's sing and dance'
1-sing- SS 1-dance-SS nyi-l-be+du-ir
- (241) '-ashvar-k '-iima- k nyi-'-duu-uum 'I will sing and dance'
1-sing- SS 1-dance-SS nyi-l-be- inc
- (242) '-ashvar-uum '-iima- uum nyi-'-duu-uum 'I will sing and dance'
1-sing- inc 1-dance-inc nyi-l-be- inc

4.623 The structure using an existential verb can also be used to conjoin clauses with different subjects. If the subjects differ, then the existential is marked as having the subject of both of them, in the sense of: 'you' + 'I' = 'we'
'he' + 'I' = 'we'
'you' + 'he' = 'you'

- (243) nyaa '-ashvar-m Pam-sh iima- k nyi-'-duu-m 'I sang and Pam
I 1-sing- DS Pam-sj dance-SS nyi-l-be-asp danced'
- (244) nyaa ny-'-wik- m man-sh 'nym-wik- k nyi-'-wish- k
I 1/2-help-DS you-sj 2/1- help-SS nyi-l-do+du-asp
'I helped you and you helped me'

4.624 As noted in section 2.221, when two clauses are juxtaposed such that one clause has a subject which includes the subject of the other clause, the first clause can be marked as having either the same subject as or a different subject from that of the following verb. In this existential conjunction construction, as in the nominal conjunction construction using uudav-k 'be with', the switch reference marking on the verb immediately before the existential verb is syntactically fixed--the verb must be marked with the same subject suffix, if the verb is one which participates in switch reference. This is true even in cases like (243) and (244) above in which the second lexical verb has a subject different from the one marked on the existential verb.

It is also possible for both clauses to be marked with -k when two clauses with different subjects are conjoined in this way:

(245) nyaa ny- wik- k man-sh 'nym- wik- k nyi- '-wish- k
 I 1/2-help-SS you-sj 2/1- help-SS nyi- l-do+du-asp

'I helped you and you helped me'

(246) nyaa '-ashvar-k Pam-sh iima- k nyi- '-duu-m 'I sang and Pam
 I 1-sing- SS Pam-sj dance-SS nyi-l-be -asp danced'

(247) Pam-sh va chew-k nyaa va '-chew-k nyi- '-wii-m
 Pam-sj house make-SS I house l-make-SS nyi-l-do-asp

'Pam built a house and I built a house'

There are two possible analyses explaining the presence of -k on the verb of the first clause: one, that this -k is the realis aspect marking -k and the verb is independently marked for aspect (as in (242)); and two, that this is the same subject suffix.

One argument against the first hypothesis is that there are sentences of this type in which the aspect of the entire sentence is not neutral realis:

(248) Pam-sh ny- yuu-k Heather-sh ny- yuu-k nyi-duu-sh
Pam-sj 3/l-see-SS Heather-sj 3/l-see-SS nyi -be-prf

'Pam saw me and Heather saw me'

(249) Pam-sh ashvar-k Heather-sh iima- k nyi-duu-uum
Pam-sj sing- SS Heather-sj dance-SS nyi-be- inc

'Pam will sing and Heather will dance'

Another argument is that no place else is -k used as an aspect marker on subordinate verbs.

The second analysis has one immediate problem--the subjects of the two conjoined clauses are not the same, so why mark the first clause with the same subject marker? There is an explanation for the variation between -k and -m in this construction which is parallel to that given for structures already discussed in section 2.221. The first verb is marked for switch reference not with respect to the second verb, but with respect to the existential verb. Since the existential verb has a subject which includes the subject of the first verb, the first verb could be marked with either the same or the different subject suffix. This construction is only possible if the existential verb is the highest verb in the sentence syntactically. This suggests that this construction has as its highest verb and existential verb whose form is apparently determined by the features of the verbs subordinate to it, a rather unusual situation.¹¹

4.625 When clauses whose main verbs are existential are conjoined, then the existential verbs (if the same) must be omitted and only the conjoined existential is used:

(250) many sny'ak-sh kwsede-sh nyi-m-duu-m 'You are a doctor and
you woman-sj doctor-sj nyi-2-be- asp

This results in a construction which, in effect, can be used to conjoin NP's, as in

(251) 'iipaa-ny- sh nyave-ny- sh vchii-ny- sh nyi-duu-m/ny-uuduush-k
 man- dem-sj wife- dem-sj daughter-dem-sj nyi-be -m nyi-be+pl- SS
 vakpaaly ayem- k
 Phoenix go+pl-asp

'That man, his wife and his daughter went to Phoenix'

4.626 Accepting the the existential is the highest verb in the sentence in the cases of clausal conjunction, we are still left with two alternate analyses. In one, the first clause is always marked for switch reference with respect to the existential verb. In the other analysis, the switch reference on the first verb is marked either with respect to the djoining clause or with respect to the main verb in the sentence. Both analyses are possible depending on the internal structure of the sentence type. The examination of more data, however, makes the first hypothesis untenable. The nominalized modal construction (cf, section 4.214) plays a crucial role in analyzing the structure of this kind of conjunction. Two irrealis nominalizations of this kind can be conjoined by juxtaposing the two nominalizations (and as discussed in 4.625 the instances of the main verb 'be' can not appear when conjoined by an existential verb).

(252) Pam JP 'ayuu uumay-h- sh Allen JP aas'uly-h- sh nyi-duu-m
 Pam JP s.t. feed-ir- sj Allen JP wash- ir-sj nyi-be- asp

'Pam is supposed to feed JP and Allen is supposed to wash him'

It is possible, however, to conjoin obligation modal clauses using switch reference.

(253) Pam-sh JP 'ayuu uumay-k ha- ly aas'uly-h- sh nyi-duu-m
 Pam-sj JP s.t. feed-SS water-in wash- ir-sj nyi-be- asp

'Pam has to feed and wash JP'

The first clause must be switch reference marked with respect to the second clause, not with respect to the existential verb in this case. If the first clause were not dependent on the second clause, were it marked with switch reference with respect to the final existential verb, it would be impossible for the first clause to have the modal reading. What would impart the modal reading. The existential verb is not marked appropriately to such a modality. Only the second clause is overtly marked as being nominalized.

It is possible for the existential itself to be the irrealis nominalized verb; in this case it is impossible to determine whether the switch reference marking would be with respect to the adjacent verb or the existential verb:

(254) many m- wuuycov-k m- uu'av- k nvi-ado-h-sh 'They should see
 you- 3/1-see+pl-SS 3/1-hear+pl-SS nvi-be-ir-s' and hear you'

The structure of this construction is parallel to other subordination structures discussed in section 2.221 . If two clauses are subordinated to a main verb in the same relationship, then the switch reference of the first clause can be marked with respect to either the second (adjoining, parallel) clause or the clauses to which it is subordinate. In sentences with clauses conjoined just by switch reference, the first clause is subordinate to the second clause (and so on). In these sentences conjoined by switch reference and existential verbs, the first clause is subordinate to the existential verb or to the following verb. This variation in structure accounts for the alternation in switch reference marking and for the facts about the distribution of modality.

4.627 To negate this kind of conjoined sentence, two constructions are possible. Both verbs can be negated and conjoined using a nyi- marked existential verb;

(255) Pam-sh aly-ashvar-ma-k aly-iima- ma- k nyi-duu-m
 Pam-sj neg-sing- neg-SS neg-dance-neg-SS: nyi-be-asp

'Pam didn't sing or dance'

(256) 'ayuu-aly- '- ma- ma- k aly--'shma- ma- k nyi--'duu-m
 s.t.-neg- ;-eat- neg-SS neg-l-sleep-neg-SS nyi-l-be- asp

'I didn't eat or sleep'

Alternatively, both verbs can appear without negative markers followed by a negative existential verb (which cannot have the nyi- prefix):

(257) Pam-sh ashvar-k iima-k aly-do-ma-ak 'Pam didn't sing or dance'
 Pam-sj sing- SS dance-SS neg-be-neg-asp

(258) The nyi- in all these sentences has not been glossed very informatively. The only nyi- (as opposed to ny- or nya-) prefix of which I am aware outside this construction is the plural object prefix (cf. section 2.61). Identifying this prefix as the plural object prefix is semantically attractive since it reflects the concept of plurality which is the essence of conjunction.

In Mojave (cf. Munro, 1976a) there is a similar, though more highly constrained construction. In this construction the auxiliary of the last verb in a sequence of verbs is marked with -v-. In Mojave, this construction is found only when the verbs conjoined would have the same auxiliary and do have the same subject. The v- in Mojave marks that the sentence has undergone conjunction reduction, maintaining only the final existential auxiliary and deleting the existential auxiliary of the non-final verbs (Munro, 1976a). The constraints on the Mojave

8008

construction make this appear to be a perfectly reasonable explanation for these facts.

While in Maricopa the features of the construction are not the same, some aspects of the construction do support such an analysis. In the predicate nominal and the irrealis nominalization modal construction the main verb of the sentence is the sentence final 'be'. When these kinds of sentences are conjoined, however, using a higher existential verb, the existential verb in the subordinate clauses cannot appear.

The problems for this analysis which the Maricopa data raise are that (1) the conjoined verbs are not constrained to being from the same class and, therefore, to having the same existential associated with them; and that (2) the conjoined verbs are not restricted to having the same subject, so neither are their existential auxiliaries; and (3) that the existential verb in this construction must be an independent verb rather than an auxiliary. If the nyi- on the existential verb marks the occurrence of conjunction reduction, then it marks the deletion of non-identical elements--both in choice of existential and in person marking.

In Maricopa, the existential must still synchronically be the highest verb in the sentence to account for the switch reference facts adequately. The existential auxiliaries cannot be deleted on identity with the final auxiliary unless one assumes that all the auxiliaries are duu-m 'be' in those cases where the features of the verbs in the sentence differ. Moreover, the existential left in the sentence cannot be viewed as the auxiliary of the final verb for another reason--it may include the subject of the prior verb without being identical to it (cf. example (245)). Arguably, all the auxiliaries in the sentence

could be deleted on identity with the higher existential verb, In Maricopa. this construction appears to have occurred before the final step of auxiliarization (though after raising since it is person marked) which must lower the existential into the same clause as the lexical verb.

4.63 Summary. Both kinds of conjunction of clauses in Maricopa involve syntactic subordination of the non-final verbs in the sentence. There is no form of co-ordination in which the clauses being conjoined are all syntactically independent. If the clauses being conjoined are just put together and marked with switch reference, the non-final clauses must each be subordinate to the clause to its immediate right. If the existential conjunction construction is used, then the two clauses can be parallel, however both are subordinate to the final existential verb.

4.7 Conclusions. In Maricopa, there are two major subordination strategies: nominal and verbal. The nominal strategies can involve nominalizing the verb and always involve marking the clause with nominal morphology--marking the verb with demonstrative and case suffixes. This nominal strategy can be used for complement clauses, relative clauses, and temporal clauses.

The verbal strategies primarily involve switch reference, which can be used to mark complement clauses, relative clauses, (or rather a restricted kind of nominal modification), temporal clauses and other adverbial clauses and conjoined clauses.

Switch reference marked clauses can bear distinct roles with respect to the main predication which may not be immediately obvious

as a feature of their syntax. Different kinds of switch reference marked clauses are subject to different kinds of syntactic constraints, implying that although their internal structure may be the same, their syntactic roles differ.

Footnotes to Chapter 4

¹ Other complex sentences have been introduced in earlier chapters, of course. In Chapter 2, all of section 2.22 is devoted to the suffixes which appear on subordinate clause verbs. In Chapter 3 a number of the constructions involved subordinate clauses. This chapter, however, is explicitly devoted to analyzing and describing the relationships (syntactic and semantic) between clauses of a single sentence.

² This concept of verbs (clauses) having restricted numbers of arguments is discussed in Munro and Gordon (to appear). P. M. Munro (personal communication) pointed out a similar constraint in Mojave which led me to test for this constraint in Maricopa.

³ wom-k 'be on account of' is derived from the verb wii-m 'do' and a derivational suffix -m (whose semantics I do not at this point understand).

⁴ wey-k which is of course 'do+benefactive' can be replaced by 'ey-k 'say+benefactive' when the action which is benefiting the object is an act of communication, as in

(i) ny-'ey- k '-ashvar-k 'I sang for you'
1/2-say+ben-SS 1-sing- asp

⁵ -ha 'irrealis' does co-occur with the number and causative -sh suffixes.

(ii) kwsede-sh '-duush-ha 'Let's be doctors!'
doctor-sj 1-be+du-ir

(iii) tmnyesh-ha 'Let him sweeten it!'
sweet+cs-ir

⁶ This construction is discussed in detail in section 5.41.

⁷ A cognate construction is used in Tolkapaya Yavapai (Hardy, 1978) to express the same semantic effect. 'Pretend' in Tolkapaya is expressed with a medio-passive form of the verb 'i 'say'. The complement clauses is marked with the suffix -oo.

Ya (iv) pahmi-che nyul yam-oo 'ii-v-k yu-m 'The man pretended to go'
man -sj away go- nom say-mpSS be-inc

⁸ aly'ii 'think' is transparently related to the verb 'ii-m 'say'. Aside from the obvious phonetic similarity, there is more

evidence supporting this relationship. In the same forms in which 'ii 'say' varies with 'e, aly'ii 'think' varies with aly'e. Both aly'ii and 'ii are -m verbs. More importantly the length of the vowel in aly'ii varies just like the vowel in 'ii. Finally, aly'ii, like 'ii 'say', has an aa transitive form (cf. section 3.241) as in

(v) m-nyaly'aam-sh ny-aly'aa- m 'I think you are an Indian'
 2-Indian- sj 1/2-think+tr-asp

(vi) Pam-sh '-uulyesh- k ny-aly'aa- k l-aly'i-sh 'I think Pam
 Pam-sj l-break+cs-k 3/l-think+tr-k l-think-prf

Note that aly'ii 'think', like 'ii 'say', governs a complement which can be marked with the locative suffix -k (cf. sections 2. and 4.242).

⁹Margaret Langdon (personal communication) pointed out that in Diegueno, the separate word haylly is used to mean 'before'.

¹⁰Thompson and Longacre (to appear) demonstrate that negation is associated with 'before' clauses in a number of languages. They note there the Tolkapaya construction which is also cited in (Hardy, 1978; Hardy and Gordon, 1980) which is parallel to the Maricopa construction:

(vii) qwaloyawa ssah- a 'um- t- m nya-ch '-nwir- k '-wu-m
 chicken spoil-ir neg+tem-DS I -sj l-cook-SS l-do-inc

'I cooked the chicken before it spoiled'

Note that the temporal marker on the subordinate clause in Tolkapaya is not cognate to those of the Maricopa temporal clause. The negative structure is different, as well. However, the overall strategy is the same--using a negated temporal (concurrent) clause to indicate sequential action with the main clause set prior in time.

11

It may be the case that in fact the features of the conjunct verbs do not strictly select the existential verb used as the main verb in these sentences. It may be that the main existential verb is selected independently (as in the inferential constructions presented in sections 3.254 and 3.255). Then certain typical relationships could have become fixed, giving the appearance of a grammatically fixed construction.

Chapter 5

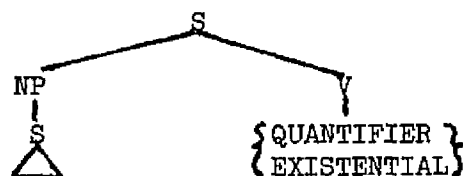
Syntactic Change: Innovation and Grammaticization

5. This chapter is devoted to presenting a large number of Maricopa constructions which are of interest diachronically. These structures include a wide range of modal and auxiliary constructions as well as a number of verbal suffixes and morphemes which have features of both affixes and independent verbs and verbs which have features of both auxiliaries and main verbs. Some of these constructions have been introduced in earlier chapters; this chapter is aimed at presenting their behavior in detail and providing a diachronic explanation for that behavior.

The constructions presented in this chapter illustrate a number of aspects of syntactic change. All these constructions demonstrate in their development changes from forms using general, productive processes toward fixed forms which are no longer internally analyzeable.

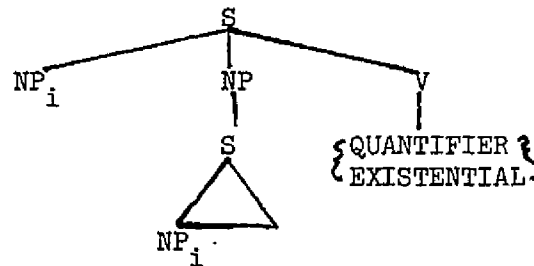
5.1 Synchronic Variation and Syntactic Change. Munro (1976b) proposed an analysis of existential auxiliary constructions and constructions which quantify events in Mojave. This analysis proposed a source construction in which the existential verb or the number verb was the main verb of the sentence, while the lexical verb was a part of the subject clause.

Figure 1: Quantifier/Existential Verb with Clausal Subject--Stage 1



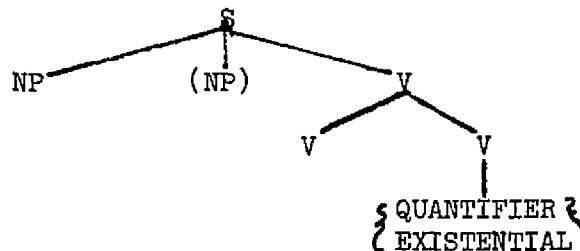
This is followed by a stage in which the subject of the subject clause is copied as the subject of the main verb as well.

Figure 2: Quantifier/Existential Verb with Personal Subject Copied from Clausal Subject--Stage 2



This stage (as represented in figure 2), then, can be followed by a stage at which the lexical predicate is raised--producing a simple sentence with a verb and an auxiliary.

Figure 3: Sentence with Quantifier/Existential Auxiliary



These three stages constitute to historical route Munro (1976b) postulates as the derivation of the existential auxiliary construction in Mojave (cf. Maricopa existential auxiliary construction, section 3.252) and to a greater extent in Yavapai (in which the auxiliary has become what amounts to an invariant affix on the lexical verb).

The reason I recapitulate this analysis here is that sentences expressing quantified events in Maricopa to a much greater extent confirm each stage of this derivation. While in Mojave only one or another of these stages is represented in the different constructions, in Maricopa

the constructions for expressing the quantification of some event show each of these structures synchronically. Each of the possible stages is exemplified, demonstrating that the variation can (and does) exist in a language synchronically.

In Mojave, the only form for this kind of quantified construction is one in which the subject of the verb expressing the event is also the subject of the quantifier verb (cf. figure 2 above).

In Maricopa the situation is more complicated, but also clearer in some ways. It is perfectly possible for the event which is being quantified to be expressed as the syntactic subject of the quantifier verb. The complement clause can be marked with the different subject suffix -m (as other verbs of subject complements are; section 4.22) or the complement clauses can be nominalized and marked with the subject suffix -sh (section 4.21). Either of these constructions corresponds to the tree in figure 1.

- (1) 'nym-aashham- m hmuk- k 'You hit me three times'
 2/1-hit+dist-DS three-asp
- (2) 'nym-aashuham- ny- sh hmuk- k 'You hit me three times'
 2/1-hit+dist+nom-dem-sj three-asp

From a basic structure in which there is a clausal subject, either of the two ways of realizing clausal subjects can be used--switch reference marking (as in (1)) or nominalization and case marking (as in (2)).

These data confirm that the hypothesized underlying structure is a possible structure in Yuman. Further, it validates the semantic argumentation used to postulate the underlying forms in Mojave--the nominalized clauses, in particular, does this since it is explicitly marked for its grammatical role in the main clause.

Another way to express the same meaning is to copy the subject of the subordinate clause as the subject of the quantifier verb. This corresponds to the structure found in figure 2 (and the structure found in Mojave). In Mojave the first verb (lexical verb) has not suffix; in Maricopa the first verb is marked with the same subject marker -k.

(3) 'nym-aashham- k m-hmuk- k
2/1- hit+dist-SS 2-three-asp 'You hit me three times'

(4) '-yoq- k '-hvik-ksh
1-vomit-SS 1-two- lprf 'I threw up twice'

(Note that in (4), the perfective suffix -ksh as well as the pronominal prefix ' marks the verb hvik-k 'be two' as having a first person subject. -ksh as noted in sections 2.215 and 5.4 is restricted to occurring on first person subject verbs.)

(5) yoq- k hmuk- k
vomit-SS three-asp 'He threw up three times'

In Mojave, sentences expressing quantified events do not occur without the subject of the verb expressing the event also serving as the subject of the quantifier. Thus, switch reference marking on the lexical verb in Mojave would be redundant (though, of course, this does not explain why it is not present since other redundant switch reference marking is maintained). In Maricopa, the switch reference marking is not fixed since either the subordinate clause or its subject can serve as the subject of the quantifier verb. Compare (5) in which the subject of the subordinate clause is also the subject of the main verb (as shown by the -k on the first verb) with the following in which the clause is the subject of the main verb (as shown by the -m on the main verb).

(6) yoq- m hmuk- k
vomit-DS three-asp 'He threw up three times'

The next step represented in the Maricopa data is a kind of joining of the two predicates (as in figure 3). The main quantifier verb becomes a kind of auxiliary. The lexical verb is not marked with any suffix. The quantifier is not marked with any pronominal prefix. The quantifier verb is, however, treated for switch reference as though its subject were the subject of the lexical verb. Thus, in (8) the quantifier is marked as having the same subject as the following verb, which is marked as having the same subject as the preceding lexical verb).

- (7) 'nym-aashham hmuk- k
2/1- hit+dist three-asp 'You hit me three times'
- (8) mhaa-ny- sh ashuuvar hvik-k
boys-dem-sj sing+pl two-SS 'The boys sang twice and left'
- v- ayem- k
dem-go+pl-asp

The quantifier in this construction is not an affix on the preceding verb as can be demonstrated by the fact that the quantifier can be marked with the temporal prefix nya- 'when' (which can only be affixed to the beginning of a verb; cf. section 2.62 and 4.41).

- (9) ny-qaas nya- hvik-m
1/2-call when-two- DS 'When I call you two times,
you should come'
- m-va- huudaw-t- sa
2-come- should-emp-adv

The pattern of negation also indicates that the two verbs are separate since the negative proclitic aly- precedes the quantifier, not the lexical verb.

- (10) mkip- sh puy aly-hvik-ma- yuum 'Nobody can die twice'
which-sj die neg-two-neg- inc

On the other hand when the entire sentence is nominalized the lexical verb is in its nominalized form and the demonstrative and case marking

suffixes follow the quantifier verb, suggesting again that the two verbs form a constituent (rather than the quantifier being the higher verb in the sentence).

(11) 'nym-aashuugam hmuk- ny-sh waly-hot- ma- k 'Hitting me three
2/1- hit+dist+nom three-dem-sj neg-good-neg-asp times was wrong'

Two of the quantifier verbs, hvik-k 'be two' and hmuk-k 'be three', can apparently serve as suffixes on the verb. Only the lexical verb is marked for the person of the subject. Nothing can intervene between the two verbs. If the lexical verb is one which participates in the variation in its root vowel before certain suffixes (as discussed in section 2.5), then the stem used in this construction is the one found with the second class of suffixes (e.g., -ha 'irrealis', -hpuk- 'first').

(12) nyip 'nyk- we-hvik-k¹
me imp/1- do-two-asp 'Do it to me twice'

Still another way to convey the same meaning is to mark the first verb with -sh. Person marking in this construction is variable. Either or both of the verbs can be marked with the pronominal prefixes. In this construction, unlike all the others the personal prefix on the quantifier verb can mark not only the subject of the first verb, but its object as well (as in (17)).

Both verbs can be marked with the subject person marker.

(13) man-sh m-iima -sh m-shent-k
you-sj 2-dance- sh 2-one- asp 'You danced one time'

(14) m-wi-sh m-hmuk- k
2-do-sh 2-three- asp 'You did it three times'

Alternatively, only the first person can be person marked, as in

(15) m-wi-sh paaly-k
2-do-sh many- asp 'You did it many times'

The third way is for the first element to be invariant and the quantifier to bear all the person marking.

- (16) wi-sh '-hvik-ksh
do-sh 1-two- lprf 'I did it two times'
- (17) wi-sh 'nyk- hvik-k
do-sh imp/1-two- asp 'Do it to me twice'
- (18) man-sh mi- sh m-shent-k
you-sj cry-sh 2-one- asp 'You cried once'
- (19) wi-sh m-paaly-k
do-sh 2-many- asp 'You did it many times'

The first (lexical) verb is always marked with -sh, which is not the subject marker nor is it the perfective suffix. It cannot be the subject suffix since (1) it is not the subject of the following verb; (2) its own subject is always subject marked (cf. (13) and (18)); and (3) the verb is never otherwise nominalized. It is not the perfective suffix as evidenced by the fact that it is not restricted to referring to realized events (cf. (20)) and, moreover, nowhere else does the perfective suffix appear on non-main verbs.

- (20) m-wi-sh hvik-uum 'Are you going to do it twice?'
2-do-sh two- inc

Another possibility is that this is the number marking -sh, marking in this case plural action. The problem with this analysis is that this form is used even when the main verb is specifically singular shent-k 'be one', as in (13)).

The -sh which this most resembles is the -sh which marks the existential verbs in the inferential construction presented in section 3.255. In this construction an invariant form of the existential verb marked with -sh follows a person marked lexical verb and precedes a person marked form of lyvii-k 'be like' to express that the information

in the sentence is an inference of the speaker.

- (21) 'ayuu m-rav-k duu-sh m-lyvii- k
s.t. 2-hurt-SS be-sh 2-be=like-asp 'You look sick'

This is the only construction in which an unmarked (i.e., without a pronominal prefix) -sh suffixed verb is used.

When this quantifier construction is negated, the first verb is always invariant and the negative morphemes are attached to the quantifier verb.

- (21) iima- sh aly-m-shent-ma- k
dance-sh neg-2-one- neg-asp 'You didn't dance once'

- (22) man-sh mi- sh aly-m-shent-ma -k
you-sj cry-sh neg-2-one- neg-asp 'You didn't cry once'

The full range of structures from fully subordinate clauses as subjects of quantifier verbs to completely auxiliarized elements is represented in the Maricopa system. This system is more extended on both ends of the continuum so that it seems to suffound the more fixed Mojave structure on a continuum of synchronic syntactic complexity.

The range of constructions found in Maricopa confirms the analysis hypothesized by Munro (1976b). This range also suggests that the development of the more opaque Mojave structure had as its source at one time when more constructions were available, when the Mojave system more closely resembled the Maricopa system. In the Maricopa system, the construction has not become fixed; it still reflects a full range of variation from complex sentences through simple sentences with auxiliaries and suffix constructions.

The proposed stages of development from main verb to auxiliary can produce structures which co-exist synchronically, as in Maricopa. The noticeable diachronic change which has occurred between present-day

Mojave and earlier stages of Mojave is not the change from the structure in figure 1 to that in figure 2 in a straight line of development. The change is more likely from a stage which both structures existed as in modern Maricopa. The change consists of the loss of the construction in which the quantified event is expressed as the syntactic subject of the quantifier verb. This is in keeping with a trend toward eliminating non-personal subjects in Mojave. In Mojave, far more than in Maricopa, there is a powerful tendency away from clausal subjects.

5.2 Multiple Analyses. Hankamer (1977) proposed that some synchronic constructions can only be correctly described by saying they have more than one analysis. This multiple analysis can be of two kinds. "Conjunctive multiple analysis" is what produces a construction in which both analyses must be appropriate for each instance of the construction (i.e., the ungrammatical forms are produced withen either analysis would not produce the output; the grammatical forms are only those which both analyses would predict). "Disjunctive multiple analysis" occurs when either of the analyses produces a grammatical form (thus, the grammatical forms are what both analyses would predict and what each of the analyses would predict independently). In both cases, the features of the construction cannot be account for in one analysis and the analyses must "partially overlap in the classes of sentences derived" (Hankamer, 1977: 590)

The constructions to be presented in this section are all fixed forms of the shape V V. The relationship between the elements of these constructions vary between subordinate and main verb; main and auxiliary verb; and verb and suffix. Each of these can be seen as a case of

disjunctive multiple analysis.

5.21 V-ha lyvii. One case of disjunctive multiple analysis involves the -ha lyvii construction. -ha lyvii follows a verb to express that the subject feels like performing the action expressed by that verb or like being in the state expressed by that verb. Yuma has a cognate construction analyzed in Norwood, 1976. She describes -ha-lyvii in Yuma as an enclitic, which "appears only on verbs...It can be suffixed to main verbs and auxiliaries" (Norwood, 1976:79). She notes (Norwood, 1976:80) "Unlike lyvii used as a *mina* verb, -ha-lyvii does not take pronominal prefixes and does not inflect for number." These features are generally true of the Maricopa construction as well, as exemplified in (23)-(26) below. Note that in none of these examples is lyvii marked with a pronominal prefix, nor in (26) where the subject is plural is lyvii marked for number.

- (23) 'iima- ha lyvii- k
1-dance- ir be=like- asp 'I feel like dancing'
- (24) m-shma- ha lyvii- k
2-sleep-ir be=like-Qasp 'Are you sleepy?'
- (25) 'shma- ha lyvii- k
1-sleep-ir be=like-asp 'I am sleepy'
- (26) 'atshmaash-ha lyvii- k
1-sleep+pl- ir be=like-asp 'We are sleepy'

The syntactic structure of this form is by no means transparent. There is evidence which confirms the idea that -ha-lyvii (more particularly lyvii) forms a constituent with the preceding verb. In negation, the clitic typically precedes the verb, while the negative suffix follows the lyvii form.

- (27) aly-'shma- ha lyvi- ma- k
neg-1-sleep- ir be=like-neg-asp 'I am not sleepy'

The facts are not clear-cut, however. When this construction is used in a relative clause whose head is the subject of the relative clause (cf. section 4.341), it is possible for both the lexical verb and the lyvii to be marked with the relative prefix kw- (as in (28)) or for only lyvii to be marked (as in (29)).

(28) 'iipaa ku-shma- ha kw-lyvii- ny- sh yem-sh 'The sleepy man
man rel-sleep- ir rel-be=like-dem-sj go- prf went'

(29) 'iipaa shma- ha kw- lyvii- ny- sh shmaa- 'yuu 'The sleepy man
man sleep- ir rel-bē=like-dem- sj sleep-see=ev went to sleep'

Even the person-marking facts are not clear-cut. While it is true that lyvii is never marked with the ' first person subject prefix or the m second person subject suffix, it is not true to suggest that it never bears markers which reflect that lyvii can have a personal subject which is the same as the subject of the irrealis marked verb which precedes the lyvii. In imperatives lyvii can be marked with the imperative prefix k-. This imperative marking is in keeping with the scope of the command--the addressee is being ordered to feel something, not do something.

(30) man-sh m-shma- ha k- lyvii- k 'Get sleepy!
you-sj 2-sleep-ir imp-be=like-asp

Alternatively, the lexical verb can be marked with the imperative prefix and the lyvii can be unmarked.

(31) man-sh k-shma- ha lyvii- k
you-sj imp-sleep-ir be=like-asp 'Get sleepy!'

It is, however, by no means clear that the lyvii always has the same subject as the lexical verb. In questions, verbs which have second person subjects and which are realis in mood cannot end in \emptyset if they are forms which takes -k in declarative sentences (cf. section 5.33).

When a second person verb is followed by a ha-lyvii, the interrogative form can be signalled by the absence of a final aspect marker (as in (24) and the following).

(32) m-iima- ha lyvii 'Do you feel like dancing?'
 2-dance-ir be=like

If ha-lyvii is just a part of a verb which has a second person subject or if lyvii itself has a second person subject (which is not marked with a pronominal prefix), then it would not be possible for its question form to occur without a final suffix. Compare lyvii in (24) and (32) with the following.

(33) dany m-lyvii -k 'Are you like this?'
 dem 2-be=like-Qasp

(33!)*dany m-lyvii 'Are you like this?'
 dem 2-be=like

When, as in (33), lyvii is a verb with a second person subject and it occurs as the main verb or final verb of a question, then it must be marked with a final suffix.

Only verbs which have second person subjects can occur in questions marked with -k. A possible paraphrase for (32) is

(34) m-iima- ha lyvii- k 'Do you feel like dancing?'
 2-dance-ir be=like-Qasp

In the case of (34), the verb must have a second person subject (whether because the lyvii is an unmarked auxiliary or because it is an affix on the lexical verb cannot be determined from these data).

Similar arguments exist on the basis of the perfective suffixes. As noted in detail in sections 1.132, 2.215 and 5.34, the perfective suffix -ksh only occurs on -k verbs which have first person subjects while -sh occurs on -m verbs and on verbs which do not have first person

subjects. When this construction is marked with a perfective suffix and the first verb has a first person subject, the perfective suffix is regularly -sh (not -ksh which would be expected if the lyvii and the preceding verb had the same subject).

- (35) '-mshray-ha lyvii- sh
l-angry- ir be=like-prf 'I feel angry' .
- (36) 'ayuu '-ma- ha lyvii- sh
s.t. l-eat-ir be=like-prf 'I feel like eating'
- (37) nyaa aly-'-aaham-ha lyvi- ma-sh
I neg-l-hit-' ir be=like-ir-prf 'I don't feel like hitting him'

On the other hand, it is acceptable to mark lyvii with the first person perfective suffix -ksh when the subject of the lexical verb is first person.

- (38) nyaa '-shma- ha lyvii -ksh
I l-sleep-ir be=like-lprf 'I am sleepy'

In some cases, then, lyvii has the same subject as the verb which precedes it while in other cases it does not, for purposes of processes which are sensitive to the subject of the verb. In some ways the two verbs form a constituent (e.g., for negation, relative clause marking) while in others the verbs do not even have the same subject (as can be seen by final suffixes on second person question forms and on first person perfective forms). Another process which is sensitive to the syntactic subject of the verb is switch reference marking.

- (39) ny- shma- ha nya- lyvii -m hshkwaat-k 'When I am sleepy, I
when+l- sleep-ir when-be=like-DS yawn- asp yawn'
- (40) ny- shma- ha lyvii- k hshkwaat-k 'When I am sleepy, I
when+l-sleep-ir be=like-SS yawn- asp yawn'

In (39) lyvii is marked with -m 'different subject' even though the verb which precedes the lyvii and the main verb of the sentence have

the same subject. In (40) lyvii is marked with -k 'same subject' and the verb before lyvii and the main verb have the same subject. In both cases the semantic relationships are the same. In (39), lyvii aside from being marked with the different subject suffix -m is also marked with the temporal prefix nya-, while in (40) it is not. This marking is in keeping with the construction in which lyvii is the higher verb in the subordinate clause. However, this nya- marking is not obligatory when lyvii is marked as having a different subject from its preceding and following verbs.

(41) ny- shma- ha lyvii- m '-hshkwaat-k '
 when+1- sleep-ir be=like-DS 1-yawn- asp 'When I am sleepy, I yawn'

(42) nya- m-shma- ha lvyii- m k- yaa-k k- shmaa-m
 when-2-sleep-ir be=like-DS imp-go-SS imp-sleep-asp

'When you get sleepy, go to sleep'

(43) ny- yoq- ha lyvii- m '-yem-uu 'When I feel like I am
 when+1-vomit-ir be=like-DS 1-go-inc going to vomit, I'll go'

In (41)-(43) each instance of lyvii is marked with the different subject suffix -m even though in each case the subject of the verb preceding the lyvii is the same as the verb following it. This suggests that lyvii does not form a constituent with the preceding verb. On the other hand, in none of the cases in (41)-(43) is lyvii marked with the prefix nya- 'when' which is obligatory on the highest or final verb of the subordinate clause (cf. section 4.41).

It is clear that for purposes of syntactic organization, lyvii can be treated in several ways in this construction. First, lyvii can be a part of the verb which it follows (note the negation in (27)). lyvii can be treated as having the same subject as the verb it follows (note the prefixation in (28) and (30)-(31) and switch reference marking in (37)).

lyvii can also have a different subject from that of the verb it follows (note the switch reference in (39), (41)-(43), the perfective marking in (35)-(37) and the final suffix on the questions in (24) and (32)). Even when lyvii is treated as having a different subject from that of the verb it follows, it is not treated obligatorily as a higher verb, since it is not obligatorily marked with nya- when it is the last element in a temporal clause. lyvii can be an affix, an auxiliary or a higher verb. In most cases, the constructions are indistinguishable since the order of elements and their form is the same.

5.22-v'ar and -ly-skiit: Two other cases of disjunctive multiple analysis involve the morphemes v'ar 'used to' and -ly-skiit 'still'. Both these forms are basically aspectual in nature. They can serve as both auxiliaries and as suffixes. (-ly-skiit, like -ha-lyvii, consists of one element which is clearly a suffix on the lexical verb and one element which is separable.) These two forms can be found serving as auxiliaries or as affixes, but neither is found as a main verb (unlike lyvii).

In both cases (V-v'ar and V-ly-skiit) the evidence is the same. In neither case is the second element ever marked with a pronominal prefix in volunteered data.

(44) m-sper- v'ar- k
 2-strong-used-asp 'You used to be strong'

(45) 'ayuu-m-rav- ly-skiit-k
 s.t.- 2-hurt-in-still-asp 'You are still sick'

In Yuma (cf. Nerwood, 1976) -ly skii- is apparently a part of a regular auxiliary construction, with skii always marked with a subject prefix indicating that it has the same subject as the preceding -ly- marked verb.

Yu (46) m- duu-ly-m- skii- k 'Are you still doing it (acting
 you-act-?- you-still-EV that way)? (Norwood, 1976:80)

(The t I have always heard in the Maricopa construction is probably the emphatic non-final suffix (cf. section 2.31) used in imperfectives.)

The perfective data further supports the idea that v'ar and -ly-
skiit have the same subject as the verb which precedes them, even though they are not marked with any pronominal prefixes.

(47) 'ayuu-'-sii- v'ar-ksh 'I used to drink'
 s.t.- l-drink-used-lprf

(48) '-shay-ly-skiit-ksh 'I am still fat'
 l-fat- in-still-lprf

In second person questions, v'ar or skiit is followed by -k which can, of course, only happen if the verb has a second person subject.

(49) 'ayuu-m-sii- v'ar-k 'Did you use to drink?'
 s.t.-2-drink-used-Qasp

(50) 'ayuu-m-se- ly-skiit-k 'Do you still drink?'
 s.t.-2-drink-in-still-Qasp

None of these constructions effectively distinguishes between auxiliary and suffix constructions, however, Wheat serves to distinguish between these two structures is that auxiliaries as the final verb in the clause must be marked with any prefixes which serve to mark the relationship between a subordinate clause and its main clause. The prefixes in question are the temporal prefix nya- and the relative prefix kw-.

In (51)-(53) below, it appears that the morphemes in question are suffixes.

(51) mhay t'ar uuvaa-k kw-ar'oy-v'ar-ny- sh v- yem-sh
 boy out be=loc-SS rel- play-used-dem-sj dem-go-prf

'The boy who used to play outside went away'

(52) vakpaaly ily-nya- m-v -uuva- v'ar-k 'ayuu-m m-ev- k
 Phoenix in- when-2-dem-be=loc-used-SS s.t.-asc 2-work-Qasp

'When you used to be in Phoenix, did you work?'

- (53) nya- m- ar'oy-ly-skiit-k t'ar k- uuvaa- k
 when-2- play- in-still-SS out rel-be=loc-asp

'While you are still playing, stay outside'

In (54)-(56), v'ar and skiiit are marked with the syntactic pre-
 fixes, indicating that they are separate auxiliaries.

- (54) humar kw- me- ly kw- skiiit-ny- sh cham puy-k
 child rel-cry-in rel-still-dem-sj hunger die-asp

'The baby who is still crying is hungry'

- (55) 'iipaa dii (k-)uuvaa-k 'ayuu-m kw- ev kw- v'ar-ny- sh hmii-k
 man dem+at rel-be=loc-SS s.t.-asc rel-work rel-used-dem-sj tall-asp

'The man who used to work here is tall'

- (56) harav nya- '- se- ly nya- skiiit-k ya- '-kpet- k
 liquor when-1-drink-in when- still-SS mouth-1-block-asp

'When I was still drinking, I was crazy'

Synchronically, therefore, -ly-skiit and v'ar serve as both suf-
 fixes and auxiliaries. Diachronically, -ly-skiit is undoubtedly identi-
 fiable as an auxiliary (compare the Yuma data (Norwood, 1976)), and pro-
 bably so is v'ar. There is a change going on reducing these morphemes
 from auxiliaries to affixes; right now they are both. These data and
 the analysés they suggest indicates that multiple analyses can be the
 result of on-going change. Hankamer (1977) noted that multiple analyses
 produces a situation complex enough and ambiguous enough to be a natural
 candidate for change. However, these examples suggest more than that.
 These data suggest that multiple analyses can be a natural outcome of
 change, in fact, a natural stage of syntactic change.

5.3 Simplification and Reduction. In this section I present a number of
 constructions whose historical development illustrates simplification
 of the grammatical structure and phonological reduction of the elements

of the construction. The kind of simplicity I am referring to is basically what Langacker (1977) called "signal simplicity" and "constructional simplicity". By "signal simplicity" he meant (Langacker, 1977:102-103) "economy in regard to production of the speech signal...Other syntactic aspects of signal simplicity pertain to reduction in status of units from relative independence to relative dependence." "Constructional simplicity" is "reflected syntactically from marked categories to be replaced by relatively unmarked ones; for marked constructions to give way to more commonplace ones; and for the intrinsic complexity of constructions to be reduced" (Langacker, 1977:107). Obviously, phonological reduction typically accompanies a change in the direction of "signal simplicity". These two kinds of simplicity are, together with transparency and perceptual optimality, the interacting pressures on languages in directing change (Langacker, 1977). In the cases I am presenting each move toward simplicity (toward making the individual sentences simpler) results in a more complex system in the sense that from a fund of established elements systematically interacting new elements are formed which no longer participate in a straightforward way in the systems in which the original parts of the construction played a role.

5.31 -uum. One case of "simplification" involves the incompleted suffix -uum. There is a great deal of evidence in Maricopa that the diachronic source of the incompleted suffix -uum is the verb 'be' duu-m (with its m-suffix). This has been suggested for other River languages. Crawford (1976:45) noted "There is substantial evidence from within Mojave, as well as from comparison with other Yuman languages, that /u/ [in some Mojave suffixes including -um 'has to, must', -chum 'emphatic',

-tum 'usitative', etc.] is a contraction or reduction of idú: be."

An existential auxiliary becomes an affix on the verb according to the analysis proposed by Crawford (1976). Langdon (1978a) presented a number of examples from several Yuman languages of reduced forms of a 'be' auxiliary. In Upland Pai (Havsupai, Hualapai, and Yavapai) reduced forms of 'be' play an important role in the verbal system.

In Maricopa as noted in section 2.212, the incompletive suffix -uum is used to mark simple future, hypothetical, contrary-to-fact events, on-going or habitual actions or interrupted states (what Crawford (1976) and Halpern (1947c) refer to as usitative) and uncompleted events.

- | | |
|---|-----------------------------|
| (57) vii- ny- sh naly-uum rock-dem-sj rall-inc | 'The rock is going to fall' |
| (58) nyaa '-iima-uum I l-dance- inc | 'I can, will dance' |
| (59) kwsede-sh duu-uum doctor-sj be-inc | 'He is a doctor' |
| (60) 'ayuu-maa-haay-uum s.t.-eat-yet- inc | 'He just started to eat' |

This suffix is cognate to one of the suffixes suggested by Crawford (1976) to be a reduced form of 'be'. Langdon (1978) criticizing Crawford's 1976 analysis of /u/ as derived from idú: 'be', noted (Langdon, 1978b:121) that "The problem is that while a reduction of yu to -u- or -ə- in suffixed position is phonologically plausible and would account for the facts in most Yuman languages, in the River languages the verb 'be' has the shapes idú: in Mojave and adú: in Yuma [du: in Maricopa], accounted for by the fact that PY *y became d in River in root initial position. The question then is whether the Mojave and Yuma facts can

be accounted for by a similar reduction." She goes on to point out that one of the Yuma suffixes has an alternate that shows y but not d:

Yu (61) cakavar-tiyum 'He always laughs' (Langdon, 1978b:120)
 3=laugh-usitative

Note, however, that the y in this form and in the cognate Maricopa form would be phonologically predicted since both t and nt in Maricopa and in Mojave have alternate forms ti and nti. In Maricopa, however, there are y's which are not phonologically produced, but which are clearly phonemic and are associated with -uum. The combination of the in-completive suffix and the negative suffix is -mayuum (cf. section 2.39) and of the in-completive suffix and the 'along' non-final suffix is -payuum (cf. section 2.33). The expected intervocalic glide in both these cases would be [w]. This y must be accounted for in some other way. Langdon (1978b:121) suggests "Assume that the cliticized forms of the verb 'be' developed before the sound shift, so that they would at that time still have the segment y. If these suffixes were grammaticized enough to lose their force as root elements, the sound shift affecting only root-initial segments, would leave the suffixed form of 'be' unaffected, and subject to the same reduction as in other Yuman languages."

The Maricopa forms of the negative + in-completive suffix and the 'along' + in-completive suffix are suggestive of an earlier 'be' form.² Other data also exists which suggests that the in-completive suffix is a reduced form of the verb duu-m 'be'. In clausal objects which have future reference of the verb shuupaw-m 'know' (as presented in section 4.23), the verb is suffixed with the in-completive suffix -uum and can be optionally followed by an unmarked form of duu-m 'be'

(62) Pam-sh ny-aaham-uum duu-m 'shuupaw-m 'I know that Pam is going
 Pam-sj 3/1-hit-inc be- m 1-know- asp to hit me'

(63) man-sh m-mii-uum duu-m '-shuupaw-m 'I know you will cry'
 you-sj 2-cry-inc be- m l-know- m

Note that the 'be' verb duu-m does not agree in person with the subject of the verb which precedes it (e.g., note that in (63) duu-m is not marked with the second person prefix m-).

It has been postulated (Munro, 1976b) that there was a point in the history of the River languages when subject clauses were subordinated to a higher existential verb. This is hypothesized as the source of the existential auxiliary construction (cf. section 3.252). In the existential auxiliary construction, stative and intransitive verbs have as their auxiliary duu-m 'be'; active transitive verbs have wii-m 'do'; and verbs of communication, verbal behavior and manifestation have 'ii-m 'say'.

In the construction in which a future object clause is subordinated to the verb shuupaw-m 'know', the existential is obligatorily duu-m 'be' and it is not marked for the subject of the lexical verb. A suggested explanation for the construction (Margaret Langdon, p.c.) is that the duu-m 'be' imparts the meaning "it was the case that...", thus the translation for (63) would literally be "I know it is the case that you will cry." The problem with this suggestion is that it does not explain why this unmarked form of 'be' should be restricted to occurring with clausal objects which refer to the future; why should

(64)*man-sh m-mii-m duu-m '-shuupaw-m 'I know it it the case that
 you-sj 2-cry-m be- m l-know- m that you cried'

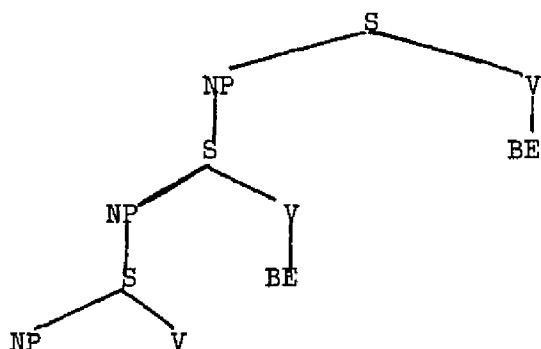
be ungrammatical? Nothing about the structure, if the duu-m is being used as proposed, should be wrong.

An alternate explanation for this distribution is that it is

the affix -uum which is historically a higher verb 'be' which determines the space of the existential in this construction. The 'be' auxiliary does not have any subject prefix because it is an auxiliary to the reduced 'be' verb which itself does not have a personal subject.

The historical source of this construction would be

Figure 4: Source of 'BE' in
future complements



The construction found in (62) and (63) would, therefore, be maintaining an archaic structure in which the incomplete suffix -uum and the auxiliary 'be' have been fixed.

The highest verb of the subject clause would determine the shape of the existential verb which follows it. Thus, duu-m 'be' as the highest verb in the clause would select duu-m 'be' as its existential auxiliary.

The basic form of the Maricopa future in an earlier stage of the language would then be an unmarked verb followed by a form of the verb 'be'. This would make the earlier Maricopa construction more similar to the Mojave simple future, which, according to Munro (1976a: 74), "can be indicated by the absence of any tense marker."

Early in this argument it was noted that the y in the proto-form

is a better candidate for deletion than d (as in the modern River languages). However, in Maricopa, there is synchronic variation between duu and uu in certain fixed constructions.

In questions involving locational verbs either as auxiliaries (cf. section 3.352) or as main verbs (cf. section 3.35), 'be' can be the final auxiliary (with the -m deleted). When the duu immediately follows the locational verb without any person marker intervening, the d can optionally be deleted.

- (65) mkip-sh v'aw-m-uu 'Who is standing there?'
 which-sj stand-m-uu
- (65') mkip-sh v'aw- m duu 'Who is standing there?'
 which- sj stand-m be
- (66) da-sh svii va- k-uu 'Is he sitting there?'
 dem-sj dem+at sit-SS-uu
- (66') da-sh svii va- k duu 'Is he sitting there?'
 dem-sj dem+at sit-SS be

Another place in which duu varies with uu is in a complex modal construction. In this construction, 'be' appears as a complement of 'say' (it is obligatorily marked with -k which is a feature of the main verb of complements of 'say' (cf. sections 2,222 and 4,24)), The verb before duu 'be' is also obligatorily marked with -k which may mean that it too is a complement of 'say'. It can hardly be that the -k is marking 'same subject' with respect to the following 'be' verb since that verb cannot have any pronominal prefixes. Also, this -k marks verbs which do not participate in switch reference,

- (67) ny- yuu-k-duu-k-'e 'Maybe I'll see you'
 1/2-see-k-be- k-say
- (67') ny-yuu-k-uu-k-'e 'Maybe I'll see you'
 1/2-see-k-uu-k-say

(68) '-wii-k-duu-k-'e 'I might do it'
l-do -k-be -k-say

(68') '-wii-k-uu-k-'e 'I might do it'
l-do- k-uu-k-say

The 'say' verb can optionally be marked with the same subject prefix as the lexical verb,

(69) man-sh m-vaa- k-uu-k-(m)-'e 'You might come'
you-sj w-come--k-uu-k-(2)-say

In these two fixed constructions (after location verbs in questions and in 'might/may' modals), Maricopa show optional deletion of the d of duu. Thus, it is not absolutely necessary to postulate that the reduction of 'be' to uum must predate the change from *y to d in root-initial position. However, the phonological shape of the negative suffix and the incompletive suffix, and the 'along' suffix and the incompletive suffix (the presence of the y)² indicates that the reduction may well predate the phonological shift from *y to d. However, the reduction of forms of 'be' is obviously still going in in synchronic Maricopa in limited constructions.

The shift from duu-m 'be' to -uum 'incompletive' demonstrates a change in in the direction of both "signal simplicity" and "constructional simplicity". duu-m 'be' changes from a verb to a dependent suffix; the sentence changes from one which has two verbs (in a complex relationship) to one which has only one verb (and, therefore, is a simple sentence).

5.32 -huu'itsh. Another case of "simplification" concerns the development of the modal -huu'itsh.

The strongest way of expressing necessity or obligation is by suffixing -huu'itsh to the main meaning-bearing verb. In many instances

-huu'itsh is treated as a unitary morpheme synchronically. The internal structure of this affix is not synchronically transparent to speakers.³

(70) man-sh m-se- h- uu'it -sh (duu-m) 'You should drink it'
 you-sj 2-drink-ir-say+nom- sj ' be-asp

Historically, however, this affix can be analyzed into -h 'irrealis' + uu'ish⁴ 'say +nom' + -sh 'subject'. This construction appears to be the nominalized form of the modal construction presented in section 3.233 in which 'should' is expressed by an irrealis-marked verb followed by 'ii-m 'say', as in

(71) uuv'aw-ha 'i- m 'It should rain'
 rain- ir say-asp

This segmentation into h-uu'it-sh can be demonstrated to be accurate in several ways:

(a) Rarely, it is possible to mark the nominalized 'say' form with a person marker signalling the subject of the lexical verb, e.g.

(72) 'ayuu-m m-ey- h m-uu'it- sh (m-duu-m) 'You are supposed to
 s.t.-asc 2-work-ir 2-say+nom-sj

This demonstrates the separability of h and uu'itsh.

(b) This construction can be negated in several ways. Typically, it is negated with the usual verbal negation on 'be' as in (73) or on the lexical verb as in (74).

(73) 'ayuu m-se- h- uu'it- sh aly-do-ma- k 'You shouldn't drink'
 s.t. 2-drink-ir-say+nom-sj neg-be-neg-asp

(74) 'ayuu aly-m-se- m- h- uu'it- sh (duu-m) 'You shouldn't drink'
 s.t. neg-2-drink-neg-ir-say+nom-sj be-asp

It is possible to negate this sentence type using nominal negation of the uu'itsh, 'say+nom', as in (75) below.

This rare form demonstrates that uu'ish is segmentable from the following -sh and that the uu'ish is a nominalized form (since only nominalized verbs and nouns can be negated without the negative proclitic (w)aly-, see section 1.62). This construction looks like a combination of the modal construction presented in section 3.233 with another modal construction (cf. section 4.215) which consists of an irrealis nominalized clause serving as the subject of the verb duu-m 'be', as in

(76) Pam uuwe- h- sh (duu-m) 'Pam is supposed to do it'
 Pam do+nom-ir- sj be-asp

Although the irrealis suffix is used only once in the construction, the basic structure of a nominalized clause which is specifically marked as unreal and predicating it of 'be' to express strong obligation is exactly parallel to the form found in (76).

In the -h-uu'it-sh construction, the subject of the lexical verb is marked with the subject suffix (cf. (70)) unlike the subject of the irrealis nominalized modal clause (as in (76)). The subject of the lexical verb in the -huu'itsh construction is marked with the subject suffix because it is not the subject of a nominalized clause--it is the clause which the lexical verb is subordinate to which is nominalized, not the lexical verb itself. This suggests that the 'say' found in the -ha 'iim construction exemplified in (71) which is the apparent source of the construction is not an auxiliary, but a main verb. Were the 'say' 'ii-m in that form an auxiliary, one would expect the entire clause (including the lexical verb and its subject) to be nominalized, not just the auxiliary.

This construction (-huu'itsh) is already *grammaticized* and it is undergoing further reduction and reanalysis as an integral whole. It

extremely rare for the h-uu'it-sh sequence to be interrupted as in (72) and (75).

It is clear that this construction is well on its way toward complete reanalysis as a non-final suffix as demonstrated in the occasional occurrence of such forms as

(77) piipaa-sh vakpaaly-ly aly-yem-huu'ish-ma- k 'Nobody wants to go
people-sj Phoenix- in neg-go -huu'ish-neg-asp to Phoenix'

In this example, the irrealis suffix and the nominalized 'say' form have combined to form a non-final suffix to the verb yem'go'. It is no longer interpreted as a nominalized form since it can be followed by the neutral realis suffix, which cannot occur on nominalized verbs.

This construction again demonstrates the tendency toward both signal and constructional simplicity. The original construction consists of an irrealis marked complement clause, a nominalized 'say' verb marked with the subject suffix and the main verb duu-m 'be'. The new construction has reduced the nominalized verb to an affix and therefore reduced the complexity of the sentence considerably. The probable next step as exemplified in (77) shows still more reduction of syntactic complexity--not the construction is part of a simple, one-verb sentence,

5.33 -k, -m and \emptyset on Realis Questions. A third example of 'simplification' is the development of the structure of the verb in realis questions.

Questions are distinguished from assertions by rising intonation and by the structure of the verb. Intonation alone can be used to indicate that an utterance is a question, rather than a declarative sentence. However, certain features of the verb also change to indicate whether the utterance is a question or an assertion.

When the question refers to the present or the past (in other words is realis), the verb can be marked in several ways depending on whether the verb is a -k verb or an -m verb (cf. section 2.211) and on what its subject is.

5.331 A realis question with an -m verb provides the simpler construction.

Either -m is suffixed to the verb stem or it is omitted and the verb is left without a final suffix. If -m is not suffixed to the verb, then the shape of the interrogative verb is conditioned by the shape of the verb stem. If the verb stem is vowel final, then nothing is added to the verb.

(78) m-mii 'Did you cry?'
2-cry

If the verb stem is consonant final then a vocalic increment, -ii, is added to the verb.

(79) m-nmak- ii 'Did you leave it?'
2-leave-Qaug

As noted, -m verbs can also be found in questions marked with -m.

(80) m-mii-m 'Did you cry?'
2-cry-Qasp

(81) m-nmak- m 'Did you leave it?'
2-leave-Qasp

If there is a meaning or usage difference between (79) and (81), for example, I have been unable to determine what it may be.

The distribution of \emptyset and -m on -m verbs is not determined by the subject of the sentence.

(82a) 'ayuu '-maa-m 'Did I eat something?'
s.t. 1-eat-Qasp

(82b) 'ayuu '-maa 'Did I eat something?'
s.t. 1-eat

- (83a) 'ayuu m-maa-m 'Did you eat something?'
 s.t. w-eat-Qasp
- (83b) 'ayuu m-maa 'Did you eat something?'
 s.t. 2-eat
- (84a) Pam-sh 'ayuu maa-m 'Did Pam eat something?'
 Pam-sj s.t. eat-Qasp
- (84b) Pam-sh 'ayuu maa 'Did Pam eat something?'
 Pam-sj s.t. eat

5.332. Questions which have a -k verb as the main verb can be marked in several ways. First, marking any -k verb which is the main verb of a sentence with a final -m marks the sentence as a question.

- (85) shay-k 'He is fat'
 fat-asp
- (86) shay-m 'Is he fat?'
 fat-Qasp
- (87) hmii-k 'He is tall'
 tall-asp
- (88) hmii-m 'Is he tall?'
 tall-Qasp

If the subject of the question is not second person (i.e., if it is either first or third person), then the verb of the question can be formed without any final suffix. As with -m verbs, when the stem is vowel final, the verb is left unmarked; when the stem is consonant final, the verb is marked with the vocalic increment -ii.

- (89) hmii 'Is he tall?'
 tall
- (90) naly-ii 'Did it fall?'
 fall-Qaug

If the subject of the question is not second person, the verb can only be marked with -m or \emptyset , but not with -k.

If the subject of the question is second person, the verb can

not be marked with \emptyset . The verb can, however, be marked with either -k or -m.

- (91a) m-yoq- k 'Did you vomit?'
2-vomit-Qasp
- (91b) m-yoq- m 'Did you vomit?'
2-vomit-Qasp
- (91c)*m-yoq- ii 'Did you vomit?'
2-vomit-Qaug

5.333 The same distribution of -k, -m, \emptyset and -ii is found on auxiliaries when they are the final verb in the question.

- (92a) Grace-sh pis ar'oy-k v- uuvaa- m 'Is Grace playing now?'
Grace-sj now play-SS dem-be=loc-Qasp
- (92b) Grace-sh pis ar'oy-k v- uuvaa 'Is Grace playing now?'
Grace-sj now play-SS dem-be=loc

5.334 The same rules apply to the verbs of constituent (wh-) questions as well.

-k verb

- (93a) mki-sh m- aashham- m 'Who hit you?'
who-sj 3/2-hit+dist-Qasp
- (93b) mki-sh m- aashham- ii 'Who hit you?'
who-sj 3/2-hit+dist-Qaug
- (94a) mkiny m- aashham- k 'Whom did you hit?'
whom 2/3-hit+dist-Qasp
- (94b) mkiny m- aashham- m 'Whom did you hit?'
whom 2/3-hit+dist-Qasp

-m verb

- (95a) mki-sh m- kyaa- m 'Who shot you?'
who-sj 2/3-shoot-Qasp
- (95b) mki-sh m- kyaa 'Who shot you?'
who-sj 2/3-shoot
- (96a) mkiny m- kyaa- m 'Whom did you shoot?'
whom 3/2-shoot- Qasp

(96b) mkiny m- kyaa
whom 3/2-shoot

'Whom did you shoot?'

5.335 To summarize, the distribution of -k, -m and \emptyset on the final verbs of questions is

| | for <u>-m</u> verbs | for <u>-k</u> verbs |
|------------|--------------------------|--------------------------|
| 1st person | <u>-m</u> or \emptyset | <u>-m</u> or <u>-k</u> |
| 2nd person | <u>-m</u> or \emptyset | <u>-m</u> or \emptyset |
| 3rd person | <u>-m</u> or \emptyset | <u>-m</u> or <u>-k</u> |

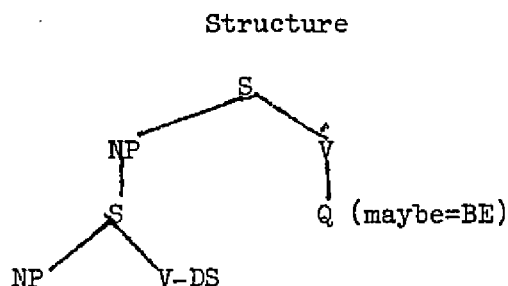
5.336 Any realis verb in any question can be marked with -m, -m on a final -k verb marks the sentence as a question. -m verbs as well can just be marked with -m. However, only second person verbs of questions can be marked with -k. Verbs which do not have second person subjects can be marked with \emptyset if the verb is a -k verb. All -m verbs can be marked with \emptyset . The contrast is, therefore, between \emptyset and -k (since -m is always a possible suffix on verbs of questions).

The contrast between -k and \emptyset is controlled by the person of the subject of the verb and whether the verb is a -k verb or an -m verb. This suggests that -k is serving as a same subject marker since its distribution is controlled by the same features which control switch reference.

If one hypothesized that questions historically had some higher verb to which the lexical verb was subordinate, the distribution of these suffixes becomes somewhat clearer. In one case, the higher verb would have to be impersonal, perhaps duu-m 'be' (meaning something like "Is it the case that,,,"),. In this situation, the lexical verb would always be marked with -m since as the subject clause it cannot have the

have itself as its subject.

Figure 5: Original Question



For the distribution of the other two markers one would have to hypothesize an earlier stage in which the main verb of the sentence was a verb which had a second person subject. This would account for why second person -k verbs could be marked with -k in questions. It would further account for why no other verbs can be marked with -k in questions. This would suggest that \emptyset is associated with 'different subject'. This suggestion finds support in the structure of evidentials (as presented in section 5.4). It is difficult to determine what the main verb of this earlier sentence type might be; however, it must be a verb which takes a second person subject and it cannot be a 'say' verb (since 'say's' complements do not have switch reference marked verbs). More than this I cannot determine.

The simplification here clearly results in a synchronically simpler construction. By levelling out the main verb and retaining the complementizers as the only markers of the question forms a simple sentence is derived from a complex source. It results in a reanalysis of -k and -m and \emptyset from switch reference markers to question markers parallel to the reanalysis of -k and -m from switch reference markers to final aspect/mood suffixes (cf. Munro (1976a) and section 3,252),

5.34 Evidentials and Perfectives. A fourth case of 'simplification' of the verbal system is the development of the evidentials and perfectives. In section 2.215 the sight and auditory evidentials -k'yuu/'yuu and -k'a/'a were introduced. The details of their distribution and semantics were presented there. To recapitulate the distributional facts: -k'yuu 'see=ev' and -k'a 'hear=ev' can occur only on -k verbs with first person subjects; -yuu 'see=ev' and -a 'hear=ev' can occur on any -m verb and any -k verb which does not have a first person subject. This association of -k'yuu with -k verbs suggests that this -k is segmentable and related either to the switch reference marking -k or the aspect/mood marking -k. Since the presence of the -k is conditioned not only by the kind of verb (-k verb or -m verb) but also by what the subject of the verb is, it seems likely that this -k is related to the switch reference system which is also sensitive to the subject of the verb. Thus, in (97) which has a -k verb with a first person subject,

(97) nyaa 'ayuu '-rav- k- 'yuu 'I was sick'
 I s,t. l-hurt-SS-see=ev

the -k in -k'yuu can tentatively identified as the same subject suffix. In (98) which has the same verb, but a third person subject, the -k is not present.

(98) Pam-sh 'ayuu rav- 'yuu 'Pam was sick'
 Pam-sj s,t, hurt-see=ev

In (99) and (100), which both contain -m verbs it does not matter what the subject is; as in the switch reference cases, these verbs cannot be marked with -k.

(99) nyaa '-wii-'yuu 'I did it'
 I l-do- see=ev

(100) Pam-sh wii-'yuu 'Pam did it'
 Pam-sj do- see=ev

Further support for the hypothesis that the -k in this construction is the same subject -k comes from the remainder of the affix. The sight evidential itself consists of 'yuu which is transparently related to the verb yuu-k 'see' with the first person prefix 'y; this is compatible with the semantics since this affix means that the event took place in the sight of the speaker. In other words, the sight evidential includes the morphemes for 'I see' (not, I think, a great or opaque semantic development). yuu-k 'see', as noted in 4,221, is a verb which takes switch-reference marked object complement clauses. Thus, complements of 'yuu 'I see' which themselves have first person subjects are obligatorily marked with -k (if the verb is not an -m form, and therefore impossible to mark with the same subject -k).

A parallel relationship can be traced for -k'a/'a with respect to the verb 'av-k 'hear, sense'. The distribution of the form with -k and that without -k is the same as described above. Like yuu-k, 'av-k is a verb which takes a switch-reference marked object complement. 'av-k is somewhat more distant phonologically from its affixal counterpart 'a, than the first person verb of 'seeing' is from the sight evidential. There is no explicit first person ' on the hearing evidential. This seems a very slight change given the general process for eliminating first person ' on consonant-initial verb stems in Maricopa. The loss of y is not particularly difficult to account for; many y's in final position are lost in many contexts--particularly medio-passive y. As pointed out by Munro (1980a; to appear) it seems that 'hear' in the Yuman languages is the medio-passive form of 'say'; in Maricopa, the transitive form of 'say' is 'aa=m and the medio-passive form 'hear'

is 'av-k.

In complex sentences which have a sensory verb as their main verb and a clausal object, the verb of the complement clause is marked with a switch reference suffix, -k or -m (cf. section 2.221). In the following examples, this complex construction is shown with the two sensory verbs yuu-k 'see' and 'av-k 'hear' with complement clauses which have the same and different subjects (with verbs which participate in the switch reference system).

- (101) '-iima- k '-yuu-k 'I saw myself dance'
l-dance-SS l-see-asp
- (cf. (102) '-iima- k-'-yuu 'I danced'
l-dance-SS-l- see=ev
- (103) iima- m '-yuu-k 'I saw him dance'
dance-DS l-see-asp
- (cf. (104) iima- '-yuu 'He danced'
dance-l-see=ev
- (105) '-ashvar-k '-'av- k 'I heard myself sing'
l-sing- SS l-hear-asp
- (cf. (106) '-ashvar- k-'a 'I sang'
l-sing- SS-hear=ev
- (107) ashvar-m '-'av-`k 'I heard him sing'
sing- DS l-hear-asp
- (cf. (108) ashvar-'a 'He sang')
sing-hear=ev

Under each example of a complex sentence above is a parallel example of an evidential-marked simple sentence. Note that the -k in the evidential form is associated with -k 'same subject' in the complex sentence, while \emptyset in the evidential form is associated with -m in the complex sentence (on the verb of the complement clause). Similarly, with verbs which do not participate in switch reference, -m in the complex sentence

is parallel to \emptyset in the evidential form.

(109) '-aaham-m '-yuu-k 'I saw myself hit him'
l-hit- m l-see-asp

((110) '-aaham-'-yuu 'I hit him')
l-hit- l-see=ev

(111) aaham-m '-yuu-k 'I saw him hit him'
hit- m l-see-asp

((112) aaham-'-yuu 'He hit him')
hit- l-see=ev

Note that none of the evidential suffixes ends in any aspect suffix of its own (as they would were they independent verbs). Granted that these forms developed from complex sentences in which the main verb was the sensory verbs (similar to those found in (101), (103) etc.), the sensory verb would have its own aspect marking. Margaret Langdon (p.c.) has suggested that the evidential markers were probably incorporated as part of the verb at a point at which realis marking was \emptyset in Yuman. The River realis markers -k and -m are derived from the switch reference markers from the existential auxiliary construction (cf. Munro, 1976a).

The evidential forms, unlike their complex counterparts, do not have as their main assertion that the speaker saw or heard something; instead the main assertion is that made by the verb to which the evidential is affixed. The evidential marking sets the event in time and space with regard to the speaker. Thus, an evidential-marked verb could not be used to respond to a question like 'What did you see?'

The main semantic force of these affixes which speakers are immediately conscious of is that clauses which contain evidentials assert something which truly happened in the past. (An evidential is not used on a verb to express an action or state which is presently going on in the sight or hearing of the speaker--that would presumably also be in

the sight or hearing of the person the speaker is addressing). More than this, of course, these affixes reflect the actual sensory source of the information. These affixes form a kind of hierarchy for use--if an event is both seen and heard (probably the most commonplace situation), then the sight evidential is used; the hearing evidential is only used when the event is witnessed by not see, the direct perceptual source of the information can be hearing, feeling or otherwise sensing (but not seeing).

Evidential marking may seem odd on first person verbs, since, of course, any event one is a participant in, one is present at. However, we have already seen that it is possible to assert (without difficulty) that 'I' saw or heard (or otherwise sensed) 'myself' do something (cf. (101), (105), (109)). The semantic inference of these evidentials is that something truly happened in the past (as noted above). With a first person subject, that aspect of the meaning is central (the form of the witnessing is less important as is the assumption of direct observation since they are part of the natural and predictable state of affairs). When the subject is first person, the use of -k'yuu marks the assertion as more emphatically true and sets the event unambiguously in the past. Neutral realis marking as in (113) does not mark the action/state expressed by the verb in the past. Compare (113) with (114) which is unambiguously set in the past.

(113) nyaa 'ayuu-'-rav- k 'I am/was sick'
 I s.t. l-hurt-asp

(114) nyaa 'ayuu-'-rav- k- '-yuu 'I was sick'
 I s.t. l-hurt-SS-l-see=ev

The verb marked with an evidential suffix can be negative--one can witness something not happening.

(115) waly-marsh- ma- '-yuu 'They didn't win'
 neg- win+du- neg-l-see=ev

The evidential cannot be negated, however, since the evidential sense is part of the presupposition, not part of the assertion. To assert that one did not witness something, an independent main verb must be used,

(116) marsh- m waly-'-yuu-ma- k 'I didn't see them win'
 win+du-DS neg- l-see-neg-asp

The source of these evidential suffixes suggests a parallel source for -ksha/sha 'emphatic perfective' and -ksh/sh 'perfective' which demonstrate the same distributional pattern of k and \emptyset as the evidentials do. It was the pattern of distribution of k and \emptyset which enabled me to determine that -k was the same subject suffix (historically) and begins the segmentation of the evidentials. It seems likely that in the perfective suffixes as well -k is historically the same subject suffix. This leaves us with morphemes which cannot be related to any independent verb. The perfective affixes, if they are related to independent verbs, are so reduced that no identification is possible. Note that as well as sharing the distribution of form with the evidentials, the perfectives also share the semantic feature of basically past time reference. Whatever the original verb was in the perfective constructions (or verbs were), all that is historically reconstructable of them now is that they must have had first person subjects (like the sensory verbs in the evidentials) to account for where the -k's are found in the perfectives (only on verbs which have first person subjects).

An interesting outcome of this grammaticization is that it gives Maricopa a set of verbal forms in which first person subject is, in effect, marked by the shape of the suffix rather than a prefix or in

addition to the pronominal prefix.⁵ In four different, though related, aspect/moods, the presence of the -k in the suffix identifies the verb as having a first person subject (though, of course, the absence of -k does not suffice to mark the verb as not having a first person subject if the verb is an -m form). This process of marking first person subject with the presence of -k in the suffix is happening concurrently with the loss of ' as a first person prefix (cf. section 1.111).⁵

Another thing to note is that the contrast which is grammaticized here is not between -k and -m, but between -k and \emptyset . This contrast is found grammaticized elsewhere--in the question system. There, again, we can see a contrast between -k 'same subject' and \emptyset 'different subject/-m verb', historically. -m has been reconstructed as the different subject marker for Proto-Yuman (Winter, 1970; Langdon, 1978) and it is found in all the present day Yuman languages as a different subject marker. The contrast between -k and \emptyset may be due to some phonological process which deleted word final -m's and not -k's, though no evidence of such a process can be found. In modern Maricopa, there is no productive process which marks different subject with \emptyset , though \emptyset can mark same subject, as in

(117) tiiwamtor '-shuu'at_ '-yaa-k 'I went to buy a car'
 car l-buy l-go- asp

The contrast in the grammaticized constructions may suggest, however, that an earlier stage of Yuman may have contrasted -k 'same subject' and \emptyset 'different subject'.

In both questions and perfectives/evidentials the original relations signalled by the presence or absence of -k have disappeared, only the -k or lack of -k serves to distinguish the forms. The

distribution is associated with meaningful elements (i.e., the subject of the verb), but it is no longer part of the larger system (switch reference) which originally controlled the distribution.

The evidentials and perfectives like the other forms discussed in section 5.3 reflect a process of simplification which results in forms which are simple sentences, rather than complex sentences. The development of these constructions demonstrates the evolution of an independent verb to a dependent affix. The new constructions are simpler (internally, though not systemically) and shorter in form than the original sentences.

5.4 Syntactic Change and Grammatical Systems. Innovations, be they morphological, syntactic or semantic, must by definition be transparent. Without such transparency, the innovation would not be comprehensible to the users of the language. The innovation, moreover, must be accomplished by assembling items whose meaning is clear and unambiguous to the speaker. (It is this feature that helps make syntax reconstructible, that speakers use meaningful elements to convey information.) This feature of languages shares much with the quality Langacker (1977) calls "perceptual optimality" which "pertains to the adequacy of sentences in their overt form to convey the desired information to the speaker" (Langacker, 1977:105).

Langacker (1977:105) further notes "The central mechanism for achieving perceptual optimality in syntax is a process I will call 'periphrastic locution' which is simply the creation by ordinary or extraordinary means of periphrastic expressions to convey the desired sense." This 'periphrastic locution' takes advantage of established lexical items

and grammatical structures in the language to produce structures which fit the already established syntactic system,

Once a construction exists in the language accepted by its speakers and known to them, reduction of the construction to a 'simpler' form is possible. It becomes the construction rather than the particular morphemes which bears the message; the sum of the parts is less than their combination. At this point the construction may have both its lexical and grammatical meaning. Thus, in Maricopa, the progressive auxiliary construction uses verbs of location to express progressive-ness (cf. section 3.352). These constructions have both the grammatical meaning of progressive and the lexical meaning of the location verb,

(118) '-ashvar-k v- '- va- k 'I was (sitting here) singing'
1-sing- SS dem-1-sit-asp

The construction is available for full grammaticization--the reduction of the individual parts is a feature of the combination (which may now be viewed as an unanalyzeable whole). The simplification, therefore, consists of making the construction unanalyzeable in terms of synchronic morphology, or rather in reflecting that the construction has become unanalyzeable in this way,

The simplification is, therefore, not making the construction simpler in the sense of making it clearer or in the sense of simplifying the system. It is making it simpler in the sense of reducing hierarchical structure and in the sense of reducing free interpretations of the parts of the construction (it can become fixed in meaning before the grammaticization becomes overt). This kind of simplification consists of change in the directions discussed in Langacker, 1977 and presented in 5.3, constructional and signal simplicity. The new construction may

have a transparent relationship to its meaning, in the sense that the new form directly represents some meaning without participating in the systems from which the original periphrastic construction was assembled. The internal constituency of the construction becomes opaque, however. This kind of opacity can be produced in several ways: (1) multiple synchronic expressions of the same semantic relationships can be reduced to a smaller number of expressions by loss of the most neutral expression (as is the case in Mojave where the semantically transparent expression of quantified events no longer exists, see section 5.1); (2) a single synchronic expression can become simplified in the sense, e.g., of two clauses becoming one, two verbs becoming one (as exemplified in sections 5.1, 5.21, 5.22, 5.31, 5.32, 5.33, 5.34); (3) grammatical fixing can result in or allow phonological reduction of some element or string of elements into a sequence which does not allow analysis of the individual elements by the speakers (cf. section 5.31 and 5.32); (4) a construction can become fixed and fail to participate in some change which affects the category to which its elements originally belonged (see section 5.4, the evidential suffixes derived from verbs are not marked with realis suffixes); (5) a morpheme or set of morphemes can be lost in the language except in some fixed construction; thus, the individual elements no longer exist in the language productively or independently (as may have occurred in the development of the perfectives, section 5.4)⁶.

Consider the many uses of -k described as having their historical source as the same subject suffix: -k as a final realis suffix, -k on second person subject realis verbs in questions, and -k- in evidential

and perfective forms of first person verbs. A relatively simple suffix has become four homophonous suffixes or a polysemous suffix with four separate meanings synchronically. Each change that resulted in a new use of -k was a change in the direction of simplicity, in the sense that the individual sentences had reduced hierarchical structure. However, the result of all this 'simplification' is a considerably more complex system.

Syntactic change has been shown to occur incrementally (Chung, 1977; Timberlake, 1977). As part of this gradual actualization of syntactic change, stages can occur in which the same construction can function in more than one category, as having more than one analysis. These multiple analyses (Hankamer, 1977) is illustrated in Maricopa in section 5.2 for forms which can be either auxiliaries, main verbs or suffixes. This situation as Hankamer (1977) pointed out is a natural for syntactic change since the system is so difficult to acquire (except where the two systems intersect). Whatever may have motivated the first change which produces the multiple analyses still holds, so any further changes would likely be in the direction of establishing these elements as full-fledged participants in only one system (e.g., as suffixes, as with -uum 'incompletive', cf. section 5.31).

Footnotes to Chapter 5

¹Note that the waa-m 'do+personal object' form is not used in this case even though there is overt object agreement on the verb. When a non-final suffix is affixed to the verb, either the ii form or the aa form is acceptable with an overt pronominal object. Cf.

(i) nyaa ny-wa- hvik-ksh 'I did it to you twice'
 I 1/2-do+tr- two- lprf

²Munro (1976c) notes that in Mojave pa varies with pay even when it is not followed by -uum or any other suffix related to the verb 'be'. She presented pay as the ablauted form of pa.

³The opacity of the internal structure of this form and its fixed shape can be demonstrated in the remark of one consultant: "I don't know what that huu'itsh is, but it means 'should'."

⁴uu'ish as noted in section 4.2.11 is the realis nominalized form of 'say'. The stem final -sh becomes t before the subject-marker -sh. This is an instance of a general phonological process described in section 0.2.

⁵Hinton (1980) describes the person marking system in Havasupai as becoming suffixal. In Havasupai, assimilation and reduction have resulted in suffixes which mark the person of the subject of the verb. The new system marks third person verbs with -g (*k 'same subject') followed by the auxiliary. The entire system among the younger speakers is now

| person | |
|--------|--------------------|
| 1 | stem + ? - AUX |
| 2 | m + stem + p - AUX |
| 3 | stem + g - AUX |

⁶A better example exists in Tolkapaya Yavapai. Tolkapaya has an inchoative auxiliary unuu which is clearly a locational auxiliary in the other Yuman languages which have locational auxiliaries (Hardy, 1979). In Tolkapaya, however, unuu is never found outside of the inchoative construction--it does not exist as an independent verb and it no longer reflects the posture of the subject and it does not reflect the number of the subject.

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