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Voice and argument structure in Yaqui

Escalante, Fernando, Ph.D.
The University of Arizona, 1990
VOICE AND ARGUMENT STRUCTURE IN YAQUI

by

Fernando Escalante

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A Dissertation Submitted to the Faculty of the
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THE UNIVERSITY OF ARIZONA

1990
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Eloise Jelinek

April 12, 1990
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SIGNED: Fernando Escalante
DEDICATION

ITOM YOEMNOKTA KETUNI

NOOKAME VETCH'IVO

Abwe heewi, wa'asok chikti pa'ala Hiak yoremia nee mammatteme. Bweituk, in poloove Yoemtuka'upo amani. Inepo inika yoemnokta kaa nee chea tuttutti tu'isi ino nee a ta'a tia huni'i to'oven. Taa nee inika iiiikik in ta'aa'u, nee inim Yoemem vetchi'ivo a hiohtek.

Inika itom Hiak nooki chea itom aa ta'avaepeo vetana, itepo tua inian au haptele. Itom Yoemnoki a nakekai, a hatteiyakai aet te tekipanoasakane. Wame itom aso'olam, itom ili uusim kaa vem nooki am ta'arune'epo vetana. Inika itom Yoemnkoka itom yoyo'owam itou to'osahaka'u, itepo-te am mahtane. Halekesia, nalleve'emu, wepul itom nau ohvoka'apo amani, au te hapteka nau te wepul nau hiapsekamtavenasia te aet tekipanosakane vichau vicha. Humaku'u te itom noki kee a lu'uteo a hinneune.
DEDICATION

TO OUR YOEMEM WHO STILL

SPEAK OUR YAQUI LANGUAGE

Well yes, all those Yoemem inclusively that understand me. Because I am a humble man, I am not saying that I know the Yoeme language very thoroughly. But, the little that I know, I have written it here for the Yoemem.

This Yoeme language of ours, in order to know more about it, we like this have stood up to our task. Loving and admiring our Yoeme language we will keep on working on it, so that those children of ours will not lose their language. This Yoeme language of ours that our elders left for us, we will teach it to our children without hesitation, side by side, because we have one blood together. We will stand up to our task like as if we had one heart together. Going forward we will work at it. Maybe, we can save our language before it ceases to exist.
ACKNOWLEDGEMENTS

At this time I would like to take this opportunity to express my profound appreciation and gratitude to all those who have directly or indirectly contributed to my educational and intellectual development.

I realize that a great number of individuals assisted me with encouragement and financial support during my many years of attendance at the University of Arizona. Unfortunately, because of limited space, I will just mention a couple of individuals who with their encouragement, and belief in my untapped potential have uplifted me to my present educational status which I now enjoy.

I now wish to make known here my grateful acknowledgement to my mentor, linguistic advisor, and friend, Professor Eloise Jelinek, for her linguistic expertise, without which this dissertation never could have been written. She always made available that extra assistance above and beyond her duty that inspired me to pursue my education in linguistics.

I would also like to express my heartfelt gratitude to Arlene Hobson, who was the American Indian student advisor during my undergraduate years. Ms. Hobson encouraged me to continue in school and during my perpetual money crisis, she always managed to find some financial support that enabled me to finish with my bachelor's degree.

I am also very grateful to the University for the monetary support it has extended to me. My gratitude also goes to the very supportive role of the Linguistics faculty for their students. I am grateful to my family and hope my daughters, Rosa and Patti, follow in my footsteps in any educational field of their choice.
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ABSTRACT

This thesis is a description, analysis and functional interpretation of voice and argument structure in Yaqui, a Uto-Aztecan language spoken in Southern Arizona and Sonora, Mexico. Yaqui is a SOV language with a complex verbal morphology, and voice alternations are morphologically marked. I begin with the analysis of argument structure in basic clause types, and describe lexical and clitic arguments. The voice alternates I identify are Passive, Impersonal, Anti-passive, Impersonal Anti-Passive and Unaccusative. I also provide an analysis of Dative and Applicative constructions, and a type of Possessive sentence where the head of the Possessed NP is incorporated into the verb. Each of these construction types involves argument arrays that differ from the argument structures seen in basic sentence types.

Each of these construction types has a specific function in discourse. The speaker selects the construction type that places an argument with a particular theta role in focus position, determines what other arguments are present, and determines which arguments are referential. This functional perspective gives us an integrated view of voice and argument type in Yaqui.
CHAPTER 1

INTRODUCTION

1.0. Background of the study.

In this dissertation I will present an analysis of Voice and Argument Structure in Yaqui. The data for this analysis will be based mainly on my own dialect of Arizona Yaqui with some reference to the work of other researchers on the Yaqui language. I will begin this work with some background material on the Yaqui language and the Yaqui people.

1.1. The Arizona Yaqui.

The original homeland of the Yaqui people is in Sonora, Mexico, and the large majority of Yaquis still reside there. At the beginning of the Nineteenth Century, after the Spaniards were forced out of the Rio Yaqui Valley, the Mexican government began a policy of conquest, genocide, political persecution, and forceful removal of Yaquis from their homeland. The Yaquis then began to openly resist Mexican domination by battling the Mexicans from time to time over the years in guerilla style warfare. As a result of these hostilities between the Yaquis and
Mexicans, hundreds of Yaquis fled into Arizona territory, seeking what would now be called political asylum.

When the Yaquis fled into Arizona they brought with them their cultural heritage, religion, and language. Today in Arizona, there are an estimated six to eight thousand Yaquis residing mainly around the Tucson and Phoenix areas, while others live around other communities in Arizona and in the rest of the United States. For many years the Yaquis born in the United States were not considered American Indians by the United States government because of their ancestral roots in Mexico. Finally, on September 18, 1978, the Pascua Yaqui Tribe of Arizona was granted federal recognition by the United States government, which gives the tribe the same status as other officially recognized American Indian tribes. This recognition made those who enrolled as members of the Pascua Yaqui tribe eligible to receive benefits such as health care, housing, education, and other services under the sponsorship of the Bureau of Indian Affairs. The tribe now has its own reservation which is located about fifteen miles southwest of downtown Tucson.

This small reservation has approximately one thousand residents and is still growing. Close to six thousand Yaquis have officially enrolled in the Pascua Yaqui Tribe,
while around two thousand of the Yaquis born in the United States are on a pending status, and others have chosen not to enroll.

1.2. Bilingualism.

In Arizona's estimated six to eight thousand Yaqui population, probably one-half of that number still speak their native language. Although the number of Yaqui speakers has declined in recent years, nevertheless, the Yaqui language is still holding on as a means of communication among the Yaqui population. Yaqui is still extensively used, along with Spanish, in the various religious activities, which are attended by a large proportion of the Yaqui population, especially during Lent. Presently, many Yaquis living in Sonora are bilingual, speaking both Yaqui and Spanish, while others speak only Yaqui.

Either standard Mexican Spanish or the Barrio dialect of Mexican Spanish are becoming the language of daily use in the main Yaqui communities in Arizona. Many Yaquis are trilingual; they speak Yaqui, Spanish, and English. Others are bilingual, speaking Yaqui and Spanish, or Yaqui and English, or Spanish and English. Also, within the younger generation many young Yaquis speak only English and there is a lot of code-switching between Spanish and English.
Although the Yaqui language is losing out as the language of daily discourse in Arizona, Yaqui will still continue to be used as a means of communication for many years to come.

The first significant contact of the Yaqui people with the Spanish language and Latin was through the teachings of the Catholic religion, taught by the Spanish Jesuit missionaries who arrived in the Rio Yaqui Valley, Sonora, Mexico around the sixteen hundreds. From here on out, the Yaquis have had almost continuous contact with the Spanish language. This contact also gave birth to the Yaqui Indian religion as it is now practiced among the Yaquis of Sonora, Mexico and Arizona. As the Jesuits and other Spanish personnel got more involved over the years with the daily activities of the Yaqui communities, the Yaquis were continuing to be exposed to the Spanish language. As a consequence of this continuous contact with the Spanish language, for over three hundred years, contemporary Yaqui has a large number of Spanish loan-words in its lexicon. These borrowed words are interspersed in modern Yaqui conversations and religious ceremonial speeches either as unaltered Spanish words or Spanish-derived Yaqui words which have been changed to conform to the Yaqui phonological pattern or sound system. Also, many Spanish words can be borrowed simply by attaching Yaqui suffixes to them. There has been no significant research reported in
the linguistic literature to document to what degree (if any) the Spanish language has influenced modern Yaqui speech patterns and the phonology. I will not be concerned with the study of Spanish influence and loans here, and will confine this study to Yaqui alone unless it is necessary to consider loanwords in connection with some problem at issue.

1.3. The Yaqui Language.

The Yaqui Indian language is still an enduring medium of communication in Rio Yaqui Valley, Sonora, Mexico, the ancestral homeland of the Yaqui Indians. The language is spoken by an estimated fifteen thousand or more Yaquis living in Sonora. The Yaqui language belongs to the Uto-Aztecan family which ranges over a large geographical area, extending from Oregon, Utah, and Idaho in the United States on southward into Mexico and Central America. Yaqui is a member of the Taracahitic subbranch of this family, which includes the extinct languages of Tubar, Eudeve and Opata (cf. Encyclopedia Britannica, 1987:12). Tarahumara, Guarijol-Varohio, and Mayo also belong to this subfamily. Mayo and Yaqui are dialects of one language (cf. Voegelin 1964:10). Yaqui and Mayo are mutually intelligible. Speakers of Yaqui or Mayo can understand each other very readily.
Yaqui is a synthetic/agglutinative type of language which uses suffixes quite extensively and to a far lesser extent uses prefixes in its morphology. Yaqui is a verb final language, and the unmarked word order is Subject Object Verb. However, these nominals can sometimes be "scrambled", as is often seen in verb-final languages where object nouns are case marked. Yaqui has postpositions, and sentence final suffixes marking Tense, Aspect, and Modality. Reduplication is widely used to mark plurality of action and person.

The Yaqui language, like any other language, has differences in speech patterns and in pronunciation arising with different speakers. However, there do not seem to be any significant (other than lexical) differences between the Yaqui spoken in Rio Yaqui Valley, Sonora, Mexico and that spoken in Arizona.

1.4. Previous Research on Yaqui. To my knowledge, I am the first native speaker of Yaqui to do linguistic research on the language. I have benefited from the pioneering work of Jacqueline Lindenfeld, who wrote a thesis on Arizona Yaqui syntax using a transformational framework (1969, 1973). The publications of Langacker (1976, 1979) on comparative Uto-Aztecan have been an invaluable aid. A short sketch of Yaqui by Andres Lionnet (1977) has also
been helpful. Some brief papers on Yaqui phonology will be mentioned in the next section. By far the most useful work for me has been Jean Johnson's *El Idioma Yaqui* (1962). This book contains an introductory grammatical sketch, a lexicon, and most importantly, a collection of texts. These texts are a most valuable source of information on the Yaqui spoken in Mexico, which differs only in minor ways from Arizona Yaqui. I recommend this work to anyone interested in Yaqui or in Uto-Aztecan.

John Dedrick of the Summer Institute of Linguistics has spent about forty years with the Yaqui in Mexico and is currently preparing a grammar of Sonoran Yaqui. I am grateful for his comments on earlier versions of some parts of this material. A dictionary of Mayo by Collard and Collard (1984) has been useful, and current work in progress by Larry Hagberg on Mayo has given me an idea of the differences between Yaqui and Mayo.

1.5. The Sound System of Yaqui.

The following notes on the sounds of Yaqui are intended as an informal pronunciation guide for the reader, especially the Yaqui speaker, and are not intended as a technical analysis of the phonological system. The orthographic system that I will use in this dissertation is the one that was officially adopted by the Pascua Yaqui
Tribe in 1985, for writing material in the Yaqui language. This writing system is largely phonemic, except for the use of certain digraphs, for typographic convenience.

I will now introduce the Yaqui phonemic inventory, shown in Figure 1.
### Yaqui

#### Phonemic Inventory

**Consonant Chart**

<table>
<thead>
<tr>
<th>Manner of Articulation</th>
<th>Bilabial</th>
<th>Labiodental</th>
<th>Place of Articulation</th>
</tr>
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<tbody>
<tr>
<td>Glottal</td>
<td></td>
<td></td>
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<tr>
<td>Stops</td>
<td>voiceless</td>
<td>voiceless</td>
<td>voiceless</td>
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<td>voiceless</td>
<td>p</td>
<td>t</td>
<td>k</td>
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<td>?</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Stop Labialized</td>
<td>voiceless</td>
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<td>voiceless</td>
<td>bw</td>
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<td>Fricative</td>
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<td>voiced</td>
<td>voiceless</td>
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<td>Approximate</td>
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<td>s</td>
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<td>voiceless</td>
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<td>Affricate</td>
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<td>voiceless</td>
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<td>voiced</td>
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<td>Nasals</td>
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<td>Liquids:</td>
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<td>Lateral</td>
<td>voiced</td>
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<td>Flap</td>
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<td>voiced</td>
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<tr>
<td>Semi-vowels, Glides</td>
<td>voiced</td>
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<td>voiced</td>
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<td>voiced</td>
<td>w</td>
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<td>y</td>
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</table>

#### Vowel Chart

<table>
<thead>
<tr>
<th></th>
<th>Front</th>
<th>Mid.</th>
<th>Back</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>i i:</td>
<td></td>
<td>u u:</td>
</tr>
<tr>
<td>Mid</td>
<td>e e:</td>
<td></td>
<td>o o:</td>
</tr>
<tr>
<td>Low</td>
<td></td>
<td></td>
<td>a a:</td>
</tr>
</tbody>
</table>
Allophonic variation in Yaqui is minimal. The voiceless stop consonants are: /p/ /t/ /k/ /ʔ/. The voiceless stops are unaspirated; otherwise, the bilabial /p/ sound in the word pa'aku "outside", is much like the English /p/ sound in pen. The alveolar /t/ sound as in taa'a "sun", corresponds to the English /t/ sound as in tie or tack. There is an unreleased [tʰ] that occurs only at the end of words, such as: [vaakotʰ] "snake", [hamutʰ] "woman". The velar /k/ sound in kari "house", is like the English /k/ sound in key. There is also an unreleased [kʰ] as in [katekʰ] "sitting" that occurs in word-final position. The glottal stop /ʔ/ is abundant in Yaqui. Contrast the words woi "two" and wo'i "coyote". This sound is sometimes very soft and difficult to hear, and may be heard as glottalization of the adjoining vowel(s). The velarized voiced bilabial stop /bʰ/ sound is also very common in Yaqui: b'a'am "food". This is the only velarized stop in the language. The voiced labio-dental fricative /v/ sound has three allophones, which are [v], [b] and the voiced bilabial fricative [B]: [va:'am], [ba:'am], [Ba:'am] "water". Jane Hill (p.c.) informs me that this variation is present also in Tohonno O'odham, and may be an areal feature.

Other sounds: Voiceless, alveolar fricative /s/ saami "adobe". Voiceless, glottal approximate /h/ himsim
"mustache". Voiceless, alveo-palatal affricate /ch/, chiinim "cotton". Voiced, bilabial nasal /m/, mamni "five". Voiced, alveolar nasal /n/, nohim "tamales". This nasal has a velar allophone when it precedes a velar stop [nenkak] "sell"; and when it precedes the semi-vowel /w/; compare [chochonak] "hit" with [chochonwak] "was hit".

Voiced liquid alveolar lateral /l/, lo'i, "crippled".
Voiced liquid alveolar flap /r/, rumui "uneven". There are not very many Yaqui words with this sound. Many Mayo words with /r/ have Yaqui cognates without /r/. Voiced, bilabial semi-vowel glide /w/, wikui "lizard". Voiced, alveo-palatal semi-vowel glide /y/, voi "Mexican". All the Yaqui consonants, including the glottal stop and /h/, can appear long, or geminate. Long consonants occur only word medially, at syllable boundaries. We will see many examples of long consonants below in Section 1.4.1.3., on Reduplication.

The vowel sounds in Yaqui consist of five short and five long vowels all of which are voiced. There are long glottalized vowels, written V'V. There are only front and back vowels. Also, all word initial vowels are preglottalized: 'i "this", 'i'i "this one", 'ili 'uusi 'little child'; 'e'e "no", 'ete "louse"; 'aache "laugh", 'achai "father"; 'u "the", 'u'u "that one", 'uusi "child". Since this preglottalization of the vowel when it is word
initial is predictable, the Pascua Yaqui Tribe has chosen not to write it in their official orthographic system, but only to write the glottal stop in word medial and final position. Accordingly, I will not write this initial glottal stop in the main part of this dissertation, only in Chapter I where I am discussing the sound system of the language. Similarly, I will use the digraphs ch for the affricate, and bw for the velarized stop, since the Pascua Yaqui have also officially adopted these symbols. The glides /w/ and /y/ are written only in morpheme initial position, although the data on syllable structure given below in Section 1.4.1.3.2. suggests the presence of syllable initial and final glides.

1.5.1. The Problem of Pitch/Accent or Tone in Yaqui.

There has been very little research done on the elusive problem of stress, pitch, and accent in Yaqui. In the few brief studies of Yaqui phonology that are available, no consensus exists among the researchers as to exactly what role accent and tone play in the Yaqui language. In this section, I will give an informal account of the dependency of pitch/accent upon syllable structure in Yaqui. It appears that pitch/accent is largely predictable from syllable structure, but there are a few other contrasts that apparently cannot be explained with reference to the syllable structure of the word.
I begin with some notes on the literature that is available on Yaqui phonology. I will begin by citing some of the statements or proposals presented by various researchers regarding the problem of pitch/accents in the Yaqui language.

Fraenkel (1959:2) states:

"Yaqui alternation of stress begins on the first stressed syllabic in any syllable sequence. As the position of this syllabic is not predictable, stress is phonemic and its first occurrence has to be marked".

Fraenkel goes on to say that:

"In isolatable words tone differences have been noted which were not treated in this paper. A discussion with Kenneth Hale...revealed that our results, at variance in these cases, were conditioned by the fact that he was listening to tone while I was listening to stress." (Fraenkel (1959:17)

On the other hand, Lindenfeld (1973:4) says that she did not represent stress

"...because it does not seem to play a contrastive role within the word and appears to be highly predictable".

Crumrine (1961:10) summarizes her findings in the following way:

"Stress in single words may be governed by a fuller context in the phrase or sentence where stress and time are significantly related. Grammatical and semantic considerations seem to constitute the governing elements in the use of tone. There are three types of junctures, whose main phonological correlates are tone and pause."

Dedrick (1984:10) mentions that in Yaqui,
"...if stress and higher pitch do not necessarily coincide, then it is pitch, not stress, that is phonemic."

Dedrick notes, however, that there are only a few minimal pairs, where pitch is not predictable.¹

Other writers working on related languages include Woo (1970) on Northern Tepehuan. Woo rejects an analysis based on a "lost laryngeal," and suggests that vowel length and syllabicity underlie tone differences, which are predictable. On Southeastern Tepehuan, Willett (1982) claims that tone is predictable, as follows:

"All words are accented on the first or second syllable of the stem, including reduplicated stems. Of these two syllables, the one of heaviest grade is accented. If they are equally heavy, the first one receives the accent.

There are three degrees of heaviness. An open syllable with a short vowel is the lightest. A closed short syllable is heavier; all of these result from final vowel dropping or from the suffixing of a consonant. A syllable with a vowel sequence is the heaviest. Note that at this stage the second syllable of a word is either closed final or open medial. The following rule expresses accent placement:

\[ V \rightarrow [+\text{accent}] \text{#} \langle CV \rangle \text{C_ V} \text{ [+ stem]} \text{C##} \text{"} \]

(Willett 1982:176). This rule does not apply to Yaqui. However, Willett's analysis provides some support for the analysis given here, where the claim will be made that tone in Yaqui is predictable, and that vowel length and syllabicity are the determining factors.
1.5.1.1. Pitch/Accent and the Syllable. In this section, I will focus on the phenomena of reduplication, and the light that it sheds on this problem. Reduplication is based on the syllable, and it can be used to test for syllable structure. My tentative conclusion is that pitch/accent is largely predictable, and follows from the syllable structure.

1.5.1.2. Syllable Types. All Yaqui words begin with the sequence CV; word initial vowels are preglottalized and the glottal stop is a consonant. The syllable types are:

1) a. V(C)
b. CV(C)
c. CV:(C)
d. CVV(C)

The first syllable type, (V(C)), occurs only within a word: yo/e/me "person", "Yaqui". This is also true of (CV:C), included under type (1c). The other syllable types may be independent words. Examples of these types as words:

2) 'u "the" CV
   yak "did" CVC

3) ne: "I", "me" CV:

4) 'au "to him" CVV
   neu "to me" CVV
   'auk "did", "exists" CVVC

Consonant clusters occur only at syllable boundaries, word medially. Examples of two-syllable words are:
5) CV/CV  
ka/ri  "house"  ye/'e  "dance"
se/wa "flower"  ko/va "win"

6) CV:/CV  
no:/ka "talk"
te:/ka "lay (something) down"
ka:/te "go" (pl.)
tu:/ka "yesterday"

7) CV/CV:  
tu/ka: "night"

8) CV/CVC  
ha/mut "woman"

9) CVC/CV  
chep/te "jump"

Examples of three syllable words:

10) CVC/CV/CV  
lot/ti/la "tired"

11) CV/VC/CV  
hi/ap/si "heart"

12) CV/V/CVC  
hi/o/kot "pity", "sorry"

13) CV/CVC/CV  
ha/mut/ta "woman"-ACC

14) CV/CV/CVC  
chi/ku/lim "mice"

Examples (10) and (11) show geminate tt.

Now I will show how reduplication can be used to probe
or test for syllable structure.

1.5.1.3. Reduplication. This process is very widely used
in Yaqui. I will not give a technical linguistic analysis
of Reduplication in Yaqui, but merely provide an informal,
rough description of two types of Reduplication that I have
noticed.

15) "Primary" Reduplication: CV_ ---> CV_/CV_

Copy first syllable.

ko/che ---> ko/ko/che
'sleeping'(SG), 'sleeping'(PL)
16) "Secondary" Reduplication: CV_ ---> CV_ CCV_

Do primary duplication, then make the first consonant of the root long or geminate.

ko/ko/che ---> kok/ko/che
'sleeping' 'falling asleep' (on and off)

17) Vowel Shortening Rule: CV_ ---> CV_ CV_

A further rule is vowel shortening. A long vowel in the first syllable is shortened when that syllable is reduplicated.

ko:/va ---> ko/ko/va
'winning' 'winning (over somebody)'

Many verbs show this pattern. The most typical syllable structures for Yaqui verbs are CV:/CV, CVV/VC or CV/V/CV. A smaller group of verbs show the pattern CV/CV.

1.5.1.4. The Semantics of Reduplication. Primary reduplication often marks Habitual aspect.

19) aapo b'i:/ka ---> aapo b"i/b"i/ka
'he is singing' 'he sings'

aapo ye/na ---> aapo ye/ye/na
'he is smoking' 'he smokes'

aapo va/hu/me ---> aapo va/va/hume
'he is swimming' 'he swims'

aapo b'a:/na ---> aapo b"a/b"a/na
'he is crying' 'he cries'

Secondary reduplication often marks Iterative or Punctive aspect.

20) b"ib"/b"i/ka 'from time to time he sings'
yey/ye/na 'from time to time he smokes'
vav/va/hu/me 'from time to time he swims'
b"ab"/b"a/na 'from time to time he cries'

Or it may mark Process or perhaps Continuative aspect:
21) tu:/ke ---> tut/tuke 'flickering out'
    te:/ka ---> tet/te/ka 'in the process of laying
something down'

Many verbs do not permit one or the other kind of
reduplication. In many cases primary or secondary
reduplication has a specialized meaning. This kind of
semantic "drift" is not uncommon with reduplicated forms
across languages.

22) koche 'sleeping'
    kok/ko/che 'falling asleep (on and off)'

1.5.1.5. Reduplication and Syllable Structure. Since
primary reduplication copies the first syllable, it can be
used to show where the syllable boundary is. Examples of
copying a CV syllable are:

23) ye/cha ---> ye/ye/cha
    'set X down, or get X up'
    e/ta ---> e/‘e/ta
    'close'
    ko/‘a ---> ko/ko/‘a
    'chewing'
    ta/se ---> ta/ta/se
    'coughing'
    chu/pe ---> chu/chu/pe
    'finishing'
    ta/ke ---> ta/ta/ke
    'shaking'
    'shakes'
Examples of copying a CVC syllable:

24) chep/te ---> chep/chep/te
   'jump'
   kop/ta ---> kop/kop/ta
   'forget'
   wom/ta ---> wom/wom/ta
   'frighten'
   chuk/ta ---> chuk/chuk/ta
   'cut' (Trans.)

Examples of copying a CV syllable before a following V syllable:

25) su/a/le ---> su/su/a/le
   'believes'
   si/a/li ---> si/si/a/li
   'green'
   na/u ---> na/na/u
   'together'
   na/i/ki ---> na/na/i/ki
   'four'
   hi/a ---> hi/hi/a
   'say'
   te/u/wa ---> te/te/u/wa
   'is said'
wa/i/wa ---» wa/wa/i/wa
'inside'
hi/o/ko/le ---» hi/h/hi/o/ko/le
'feel pity for'
'e/u/se ---» 'e'/e'/u/se
'hide'

Examples of copying a CVV syllable:

26) woi/te ---» woi/woi/te
'loosen', 'untie'
noi/te ---» noi/noi/te
'go' or 'come'
siu/te ---» siu/siu/te
'tear'
vui/te ---» vui/vui/te
'run'
wiu/ta ---» wiu/wiu/ta
'spend'
viu/te ---» viu/viu/te
'whistle'

Note that the last segment in each of these syllables is either a /i/ or a /u/. If these segments are analyzed as the glides /y/ and /w/, we can group the examples in (26) with those in (24), and have an explanation for the difference in the way the words in group (25) reduplicate, as compared to those in group (26). In the words of group (25), there are no glides; there are sequences of unlike
short vowels, and only the first of these is copied under reduplication.

It appears that pitch/accent is predictable from the syllable structure of the word. The few minimal pairs include:

27) teeka 'sky' 28) teeka 'lay down'
   kaâte 'making a house'
   yoóko 'spotted'
   waate 'remember'

   káate 'walking' (PL)
   yóoko 'tomorrow'
   wáate 'others'

These examples are taken from Dedrick (1984 MS), with his transcription. I suggest that the words that Dedrick writes with a VV are examples of sequences of two identical short vowels, whereas the words he writes VV, are examples of true long vowels. This would make the syllable structure of the words in each column different.

29) te'/e/ka 'sky'
   ka/a/te 'making a house'
   yo/o/ko 'spotted'
   wa/a/te 'remember'

30) te:/ka 'lay'
    kā:/te 'walking' (pl.)
    yo:/ko 'tomorrow'
    wā:/te 'others'

When a sequence of two identical short vowels appears, the second one is not rearticulated. The contrast between the words in these minimal pairs is heard in the pitch/accent, which reflects the syllable structure. Evidence for this proposal can be seen in what happens to the words when reduplication is present. When the three-syllable words (29) undergo primary reduplication, the result is four syllables, as seen in (31).
Note that since the second and third syllables in the reduplicated forms in (31) have the same vowel, we again have a sequence of two identical short vowels, and again we have what sounds like a long vowel -- but in a different place. These examples are parallel to those given in (25) above, where a CV syllable was copied before a V syllable, but the vowels in these two syllables were not identical.

When the two-syllable words given in (30) undergo primary reduplication, the long vowel in the first syllable is reduced (see Rule (17) above), and the resulting word has three syllables, and no long vowels.

Under this analysis, tone is predictable, not phonemic, because where there is a sequence of two identical vowels in separate syllables, falling tone is heard. Where there is a long vowel, rising or level tone is heard. Other examples include:

33) Long vowels:

   no:/ka ---> no/no/ka
   'talk'

   ku:/ si ---> ku/ku/si
   'audible'
An interesting minimal pair noted by Dedrick are the words for 'hurry!' and 'slowly' which he writes as follows:

35) a. lautì 'quickly'

b. laautìa 'very slowly'

In (35b) the word has been drawn out, as when in English we might say "slow-o-owly." Aside from this feature, I find the following contrast in syllable structure when these words undergo reduplication:

36) a. lau/ti/a ---> lau/lau/ti/a 'quickly'

b. lau/ti/a ---> lau/lau/ti/a 'slowly'

Another contrasting pair are:

37) puh/puh/te 'opening eyes' or 'have eyes on X'
38) puh/puh/ta 'blows'

In (37), the root is pu:s:i 'eye'. There is free variation between /s/ and /h/ before a consonant in some words. In reduplication, the long vowel is shortened, and the verbalizing suffix - te is present. In (38) the verb puhta 'blow' is reduplicated.

1.5.1.6. Unresolved Problems. In this section I include notes on some problems with respect to pitch/accent in Yaqui that need further study. I have noted a few exceptions to the reduplication rules given above, as follows:

39) yep/sa ---> ye/yep/sa, not *yep/yep/sa 'arrive'
40) hapte ---> ha/hap/te, not *hap/hap/te 'stand up' (PL)
41) he/'ok/te ---> he/'o/he/'ok/te, not *he/he/'ok/te 'hiccup'
42) ve/'ok/te ---> ve/'o/ve/'ok/te, not *ve/ve/'ok/te 'lightening' or 'sticking tongue out'
43) to/hak/te ---> to/ha/to/hak/te, not *to/to/hak/te 'bounce'

In (39) and (40) only the initial CV of the CVC first syllable is copied. In (41-43) more than one syllable is fully or partially copied. In (39-43) the reduplicated words marked with an asterisk could be a matter of dialect or idiolect. It is possible that those forms might be acceptable to some Yaqui speakers, or they might be acceptable in the right context.
In addition to these exceptions, there are two other contrasting pairs that seem to differ in tone, but apparently not in syllable structure.

44) a/ni/a 'world' a/'a/ni/am 'worlds' (N)
a/ni/a 'help' a/'a/ni/a 'helps' (V)

45) b′ichia 'worm' b′i/b′i/chi/am 'worms' (N)
b′ichia 'smoke' b′i/b′i/chi/am 'smokes' (N)

I have no account of these contrasts. Primary reduplication is an optional and unusual feature of noun plurals. The plural in nouns is regularly made with a suffix -(i)m, to be described below.

When a noun plural with -(i)m also has reduplication, the vowel shortening rule given in (17) above is also optional.

Examples:

46) chu:'u 'dog' chu:'um 'dogs'
With Reduplication in the plural: chu chu:um or chu chu:'um

47) mi:si 'cat' mi:si:m 'cats'
With Reduplication in the plural: mimisim or mimisi:m

This variability is also not explained in the analysis proposed here.

1.5.2. Summary on Pitch/Accent.

Many problems relating to tone or pitch/accent in Yaqui are left unresolved here. Some recent spectographic
work suggests that the contrast may involve relative loudness more than tone. However, there are interesting findings concerning the role of reduplication in revealing syllable structure, and the relationship between syllable structure and surface tone. I have also identified the presence of two types of reduplication in Yaqui, that I have called "Primary" and "Secondary", and I have tried to identify some semantic correlates of these morphological processes. Although pitch/accent seems to be contrastive in some words, the functional load on the contrast is very low. For the great majority of words and roots, the initial syllable has a falling tone and the second syllable has a rising tone. The Pascua Yaqui Tribe does not include pitch/accent in the official orthography it has adopted, and in the following sections of this study, I will not record the pitch/accent of words.

After this brief background material on the Yaqui language and its sound system, I turn to the analysis of voice and argument structure in the language.
CHAPTER II

ARGUMENT STRUCTURE IN BASIC SENTENCES

2.0. Introduction.

In this chapter, I will describe the argument structure of basic, single clause sentences in Yaqui, in order to lay the groundwork for the analysis of the changes in argument structure that occur in complex sentences (Chapter III) and in voice alternations (Chapter IV). Subordination and voice alternations are both processes and create changes in argument structure.

Yaqui is a language rich in derivation and inflection, and the morphology of the language is complex. In dealing with voice and argument structure, I will be constantly concerned with morphology as well as syntax, since the former is part of the latter. In this chapter, I want to outline the properties of the fundamental morphologically defined word classes of the language, in order to be able to lay out the problems I want to investigate. In order to define predicate/argument structure, we need some workable
definitions of Verbs, Nouns, and Adjectives, and we need to identify some of the closed functional categories. We will need a description of the structure of the phrasal categories. I will then describe the argument structure of simple sentences, define the argument types that occur, and add some observations on the use of the different argument types.

2.1. The Noun and the Noun Phrase.

Yaqui nouns may be defined as words that can take the Plural suffix -(i)m, and the Case suffix -ta. As seen in some other Uto-Aztecan languages, Plural and Case marking on nouns (not pronouns) are mutually exclusive.

2.1.1. Plurals.

In plural formation, Nouns that end in a vowel retain that vowel before the -m.

<table>
<thead>
<tr>
<th>1)</th>
<th>Singular</th>
<th>Plural</th>
<th>Gloss</th>
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<tbody>
<tr>
<td></td>
<td>miisi</td>
<td>miisi-m</td>
<td>cat</td>
</tr>
<tr>
<td></td>
<td>uusi</td>
<td>uusi-m</td>
<td>child</td>
</tr>
<tr>
<td></td>
<td>kari</td>
<td>kari-m</td>
<td>house</td>
</tr>
<tr>
<td></td>
<td>yoi</td>
<td>yoi-m</td>
<td>Mexican</td>
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<td></td>
<td>yoeme</td>
<td>yoeme-m</td>
<td>person or</td>
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<tr>
<td></td>
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<td>leepe-m</td>
<td>Yaqui</td>
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<tr>
<td></td>
<td>eeye</td>
<td>eeye-m</td>
<td>orphan</td>
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<td>masiwe-m</td>
<td>big ant</td>
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<td>Singular</td>
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<td>mochik-im</td>
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<td>voovo’ok-im</td>
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<td>pa’aros-im</td>
<td>rabbit</td>
<td></td>
</tr>
<tr>
<td>o’ow</td>
<td>o’ow-im</td>
<td>man</td>
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</tbody>
</table>

There are very few Yaqui root words that end in a consonant. Note that these nouns all are natural kind terms, and note also that only a very few consonants appear here. It is believed that these consonants may be reflexes of old Absolutive suffixes. The term "Absolutive" was introduced by Sapir, to refer to non-possessed nouns in Native American languages.

If the singular noun ends in the consonant -t, it is a -ch that appears before the plural suffix -im:
3) Singular | Plural | Gloss
---|---|---
vaakot | vaakoch-im | snake
hamut | ha'amuch-im | woman
teput | tepuch-im | flea
wiikit | wiikich-im | bird

This same alternation between -~ and -ch appears elsewhere in the grammar. (See Hagberg, to appear, for a treatment of the same phenomenon in Mayo).

2.1.2. Case.

Yaqui has a Nominative/Accusative case system. Nouns occur with the case suffix -ta. As elsewhere in Uto-Aztecan, this suffix occurs with nouns in Object function, and with Possessor nouns.

4) Peo miisi-ta tetemu-k.
   Pete cat-ACCUSATIVE kick-PERFECTIVE
   Pete kicked a cat.

5) Peo-ta kari veete-k
   Pete-POSSESSIVE house burn-PERFECTIVE
   Pete’s house burned.

When a Noun Phrase containing a Possessive Noun is in object function, the suffix -ta may not be repeated.

6) ine po Peo-ta kari vicha-k
   1sNOM Pete-POSSESS house see-PERF
   I saw Pete’s house.

Accordingly, we could say that -ta simply marks Non-Nominative case. But since there is a contrast between Accusative case and Possessive case in the pronominal
system, and since these cases have different syntactic functions, I will treat -ta as two homophonous case markers, Accusative and Possessive, except where the contrast in syntactic function is at issue, in the analysis of Possessive sentences in Chapter VI below.

It was noted above that Plural and Case on nouns are mutually exclusive. Compare (7) with (4) above.

7) Peo ume miisi-m tetemu-k
   Pete DET:PL cat:PL kick-PERF
   Pete kicked the cats.

Nouns also occur with various postpositions. Some examples:

8) miisi-ta-u   'to (a) cat'
   miisi-ta-t   'on a cat'
   miisi-(ta)-mak(e)   'with a cat'
   miisi-ta-vetchi'ivo   'for a cat'

9) Peo uka miisi-ta-t chepte-k
   Pete DET:ACC cat-ACC-PP step-PERF
   Pete stepped on the cat.

There are also locative postpositions:

10) kari   'house'
    kari-po   'in the house'
    kari-wi   'toward the house'
    kari-chi   'on the house'

There is an instrumental:

11) kuta   'stick'
    kuta-e   'with a stick'
    kutam-mea   'with sticks'
2.1.3. The Noun Phrase.

The noun phrase may be headed by a Determiner, and it may include other items such as Adjectives, Adverbs, Numerals, and Quantifiers.

12) u teeve o'ow maaso-ye'e
   DET tall man deer-dance
   The tall man is deer-dancing.

The head noun of the Noun Phrase is case marked.

13) Peo teeve o'ow-ta vicha-k
    Pete tall man-ACC see-PERF
    Pete saw (a) tall man.

2.1.3.1. Determiners. These words also serve as Demonstratives, and mark Case and Plural number. There are several sets, marking definiteness and distance from the speaker/hearer.

<table>
<thead>
<tr>
<th>Sg.NOM</th>
<th>Sg.ACC</th>
<th>Plural</th>
<th>Gloss</th>
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<tbody>
<tr>
<td>u</td>
<td>uka</td>
<td>ume</td>
<td>the</td>
</tr>
<tr>
<td>inii</td>
<td>inika</td>
<td>inime</td>
<td>this</td>
</tr>
<tr>
<td>hunuu</td>
<td>hunuka</td>
<td>hunume</td>
<td>that</td>
</tr>
</tbody>
</table>

There are other variants. As Demonstratives, these words can stand alone as a case-marked argument.

17) inepo hunuka vicha-k
    IsNOM DET:ACC see-PERF
    I saw that one.
In a case marked NP, both the Determiner and head noun are case marked.

18) inepo hunuka o'ow-ta vicha-k
    IsNOM DET:ACC man-ACC see-PERF
    I saw that man.

2.1.3.2. Adjectives. Adjectives may modify nouns, or they may also stand alone as a case-marked argument.

19) inepo uka chukui chuu'u-ta vicha-k
    IsNOM DET:ACC black dog-ACC see-PERF
    I saw the black dog.

When Adjectives do not occur with a head noun, they mark case and number. The Accusative case suffix on Adjectives is -k.

20) inepo uka chukui-k vicha-k
    IsNOM DET:ACC black-ACC vicha-k
    I saw the black one.

This Adjectival Accusative case is also mutually exclusive with plural marking.

21) inepo ume chukui-m vicha-k
    IsNOM DET:PL black-PL vicha-k
    I saw the black ones.

Other properties of the Noun Phrase will be identified in the course of the analysis of voice and argument structure.
2.1.4. Pronouns.

Yaqui Pronouns are words that mark the features of person, number, and case. Gender is not marked. There are distinct paradigms for Accusative and Possessive pronouns, with some overlap in forms.

22) Nominative Pronouns

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ineypo, nee</td>
<td>itepo</td>
</tr>
<tr>
<td>2</td>
<td>empo</td>
<td>eme’e</td>
</tr>
<tr>
<td>3</td>
<td>aapo</td>
<td>vempo</td>
</tr>
</tbody>
</table>

23) Accusative Pronouns

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>nee</td>
<td>itom</td>
</tr>
<tr>
<td>2</td>
<td>enchi</td>
<td>enchim</td>
</tr>
<tr>
<td>3</td>
<td>apo’ik</td>
<td>vempo’im</td>
</tr>
</tbody>
</table>

Nominative pronouns appear in intransitive sentences; both Nominative and Accusative pronouns appear in transitive sentences.

24) a. aapo nooka

3sNOM speak

He is speaking.

b. ineypo enchi ania-ne

1sNOM 2sACC help-FUTURE

I will help you.

c. empo nee ania-ne

2sNOM 1sACC help-FUTURE

You will help me.

25) Possessive Pronouns

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. in, nim
2. em
3. a, apo'ik

These Possessive pronouns are often precliticized to the Possessed noun. Typically, the suffix \(-wa\) is also attached to the possessed noun.

\[
\begin{align*}
\text{in=kari-wa} & \quad \text{\textquoteleft my house\textquoteright} \\
\text{em=kari-wa} & \quad \text{\textquoteleft your house\textquoteright} \\
\text{a=kari-wa} & \quad \text{\textquoteleft his/her house\textquoteright}
\end{align*}
\]

This suffix \(-wa\) is ordinarily mutually exclusive with the case marker \(-ta\).

\[
\begin{align*}
\text{a. vempo uka} & \quad \text{3pNOM} \\
& \quad \text{kari-ta} \\
& \quad \text{veeta-k} \\
& \quad \text{DET:ACC house-ACC burn-PERF} \\
\text{They burnt the house.}
\end{align*}
\]

\[
\begin{align*}
\text{b. vempo em=} & \quad \text{3pNOM} \\
& \quad \text{kari-wa} \\
& \quad \text{veeta-k} \\
& \quad \text{2sPOSS house-POSS burn-PERF} \\
\text{They burnt your house.}
\end{align*}
\]

There are also Reflexive pronouns:

\[
\begin{align*}
\text{28) Reflexive Pronouns} \\
\text{Singular} & \quad \text{Plural} \\
1. & \text{ino} & \text{ito} \\
2. & \text{emo} & \text{emo} \\
3. & \text{au} & \text{emo}
\end{align*}
\]

Note the default form \textit{emo}; this kind of Reflexive paradigm is typical of Uto-Aztecan. Example:

\[
\begin{align*}
\text{29) aapo au} & \quad \text{3sNOM} \\
& \quad \text{vicha-k.} \\
& \quad \text{espeho-po} \\
& \quad \text{3sREFL see-PERF, mirror-PP} \\
\text{He saw himself, in the mirror.}
\end{align*}
\]
30) Dative Pronouns

1. neun  itou
2. eeu  emou
3. aau  ameu

Dative pronouns appear in ditransitive sentences, to be described in Chapter IV.

31) aapo uka vachi-ta itou nenka-k

3sNOM DET:ACC corn-ACC 1pDAT sell-PERF

He sold the corn to us.

The pronouns in (30) contain the Postposition -u, seen in Exp. (8) above, which marks Dative or Oblique case. Other postpositions are attached to the pronominal bases seen in (30), with some variations.

2.1.5. Clitic Arguments.

In addition to free lexical arguments, NPs and free pronouns, Yaqui has pronominal clitics.

2.1.5.1. Subject clitics. Compare the following:

32) a. inepe siikka

1sNOM leave:PERF

I left.

b. siikka=ne

leave:PERF=1sg

I left.

Example (32a) shows a free pronoun as subject; (32b), a subject clitic. (I write clitic attachment with the
equal sign, and the hyphen for an affix.) Subject clitics occur in the second position in the sentence, following the first constituent, whatever that may be. Second position clitics are very common in the Uto-Aztecan languages. Subject clitics are not obligatory in Yaqui, as they are in many languages. The Yaqui speaker may choose between free and clitic pronouns according to discourse factors, in placing more or less focus on an argument. Exp. (32a) can be used for contrastive emphasis on the subject, and (32b) for topic continuity in discourse.

The subject clitic may attach to an adverb, or, in a transitive sentence, to an object argument.

33) a. tuuka=te tekipanoa-k
    yesterday=lpNOM work-PERF
    We worked yesterday.

   b. uka ili-'uusi-ta=te ania-k
    DET:ACC child-ACC=lpNOM help-PERF
    We helped the child.

The complete set of subject clitics is as follows:

34) Singular                 Plural
   1.  =ne                        =te
   2.  ='e                        ='em
   3.  __                         =m

There is no third person singular subject clitic.

Alternatively, we could say that there is a ZERO pronoun
in this position, since third person singular subject pronouns are often "dropped" or "missing" in discourse. I interpret sentences with a "missing" subject as sentence partials, but I will not argue for this analysis here.

2.1.5.2. Object clitics. There are also object clitics, but only for the third person in Arizona Yaqui. There are no object clitics for the first and second person.

35) a. Maria a=bwise-k
   Mary 3sACC=grab-PERF
   Mary grabbed it.
   
b. Maria am=bwise-k
   Mary 3pACC=grab-PERF
   Mary grabbed them.

We saw that subject clitics occupy a certain position in the sentence, the second position. Object clitics do not occupy a particular sentence position; they occur before the verb, wherever it appears. While adverbs (or subjects) may intervene between a lexical object and the verb, nothing can intervene between an object clitic and the following verb.

36) a. Peo haivu kuta-m chukta-su-k
    Pete already wood-PL cut-COMPL-PERF
    Pete already chopped the wood.
b. Peo haivu am=chukta-su-k
   Pete already 3pACC=cut-COMPL-PERF
   Pete already chopped them.

c. *Peo 'am=haivu chukta-k
   Pete them=already cut-PERF

Clitic objects, like clitic subjects, do not take full stress, nor affect the pitch/accent structure of the word to which they are cliticized. Compare:

37)  a. tuuka yesterday
     b. tuuka=ne yesterday=I
     c. nooka talk
     d. [nok-ne] talk-FUTURE

38)  a. tuuse grind
     b. am=tuuse grind them
     c. poona play (musical instrument)
     d. [hi-pona] play (some instrument)

(The hi- prefix marks an indefinite patient, and will be treated further in Chapter IV below.) Affixes produce a phonetic shortening of the vowel, as shown in the two forms in brackets, (37d) and (38d). The vowels do not shorten when clitics are attached, as shown in (37b) and (38b).

2.1.5.3. Uses of the clitics. A clitic argument is used when the speaker wishes to remove focus from that argument position. With a transitive sentence, the Yaqui
speaker may choose between free and clitic pronouns in selecting which argument will be in focus, and which one will reflect topic continuity.

39) a. apo'ik=ne ania-k
    3sACC=1sgNOM help-PERF
    I helped him.

39) b. ine po a=ania-k
    1sNOM 3sACC=help-PERF
    I helped him.

Example (39a) has a lexical object and a clitic subject; in (39b), the situation is reversed. This contrast is much like that between stressed and unstressed pronouns in English. A variant of (39b) is:

39) c. ine po=ne a=ania-k
    1sNOM=1sNOM 3sACC=help-PERF
    I helped him.

Note that in this example, the first person clitic is attached to the free pronoun of the same value.

Among the subject clitics, the first and second person are perhaps the most often used, since first and second person are the "speech act participants". They are usually not new information in the sentence, and are backgrounded in the discourse. Second person arguments are the addressee, and usually are full pronouns in
simple declarative sentences, where second person is in focus as new information, or under contrastive emphasis.

40) empo yooko tekipanoa-ne
   2sNOM tomorrow work-FUTURE
   You will work tomorrow.

41) empo ume livro-m kopta-k
   2sNOM DET:PL book-PL forget-PERF
   You forgot the books.

The second person clitics are used frequently in Imperatives and in Interrogatives, where the second person argument is background information that is "understood" in context.

42) a. ume livrom neu toha='e!
   DET:PL book-PL 1sDAT hand=2sNOM
   Bring me the book(s)! (SG Imperative)
   b. hoote='em, uusi-m!
      sit down=2pNOM, child-PL
      Sit down, children! (PL Imperative)

They may also appear in a yes/no question or a statement.

43) a. ume vista-m='e vicha-k?
   DET:PL movie-PL=2sNOM see-PERF
   Did you see the movie?
   b. Peo-ta='e tekipanoa-sae-n
      Pete-ACC-2sNOM work-DIRECTIVE-PAST IMPF
      You told Pete to work.
(In Exp. [42, 43] we see Spanish loanwords [livro, vista] that typically appear in the plural regardless of the number of the intended referent.) The third person plural subject clitic also appears in marking topic continuity.

44) Maria-ta=m vicha-k
    Mary-ACC=3pNOM see-PERF
    They saw Mary.

In my speech, the object clitics are limited just to third person. It seems likely that pragmatic and discourse factors are involved in this distribution. Recent statistical studies of the use of nouns and pronouns in discourse have shown that nouns are most often used for new information, while pronouns are used for old information and to mark topic continuity (Givon 1984). When first and second person are objects, it is more often new information or contrastive emphasis. Therefore, it is just in the third person that we should expect to see object clitics. I have no statistical data on these questions; I am just presenting my intuitions as a native speaker as to how and why sentences with clitic arguments are used. In Chapter IV, I will compare the uses of the Voice alternates to the uses of the different argument types described here.
2.2. The Verb.

In the example sentences given in the preceding sections, we have seen a number of inflected verbs with their arguments. Yaqui has the rich sentence final inflectional machinery that is typical of verb-final languages.

2.2.1. Tense, Aspect and Modality.

There appear to be three position classes of suffixes that mark contrasts in Tense/Aspect/Modality. The following sentence shows the three positions:

45) inepo tekipanoa-taiti-pea-n

1 2 3

lsNOM work-INCEPTIVE-INCLINATION-PAST IMPERFECT

I felt like starting to work.

2.2.1.1. Position 1. Only two suffixes appear in this position.

46) a. tekipanoa-taite='e!

work-INCEPTIVE=2sNOM

Start work!

b. tekipanoa-su='e!

work-COMPLETIVE=2sNOM

Finish work!

As the examples in (46) show, the Inceptive and the Completive do not make the clause finite. They can be
followed by the second person clitics that build an Imperative. These clitics cannot follow the other T/A/M suffixes.

2.2.1.2. Position 2. This position is occupied by two modal suffixes. They render the clause finite.
47) inepo tekipanoa-taiti-pea

1 2
1sNOM work-INCEPTIVE-INCLINATION
I feel like starting to work.
48) inepo tekipanoa-taiti-vae

1 2
1sNOM work-INCEPTIVE-PROSPECTIVE
I am going/I want to start work.

The suffix -pea is used to refer to the subject’s own desires for himself, and cannot be used to refer to what he wants someone else to do. The suffix -vae can mean "is about to" or "wants to." Neither of these suffixes can occur as free words.

There are other less commonly used elements that appear in this position. Including is the suffix -roka, which is hard to find a name for. It means something like "to speak of a desire", as in the following sentences.
49) a. aapo nok-roka
   3sNOM speak-QUOT:DESID
   He says he wants to talk.

b. aapo hiokte-roka
   3sNOM-write-QUOT:DESID
   He says he wants to write.

This suffix seems to include both the functions of a Quotative and a Desiderative. It does not occur as a free verb. As a Quotative, it does not occur with first person subjects.

49) c. * inepo nok-roka
d. * inepo hiokte-roka

It may be that the verb nooka, "talk" is included in this form. I have no analysis of -roka. Forms like -vae, -pea, and -roka add real lexical content to the clause, but they do not add an argument. This suggests that a serial verb analysis would be appropriate here. Since these elements do not affect argument structure, I will not deal with them further in this thesis.

2.1.1.3. Position 3. An example of this position was given above in Exp. (45); this is the suffix -n, Past Imperfect. In the preceding examples, we have seen several other suffixes that occur in this position.
Included are:

50) a. aapo bwiika-k
He sang.

b. aapo bwiik-ne
He will sing.

c. aapo bwiika-kan
He had sung.

d. aapo bwiika-n
He was singing.

As example (50b) shows, the final vowel of certain verbs drops before T/A/M suffixes that begin with a continuant.

2.2.2. Suppletion.

The Yaqui verb does not inflect for person. It also does not show number, aside from a closed class of commonly used verbs that supplete for number.

51) Singular Plural Gloss

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>vuite</td>
<td>tenne</td>
<td>'run'</td>
</tr>
<tr>
<td>weche</td>
<td>watte</td>
<td>'fall'</td>
</tr>
<tr>
<td>weeye</td>
<td>kaate</td>
<td>'walk'</td>
</tr>
<tr>
<td>yeste</td>
<td>hote</td>
<td>'get up'</td>
</tr>
<tr>
<td>kikte</td>
<td>hapte</td>
<td>'stand up'</td>
</tr>
<tr>
<td>yecha</td>
<td>ho' a</td>
<td>'wake up'</td>
</tr>
</tbody>
</table>

For some verbs, this suppletion occurs only in the Perfective aspect.

52) katek hoka 'be seated'
vo'oka to'oka 'be lying'

For other examples, see Escalante (1985). These verbs share a semantic feature; the Perfective aspect shows the result of a change of body position.
2.2.3. The Verb Phrase.

As in many verb final languages with case-marked nouns, Yaqui shows some "scrambling" in the order of nominal arguments. But there is evidence that the underlying order is SOV. Plural nouns in Yaqui are not case-marked, and when both the subject and object of a transitive sentence are plural nouns, the word order is fixed.

53) ume chuu’u-m ume miisi-m hahha-su-k
DET:PL dog-PL DET:PL cat-PL follow-COMPL-PERF
The dogs chased the cats.

This is the only possible interpretation of this sentence.

Other information on the Verb Phrase will be given in the succeeding chapters.

2.3. Summary on Simple Clauses.

This completes the preliminary overview of the argument structure of basic clauses in Yaqui. This survey of the argument structure of simple clauses is the background for the study of the changes in argument structure that appear in complex sentences, to be described in Chapter III, and in the voice alternations described in Chapter IV. We have seen two argument types in simple sentences: lexical (free word) arguments, including noun phrases and pronouns; and clitic
arguments, second position subject clitics and pre-verbal object clitics. I have described the use of clitic arguments for removing focus and prominence from an argument position in the sentence. A clitic cannot receive full stress and cannot be focussed. I will return to this question in the discussion of the functions of voice alternations.
3.0. Introduction.

In Yaqui, there are a number of suffixed elements that attach to the verb to derive complex sentences, sentences with an embedded clause. This is typical of verb-final languages. In this chapter, I want to distinguish between two types of elements that are suffixed to verbs to make a complex sentence: a) those elements that also appear in other sentences as free verbs, and b) those that occur only as suffixes. When the suffixed item appears in other contexts as a free verb, I will call the verb plus verb construction a compound verb. When the suffix never occurs alone as a free verb, I will call the verb plus suffix a complex verb (Jelinek and Escalante, 1985). There are certain properties that the argument structure of a sentence with either a compound or complex verb must have. It must have at least two arguments, since each verb must have a subject. The final verb must have an object also: this object is the preceding "inner" verb and its arguments. In this chapter I will be describing the kinds of argument structures that
show up in complex sentences with Compound and Complex verbs. I will describe how they resemble the argument structures seen in single-clause sentences, and how they differ from them. It is because of the difference between the possible argument structures of simple verbs vs. Compound/Complex verbs that we want to say that these derived verbs build complex sentences.

There are other kinds of embedded nominalized subordinate clauses in Yaqui, including what are sometimes called "headless" relative clauses, as shown in examples (1) and (2). In the following examples, the subordinate clauses in the Yaqui sentences and interlinear glossses will be enclosed in brackets.

1) a) \([u enchi vicha-ka-me] \) siika

\[[DET 2sACC:ACC see-PERF-SUBJ:NOML] leave-SG:PERF\]

The (one who) saw you left.

b) \([ume em vicha-ka-'u-m] \) sahak

\[[DET:PL 2s:POSS see-PERF-OBJ:NOML-PL] leave:PL:PERF\]

The (ones who) you saw left.

There are also adjoined subordinate clauses.

2) \(Peo hu'unea, [ENCHI siika-'u]\)

Pete know \([2sNOM leave:PERF-OBJ:NOMINALIZER]\)

Pete knows, that you left.
I will not be concerned with these nominalized clause types here, since they do not involve compound or complex verbs.


In the process of verb compounding, two independent or "free" verbs are combined into a single word. Compare Examples (3) through (5).

3) a. ine po ye’e
   1sNOM dance
   I am dancing.

   b. ine po yi’i-ne
   1sNOM dance-FUTURE
   I will dance.

Note the change in the form of the verb meaning "dance" when it is followed by a suffix. Now compare:

4) aapo enchi uka lio(s)-nok-ta mahta-k
   3sNOM 2sACC DET-ACC god-talk-ACC teach-PERFECTIVE
   He taught you the prayer.

5) aapo [enchi yi’i]-mahta-k
   3sNOM [2sACC dance]-teach-PERFECTIVE
   He taught you to dance.

Ex. (3) and (4) show single clause sentences. (In [4], the object NP is a compound noun, that we will not be concerned with here.) Ex. (5) shows the verbs that appear in Examples (3) and (4) compounded, in a complex sentence
with an embedded clause. When verbs are compounded, each of the compounded verbs appears last in its own clause. The "inner" verb appears first, in a bound form, shown in the brackets in Ex. (5). The "outer" verb appears second, and its subject has Nominative case. The first person singular subject of the inner verb, of the embedded clause, cannot have Nominative case. As seen in (5), the subject of the inner verb "dance" has Accusative case.

The presence of Accusative case on the subject of the inner verb is evidence that the example in (5) is a complex sentence with an embedded subordinate clause. It cannot be an example of two conjoined independent clauses, since each of the conjoined independent clauses would have a subject with Nominative case, as in (6) and (7).

6) empo ye'e-ka, aapo into bwiika-
   2sNOM sing-PERF, 3sNOM and dance-PERF
   You sang and he danced.

7) empo ye'e-ka, taa aapo kaa ye'e-ka
   2sNOM dance-PERF, but 3sNOM NEG dance-PERF
   You danced but he didn’t dance.

We can prove that the inner verb has a subject, since this subject can bind a reflexive anaphor if the inner verb is transitive.
8) Peo [enchi emo vekta]-mahta-ne
    Pete [2sACC 2sREFL shave]-teach-FUTURE
    Pete will teach you to shave yourself.

Binding anaphors is a property of subjects.

   Perception verbs often appear in compound verb constructions.

9) Peo [apo’ik bwiik]-hikkaha-n
    Pete [3sACC sing]-hear-PAST IMPF
    Pete was listening to him sing.

10) aapo (espeho-po) [au yi’i]-vitchu-n
    3sNOM (mirror-PP) [3sSELF dance]-watch-PERF
    He was watching himself dance (in the mirror).

Another example of compound verb formation involves the verb tia (tihia) "say". This verb can also occur as the single verb in a simple clause.

11) aapo "ye’e-’e" tia-n
    3sNOM dance-IMPERATIVE say-PAST IMPF
    He said "Dance!"

   Compare the following sentences with a compound verb:

12) aapo [apo’ik siika’]-tia-n
    3sNOM [3sACC leave:PERF]-say-P IMPF
    He said he was leaving.

13) aapo [au siika’]-tia-n
    3sNOM [3sgREFL leave:PERF]-say-P IMPF
    He said he was leaving.
In Exp. (12), the subjects of the main and embedded clauses are not coreferent, but in (13) they are. The use of the anaphor as subject of the embedded sentence in Exp. (13) shows that the subjects of the main and embedded clauses are coreferent. This is evidence that the embedded clause is dependent upon the main clause. The glottal stop at the end of the verb siika' precedes -tia and certain other verbal suffixes, showing that the two verbs are compounded into a single phonological word.

However, the verb tia has another special property when it appears in a complex sentence. The clause that is the object of the verb tia is finite; it has the Perfective aspect in Examples (12) and (13). This is the only verb I have found that has this property. It is even possible for both the main and subordinate clauses to have the Passive, to be described in the next chapter.

14) aapo vep-su-wa-k tiu-wa
   3sNOM beat-COMPLETIVE-PASSIVE-PERFECTIVE say-PASSIVE
   He was beaten, [it] is said.
The subordinate clause in Exp. (14) is the subject of the main clause verb tia; since tiuwa is Passive, the subject has a Patient theta role. When main clause tia is Passive, it is like a Quotative, and does not attach to the previous verb. In these constructions, the subordinate clause is adjoined rather than embedded.
3.2. Complex verbs. There are a number of suffixes that can attach to a verb in Yaqui, producing a complex sentence. These suffixes never stand alone as full verbs. They may derive historically from full verbs, just as some of the Tense/Aspect and Modality suffixes discussed in Chapter II may derive from full verbs. We can obtain evidence on this point by looking at the closely related language Mayo, or others not so closely related (see Collard and Collard, 1984). Among the suffixes to be included here are: the Causative, the Indirect Causative, the Directive, and the Desiderative. Suffixes of this kind are often seen in other verb final languages also, where they build complex sentences. Examples of these suffixes follow.

3.2.1. The Causative.

The simple Causative in Yaqui is the suffix -tua. Compare Examples (15a) and (15b).

15) a. aapo bwiik-ne
   3sNOM sing-FUTURE
   He will sing.

   b. inepo [apo’ik bwiik]-tua-ne
   lsNOM [3sACC-sing]-CAUS-FUTURE
   I will make him sing.

In Example (15b), first person singular is the subject of the Causative suffixed verb, and third person singular is
the subject of the free verb "sing". Another example of the Causative is:

16) ine-po [ino bwiik]-tua-vae-n,
    1sNOM [1sREFL sing]-CAUS-PROSP-PAST IMPF,
    I wanted to make myself sing,
    taa-ne kaa aa bwiika-k
    but NEG=1sNOM ably sing-PERF
    but I wasn’t able to sing.

    (I tried to sing, but I couldn’t.)

In Exp. (16), we see coreference between the subjects of the Causative and the inner verb, in the first of the two conjoined sentences. This coreference is shown by the use of an anaphor.

When the inner verb is transitive, we can see coreference between the inner subject and object, producing an anaphor.

17) aapo [Peo-ta au vekta]-tua-ne
    3sNOM [Pete-ACC 3sREFL shave]-CAUS-FUTURE
    He will make Pete shave himself.

This kind of argument structure appears only in complex sentences, since the control of anaphors is a property of subjects. Note that Complex verb constructions can contain an anaphor that is not controlled by the Nominative argument of the sentence, but by the subject of the "inner" verb. This is evidence that these sentences
contain embedded clauses, with embedded subjects that are marked Accusative.

This anaphor in the embedded clause cannot be controlled by the subject of the "upstairs" clause.

18) aapo [Peo-ta a=vekta]-tua-ne
   3sNOM [Pete-ACC 3sACC=shave]-CAUS-FUTURE
   He will make Pete shave him.

As in English, the object pronoun in the embedded clause can refer to the subject of the main clause or to a some other person, but not to the subject of the embedded clause.

3.2.2. The Indirect Causative.

This suffix is used to speak of a situation where the subject of the Indirect Causative is indirectly involved in causing some eventuality. Compare (19) and (20).

19) vempo [itom saka']-tua-k
   3pNOM [lpACC leave:PL]-CAUS-PERF
   They made us leave.

20) vempo [itom saka']-tua-tevo-k
   3pNOM [lpACC leave:PL]-CAUS-IND CAUS-PERF
   They had us leave.

In (19), the Causative subject directly causes the subject of the inner verb to act; in (20), the causation is
indirect. The use of -tevo along with -tua changes the reading to that of an Indirect Causative.

There are some constructions in which the Indirect Causative suffix can appear without -tua. Compare:

21) a. aapo nee sua-k
   3sNOM 1sACC-guard-PERF
   He took care of/guarded me.

   b. aapo nee sua-tevo-k
   3sNOM 1sACC-guard-IND CAUS-PERF
   He had me guarded.

As with the simple Causative, it is possible to have an anaphor in the embedded clause.

22) aapo [Peo-ta au vekta]-tua-tevo-ne
   3sNOM [Pete-ACC 3sREFL shave]-CAUS-IND CAUS-FUTURE
   He will have Pete, shave himself.

This anaphor cannot be controlled by the matrix subject, as we saw with the simple Causative.

3.2.3. The Directive.

This suffix is very much like the Causative.

23) Peo [Maria-ta bwiik]-sae-n
    Pete [Mary-ACC sing]-DIRECTIVE-PAST IMPF
    Pete told Mary to sing.
As with the Causative, the Directive can be used when the inner verb is transitive, producing an anaphor.

24) Huan [varveo-ta au vekta]-sae-n

John [barber-ACC 3sREFL shave]-DIR-PAST IMPF

John, told the barber, to shave himself.

This anaphor must be controlled by the "inner" subject.

25) Huan [varveo-ta a=vekta]-sae-n

John [barber-ACC 3sACC=shave]-DIR-PAST IMPF

John, told the barber, to shave him.

Again, the object pronoun in the embedded clause can refer to the subject of the main clause or to a third person, but not to the subject of the embedded clause.

3.2.4. The Desiderative.

This suffix is used to express the fact that the subject of the Desiderative wants the subject of the embedded clause to do or be something.

26) a. Peo [Maria-ta bwiik]-'ii'aa

Pete [Mary-ACC sing]-DESIDERATIVE-PERF

Pete wants Mary to sing.

This suffix contrasts with the "Inclination" suffix -pea, described in Chapter II, where the subject of the main clause speaks of what he wants to do himself.

26) b. ine po bwiik-pea

1sNOM sing-INCLINATION

I feel like singing.
c. *inepo Maria-ta bwiik-pea

This suffix is most natural when used to refer to the speaker's own desires, since the desires of another can never be directly known. Another argument is never added, and a complex sentence is not produced.

The Desiderative, like the other suffixes that build complex verbs, can embed a transitive verb, producing an anaphor in the embedded clause.

27) aapo [Peo-ta au vekta]-'ii'aa
   3sNOM [Pete-ACC 3sREFL shave] - DESIDERATIVE
   He_i wants Pete_j to shave himself_j.

28) aapo [Peo-ta a=vekta]-'ii'aa
   3sNOM [Pete-ACC 3sACC=shave] - DESIDERATIVE
   He_i wants Pete_j to shave him_i,k.

Again, the anaphor can be bound only by the subject of the embedded clause.

This completes the list of suffixed elements that I have identified that do not occur as free verbs, and function to build Complex verbs. These suffixes are mutually exclusive, except for the Causative and Indirect Causative, as noted above.
3.3. Evidence for a multi-clause analysis.

In the preceding sections, we have been using the fact that Compound and Complex verb constructions can contain an anaphor that is not bound by the Nominative argument of the sentence as evidence that these sentences contain embedded clauses, with embedded subjects that are marked Accusative. However, there is also evidence suggesting that these are single clause constructions, perhaps with some kind of clause merger. For example, only the outermost element can be negated.

29) a. ine po kaa [enchi siim]-sae-n
   1sNOM NEG 2sACC leave-DIR-PAST IMPF
   I didn’t tell you to leave.

There is no way to negate the inner verb in such a sentence; a construction with an adjoined subordinate clause must be used.

29) b. nee enchi tehhoa-kan, kaa enchi siim-sae-kai
   1sNOM 2sACC tell-P PERF, NEG 2sACC leave-DIR-COMP
   I told you, not to go.

This is evidence against an embedded clause analysis.

Another problem for an embedded clause analysis is the fact that when the subjects of the two clauses are coreferent, an anaphor appears.
30) aapo au siim-ne'-'tia-n
   3sNOM 3sREFL leave-FUTURE-say-PAST IMPF
He said he will leave.

However: note that there are two instances of Tense/Aspect marking in Example (30): the inner verb has the Future suffix and the outer verb has the Past Imperfect. This is evidence that this is a two-clause construction, despite the anaphor as subject of the inner verb. The use of the anaphor here can be compared to Same Subject marking in a "Switch Reference" system, as seen in the Muskogean language family (see Haiman and Munro 1983). Otherwise, Yaqui does not have Switch Reference.

Furthermore, there are a very few special sentence types in other languages where anaphors appear to be controlled by objects in simple clauses. For example:

31) I showed little Janie herself in the mirror.
A similar sentence can be constructed in Yaqui:
32) inepo ili Huana-ta espeho-po au vit-tua-k
   1sNOM little Huana-ACC mirror-PP 3sREFL see-CAUS-PERF
I showed little Janie herself in the mirror.

The English sentence in (31) is claimed to have a "small clause" (Stowell, 1981; Chomsky, 1981). Notice that neither object can be made oblique with a preposition, so it is not a ditransitive sentence.
Evidence against analyzing Compound and Complex verb sentences as having just one clause can be found in other facts about argument structure in these sentences.

It is possible to have the innermost verb be a ditransitive, producing a string of three Accusative arguments after the Nominative subject of the outer verb.

33) Hose [Peo-ta enchi uka vachi-ta miik]-sae-n
    Joe [Pete-ACC 2sACC DET:ACC corn-ACC give]-DIR-P IMPF
    Joe told Pete to give you the corn.

In this example, uka vachi-ta is a single constituent, and there are three Accusative marked constituents in a row. Sentences with this many Accusative constituents are not common, but they are grammatical, and they provide important evidence that we are dealing with embedded clauses in these constructions. Aside from complex and compound verbs, Yaqui has no simple clauses with strings of Accusative constituents of this kind.

3.4. Compound-Complex verbs.

It is possible for some of the suffixes we have seen in Section 3.2 to occur together, and it is possible for some of them to occur with a compound verb. Both of these combinations produce a sentence with two embeddings.
34) Peo [ENCHI [Huana-ta yi’i]-mahta]-tua-ne
   Pete [2sACC [Jane-ACC dance]-teach]-CAUS-FUTURE
   Pete will make you teach Jane to dance.

In these constructions also, we may see anaphors.

35) ine po [Peo-ta [ENCHI emo vekta]-tua]-sae-n
   1sNOM [Pete-ACC [2s-ACC 2sREFL shave]-CAUS]-DIR-P-IMPF
   I ordered Pete to make you shave yourself.

However, these double embeddings are not common.

Sentences with more than two embeddings of this kind seem to be impossible to process, and are not used.

3.5. Argument order.

In these constructions, the order of the ACC arguments is fixed. The innermost verb is preceded by its subject, then each verb added to the right adds its own subject on the left, in a "nested" clause construction, shown by the bracketing: \([S_3 [S_2 [S_1 \text{V}_1] - \text{V}_2] - \text{V}_3]\).

Compare the different word order and glosses of the example sentences in Examples (36) and (37).

36) Maria [Huana-ta [ENCHI kuta-ta chukta]-tua]-sae-n
   Mary [John-ACC [2s:ACC wood-ACC chop]-CAUS]-DIR-P-IMPF
   Mary ordered John to make you chop the wood.
37) Maria [enchi [Huan-ta kuta-ta chukta]-tua]-sae-n
   Mary [2s:ACC [John-ACC wood-ACC chop]-CAUS]-DIR-PAST
Mary ordered you to make John chop the wood.
In these examples, if we change the order of the arguments, we change the interpretation of the sentence, since we change the constituents of the embedded clauses.

I noted in Chapter II above that there is some "scrambling" permitted in the order of the lexical (noun and free pronoun) arguments in simple clauses in Yaqui. This "scrambling" of NP arguments cannot appear in complex sentences; it would change the meaning of the sentence, as shown in Examples (36) and (37). However, the subject clitics are attached to the first constituent in the sentence, and since this first constituent may be an object NP, the argument order may be Object=Subject Verb, as shown in Example (38).

38) apo'ik=ne hikkaha-n
   3sACC=1sNOM listen-PAST IMPF
I was listening to him.
This same order of the arguments may appear with a compound or complex verb when there is a clitic subject.
This second-position placement of the subject clitic in Examples (39) and (40) breaks up the association between the inner verb bwiik- and its subject. This is because the subject of the outer verb is a clitic that appears in the middle of the inner clause. Second-position clitics present an even more difficult problem of analysis for sentences with embedded clauses than they do for the simple clauses discussed in Chapter II, because the clitic placement causes a surface "mixing" of the arguments of the main and embedded clauses. I do not suggest a solution here to this problem of analysis, which is common to many languages. The reader is referred to the discussion of AUX phenomena in Hale (1973, 1983), Steele, et al (1981), and Jelinek (1984).

3.6. Reduplication of the Matrix Verb.

Additional evidence that the "outer" or matrix element in these complex verb constructions should be
classed as a verb is the fact that they can undergo reduplication. The process of Reduplication is confined to root elements across languages, not to derivational and inflectional elements. When Reduplication is applied to complex verbs, it is the "outer" verb that is reduplicated, and furthermore, shows a change in aspect to Habitual or the like, as the translations in (41) and (42) are trying to show. This occurs with the Directive.

41) inepo a=nok-sae ---> inepo a=nok-sassae
   1sNOM 3sACC=talk-Directive
   I tell him to speak up.

And with the Desiderative:

42) inepo a=nok-'ii'aa ---> inepo a=nok-'ii'i'i'aa
   1sNOM 3sACC=talk-Desiderative
   I would like him to talk (more).

This suggests that these suffixed elements, although they do not occur as free verbs, are to be classed as lexical verbs, and that all the instances of "complex verbs" fall together with the compound verbs.

Reduplication also can apply to some of the Tense/Aspect/Modal suffixes we saw in Chapter II, suggesting that they also are compound verbs. In this case, this compounding would produce a serial verb, since these suffixes elements do not add an embedded clause with a new subject.
43) Aapo nok-taite ---> Aapo nok-tataite.
   he talk-Inceptive
   He starts to talk (hesitates).

44) Aapo nok-vae ---> Aapo nok-vavvae
   he talk-Prospective
   From time to time he wants to talk; he gets the urge to talk.

45) Aapo nok-pea ---> Aapo nok-pe'ea
   he talk-Inclination
   He gets the desire to talk a lot.

This reduplication suggests that historically at least, these suffixed elements are lexical verbs.

3.7. Summary and Discussion.

In this Chapter, I have described Compound and Complex verb constructions. I have given evidence that these sentences have embedded clauses, since Complex sentences can have argument structures that do not occur in simple clauses: they can have anaphors that are not controlled by the matrix subject, and they can have a greater total number of arguments than a simple clause permits, when the arguments of the main and embedded clause are added up. I have also shown that the subject of the matrix or outer verb can be a second position clitic. When this happens, it is the subject of the
embedded clause that is given focus in the sentence, while the outer subject is backgrounded.
CHAPTER IV

VOICE

4.0. Introduction.

Among the differences in argument structure across clause type seen in the grammar of a language, there are a number that are traditionally labeled voice alternations. In this Chapter, I will first describe Passive and Impersonal constructions in Yaqui. Then I will identify Anti-Passive and Impersonal Anti-passive constructions, which involve object incorporation. Finally, I will discuss Unaccusatives, which are morphologically marked in Yaqui (Jelinek and Escalante, 1987). I will also discuss the pragmatic function of voice alternations, and relate voice contrasts in Yaqui to other contrasts in argument structure in the language.

4.0.1. A Definition of Voice.

I will adopt here the definition of Voice given in Jelinek (1990).
1) a. Voice is a mapping from theta roles to grammatical relations.

b. Voice alternates are a set of mappings from theta roles to grammatical relations.

Voice is generally understood as being concerned with the particular theta role assigned to the subject of a sentence, as in the contrast between Active and Passive sentences in English. Langendoen (to appear) provides an analysis of voice distinctions in terms of whether the subject is interpreted as affector, affected, or both. In this chapter, I will be concerned both with the semantic roles assigned to the arguments in a voice alternation, and with the uses of the voices in marking focus.

4.0.2. The Pragmatics of Voice.

The use of voice alternates reflects the speaker's choice as to argument focus. We saw in Chapter I that the Yaqui speaker can choose among the set of argument types in the language -- nouns, pronouns, and clitics -- to express his choices with respect to focus, as well as reflecting other discourse factors. The use of the special construction types to be examined here, the "Voice" constructions, also reflects focus and prominence. I will argue that in the Voice alternates, Yaqui shows a third argument type, distinct from either lexical or
clitic arguments: these are incorporated arguments.
There are incorporated object pronouns, and there is noun
incorporation. I will also examine the question of
whether the Passive suffix should be treated as an
incorporated external argument, as Baker (1988) has
proposed for other languages.

4.0.3. Voice and Argument Structure.

The Yaqui speaker can choose among argument types in
order to express differences in the meaning of sentences.
These meaning differences have less to do with truth
values than with focus and discourse prominence. There is
a pragmatic hierarchy among argument types, as discussed

2) a. Nouns are highest in focus, and are used to
introduce new referents or for contrastive
emphasis;

b. Free pronouns are used to mark continuity in
reference, and for contrast;

c. Cliticized pronouns are used to refer to persons
or things previously identified and backgrounded
in the discourse, and lack focus;

d. Incorporated arguments also lack focus, and are
used in describing culturally recognized
activities or events, where the event or activity is in focus rather than a participant.

Since incorporated arguments occur only in certain (non-Active) Voice constructions, the speaker selects among Voice types as well as argument types in marking focus and prominence.

The analysis of incorporated arguments in Yaqui that I propose here depends upon the work of Baker (1988), with the addition of a discussion of contrasts in argument type from a functional perspective, as expressing contrasts in the way sentences are used in discourse.

In Chapter I described the use of nouns, free pronouns and clitics. I turn now to a consideration of voice contrasts, which may be analyzed as having a fourth type of argument: these are incorporated arguments. Incorporated arguments, unlike clitics, affect the phonological structure of the word in which they are incorporated. Like lexical and clitic arguments, they have theta roles. Their theta roles are assigned by the verb that incorporates them. I will describe both nominal and pronominal incorporated arguments, and examine their
distribution in the voice alternations to be described in the following sections of this Chapter.

4.1. The Passive.

Yaqui transitive verbs, as in Exp. (3), take the suffix -wa to form the Passive. In the resulting construction, shown in Exp. (4), no free or clitic Accusative object argument may appear.

3) Peo Huan-ta chochon-ak
   Pete John-ACC punch-PERF
   Pete punched John.

4) Huan chochon-wa-k
   John punch-PASS-PERF
   John was punched.

No oblique agent phrase is permitted. The suffix -wa is widespread in this function in Uto-Aztecan (Langacker, 1976), and is said to derive historically from an element that has been analyzed both as a copula and as a nominalizer. Heath (1973) reconstructs -wa and Langacker (1976) reconstructs -tiwa in this function for Proto-Uto-Aztecan.
4.1.1. Passives of Complex verbs.

As we saw in Chapter II, Complex Verb constructions with embedded clauses are common in Yaqui, and when an attached verb adds a "new" subject argument, Passive -wa functions to delete it.

5) Peo enchi Huan-ta chochon-sae-n
   Pete 2sACC John-ACC punch-DIR-PAST IMPF
   Pete told you to punch John.

6) empo Huan-ta chochon-sae-wa-n
   2sNOM John-ACC punch-DIR-PASS-PAST IMPF
   You were told to punch John.

Note that the subject of the embedded clause in Exp. (6) has Nominative case, since the subject of the matrix clause has been "deleted" when -WA is added. The Passive follows the Causative. This conforms to Baker's (1988) claims about the universal ordering of these processes.

7) Peo enchi Huan-ta chochon-tua-k
   Pete 2sACC John-ACC punch-CAUSATIVE-PERF
   Pete made you punch John.

8) empo Huan-ta chochon-tua-wa-k
   2sNOM John-ACC punch-CAUSATIVE-PASS-PERF
   You were made to punch John.
Passive also appears after the Desiderative.

9) a. Peo enchi siim-’ii’aa
   Pete 2sACC leave-DESIDERATIVE
   Pete wants you to leave.

   b. empo siim-’ii’aa-wa
      2sNOM leave-DESIDERATIVE-PASSIVE
      It is desired that you leave.

It is also possible to have -wa follow a compound verb.

10) a. Irena Huan-ta yi’i-mahta-vae
    Irena Juan-ACC dance-teach-PROSPECTIVE
    Irena is going to teach Juan to dance.

    b. Huan yi’i-mahta-wa-k
      Juan dance-teach-PASS-PERF
      Juan was taught to dance.

Note that in all these Passives of complex verbs, Examples (6, 8, 9b, and 10b), the subject of the inner verb is "raised" to subject of the Passive sentence.

4.1.2. Passive and the Applicative.

The Applicative suffix -ria, to be discussed in detail in the next Chapter, adds an Accusative marked argument with a theta role of Benefactee to the clause. When added to an intransitive verb, the Applicative produces a derived transitive construction. When it is
followed by the Passive, this Benefactee argument appears as Subject of the Passive. Compare examples (11) through (13).

11) Peo bwiika-k
    Pete sing-PERF
    Pete sang.

12) Peo enchi bwiik-ria-k
    Pete 2sACC sing-APPLICATIVE-PERF
    Pete sang for you.

13) empo bwiik-ria-wa-k
    2sNOM sing-APPLICATIVE-PASS-PERF
    You were sung for.

In (13) the Benefactee argument associated with the Applicative suffix -ria appears as subject. This Benefactee is the Accusative object of the derived transitive produced by the Applicative.

4.1.3. Double Object Constructions and the Passive.

As we will see in Chapter V, there are two kinds of constructions with goal arguments in Yaqui, and each has its own type of Passive. That is, the Yaqui di-transitive verb selects for either a) an Accusative and an Oblique (postpositional) argument, or b) for two Accusative arguments. Where the verb selects an argument with a
post-position, the corresponding Passive has the argument with the theta-role of Theme as subject.

14) Peo uka kava’i-ta ne-u nenka-k
   Pete DET:ACC horse-ACC 1sDAT sell-PERF
   Pete sold the horse to me.

15) u kava’i ne-u nenki-wa-k
   DET horse 1sDAT sell-PASS-PERF
   The horse was sold to me.

Where the verb selects an Accusative argument, the corresponding Passive has the argument with the theta-role of Goal as subject. (Argument order is quite free in these examples.)

16) Peo uka kava’i-ta nee miika-k
   Pete DET:ACC horse-ACC 1sACC give-PERF
   Pete gave me the horse.

17) ine po uka kava’i-ta miik-wa-k
   1sNOM DET:ACC horse-ACC give-FASS-PERF
   I was given the horse.

That is, the Passive of the verb nenka can never have a Goal subject, and the Passive of the verb miika can never have a Theme subject.
4.1.4. Oblique Agents are Excluded.

Contrary to claims that have appeared in the linguistic literature, it is impossible to have an oblique agent included in a Passive sentence in Yaqui. The following example sentences appear in Lindenfeld 1969 and 1973:

18) hu maaso wepul o’oo-ta-e me’e-wa-k
   this deer one man-Dependent-with kill-PASS-Realized
   The deer was killed by one man. (Lindenfeld 1973)

19) hu maaso bahi oow-im-mea me’e-wa-k
   this deer three man-PL-with kill-PASS-Realized
   The deer was killed by three men. (Lindenfeld 1973)

20) hu kuchu b’a’a-wa-k ’in ’usi-m-mea
   that fish eat-PASS-Real. my child-PL-with
   That fish was eaten by my children. (Lindenfeld ’69)

I have changed the interlinear gloss in Exp. (20) to make it conform to Lindenfeld’s later usage, as in (18) and (19).

These sentences are cited in Langacker (1976) and (1977), and most recently in Suarez (1983). These authors cite these sentences in discussing the question of whether it is possible to state an agent in Passive sentences in Yaqui. My judgement and that of other speakers I have
consulted is that these sentences are ungrammatical. (See Escalante, in press, for a preliminary statement of the issue.) It is not possible to state an agent in a Passive sentence in Yaqui. The only way to state the agent is to use the corresponding Active sentence.

21) u wepul o'ow uka maaso-ta me'e-ak
    DET one man DET:ACC deer-ACC kill-PERF
    One man killed the deer.

22) bahi o'ow-im uka maaso-ta me'e-ak
    three man-PL DET:ACC deer-ACC kill-PERF
    Three men killed the deer.

23) in-'uusi-m uka kuchu-ta b'aa'a-ka
    lsPOSS-child-PL DET:ACC fish-ACC eat-PERF
    My children ate the fish.

Examples (18 - 20) are correct without the oblique "agent" phrase.

24) u maaso me'e-wa-k
    DET deer kill-PASS-PERF
    The deer was killed.

25) u kuchu b'aa'a-wa-k
    DET fish eat-PASS-PERF
    The fish was eaten.

It is possible to include an oblique Instrumental argument in both the Active (Transitive) and Passive constructions.
26) u o'ow uka maaso-ta kuta-e me'e-ak  
DET man DET:ACC deer-ACC stick-INST kill-PERF  
The man killed the deer with a stick.

27) u maaso kuta-e me’e-wa-k  
DET deer stick-INST kill-PASS-PERF  
The deer was killed with a stick.

28) ume uusi-m uka kuchu-ta  
DET-PL child-PL DET:ACC fish-ACC  
kuchi’i-m-mea b’a’a-ka  
knife-PL-INST eat-PERF  
The children ate the fish with (by means of) knives.

29) u kuchu kuchi’i-m-mea b’a’a-wa-k  
DET fish knife-PL-INST eat-PASS-PERF  
The fish was eaten with (by means of) knives.

In example sentence (18) above, we see the case suffix -ta and the postposition -e combined on an argument that Lindenfeld (1976) considered an "Agent". Such combinations do occur, but where they appear the argument is neither an Agent nor an Instrumental, but rather what I have labeled a "Source". Consider the following:

30) u o’ow-ta-e nee sioka  
DET man-ACC-PP IsNOM sad  
I’m sad on account of a man.
31) in-tekil-ta-e nee kova-waante
    1sPOSSjob-ACC-PP 1sNOM head-hurt
    I've got a headache on account of my job.

Recall that in Yaqui, the Plural suffix -(i)m and the Case suffix -ta are mutually exclusive, so when the noun is plural, the Instrumental and Source ("on account of") constructions appear the same. Compare the following example (32), with (20) above.

32) in-'uusi-m-mea nee sioka
    1sPOSS-child-PL-PP 1sNOM sad
    I'm sad on account of my children.

These examples show that the contrast between the Instrumental and Source constructions is neutralized when the noun is plural. Compare also (33).

33) u maaso kuta-m-mea me'e-wa-k
    DET deer stick-PL-INST kill-PASS-PERF
    The deer was killed with sticks.

The crucial point is that the Source expressions are excluded in both Transitive and Passive sentences.

34) *aapo uka o'ow-ta hamut-ta-e me'e-ak
    3sNOM DET:ACC man-ACC woman-ACC-PP kill=PERF
    (He killed the man on account of a woman.)
35) *u o'ow hamut-ta-e me'e-wa-k  
   DET man woman-ACC-PP kill-PASS-PERF  
   (The man was killed on account of a woman.)  

Sentences of the following kind are used instead.

36) aapo uka o'ow-ta hamut-ta-veti'ivo me'e-ak  
   3sNOM DET:ACC man-ACC woman-ACC-for kill-PERF  
   He killed the man for/because of a woman.

37) u o'ow hamut-ta-veti'ivo me'e-wa-k  
   DET man woman-ACC-for kill-PASS-PERF  
   The man was killed for/because of a woman.

There is also a Comitative case suffix in Yaqui, which is distinct from the Instrumental.

38) aapo Maria-ta-mak weeye  
   3sNOM Mary-ACC-COM go  
   He's going with Mary.

39) aapo 'ili-'uusi-m-mak weeye  
   3sNOM small-child-PL-COM go  
   He's going with the children.

Like the Source suffix, the Comitative follows the Accusative -ta in the Singular, and -ta does not occur with the Plural.

I have included these examples to show that the oblique argument that appears in Example (18) cannot be an
Agent, Instrumental, or Source. Agents and Sources are excluded from Passives, and Instrumentals do not have the Case marker -ta before the Postposition. Without the -ta, the oblique argument would have to be interpreted as an Instrumental, as the oblique arguments in Examples (19) and (20) are. Example (18) is ungrammatical because of the presence of -ta before the Postposition, and all of the examples (18 - 20) are ungrammatical if the reading is intended to include an agent; only the nonsense readings where men and children are taken to be instruments used in killing and eating are possible.

4.1.5. Summary on the Passive.

Whenever Passive -wa is present, the clause does not have an argument with an Agent theta role assigned by the verb of the clause. The verb can be a derived transitive, as the example with the Applicative suffix shows. When a simple or underived clause takes -wa, an argument with a Patient theta role becomes subject. In complex clauses, the embedded subject is "raised" to subject of the Passive, and in the case of the Applicative, a Benefactee argument becomes the subject.
4.2. **Impersonals.**

As seen elsewhere in Uto-Aztecan, Intransitive verbs in Yaqui may take the same suffix -wa that appears on transitive verbs. And, as with transitive verbs, an intransitive sentence with -wa has a "missing" argument. Since intransitives have only one direct argument, the subject, it is the subject that is "missing". Compare Exp. (40) with Exp. (41).

40) Peo bwiika
   Pete sing
   Pete is singing.

41) bwiik-wa
    sing-IMPERSONAL
    Singing is going on.

Exp. (41) has no lexical or clitic subject. With transitive verbs, -wa is associated with a missing Agent. But Impersonal constructions need not be agentive. They are not restricted to intransitives that assign a particular theta role to the verb. A change of state verb can appear in an Impersonal construction:

42) vempo koko-k
    3pNOM die:PL-PERF
    They died.
43) hoktia-e koko-wa
   cough-INST die:PL-IMPERS
   Dying from whooping cough is occurring.

With a verb of motion:
44) vempo aman yaha
   3pNOM there arrive:PL
   They are arriving there.
45) aman ya(h)i-wa
   there arrive:PL-IMPERS
   Arriving there is going on.

4.2.1. Impersonals of Derived Verbs.

The Impersonal -wa can follow the Modal suffixes identified in Chapter I.
46) Peo bwiik-pea
   Pete sing-INCLINATION
   Pete feels like singing.
47) bwiik-pea-wa
   sing-INCLINATION-wa
   There is a desire to sing.
48) aapo yi’i-machi
   3sNOM dance-MODAL
   He should dance.
49) yi'i-machi-wa
dance-MODAL-wa
There should be dancing.

The Impersonal can also be used with the verbal suffix -te.

50) vempo teopo-te
3pNOM church-make
They are building a church.

51) aman teopo-te-wa
church-make-WA
Church-building is taking place there.

4.2.2. Reflexive Impersonals.

In these constructions, the reflexive anaphor is an incorporated nominal object. (See Section 3.4. below.)

Compare:

52) vempo emo-'ania
3pNOM self-help
They are helping each other/themselves.

53) vempo ania-wa
3pNOM help-IMPF-WA
They are being helped.
54) tu'isi emo-ania-wa

    well self-help-WA

    They are helping each other/themselves very well.
    [Good self/mutual aid is going on.]

I have included this wide range of examples to show that it is not just Agent arguments that are "missing" from intransitives when the -wa suffix is applied; it can be any subject, any external argument, no matter what the theta role of that argument may be.

4.2.3. "Pseudo-Passives".

    Example (43), repeated here, shows an Impersonal with an oblique argument.

43) hoktia-e koko-wa

    cough-INST die:PL-IMPERS

    Dying from whooping cough is occurring.

Compare also Examples (55) and (56):

55) Maria-ta-t nok-wa-k

    Mary-ACC-PP speak-IMPERSONAL-PERF

    Mary was spoken of.

56) Maria-ta-u nok-wa-k

    Mary-ACC-DAT speak-IMPERSONAL-PERF

    Mary was spoken to.
Constructions like Examples (55) and (56) in English have been called "Pseudo-Passives" in the linguistic literature (Hornstein and Weinberg, 1981). These Yaqui sentences, like their English glosses, are based on an intransitive verb, nooka "speak". However, the Yaqui sentences in (55, 56) differ from their English counterparts in that they have no lexical (or clitic) subject; they are true Impersonals. There is no "postposition-stranding" in the Yaqui examples, and no Pseudo-Passives. Examples (55, 66) correspond exactly to Exp. (43); they are Impersonals with an optional postpositional phrase.

4.2.4. Summary on the Impersonal.

Impersonals resemble Passives, then, in that an argument is "missing" from the clause, while the suffix -wa is present. They differ from Passives in that they are intransitives, and have no lexical or clitic subject. In Passives, there is no free or clitic agent argument. In Impersonals, there is no free or clitic argument with Nominative case, the external argument. An oblique agent phrase is excluded from both constructions.
4.3. Summary on -WA.

I conclude that the suffix -wa that appears in Yaqui Passives, Impersonals, and "Pseudo-Passives" is one and the same, and I will identify it simply as -WA in the following. Further support for this claim can be seen in the fact that there is also a suffix -NA, appearing in Future Passives and Impersonals--presumably derived from -WA plus the Future suffix -ne.

57) aapo vepsu-na
   3sNOM beat-NA
   He will be beaten. (Passive)

58) pahko-po b'iiik-na
    feast-PP sing-NA
    There will be singing at the fiesta. (Impersonal)

Further evidence that there is a single -WA is that it cannot apply twice--once for Passive, and once for Impersonal.

59) a. Peo Huan-ta vepsu-k    Pete beat John.
    b. Huan vepsu-wa-k          John was beaten.
    c. *vepsu-wa-wa

I define Passive and Impersonal in Yaqui as follows:

60) a. Yaqui Passives have a lexical or clitic subject (an argument with Nominative case) and the suffix -WA.
b. Yaqui Impersonals have no lexical or clitic subject, and have the suffix -WA.

I turn now to a description of a less well-known Voice alternation, the Anti-Passive.

4.4. The Anti-Passive.

The term "Anti-Passive" is not traditionally used in Uto-Aztecan linguistics. What I want to do in this section is point out the resemblances between what is usually called object Noun Incorporation and an Anti-Passive construction. Anti-Passives across languages are identified as derived intransitive clauses; in this respect they are like Passives. But they differ in that, with the Anti-Passive, it is the object that is "missing". In an Anti-Passive, some element is affixed to the transitive verb that excludes an object constituent. These constructions are typically employed in reference to some customary activity, where an associated patient is non-referential.

4.4.1. Indefinite Object prefixes.

Yaqui has two prefixes of this kind, one marking indefinite inanimate patients, and one marking indefinite human patients. This kind of contrast in such prefixes is
common in other Uto-Aztecan languages. Compare Exp. (61), which includes an object NP, and Exp. (62), which includes clitic object, with Exp. (63) where there is no such object.

61) Peo ume kamisola-m vaksia
    Pete DET:PL shirt-PL wash
    Pete is washing the shirts.

62) Peo am=vaksia
    Pete them=wash
    Pete is washing them.

63) Peo hi-paksia
    Pete HI-wash
    Pete is washing.

Example (63) shows the indefinite inanimate patient prefix, hi-, which is thought to derive from the word hita "something". Note the contrast in the initial consonant of the verb root: -paksia vs. vaksia (a p/v alternation within the word is widespread in Uto-Aztecan). We saw above in Chapter II, Sec. 2.1.5.2., that clitics in Yaqui do not affect the phonological structure of the word they attach to. Exp. (62) shows the object clitic am=, which does not affect the phonology of vaksia. Another set of examples is:
Aapo uka vachi-ta bwa’a-ka
3sNOM DET:ACC corn-ACC eat-PERF
He ate the corn.

Aapo a=bwa’a-ka
he it=eat PERF
He ate it.

Aapo hi’-bwa-k
3sNOM s.t.-eat-PERF
He ate.

Again, we see that the phonological structure of the verb with the indefinite patient prefix is not the same as the verb with a clitic or lexical argument.

The indefinite human patient prefix is vee, believed to derive from yoeme "people". Example:

Hunu chuu’u yee-keke
that dog people-bite
That dog bites people (people-bites).

The use of this construction is very much like the English sentence in (68).

That tiger is a man-eater.

The speaker does not have any particular human object in mind; he is describing a customary activity of the tiger.
The prefix *hi-* is limited in distribution, but the use of *yee* is quite free. I turn now to another construction type that is also often classed with the Anti-Passive.

### 4.4.2. Noun Incorporation.

The prefixes *hi* and *yee-* are incorporated nominal arguments. The incorporation of nominal patients is very common in Yaqui. The incorporated noun is assimilated into the pitch-accent structure of the word; it is indefinite and non-referential, but is described by the lexical noun that is incorporated. Again, these constructions are most often used to talk about some culturally recognized or defined activity, where no specific object of the transitive verb is intended. Compare Examples (69a) and (69b).

69) a. aapo uka maaso-ta aamu
   3sNOM DET:ACC deer-ACC hunt
   He is hunting (for) a/the deer.

   b. aapo maaso-’aamu
   3sNOM deer-hunt
   He is deer-hunting.

In (69b), the Patient is incorporated, and cannot serve as a focus. Therefore, it is impossible to use a clitic subject in such a construction.
70)  a. itepo maaso-aamu
    1plNOM deer-hunt
    We are deer-hunting.

    b. * maaso-aamu=te

Example (70b) may be excluded because neither the subject
nor the incorporated object could be in focus, and yet the
construction is not an Impersonal.

    Since the incorporated object is not referential, it
cannot serve as a discourse antecedent. Compare (71a) and
(71b).

71)  a. aapo uka maaso-ta aamu, uka em-vicha-ka-'u
    DET:ACC 2sPOSS-see-PERF-O:REL
    He is hunting (for) the deer, the one you saw.

    b. ?? aapo maaso-‘aamu, uka em-vicha-ka-‘u
    (?? He is deer-hunting, the one you saw.)

Since no specific object is intended, it is not possible to
add a demonstrative to the incorporated noun. Compare
(72a) and (72b).

72)  a. vempo kavi‘i-‘etb‘a
    3pNOM horse-steal
    They are horse-stealing.
b. *vempo hunuka kavi'i-′etb'a
3pNOM DEM:ACC horse-steal
[They are horse-stealing that one]
However, there are certain "fixed expressions", in which a verb with an incorporated noun can still function as a transitive, and take a free object argument.
73) a. vempo hunuka maaso-′aamu
3plNOM 3sDEM:ACC deer-hunt
They are deer-stalking that one. (They are stalking him the way they stalk a deer.)
b. vempo hunuka bwe'uu-k chuu'-hahhasu-k
3plNOM 3sDEM:ACC big-ACC dog-follow-PERF
They dog-trailed that big one. (They trailed him the way a dog trails something.)
In (73a,b) the Demonstrative or Demonstrative plus adjective constitutes an object NP. These "fixed expressions" are similar to English constructions such as
74) She is baby-sitting my little brother.
I assume, following Baker (1988), that the sentences in (73) are examples of "classificatory" incorporation, since they permit an external object argument.

Compare also the examples in (75a,b) and (75,c,d).
75) a. aapo tu’ii tekil-ta hariwa
   3sNOM good job-ACC look for
   He's looking for a good job.

b. aapo tekil-hariwa
   3sNOM job-look for
   He is job-hunting.

Example (75a) shows a simple transitive; (75b) an Anti-Passive with an incorporated noun.

75) c. aapo tu’ii-tekil-hariwa
   3sNOM good-job-hunt
   He is "good-job-hunting".

d. *aapo tu’ii-k tekil-hariwa
   3sNOM good-ACC job-hunt
   [He is job-hunting the good one]

Example (75c) shows the complex noun tu’ii-tekil "good-job" incorporated into the verb. Example (75d, where the adjective tu’ii remains a free word and is necessarily case-marked, is excluded, just as (72b) is, since an incorporated noun cannot have an adjectival complement. The adjective alone cannot constitute an object NP without a preceding Determiner/Demonstrative.

Thus, Yaqui noun incorporation is consistent with Baker's (1988) claims about incorporation as "head-to-head"
movement. It is only a head noun, rather than an NP, that is incorporated. A comparison of (74) and (75) shows that the incorporated noun loses its case suffix. While incorporated objects in Yaqui have no case, they must be assigned a theta role by the verb. Whether or not incorporated arguments have case seems to vary across languages, depending upon other features of the grammar; see Baker (1988, p. 340) on this point. Incorporated nouns in Yaqui are restricted to a patient theta role; they correspond to the direct object of the verb. It is not possible to incorporate an Accusative Goal argument, where the verb requires an Accusative Goal.

76) uka tomi-ta=ne pove-ta miika-k
   DET:ACC money-ACC=1sNOM poor-ACC give-PERF
   I gave the money to the poor.

77) *uka tomi-ta=ne povi-miika-k
   DET:ACC money-ACC=1sg poor-give-PERF
   [*I poor-gave the money.]

The same constraint applies to Accusative arguments introduced by the Applicative suffix -ria.

78) Maria uka ili uusi-ta bwiik-ria-k
   Mary DET:ACC child-ACC sing-APPLICATIVE-PERF
   Mary sang for the child.
79) * Maria uusi-bwiik-ria-k

[Mary child-sang-APPLICATIVE-PERF]
The fact that only nouns with the theta role Patient are incorporated in Yaqui confirms Baker’s generalization about this kind of incorporation as being confined to only to those nouns corresponding to direct objects of the incorporating verb.

4.4.3. Other Complex Predicates.

It is important to distinguish between object incorporation vs. other kinds of compound and complex predicates. In Chapter III I described Compound and Complex verbs, where an embedded clause is present. There are also complex verbs that include an adjective or a noun that is not an incorporated object.

80) vempo maaso-ye’e

3pNOM deer-dance

They are deer-dancing.

81) aapo lio(s)-nooka

3sNOM god-talk

He is praying.

In the two preceding examples, the noun that is attached to the verb is not an object; both of these verbs are intransitive. The noun merely describes the kind of
activity referred to by the verb. Or, a noun can be used to derive a transitive verb:

82) tuuka-ne enchi vo’o-vicha-k
    yesterday=lsNOOM you:ACC road-see-PERF
I waited for (watched the road for) you yesterday.
This derived transitive verb has an Accusative pronoun as its object in Exp. (82). Note that the meaning of this derived verb is not entirely predictable from its parts; there is some semantic "drift", which is not unusual with compounds.

With the Stative Perfective construction, the complex predicate may include a noun that identifies an agent. Compare the next set of examples.

83) u chuu’u uka uusi-ta ke’e-ka
    DET dog DET:ACC child-ACC bite-PERF
    The dog bit the child.
84) u uusi ki’i-wa-k
    DET child bite-PASS-PERF
    The child was bitten.
85) hinii uusi chuu’u-ki’i-ri
    DEM child dog-bite-STATIVE PERF
    This child is dog-bitten.
If Baker (1988) is correct, this is not agent incorporation, but just identifies the kind of bite, as "deer-dancing" (Exp. 80) identifies the kind of dance., or "god-talking" (Exp. 81) identifies the kind of talk.

4.5. Impersonal Anti-Passives.

Noun incorporation produces a derived intransitive clause, the Anti-Passive. This derived intransitive can have a corresponding Impersonal. The examples under (86) show one verb in all the different voice alternates we have seen so far.

86) a. Peo uka maaso-ta aamu
Pete DET:ACC deer-ACC hunt
Pete is hunting that deer. (Transitive)
b. Peo maaso-’aamu
Pete deer-hunt
Pete is deer-hunting. (Anti-Passive)
c. u maaso aamu-wa-k
DET deer hunt-WA-PF
The deer was hunted. (Passive)
d. maaso-’aamu-wa-n
deer-hunt-WA-PAST IMPERF
Deer-hunting was going on. (Impersonal Anti-Passive)
Impersonal Anti-Passives with the inanimate and indefinite human patient prefixes also occur.

87) a. hi'-bwa-wa
   s.t.-eat-WA
   Eating is going on.

b. yee-sua-wa
   people-kill: PL-WA
   Murdering is going on.

Next I will describe the last Voice alternate to be included in this chapter, the Unaccusative.

4.6. Unaccusatives.

The class of Unaccusative verbs (Perlmutter, 1978, 1987) across languages are intransitives that are said to have a subject with a theta role of Patient, and this property of these intransitives is associated with a number of syntactic features (cf. Burzio, 1978). There seems to be good reason to count the Unaccusative as a Voice alternate in Yaqui, since this class of verbs is morphologically marked in the language. There is a set of transitive verbs that have Unaccusative counterparts, and the contrast is marked by a change in the final vowel of the verb.
Not all verbs occur in "doublets" of this kind. It is not always possible to tell from the final vowel of a verb whether or not it is transitive. There are many exceptions to the association of -e with intransitives, and -a with transitives. For example, tuuse 'grinds' is transitive, and b'ika 'sings' is intransitive. But whenever verbs occur in pairs of this kind, the Transitive/ Unaccusative contrast is present. There are perhaps a hundred and fifty pairs of this kind that I have identified so far. I have listed these verbs in Appendix A.

Transitive verbs of the type seen in (88), those that have a corresponding Unaccusative, can also appear with an incorporated nominal object. When this happens, a derived intransitive, an Anti-Passive, is produced, and the verb is overtly marked as an intransitive; the vowel -e that
appears in the Unaccusatives is employed. Compare the four examples in (89 - 92).

89) aapo uka hio'osia-ta siuta
   3sNOM DET:ACC paper-ACC tear:TRANS
   He is tearing the paper.   (Transitive)

90) u hio'osia siuta-wa
   DET paper tear:TRANS-WA
   The paper is being torn.  (Passive)

91) u hio'osia siute
   DET paper tear:INTRN
   The paper is tearing.     (Unaccusative)

92) aapo hio'osia-siute
   3sNOM paper-tear:INTRN
   He is paper-tearing.     (Anti-Passive)

In Exp. (89), the word hio'osia is a transitive object, with Accusative case; in (90), it is a Passive subject; in (91), it is an Unaccusative subject; and in (92) it is an incorporated object. In every case it has a Patient theta role.

Subject incorporation is much less common across languages than is object incorporation, and when subject nouns do incorporate, they are Unaccusatives (Mithun, 1984; Baker, 1988). Baker's position is that this incorporation
occurs because unaccusative subjects in underlying structure are objects, and have a Patient theta-role. In this section, we will see that Yaqui does not permit Unaccusative subject incorporation. A sentence like (92) requires a subject in addition to the incorporated object.

The following is ungrammatical:

93) * hio’osia-siute
    paper-tear
    [paper is tearing]

Among the syntactic features that have been identified for Unaccusatives is the fact that they do not occur in Impersonal Passive constructions (Perlmutter, 1978); this has been demonstrated for a number of languages (Baker, 1988). This is the case in Yaqui also. The morphologically defined set of Unaccusative verbs in Yaqui do not take -WA. As we saw in Section 3.2 above, there are other non-agentive intransitive verbs such as koko "die (Pl)" and yaha "arrive (Pl)" that do take -WA. Verbs with the same English glosses belong to the class of Unaccusative verbs in other languages, for example Italian (Burzio 198). In Yaqui, they do not participate in the -a/-e contrast, and they lack corresponding transitives. I assume that these non-Unaccusative verbs in Yaqui assign
the theta-role of Theme, rather than Patient, to their arguments. It appears that there is a core group of verbs with certain semantic properties that are Unaccusatives across languages, with some variability with respect to certain items.

Unaccusative subjects in Yaqui cannot incorporate, but as we have seen in Example (86d), there are Impersonal Anti-Passives. And since the Anti-Passive of a Transitive verb that has a matching Unaccusative ends in the vowel -e, it is easy to confuse them with the excluded incorporated Unaccusative subjects. But the gloss of the sentence allows us to identify the construction. Compare Examples (89 - 93) above with Example (94) below.

94) hio'osia-siuti-wa
   paper-tear-WA

   Paper-tearing is going on.

Example (94) means "People are paper-tearing"; it cannot mean "Paper is tearing", which is the meaning of (91), the Unaccusative. The incorporated noun in (94) is a transitive object, not an unaccusative subject. Then the derived construction is an Anti-Passive, an intransitive,
which ends in the vowel -e; this vowel changes to -i before the suffix-wa. Note that the vowel does not change before -wa in Exp. (90), the Passive.

The contrast is easier to see when the transitive and Unaccusative verbs have different English glosses.

94) a. Peo ume saami-m hamta  
   Pete is breaking up the adobes.

   b. ume saami-m hamta-wa  
   The adobes are being broken up.

   c. Peo saami-hamte  
   Pete is adobe-smashing.

   d. ume saami-m hamte  
   The adobes are breaking apart.

   e. saami-hamti-wa  
   Adobe-smashing is going on.

In each of the construction types shown in (94), the noun saami has a patient theta role. But this noun also has other properties in each of the examples. It is in focus as the subject in (94b,d). It is referential, and can be made definite when preceded by a determiner, in all the examples except (94c,e), the two Anti-Passives. In the last example, (94e), no argument is in focus, and therefore the event itself is in focus.
Another set of examples, showing the five possible voice alternations, is given in (95).

95) a. u wikia vi’ite
   DET rope twist
   The rope is twisting (Unaccusative)

b. aapo uka    wikia-ta vi’ita
   3sNOM DET:ACC rope-ACC twist-IMPF
   He is twisting the rope. (Transitive)

c. u wikia vi’ita-wa
   DET rope twist-WA
   The rope is being twisted. (Passive)

d. aapo wikia-vi’ite
   3sNOM rope-twist
   He is rope-twisting. (Anti-Passive)

e. wikia-vi’iti-wa
   rope-twist-WA
   Rope-twisting is going on. (Impersonal
   (People are rope-twisting.) Anti-Passive)

In the next section I will discuss arguments for treating -WA as an incorporated pronominal argument.

4.7. The Argumental Status of -WA.

Baker (1988) proposes that Passive morphology in some languages can be analyzed as an incorporated argument with
an Agent theta role. In this section, I will discuss evidence relating to this kind of an analysis for Yaqui -WA, in each of the construction types it occurs in.

We have seen the suffix -WA occurring in a variety of construction types: Passive, "Pseudo-passive", Impersonal, Impersonal Anti-Passive. For all of these construction types there are corresponding constructions without -WA, that have an additional argument. Let us see what evidence we can find for identifying -WA as an incorporated pronominal argument that is in complementary distribution with lexical and clitic arguments. An alternative view, and one that I will also consider, is that -WA simply marks a clause as having one less argument than the corresponding clause without -WA, but is not argumental in status.

4.7.1. Passives: -WA as an Incorporated Agent Argument.

We have seen in Chapter II that the subject clitics occur second in the sentence, the most common AUX position (Steele et al., 1981). The suffix -WA is not a sentential clitic, but a verbal suffix that occurs after the verb and certain derivational suffixes, and immediately before the set of Tense/Aspect/Modality suffixes. Compare:
Exp. (96) is a simple transitive; Exp. (97) shows the co-occurrence of -WA and the subject clitic te separated by the Tense/Aspect form -ka. Tense/Aspect appears in that part of the sentence called INFL (Inflection) in Government and Binding Theory (Chomsky 1981). According to Baker (1988), in one type of Passive seen across languages, the INFL node is the locus of an incorporated "external" argument. The position of -WA is consistent with an analysis of this kind.

In Passives, -WA can be analyzed as an incorporated "external" argument with an Agent theta role. Since incorporated arguments in Yaqui do not have case, as we saw with the incorporated nominal arguments, some other argument carries NOM case. This Nominative argument may have any theta role that is associated with an internal argument of the verb: Patient, Goal, or Benefactee. In Passives, -WA is in complementary distribution with lexical
and clitic arguments with an Agent theta role, and it excludes any oblique argument with an Agent theta role. The fact that -WA excludes an oblique Agent argument is evidence in favor of its being an argument itself.

4.7.2. Impersonals: -WA as an Incorporated Subject.

Many but not all Yaqui Impersonals are agentive, as we have seen in the preceding examples. In Impersonals, -WA is in complementary distribution with an intransitive lexical or clitic subject, with NOM case, with a theta role of Agent or Theme. It is the single direct argument of the verb, and by virtue of its incorporated status is devoid of prominence or topicality. In these constructions, since no argument is in focus, the event or state itself is given prominence; the sometimes awkward glosses for Impersonals I have given here have been in the attempt to show this.

98) a. vempo yi'ī-taite
   3pNOM dance-INCEPTIVE
   They are starting to dance.

   b. yi'ī-taiti-wa
   dance-INCEPTIVE-WA
   Dancing is beginning.
4.7.2.1. Anaphor-binding in Impersonals. Recall that in Examples (52 - 54) above, repeated here, we saw the suffix -WA with a Reflexive/Reciprocal anaphor.

52) vempo emo-'ania
   3pNOM self-help
   They are helping each other/themselves.

53) vempo ania-wa
   3pNOM help-IMPF-WA
   They are being helped.

54) tu'isi emo-ania-wa
   well self-help-WA
   They are helping each other/themselves very well. [Good self/mutual aid is going on.]

The binding of anaphors is a property of arguments. Binding of this kind cannot take place in Passives, since -WA would have to bind a Reflexive in subject position, and Reflexives do not appear as Subjects.

The important property of Impersonals is that they do not have a lexical or clitic subject. As we will see in the next section, there are other kinds of finite sentences in Yaqui that have no lexical or clitic subjects; this option is already available in the grammar.
4.7.3. Verbs that Exclude -WA.

In this section, I will survey the various clause types in Yaqui that are subjectless, to see what evidence they can give us on the argumental status of -WA. I have been providing evidence on the view that in Passives, -WA is an incorporated Agent, and in Impersonals, an incorporated Subject. There are three clause types that exclude -WA; these are clauses that do not have a subject, or clauses with verbs that have only a patient theta role to assign.

4.7.3.1. Weather and temporal verbs. These verbs inflect for Tense/Aspect/Modality.

99) a. yuke    b. yooko yuk-ne
    rain                tomorrow rain-FUTURE
    It’s raining.       It will rain tomorrow.

100) a. kupte    b. haivu kupti-su-k
    be: late            already late-CMPL-PERF
    It’s late.          It’s already gotten late.

These verbs are intransitive, so they have no objects. They also exclude lexical and clitic subjects -- and crucially, for the question we are considering here -- they also exclude -WA. These verbs have no external theta role to assign. They also cannot have incorporated -WA, which is
caseless but still must receive a theta role from the verb. If the function of -WA is to mark a clause as "minus" an argument, or as subjectless, then we might expect to see -WA in these constructions, where subject arguments are excluded.

4.7.3.2. "Raising" Constructions: Epistemic Modals.
Another variety of subjectless construction in Yaqui involves the verb *vena*, "seem, resemble". This verb can function as an ordinary transitive:

101) u ili uusi Huan-ta vena
    DET child John-ACC resemble
    The child looks like John.

Or as an epistemic modal:

102) b'iik-vai-wa-m-ta vena
    sing-PROSP-WA-NOMINALIZER-ACC seem like
    Seems like there's gonna be singing.

Here the nominalized Impersonal subordinate clause is case marked as the object of the transitive verb *vena*, and epistemic *vena* excludes a subject, whether free or clitic. It also excludes -WA, for the same reason. *Vena* has no "external" theta role to assign, when functioning as a modal. Another example with *vena* and the modal *machi*:
There appears to be what looks like a mouse sitting there.

The modal \textit{maachi} as a free verb means "to dawn, to grow light." These clauses have no arguments with Nominative case, so the problem of "raising to subject" does not arise. Across languages, subjects are "raised" when the grammar requires clauses to have subjects; pleonastic subjects also appear under such circumstances. Yaqui has no such requirement for sentencehood.

4.7.3.3. Unaccusatives. It was noted above in Sec. 3.6. that verbs of this class exclude -\textit{WA}. Unaccusatives have subjects with a Patient theta role, and -\textit{WA} can only be an argument with an Agent (Transitive/Intransitive) or a Theme (Intransitive) theta role.

Consider the following set of examples:

104) a. Peo vit-wa-k \quad Pete was seen.
   \quad Passive; -\textit{WA} has Agent theta role.

b. b'iik-wa-k \quad There was singing.
   \quad Impersonal; -\textit{WA} has Agent theta role.
c. koko-wa  There is dying.
   Impersonal; -WA has Theme theta role.

d. hio’osia veete  Paper is burning.
   Unaccusative; Subject NP has Patient theta role.

e. hio’osia-veeti-wa-k  Paper-burning occurred.
   Impersonal Anti-Passive; -WA has Agent theta role.

Unaccusatives exclude -WA because they have no suitable theta role to assign to it. They have a Patient theta role to assign, and it must go to a subject argument. In contrast, the Impersonal Anti-Passive (104e) permits -WA, since it has an Agent theta role to assign.

4.7.4. Nominalizers and -WA.

Here I will give evidence against an analysis of -WA as deriving verbal nouns. The existential meaning of Impersonal clauses—where there is no verbal argument in focus position—suggests such an analysis. I conclude that this is not a viable analysis for the following reasons.

First, the nominalizer -m(e) co-occurs with -WA. This nominalizing (NML) suffix appears in the so-called "headless" relatives, when they are subject-headed (Jelinek 1988). Compare the following:
105) a. u Peo-ta vepsu-ka-me
   DET Pete-ACC beat-PERF-S:NML
   the (one who) beat Pete (Subject-headed)

b. u Peo vepsu-ka-'u
   DET Pete beat-PERF-O:NML
   the (one who) Pete beat (Object-headed)

The suffix -WA occurs in intransitive relatives, including Passive relatives, since they are necessarily subject-headed.

106) a. u yi'i-ne-me
   DET dance-FUT-S:NML
   the (one who) will dance (Subject-headed)

b. u vepsu-wa-ka-me
   DET beat-WA-PERF-S:NML
   the (one who) was beaten (Subject-headed)

The suffix -WA cannot precede the Object Nominalizer -'u.

106) c. *u vepsu-wa-ka'u
This is consistent with the analysis of -WA as in complementary distribution with a Subject. The Nominalizer -me can also nominalize an Impersonal.

107) a. u yi'i-WA-me
   DET dance-WA-NML
   the dancing
b. u yi'i-NA-me

DET dance-NA (=-ne+-WA)-NML

the future dancing

Example (106b is a Passive nominal, and (107a,b) are both Impersonal nominals; all these nominals have -WA before the nominalizer -me. In these examples, the order of the suffixes is: a) the suffix -WA; b) the Tense/Aspect suffixes; c) the Nominalizer -me.

There are other nominalizing processes in Yaqui, including a suffix -i that creates resultative verbal nouns (Johnson, 1962).

108) nooka  "speak"  nooki  "word"
euse  "hide"  eusui  "s.t. hidden"
tuuse  "grind"  tuusi  "s.t. ground"
hiawa  "talk"  hiawai  "voice"
hiapsa  "live"  hiapsi  "heart"

There is also an agentive suffix:

109) aamu  "hunt"  amu-reo  "hunter"
bwiika  "sing"  bwiik-reo  "singer"
saami  "adobe"  sami-reo  "adobe-maker"
chuu'u  "dog"  chu'u-reo  "dog-catcher"
hamut  "woman"  hamut-reo  "woman-chaser"

And a suffix -(u)ra that creates abstract nouns.
There is also a suffix -ria that occurs with nouns referring to the weather and other conditions. I have found two of these that can optionally take -WA also.

111) a. seeve "cold"
    b. u severia(wa) "the cold" (weather)
    c. tata "hot"
    d. u tataria(wa) "the heat" (hot weather)

I can not identify this optional -wa. Neither of these derived nouns permit Tense/Aspect/Modal elements to attach, whereas elsewhere, -WA freely co-occurs with the T/A/M suffixes. I conclude that -WA is unrelated to the derivation of verbal nouns, and is a feature of finite clauses, which is consistent with the view that it is an incorporated "external" argument.

4.7.5. The Pronominal Properties of -WA.

So far I have shown a) that -WA is in complementary distribution with lexical and clitic arguments, b) that it can bind a Reflexive anaphor in an Impersonal, c) that it cannot appear where the verb has no theta role to assign to it, and d) that it is not a productive nominalizer. I now
want to show evidence that -WA has crucial semantic properties that qualify it for argumental status: the pronominal properties of person and number.

There is evidence that -WA is third person plural. Recall that in Exp. (54) above, an Impersonal, we saw -WA binding an anaphor.

54) tu'isi emo-ania-wa

well self-help-WA

They are helping each other/themselves very well.

[Good self/mutual aid is going on.]

Reflexive pronouns in Yaqui mark person and number. The set of these pronouns, given in Chapter II above, is as follows:

112) ino myself ito ourselves

emo yourself emo yourselves

au himself emo themselves

Note that emo is used for second person (Singular and Plural) and third plural forms. This is typical of Uto-Aztecán. Only the emo can occur with -WA, and the meaning is third person plural only. A reading of Exp. (54) with a second person subject is not acceptable.
Additional evidence on the person and number value of -WA can be found in another pronominal paradigm, one that is not defective. There is a set of forms in which a suffix, perhaps the suffix -la that marks Stative/Compleitive on verbs, is suffixed to the free Nominative pronouns, as follows:

1.1.3) inepo-la by myself itepo-la by ourselves
        empo-la by yourself eme'e-la by yourselves
        aapo-la by himself vempo-la by themselves

Of these, only vempo-la, the third person plural form, can appear with -WA.

114) vempo vempo-la nooka
    they by themselves talk
    They are talking all by themselves/
        just to each other.

115) vempo-la nok-wa
    by themselves talk-WA
    Talking all by themselves/just to each other
        is going on.

None of the other members of this paradigm, singular or plural, can occur with -WA. The last piece of evidence concerning these pronominal attributes relates to verb suppletion. As we saw in Chapter I, there is a small set of Yaqui verbs that are frequent in usage that supplete
with number. In Impersonal constructions, only the plural form of the intransitive verb can appear.

116) a. aapo vuite
    he run:SG
    He is running.

b. vempo tenne
   they run:PL
   They are running.

c. tenni-wa
    run:pl-WA
    Running is going on.

Only a very few transitive verbs supplet. One is the verb "kill".

117) a. Peo 'a=mea-k
   Pete 3sACC=kill:SG-PERF
   Pete killed him.

b. Peo 'am=sua-k
   Pete 3pACC=kill:PL-PERF
   Pete killed them.

These transitive verbs agree in number with their patient arguments. Adding -WA produces a Passive:

118) a. aapo mea-wa-k
    he kill:SG-WA-PERF
    He was killed.
b. vempo sua-wa-k
they kill:PL-WA-PERF
They were killed.

Therefore, suppletion in transitive verbs can only give evidence on the number of the "internal" patient argument, not on the number of the "external" agent argument.

4.7.6. Binding and Control by -WA.

In recent work on Passives, Roeper (1987) accounts for the differences in the acceptability of

119) a. The boat was sunk to collect the insurance.

b. *The boat sank to collect the insurance.

in terms of an "implicit" Agent argument present in the Passive that is not present in the corresponding Unaccusative. This implicit argument can control the subject of a subordinate purpose clause, as in (119a), while in (119b) there is no implicit Agent to exercise control. Yaqui constructions with -WA have a similar control property, as shown in Examples (120), Passive, and (121), Impersonal.

120) Passive
u kari veeta-wa-k, kaa ume na'akoria-m aman
DET house burn-WA-PERF, NEG DET:PL drunk-pl there
The [abandoned] house was burnt [because] it was desired that the drunks not drink there.

When the main clause of a purpose construction in Yaqui has an incorporated -WA argument, the coindexed argument in the subordinate finite clause must be incorporated also.

121) Impersonal

aman b’ii-k-wa, ume ili-’uusi-m mahta-vetci’ivo
there sing-WA, DET:PL child-PL teach-PP [for]

Singing is being done there, to teach the children.

Whoever burnt the house or had it burnt did not want the drunks to drink there, and whoever arranged for the singing wanted the children to be taught. This control of the subject of the purpose clause, along with the anaphor binding seen earlier, suggests that -WA is an argument, and is evidence against the view that -WA just subtracts an argument, or reduces valency. Further evidence of this type was given above in Example (59), where we saw that -WA could not appear twice, once for Passive and once for Impersonal.

59) a. Peo Huan-ta vepsu-k Pete beat John.
   b. Huan vepsu-wa-k John was beaten.
   c. *vepsu-wa-wa
If -WA just marked a reduction in valency, there would be no reason in principle for it not to apply twice; but if -WA is an incorporated argument, there is good reason not to expect two instances of the same argument in a single clause.

Recall also that -WA is excluded from the subjectless sentences in Yaqui that correspond to sentences with "dummy" or pleonastic subjects in English. Pleonastic subjects occur when a language requires that every clause have a lexical or clitic subject.

In sum: -WA may be analyzed as a third person plural pronoun that can bind and control. As an incorporated argument, it would lack case. It receives a theta role from the verb, but it is not referential. Also by virtue of its incorporated status, it lacks pragmatic prominence and topicality. In both Passives and Impersonals, it is an incorporated "external" (that is, non-object) argument; in Passives, it is an incorporated Agent, and in Impersonals, it is an incorporated Agent/Theme. In both constructions, -WA corresponds to an argument that, if it were not incorporated, would be the subject of the clause.
This gives us an explanation for the split in distribution of incorporated nouns vs. incorporated -WA. The incorporated nouns are patients, and correspond to free direct object arguments; their position is "internal" to the verb. Incorporated -WA would be classed as an "external" argument, and appears in the position that Baker (1988) predicts for arguments of its kind—the INFL node.

4.8. Summary and Discussion.

In Chapter I, I identified two argument types in Yaqui, lexical and clitic, and I identified the uses of these argument types to mark differences in argument focus and topicality. In this chapter, I identified a third argument type, incorporated arguments, both pronominal and lexical. Incorporated arguments are totally devoid of focus or prominence, and appear voice alternations. Free lexical and clitic arguments have case and grammatical relations, as well as theta roles; incorporated arguments have only the latter. Noun incorporation occurs in Anti-Passives, where these nouns are internal arguments with Patient theta roles; they are prefixed to the verb. Passives and Impersonals can be said to have an incorporated pronominal "external" argument, -WA, with an Agent theta role in Passives, and an Agent or Theme theta
role in Impersonals. I also described Unaccusatives, which are like Passives in putting a Patient into focus as subject, but unlike Passives in that they exclude even an incorporated, non-referential Agent.

In this Chapter, I have given a very lengthy examination of the question of whether or not -WA can be considered an argument. I think the evidence is clear that -WA is in complementary distribution with arguments, in interesting ways. However, that may not be the final answer to the question. Perhaps we should consider only items with case and grammatical relations to be arguments, and recognize that grammars can have other devices whose function it is just to show that an argument is "missing", since the speaker desires that there be no discourse focus whatsoever associated with that argument position, and does not wish to refer to any being as related to that argument position. I suggest the possibility that it may not be the case at all that -WA has third person plural pronominal features, as discussed in Section 4.7.5. above, where we saw that third person plural emphatic pronouns and Plural verbs were associated with -WA. Note that a third person plural form, "they", is used in English, and in many other languages, just when it is desired to avoid any specific
reference. Perhaps this is exactly the function of -WA: not argumental in the way "they" is, even when it is not specific; but to point out that an argument is "missing", and to avoid reference entirely. I am arguing that -WA is an "implicit" argument, as discussed in Williams (1987).

Passives in English have an implicit or presupposed external argument, as in Exp. (119a) above, repeated here.

119)  a. The boat was sunk to collect the insurance.
       b. *The boat sank to collect the insurance.

It is a semantic property of Passive sentences that they have an implicit agent argument. English Passives have this property just as the Yaqui Passives do; and English Passives do not have a -WA suffix that could be said to be an overt external argument. In this chapter, I have shown that binding and control can appear in Yaqui constructions with -WA. But that is not evidence that -WA is an argument. It could also be taken as evidence that constructions with -WA have an implicit argument, and that implicit arguments can also have these properties. This interpretation of the status of -WA seems preferable to me.
CHAPTER V

DATIVES AND APPLICATIVES

5.0. Introduction.

This Chapter will deal with two kinds of Oblique or Indirect Objects in Yaqui. The first of these is the Dative, and the second is the Applicative. Dative arguments have the thematic role of Goal, or Source, and Applicative arguments have the thematic role of Benefactee. Both of these arguments are less directly involved in the action described by the verb than is the Agent or Patient. Across languages, Dative and Applicative arguments are often animate beings. First, I will consider Dative arguments, and the question of Dative Movement in Yaqui. Some Goal or Source arguments are marked Dative, and some are marked Accusative (Jelinek and Escalante, 1989). Second, I will give an account of Applicative constructions in Yaqui. In these constructions, there is an Applicative suffix on the verb, and there is an Accusative marked argument in the sentence that has the Benefactee theta role. This is also an alternative construction where there is an oblique
argument, the object of a postposition, which has a Benefactee theta role.

5.1. Dative Constructions.

What is called "Dative Movement" or "Goal Advancement" is very common across languages. In these ditransitive constructions, arguments with the thematic role of Goal or Benefactee may have Accusative case, along with a Theme argument that also has Accusative marking. When a Goal or Benefactee is "advanced", it loses its oblique marking.

1) a. They sent presents to the children.
   b. They sent the children presents.
2) a. She fixed a sandwich for George.
   b. She fixed George a sandwich.

Example (1) shows a Goal argument, and (2) shows a Benefactee. These "double object" constructions are generally considered to be syntactically derived.

Across languages, we frequently see two types of constraints on Dative Movement. These constraints mean that Dative Movement is not "optional", in the sense that the sentence is grammatical either way, as seen in Examples (1) and (2); the constraints set limits on the distribution of Dative Movement. In the first of these, the lexical entry of a verb must stipulate whether it
allows both an Accusative/Dative (ACC/DAT) and an Accusative/Accusative (ACC/ACC) argument array. Many English verbs permit Dative Movement; some do not, as shown in Exp. (3).

3) a. They communicated their concerns to the president.
   b. *They communicated the president their concerns.

Generally, however, the English speaker can choose between the alternative construction types shown in Examples (1) and (2), in accordance with discourse or pragmatic factors such as the relative importance of the animate goal arguments.

In the second type of restriction upon "Dative movement", there is a split across person or with respect to animacy in the distribution of ACC/ACC and ACC/DAT argument arrays, reflecting the greater prominence of animate goals. In Warlpiri, for example, first and second person goal arguments are always ACC, and third person goals are always DAT (see Hale, 1983; Jelinek 1984). The speaker cannot choose whether or not to apply goal advancement; this is determined by the person of the goal.

Yaqui is similar to English in that it is the verb, rather than the person or animacy of the goal argument, that determines the permitted argument array. But Yaqui differs from English in that the speaker has no options. Yaqui ditransitive verbs must be marked in the lexicon as
to whether they have an ACC/ACC or an ACC/DAT case array. For a given verb, only one of these argument arrays is permitted; the other is ungrammatical. The contrast between these two verb classes is shown in Examples (4) and (5).

4) aapo Huan-ta uka vaci-ta miika-k
   3sNOM John-ACC DET:ACC corn-ACC give-PERF
   He gave John the corn.  (ACC/ACC)

5) aapo Huan-ta-u uka vaci-ta nenka-k
   3sNOM John-ACC-PP DET:ACC corn-ACC sell=PERS
   He sold the corn to John.  (ACC/DAT)

The oblique nominal in Exp. (5) has a postposition -u after the case marker -ta. I identify the sequence -ta-u as marking Dative case. Dative and other oblique pronominal arguments are inflected postpositions, as in (6).

6) aapo eu uka vaci-ta nenka-k
   3sNOM you:DAT DET:ACC corn-ACC sell=PERS
   He sold the corn to you.  (ACC/DAT)

As we saw in Chapter I, the order of the NP arguments in simple sentences in Yaqui can vary, and does not necessarily reflect grammatical relations. So it is not the order of the arguments in a "double Accusative" sentence that tells us which ACC object is the Goal, and which is the Theme. In fact the sentence seems to be
acceptable in context with any order of the arguments.
Compare Examples (6 - 9) with Exp. (4) above.

7) aapo uka vachi-ta Huan-ta miika-k
   3sNOM DET:ACC corn-ACC John-ACC give-PERF
   He gave John the corn. (ACC/ACC)

8) Huan-ta aapo uka vachi-ta miika-k
   John-ACC 3sNOM DET:ACC corn-ACC give-PERF
   He gave John the corn. (ACC/ACC)

9) uka vachi-ta aapo Huan-ta miika-k
   DET:ACC corn-ACC 3sNOM John-ACC give-PERF
   He gave John the corn. (ACC/ACC)

Other verbs that I have identified as selecting an ACC/ACC argument array include:

10) aapo enchi uka etehoi-ta mahta-k
    3sNOM 2sACC DET:ACC story-ACC teach-PERF
    He taught you the story. (ACC/ACC)

11) aapo enchi uka kava’i-ta reuwa-k
    he you:ACC DET:ACC horse-ACC lend-PERF
    He lent you the horse. (ACC/ACC)

12) aapo enchi uka tomi-ta u’aa-k
    3sNOM 2sACC DET:ACC money-ACC take away-PERF
    He took the money away from you. (ACC/ACC)

It should be noted here that although the class of double ACC verbs in Yaqui is small, that the presence of such constructions is apparently an old and widespread feature
of Uto-Aztecan. Givon (1980) lists a class of verbs of
this type in Ute, including verbs meaning "give", "tell",
and "show". We will examine the Yaqui verb meaning "show"
in Sec. 5.3 below; it also takes the ACC/ACC array. /

Verbs that select an ACC/DAT array include:

13) aapo eu uka toto’i-ta mana-k
   3sNOM 2sDAT DET:ACC chicken-ACC serve-PERF
   He served (the) chicken to you. (ACC/DAT)

14) aapo eu uka vachi-ta hinu-k
   3sNOM 2sDAT DET:ACC corn-ACC buy-PERF
   He bought the corn from you. (ACC/DAT)

15) aapo uka laapis-ta neu bwise-k
   3sNOM DET:ACC pencil-ACC me:DAT hand-PERF
   He handed the pencil to me. (ACC/DAT)

16) inepo uka tomi-ta Peo-ta-u nu’u-ka
   1sNOM DET:ACC money-ACC Pete-DAT get-PERF
   I got the money from Pete. (ACC/DAT)

I will now examine some syntactic properties of the
ACC/ACC vs. the ACC/DAT constructions in Yaqui, and
consider the question of whether there is evidence for
treating the ACC/ACC constructions as syntactically
derived, even though there is no productive process of
"Dative Movement". I will conclude that there is evidence
in favor of such an analysis.
5.1.1. Arguments vs. Adjuncts.

One syntactic feature in which these clause types differ is that of required vs. optional constituents.

5.1.1.1. ACC/ACC Arrays. In these constructions, both object arguments are required.

17) a. Huan Peo-ta uka vachi-ta miika-k

   John Pete-ACC DET:ACC corn-ACC give-PERF

   John gave Pete the corn.

b. *Huan uka vachi-ta miika-k

c. *Huan Peo-ta miika-k

5.1.1.2. ACC/DAT Arrays. The ACC argument is required, the DAT may not be.

18) a. Huan Peo-ta-u uka vachi-ta nenka-k

   John sold the corn to Pete.

b. Huan uka vachi-ta nenka-k

   John sold the corn.

c. *Huan Peo-ta-u nenka-k

I conclude that for verbs with an ACC/DAT array, the ACC object is a required argument, while the DAT is often an optional adjunct. A few verbs such as toha "bring" require both an ACC theme and a DAT goal argument.

19) uka miisi-ta=ne Maria-ta-u toha-k

   DET:ACC cat-ACC=I Mary-DAT bring-PERF

   I brought the cat to Mary.
The point is that all ACC nominals are obligatory arguments, while some DAT nominals are optional sentential adjuncts.

5.1.2. Passivization.

These verbs classes also differ when Passive is applied, as follows.

5.1.2.1. ACC/ACC Verbs. The ACC argument with the thematic role of Goal becomes the subject.

20) Huan uka vachi-ta miik-wa-k

John DET:ACC corn-ACC give-PASS-PERF

John was given the corn.

With these verbs, Passives with the ACC theme argument as Subject are unacceptable, whether the goal remains ACC or is marked DATIVE.

21) a. * u vachi Huan-ta miik-wa-k

b. * u vachi Huan-ta-u miik-wa-k

5.1.2.2. ACC/DAT Verbs. With these verbs, the ACC theme argument becomes the Passive Subject.

22) u vachi Huan-ta-u nenki-wa-k

DET corn John-DAT sell-PASS-PERF

The corn was sold to John.
With verbs of this class, the goal argument cannot be made Subject of the Passive; only ACC arguments can become Passive Subjects.

23) * Huan 'uka vachi-ta nenki-wa-k

We can note a parallel with English Passives here. Since (3b) (repeated here) is not allowed, the corresponding Passive is excluded.

3b) * They communicated the president their concerns.

24) * The president was communicated their concerns.

5.1.2.3. Summary on Passivization. With simple ditransitive verbs, Passive Subjects are as follows:

25) a. ACC/ACC verbs: ACC Goal becomes Subject
    b. ACC/DAT verbs: ACC Theme becomes Subject
    c. Only one PASSIVE is allowed.

Yaqui differs from English here, since Dative Movement is for most English verbs an optional process.

26) a. John gave the book to Mary.
    b. John gave Mary the book.
    c. The book was given to Mary by John.
    d. Mary was given the book by John.

In the two English Passives, the object that immediately follows the verb in each of the Active forms becomes the Passive subject. The Yaqui verb selects either an ACC/ACC or an ACC/DAT case array in the Active form, and therefore it permits only one Passive. Since the order of these
objects is free, as we saw in Examples (4) and (7 - 9) above, it is necessary to know the thematic role of an Accusative argument in a ditransitive sentence in Yaqui, whether it is a Goal or a Theme, before the correct Passive can be formed.

5.2. The Applicative.

In many languages, including English, "Dative Movement" applies to Benefactee "for" arguments as well as Dative "to" arguments, as we saw in Exp. (2) above.

2) a. She fixed a sandwich for George.
   b. She fixed George a sandwich.

In Yaqui, Goal and Benefactee arguments are always distinct. There is an Applicative suffix -ria which attaches to the verb. This suffix introduces an argument with Accusative case, and a Benefactee theta role.

Compare examples (27 - 29).

27) Maria bwiika-k
    Mary sing-PERFECTIVE
    Mary sang.

28) Maria Huan-ta bwiik-ria-k
    Mary John-ACC sing-APPLICATIVE-PERFECTIVE
    Mary sang for John.
5.2.1. The Postpositional Benefactive.

Example (27) is a simple intransitive sentence. Example (28) includes an Applicative Benefactee argument. In contrast, (29) includes the postposition *vetchi'ivo* "for" after the Benefactee argument *Huan*.

29) Maria Huan-ta vetchi'ivo bwiika-k
   Mary John-ACC for sing-PERF
   Mary sang for John.

The Applicative and Postpositional Benefactive constructions often mean the same, but they differ in distribution. The Applicative suffix can occur with some of the suffixes that derive Complex verbs, that we saw in Chapter II above. An example with the Desiderative:

30) Peo Huan-ta bwiik-'ii'aa
    Pete John-ACC sing-DESIDERATIVE
    Pete wants John to sing.

31) Peo enchi Huan-ta bwiik-ria-'ii'aa
    Pete 2ACC John-ACC sing-APP-DESIDERATIVE
    Pete wants you to sing for John.

The Postpositional Benefactee construction must be used with the Causative.

32) Peo Huan-ta bwiik-tua-k, e-vetchi'ivo
    Pete John-ACC sing-CAUS-PERF, 2sOBL-for
    Pete made John sing, for you.

Example (32) shows the postposition *vetchi'ivo* attached to the second person singular oblique pronoun *e-. After an
Accusative noun, as in (29), this postposition appears to be a separate word.

5.2.2. Applicative and Accusative.

When the verb is transitive, the Applicative produces an ACC/ACC array. Compare (33) and (34).

33) a. aapo uka kava'i-ta etbwak
   3sNOM DET:ACC horse-ACC steal-PERF
   He stole the horse.

   b. aapo uka kava'i-ta nee etbwa-ria-k
   3sNOM DET:ACC horse-ACC me:ACC steal-APP-PERF
   He stole the horse from ("off") me.

Example (33b) shows that the Applicative, as is often the case across languages, can mark a participant that is disadvantaged by, as well as one that is advantaged by, some event. To my knowledge, this is not true of the Postpositional Benefactive, which always has the Benefactive meaning.

34) aapo uka kava'i-ta ne-vetchi'ivo etbwak
   3sNOM DET:ACC horse-ACC 1sOBL-for steal-PERF
   He stole the horse for me.

5.2.3. Applicative and Passive.

When Passive follows an Applicative suffix, the new Benefactee argument becomes the Subject of the Passive sentence.
35) Pete DET:ACC money-ACC steal-PERF
Pete stole the money. Transitive

36) Pete DET:ACC money-ACC me:ACC steal-APP-PERF
Pete stole the money off me.
+Applicative

37) lsNOM DET:ACC money-ACC steal-APP-PASS-PERF
I had the money stolen from me. +Passive

While the Subject of a Passive formed from a simple transitive is the theme, a theme cannot be the Subject of a Passive with an Applicative argument.

38) DET money steal-PASS-PERF
The money was stolen.

39) * DET money me:ACC steal-APP-PASS-PERF
(The money was stolen off me.)

We see that the Applicative is like the Double Accusative constructions, in that it is the argument with the non-Theme theta role that must be the subject of the corresponding Passive.
5.3. Double Accusatives as Derived Constructions.

In the preceding examples we have seen a number of apparently simple or underived verbs in Yaqui that must be marked in the lexicon as to whether they select an ACC/ACC or an ACC/DAT case array. In Chapter II above we saw Compound and Complex verb constructions in which a derivational suffix or verb compounding creates a complex sentence with an embedded clause. This embedded clause has an ACC subject. If the underived verb in these constructions was transitive or ditransitive, the derived construction will have more than one ACC argument. In this section I will compare the verbs that have been identified in this chapter as "simple" ACC/ACC verbs, to the Compound and Complex verbs described in Chapter II. I will try to find evidence on the question of whether the "simple" ACC/ACC verbs should be analyzed as syntactically derived, like Complex verbs.

There is one important way that Double Accusative constructions in Yaqui are different from Complex verb constructions. It is easy to show that that the former are simple, one clause constructions, while the latter have embedded clauses. When Passive applies to a Double Accusative construction, there is a single verb in the clause, and the ACC argument with the Goal theta role assigned by that verb must become the subject of the
Passive, as we saw in Section 4.1.2. above. When Passive applies to a Complex (or Compound) verb construction, there is another "free" or "bound" verb added to the underived verb, and it is the argument that receives a patient theta role from the "outermost" verb that must become the subject of the Passive.

40) empo Huan-ta uka Peo-ta vep-su-sae-n
   2sNOM John-ACC DET:ACC Pete-ACC beat-CPL-DIR-P IMPF
   You ordered John to beat up Pete.

41) Huan uka Peo-ta vep-su-sae-wa-n
   John DET:ACC Pete-ACC beat-CPL-DIR-PASS-P IMPF
   John was ordered to beat up Pete.

In Chapter III we also saw that aside from the problem of the second position subject clitics, which can move from a main clause to an embedded one, that the order of the nominals in a construction with an embedded clause must remain fixed, in accordance with the clause boundaries. In contrast, we saw in Section 4.1. above that in Dative constructions, the order of the nominals is quite free.

Figure 2 shows all the sentence types in Yaqui where more than one Accusative argument can appear. The constructions are identified according to verb type, arguments required, and how Passivization applies. Note that "simple" ACC/ACC verbs resemble Applicative constructions in that the non-theme argument with ACC case
becomes the Passive Subject. In both the Dative and Applicative double Accusative constructions, it is a non-theme oblique element that becomes an obligatory Accusative argument, and also becomes the subject of the Passive.

**Figure 2**

<table>
<thead>
<tr>
<th>Active argument array</th>
<th>Passive argument array</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Simple verbs</strong></td>
<td></td>
</tr>
<tr>
<td>a. NOM ACC ACC NOM ACC</td>
<td></td>
</tr>
<tr>
<td>agent theme goal goal theme</td>
<td></td>
</tr>
<tr>
<td>b. NOM ACC DAT NOM DAT</td>
<td></td>
</tr>
<tr>
<td>agent theme goal theme goal</td>
<td></td>
</tr>
<tr>
<td><strong>Derived verbs</strong></td>
<td></td>
</tr>
<tr>
<td>a. NOM ACC ACC NOM ACC</td>
<td></td>
</tr>
<tr>
<td>agent agent theme agent theme</td>
<td></td>
</tr>
<tr>
<td>b. NOM ACC ACC NOM ACC</td>
<td></td>
</tr>
<tr>
<td>agent theme App App theme</td>
<td></td>
</tr>
</tbody>
</table>

I conclude that all these resemblances between the Applicative and the "simple" sentences with double Accusative arguments are evidence that the ACC/ACC constructions are also syntactically derived.

Finally, I want to point out an interesting pair of constructions with the verb vicha "see" plus the
Causative suffix. As in many languages, this form has the meaning "show".

42) aapo nee uka kava'i-ta vit-tua₁-k
   3sNOM 1sACC DET:ACC horse-ACC see-CAUS₁-PERF
   He showed me the horse.  (ACC/ACC)

Now it is also possible to use vit-tua with an oblique goal argument:

43) aapo neu uka kava'i-ta vit-tua₂-k
   3sNOM 1sDAT DET:ACC horse-ACC see-CAUS₂-PERF
   He sent me the horse.  (ACC/DAT)

In Exp. (42), "cause to see" corresponds to "show"; and it seems reasonable to think that if you send an object to someone, as in Exp. (43), you may also (perhaps less directly) cause them to see it. It appears in view of the contrasting glosses for (42) and (43), there are two derived verbs here, instead of the alternative ACC/ACC and ACC/DAT arrays seen in "Dative Movement" in English. Furthermore, it is interesting that what is happening here is the reverse of goal advancement. The Causative elsewhere always produces a new ACC argument, the "old" or embedded subject of the underived verb. Here, the Causative is producing a DAT argument rather than the expected ACC one, as in Exp. (42). In Exp. (43), an oblique argument corresponds to the direct argument seen in (42).
The corresponding Passives are:

44) inepo uka kava'i-ta vit-tua₁-wa-k
    1sNOM DET-ACC horse-ACC see-CAUS₁-PASS-PERF
    I was shown the horse.

45) u kava'i neu vit-tua₂-wa-k
    DET horse 1sDAT see-CAUS₂-PASS-PERF
    The horse was sent to me.

As with other Dative constructions, no choice in the Passive formation is allowed. The Accusative argument with the non-theme theta role of Goal must be selected as the Subject in Exp. (44).

It is of interest that with all the double ACC verbs in Yaqui, there is a constraint upon the semantically oblique argument. With ACC/DAT verbs, this argument may or may not be animate; with ACC/ACC verbs, only animate goals or sources are permitted. Compare Exp. (12), repeated here, with Exp. (46).

12) aapo enchi uka tomi-ta ʻuʻaa-k
    3sNON 2sACC DET:ACC money-ACC take away-PERF
    He took the money away from you. (ACC/ACC)

46) * aapo uka tomi-ta uka kari-ta ʻuʻaa-k
    he DET:ACC money-ACC DET:ACC house-ACC took-PERF
    (He took the money from the house.)
This verb can only be used with animate sources. With the
ACC DAT \text{vit-}tua_2, "send", the goal may be inanimate, as we
might predict.

47) u kava'\text{i} tuson-ewi \text{vit-}tua_2-\text{wa-k}

\text{DET horse Tucson-DAT see-CAUS_2-PASS-PERF}

The horse was sent to Tucson. \hspace{1cm} (ACC/DAT)

What seemed to be an arbitrary class of verbs turns out
to be semantically defined. It is verbs that require an
animate goal that require an Accusative goal. Where the
goal may be either animate or inanimate, the goal is
Dative.

5.4. Conclusions.

In any theoretical framework, it is impossible for a
sentence to have two arguments with the same grammatical
relation. Furthermore, it is clear that the two ACC
marked objects of Yaqui verbs like \text{miika} "give" or \text{'u'aa}
"take away" do not have the same grammatical relation; the
syntax of these two arguments is not the same. Only the
ACC argument with the thematic role of goal can become the
Passive Subject. We cannot distinguish formally between
the two objects on the basis of word order, as we can in
English; we have to refer to the thematic role of the
argument. We have a choice: we can either take the
position that Yaqui has some strange verbs with two direct
arguments marked the same that really aren't the same, or
we can recognize the connection between these constructions and what has been called "Dative Movement" in other languages. The second alternative seems to be more useful in an attempt to develop a unified theory of language.

The discourse function of "Dative Movement" is to give prominence to human, animate goals over inanimate themes. In languages like English that have a productive syntactic process of this kind we see ACC/ACC constructions that correspond to the Yaqui ones, and behave just the same way with regard to Passivization. In many languages, Dative and Benefactive are the same, pointing up the parallels between the double ACC and the morphologically derived Applicative construction in Yaqui.

These parallels give us a way of relating the Yaqui double ACC constructions to those seen in other languages. The Yaqui speaker must have knowledge of the thematic roles of the two ACC arguments of verb like miika "give", before he can correctly produce a Passive of the sentence.
6.6. Introduction.

Across languages, copular and possessive sentences are frequently "special" in syntactic structure. This may be related to the fact that these sentence types involve a relationship between two entities, but not the kind of relationship seen in an ordinary transitive sentence, where an agent acts upon a patient (Jelinek and Escalante, 1989). Yaqui resembles other Uto-Aztecan languages in having unusual possessive sentence types. In fact, Yaqui has two kinds of possessive sentences. One of these is very much like its English equivalent: there is a transitive verb, hipue, glossed "have", which assigns case to its object, just like any other transitive verb in the language. The second type of Possessive sentence does not contain any lexical item that can serve as a verb in other contexts, in non-possessive sentences. These sentences present many problems of analysis, and I will examine them in detail. Before doing so, I will describe the structure of "ordinary" Possessive sentences with the verb hipue,
and also consider other properties of Possessive constructions.

A comparison of Examples (1) and (2) will show that the verb hipue "have" is transitive.

1) aapo kari-ta vicha
   3sNOM house-OBJ see
   He sees a/the house.

2) aapo kari-ta hipue
   3sNOM house-OBJ has
   He has a house.

The suffix -ta, which appears on transitive objects in the example sentences in (1 - 2), also serves to mark nouns as possessors, as shown in (3).

3) a. Peo-ta kari
   Pete-POSS house
   Pete's house.

   b. aapo Peo-ta kari veeta-k
   3sNOM Pete-POSS house burn-PERF
   He burned Pete's house.

Example (3a) shows the complex NP Peo-ta kari 'Pete's house'. Example (3b) shows that when this complex NP is in object function, it cannot be marked ACC with -ta after kari, as in (1), since a sequence of two -ta suffixes is excluded. Thus, we could describe -ta as simply marking
Although they are not different on nouns, POSS and ACC case are in contrast in the pronominal system.

Compare:

<table>
<thead>
<tr>
<th></th>
<th>Accusative</th>
<th>Possessive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Singular</td>
<td>Plural</td>
</tr>
<tr>
<td>1)</td>
<td>nee</td>
<td>itom</td>
</tr>
<tr>
<td>2)</td>
<td>enchi</td>
<td>enchim</td>
</tr>
<tr>
<td>3)</td>
<td>apo'ik</td>
<td>vempo'im</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The suffix -wa shown in the third person singular can also be used in all the other pronominal possessives.


The focus of this chapter is a second and typologically more interesting kind of possessive sentence in Yaqui. Compare (5) and (6):

5) aapo kari-ta hipu'u-ne  
3sg NOM house-OBJ have-FUT  
He will have a house.
6) aapo kari-ne
    3sNOM house-FUT
    He will have a house/houses.
In (6), the Future suffix -ne is attached directly to the
noun kari, which is indefinite and unspecified as to
number.

The problem is to define the predicate/argument
structure of sentences like (6), to identify the verb and
its complement. In the next two examples,
7) vempo bwe‘ere-m kaaro-k
    3pNOM big-PL car-PERF
    They have big cars.
8) inepo bwe‘ere-m kaaro-m vicha-k
    lsNOM big-PL car-PL see-PERF
    I saw (the) big cars.
The adjective bwe’erem is plural, and at the level of
phrase structure bwe’erem kaarom is a complex NP.
However, in (7) the noun that is the head of this NP is
inflected for Perfective Aspect, like the verb vicha in
(8).

6.0.2. Noun vs. Verb.
In order to investigate the predicate/argument
structure, we will need definitions of noun and verb as
lexical categories. In Chapter II, above, I defined a noun in Yaqui as follows:

9) **Nouns** take the Case suffix **-ta** and the plural marker **-im**.

Examples (1, 2) show the case marker **-ta**. Plural marking is as shown in (10).

10) kari house          kari-m houses
    leepe orphan       leepe-m orphans
    maara daughter    maara-m daughters
    maaso deer        maaso-m deer
    chuu’u dog         chuu’u-m dogs
    tekil job         tekil-im jobs

Nouns ending in a vowel retain that vowel in the plural, and the few consonant-final nouns add **-i**. The nominal suffixes **-ta** and **-(i)m** are mutually exclusive; that is, a noun cannot be marked both Case and Plural at the same time.

11) aapo kari-m hipue
    3sNOM car-PL has
    He has cars.

12) *aapo kari-m-ta hipue
    3sNOM house-PL-C has

Verbs (with the exception of some statives) differ from nouns in that they take the Imperative and Prohibitive Inflections.
The Imperative and Prohibitive do not occur with members of the set of suffixes that mark Tense/Aspect/Modality (T/A/M), to be described in the next section.

6.1. The T/A/M Possessives.

In Chapter II, I defined a verb in Yaqui as an element that occurs with the set of Tense/Aspect suffixes. In the type of possessive construction that I will be concerned with here, exemplified by (6) and (7), there is no element corresponding to the verb hipue 'have' in (5) above. A comparison of the examples in (15) and (16) will show that the set of Tense/Aspect/Modality suffixes that appear on the Yaqui verb are attached directly to the noun in these constructions.

15) a. Peo vuite Pete runs
   b. - vuit-ek ran
   c. - vuit-ekan had run
   d. - vuiti-ne will run
   e. - vuiti-su-kan had finished running
   f. - vuiti-pea feels like running
   g. - vuiti-vae is about to run
   h. - vuiti-maci should run
   i. - vuiti’ean should (have) run
The Tense/Aspect/Modal suffixes included in (15, 16) are:
b) -ek Perfective; c) -ekan Past Perfective; d) -ne Future; e) -su Completive; f) -pea Inclination; g) -vae Prospective; h) -machi Modal A; and i) -'ean Modal B.

6.1.1. The Perfective Suffix.

Inspection of the (d - k) forms in (15) and (16) will reveal that both the verb in the examples in (15) and the noun in the examples in (16) end in the vowel -i, which remains unchanged before a suffix beginning with a consonant. The (a - c) examples show that when a suffix begins with the vowel -e and the word ends with the vowel -i, the -i is replaced by the -e. This does not happen when the word ends in some other vowel. Compare:
17) a. vuiti-ne will run vuit-ek ran
b. hapte-ne will stand up hapte-k stood up
c. yecha’a-ne will wake up yecha-k woke up
d. etapo-ne will open etapo-k opened
e. temu-ne will kick temu-k kicked

The next set of examples show comparable possessives:

18) a. kari house kar-ek has house(s)
b. leepe orphan leepe-k - orphan(s)
c. maara daughter maara-k - daughter(s)
d. maaso deer maaso-k - deer
e. chuu’u dog chuu’u-k - dog(s)

For the small number of nouns ending in a consonant, the situation is as follows:

19) a. aapo tekil-ek
   3sNOM job-PERF
   He has a job/jobs.

19) b. aapo pa’arcs-ek
   3sNOM rabbit PERF
   He has a rabbit/rabbit(s).

A very few Yaqui verbs end in a consonant before a consonant-initial suffix. Those that do take either -e or -a when no suffix is present, and the shape of the Perfective varies accordingly.

20) a. tuus-ne will grind
tuuse grinds
tuuse-k ground
b. bwiik-ne   will sing
     bwiika   sings
     bwiika-k   sang

The forms given in (20a, b) show that the verb stem ends in a consonant; compare the verbs inflected with the future suffix in (17) above, where a stem-final vowel is retained. I conclude that the underlying phonological shape of the suffix that a) marks Perfective Aspect on the Yaqui verb, and b) forms possessive constructions with a present time reference when attached to nouns (see 10b, 11b above) is -ek. The vowel -e appears when the suffix follows a front vowel (-i, -e); when the suffix follows a vowel with the feature (-front), that vowel (-a, -o, -u) replaces the -e of -ek. I include this phonological detail on the Perfective suffix in order to show that it attaches in the same way to both nouns and verbs.

There has been some confusion in the literature about the identity and phonological shape of this suffix. Johnson (1962) contrasts -ek ("predicativo de posesion") and -k ("perfectivo") and Lionett (1977) notes -k(a) ("perfecto") and -k ("ser de, poseer") for Sonora Yaqui. Lindenfeld (1973) identifies -k(a) as marking "Realized" aspect in both Possessives and ordinary verbal sentence types in Arizona Yaqui.
6.1.2. The Verbalizing suffixes -tu and -te.

When no T/A/M suffix is present on a noun, a possessive interpretation is not possible.

21) a. Peo chuu’u-k
Pete dog-PERF
Pete has a dog.

b. Peo chuu’u
Pete dog
Pete is a dog.

Example (21b) is a present-tense copular sentence. The copula is phonologically null in the present tense. In non-present tense copular sentences, the copular suffix -tu appears, followed by a T/A/M suffix.

22) a. aapo ya’ut
3sNOM leader
He is a/the leader.

b. aapo ya’ut-tu-ne
3sNOM leader-BE-FUT
He will be a/the leader.

c. aapo ya’ut-tu-kan
3sNOM leader-BE-PAST PERF
He used to be a leader.

d. aapo ya’ut-tu-machi
3sNOM leader-BE-MODAL A
He should be the leader.

The copular suffix -tu can also appear in present tense sentences with a special reading:
23) aapo ya'ut-tu
3sNOM leader-BE
He is being the leader (acting as the leader).

There is also a suffix -te that derives verbs from nouns:
24) a. aapo kari-te
3sNOM house-MAKE
He is building a house.
b. aapo kari-te-machi
3sNOM house-MAKE-MODAL A
He should build a house.

Derived verbs with both -tu and -te can take the Imperative.
25) a. ya'ut-tu-‘e
3sNOM leader-BE-IMP
Be a leader!
b. kari-te-‘e
3sNOM house-MAKE-IMP
Build a house!

These constructions with verbalizing suffixes are clearly different from the Yaqui T/A/M possessives, that have no verbalizing suffix and cannot take the Imperative inflection.

6.1.3. Alienable and Inalienable Possession.

The distinction between possessive sentences with hipue and those without seems to be primarily that between alienable and inalienable possession. In speaking of a mother or a daughter, immutable relationships, hipue is not appropriate.
26) a. inepo maara-k
   b. *inepo maara-ta hipue

   1sNOM daughter-PERF 1sNOM daughter-C have

   I have a daughter.

Unless an interpretation like the following is intended.

27) aapo a-maara-wa
   hipue

   3sNOM 3sPOSS-daughter-POSS has

   He has custody of his daughter.

In speaking of a spouse, either construction can be used:

28) a. aapo kuuna-k
    b. inepo hamut-ta hipue

   3sNOM husband-PERF 1sNOM woman-C have

   She has a husband.  I have a wife/woman.

Otherwise, the alienable-inalienable distinction is not consistently followed in Arizona Yaqui, and for most nouns, either construction is acceptable:

29) a. aapo chuu’u-ta hipue

   3sNOM dog-C has

   He has a dog.

   b. aapo chuu’u-k

   3sNOM dog-PERF

   He has a dog/dogs.

For body parts, the T/A/M possessive is preferred.

30) a. inepo husai-m puus-ek

   1sNOM brown-PL eye-PERF

   I have brown eyes.
Some parallel constructions with hipue are also heard. Dedrick (personal communication) informs us that in Sonoran Yaqui, hipue cannot be used in speaking of (inalienable) body parts. In my own speech, such constructions appear. However, in the following examples, the T/A/M construction is excluded:

31) a. aapo teeve chooni-m hipue, a=choomo vetchi'ivo
   3sNOM long hair-PL has, his=Fariseo mask-for
   He has long hair for his Fariseo mask.

31) b. aapo husai puusi-m hipue, a=choomo-vetchi'ivo
   3sNOM brown eye-PL has, his=Fariseo mask-for
   He has brown eyes for his Fariseo mask.

With "store-bought" body-parts hipue only is employed.

If one is in temporary possession of property belonging to someone else, again hipue only can be used.

32) a. nee a-kaaro-wa-(ta) hipue
   1sNOM his car-C have
   I have his car.

b. * nee a=kaaro-wa-k
The Case maker -ta is optional after POSS -wa in (32a); -ta is always optional after any pronominally possessed NP in object function in Yaqui. Langacker (1979) proposes that -ta is historically derived from a reanalysis of an "absolutive" -t followed by an Accusative -a.

When location of the possessed object is specified, the following distinction can be marked:

33) a. aapo teta-ta mam-po hipue
   3sNOM rock-C hand-in have
   He has a rock in his hand.

b. aapo mam-po teta-k
   3sNOM hand-in rock-PERF
   He has a rock (stuck or embedded) in his hand.

In (33a), someone is said to be holding a rock, while in (33b) he has a rock lodged in a scrape or cut.

6.2. The Problem.

I turn now to the problem of the categorial status of a form such as kar-ek. On the definition of noun given earlier, kar-ek cannot be a noun, since it does not take Case or Plural marking. It does not take the Imperative, since the Imperative and the T/A/M suffixes are mutually exclusive. In the following sections, I will consider several alternative analyses of these Possessive
sentences. and identify some problems associated with each.

6.2.1. A Verbalization Analysis.

Suppose we define verb so as to include any word with a T/A/M suffix, and call forms such as kar-ek derived verbs. A major difficulty with this position is that of defining the scope of the verbalizing T/A/M suffixes. If we assume that these suffixes can derive verbs from nouns, it will not be just simple lexical nouns that are verbalized, but complex noun phrases that may include subordinate clauses. Across languages, it is not unusual to see nouns verbalized by a tense/aspect suffix:

34) They vacationed in Mexico.
But comparable constructions with complex NPs are uncommon. 35) *They the long awaited vacationed in Mexico.

In examples (30a, b) above, we saw adjective-noun sequences followed by Perfective -ek. Other complement types occur within the possessed NP:

36) ine po hiaki-m-po ho’a-k-am-ta huuve-k
1sNOM Yaqui-PL-PP live-PERF-S:NML-ACC wife PERF
I have a wife from Yaqui-land.

37) aapo ume em ta’aru-ka-‘u-m livro-k
3sNOM DET-PL 2sPOSS lose-PERF-O:NML-PL book-PERF
The books that you lost belong to him.
38) aapo ko’kosi au-la-m mama-k
   3sNOM hurt do-STATE-PL hand-PERF
   He has an injured hand.
(Bilateral body parts are often marked Plural in Yaqui, as in Example [38], when singular reference is intended.)

In these examples, it appears that only the subject pronoun would be outside the scope of the T/A/M suffix that builds a possessive sentence.

6.2.2. Adjectival Case.

An apparent second problem is presented by constructions such as the following:

39) nee bwe’uu-k vemela-k kaaro-k
   1sNOM big-k new-k car-PERF
   I have a big new car.

On first inspection, there appear to be three instances of the PERF suffix here, suggesting the possibility of a serial verb analysis. But other examples will show that the -k appearing on bwe’uu and vemela in (35) is distinct from the Perfective -ek that occurs in sentence final position. We have seen (Exp. 10 and 11) that PERF -ek changes a final -i to -e:

40) a. empo kari-ne
    2sNOM house-FUT
    You will have a house.

   b. empo kar-ek
    2sNOM house-PERF
    You have a house.
But the suffix that appears on elements that are attributive to the sentence-final head of a T/A/M Possessive leaves -i unchanged.

41) a. Peo tu'i
Pete good

b. Peo tu'i-k kar-ek
Pete good-k house-PERF

Pete is good. Pete has a good house.

Furthermore, the suffix -k appears on adjectives in Possessive constructions with any of the T/A/M suffixes on the head noun:

43) a. aapo tu'i-k tekil-ek
3sNOM good-k job-PERF
He has a good job.

b. aapo tu'i-k tekil-ekan
he good-k job-PAST PERF
He had a good job.

c. aapo tu'i-k tekil-ne
3sNOM good-k job-FUT
He will have a good job.

d. aapo tu'i-k tekil-machi
3sNOM good-k job-MODAL A
He should have a good job.

This -k suffix does not appear on attributive elements that are plural in number. Compare:
44) a. ine po we pulai-k tutu’uli-k maara-k
   1sNOM one-k pretty-k daughter-PERF
   I have one pretty daughter.
b. ine po woi-m tutu’uli-m maara-k
   1sNOM two-PL pretty-PL daughter-PERF
   I have two pretty daughters.

We noted above that the non-Nominative case-marker -ta is mutually exclusive with Plural marking. The fact that -k has the same distribution suggests that it is marking Case in the T/A/M Possessives. Additional evidence that -k is a Case marker comes from the fact that -k occurs on singular adjectives in non-possessive constructions, if there is no NP head of an object phrase, as in (45a).

45) a. uka siali-k ne-u toha
   DET:ACC green-k 1s-DAT give
   Give me the green one.
b. u siali weche-k
   DET green fall-PERF
   The green one fell.

46) a. ume siali-m ne-u toha
   DET-PL green-PL me-DAT give
   Give me the green ones.
b. ume siali-m watt-ek
   DET-PL green-PL fall:PL-PERF
   The green ones fell.
The suffix -k marks ACC case on the singular adjective siali-k in (45a); it does not appear on siali in (45b), where the adjective has NOM case. Note also that the NOM determiner is u in (45b), and the ACC determiner is uka in (45a). Langacker (1979) reconstructs an ACC suffix -ku for Proto Uto-Aztecan; this -ku combines with a later ACC -a, yielding -ka, and ACC -k on nouns also shows up in some of the daughter languages.

I defined the lexical category Adjective in Chapter II above as follows:

47) Adjectives are case-marked with the suffix -k. Acc -ka is also a feature of determiners, as in (45a). Adjectives are not casemarked in a non-possessive sentences if they precede an NP head. Compare:

48) a. inepo uka siali kaaro-ta vicha-k
    1sNOM DET:ACC green car-C see-PERF
    I saw the green car.

48) b. inepo uka siali-k vicha-k
    1sNOM DET:ACC green-k see-PERF
    I saw the green one.

However, if the adjective can follow the NP head, it will be case marked, rather than the NP.

49) inepo uka mansaana tu'i-k bwa'a-ka
    1sNOM DET:ACC apple good-k eat-PERF
    I ate a good apple.
Adjectives cannot take Perfective -ek in a Possessive sentence:

50) * aapo sial-ek  
    3sNOM green-PERF  
    [he has a green one]

Only the lexical noun that is head of a possessed NP can take a T/A/M suffix in a Possessive construction. Finally, there are sentences in which either the -k or -ta Case suffix can appear.

51) a. aapo veeti-la-k kar-ek  
    3sNOM burn-STATE-k house-PERF  
    He has a burnt house.

51) b. aapo veeti-la-ta kar-ek  
    3sNOM burn-STATE-ta house-PERF  
    He has a house (that was) burnt.

These sentences differ little, if at all, in meaning. Dedrick (personal communication) suggests that in (51a) veeti-la is treated as an adjective, while in (51b) it is treated as nominalized. In my own speech, -ta can often replace -k. Lindenfeld (1973) notes the following contrast:

52) senu-k-u'u nooka-’e  
    one-k-PP speak-IMP  
    Speak to (some) one!
53) senu-ta-u nooka-‘e
    one-ta-PP speak-IMP

    Speak to the other one!

Compare *senuku'u* in (52) with *senutau* in (53). The former
may represent an earlier Accusative -ku preserved in this
environment (see Langacker 1979).

In T/A/M Possessives, the head noun takes a T/A/M
suffix, while elements modifying that noun may take a) -k
if adjectival, b) -ta if nominalized, or c) -(i)m if
Plural. I conclude that -k is marking ACC Case in the
T/A/M Possessives.

The Case markers -ta and -k are alike in being
confined to elements that are singular in number; each is
mutually exclusive in distribution with the Plural suffix
-(i)m. They differ in distribution in one crucial
respect:

54) inepo bwe'uu muera siali kaaro-ta vica-k
    1sNOM big old green car-ta see-PERF
    I saw a big old green car.

55) inepo bwe'uu-k muera-k siali-k kaaro-k
    1sNOM big-k old-k green-k car-PERF
    I have a big old green car.
56) inepo uka bwe’uu-k siali-k vicha-k
   1sNOM DET:ACC big-k green-k see-PERF
   I saw the big green one.

Multiple occurrences of -k occur, while a sequence of more than one -ta in (54) is excluded. Example (3b) above is repeated here:

3b) aapo Peo-ta kari veeta-k
   3sNOM Pete-ta house burn-PERF
   He burned Pete’s house.

The head noun kari cannot take -ta in (3b), just as the adjectives do not in (54). I conclude that the Yaqui T/A/M Possessives have complements to the head noun of the possessed noun phrase that have Accusative case.

6.2.3. Object Incorporation.

It is evident that the Yaqui T/A/M Possessives involve "mismatches" between phrase structure (the complex NP), and syntactic structure (predicate/argument structure). In semantic structure, these possessive sentences state a relation between two beings, the possessor and the possessed. Either of these can be represented in phrase structure by a complex NP. In the syntax, Yaqui grammar requires that these sentences be transitive, but there is no overt verb of possession. The head noun of the possessed NP is followed by one of the
set of T/A/M suffixes; this noun + suffix then corresponds to the transitive verb and its incorporated object.

57) inepto kaaro-k
    1sNOM car-PERF
    I have a car.

We have seen that if the possessed NP is more than a simple lexical noun, the attributive elements in the complex possessed NP are Case marked with -k or -ta, showing their status as constituents of an object complement to a transitive verb.

58) havee uka bwe'uu-k kaaro-k
    who DET:ACC big-C car-PERF
    Who does that big car belong to?

The generalization concerning the appearance of the Case marker -k on adjectives in Yaqui is as follows:

59) Singular adjectives are -k marked when they are not followed by a head NP that is Case-marked.

This generalization applies to both possessive and non-possessive sentences. The incorporated noun in the T/A/M Possessives cannot be case-marked, and Case appears on unincorporated attributives of the head of the possessed NP. I have shown that -k is marking elements in ACC function rather than POSS function in these constructions, since a determiner, when present, is unambiguously ACC, as in Exp. (58); and these sentences mean that the referent
of the sentential subject, not an attributive, owns or has the possessed object. Baker (1988) has shown that across languages, we see that the process of noun incorporation involves head movement, movement of a head noun into the verb. This movement of the head noun can sometimes leave behind complements of the noun that get case-marked. We saw in Chapter IV above that object noun incorporation is a well attested process in Yaqui grammar. This suggests that noun incorporation may be the process at work in the T/A/M possessives.

6.2.4. A Possible Null Verb Analysis.

If there is noun incorporation, then there must be some "host" for the incorporation, some verb head that the head noun can move to. The Tense/Aspect/Modality suffixes are not transitivizers, making it possible for the "stranded" complements to be case-marked; they occur on intransitive verbs also. Therefore, they cannot by themselves assign a theta-role to an object. This suggests a possible analysis of the T/A/M Possessive sentences as containing a phonologically null verb of Possession which incorporates its object and takes the normal complement of verbal T/A/M markers. A ZERO verb of Possession is as respectable as a ZERO copula; they are equally devoid of lexical content, and mark a relation
between two entities that is not the typical agent/patient relation seen in transitive sentences.

In Chapter IV above, I identified Noun Incorporation in Yaqui as the Anti-Passive voice, a derived intransitive sentence where there is no free case-marked object, since the corresponding noun has been incorporated into the verb. I noted that there are certain "fixed expressions", in which a verb with an incorporated noun can still function as a transitive.

60) vempo hunuka maaso-'aamu
   3plNOM 3sDEM:ACC deer-hunt
   They are deer-stalking that one. (They are stalking him the way they stalk a deer.)

61) vempo hunuka bwe'uu-k chuu'-hahhasu-k
   3plNOM 3sDEM:ACC big-ACC dog-chase-PERF
   They dog-chased that big one. (They chased him as if he were a dog.)

These "fixed expressions" are similar to English constructions such as

62) She is baby-sitting my little brother.

I assume, following Baker (1988), that the sentences in (60, 61) are examples of "classificatory" incorporation, since they permit an external object argument. What I want to point out here is the parallel between "classificatory" incorporation and the T/A/M Possessive
sentences, that can also occur with or without a free object. This parallel lends support to the idea that the T/A/M sentences also involve noun incorporation. And if there is incorporation, then we need to consider the possibility of a ZERO verb of possession.

6.2.5. Embedded Possessive sentences.

In Chapter II, I described Complex verb constructions with embedded clauses. What I want to point out here is that the set of suffixes that form Complex verbs (-tua Causative; -tevo, Indirect Causative; -sae, Directive; and -'ii'aa, Desiderative) can also appear in Possessive constructions, again producing an embedded clause. Example (63) shows these suffixes with an ordinary verb.

63) Peo a=vuiti-tua-k Pete made him run
   a=vuiti-'ii'-aa wants him to run
   a=vuiti-sae-k told him to run

For semantic reasons, these suffixes do not occur too often with embedded Possessive sentences, but the following sentences are acceptable.

64) Peo kari-tua-wa-k
    Pete house-CAUS-PASSIVE-PERF
    Pete was caused to have house(s).
65) Peo enchi kari-‘ii‘-aa
Pete 2sACC house-DESIDERATIVE
Pete wants you to have house(s).

The next example, (66), shows a Compound verb construction, since the verb tia also occurs as a free verb.

66) Peo au kar-ek-tia
Pete 3sREFL house-PERF-say
Petei says hei has house(s).

The embedded subject is an anaphor when it is coreferent with the subject of the main verb, as we saw in Chapter III in the Complex and Compound verb constructions. Again, this use of an anaphor is suggestive of the function of the "Same Subject" marking seen in a Switch Reference system.

When these suffixes verbs appear in Possessive sentences, they behave just as if they were following some lexical verb of possession, as the glosses given in Examples (64 - 66) are intended to show. This also can be taken as support for the idea of a ZERO verb of possession.

6.3. Summary and Discussion.

In this Chapter, I have described the T/A/M Possessive sentences in Yaqui in some detail. I have
indicated some of the problems that arise in the analysis of these sentences, and I have discussed several possible analyses. I have pointed out that if we assume that the possessed noun is verbalized, we have problems in defining the scope of this possible verbalization. If noun incorporation is what is involved, then one possible analysis of these sentences would include a phonologically null or ZERO verb of Possession, which is comparable to a ZERO copula. The set of T/A/M suffixes that make a clause finite would then follow this ZERO verb and its incorporated object. What would be incorporated is just the lexical head of the possessed NP. This is consistent with what Baker (1988) has shown to be true for noun incorporation in universal grammar. If the incorporated noun has any complements, a demonstrative or an adjective, these complements remain outside the verb and are case-marked by the verb. We cannot assume that it is the T/A/M suffixes that make the verb transitive, so it can assign case to these complements, since these suffixes also appear with simple intransitive verbs. I am not sure that the ZERO verb analysis is the right one, and I do not claim that this is the final answer. It is one possible analysis of these sentences, that is consistent with recent work on noun incorporation as a general process.
A historical note: There is comparative evidence (Langacker 1976) that Yaqui Perfective -ek derives from a suffixed verb meaning "have"; this suggests that possessive sentences with this verb were the stimulus for generalizing all T/A/M suffixes to parallel function in possessive constructions. We can not synchronically analyze the set of T/A/M suffixes as verbs that can assign a theta role to an object, since they occur also with intransitive verbs.
CHAPTER VII

SUMMARY AND CONCLUSIONS

7.0. Introduction.

In this final chapter I will first summarize the contents of this thesis, and then discuss the conclusions I have arrived at from an overall perspective. In describing the voice alternations and differences in argument structure seen in the construction types I have described here, I have pointed out certain pragmatic and functional features associated with them. In the closing section of this chapter, I will give some comments on the different functions of these constructions in context, from the point of view of a native speaker. I hope that this will give the reader a unified picture of voice and argument structure in general, and a better understanding of this aspect of the Yaqui language.

7.1. Summary.

Chapter I provided some background material and an informal description of the sound system of Yaqui. I also included some data on syllable structure and pitch/accent. The analysis of argument structure began with Chapter II,
which provided an outline of the argument structure of basic, single clause sentences in the language, without any voice alternations. In that Chapter, I described the structure of the Yaqui verb, and the set of Tense/Aspect and Modality suffixes that attach to the verb. This complex appears in sentence final position, since Yaqui is an SOV language. I surveyed the primary lexical categories of the language, and defined Noun, Verb, and Adjective in Yaqui. It was noted that Yaqui has both lexical (free nouns and pronouns) and clitic arguments. The subject clitics occur in sentential second position, and follow the first word or constituent of the clause, whatever that may be. The object clitics are preverbal.

Chapter III provided a description of sentences with Complex and Compound verbs, that build sentences with embedded clauses. I argued that these are not one-clause sentences, on the grounds that the subject of the "inner" verb can bind an anaphor. I also showed that it is possible for sentences with embedded clauses to have strings of three Accusative marked arguments. "Triple" Accusatives (except for sentences with an Applicative) do not appear in single clause constructions.
Chapter IV deals with Voice, and is the core of the thesis. I began by describing the Passive and the Impersonal in Yaqui, which are both derived by the suffix -WA. I also identified the Anti-Passive, a derived intransitive where the Patient is incorporated. The suffix -WA can be added to these constructions to produce an Impersonal Anti-Passive. The last voice construction to be described was the Unaccusative. In this intransitive construction, the subject has a Patient theta-role, and there is no Passive morphology. However, Unaccusatives are generally morphologically marked in Yaqui, in the sense that they have corresponding transitive verbs that differ only in the final vowel, -e vs. -a.

The second half of Chapter IV was devoted to a detailed discussion of the question of whether the suffix -WA should be treated as an incorporated argument, as Baker (1988) has suggested for Passive morphology in other languages. I showed that -WA is in complementary distribution with "external" arguments, both across clause types and across verb types (modal and weather/temporal verbs; Unaccusatives). Finally, I showed that -WA appears with third person plural anaphors and emphatic pronouns, and that it has certain binding and control properties.
Chapter V deals with Datives and Applicatives. There is no "optional" Dative Movement in Yaqui, only a few verbs that require the Goal argument to have Accusative case, along with the Theme. This class of verbs takes only animate goals, and cognates of these verbs also take Accusative goals in other Uto-Aztecan languages. The great majority of verbs take Dative Goals, and these Goals cannot be "advanced". This chapter also included a description of the Applicative construction, where a verbal suffix is associated with an Accusative marked argument that has a Benefactee theta role. This construction can also be used to speak of someone who is disadvantaged by the event described in the sentence, the opposite of a Benefactee. In this respect it differs from the Postpositional Benefactee, that can only be used in the positive sense.

Chapter VI deals with the special kind of Possessive sentences in Yaqui. I considered a verbalization analysis and a noun incorporation analysis of these sentences, and pointed out problems with both. On a verbalization analysis, there are problems in defining the scope of the verbalization. On a noun incorporation analysis, it appears necessary to postulate a ZERO or null verb of possession, with the head of the Possessed noun phrase incorporated into the Null Verb of Possession. These
sentences are of particular interest in the analysis of Yaqui syntax, since there appears to be a "mismatch" between the phrasal categories and the syntactic categories: there is an "overlap" between the object NP and the Verb. Any complements of the head noun remain outside the verb and get case-marked by the verb. Across languages, Possessive sentences are frequently "special" in syntactic structure, and in the next section I will offer some speculations on this point, that will be relevant to the question of the function of differences in argument structure and voice.

7.2. A Functional Perspective.

In this section I will expand my earlier remarks on the use of changes in voice and argument type in relation to argument focus. In Chapter I it was pointed out that the speaker can choose between free or clitic arguments, according to which argument position he wants to place focus on in the sentence. A clitic argument cannot have focus. This difference in the use of these Yaqui sentences is comparable to the difference in using stressed and unstressed pronouns in English. I will identify the relatively greater focus on an argument with a particular Theta role by a plus mark.
These two sentences mean about the same thing, except for focus. Clitics cannot receive full stress, and cannot have focus. We can show this by looking at the kinds of questions that Examples (1a,b) can be used to answer.

Questions have inherent focus on the Wh-word. Example (1a) can be used in answer to a question such as:

2) a. havee-ta empo ania-k
   who-ACC 2sNOM help-PERF
   Who did you help? Patient +Focus

While (1b) can be used to answer a question such as:

2) b. havee a=ania-k
   who:NOM 3sACC=help-PERF
   Who helped him? Agent +Focus

It would be inappropriate to answer (2a) with (1b), or vice versa. This functional explanation for differences in argument structure is a basic theme of this thesis.

In Chapter III, on Complex sentences, I showed that a subject clitic which is the subject of the "outer" or
matrix verb, can interrupt the string of arguments of the "inner verb".

3) apo'ik=ne bwiik-hikkaha-n
   3sACC=lsNOM sing-listen-PAST IMPF

I was listening to him sing. Embedded Subject +Focus

I noted in Chapter II that this placement of the clitic produces a problem for the embedded clause analysis of these sentences that I argued for. However, this is a general problem of analysis for any language with second position "AUX" clitics. Notice that this placement of the clitic puts the subject of the embedded clause in first position in the sentence, and gives the embedded subject more focus and prominence than the clitic subject of the matrix clause, which is backgrounded in the discourse. Example (3) can not be used to answer a question about the matrix subject.

In the linguistic literature, it is common to see statements to the effect that the use of voice alternations is dependent upon discourse factors. These discourse factors are complex and poorly understood, and I do not try to give a complete account of them in this thesis. But it seems to me to be safe to say that it is not possible to place focus on an argument that is "missing" or has been incorporated. It is not appropriate
to answer a question such as (4a) with the sentence in (4b).

4) a. havee Peo-ta chochona-k
   who Pete-ACC punch-PERF
   Who punched Pete?        Agent +Focus

   b. Peo chochon-wa-k
   Pete punch-WA-PERF
   Pete was punched.          Patient +Focus

In Chapter IV, on Voice in Yaqui, we saw that sentences with the suffix -WA have no lexical or clitic argument with an "external" theta role. This means that in Passives, the Agent cannot be in focus. Passives have a single free or clitic argument with an "internal" theta role — a Patient. Focus in a sentence with more than one lexical argument can vary, and the verb can have focus. The only claim I am making here is that the focus cannot be on a "missing" or incorporated argument.

In Impersonals, -WA corresponds to a "missing" subject. Thus, it would not be appropriate to answer a question like (5a) with (5b).

5) a. havee tekipanoa
    who:NOM work
    Who is working?
b. tekipanoa-wa
   work-WA
   Work is in progress.  Event +Focus
Since there is no free or clitic argument in (5b), the event or activity itself is in focus.

In Anti-Passives, a noun corresponding to the transitive object is incorporated. This incorporated noun is not definite or referential. What is being referred to is an activity, usually culturally defined. Either this activity or the subject may be in focus, but not the incorporated Patient.
6) a. Peo chiin-pua
   Pete cotton-pick
   Pete is picking cotton.  Patient -Focus
It is impossible to background the Agent or remove it from focus by using a clitic subject argument.
6) b. *chiin-pua=te
   cotton-pick=1plNOM
   [we are picking cotton]
Instead, the free pronoun must be used.
6) c. itepo chiin-pua
   1pNOM cotton-pick
   We are picking cotton.  Agent +Focus
In order to remove the agent from focus, it is necessary to use the impersonal.
6) d. chiin-pua-wa
   cotton-pick-WA
   Cotton-picking is in progress. Event +Focus

With Unaccusatives, the only argument that can be in focus is the Patient.
7) u tomi wiute
   DET money spend:UNACCUSATIVE
   The money is running out. (being spent up). Patient +Focus

Unaccusative verbs have transitive counterparts, and this transitive may have an incorporated object, producing a derived intransitive, an Anti-Passive. With Anti-Passives, the only argument that can be in focus is the Agent.
8) Peo tomi-wiute
   Pete money-spend
   Pete is spending money. Agent +Focus

Finally, adding -WA produces an Impersonal Anti-Passive, where only the event or activity can be in focus.
9) tomi-wiuti-wa
   money-spend-WA
   Money-spending is going on. Event +Focus

In Chapter V, on Datives and Applicatives, we saw how Goals and Benefactees can be "advanced" to the status of a direct argument. There is no optional Dative Movement;
verbs that require an animate Goal also require this Goal to be "advanced". The same kind of functional explanations that are given for "Dative Movement" across languages are applicable here. Compare the following:

10) a. I sent Mary a letter.
   b. ## I sent Paris a letter.

Example (10b) is very odd unless "Paris" is the name of a person. It is Animate (usually human) goals that are "advanced" to Accusative status.

In Chapter V we saw the following contrast in the argument arrays required by Yaqui verbs:

11) Huan Peo-ta uka vachi-ta miika-k
    John Pete-ACC DET:ACC corn-ACC give-PERF
    John gave Pete the corn.

12) Huan Peo-ta-u uka vachi-ta nenka-k
    John Pete-DAT DET:ACC corn-ACC sell-PERF
    John sold the corn to Pete.

When Passive applies to a Goal construction, an "advanced" Goal becomes the Subject; otherwise the Theme is subject.

13) Peo uka vachi-ta miik-wa-k
    Pete DET:ACC corn-ACC give-PASS-PERF
    Pete was given the corn.

14) u vachi Peo-ta-u nenki-wa-k
    DET corn Pete-DAT sell-PASS-PERF
    The corn was sold to Pete.
It was noted above that questions put an argument in focus. In (13), a question can be asked about the Goal, but not about the Theme.

15) a. havee vachi-ta miik-wak
    who corn-ACC give-PASS-PERF
    Who was given corn?

    b. *hitaa Peo-ta-(u) miik-wa-k
       what Pete-ACC-(PP) give-PASS-PERF
       [What was given (to) Pete?]

Whereas with (14), either the Goal or Theme argument can be questioned, as shown in (16).

16) a. hitaa Peo-ta-u nenki-wa-k
    what Pete-DAT sell-PASS-PERF
    What was sold to Pete?

    b. havee-ta-u u vachi nenki-wa-k
       who-DAT DET corn sell-PASS-PERF
       Who was the corn sold to?

The same pragmatic factors are relevant to an understanding of the Applicative Construction. In English, we can apply "Dative Movement" to a Benefactee argument.

17) I fixed George a sandwich.

The Yaqui Applicative construction makes the Benefactee a direct object.
18) aapo ili-'uusi-ta bwa'am-ta bwasa'a-ria-k
   3sNOM child-ACC food-ACC cook-APPLICATIVE-PERF
   She cooked food for the child.

When Passive is applied to an Applicative construction, the Benefactee is the argument that gets advanced to subject.

19) u ili-'uusi bwa'am-ta bwasa'a-ria-wa-k
   DET child food-ACC cook-APPLICATIVE-PASS-PERF
   The child had food cooked for it. (Not Causative)

This is the only way a Benefactee can be subject. Compare the corresponding sentence with a Postpositional Benefactee.

20) aapo ili-'uusi-ta-vetchi'ivo bwa'am-ta bwasa-k
   3sNOM child-ACC food-ACC cook-PERF
   She cooked food for the child.

The Postpositional Benefactee cannot be raised to subject in a Passive; the Theme argument must be.

21) u bwa'am ili-'uusi-ta-vetchi'ivo bwasa'a-wa-k
   DET food child-ACC-P? cook-PASS-PERF
   The food was cooked for the child.

Benefactees are animate and usually human, and the Applicative makes it possible for the speaker to put these arguments in the subject position in a Passive sentence.

The kind of Possessive sentences I described in Chapter VI, where the head of the Possessed NP gets
incorporated into the verb, have a very unusual argument structure. These sentences can be transitive, when there is an object constituent that is marked Accusative. As noted in Chapter VI, it appears that the T/A/M possessives were originally used just for things that are inalienably possessed, body-parts and kin. In describing a connection of this kind, we are describing a *property of the possessor*.

22) inepo maara-k
   1sNOM daughter-PERF
   I have a/some daughter(s).

The *hipue* Possessive is used for impermanent relationships.

23) aapo a-maara-wa hipue
   3sNOM 3sPOSS-daughter-POSS has
   He has custody of his daughter.

An example of a body-part construction:

24) empo teeve-m choon-ek
   2sNOM long-PL hair-PERF
   You have long hair.

This sentence could also be glossed "You are long-haired", and Exp. (24) means something like "I am daughtered", if that were a possible sentence in English. These sentences state *attributes of the subject*, and we see that in English the inalienably possessed item cannot be focussed with a Passive.
25) * Long hair is had by you.
There is no Agent acting upon a Patient in these sentences. They lack real transitivity, and this is the reason that the "object" cannot be focussed.

In Yaqui, possessive sentences with the verb hipue "have" can be passivized.

26) u tomi ho'ara-po hipu'u-wa
DET money home-PP have-WA
The money is kept at home.
The possessed item in these constructions can be focussed with a Passive. It is also possible, but uncommon, to see a T/A/M Possessive sentence passivized.

27) vatnaata-kai, teevem chochon-wa-n
earlier-COMP, long-PL hair:REDP-WA-PAST IMPF
In the old days, long hair was worn (Lit.: had).
There is a functional explanation for the fact that it is unusuall to hear these sentences passivized. This is because we do not usually focus on an inalienably possessed item as such; we focus on the attribute that some person has.

In keeping with this, it is possible to question the Subject of a T/A/M Possessive, but not to question an inalienably Possessed item.
28) a. Peo husai-m puus-ek
    Pete brown-PL eye-PERF
    Pete has brown eyes.

b. havee=sa husai-m puus-ek
   who=Q brown-PL eye-PERF
   Who has brown eyes?

c. hita puusi-m=sa Peo puus-ek
   what eye-PL=Q Pete eye-PERF
   What eyes does Pete have? (Alienable only)

(Examples [28b,c] contain a second position clitic =sa
that is an optional feature of questions. See Escalante
1985.) Example (28c) can only be used when speaking of
artificial or "store-bought" eyes, not for a body-part
that would be treated as an attribute of the subject. As
we saw in Chapter VI, the T/A/M Possessives are used in
Arizona Yaqui for alienably possessed items as well as
inalienably possessed ones. Therefore, we can get
questions like:

29) havee=sa uka kar-ek
   who=Q DET:ACC house-PERF
   Who owns that house?
Again, the alienably possessed object can be questioned:

30) hita kari-ta=sa Peo kar-ek
    what house-ACC=Q Pete house-PERF

Which house is Pete's?

This is evidence that the alienably possessed object can be focussed. But an absolutely inalienably possessed object (one that can't be acquired) cannot be questioned.

31) * have maala-ta=sa Peo maala-k
    who mother-ACC=Q Pete mother-PERF

[which mother does Pete have?]

("Which" with human nouns is have.) Saying that Pete has or doesn't have a mother is to speak of an attribute of Pete. We can question the identity of Pete's mother, with a copular (ZERO present tense) sentence.

32) havee Peo-ta maala
    who Pete-POSS mother

Who is Pete's mother?

But the question in (31) is equally bad in Yaqui and English.

7.3. Conclusions.

I conclude with a review of the question of whether or not -WA is an argument. I presented a range of evidence on this point in Chapter IV, and decided that this evidence was consistent with the kind of claim that Baker (1988) makes, that Passive morphology can serve as
an incorporated argument in some languages. Some of the best evidence in favor of treating -WA as an argument lies in its apparent binding and control-like properties.

33) aman b’iik-wa, ume ili-’uusi-m mahta-veti’ivo
there sing-WA, DET:PL child-PL teach-PP [for]
Singing is being done there, to teach the children.

I then suggested another interpretation of this evidence, from a functional perspective. It is possible to interpret -WA as showing that a construction lacks an argument with an "external" theta role (Williams 1981). A sentence with -WA has no referential element in the argument position that it is in complementary distribution with. This can be true of two clauses that are linked in a purpose construction, as in (33), or of a sentence with an anaphor, as in (34).

34) tu-iisi emo-’ania-wa
well 3pREFL-help-WA
Good mutual/self help is going on.

The suffix -WA is an element that functions to mark a construction as "missing" an argument, since the speaker wants to remove any possibility of focus from that argument position, and does not want there to be any referentiality associated with that argument position. Yet an argument position that is marked "empty" is very different from a construction that simply has no argument
position of that type. Compare the following set of contrasts.

35) vempo uka tomi-ta wuita-k
    3pNOM DET:ACC money:ACC spend-PERF
    They spent the money.

36) uka tomi-ta=m wuita-k
    DET:ACC money:ACC=3pNOM spend-PERF
    They spent the money. Subject -Focus

Example (35) is an ordinary transitive. It is a good answer to the following question.

37) havee=sa uka tomi-ta wiuta-k
    who=Q DET:ACC money-ACC spend-PERF
    Who spent the money?

In Example (36), use of the clitic makes it impossible to focus the subject, and it is not a good answer to (37).

It would be a good answer to

38) hitaa=sa vempo ya-k
    what=Q 3pNOM do-PERF
    What did they do?

In a transitive, the Agent can be referred to but not identified, as in (39), with an indefinite quantifier as the subject.

39) senu uka tomi-ta wiuta-k
    someone DET:ACC money:ACC spend-PERF
    Somebody spent the money.
With Exp. (39), there can be focus on the unidentified Subject. Now compare the Passive.

40) u tomi wuita-wa-k
    DET money spend-PASS-PERF

    The money was spent.

With the Passive, the speaker is not just saying that some unidentified person spent the money. He is making it impossible to focus on the Agent argument position. But the Passive in (40) is still not the same as the example with a clitic subject, as in Exp. (36). The speaker can use the Passive (truthfully, if not very helpfully) when he knows that the hearer or even he himself spent the money; and he can not use (36), with a third person plural clitic subject, under those circumstances.

In the Passive, the argument position is marked "empty", but the underlying verb is transitive, and there is still the presupposition that some agent is involved. In this way the Passive differs from the Unaccusative, shown in (41).

41) u tomi wuite-k
    DET money spend:UNACCUS-PERF

    The money ran out.
Here there is no "empty" position, and no presupposed agent is involved. We saw above in Exp. (19) that Passives can have a Benefactee argument.

19) u ili-'uusi bwa'am-ta bwasa'a-ria-wa-k
   DET child food-ACC cook-APPLICATIVE-PASS-PERF
   The child had food cooked for it. Benf. +Focus

Similarly, an Impersonal may contain a Benefactee argument, if the verb is agentive.

42) u ili-'uusi bwiik-ria-wa
   DET child sing-APP-WA
   The child is being sung for. Benf. +Focus

Benefactees imply an Agent, whereas Unaccusatives do not. Accordingly, Benefactees are semantically very odd in Unaccusatives.

43) ?? u taasa nee hamte-ria-k
   DET cup 1sACC break:UNACC-APP-PERF
   The cup broke for me.

Whereas they are perfectly fine in Passives.

44) inepo uka kuta-ta chukta-ria-wa-k
   lsNOM DET:ACC wood-ACC cut-APP-PASS-PERF
   I had the wood chopped for me.

(Exp. (44) is not a Causative; this seems to be the only way we can make a Benefactee the Subject in English.) We saw above in Chapter IV that Passives can contain an Instrumental argument. This is also evidence that there is an understood or implied agent.
45) u maaso kuta-e me'ee-wa-k
   DET deer stick-INST kill-PASS-PERF
   The deer was killed with a stick.

I propose that -WA is not an argument, but is used to point out that an argument is "missing", and to make it impossible to focus on that argument. I think this is equivalent to the "implicit agent" that Williams (1987) and Roeper (1987) say is present in Passives. I am extending this idea and claiming that Impersonals have an implicit argument also, an implicit Agent or Theme. The Passive includes the idea or presupposition that some Agent is involved, and the Impersonal has the presupposition that some Agent/Theme is involved. This presupposition is lacking in an Unaccusative.

With this understanding of the function of -WA, we obtain an overall perspective on the use of the voice alternations, as well as the functions of the clitic arguments, in determining where focus can occur. All the voice alternations and other construction types that I have surveyed in this thesis involve argument arrays that differ from the argument structures seen in basic sentence types. Each of these construction types has a specific function in discourse. The speaker selects the construction type that makes it possible or impossible to focus on an argument with a particular theta role. The construction type also
determines what other arguments are present. This functional perspective gives us an integrated view of voice and argument structure in Yaqui.
These verbs occur in doublets, with -a and -e final vowels. Where the glosses of the transitive vs. intransitive verbs differ greatly, I use a semicolon to separate them.

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<tr>
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<th>Unaccusative</th>
<th>Gloss</th>
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<tbody>
<tr>
<td>bwasa</td>
<td>bwase</td>
<td>&quot;cook; bloom, ripen&quot;</td>
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<tr>
<td>chakukta</td>
<td>chakukte</td>
<td>&quot;lean aside&quot;</td>
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<tr>
<td>chakta</td>
<td>chakte</td>
<td>&quot;leak, drip&quot;</td>
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<tr>
<td>chihakta</td>
<td>chihakte</td>
<td>&quot;smash; shatter&quot;</td>
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<tr>
<td>chivekta</td>
<td>chivekte</td>
<td>&quot;scatter&quot;</td>
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<tr>
<td>hamta</td>
<td>hamte</td>
<td>&quot;shatter&quot;</td>
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<tr>
<td>heokta</td>
<td>heokte</td>
<td>&quot;melt&quot;</td>
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<tr>
<td>hu'akta</td>
<td>hu'akte</td>
<td>&quot;stick on; adhere&quot;</td>
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<tr>
<td>chukta</td>
<td>chukte</td>
<td>&quot;cut, detach&quot;</td>
</tr>
<tr>
<td>chupa</td>
<td>chupe</td>
<td>&quot;finish, end&quot;</td>
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<tr>
<td>ko'okta</td>
<td>ko'okte</td>
<td>&quot;pull apart; come undone&quot;</td>
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<tr>
<td>kowiikta</td>
<td>kowiikte</td>
<td>&quot;make crooked; bend&quot;</td>
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<td>kitokta</td>
<td>kitokte</td>
<td>&quot;deform, shrivel&quot;</td>
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<tr>
<td>kivacha</td>
<td>kivake</td>
<td>&quot;enter, descend&quot;</td>
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<tr>
<td>kotta</td>
<td>kotte</td>
<td>&quot;break&quot;</td>
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<tr>
<td>kuakta</td>
<td>kuakte</td>
<td>&quot;turn&quot;</td>
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<tr>
<td>kutta</td>
<td>kutte</td>
<td>&quot;tightly&quot;</td>
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<tr>
<td>kuuta</td>
<td>kuute</td>
<td>&quot;stir; mix&quot;</td>
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<tr>
<td>luuta</td>
<td>luute</td>
<td>&quot;use up; run out&quot;</td>
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<tr>
<td>mana</td>
<td>mane</td>
<td>&quot;place; be placed&quot;</td>
</tr>
<tr>
<td>mohta</td>
<td>mohte</td>
<td>&quot;grind; break up&quot;</td>
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<tr>
<td>mohakta</td>
<td>mohakte</td>
<td>&quot;take apart; crumble&quot;</td>
</tr>
<tr>
<td>movekta</td>
<td>movekte</td>
<td>&quot;invert; turn face down, incline&quot;</td>
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<td>nasonta</td>
<td>nasonte</td>
<td>&quot;damage(d)&quot;</td>
</tr>
<tr>
<td>nokta</td>
<td>nokte</td>
<td>&quot;return&quot;</td>
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<tr>
<td>patta</td>
<td>patte</td>
<td>&quot;close, shut&quot;</td>
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<td>pesta</td>
<td>peste</td>
<td>&quot;burst&quot;</td>
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<tr>
<td>pitta</td>
<td>pitte</td>
<td>&quot;press, settle down&quot;</td>
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<tr>
<td>posta</td>
<td>poste</td>
<td>&quot;boil&quot;</td>
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<tr>
<td>potta</td>
<td>potte</td>
<td>&quot;stuff; bloat, expand&quot;</td>
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<tr>
<td>rauta</td>
<td>raute</td>
<td>&quot;rinse&quot;</td>
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<tr>
<td>resta</td>
<td>reste</td>
<td>&quot;scatter&quot;</td>
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<td>riuta</td>
<td>riute</td>
<td>&quot;split&quot;</td>
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<td>revekta</td>
<td>revekte</td>
<td>&quot;crumble&quot;</td>
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<tr>
<td>ro'akta</td>
<td>ro'akte</td>
<td>&quot;roll over&quot;</td>
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<tr>
<td>ropta</td>
<td>ropte</td>
<td>&quot;sink&quot;</td>
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<tr>
<td>rutukta</td>
<td>rutukte</td>
<td>&quot;straighten&quot;</td>
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<td>rukta</td>
<td>rukte</td>
<td>&quot;approach&quot;</td>
</tr>
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<td>sinhho'ota</td>
<td>sinhho'ote</td>
<td>&quot;sprinkle; drizzle&quot;</td>
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<tr>
<td>sipa</td>
<td>sipe</td>
<td>&quot;to cool&quot;</td>
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<td>siuta</td>
<td>siute</td>
<td>&quot;tear&quot;</td>
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<tr>
<td>tahta</td>
<td>tahte</td>
<td>&quot;bump (into)&quot;</td>
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<tr>
<td>Word</td>
<td>Meaning</td>
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<td>-------</td>
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<tr>
<td>teita</td>
<td>&quot;trip&quot;</td>
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<tr>
<td>topakta</td>
<td>&quot;uncover; rise up&quot;</td>
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<tr>
<td>tohta</td>
<td>&quot;discolor, fade&quot;</td>
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<tr>
<td>totta</td>
<td>&quot;bend, collapse&quot;</td>
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<tr>
<td>tuhta</td>
<td>&quot;press, settle&quot;</td>
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</tr>
<tr>
<td>tuucha</td>
<td>&quot;put out; go out&quot;</td>
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</tr>
<tr>
<td>tutta</td>
<td>&quot;compact&quot;</td>
<td></td>
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<tr>
<td>veeta</td>
<td>&quot;burn&quot;</td>
<td></td>
</tr>
<tr>
<td>vi'akta</td>
<td>&quot;turn over&quot;</td>
<td></td>
</tr>
<tr>
<td>vi'ita</td>
<td>&quot;twist&quot;</td>
<td></td>
</tr>
<tr>
<td>vohta</td>
<td>&quot;drop&quot;</td>
<td></td>
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<tr>
<td>vutta</td>
<td>&quot;undo; come undone&quot;</td>
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<tr>
<td>vuttuta</td>
<td>&quot;straighten&quot;</td>
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<tr>
<td>weeyya</td>
<td>&quot;carry, move&quot;</td>
<td></td>
</tr>
<tr>
<td>wiokta</td>
<td>&quot;untangle&quot;</td>
<td></td>
</tr>
<tr>
<td>wiuta</td>
<td>&quot;spend, run out&quot;</td>
<td></td>
</tr>
<tr>
<td>wohokta</td>
<td>&quot;dig up; make or&quot;</td>
<td></td>
</tr>
<tr>
<td>wohokte</td>
<td>&quot;get a hole in&quot;</td>
<td></td>
</tr>
<tr>
<td>woita</td>
<td>&quot;untie; come untied&quot;</td>
<td></td>
</tr>
<tr>
<td>wo'ota</td>
<td>&quot;spill&quot;</td>
<td></td>
</tr>
<tr>
<td>yahta</td>
<td>&quot;bounce&quot;</td>
<td></td>
</tr>
<tr>
<td>yohta</td>
<td>&quot;drop&quot;</td>
<td></td>
</tr>
<tr>
<td>yooka</td>
<td>&quot;paint; change color&quot;</td>
<td></td>
</tr>
</tbody>
</table>
**Middles**

There are other pairs of verbs that take animate subjects, where the intransitive form may be a Middle or an Unergative.

<table>
<thead>
<tr>
<th>Transitive</th>
<th>Intransitive</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>aakta</td>
<td>aakte</td>
<td>&quot;to gore; lift up on horns or head&quot;</td>
</tr>
<tr>
<td>chepta</td>
<td>chepte</td>
<td>&quot;step on, jump&quot;</td>
</tr>
<tr>
<td>ha’ata</td>
<td>ha’ate</td>
<td>&quot;bet, wager&quot;</td>
</tr>
<tr>
<td>kinakta</td>
<td>kinakte</td>
<td>&quot;make faces (at)&quot;</td>
</tr>
<tr>
<td>kita</td>
<td>kitte</td>
<td>&quot;knead, mix&quot;</td>
</tr>
<tr>
<td>kupikta</td>
<td>kupikte</td>
<td>&quot;blink&quot;</td>
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<tr>
<td>lotta</td>
<td>lotte</td>
<td>&quot;tire&quot;</td>
</tr>
<tr>
<td>moita</td>
<td>moite</td>
<td>&quot;plow, cultivate&quot;</td>
</tr>
<tr>
<td>noita</td>
<td>noite</td>
<td>&quot;take/bring; go/come&quot;</td>
</tr>
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<td>omta</td>
<td>omtte</td>
<td>&quot;anger, be angry&quot;</td>
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<td>peuta</td>
<td>peute</td>
<td>&quot;to skin (animal)&quot;</td>
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<td>pomta</td>
<td>pomte</td>
<td>&quot;drink&quot;</td>
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<td>pu’akta</td>
<td>pu’akte</td>
<td>&quot;pick up; lift, load&quot;</td>
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<tr>
<td>puhta</td>
<td>puhpuhte (Redup)</td>
<td>&quot;blow up&quot;</td>
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<tr>
<td>repikta</td>
<td>repikte</td>
<td>&quot;blink, open eyes&quot;</td>
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<td>tovokta</td>
<td>tovokte</td>
<td>&quot;pick up&quot;</td>
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<tr>
<td>tomta</td>
<td>tomte</td>
<td>&quot;bring out, give birth&quot;</td>
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<td>va’a-si’ita</td>
<td>va’a-si’ite</td>
<td>&quot;sprinkle water&quot;</td>
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<tr>
<td>vehukta</td>
<td>vehukte</td>
<td>&quot;duck, bow&quot;</td>
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<td>vekta</td>
<td>vekte</td>
<td>&quot;scrape, shave&quot;</td>
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<td>waakte</td>
<td>&quot;step over&quot;</td>
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<td>wiste</td>
<td>&quot;scatter&quot;</td>
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<td>wiukte</td>
<td>&quot;swallow&quot;</td>
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<td>womte</td>
<td>&quot;scare, fear&quot;</td>
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<tr>
<td>yeewa</td>
<td>yeewe</td>
<td>&quot;play with; play&quot;</td>
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</tbody>
</table>
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