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Preface

Genetic and Areal Affiliations

Wappo is an indigenous language which was once spoken in the Russian River Valley, near Geyserville, just north of San Francisco, California, whose last speaker, Laura Fish Somersal, died in 1990. According to Laura, the name 'Wappo' came from the Spanish *guapo*, 'brave, handsome'.

Genetically, Wappo's affiliations are in dispute. Powers (1877) set up a Yukian family, hypothesizing a genetic connection between two small speech communities in north central California, Yuki to the north and Wappo to the south. The Yukian relationship is asserted in later works (Powell (1891), Kroeber (1911, 1925), and Radin (1929)), though Elmendorf (1968) points out that while the three Yukian 'dialects' are quite similar to each other, the relation of these to Wappo is a good deal more remote. Elmendorf (1981, 1997) maintains confidence in a genetic, in addition to a contact, relationship. Mithun (1999:310) concludes that 'the nature of the relationship remains an open question'.

Powers' 'common origin' hypothesis was questioned by Sawyer (1980), who concludes that Wappo and Yuki were at one time in territorial and social contact, and that the resemblances noted by Powers and others are results of this contact and not evidence of a genetic relationship.

The Yukian family itself has not turned out to be clearly relatable to any other linguistic group, though suggestions have been made by Kroeber (1959), Elmendorf (1963, 1964), and Gursky (1965). As Elmendorf (1968) points out, however,

> It is a striking fact that these suggestions point in quite different directions, and if all of them could be accepted as reflecting at least part of the true relationships, they would show Yukian to be a connecting link of some sort between several other large and apparently unconnected linguistic assemblages. (p.3)

Munro (1994) considers the evidence in favor of Greenberg's (1987) proposal of a relationship between Yukian languages and Gulf languages, concluding that there is sufficient lexical evidence to warrant continued exploration of this possibility.

Thus, genetic relationships between Wappo and any other language have never been clearly established. Grammatical descriptions of various California Indian

languages at this juncture, particularly apparent isolates such as Wappo, may become the crucial evidence for establishing genetic links among these languages in the future.

Areally, as noted by Mithun (1999:317), a linguistic area can be identified including Wappo, Utian (Miwok-Costanoan), Wintun, and Pomoan. Spanish has had some influence in phonology and lexicon (Sawyer 1964, 1965). For further discussion of the genetic and areal situation of Wappo, see Sawyer (1991:15-22).

Previous Work on Wappo

The first published work on Wappo grammar was a grammar and texts by Paul Radin (1924, 1929) from stories collected from two speakers in 1918, which remain valuable sources in spite of serious deficiencies: first, Radin's transcription is problematic; in particular, he does not seem to have recognized the distinction between glottalized and non-glottalized consonants, between aspirated and unaspirated stops, or between syllable-final /h/ and /ʔ/; second, Radin's analysis suffers from methodological inadequacies, failing to distinguish synchronic morphological phenomena from suspected diachronic relics in morphology; and third, it was produced in a context of a much more shallow understanding of grammatical typology and universals than is available today (see also Sawyer 1991).

Hoping to relate Radin's materials to our own findings, at the beginning of our fieldwork we often asked Laura for her reactions to our best rendition of both isolated and textual examples from Radin, but this did not prove to be a fruitful procedure. Most often, Laura did not understand the example, either because we hadn't accurately rendered it from Radin's transcriptions or because Laura's Wappo had changed, or both. Sometimes when we gave her the English for the Radin example, she would offer her own version, typically with different consonants (/č/ where Radin had /š/, for example) or different verb morphology. As just one example, for 'don't do that', following Sawyer (1965) (see below), we transcribed Laura as saying:

camih - lahkhiʔ
do - NEG:IMP
'don't do that' (67)

where Radin (1924:151) had:

camilak'i

Driver (1936) provides an ethnography of Wappo.

There was no further published work on Wappo grammar until Sawyer's (1965) lexicon, with data elicited from Laura. In addition to providing an English-to-Wappo word and morpheme list, Sawyer provided a phonemic analysis of Laura's

speech. However, from the fifties, Sawyer had been collecting grammatical notes on Wappo, and much of that material appeared in 1991 as 'Wappo notes' with editor's notes by Alice Shepherd (Sawyer 1991) and annotations by William E. Elmendorf. We have made much use of this work, and refer the reader to it at appropriate places throughout our grammar.

Circumstances of Data Collection

We first began our study of Wappo in 1975; we worked exclusively with Laura, who was at that time in her late eighties and, as far as we can ascertain, the last fluent speaker. We visited her several times a year during most of the fifteen years before her death in 1990. We heard of one other person who used to speak Wappo, but he proved not to be able to speak or comprehend Wappo or remember more than a few words at the time we visited him in the late 1980s. Though this grammar is thus not a grammar of a speech community, we offer it as a tribute to Laura Fish Somersal and as a record of the only Wappo there was as of about 1975.

A word is in order about the degree of Laura's fluency. Born before 1890, Laura was bilingual as a child in Southern Pomo (her father's language) and Wappo (her mother's language). She did not interact much with her father's side of the family, but Wappo was the family language, which she spoke with her mother and siblings. Because her mother was blind, Laura was excused from attending the school run by the BIA in order to look after her mother. This had the fortunate consequence of allowing Laura to maintain her Wappo into adulthood. She was thus able to speak Wappo up to a much later age than most of her contemporaries were able to maintain their native languages. We do not know how much Pomo Laura used as an adult, but she was bilingual throughout her adult life in English and Wappo. Her English was close to that of a native speaker; Sawyer (1991) notes that occasional discrepancies often seemed to be direct translations from Wappo. She never learned to read or write, except to sign her name.

Laura spoke Wappo regularly with her sister until her sister's death in the early 1970's. The language which we recorded starting in 1975 was thus the language of a fluent user, though her speech community had been limited to the two of them for some time. Before she started working with us, she had spent more than fifteen years working with Sawyer on Wappo.

From the beginning of our work with Laura, we elicited sentences in context; that is, we would describe a situation and ask her what she would say in such a situation. Throughout our fieldwork, she was always able to confidently produce long and complex sentences with ease. She never exhibited any difficulty remembering lexical items or appropriate grammatical constructions. As far as we can tell, there was very little influence of English on her Wappo. We also collected four short narrative texts, in addition to those found in Sawyer and Somersal (1977). Unfortunately, working on texts was tedious and distasteful to Laura, partly because she didn't like to hear her own voice on the tape recorder, partly because she felt she was not qualified to "tell stories", and partly because she disliked going over the text bit by bit. We therefore reluctantly decided not to press her to do this kind of work,

and, while we would have preferred to work with more texts, we have contented ourselves with a database consisting largely of sentences elicited by suggesting pragmatic contexts. We have been gratified to find that the texts and the sentences do not reveal glaring discrepancies, and, whenever possible, we have used examples from texts in our description. We do not include the texts we collected here; for the reasons just given, we are not confident enough of the transcriptions to put them in print.

Laura Fish Somersal

During the fifteen years that we worked with Laura, we not only learned about Wappo, but we also came to know a person of great intelligence, skill, dignity, and humor. Her knowledge of culture, history, and biology was prodigious, and she loved sharing it. We often met other students of hers when we went to visit her, including people interested in institutions, oral history, ethnobotany, and basket making. Laura was one of the great basket makers and teachers, and especially enjoyed sharing her expertise in the art of basket making, from locating the marshes where the reeds grow, to soaking and stripping the reeds, to the aesthetics and skills of the weaving itself.

For Laura, the pleasure in life was to give. She gave everything she had to the children she brought up. She gave steady leadership to her community until she reached her 80's. She gave her time and expertise to anthropologists and linguists who sought her out for her knowledge of Wappo language and culture. She shared her basket-weaving skills in demonstrations at numerous museums, including the Smithsonian, which collected her baskets.[1]

Laura always projected optimism and kindness. Never harboring hatred for anyone, not even those who had wronged her egregiously, she typically dismissed evil and prejudice with a chuckle. But at times when she told hair-raising stories of her past, she spoke in a somber voice. That voice almost broke when she told us how a shaman blinded her mother with rattlesnake poison. Yet, just as sadness seemed to overwhelm her, she said with a chuckle, "Well, that made me grow up fast, because I had to take care of my mother before I was ten!" Indeed, for many years she served as her mother's eyes and consequently learned much about the Wappo way of life: gathering acorns, making acorn mush, cooking with heated pebbles as a source of heat and water-proof baskets as containers, roasting venison, collecting material for weaving baskets, and making temporary shelter from branches. During the years we worked with her, Laura was single-handedly raising four adopted children. It was often challenging, but she handled the task with grace and composure. She had an inner strength that revealed itself as she talked about her views of life and her reactions to the people and events of her world.[2]

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1. There is a superb recent film by David Ludwig, entitled "Pomo Basketmakers: A Tribute to Three Elders", featuring Laura, Elsie Allen and Mabel McKay.
2. Sawyer (1991) provides a warm personal memoir of working with Laura.

For us, Laura was a patient and magnificent teacher and friend during the years we worked with her. Her insight into the Wappo language was a source of education and inspiration for us, and made the task of unraveling its structure a most pleasurable one. We hope this grammar reflects some of our joy in working with her.

The fifteen years of field work was jointly conducted by the two of us. The analyses and the writing of the grammar are primarily the work of Sandy. Joseph Park joined our team in 2000, to contribute toward the morphological analysis and composition of the chapters on verb forms and verb paradigms. We could not have finished writing this grammar without his insightful analysis. He has also played a major role in the preparation of the manuscript for publication.

Sandra A. Thompson and Charles N. Li
Santa Barbara
June, 2005

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Abbreviations

1	first person
2	second person
3	third person
3CO	third person co-referential
BENEF	benefactive case
CAUS	causative suffix
CLAR	**lakhu**, morpheme for clarification after a misunderstanding
COM	comitative case
COMP	comparative morpheme
COND	conditional
CONTR	contrast marker **yoh**
COP	copula
DAT	dative case
DEM	demonstrative
DEP	suffix for verbs in dependent clauses
DES	desiderative morpheme **k'ah**
DIR	directional prefix
DUR	durative for habitual/progressive action
EP	epenthetic inter-morphemic segment
EPIST	epistemic marker **la?** 'I don't know'
EVID	evidential morpheme
FUT	future tense
GEN	genitive case
HYP	hypothetical verb form
IMP	imperative
INCH	inchoative
INDEF	**i-**, indefinite prefix with certain roots
INF	infinitive
INST	instrumental case
ITER	iterative

LOC	locative
NEG	negative morpheme
NOM	nominative case
OPT	optative morpheme keye
PASS	passive
PL	plural
PST	past tense
PURP	purpose suffix
Q	yes/no question morpheme
RECIP	reciprocal
REFL	reflexive morpheme
SG	singular
SUP	humisme?, the superlative morpheme
STAT	stative aspect
UOP	unspecified object prefix

1. PHONEMIC INVENTORY AND TRANSCRIPTION

Here we reproduce Sawyer's (1965:vii) sounds of Wappo. Since Sawyer's phonemic analysis was based on Laura's speech, we have taken it as the basis for the transcription we will use in this book. Further discussion of the phonetics and phonology of Wappo can be found in Sawyer (1981, 1991). We do not attempt to improve on his analysis here; from the beginning of our fieldwork, we concentrated on morpho-syntactic analysis, both because Sawyer had dealt almost not at all with morphological and syntactic patterns, and because both we and Laura felt more competent in that area.

There are several points to keep in mind regarding Sawyer's transcription.

- Sawyer's lexical entries are marked for stress, which we do not mark. Word stress is essentially predictable, falling on the first 'core' syllable, that is, the first syllable which is not synchronically (or transparently diachronically) a prefix.
- Sawyer transcribes a glottal stop at the beginning of words whose initial phoneme is a vowel. We omit this glottal stop, as it appears to us to be predictable.
- Sawyer uses / **t** / for a dental stop and / **ṭ** / for an alveolar stop. Although Pullum and Ladusaw advise against the underdot notation (1996:246), we are keeping the distinction Sawyer makes so as to make our transcription more comparable to his. Otherwise unmarked / **t** / would be dental for Sawyer but alveolar for us, which we feel would be an unnecessary complication in view of the small amount of Wappo scholarship there is or is likely to be. For further discussion of this as an areal feature, see Mithun (1999:15).
- Sawyer's lexicon contains a number of words with long vowels. We were not able to hear this distinction, and Laura could not confirm that it existed. We have kept the length marking when citing examples from Sawyer (1965).

- Sawyer postulates two series of stops, plain and glottalized (another areal feature (Mithun 1999:19), but does not allow for aspirated stops. We would analyze what he transcribes as /ph/, /th/, and /kh/ as aspirated stops, and consider Wappo to have three series of stops, plain, aspirated, and glottalized.

Table 1-1. Sawyer's Phonemic Inventory

p	t	ṭ	c	č	k	ʔ		i	i:			u	u:
p'	t'	ṭ'	c'	č'	k'			e	e:			o	o:
m	n	l	w	y						a	a:		
m'	n'	l'	w'	y'									
			s	š		h							

2. WORD ORDER

Without extensive text-based analysis, it is difficult to draw definitive conclusions about word order in Wappo; nevertheless, based on a large amount of situation-oriented elicitation and a small number of texts, it is possible to give the broad outlines of Wappo word order.

Wappo is strongly, though not rigidly, a predicate-final language. Both in elicited and text data, verb-final clauses predominate, as is illustrated by the following example and throughout this grammar.[1]

(1) cephi onoʔšiʔ okel haṭel - khiʔ
3SG:NOM Indian language learn - STAT
's/he's learning Indian language' (206)

Patient-initial sentences were often accepted, though seldom volunteered. Here are two such examples:

(2) ce ew ce k'ew - i t'um - taʔ
DEM fish DEM man - NOM buy - PST
'that fish, the man bought (it)' (44)

(3) ce hol ah te k'eč' - is - ta - lahkhiʔ
DEM wood 1SG:NOM 3SG chop - CAUS - PST - NEG
'the wood, I didn't make him chop it' (110)

1. Our glossing conventions can be found on pp. xviii-xix. For further discussion of word order in Wappo, see Li et al. (1977). Throughout the grammar, numbers in the translation line refer to page numbers in our original field notes, and 'o' indicates an example constructed by us which was accepted by Laura. A number preceded by 'lts' indicates an example from Li et al. (1977), while a number preceded by 'j' indicates an example from Sawyer (1965).

Patient-initial order was also occasionally offered with yes-no questions, as in:

(4) tahwal' ne? - khi? hi? mi?
job have - STAT Q 2SG:NOM
'do you have a job?' (lts86)

(4) also illustrates a tendency for topical subjects to appear in clause-final position. Here are further examples of this:

(5) ?i?i, olol - mi?, ce k'ew - i
yes dance - DUR DEM man - NOM
'yes, (he) dances, that man' (128)

(6) cel' oni o - pa? - mi?, mul' - i
then everybody UOP - eat - DUR all - NOM

o - pa? - mi? isa okant - i
UOP - eat - DUR 1PL relative - NOM
'then everybody eats, all our relatives eat' (text F, 305)

With complement clauses, particularly with first person subjects, the word order becomes considerably freer:

(7) a. ah ce k'ew ew ṭ'oh - ta? haṭis - khi?
1SG:NOM DEM man fish catch - PST know - STAT

b. ah haṭis - khi? ce k'ew ew ṭ'oh - ta?
1SG:NOM know - STAT DEM man fish catch - PST

c. ce k'ew ew ṭ'oh - ta? ah haṭis - khi?
DEM man fish catch - PST 1SG:NOM know - STAT

'I know that the man caught a fish' (lts86)

The verb-medial order seen in (7)b. was never offered or accepted in simple clauses, as illustrated by:

(8) * ah haṭis - khi? ce k'ew
1SG:NOM know - STAT DEM man
('I know the man') (lts86)

Question words were always placed in clause-initial position in volunteered utterances:

(9) ita mi - me? makina? - i
where 2SG - GEN car - NOM
'where is your car?' (160)

(10) thal mi? pa? - ukh hak' - še?
what 2SG:NOM eat - INF want - DUR
'what do you want to eat?' (lts87)

Wappo being a predicate-final language, modifiers within noun phrases would be expected to precede the head noun. While this is true for demonstratives and genitives, adjectives and numerals are most commonly placed after the noun (see also section 3.1):

(11) he tonči
DEM cat
'this cat' (o)

(12) te - me? č'ešma
3SG - GEN bed
'his/her bed' (o)

(13) cephi i - thu hol čay'is te - hes - ta?
3SG:NOM 1SG - DAT stick bent DIR - give - PST
's/he gave me a bent stick' (106)

(14) hinta hopoka ah k'ešu mehlahi - khi?
day three 1SG:NOM deer hunt - STAT
'for three days, I was hunting' (389)

Within the verb phrase adverbs and oblique arguments, as expected, tend to precede the verb:

(15) cephi mena k'u:wi: - ya?
3SG:NOM fast run - DUR
's/he runs fast' (50)

(16) mi - me? taka? - i ceta koy'i - khi?
2SG - GEN basket - NOM there sit - STAT
'your basket is over there' (337)

(17) cephi lewa ma - čo: - khi?
3SG:NOM outside DIR - go - STAT
's/he went outside' (64)

(18) ah kaphe kawaču - k'a hak' - še?
1SG:NOM coffee sugar - COM want - DUR
'I want coffee with sugar in it' (336)

3. THE NOUN PHRASE

3.1 Order of Elements

The noun phrase in Wappo consists minimally of a noun or pronoun and optional modifiers, as suggested by the following formula:

(1) (Dem) (Gen) { N / Pron } (Numeral/Quantifier) (Adjective)

As suggested by (1), while numerals or quantifiers precede adjectives, any of these may precede or follow the noun.

Here are some examples illustrating the various combinatory possibilities:

(2) ce k'ew
DEM man
'that man'

(3) kahon pasakis
box two
'two boxes' (j3)

(4) met'e le?a
woman many
'many women' (50)

(5) chica hopok'a koṭo:mela
bear three big:PL
'three big bears' (10)

(6) i hu
1SG face
'my face'

(7) me - me? chipe tu:niku?
2SG - GEN red dress
'your red dress'

3.2 Associative Phrases

An associative phrase is formed by juxtaposing two nouns; the second noun is the head. A variety of semantic relationships are expressed this way, including inalienable possession (see section 3.3.7).

(8) ah ono?ši? okel hak' - še?
1SG:NOM Indian lang. like - DUR
'I like the Indian language' (32)

(9) he?e? šomo? taka?
COP fruit basket
'this is a fruit basket' (60)

(10) oye? šukolo? - i pico:we - khi?
pot bottom - NOM dirty - STAT
'the bottom of the pot is dirty' (69)

(11) ceko:t - i hol lamesa ne? - khi?
3PL - NOM wood table have - STAT
'they have a wooden table' (72)

(12) ita i - me? c'iw - lat' - e:ma
where 1SG - GEN fly - whip - PURP
'where is my fly-swatter?' (191)

3.3 Case[1]

Wappo is a rich case language. The morphologically unmarked case is the accusative; the other cases are marked by suffixes.

3.3.1 Nominative: -i [2]

The nominative is used for agents, initators, and experiencers of transitive verbs, and for the single argument of an intransitive verb, including an existential verb. We will henceforth refer to this set of NP roles as the "subject". There is some variation in the morphotactic changes resulting from the suffixation of the nominative marker.

Typically, if the noun stem ends in a consonant, suffixation of the **-i** involves no change of the stem:

pol'e?	:	pol'e?i [3]
boy		boys

However, if the noun stem ends in a vowel, this vowel is dropped or modified when the **-i** is added; from the data we have this appears to be lexically determined:

k'ešu	:	k'eši
deer (sg.)		deer (pl.)

1. For further discussion of case in Wappo, see Li and Thompson (1976).

2. In a few examples in our data, the nominative appears as **-ti**.

3. Our field notes recurrently record both **pole?i** and **pola?i** for 'boy-NOM'; as far as we can tell, they were interchangeable for Laura.

met'e : met'a:yi
woman women

(13) ce k'ew - i ce holo:wik'a t'a - ta?
DEM man - NOM DEM snake kill - PST
'the man killed the snake' (11)

(14) ce pol'e? - i i haṭis - khi?
DEM boy - NOM 1SG know - STAT
'that boy knows me' (o)

(15) chic - i olah t'a? neh - khi?
bear - NOM four leg have - STAT
'{bears have / the bear has} four legs' (45)

(16) mi - me? tuni:ku? - i eni:ya mey - khi?
2SG - GEN dress - NOM very water - STAT
'your dress is all wet' (51)

(17) mey - i tekiw' - khi?
water - NOM flow - STAT
'the water is flowing' (160)

(18) heta hut' - i lakhi?
here coyote - NOM missing
'there aren't any coyotes around here' (86)

3.3.2 Accusative: -ø

The accusative, the unmarked case, is used for patients and other patient-like arguments of transitive verbs, for the single argument in an equational sentence, and for all subjects when they occur in dependent clauses (see chapter 6).

(19) ah mult'a šawo pa? - mi?
1SG:NOM all:the:time bread eat - DUR
'I eat bread all the time' (2)

(20) ah ce omehwiliš natuy' - si?
1SG:NOM DEM story believe - DUR
'I believe the story' (27)

(21) ce k'ew ce?e? i ek'a
DEM man COP 1SG son
'that man is my son' (8)

(22) ah haṭis - khi? ce pol'e? k'ena - kh - lah
1SG:NOM know - STAT DEM boy tall - STAT - NEG:DEP
'I know that the boy isn't tall' (113)

3.3.3 Dative: **-thu**

The dative case suffix is used for recipients, and to indicate direction.

(23) ce k'ew - i chica - thu ew ma - hes - ta?
DEM man - NOM bear - DAT fish DIR - give - PST
'the man gave the fish to the bear' (54)

(24) ah i ek'a i - thu okal'i - h hinčoh - ta?
1SG:NOM 1SG son 1SG - DAT talk - DEP dream - PST
'I dreamed that my son was talking to me' (230)

(25) chic - i i - thu te - laha - khi?
bear - NOM 1SG - DAT DIR - come - STAT
'the bear is coming toward me' (75)

3.3.4 Benefactive: **-ma**

The benefactive case is used for the benefactee of an action, including the hearer with verbs of speaking:

(26) may - ma mi? ce taka? mes - ta?
who - BENEF 2SG:NOM DEM basket make - PST
'who did you make that basket for?' (341)

(27) cephi isa - ma o - mehwil - ta?
3SG:NOM 1PL - BENEF UOP - tell - PST
's/he told us the story' (32)

The use of **-ma** in the following elicited example may be due to the influence of English.

(28) kaphe - ma ah mey k'o - ta?
coffee - BENEF 1SG:NOM water boil - PST
'I boiled water for coffee' (701)

3.3.5 Instrumental: **-thi?**

The instrumental is used with instruments:

(29) cephi kuči:ya - thi? chica ṭ'oh - ta?
3SG:NOM knife - INST bear kill - PST
's/he killed the bear with a knife' (17)

(30) i - ma taka - thi? mel te - phita - te?
1SG - BENEF basket - INST acorn DIR - bring - IMP
'bring me a basket of acorns' (24)

and with intensive reflexives:

(31) ah may' - thi? kah - ši?
1SG:NOM REFL - INST hear - DUR
'I hear it myself' (57)

3.3.6 Comitative: **-k'a**

The comitative is the case of accompaniment:

(32) ah mi - k'a čo: - si?
1SG:NOM 2SG - COM go - FUT
'I'll go with you' (5)

(33) ah k'ešu - k'a chica mewi? - ta?
1SG:NOM deer - COM bear catch - PST
'I caught a deer and a bear' (65)

(34) ah keye? otay' - ti? ce - k'a olol - ti?
1SG:NOM can sing - DUR DEM - COM dance - IMP
'I can sing and dance' (199)

3.3.7 Genitive: **-me?**

The genitive suffix, as in many languages, is used only with expressions of alienable possession.

(35) mi - me? hel - khutem - i ma?a ha? hel ne? - khi?
2SG - GEN fire - oven - NOM still Q fire have - STAT
'does your fireplace still have a fire in it?' (73)

(36) ah ce met'e ce k'ew - me? k'ešu
1SG:NOM DEM woman DEM man - GEN meat

pa? - is - ta?
eat - CAUS - PST
'I made the woman eat the man's meat' (54)

(37) i - me? luč - i lakhi?
1SG - GEN tobacco - NOM missing
'I don't have any cigarettes' (62)

The suffixed form can be used as an NP, as expected:

(38) ce?e? i - me?
COP 1SG - GEN
'it's mine' (o)

Inalienable possession is indicated by simple juxtaposition, which means that an inalienable possession phrase is indistinguishable from an associative phrase (see section 3.2 above). The inalienable possession construction is found with body parts, kin terms (except for **ek'a** 'son', and **ok'o:to** 'children' which inexplicably occur with either the suffixed or unsuffixed form), words for 'friend', and some (apparently important) material possessions, such as **čhuya** 'house':

(39) c'ic'a khap - i ke?te - khi?
bird wing - NOM broken - STAT
'the bird's wing is broken' (65)

(40) te phe? - i tuč'a - khi?
3SG foot - NOM big - STAT
'his/her foot is big' (j41)

(41) i yawe ah huhkal - ta?
1SG name 1SG:NOM remember - PST
'I remembered my name' (74)

(42) cephi me ew č'a - kek'i - ya:mi?
3SG:NOM 3SG husband DIR - leave - FUT
'she's going to leave her husband' (705)

BUT:

(43) te - me? ok'o:t - i natuy' - si?
3SG - GEN children - NOM believe - DUR
'his/her children believe (it)' (58)

Finally, here is a minimal pair illustrating the difference in interpretation between an alienably and an inalienably possessed noun:

(44) a. ah i - me? t'ol oh - co: - ta?
1SG:NOM 1SG - GEN hair CAUS - black - PST
'I dyed my wig black' (27)

b. ah i t'ol oh - co: - ta?
1SG:NOM 1SG hair CAUS - black - PST
'I dyed my hair black' (27)

3.3.8 Locative

There are a large number of locative suffixes with specific locational senses. Here is a relatively exhaustive list of the locative suffixes we have found:

(45)		
	-cawoh	'on top of' (e.g., house)
	-čuthiwe:la	'downstream from / below'
	-hanwe:la	'behind'
	-helawe:la	'in front of'
	-hinawe:la	'across'
	-hupwe:la	'upstream from / above'
	-hušik'a	'beside'
	-nawe:la	'beside'
	-newe:la	'inside' (e.g., boat, basket)
	-ompi	'under'
	-pi	'away from'
	-piyah	'near'
	-temu	'on top of' (e.g., stove)
	-u	'on, in, by' (e.g., tree, table, ground, river)
	-uhpi	'off'
	-upi	'out of'

The following examples illustrate some of them:

(46) thal - i čhuya - cawoh te - cewte - khi?
what - NOM house - on:top DIR - fall - STAT
'what fell on the roof?' (17)

(47) is - i kheye - newe:la
1PL - NOM boat - inside
'we are in the boat' (39)

(48) is - i čhuya - helawe:la te naw - ta?
1PL - NOM house - in:front 3SG see - PST
'we saw him in front of the house' (70)

(49) cephi mot'a - pi tule?a - khi?
3SG:NOM mountain - from come - STAT
's/he came from the mountain' (97)

(50) ce taka? - i hol - ompi yo? - khi?
DEM basket - NOM tree - under sit - STAT
'the basket is under the tree' (75)

(51) mansa:na? - i lamesa - uhpi č'a - polah - khi?
apple - NOM table - off DIR - roll - STAT
'the apple rolled off the table' (195)

(52) puenta - hupwela mey - i ela - khi?
bridge - upstream water - NOM deep - STAT
'upstream from the bridge the water is deep' (163)

The next example shows that a noun with a locative suffix can be used as a subject argument in a clause, taking its own nominative case suffix:

(53) čhuya - helawe:l - i pico:we - khi?
house - front:of - NOM dirty - STAT
'the front of the house is dirty' (77)

3.3.9 Case in noun phrases

Unlike some case languages, in Wappo case suffixes only appear on the last word of a complex noun phrase.

(54) a. **eču mey - i ela - khi?**
river water - NOM deep - STAT

b. ***eč - i mey ela - khi?**
river - NOM water deep - STAT

'the river water is deep' (41)

(55) **ce k'ew hučew'iš - i ew ṭ'oh - ta?**
DEM man happy - NOM fish catch - PST
'that happy guy caught the fish' (105)

If, however, that last word is one of the quantifiers **le?a** 'many' or **pina** 'few', then the case suffix must appear on the noun; these quantifiers do not take case:

(56) **c'ic - i le?a ho: - mi - se?**
bird - NOM many around - fly - DUR
'many birds are flying around' (2)

(57) **mansa:na? - i pina č'a?elš - khi? taka? newe:la**
apple - NOM few sit - STAT basket inside
'there are a few apples in the basket' (j38)

In contrast, the quantifier **mul'** 'all' may take a case suffix:

(58) a. kašic' - t - i mul' - i o:hak' - še?
boy - PL - NOM all - NOM hungry - DUR

b. kašic' - ta mul' - i o:hak' - še?
boy - PL all - NOM hungry - DUR

'all the boys are hungry' (52)

In the next example, either of the nominative case suffixes may appear, but not both, in accordance with the general rule specifying a single case marker per noun phrase given just above:

(59) hol pel (-i) mul' (-i) luhte - khi?
tree leaf (-NOM) all (-NOM) fallen - STAT
'the leaves have all fallen off' (118)

The reason for this difference between le?a 'many' and pina 'few', on the one hand, and mul' 'all', on the other, seems to be this: le?a 'many' and pina 'few' do not take case because they are actually adverbs, as illustrated for le?a in the following example:

(60) ce k'eš - i le?a ohca? - še?
DEM deer - NOM much weigh - DUR
'that deer weighs a lot' (234)

mul' 'all', on the other hand, is a "true" quantifier with only an attributive role to play; the adverbial form of mul' is mul'ta 'all the time':

(61) cephi mul'ta otay' - mi?
3SG:NOM all:the:time sing - DUR
's/he's singing all the time' (77)

3.4 Number

Both nouns and adjectives show number; the singular is unmarked, and the plural morpheme is generally the suffix -te, though some adjectives have idiosyncratic

plural forms, such as **tuč'a** 'big', whose plural form is **koṭo:mela** (see also Sawyer 1991).

Both human and non-human nouns may be inflected for number, though non-human nouns often do not show plural marking even when the sense is plural. In the following examples, the human nouns in (62) and (63) are marked as plural, as is the non-human subject of (64), but (65) shows that a non-human subject need not be so marked:

(62) **ce pol'e? - te ce?e? i ek'a - ok'o:to**
DEM boy - PL COP 1SG son - children
'these boys are my children' (214)

(63) **ce?e? ono?ši? - te**
COP Indian - PL
'they are Indians' (73)

(64) **hol - pel - t - i hotoka:la?**
tree - leaf - PL - NOM wash:down
'the leaves are washing down' (j117)

(65) **luč - i taka? newe:la yo? - khi?**
tobacco - NOM basket in exist - STAT
'the cigarettes are in the basket' (47)

Here are some other examples of non-human nouns with a plural sense and no plural marking:

(66) **mansa:na? - i pina**
apple - NOM few
'a few apples' (j38)

(67) **cephi hol (- te) č'eph - mi?**
3SG:NOM stick (- PL) bend - DUR
's/he is bending sticks' (208')

(68) i - me? chuy - i wentana hucah - khi?
1SG - GEN house - NOM window full:of - STAT
'my house has many windows' (45)

The following minimal pair illustrates the difference between human and non-human nouns; plural marking is obligatory with the human noun and optional with the non-human one:

(69) ah { met'e *(-te) / chica (-te) } le?a naw - ta?
1SG:NOM { woman *(-PL) / bear (-PL) } many see - PST
'I saw many { *women* / *bears* }

However, if there is an attributive adjective in the phrase, that adjective agrees in number with the head noun only if that noun is human. The following example shows that when the head noun is human, both the noun and the adjective are marked for plurality:

(70) a. met'e - te k'ena - te
woman - PL tall - PL
'tall women' (lts89)

b. *met'e k'ena - te
woman tall - PL

c. *met'e - te k'ena
woman - PL tall

The following examples show that when the head noun is not human, only the adjective takes the plural suffix:

(71) a. hol k'ena - te
tree tall - PL
'tall trees'

b. *hol - te k'ena - (te)
tree - PL tall - (PL)

Example (5) also illustrates this point; chica 'bear' appears in its singular form, but koṭo:mela 'big' is given in its plural form.

3.5 Demonstratives

Wappo has only two demonstratives, he for proximate and ce for distal.

(72) he k'eš - i čokali - khi?
DEM deer - NOM fast - STAT
'this deer can run fast' (12)

(73) ce k'ew ce?e? mi ek'a ha?
DEM man COP 2SG son Q
'is that man your son?' (16)

As in many other languages, the distal demonstrative can be used for definiteness, where neither distance nor pointing is indicated, as in:

(74) ce k'ew - i šawo eniya nočay' - še?
DEM man - NOM bread very enjoy - DUR
'the man enjoys the bread very much' (11)

3.6 Conjoined NPs

The comitative morpheme -k'a 'and' can (but need not) be used to conjoin NPs, as in (33) and:

(75) he k'a ce
this and that
'this and that' (JS3)

Sawyer (1965:106) suggests that the suffix **-k'a** means 'together' and can be found in **hopak'a** 'both' (from **hopa** 'two', 'each other').

The morpheme **he** 'or' signals phrasal disjunction.

(76) čhuya - nan he wentana, thal - i la? ke?te - khi?
house - mouth or window what - NOM EPIST break - STAT
'either the door or the window got broken, I don't know which' (33)

(77) ah he Charlene - i mi - me? kaphe?
1SG:NOM or Charlene - NOM 2SG - GEN coffee

oh - mesi - si?
CAUS - get - FUT
'either Charlene or I will get your coffee' (703)

(78) ah winu uk' - iš - lahkhi? he meycoc
1SG:NOM wine drink - DUR - NEG or foam:water

ah uk' - iš - lahkhi?
1SG:NOM drink - DUR - NEG
'I don't drink wine or soda' (703)

3.7 Quantifiers

Quantifiers generally follow the head noun, as suggested in the order chart shown in (1) at the beginning of chapter 3, but they may also precede:

(79) a. kašic' - t - i mul' - i ohak' - še?
boy - PL - NOM all - NOM hungry - DUR
'all the boys are hungry' (52)

b. mul' - i kašic' - t - i ohak' - še?
all - NOM boy - PL - NOM hungry - DUR
'all the boys are hungry' (52)

(80) met'e - t - i le?a i - thu nat'o?ah - khi?
woman - PL - NOM many 1SG - DAT came - STAT
'many women came to my house' [lit., 'to me'] (50)

(81) mansa:na? - i peras - i mul' - i pot'i - khi?
apple - NOM pear - NOM all - NOM ripe - STAT
'the apple and the pear are both ripe' (58)

(82) mansa:na? - i pina č'a?elš - khi? taka? newe:la
apple - NOM few sit - STAT basket in
'There are a few apples in the basket' (j38)

(83) ah le?a le:če uk' - ši?
1SG:NOM much milk drink - DUR
'I drink lots of milk' (73)

The quantifier with an object may float to the beginning of the sentence; our only examples of this are with a first person singular pronoun:

(84) pina ah k'ew - ta koṭo:mela haṭis - khi?
few 1SG:NOM man - PL big:PL know - STAT
'I know a few big guys' (205)

(85) le?a ah uh pesu masometis - ta?
much 1SG:NOM already money spend - PST
'I've spent too much money already' (206)

3.8 Non-referential Noun Phrases

Non-referential noun phrases may not occur with demonstratives, as expected, but they do take case suffixes. Also as expected, since a distinction between singular and plural is relevant only for referential nouns, non-referential nouns never take number marking:

(86) he oyi? ce?e? k'ešu k'o? - e:ma
DEM pot COP meat cook - PURP
'this pot is for cooking meat' (60)

(87) mi? ew hak' - še? , ah ona?
2SG:NOM fish like - DUR 1SG:NOM also
'you like fish and so do I' (33)

(88) i - me? tuni:ku? - i alina hucah - khi?
1SG - GEN dress - NOM flower full:of - STAT
'my dress has flowers all over it' (45)

(89) ec' - i hophihan t'a? ne? - khi?
spider - NOM eight leg have - STAT
'spiders have eight legs' (43)

3.9 Pronouns

3.9.1 Personal pronouns

Pronouns show the case forms given in Table 3-1. The other cases are formed by adding the appropriate suffix to the unmarked (accusative) root (further discussion can be found in Sawyer 1991).

Table 3-1. Case Forms for Personal Pronouns

	1st		2nd		3rd	
	sg	pl	sg	pl	sg	pl
Nominative	**ah**	**isi**	**mi?**	**misi**	(distal) **cephi**	(distal) **ceko:ti**
					(proximal) **hephi**	(proximal) **heko:ti**
Unmarked (Accusative)	**i**	**isa**	**mi**	**misa**	**te**	(distal) **ceko:to** (proximal) **heko:to**

Examples of these forms can be found throughout this grammar.

3.9.2 Reflexive and reciprocal pronouns

The Wappo reflexive pronoun is **may'**, and the reciprocal pronoun is **hopha**. For examples and discussion, see section 4.12.

3.9.3 The third-person co-referential pronoun

In addition to third-person pronouns and reflexive and reciprocal morphemes, Wappo has a third-person co-referential pronoun (3CO), **me** (plural **mesa**).[4] It is used to show that two third-person referents are the same when the first of them is the subject. It can be found in simplex sentences with non-body-part genitives as well as in complex sentences with dependent, but not coordinate, clauses.

A. Non-body-part genitives

As an example of 3CO in simplex sentences with non-body-part genitives, consider (90):

(90) cephi me - me? papel' peh - khi?
3SG:NOM 3CO - GEN book look - STAT
's/he$_i$ is looking at his/her$_i$ own book' (j51)

Example (90) contrasts with (91), where the referents are co-referential, but are first person instead of third person, and the second occurrence of the co-referential pronoun is the reflexive:

(91) ah may' - me? papel' peh - khi?
1SG:NOM REFL - GEN book look - STAT
'I am looking at my own book' (o)

Example (90) also contrasts with (92), where the third-person referents are not co-referential; here the appropriate personal pronoun is used instead of 3CO:

(92) ah te - me? papel' peh - khi?
1SG:NOM 3SG - GEN book look - STAT
'I am looking at his/her book' (o)

Finally, note that example (90) also contrasts with (93), where there are two third-person referents, but the non-initial one is not a possessor.

4. For further discussion of 3CO, including cross-linguistic comparisons, see Li and Thompson (1993).

(93) cephi may' - piya? holowik'a naw - ta?
3SG:NOM REFL - near snake see - PST
's/he saw a snake near him/herself' (53)

Here are further examples of 3CO with non-body-part genitives:

(94) nom - khi? khon' pola? - i me - me? on - k'a
live - STAT EVID boy - NOM 3CO - GEN people - COM
'there lived, they say, a boy$_i$ with his$_i$ people' (Text E, 295)

(95) ce k'ew - i me - me? kapote č'a - welis - ta?
DEM man - NOM 3CO - GEN coat DIR - take:off - PST
'the man$_i$ took off his$_i$ coat' (78)

(96) cel' nete? - met'a - i me ek'a:pi - thu
then mole - woman - NOM 3CO daughter - DAT

cew - is - ta? ...
ask - CAUS - PST
'then the mole-woman asked her daughter ...' (Bear Woman, 14)

B. Complex sentences with dependent clauses

3CO is also used in complex sentences with dependent clauses. Although in some examples, it appears that 3CO might be marking 'switch-reference', several pieces of evidence work against this analysis. First, as seen in (90) - (96), it is used in non-complex sentences. Second, as seen in several examples below, it is used with embedded clauses, where a 'switch-reference' analysis is less well-justified, as well as with adverbial clauses. Third, as illustrated below, it is not used when the two clauses are in a conjoined or non-dependent relation with each other.

We thus conclude that, although switch-reference systems have been argued for in numerous native North American languages, including those in close areal proximity with Wappo (Mithun 1999:4.7.2), our data suggest that that is not the primary function of 3CO.

In the following examples, square brackets indicate the boundaries of the dependent clause:

(97) cephi [me k'ešu mewi?i - wis] natuy' - si?
3SG:NOM 3CO deer catch - DEP:FUT believe - DUR
's/he$_i$ believes that s/he$_i$ will catch the deer' (27)

(98) thal yoh cephi [me hak' - še] hah - ši?
what CONTR 3SG:NOM 3CO want - DUR say - DUR
'what does s/he$_i$ say s/he$_i$ wants?' (18)

(99) cephi [me okal' - ih mahwewela?] haṭis
3SG:NOM 3CO speak - DUR:DEP COMP know

choy' - mi?
write - DUR
's/he$_i$ can write better than s/he$_i$ can speak' (28)

(100) cephi [me k'ešu pa? - e cel'] uwa
3SG:NOM 3CO meat eat - HYP COND bad

pihkahlik - si?
feel - FUT
'if s/he$_i$ eats that meat, s/he$_i$'ll feel bad' (35)

(101) ceko:t - i [mesa o - pa? - ta šu?u]
3PL - NOM 3CO UOP - eat - PST after

hinwey?a - khi?
sleep - STAT
'when they$_i$ had finished eating, they$_i$ slept' (47)

(102) kota maʔa ce šuʔu čhoʔel - khiʔ [me ce hopilaka
but just DEM after die - STAT 3CO DEM quarter

masomi - tis - ta] wen
spend - CAUS - PST because
'but after that he$_i$ just died because he$_i$ had spent that quarter'
(Text A, 185)

(103) cephi i peh - še - lahkhiʔ [i me - thu
3SG:NOM 1SG look:at - DUR - NEG 1SG 3CO - DAT

okal'te cel']
talk COND
's/he$_i$ doesn't look at me when I talk to him/her$_i$' (286)

(104) cephi [me šawo mes - tah] paʔ - taʔ
3SG:NOM 3CO bread make - PST:DUR eat - PST
's/he$_i$ ate the bread s/he$_i$ made' (52)

The preceding examples all illustrate 3CO following its co-referent nominal, but the following examples show that 3CO can precede its co-referent nominal in complex sentences:

(105) [me k'ešu paʔ - e cel'] cephi uwa pihkah - seʔ
3CO meat eat - HYP COND 3SG:NOM bad feel - DUR
'whenever s/he$_i$ eats meat s/he$_i$ feels bad' (35)

(106) [chica me mewiʔ - i cel'] kota maʔa cephi
bear 3CO catch - HYP COND but still 3SG:NOM

ce pahčhoṭik - lahkhiʔ
DEM fear:HYP - NEG
'even if a bear caught him/her$_i$, s/he$_i$ still wouldn't be afraid' (36)

Examples (107) and (108) show that 3CO is not used in a complex sentence when the two clauses are in a coordinate or non-dependent relation with one another:

(107) cephi i peh - khi? wey {(cephi) / (*me)} kat'a - khi?

3SG:NOM 1SG look - STAT and {3SG:NOM / 3CO} laugh - STAT

's/he$_i$ looked at me and s/he$_i$ laughed' (51)

(108) wey učі ola šu?u meh - yok'el - khi? , cel' (*me) cew
and night four after up - sit - STAT then 3CO there

ečumu - h c'esmi - khi?
river - LOC swim - STAT

'and after four nights he got up, and then went swimming in the river there' (Text A:182)

Finally, 3CO appears to be possible only if the main clause referent is the subject of the (main) clause:

(109) ah [{te / (*me)} uwa pihkah - se] {te / (*me)} - thu

1SG:NOM {3SG / 3CO} bad feel - DUR:DEP {3SG / 3CO} - DAT

cews - ta?
ask - PST

'I asked him/her$_i$ if s/he$_i$ was feeling bad' (19)

In (109), since the initial third-person referent is not the subject of its clause, the second mention of this third person cannot be done with 3CO. Similarly, in (110), since the initial third-person referent is a genitive modifier of the subject, but not the subject, this third person cannot be referred to by 3CO.

(110) te - me? na? - i eniya { te / (*me) } huk'aš - e?

3SG - GEN mother - NOM very { 3SG / 3CO } adore - DUR

'his/her$_i$ mother really adores him/her$_i$' (71)

4. THE VERB PHRASE

Wappo is relatively rich in inflectional and derivational verbal morphology (see Sawyer 1991 for some discussion of Wappo verb morphology). While the forms of many of the inflectional categories differ according the class of verb, the categories themselves are relatively clear. In the following sections, we will discuss the functions and uses of the various parts of the verb phrase without regard to their form, while in section 4.3, we will present the verb classes and the effect they have on the forms of the inflectional morphemes.

4.1 Tense and Aspect

Wappo has five tense/aspect categories:

- DUR (habitual/progressive)
- STAT (stative)
- PST (past for actions)
- INCH (inchoative)
- FUT (future)

4.1.1 Habitual/progressive [= DUR]

What we are glossing DUR (for 'durative') in this grammar is the inflectional category expressing habitual or progressive actions. There are 13 different forms in which the durative suffix may occur; it is the form of this inflectional category that primarily determines which verb class a root belongs to, as we will show later in this chapter (section 4.3.1). Because both DUR and STAT can express what Comrie (1976) identifies as present, we do not use this label. Here are examples illustrating the use of the DUR suffix:

A. Habitual use

(1) ah mul'ta šawo pa? - mi?
1SG:NOM all:the:time bread eat - DUR
'I eat bread all the time' (2)

(2) ʔiʔi, cephi luče poʔ - miʔ
yes 3SG:NOM cig. smoke - DUR
'yes, s/he smokes' (3)

(3) ah yekhe k'el - iʔ
1SG:NOM acorn:mush lick - DUR
'I eat acorn mush' (17)

(4) cel' ah šawo tac' - miʔ
then 1SG:NOM bread flat - DUR
'then I flatten the bread' (116)

B. Progressive use

(5) leʔa miʔ okal' - iʔ
much 2SG:NOM talk - DUR
'you are talking too much' (j67)

(6) heʔ ah otay' - miʔ
now 1SG:NOM sing - DUR
'now I'm singing' (77)

(7) hel - i šuṭi: - šiʔ
fire - NOM go:out - DUR
'the fire is going out' (82)

(8) cephi i hukal - šeʔ
3SG:NOM 1SG think - DUR
's/he's thinking of me' (117)

4.1.2 Stative [= STAT; **-khiʔ**]

The form of the stative category is invariant: it is **-khiʔ** everywhere. Essentially (with some exceptions to be noted below), it is found with intransitive main clause predicates and indicates the existence of a state, either a simple state (as with property predicates) or states having been arrived at (i.e., resultant states):

A. Simple states

(9) i me? - i husoha - khi?
1SG hand - NOM tired - STAT
'my hand is tired' (12)

(10) mey - i šoy'i:ya: - khi?
water - NOM hot - STAT
'the water is hot' (23)

(11) še? - ti eniya c'iti - khali - khi? he - hinta
wind - NOM very bone - like - STAT DEM - day
'the wind is strong today' (27)

(12) lel - i ceta wil - khi?
rock - NOM there sit - STAT
'the rock is over there' (337)

(13) c'ic' - i č'ep'iš nahwelis - khi?
bird - NOM worm hold:in:mouth - STAT
'the bird is holding the worm in its mouth' (203)

B. Resultant states

(14) i - me? hel - i šuṭi: - khi?
1SG - GEN fire - NOM go:out - STAT
'my fire has gone out' (277)

(15) ah yomto? - iš - khi?
1SG:NOM doctor - INCH - STAT
'I've become a doctor' (71)

(16) lo? - eš - khi?
damp - INCH - STAT
'(it) got damp' (374)

(17) ah te čhuya - h uh čo: - khi?
1SG:NOM 3SG house - LOC already go - STAT
'I've already been to his/her house' (502)

(18) cephi monah - khi?
3SG:NOM hide - STAT
's/he's hiding [i.e., has hidden]' (371)

(19) i - me? c'ic' - i čho?el - khi?
1SG - GEN bird - NOM die - STAT
'my bird has died' (88)

A subcategory of "resultant state" usage is that in which -khi? expresses having arrived at a certain position or location:

(20) ah pawata? te - hew'i - khi?
1SG:NOM once DIR - jump - STAT
'I jumped down once' (44)

(21) ah čhuya ma - kuyel - khi?
1SG:NOM house DIR - go - STAT
'I went into the house'

(22) ceta kayeta ma - t'um'i - khi?
there crackers DIR - go:buy - STAT
'(he) went there to buy crackers' (Text B, 185)

(23) met'e - t - i me?a i - thu nat'o?ah - khi?
woman - PL - NOM many 1SG - DAT come - STAT
'many women came to my house [lit., 'to me']' (50)

(24) cephi te - piyola - khi?
3SG:NOM DIR - sneak - STAT
's/he sneaked in' (333)

It is no accident that the verbs **ne?khi?** 'have' and **lahkhi?** 'lack' must occur with the stative suffix:

(25) cephi cey' nokh le?a ne? - khi?
3SG:NOM long:ago friend many have - STAT
's/he used to have a lot of friends' (506)

(26) hol pel - i lah - khi?
tree leaf - NOM missing - STAT
'the tree has no leaves' (64)

In fact **lahkhi?** 'lack' is the negative morpheme itself, found with all negative main clause predicates:

(27) ah olol - o - lah - khi?
1SG:NOM dance - EP - lack - STAT
'I'm not dancing' (89)

(28) ce k'ew - i eniya k'ena - kh - lah - khi?
DEM man - NOM very tall - STAT - lack - STAT
'that man isn't very tall' (110)

(29) ah te haṭasu - kh - lah - khi?
1SG:NOM 3SG know - STAT - lack - STAT
'I don't know him/her' (o)

From here on we will simply gloss the negative morpheme -**lahkhi?** as NEG. That this negative morpheme is a suffix rather than a main verb of negation is indicated by the fact that many verbs undergo internal changes upon the addition of this negative morpheme. The form **haṭasu - kh - lah - khi?** 'don't know' in (29) is a case in point: the affirmative form of this verb is **haṭis - khi?** 'know-STAT', but with the addition of the negative suffix, the second and third stem vowels change, and the **-khi?** reduces to **-kh**. This is very common, though the changes differ from one verb class to another (see section 4.3 below; from here on, we will not gloss the epenthetic segments separately as EP). (See section 4.7 for further discussion of negation.)

Similarly, it is not surprising that numeral and quantifier roots, when used as predicates, take the stative **-khi?** suffix, as in:

(30) ceta lakhu ši?ay - i le?a - khi?
there CLAR grass - NOM much - STAT
'over there is a lot of grass' [lit., 'over there the grass is much'] (337)

(31) ec'e t'a? - i hophihan - khi?
spider leg - NOM eight - STAT
'spiders have eight legs' [lit., 'spiders, legs are eight'] (43)

Minimal and near-minimal contrasts between the durative suffix and the stative suffix help to illustrate the functional differences between them:

(32) a. kayi:na? - i nale? - ša?
chicken - NOM angry - DUR
'the chicken is behaving angrily' (8)

b. kayi:na? - i nale? - iš - khi?
chicken - NOM angry - become - STAT
'the chicken has gotten angry' (8)

(33) a. hin - i ma - muyel - se?
sun - NOM DIR - go:down - DUR
'the sun is setting' (369)

b. hin - i ma - muyel - khi?
sun - NOM DIR - go:down - STAT
'the sun has set' (369)

(34) a. cephi k'u:wi: - ya?
3SG:NOM run - DUR
's/he's running' (o)

b. cephi k'uwey - khi?
3SG:NOM run - STAT
's/he arrived (somewhere) by running' (369)

(35) a. c'ic'a - t - i ho - yok'a: - la?
bird - PL - NOM DIR - fly - DUR
'the birds are flying around' (369)

b. sumi cic'a - t - i ho - yok'el - khi?
yesterday bird - PL - NOM DIR - fly - STAT
'yesterday the birds were flying around [but have now roosted]' (13, 369)

(36) a. cephi ew mehlah - ši?
3SG:NOM fish catch - DUR
's/he's fishing' (370)

b. cephi ew mehlahi - khi?
3SG:NOM fish catch - STAT
's/he's gone fishing' (370)

(37) a. thal - i te - cew - še?
what - NOM DIR - fall - DUR
'something is falling (toward me)' (370)

b. thal - i te - cewte - khi?
what - NOM DIR - fall - STAT
'something fell down (toward me)' (370)

(38) a. om - i chach - ša?
everywhere - NOM cold - DUR
'it's getting cold (outside)' (172)

b. om - i chach - khi?
everywhere - NOM cold - STAT
'it's cold (outside)' (172)

(39) a. ah ek'a pihšay'i - ya?
1SG:NOM baby hold:in:arms - DUR
'I am carrying the baby' (366)

b. ah ek'a pihšay'is - khi?
1SG:NOM baby hold:in:arms - STAT
'I am holding the baby' (366)

(40) a. cephi hincaṭi: - se?
3SG:NOM wake:up - DUR
's/he's waking up' (374)

b. cephi hincaṭel - khi?
3SG:NOM wake:up - STAT
's/he's awake'

It should be noted that there is a certain amount of idiosyncracy; there are instances in which stative meanings are expressed, not with a stative suffix, as expected, but with a durative suffix:

(41) he - hinta ah uwa pihkah - se?
DEM - day 1SG:NOM bad feel - DUR
'today I feel bad' (36)

(42) i t'a? - i kali - ša?
1SG leg - NOM hurt - DUR
'my leg hurts' (36)

(43) ce k'eš - i le?a ohca? - še?
DEM deer - NOM much weigh - DUR
'this deer weighs a lot' (234)

(44) ah mi hak' - še?
1SG:NOM 2SG like - DUR
'I like you' (o)

And there are also rare instances of verbs with which a durative meaning occurs with a stative suffix:

(45) ah mansa:na? lu - khi?
1SG:NOM apple pick - STAT
'I am picking apples' (357d)

Finally, there seem to be some non-action verbs which cannot occur with the past suffix, so express past time meanings with the stative suffix, such as kat'a- 'laugh':

(46) te i pehuk wen, ah kat'ah - khi?
3SG 1SG look when 1SG:NOM laugh - STAT
'when s/he looked at me, I laughed' (51)

4.1.3 Past for actions [= PST; -ta?]

What we are glossing PST is restricted to transitive actions performed in the past, as well as intransitive actions performed in the past which do not result in identifiable states.

A. Transitive verbs

(47) is - i kuči:ya - thi? chica ṭ'oh - ta?
1PL - NOM knife - INST bear kill - PST
'we killed the bear with a knife' (6)

(48) ah omehwiliš mehwil - ta?
1SG:NOM story tell - PST
'I told the story' (44)

(49) ah hol koṭo:mela te - k'eč' - ta?
1SG:NOM tree big:PL DIR - chop - PST
'I chopped down the big trees' (49)

(50) ah te kat'a čuṭi: - ta?
1SG:NOM 3SG laugh:INF order - PST
'I told him/her to laugh' (99)

(51) ah čuteh - ta? te thal hak' - še?
1SG:NOM forget - PST 3SG what like - DUR
'I forgot what s/he likes' (167)

(52) may mi? naw - ta?
who 2SG:NOM see - PST
'who did you see?' (23)

(53) ah le?a mey - ocow el - ta?
1SG:NOM many water - root dig - PST
'I dug lots of swamp-roots' (191)

B. Intransitive verbs with no resulting state

(54) hay - i ho? - ta?
dog - NOM bark - PST
'the dog barked' (324)

(55) cephi pulu:mek' - ta?
3SG:NOM run:away - PST
's/he ran away' (130)

(56) sumi is - i olol - ta?
yesterday 1PL - NOM dance - PST
'yesterday we danced' (o)

The contrast between past intransitive actions with resultant states, which are marked with the stative suffix -khi?, and past intransitive actions without resultant states, which are marked with the past suffix -ta?, is striking; all of the examples (14) through (24) above were reports of past actions in which the subject had arrived at some identifiable state upon the completion of the action, while examples (54) through (56) reported past actions from which no discernible state for the subject could be said to have resulted.[1] The data make it clear that it is resultant state and

1. Interestingly, reports of past actions without a resulting state seem to be cross-linguistically relatively rarely used in ordinary discourse; it seems that people tend to associate pastness with "closure".

not, say, punctuality, that determines whether it will be -khiʔ or -taʔ that will be used to report a past time intransitive event; for example, because the wine in the next example is in the state of being spilled after the event, the stative -khiʔ is appropriate:

(57) winuʔ - i ohč'ay'te - khiʔ
wine - NOM spill - STAT
'the wine spilled' (23)

But in (58), there is no identifiable state that results from stopping dancing, so the past suffix -taʔ is appropriate:

(58) cephi ololʼ - ukh c'ey - taʔ
3SG:NOM dance - INF stop - PST
's/he stopped dancing' (40)

Again, there are a small number of idiosyncrasies; we have found a few instances of verbs which ought to occur with the past suffix but don't:

(59) ah ew - teymu pheʔṭ'aʔel - khiʔ
1SG:NOM fish - on:top step - STAT
'I stepped on the fish' (272)

And we have a few examples in which the past suffix occurs, but without a clear past meaning:

(60) cephi sapatu ohkhuy' - taʔ
3SG:NOM shoe wear/put:on - PST
's/he's wearing shoes' (174)

Compare:

(61) cephi sapatu ohkhuy' - iʔ
3SG:NOM shoe wear/put:on - DUR
's/he's putting on (his/her) shoes' (174)

While most of these examples with PST express punctual perfective meanings, there is much evidence in our materials that PST is not perfective. Here are two such examples:

(62) ah uwa pihkahlik - ta?
1SG:NOM bad feel - PST
'I felt bad' (117)

(63) ah ma?a nahle? olol - ta?
1SG:NOM just little:while dance - PST
'I only danced for a little while' (194)

Finally, we note that there is tense variation in our narratives; more data would be needed to generalize.

4.1.4 Inchoative [= INCH; **-iš** / **-eš**]

The inchoative suffix is used to indicate coming into a state; for example, compare:

(64) cephi tuč' - iš - khi?
3SG:NOM big - INCH - STAT
's/he got big' (64)

with:

(65) cephi tuč'a - khi?
3SG:NOM big - STAT
's/he is big' (o)

Or compare:

(66) i ce?e? yomto?
1SG COP doctor
'I am a doctor' (o)

with:

(67) ah yomto? - iš - khi?
1SG:NOM doctor - INCH - STAT
'I've become a doctor' (71)

Here are some further illustrative minimal pairs:

(68) a. taka? - i chipiholey - khi?
basket - NOM rusty - STAT
'the pan is rusty' (211)

b. taka? - i chipihol - iš - khi?
basket - NOM rusty - INCH - STAT
'the pan got rusty' (211)

(69) a. he pol'e? - i k'ena - khi?
DEM boy - NOM tall - STAT
'this boy is tall' (211)

b. he pol'e? - i k'en - iš - khi?
DEM boy - NOM tall - INCH - STAT
'this boy got tall' (211)

(70) a. om - i šoy'i:ya: - khi?
everywhere - NOM hot - STAT
'it's hot' (211)

b. om - i šoy' - iš - khi?
everywhere - NOM hot - INCH - STAT
'it got hot' (211)

(71) a. cephi lo?e - khi?
3SG:NOM damp - STAT
'it's damp' (212)

b. cephi lo? - eš - khi?
3SG:NOM damp - INCH - STAT
'it got damp' (212)

However, while -iš- before -khi? always signals inchoative meaning, there are rare cases in which it is quite possible to express inchoativeness without this suffix. Here are some examples:

(72) ce taka? - i wiši - khi?
DEM basket - NOM dry - STAT
'the basket is/got dry' (211)

(73) šičhel - khi?
wet - STAT
'it is/got wet' (212)

(74) šaw - i nasephel - khi?
bread - NOM flat - STAT
'the bread got flat' (109)

(75) ah pahčhoṭi - khi?
1SG:NOM scared - STAT
'I got scared' (118)

4.1.5 Future [= FUT; -ya:mi? and -si?]

There are two suffixes expressing future actions and intentions. Since futurity is so closely related to intentionality and desire (Bybee and Pagliuca 1987, Bybee et al. 1994), we will not attempt to determine whether these suffixes are "tense" markers or "mood" markers, and will simply gloss them both as FUT for 'future'. The difference between them is summarized in the following chart:

Table 4-1. Future Suffixes Compared

-ya:mi?	-si?
more certain predicted event corresponds to 'going to'	less certain, intentional possible event corresponds to 'let's' corresponds to 'might' used in consequent of conditionals (see section 6.5.3)

Thus, of the two future suffixes, -ya:mi? is the one used in contexts where the speaker is more certain about the future event, while -si? is found in contexts in which the speaker is less certain about the imagined event.

A. -ya:mi?*, more certain*

(76) cephi oci:te - ya:mi?
3SG:NOM give:birth - FUT
'she is going to have a baby' (72)

(77) ah ot'il'i - ya:mi?
1SG:NOM wrap:around - FUT
'I'm going to wrap it around and around (as in making a basket)' (196)

(78) ah te ewis - ya:mi?
1SG:NOM 3SG marry - FUT
'I'm going to marry him' (j62)

(79) ah hintolik - ya:mi?
1SG:NOM go:to:sleep - FUT
'I'm going to go to sleep' (329)

(80) ah mi o - šay'i - ya:mi?
1SG:NOM 2SG UOP - pay - FUT
'I'm going to pay you' (205)

B. -si?, *less certain*

(81) maʔa mi? thal mes - taʔ ah paʔe - si?
just 2SG:NOM what make - PST 1SG:NOM eat - FUT
'I'll just eat whatever you cooked' (261)

(82) isa čo: cel' ceko:t - i isa kat'ah - si?
1PL leave COND 3PL - NOM 1PL laugh - FUT
'when we leave they'll laugh at us' (38)

(83) hopa - k'a isi mesi - si?
two - COM 1PL:NOM make - FUT
'let's do it together' (117)

(84) om - i makhaʔ - si? huka:hiye
everywhere - NOM rain - FUT maybe
'it might rain' (37)

(85) mi? may' ohk'eč'e - si?
2PL:NOM REFL cut - FUT
'[be careful -] you'll cut yourself' (362)

(86) ah mi? ṭ'o - si?
1SG:NOM 2SG spank - FUT
'I'll spank you' (257)

(87) cephi k'ešu mewiʔi - si?
3SG:NOM deer catch - FUT
's/he can catch the deer' (27)

(88) mi tuleʔa cel' isi winu uk'i - si?
2SG come COND 1PL:NOM wine drink - FUT
'if you come over we'll drink wine' (357d)

4.2 Paradigms

In this section, we give a sample of verb paradigms, to illustrate the range of inflections verbs may take. These paradigms also illustrate nicely the patterns in verb stem changes that characterize Wappo verb inflection, which is discussed in the next section. We omit the causative, whose paradigm is presented in section 6.3.1.

Most of the suffixes are discussed in this grammar. The generalizations we can make about verb paradigms, based on a database of 236 verbs, are these:

- All verb roots seem to be able to appear in at least two forms, an 'unmarked' form, and a semantically motivated 'marked' form. Each of these two forms is used with a variety of suffixes, which are predictable for the most part:
  - Form A, the unmarked form, is the basis for the durative, past, present tense and past tense negatives, infinitive, causative, purposive, and passive forms.
  - Form B, the future form, is the basis for the future, stative, imperative forms. It also occurs in the negative future, the negative imperative, and the dependent future forms.
  - There are several systematic exceptions to this distribution of A and B forms, which will be discussed in section 4.3.
- The exact form of the A and B forms of a particular verb is determined largely by the semantic verb class the verb belongs to. This will be discussed in detail in section 4.3.
- For some verbs, there is a third form, form C, typically occurring with dependent verb forms.
- If both the stem-final segment and suffix-initial segment are vowels, one of them is deleted, typically the second vowel (i.e., the initial vowel of the suffix).

čoči	-	i?	>	čoči?
weave	-	DUR		weave-DUR
k'o	-	ukh	>	k'okh
boil	-	INF		boil-INF
me?ewa	-	is	>	me?ewas
go:wrong(B form)	-	INF		go:wrong-INF

- All non-dependent verb forms end with a glottal stop. If the verb ends with a non-fricative consonant, the consonant is glottalized.

mešik'el	-	ø	>	mešik'el'
breathe(B form)	-	IMP		breathe:IMP

Here we show three verb paradigms for illustration. These paradigms also show some of the systematic or idiosyncratic exceptions to the generalizations stated above; we will return to a more detailed discussion of these paradigms in section 4.3. A more extensive set of paradigms can be found in the Appendix.

First is the paradigm for the intransitive action root olol- 'dance'. Note that olol- does not occur with the stative suffix, though many verbs of action do occur both with the durative and the stative suffix with a slight difference in meaning (see section 4.1.2). The root olol- has the following forms:

- Form A: the unmarked form olol-, found with the durative, past, past tense negative, affirmative imperative, infinitive, purposive, and the suffixes -mime? and -miti?. There is also a variant ololo-, which occurs in the present tense negative only.
- Form B: the future form ololih-, found in the future tenses, the negative future tenses, the dependent future tenses, and the negative imperative.
- Form C: the dependent form ololoh-, found only in the non-future dependent tenses

Next we consider the paradigm for the transitive action verb root hic- 'pound to make flour'. Like olol- above, hic- does not occur with the stative suffix. The forms for hic- are:

- Form A: the unmarked form hic-, found with the infinitive and purposive suffixes. Form A also occurs in a variant form hicu-, found with the durative, present tense negative, passive, and the suffixes -mime? and -miti?, and another variant form hici- (which happens to be identical to form B), found with the past and past tense negative.
- Form B: the future form hici-, found in the future tenses, negative future tenses, imperatives, and the dependent future tenses.
- Form C: hicih- and hicuh-, found with some dependent tenses.

Table 4-2. Paradigm for **olol-** ‘dance’

	olol- ‘dance’
DUR	**olol - mi?**
PAST	**olol - ta?**
FUT1	**ololih - ya:mi?**
FUT2	**ololih - si?**
NEG	**ololo - lahkhi?**
NEG:PST	**olol - ta - lahkhi?**
NEG:FUT1	**ololih - yawlahki?**
NEG:FUT2	**ololih - lahkhusi?**
IMP	**olol - ti?**
NEG:IMP	**ololih - lahkhi?**
INF	**olol – ukh**
PASS	N/A
PURP	**olol - e:ma**
-mime? (‘go out and X’)	**olol – mime?**
-miti? (‘go do X’)	**olol - miti?**
DUR:DEP	**ololoh**
PST:DEP	**ololoh - tah**
FUT1:DEP	**ololih - yaw**
FUT2:DEP	**ololih - wis**

Table 4-3. Paradigm for **hic-** ‘pound to make flour’

	hic- ‘pound to make flour’
DUR	**hicu - mi?**
PAST	**hici - ta?**
FUT1	**hici - ya:mi?**
FUT2	**hici - si?**
NEG	**hicu - lahkhi?**
NEG:PST	**hici - ta - lahkhi?**
NEG:FUT1	**hici - yawlahkhi?**
NEG:FUT2	**hici - lahkhusi?**
IMP	**hici - ti?**
NEG:IMP	**hici - lahkhi?**
INF	**hic – ukh**
PASS	**hicu – khe?**
PURP	**hic – e:ma**
-mime? (‘go out and X’)	**hicu - mime?**
-miti? (‘go do X’)	**hicu - miti?**
DUR:DEP	**hicih**
PST:DEP	**hicuh - tah**
FUT1:DEP	**hici - yaw**
FUT2:DEP	**hici – wis**

Table 4-4. Paradigm for **hinto-** ‘sleep’

	hinto- ‘sleep’
STAT	**hinto - khi?**
FUT1	**hintolik - ya:mi?**
FUT2	**hintolik - si?**
NEG	**hinto - khi - lahkhi?**
NEG:PST	**hinto - khi - lahkhi?**
NEG:FUT1	**hintolik - yawlahkhi?**
NEG:FUT2	**hintolik - lahkhusi?**
IMP	**hinto - la?**
NEG:IMP	**hintolik - lahkhi?**
INF	**hinto – kh**
PASS	N/A
PURP	**hintolik – ma**
-mime? (‘go out and X’)	**hinto – mime?**
-miti? (‘go do X’)	**hinto - miti?**
DUR:DEP	**hinto – khih**
PST:DEP	**hinto – khih**
FUT1:DEP	**hinto - yaw**
FUT2:DEP	**hinto - wis**

Finally, on page 52 we have given the paradigm for the state verb **hinto**- 'sleep', whose profile differs from the action verbs **olol**- 'dance' and **hic-** 'pound' (see section 4.1.2 and 4.1.3) for the distinction between state and action verbs). Like other state verbs, **hinto**- does not distinguish between durative and past, but takes only the stative suffix -**khi?** in present and past contexts. Here we see the following root forms:

- Form A: the unmarked form **hinto**-, found with the stative, the present and past tense negatives, the affirmative imperative, the infinitive, the suffix -**mime?**, and all the dependent tenses.
- Form B: the future form **hintolik**-, found in the future and negative future tenses, the negative imperative, and with the purposive.
- No form C.

4.3 Verb Classes

As can be seen in the verb paradigms in section 4.2, Wappo verb roots go through a complex pattern of epenthesis or stem change. First, as we suggested in section 4.2, each verb root appears in two different stem forms, A and B (and in some cases, a third form as well) depending on the suffix it combines with. Second, for each suffix, a verb stem goes through some additional 'changes', resulting in its final realization.[2] This section will discuss this pattern. But before doing that, a discussion of the semantically-motivated verb classes is in order, as the pattern of epenthesis and stem change can largely be predicted from the class of the verb. There are three relevant classes: the DUR class, the IMP class, and the INF class.

4.3.1 DUR classes

The DUR class of a verb is determined by which form of the DUR suffix a root may occur with. The durative suffix (see section 4.1.1) occurs in 13 different forms, which are shown in Table 4-5. Since most verb roots occur with only one of them, Wappo verbs can be classified into 13 DUR classes. In addition to this, there are a small number of stative verbs which do not occur in durative form and thus do not have a durative suffix associated with them, forming an additional class, which we term DUR0. Therefore, we have 14 different DUR classes.

Even though the similarity of the forms of some durative suffixes may appear to suggest that there may be fewer DUR classes and that the differences between some durative suffixes may be due to phonologically motivated alternations, this does not seem to be the case. There do not seem to be any clear phonological patterns within

2. Here, we are not implying that a verb root actually goes through these two 'steps' to reach a 'surface' realization; rather, we simply find this to be a useful way of demonstrating the general systemacity of epenthesis and stem change that can be observed in the complex paradigm of the Wappo verb.

Table 4-5. DUR Classes

-m'iʔ	DUR1
-iʔ	DUR2
-šiʔ	DUR3
-šeʔ	DUR4
-šaʔ	DUR5
-seʔ	DUR6
-i:yaʔ	DUR7
-alaʔ	DUR8
-tiʔ	DUR9
-siʔ	DUR10
-eʔ	DUR11
-meʔ	DUR12
-saʔ	DUR13
no DUR suffix	DUR0

each DUR class. Moreover, there are some homonyms that belong to different DUR classes; for example, compare **okal-** 'speak' (=DUR2) and **okal-** 'hurt' (=DUR11), **yok'-** 'win (in gambling)' (=DUR1), **yok'-** 'stay' (=DUR4), and **yok'-** 'fly' (=DUR6).

Instead, these classes appear to be semantically motivated. This can be seen from the fact that some verbs may take different durative suffixes depending on their meaning in context. For example, the verb **chach** '(become) cold' occurs with **-še?** when the subject is human, as in example (89), and with **-ša?** when it is used as a 'weather verb', as in example (90).

(89) **phil' makha cel' ah chach - še?**
snow precipitate COND 1SG:NOM cold - DUR
'if it snows, I get cold' (36)

(90) **om - i chach - ša?**
everywhere - NOM cold - DUR
'it's getting cold (outside)' (172)

Thus, some classes have a relatively clear semantic basis. The DUR8 class, for example, consists of verbs with the directional prefix **ho-** 'around' (though not all verbs with this prefix are of this class; see section 4.4.2), thus having a common meaning. In fact, adding **ho-** to a verb changes the class of the verb; for example, **čoh** 'go' (=DUR12) becomes **hočoh** 'walk around' (=DUR8).

While the semantic motivations for all classes are not as clear as this, there seems to be a noticeable pattern; verbs that take DUR1, DUR2, and DUR11 are mostly transitive verbs, and verbs that take DUR3, DUR 4, and DUR6 are mostly intransitive verbs. This is demonstrated nicely through verb pairs that differ only in transitivity; for example, intransitive **ko?-** 'boil' belongs to DUR3 class, while transitive **k'o-** 'boil' belongs to DUR1 class. The rest of the classes comprise a smaller number of verbs, in some cases only a single root, and their semantic basis is less clear, except for the DUR8 class mentioned above.

4.3.2 IMP classes

The IMP class of a verb is determined by which form of the imperative suffix a root may occur with. There are four different IMP classes to which a Wappo verb root may belong; when forming imperatives, each root occurs with only one of the following suffixes:

-ti?	IMP1
-ø	IMP2
-la?	IMP3
-te	IMP4

Stems which occur with IMP3 or IMP4 are rare, and most stems take either IMP1 or IMP2. At this point, it is not clear what determines which imperative suffix a stem takes. The distribution of IMP1 or IMP2 suffixes does not show any significant correlation with transitivity. However, a semantic motivation is again suspected; the small number of IMP3 stems in our database are typical state verbs, such as **hinto-** 'sleep' and **ohthe-** 'be quiet'.

Also, IMP classes appear to intersect the distribution of the DUR classes in an interesting way; they distinguish between two of the major DUR classes, DUR1 and DUR2, as most DUR1 verbs take IMP1, and most DUR2 verbs take IMP2.

4.3.3 INF classes

The INF class of a verb is determined by which form of the infinitive suffix a root may occur with. There are three different INF classes to which a Wappo verb root may belong; when forming the infinitive, each stem takes only one of the following suffixes:

-ukh	INF1
-ø	INF2
-is	INF3

Most stems take the INF1 suffix, but there are a small number of verbs which take **-ø**; those stems are mostly state verbs which take the **-khi?** STAT suffix. The **-is** suffix is limited to an even smaller number of verbs.

4.3.4 Pattern of epenthesis in verb paradigms

In the remaining parts of this section, we will discuss how the verb classes mentioned above figure in predicting the pattern of epenthesis and stem change in the verb paradigms.

A. The A form and B form

As mentioned above, each verb root appears in two different stem forms, A and B. The A form is the unmarked form, and is identical to the root form of the verb. On the other hand, the B form differs from the root form of the verb, and this form is largely determined by the intersection of the DUR and IMP class of the verb. The following generalizations can be made:

- Verbs that belong to both one of the most frequent DUR classes (DUR1, DUR2, DUR4, or DUR6) and one of the most frequent IMP classes (IMP1, IMP2) typically have the segment shown in the following table added to the verb root. For example, the B form for **olol-** 'dance', which belongs to DUR1 and IMP1 classes, is **ololih-**, while the B form of **šič-** 'get wet', which belongs to DUR6 and IMP2 classes, is **šičhel-**. Over 70% of the verb roots in our database belong to the DUR1, DUR2, DUR4, or DUR6 class, so this pattern accounts for a large percentage of verbs.

Table 4-6. IMP and DUR Classes Correlated

	IMP1	IMP2
DUR1	**-i/ih**	**-e**
DUR2	**-i/ih**	**-e**
DUR4	**-a**	**-e/el**
DUR6	**-a**	**-e/el**

- Verbs of other classes are less frequently attested in our database, so clear generalizations are difficult to make. But the following are some additional patterns that are observable:
  - Verbs that occur with the IMP3 suffix have **-lik-** added to the verb root. For example, the B form of **hinto-** 'sleep', which belongs to the IMP3 class, is **hintolik-**.
  - The segment **umekh** is often epenthesized for DUR7 class verbs. For example, the B form of **man-** 'take out', which belongs to the DUR7 class, is **manumekh-**.

B. Further stem changes

When a verb root combines with a suffix, it occurs in either the A or B form (or one of their variants), depending on the suffix and verb class of the root. We will now describe these patterns.

B.1 DUR forms

The form of the verb that occurs with the durative suffix is the A form. For most verbs, this form is 'unmarked'; there is no change in the root.

(91) choy' - mi? > choy'mi? (DUR1, IMP1)
write - DUR1 write:DUR

(92) heyh - i? > heyhi? (DUR2, IMP2)
saw:(wood) - DUR2 saw:DUR

(93) mehšik' - še? > mehšik'še? (DUR4, IMP2)
breathe - DUR4 breathe:DUR

(94) šič - se? > šičhse? (DUR6, IMP2)
get:wet - DUR6 get:wet:DUR

However, there are a few exceptions to this. For verbs that belong to DUR1 class, when the stem ends with a plain non-continuant consonant (i.e., a non-aspirated/non-glottalized stop or affricate), u is epenthesized. If the stem vowel is o, the epenthesized vowel is o.

(95) hic - mi? > hicumi? (DUR1, IMP1)
pound:to:make:flour - DUR1 pound:to:make:flour:DUR

(96) čop - mi? > čopomi? (DUR1, IMP1)
warm:up - DUR1 warm:up:DUR

For stems that belong to both the DUR2 and IMP2 class, when the stem ends with a plain sonorant, the sonorant is glottalized.

(97) hil - i? > hil'i? (DUR2, IMP2)
build - DUR2 build:DUR

B.2 PST forms

The past suffix generally occurs with the A form of the verb.

(98) choy' - ta? > choy'ta? (DUR1, IMP1)
write - PST write:PST

(99) heyh - ta? > heyhta? (DUR2, IMP2)
saw:(wood) - PST saw:PST

However, DUR7 verbs and a few idiosyncratic verbs combine with the past suffix in their B form.

(100) man - ta? > manumekta? (DUR7, IMP2)
carry - PST carry:PST

Also, stems with a final plain non-continuant consonant have i epenthesized.

(101) hic - ta? > hicita? (DUR1, IMP1)
pound:to:make:flour - PST pound:to:make:flour:PST

While this often results in a form identical to the B form of the verb, this is not always the case, as we can see for verbs such as **pitek-** 'knock over by bumping into', whose PST form is **pitekita?**, while its B form, as attested through its future, imperative, and other forms, is **pitekel-**.

B.3 STAT forms

The stative suffix occurs with the B form of the verb.

(102) mehšik' - khi? > mehšik'elkhi? (DUR4, IMP2)
breathe - STAT breathe:STAT

(103) šič - khi? > šičhelkhi? (DUR6, IMP2)
get:wet - STAT get:wet:STAT

However, for DUR0 class verbs, it is the A form that combines with the stative suffix. Thus, the form of **hinto-** 'sleep', whose B form is **hintolik-**, when combined with the stative suffix is **hinto-khi?**.

B.4 FUT forms

The future suffixes occur with the B form of the verb. The forms that occur with -**ya:mi?** and -**si?** are always identical; here we only show examples with -**si?**.

(104) choy' - si? > choy'ihsi? (DUR1, IMP1)
write - FUT write:FUT

(105) heyh - si? > heyhesi? (DUR2, IMP2)
saw:(wood) - FUT saw:FUT

(106) mehšik' - si? > mehšik'elsi? (DUR4, IMP2)
breathe - FUT breathe:FUT

(107) šič - si? > šičhelsi? (DUR6, IMP2)
get:wet - FUT get:wet:FUT

However, there are some idiosyncratic exceptions to this. For example, some verbs that belong to both the DUR2 and IMP2 classes have **i** epenthesized instead of **e**, as suggested in 4.3.4.A above. The root **pet-** 'remove feathers from bird' is one such verb. Its B form is **pete-**, and it occurs when it appears in the imperative form; but when combined with the future suffix -**si?**, its form is **petisi?**.

B.5 IMP forms

The imperative suffix occurs with the B form of the verb.

(108) meč'oth - ti? > meč'otha<u>t</u>i? (DUR4, IMP1)
refuse - IMP1 refuse:IMP

(109) t'um - ø > t'um<u>e</u>? (DUR2, IMP2)
buy - IMP2 buy:IMP

(110) mehšik' - ø > mehšik'<u>e</u>l' (DUR4, IMP2)
breathe - IMP2 breathe:IMP

(111) walhel - te? > walhel<u>a</u>te? (DUR4, IMP4)
respect - IMP4 respect:IMP

There are several exceptions to this. First, roots that are both DUR1, DUR2, or DUR11 and IMP1 class combine with the imperative suffix in their A form. Therefore, the imperative form of **ololˉ** 'dance', which belongs to the DUR1 and IMP1 class, is **olol-ti?**, even though its B form is **ololihˉ**. However, roots that end with a plain non-continuant consonant do not follow this pattern; the root **hicˉ** 'pound to make flour', even though it belongs to the same verb classes as **ololˉ**, has the imperative form **hici-ti?**.

Second, as with the stative suffix, DUR0 verbs have their A form combined with the imperative suffix. Thus, the form of **hintoˉ** 'sleep', whose B form is **hintolikˉ**, combined with the imperative suffix is **hinto-la?**.

B.6 NEG forms

The negative suffix occurs with the complex of the A form of the verb and its durative suffix or, for DUR0 class verbs, the stative **-khi?** suffix. Here are some examples:

(112) čoč - lahkhi? > čoč - i - lahkhi? (DUR2, IMP2)
weave - NEG weave - DUR - NEG

(113) mehšik' - lahkhi? > mehšik' - še - lahkhi? (DUR4, IMP2)
breathe - NEG breathe - DUR - NEG

(114) čuteh - lahkhi? > čuteh - se - lahkhi? (DUR6, IMP2)
forget - NEG forget - DUR - NEG

(115) hinto - lahkhi? > hinto - khi - lahkhi? (DUR0, IMP3)
sleep - NEG sleep - STAT - NEG

However, there is one systematic exception to this pattern. For verbs that belong to both the DUR1 or DUR2 class and to the IMP1 class, the negative suffix combines with the A form of the verb only, with u (or o if the stem vowel is o) epenthesized, as in the next example.

(116) olol - lahkhi? > olololahkhi? (DUR1, IMP1)
dance - NEG dance:NEG

Similarly, past tense negatives are formed by combining the negative suffix with the past form of the verb.

(117) pa? - ta - lahkhi?
eat - PST - NEG
'did not eat'

(118) naw - ta - lahkhi?
see - PST - NEG
'did not see'

B.7 NEG:FUT and NEG:IMP forms

These forms are always identical to the future form; in other words, they are based on the B form, with several exceptions, as outlined above. First, here are some examples of negative future forms.

(119) choy' - lahkhusi? > choy'ihlahkhusi? (DUR1, IMP1)
write NEG:FUT write:NEG:FUT

(120) mehšik' - lahkhusi? > mehšik'ellahkhusi? (DUR4, IMP2)
breathe - NEG:FUT breathe:NEG:FUT

Next, here are some examples of negative imperative forms. Note that, in this case, there is no separate suffix for negative imperatives. To form negative imperatives, the negative suffix simply combines with the future form of the verb. That the form the negative suffix combines with is not the imperative form can be seen from example (123); the imperative form (or B form) of **pet**- 'remove feathers from bird' is **pete**-, which appears in the imperative form (see also the discussion in B.4 above). However, it is also true that with most other verbs, the future form and the imperative form will be identical (both B forms).

(121) choy' - lahkhi? > choy'ihlahkhi? (DUR1, IMP1)
write - NEG write:NEG:IMP

(122) mešik' - lahkhi? > mešik'ellahkhi? (DUR4, IMP2)
breathe - NEG breathe:NEG:IMP

(123) pet - lahkhi > petilahkhi? (DUR2, IMP2)
remove:feathers - NEG remove:feathers:NEG:IMP

B.8 INF forms

Most of the verbs in our database are of the INF1 class, and they combine with the infinitive suffix in their A form.

(124) choy' - ukh > choy'ukh (DUR1, IMP1, INF1)
write - INF write:INF

(125) heyh - ukh > heyhukh (DUR2, IMP2, INF1)
saw:(wood) - INF saw:INF

The exceptions to this are the small number of INF2 class verbs; they combine with the infinitive suffix in their B form. The following are some examples.

(126) wiš - ø > wiši (DUR1, IMP1, INF2)
dry - INF2 dry:INF

(127) šič - ø > šičhel (DUR6, IMP2, INF2)
get:wet - INF2 get:wet:INF

Determining the infinitive form is the only situation where the INF class of a verb becomes relevant.

B.9 CAUS forms

The causative suffix occurs with the A form, though there are some idiosyncratic exceptions to this. The form of the causative is discussed in more detail in section 6.3.

B.10 PASS forms

The passive suffix occurs with the A form.

(128) choy' - khe? > choy'khe? (DUR1, IMP1)
write - PASS write:PASS

(129) heyh - khe? > heyhkhe? (DUR2, IMP2)
saw:(wood) - PASS saw:PASS

This pattern is quite regular; the only exceptions to this are roots with a final plain non-continuant consonant, which have u epenthesized.

(130) hic - khe? > hicukhe? (DUR1, IMP1)
pound:to:make:flour - PASS pound:to:make:flour:PASS

(131) pitek - khe? > pitekukhe? (DUR1, IMP2)
knock:over:(by bumping into)- PASS knock:over:PASS

B.11 PURP forms

The purposive suffix occurs with the A form.

(132) choy' - e:ma > choy'e:ma (DUR1, IMP1)
write - PURP write:PURP

(133) heyh - e:ma > heyhe:ma (DUR2, IMP2)
saw:(wood) - PURP saw:PURP

There are a small number of exceptions that are not clearly defined in terms of class; these verbs use the B form, and take the suffix form -ma instead of -e:ma. For example, the B form of hinto- 'sleep' is hintolik-, and its purposive form is hintolik-ma.

B.12 -mime? 'go out and X' and -miti? 'go do X' forms

These suffixes occur with the A form of the verb; when they combine with IMP2 class roots, the form of the suffix becomes -ime? and -iti?.

(134) choy' - mime? > choy'mime? (DUR1, IMP1)
write - go:out:to:X go:out:to:write

(135) heyh - mime? > heyhime? (DUR2, IMP2)
saw:(wood) - go:out:to:X go:out:to:saw

In addition, roots that end with a plain non-continuant consonant have u epenthesized.

(136) hic - mime? > hicumime? (DUR1, IMP1)
pound:to:make:flour - go:out:to go:out:to:pound:to:make:flour

C. Derivation of paradigms

In order to summarize these patterns and show how various exceptions figure in the paradigms we showed in section 4.2, here we reproduce those paradigms, this time showing the primary verb form used for each suffix and a description of what exceptions are found. First, the A and B forms of the roots **ololo-** 'dance', **hico-** 'pound to make flour', and **hinto-** 'sleep' can be determined as follows:

- **ololo-** 'dance' belongs to the DUR1, IMP1, and INF1 class. The A form is the unmarked form, thus **ololo-**. The B form is determined by the fact that verbs that belong to both DUR1 and IMP1 class typically have **i** or **ih** added to the root; thus the B form is **ololih-**.
- **hico-** 'pound to make flour' belongs to the DUR1, IMP1, and INF1 class. The A form is the unmarked form, **hico-**. The B form is determined by the fact that verbs that belong to both DUR1 and IMP1 class typically have **i** or **ih** added to the root; thus the B form is **hici-**.
- **hinto-** 'sleep' does not occur with a DUR suffix, and belongs to the IMP3 and INF1 class. The A form is the unmarked form, **hinto-**. The B form of IMP3 class verbs have **-lik-** added to the root; thus the B form is **hintolik-**.

Based on these forms of the verbs, paradigms can be constructed by combining a suffix and a form of the verb that typically occurs with that suffix (which are marked on the sides of the paradigms below). The exceptions, which are marked with numbers in the paradigms, are explained below.

Table 4-7. Verb Paradigm Construction

		olol- ‘dance’	hic- ‘pound to make flour’	hinto- ‘sleep’		
DUR	**A**	olol - mi?	hicu - mi? (1)	hinto - khi? (3)	**B**	STAT
PAST	**A**	olol - ta?	hici - ta? (2)			
FUT1	**B**	ololih - ya:mi?	hici - ya:mi?	hintolik - ya:mi?	**B**	FUT1
FUT2	**B**	ololih - si?	hici - si?	hintolik - si?	**B**	FUT2
NEG	**A**	ololo - lahkhi? (4)	hicu - lahkhi? (4)	hinto - khi - lahkhi?	**A**	NEG
NEG:FUT1	**B**	ololih - yawlahki?	hici - yawlahkhi?	hintolik - yawlahkhi?	**B**	NEG:FUT1
NEG:FUT2	**B**	ololih - lahkhusi?	hici - lahkhusi?	hintolik - lahkhusi?	**B**	NEG:FUT2
IMP	**B**	olol - ti? (5)	hici - ti? (6)	hinto - la? (7)	**B**	IMP
NEG:IMP	**B**	ololih - lahkhi?	hici - lahkhi?	hintolik - lahkhi?	**B**	NEG:IMP
INF	**A**	olol - ukh	hic – ukh	hinto – kh	**A**	INF
PASS	**A**	N/A	hicu – khe? (8)	N/A	**A**	PASS
PURP	**A**	olol - e:ma	hic – e:ma	hintolik - ma (9)	**A**	PURP
-mime? form	**A**	olol - mime?	hicu - mime? (10)	hinto - mime?	**A**	-mime? form
-miti? form	**A**	olol - miti?	hicu - miti? (10)	N/A	**A**	-miti? form

(1) **hicu - mi?**: If a DUR1 class verb stem ends with a plain non-continuant consonant, **u** is epenthesized between the A form of the verb and the durative suffix (see B.1 above).

(2) **hici - ta?**: Roots with a final plain non-continuant consonant have **i** epenthesized when combining with the past suffix (see B.2 above).

(3) **hinto - khi?**: While the stative suffix typically occurs with the B form of the verb, for DUR0 class verbs, it is the A form that combines with the stative suffix (see B.3 above).

(4) **ololo - lahkhi?**, **hicu - lahkhi?**: For roots that belong to both DUR1 or DUR2 and IMP1 class, the negative suffix does not combine with the complex of the A form and durative suffix, but with a variant of the A form, in which **u** or **o** is epenthesized depending on the root vowel (see B.6 above).

(5) **olol - ti?**: While the imperative suffix typically occurs with the B form of the verb, roots that are in both the DUR1, DUR2, or DUR11 and the IMP1 class combine with the imperative suffix in their A form (see B.5 above).

(6) **hici - ti?**: Roots that end with a plain non-continuant consonant are exceptions to the condition that verbs that are in both the DUR1, DUR2, or DUR11 and the IMP1 class combine with the imperative suffix in their A form; thus **hic-** combines with the imperative suffix in its B form (see B.5 above).

(7) **hinto - la?**: DUR0 class verbs have their A form combined with the imperative suffix (see B.5 above).

(8) **hicu – khe?**: Roots with a final non-continuant consonant have **u** epenthesized when combining with the passive suffix (see B.10 above).

(9) **hintolik - ma**: While the purposive suffix occurs with the A form, in this case, **hinto-** combines with the purposive suffix in its B form. This is an idiosyncratic exception.

(10) **hicu - mime?**, **hicu - miti?**: Roots that end with a plain non-continuant consonant have **u** added to the stem when combining with **-mime?** or **-miti?** (see B.12 above).

4.4 Directional Prefixes

There are two subsets of directional prefixes for Wappo verbs: those which are speaker-oriented and those which are not.

4.4.1 Speaker-oriented directional prefixes

The speaker-oriented directional prefixes fall into two classes, those relating to motion towards the speaker and those relating to motion away from the speaker. There are several pairs, their distribution apparently governed lexically:

A. ma- *and* te-

A.1 ma- 'away from speaker'

(137) ah taka? te - thu ma - hes - ta?
1SG:NOM basket 3SG - DAT DIR - give - PST
'I gave him/her the basket' (76)

(138) cephi mey - uh ma - hew'i - khi?
3SG:NOM water - in DIR - jump - STAT
's/he jumped into the water' (77)

(139) ah čhuya - nan ma - lih - ta?
1SG:NOM house - mouth DIR - push - PST
'I pushed the door open' (116)

(140) ah mi - thu čhuya ma - naw' - is - ta?
1SG:NOM 2SG - DAT house DIR - see - CAUS - PST
'I showed you the house' (348)

Intriguingly, in a narrative, ma- is used to indicate direction away from the main character rather than away from the speaker; we consider these to be also 'speaker-oriented', on the assumption that the speaker identifies with the main character:

(141) calaha:ya ma - le?u - še?
things DIR - go:after - DUR
'[he] goes after things' (Text B, 183)

A.2 te- ‘toward speaker’

(142) cephi te - hew'i - khi?
3SG:NOM DIR - jump - STAT
‘s/he jumped [down here]’ (76)

(143) cephi i - thu luče te - man - še?
3SG:NOM 1SG - DAT tobacco DIR - carry - DUR
‘s/he’s bringing me my cigarettes’ (95)

(144) pol'a? - i mot'a - pi te - čayha - khi?
boy - NOM hill - from DIR - roll - STAT
‘the boy rolled down the hill [toward me]’ (195)

Just as with ma-, in a narrative, we find te- used to indicate not direction toward speaker, but direction toward main character, as in:

(145) ce k'ew - i mich - nalewa te - mak'alah - khi?
DEM man - NOM road - beside DIR - invite - STAT
‘that man invited [him] over to the side of the road’ (Text B, 179)

B. mu- *and* tu- *(used with a restricted set of verbs)*

B.1 mu- ‘away from speaker (far)’

(146) ah te mu - lek'i - khi?
1SG:NOM 3SG DIR - go:visit - STAT
‘I went to see him’ (32)

(147) ikha? mi? ceta mu - le?a - khi?
how 2SG:NOM there DIR - arrive - STAT
‘how did you get over there?’ (116)

(148) mi mi - noma mu - le?a - cel' uči ola mi?
2SG 2SG - home DIR - arrive - when night four 2SG:NOM

hintolik - si?
sleep - FUT
'when you get to your home, you'll sleep for four nights' (Text B, 181)

B.2 tu- 'toward the speaker (from far away)'

(149) ah te tu - lek'i - khi?
1SG:NOM 3SG DIR - go:visit - STAT
'I came to see him' (32)

(150) ikha? mi? heta tu - le?a - khi?
how 2SG here DIR - arrive - STAT
'how did you get over here?' (116)

(151) ce layh tu - le?a - cel' okal'te - lahkhi?
DEM white:person DIR - arrive - when talk:IMP - NEG
'when that white man comes, don't talk' (69)

C. mo?o- *'away from speaker' and* to?o- *'towards speaker'*

(152) cephi mot'a - pi mo?o - we - se?
3SG:NOM mountain - from DIR - travel - DUR
's/he's going down the mountain' (76)

(153) cephi mot'a - pi to?o - we - se?
3SG:NOM mountain - from DIR - travel - DUR
's/he's coming down the mountain' (76)

D. mo- *'away from speaker' and* to- *'towards speaker'*

(154) mo - čitel'
DIR - turn:IMP
'turn away from me' (104)

(155) to - čitel'
DIR - turn:IMP
'turn towards me' (104)

E. meh- *'away from speaker' and* teh- *'towards speaker'*

(156) hansoya ah meh - paw - ta?
sorry 1SG:NOM DIR - drop - PST
'I'm sorry I dropped it' (21)

(157) teh - lihe?
DIR - push:IMP
'push it down here' (505)

4.4.2 Non-speaker-oriented directional prefixes

The following is a nearly exhaustive list of the non-speaker-oriented directional prefixes which we have found; as can be seen, not all of them are strictly "directional". It is not possible to determine just how productive these prefixes are.

A. ho- *'around'*

(158) cephi ce - kha? ho - čoha - la?
3SG:NOM DEM - way DIR - go - DUR
's/he goes around like that' (42)

(159) c'ic' - i hol - wiluh ho - mi - se?
bird - NOM tree - top DIR - swarm - DUR
'there are birds swarming around the tree' (3)

B. meh- *'up'*

(160) ah he taka? meh - phiṭi - ya?
1SG:NOM DEM basket DIR - take - DUR
'I'm picking up this basket' (202)

(161) ah te k'ešu meh - wi? - ukh hak' - še?
1SG:NOM 3SG deer DIR - hang - INF want - DUR
'I want him/her to hang up the deer' (509)

C. č'a- *'off, away'*

(162) nat'a? - i č'a - suphi - khi?
quilt - NOM DIR - slide - STAT
'the quilt slid off' (196)

(163) chic - i hol - piyah - pi č'a - wal - še?
bear - NOM tree - near - from DIR - go - DUR
'the bear is going away from near the tree' (75)

(164) ah winu č'a - č'ay' - ta?
1SG:NOM wine DIR - pour - PST
'I poured out the wine' (277)

D. č'ah- *'out'*

(165) c'ic' - i č'ep'iš č'ah - k'al - ta?
bird - NOM worm DIR - pull - PST
'the bird pulled a worm out [of the ground]' (203)

(166) mansa:na? č'ah - ma - numek - ta?
apple DIR - DIR - pick - PST
'(I) picked an apple out (e.g., of a dish)' (202)

Here is a minimal pair illustrating the difference between č'a- 'off, away' and č'ah- 'out':

(167) a. hol č'a - k'al - ta?
tree DIR - pull - PST
'(I) hauled a tree away'

b. hol č'ah - k'al - ta?
tree DIR - pull - PST
'(I) pulled a tree out'

E. pah- *'put together'*

(168) cephi pah - wič - mi?
3SG:NOM DIR - sweep - DUR
's/he's sweeping it all up' (365)

(169) cephi pah - moṭ' - mi?
3SG:NOM DIR - tie - DUR
's/he is cording up [the wood]' (224)

F. pi- *'accidentally'*

(170) ah i me? pi - k'eč' - ta?
1SG:NOM 1SG hand DIR - cut - PST
'I accidentally cut my hand' (73)

(171) winu? - i pi - č'ayte' - khi?
wine - NOM DIR - pour - STAT
'the wine accidentally spilled' (359)

4.5 Mood

There are two mood particles in Wappo that we have found, k'ah 'desiderative' and keye 'optative'. In addition, ne?-khi? 'have' is used to express deontic modality.

4.5.1 **k'ah** 'desiderative'

The desideratative morpheme, glossed DES, is **k'ah**; it indicates the speaker's hypothetical wish or hope that the proposition might be true. It occurs after the subject, and takes a special form of the verb, which we are calling the "hypothetical", glossed HYP. Here are some examples:

(172) om - i k'ah makhah - lahkhih
everywhere - NOM DES rain - NEG:HYP
'I hope it won't rain' (52)

(173) cephi k'ah ew t'um' - eh
3SG:NOM DES fish buy - HYP
'I wish he would buy fish' (60)

(174) cephi k'ah o - pa? - eh
3SG:NOM DES UOP - eat - HYP
'I wish s/he would eat' (377)

(175) he phil' - i k'ah k'opa - tih
DEM snow - NOM DES melt - HYP
'I wish the snow would melt' (377)

(176) he hol - pel k'ah še? - ti mul' č'a - čhuhta - sih
DEM tree - leaf DES wind - NOM all DIR - blow - HYP
'I wish the wind would blow all these leaves away' (103)

As expected, **k'ah** cannot be used to indicate anyone's wish but that of the speaker, as illustrated by the following example, where the periphrastic form with **hak'še?** 'like, want' must be used when it is someone besides the speaker who wishes something:

(177) George - i oma makhah hak' - še - lahkhih
George - NOM everywhere rain:DEP like - DUR - NEG:HYP
'George is hoping it won't rain' (52)

4.5.2 **keye** 'optative'

keye, glossed OPT, is a pre-verbal particle which may be translated as 'can', 'could', or 'should', depending on the context. It seems to be generally used with the hypothetical form of the verb.

Here are some illustrations of its use:

(178) mi? keye taka? čoč - ukh i heltih hi?
2SG:NOM OPT basket weave - INF 1SG help:HYP Q
'could you help me make baskets?' (53)

(179) ah keye ma?a he? čo:
1SG:NOM OPT just now go:HYP
'I have to go now' (40)

(180) ah keye k'ešu t'um' - i - tih
1SG:NOM OPT deer buy - go:do - HYP
'I should go buy meat' (40)

(181) ah keye otay' - tih ce - k'a olol - tih
1SG:NOM OPT sing - HYP DEM - COM dance - HYP
'I can sing and dance' (199)

(182) ah eniya ohak'še? -- ah keye ma?a chica
1SG:NOM very hungry 1SG:NOM OPT just bear

menac'ey - eh
devour - HYP
'I'm very hungry - I could eat a bear' (121)

keye can also be used in the apodosis of conditionals (see section 6.5.3):

(183) mi te o - me? - is cel' keye
2SG 3SG UOP - feed - CAUS COND OPT

čho?e - lahkhih
die:IMP - NEG:HYP
'if you had fed it, it wouldn't have died' (88)

(184) te ce ew t'ume cel' keye ah ce
3SG DEM fish buy:DEP COND OPT 1SG:NOM DEM

pa?eh
eat:HYP
'if he had bought that fish, I would have eaten it' (60)

4.5.3 ne?-khi? 'deontic'

In one of the very few constructions which we suspected to be English-influenced, we have found ne?-khi? 'have' being used for 'must, have to'. We may never know whether or not this actually is a bit of English influence, but in spite of extensive efforts, we have not discovered any alternative ways of expressing deontic modality. Here are three examples, the last one of which is from a story and thus not elicited with an English 'have to' construction:

(185) ah čoh - ukh ne? - khi? ma?a he?
1SG:NOM go - INF have - STAT just now
'I have to go right now' (48)

(186) cephi šawo ca pa? - ukh ne? - khi?
3SG:NOM bread plain eat - INF have - STAT
'he has to eat plain bread' (48)

(187) mi? i haṭal - ukh ne? - khi?
2SG:NOM 1SG recognize - INF have - STAT
'you have to recognize me' (Text B, 186)

4.6 Imperative

The form of the imperative has been discussed in section 4.3.4 above; here are some examples of its use, first in affirmative clauses, then in negatives:

(188) č'a - manu:maʔ
DIR - take:IMP
'take it off' (j112)

(189) i - thu te - heseʔ mi thal manas - ukh
1SG - DAT DIR - give:IMP 2SG what have:in:hand - DEP
'give me what you have in your hand' (10)

(190) mi papaʔ hel - tiʔ
2SG grandma help - IMP
'help your grandma' (53)

(191) ce k'ew - ma mehwileʔ mi thal naw - ta
DEM man - BENEF tell:IMP 2SG what see - PST:DEP
'tell the man what you saw' (170)

(192) cay'i - lahkhiʔ
say:IMP - NEG
'don't say [that]' (123)

(193) čutehel - lahkhiʔ
forget:IMP - NEG
'don't forget' (118)

(194) šik'aṭ'is - khiʔ --- t'ume - lahkhiʔ
green - STAT buy:IMP - NEG
'[it's] green --- don't buy it' (206)

4.7 Negation

As shown in section 4.2, each tense/aspect/mood form in Wappo has its own negative form. In this section we simply present some examples of independent negative clauses:

(195) ah chach - še - lahkhi?
1SG:NOM cold - DUR - NEG
'I'm not getting cold' (36)

(196) ce k'ew - i tuč' - kh - lahkhi?
DEM man - NOM big - STAT - NEG
'that man isn't big' (19)

(197) ah may naw - ta - lahkhi?
1SG:NOM who see - PST - NEG
'I didn't see anybody' (22)

4.8 Passive

What we are calling "passive" is in Wappo simply an intransitive verb form -khe?, glossed PASS, as shown in section 4.2. It is used for actions affecting a patient, where the patient takes the nominative case, and the agent must be unspecified. Since there can be no agent, it indicates a state resulting from the action.

(198) cephi ošay' - khe?
3SG:NOM pay - PASS
's/he got paid' (504)

(199) ši?ay - i mot' - khe?
stalk - NOM pile:up - PASS
'the stalks have been piled up' (376)

(200) mayiš - i maču? - khe?
corn - NOM ash:roast - PASS
'the corn has been ash-roasted' (374)

4.9 Adverbs

Wappo naturally has a number of adverbs; as expected, their position is invariably pre-verbal, though not always directly before the verb. Quite predictably, some, like

uh ‘already’, cah ‘just’, and maʔa ‘just’,[3] are roots apparently used only as adverbs; others, like mena ‘fast’, are roots which can also take the stative predicator -khiʔ and be used as predicates. The following is a small set of examples of some Wappo adverbs which occur frequently in our examples:

(201) heʔeʔ cah i opaʔukh me - siʔ
COP just 1SG food make - DUR
‘this is the only food I make’ (339)

(202) hol - i eniya čʼuhe - khiʔ
tree - NOM very dewy - STAT
‘the tree is very dewy’ (37)

(203) cephi hukahiyeʔ ololih - siʔ
3SG:NOM maybe dance - FUT
‘s/he might dance’ (40)

(204) ah maʔa kutiyaʔ o - paʔ - taʔ
1SG:NOM just a:little UOP - eat - PST
‘I only ate a little bit’ (194)

(205) matʼita miʔ emel - khiʔ
long:time 2SG:NOM lost - STAT
‘you’ve been lost a long time’ (246)

(206) cephi mena kuːwiː - yaʔ
3SG:NOM fast run - DUR
‘s/he runs fast’ (73)

(207) cephi heta mulʼta tu - le - seʔ
3SG:NOM here all:the:time DIR - travel - DUR
‘s/he comes here all the time’ (260)

3. We have not been able to discern a clear difference between cah ‘just’ and maʔa ‘just’.

(208) ah ona? kaphe? uk'i - ya:mi?
1SG:NOM also coffee drink - FUT
'I'll drink coffee too' [said after interlocutor had said she'd have coffee] (206)

4.10 Classificatory Verbs: Semantically Specific Verbs of Position and Motion

Like many other languages, particularly native American languages (Mithun 1999:3.4.2), Wappo has a number of verb roots, both transitive and intransitive, which are lexically specialized for the shape, size, or other features of their patient or single argument. While there is no grammatical regularity here to comment on, and while we haven't done a thorough semantic analysis of this set of verbs, the phenomenon is worth mentioning and providing some examples of. For example, in the intransitive frame:

(209) mi - me? _____ _____
2SG - GEN X exist:specific
'your X is there'

we can have the following combinations:

cigarettes, pencils, bananas, sticks:	neh - khi?
rocks, watermelons, sacks of objects:	wil - khi?
paper, chairs, people, chunks, animals:	yo? - khi?
empty containers, beds:	khoy' - khi?
full containers, cars:	čoi: - khi?
logs, trees, animals lying down:	muku - khi?
people, deer, posts standing up:	lepu - khi?
hay, acorns, anything piled up	mot' - khi?
person curled up in a fetal position	phemoc - khi?
person squatting down	c'om' - khi?

(210) ceta k'eš - i lepu - khi?
there deer-NOM stand-STAT
'the deer is standing there' (14)

(211) **ši?ay - i ceta mot' - khi?**
hay - NOM there piled:up - STAT
'the hay is piled up there' (336)

(212) **mi - me? kaphe? - i ceta čoy' - khi?**
2SG-GEN coffee - NOM there sit - STAT
'your coffee is there' (337)

(213) **ita mi - me? makina? - i čoy' - khi?**
where 2SG-GEN car - NOM sit - STAT
'where is your car (sitting)?' (160)

As another example, consider the transitive frame:

(214) **ah _____ _____**
1SG:NOM X shake
'I'm shaking the X'

in which we can have such combinations as these (in addition to those found in Sawyer (1965:90)):

knocking acorns off a tree	**chek' - mi?**
shaking apples off a tree	**pihil' - se?**
shaking a person	**mehiw' - se?**
shaking a towel out	**mehil - se?**
knocking things over	**piteku - mi?**
shaking a tree	**pihiw' - se?**

As might be imagined, verbs of picking, catching, holding, and carrying are similarly differentiated. In addition to those cited in Sawyer (1965:19), here are the instances we have found:

picking grapes	**kola**	**puṭ' - i?**
picking oranges, plucking feathers	**naraha?**	**luh - e?**
pulling roots (for basket-making)	**cache**	**k'al' - i?**
(a bird) holding a worm in its mouth	**č'ep'iš**	**nahwelis - khi?**

(a dog) carrying a bone in its mouth	**c'iti**	**nahwelis - khi?**
carrying a baby on one's back	**ek'a**	**het'is - khi?**
holding food/baby in one's arms	**opa?ukh/ek'a**	**pihšay'is - khi?**
(I'm) carrying a full basket (or other large container)	**taka**	**hophital - a?**

4.11 Evidentiality

There is one evidential morpheme in Wappo that we have been able to discover: **khon'**, which means roughly 'they say'. Sawyer (1965:87) lists **khon'** as meaning 'heard, reported, rumored'.

We gloss it as EVID. It typically occurs in second position. Here is Sawyer's example:

(215) **cephi khon' ce mehwil - ši?**
3SG:NOM EVID DEM tell - DUR
'they say s/he is telling it' (j87)

Under the entry for **khon'**, where (215) occurs, Sawyer (1965:87) says:

> Wherever **khon'** occurs, the item it modifies is marked as uncertain. In this case the he/she who is telling the story is marked as being a person of uncertain identification.

In our data, we have found that **khon'** is used somewhat more generally than to mark a particular item as being "of uncertain identification". For instance, the most likely context for the following example would be one in which the uncertainty surrounds the fact of Old Coyote's dancing rather than the identity of Old Coyote himself:

(216) **huṭ'has - i khon' olol - mi?**
Old:Coyote - NOM EVID dance - DUR
'they say Old Coyote is dancing' (j24, 62)

Here are some further elicited examples, all volunteered by Laura:

(217) **ce khon' thal**
DEM EVID what
'what does that mean?' (lit., 'what do they say that is?') (220)

(218) šaw - i khon' la - khi?
bread - NOM EVID missing - STAT
'they say there's no bread' (249)

(219) i ay - i khon' omehwiliš mehwil - ši?
1SG father - NOM EVID story tell - DUR
'they say that my father tells stories' (355)

(220) aṭhi khon'
later EVID
'(they say) it'll be after a while' (j85)

(221) iha? khon' ceko:ti tu - le?a - si?
when EVID they DIR - come - FUT
'when have you heard they are coming?' (j119)

While these examples give an idea of how **khon'** is used, a better view of its function can be presented by examining its use in the stories we collected, where it is found rather frequently.

For example, in one story, Laura was recounting a strange experience an uncle of hers had; at one point he invites a number of people, and his female relatives cook for them:

(222) i na? - i khon' opa? - ukh totia me - si?
1SG mother - NOM EVID eat - INF tortilla make - DUR
'(they say) my mother makes (i.e., 'made') food, tortillas' (Text B, 183)

Later in the story, the uncle's daughter wants some crackers, which leads to a major story event:

(223) " ah kayeta hak' - še? ", hah - ši? khon'
1SG:NOM cracker want - DUR say - DUR EVID

chal'as - i
girl - NOM
' "I want crackers", says the girl (they say)' (Text B, 184)

Further in the story:

(224) cel' khon' hinta ola šu?u te - me? ečt' - i
then EVID day four after 3SG - GEN br:in:law - NOM

te mu - lek'i - khi?
3SG DIR - go - STAT
'then (they say) after four days, his brother-in-law went to see him' (Text B, 186)

The story continues with five more occurrences of **cel' khon'** 'then they say ...'.

Interestingly, **khon'** occurs in another narrative which is not something which Laura literally had heard from older members of her group: Text E is her rendition of a story which we had told to her in English about a boy who meets a girl from a different group of people. When the girl slaps him, he concludes that she doesn't like him, without knowing that in her culture, a slap is a friendly gesture. There are two occurrences of **khon'** in this very short story, as if it were part of the "hearsay" that had been passed down to Laura. Text E begins with the following sentence:

(225) nom - khi? khon' pol'a? - i me - me? on - k'a
live - STAT EVID boy - NOM 3CO - GEN people - COM
'there lived (they say) a boy with his people' (Text E, 295)

Near the end of the same story, we find this example:

(226) " ce?e? isa taw' ", hah - ta? khon' met'e hina? - i
COP 1PL way say - PST EVID woman other - NOM
' "that's our custom", said the other woman (so they say)' (Text E, 299)

Note that in (223), (225), and (226), the position of **khon'**, while still second, is not directly after the subject but rather after the verb.

As expected, we do not find **khon'** in the non-narrative texts we collected.

4.12 The Reflexive and Reciprocal

4.12.1 The reflexive

The reflexive morpheme in Wappo is **may'**. It functions as a noun, is found in non-subject positions, and can either stand alone or as a possessive modifier of a noun. As a free noun, it can take any of the nominal case suffixes.

Here are some examples of its use as a noun standing alone:

(227) ce k'ew - i may' huk'aš - e?
DEM man - NOM REFL adore - DUR
'the man adores himself' (o)

(228) ah may' huk'aš - e?
1SG:NOM REFL adore - DUR
'I adore myself' (27)

(229) ah i ek'a may' peh - ukh mes - ta?
1SG:NOM 1SG son REFL look - INF make - PST
'I made my son look at himself' (31)

(230) cephi may' - piya? holo:wik'a naw - ta?
3SG:NOM REFL - near snake see - PST
's/he saw a snake near him/herself' (53)

(231) Esther - i Billy - thu may' - ca okal - ta?
Esther - NOM Billy - DAT REFL - about talk - PST
'Esther talked to Billy about herself' (53)

(Example (231) cannot mean 'Esther talked to Billy about himself'.)

(232) cephi may' - ma okal' - i?
3SG:NOM REFL - BENEF talk - DUR
's/he speaks for him/herself' (53)

(233) mi? may' oh - kal - ta? ha?
2SG:NOM REFL CAUS - hurt - PST Q
'did you hurt yourself?' (57)

(234) cephi ma?a may' - thu okal' - i?
3SG:NOM just REFL - DAT talk - DUR
's/he just talks to him/herself' (57)

(235) calaha:ya huk'ašiya - te ce te - thu naw - asa? cel'
things pretty - PL DEM 3SG - DAT see - CAUS then

may' - thu mu - wel - asa?
REFL - DAT DIR - go - CAUS
'the pretty things he would show them to him, and then take them back to himself' (Text B:180)

The next examples illustrate the use of may' as a possessive (where it alternates with the ordinary unmarked pronoun):

(236) ah {may' / i} t'ol oh - co: - ta?

1SG:NOM {REFL / 1SG} hair CAUS - black - PST

'I dyed my hair black' (26)

(237) ah {may' / i} me? oh - k'eč' - ta?

1SG:NOM {REFL / 1SG} hand CAUS - cut - PST

'I cut my hand (on purpose)' (12)

(238) cephi { may' / te } hu? mepi - ta?

3SG:NOM { REFL / 3SG } face wash - PST

's/he$_i$ washed his/her$_i$ face' (360)

The following examples show that may' cannot be used as a possessive in subject position:

(239) { (*may') / i } hu? - i chipe - khi?

{ REFL / 1SG } face - NOM red - STAT

'my face was red' (26)

(240) (*may') huc - i kali - ša?
REFL eye - NOM hurt - DUR
'my eye(s) hurt(s)' (12)

As in English, may' is also used as an intensive reflexive; in this use it occurs with the instrumental suffix (see also section 3.3.5).

(241) ah may' - thi ce šawo mes - ta?
1SG:NOM REFL - INST DEM bread make - PST
'I made this bread myself' (58)

Here is a contrast which illustrates the distinction between the reflexive and the intensive reflexive:

(242) ah may' - thi kah - ši?
1SG:NOM REFL - INST hear - DUR
'I hear it myself' (57)

(243) ah may' kah - si?
1SG:NOM REFL hear - DUR
'I hear myself' (57)

4.12.2 The reciprocal

The reciprocal morpheme in Wappo is **hopha**. Like the reflexive, it is used in non-subject positions and can occur with case suffixes.

(244) chica - k'a k'eš - i hopha naw - ta?
bear - COM deer - NOM RECIP see - PST
'the deer and the bear saw each other' (15)

(245) isi hopha hak' - še?
1PL:NOM RECIP like - DUR
'we like each other' (15)

(246) isi ceko:to hopha - thu okal - is - ta?
1PL:NOM 3PL RECIP - DAT talk - CAUS - PST
'we made them talk to each other' (96)

(247) ceko:ti hopha - k'a yo? - khi?
3PL:NOM RECIP - COM sit/live - STAT
'they're sitting/living with each other' (105)

(248) isi hopha - thupi ono?ši? - okel haṭel - khi?
1PL:NOM RECIP - from Indian - talk learn - STAT
'we learn Wappo [Indian language] from each other' (206)

5. SIMPLE CLAUSE TYPES

5.1 Declarative Clauses

As there are many examples of declarative clause types throughout this grammar, we will not further exemplify them here.

5.2 Questions

5.2.1 Yes-no questions

Yes-no questions are signalled in Wappo by a question particle, glossed Q, which typically occurs after the verb, thus typically clause-finally. Its form is **hV?**, where the vowel harmonizes with the preceding vowel. Because of the vowel harmony, it might seem appropriate to regard the question particle as a verbal suffix, but, as will be seen just below, it can follow words from several different classes, including verbs, nouns, and adverbs, and it harmonizes with each of them. Therefore, we choose to represent it as a separate word. Here is a minimal pair to illustrate the vowel harmony:

(1) a. k'ew - i mi naw - ta? ha?
man - NOM 2SG see - PST Q
'did the man see you?' (16)

b. k'ew - i mi naw - ši? hi?
man - NOM 2SG see - DUR Q
'does the man see you?' (16)

Here are some further examples:

(2) uh mi? c'ey - ta? ha?
already 2SG:NOM finish - PST Q
'have you finished already?' (j3)

(3) mi? i hak' - še? he?
2SG:NOM 1SG like - DUR Q
'do you like me?' (11)

(4) may mi? naw - ta - lahkhi? hi?
who 2SG see - PST - NEG Q
'didn't you see anybody?' (23)

(5) te ce? mi ek'a ha?
3SG COP 2SG son Q
'is he your son?' (26)

(6) mi? te - thu ma - hes - ukh hak' - še? he?
2SG:NOM 3SG - DAT DIR - give - INF want - DUR Q
'do you want to give it to her?' (204)

There are several conditions under which the question particle does not occur sentence-finally. First, it is possible for a pronominal subject or an adverb to follow the verb; in such cases the question particle is not clause-final:

(7) luče ne? - khi? hi? mi?
tobacco have - STAT Q 2SG:NOM
'do you have any cigarettes?' (14)

(8) k'eš - i la - khi? hi? heta
deer - NOM missing - STAT Q here
'aren't there any deer here?' (14)

With an adverb as the focussed element, it is also possible for the question particle to occur directly after the adverb:

(9) cephi athikeywi? hi? tu - le?a - si?
3SG:NOM tomorrow Q DIR - come - FUT
'is she coming tomorrow?' (73)

(10) ma?a ha? mi? yo? - khi?
still Q 2SG:NOM exist - STAT
'are you still here?' (j99)

Finally, in a complement sentence, especially with verbs of knowing and saying, if the questioned predicate is not sentence-final, then neither will the question particle be:

(11) haṭis - khi? hi? mi? i thal i - čal' - iš
know - STAT Q 2SG 1SG what INDEF - say - DUR:DEP
'do you know what I'm saying?' (169)

5.2.2 Question-word questions

A. The position and use of question words

For a predicate-final language, Wappo is unusual in having question words typically occurring in clause-initial position, though other positions are possible under pragmatic conditions which we have not uncovered. Thus, along with (12) a., we can also have (12) b. and (12) c.:

(12) a. iṭa mi? i yok' - okh hak' - še?
where 2SG:NOM 1SG sit - INF want - DUR
'where do you want me to sit?' (lts87)

b. mi? iṭa i yok' - okh hak' - še?
2SG:NOM where 1SG sit - INF want - DUR
'where do you want me to sit?' (lts87)

c. mi? i iṭa yok' - okh hak' - še?
2SG:NOM 1SG where sit - INF want - DUR
'where do you want me to sit?' (lts87)

This preference for clause-initial question words could be due to influence from English.

Here are some further examples of question word questions in Wappo:

(13) may mi? naw - ta?
who 2SG:NOM see - PST
'who did you see?' (23)

(14) thal mi? mi me? - u ne? - khi?
what 2SG:NOM 2SG hand - LOC have - STAT
'what do you have in your hand?' (10)

(15) iṭa mi - me? makina? - i čoi: - khi?
where 2SG - GEN car - NOM exist - STAT
'where is your car (sitting)?' (160)

(16) iha? mi čo? - me?
when 2SG:NOM go - DUR
'when are you going?' (500)

(17) ikha? mi? mes - i?
how 2SG:NOM make - DUR
'how do you make it?' (204)

(18) ikha? mena mi? c'es - e?
how fast 2SG:NOM swim - DUR
'how fast do you swim?' (291)

(19) thal - ma mi? ce ew t'um - ta?
what - BENEF 2SG:NOM DEM fish buy - PST
'why (lit., what for) did you buy that fish?' (18)

(20) ih kayi:na mi? hak' - še?
which chicken 2SG:NOM want - DUR
'which chicken do you want?' (56)

(21) ikhali mi? ok'o:to ne? - khi?
how:many 2SG:NOM child:PL have - STAT
'how many children do you have?' (219)

(22) ikhali mi? ohca? - še?
how:much 2SG:NOM weigh - DUR
'how much do you weigh?' (219)

Question words are inflected for case as are other nouns and pronouns:

(23) may - i oyok' - e?
who - NOM win - DUR
'who's winning?' (70)

(24) thal - i čhuya - cawo te - cewte - khi?
what - NOM house - on:top DIR - fall - STAT
'what fell on the roof?' (17)

(25) may - thu mi? okal'te - si?
who - DAT 2SG:NOM talk - FUT
'who are you going to talk to?' (291)

Question words show the same distinction for alienable and inalienable possession as do other nouns and pronouns (see section 3.3.7). Thus, as expected, for inalienable possession, the question word is unsuffixed:

(26) may hu? - i chip - iš - khi?
who face - NOM red - INCH - STAT
'whose face got red?' (26)

while for alienable possession the question word takes the genitive suffix:

(27) ce?e? may - me? c'ic'a
COP who - GEN bird
'whose bird is that?' (56)

B. The "indefinite" prefix i-

There is some evidence that the "indefinite" prefix i- is an old indefinite prefix, now only partially productive. First, note that many of the question words, though no longer morphologically analyzable, begin with i-. Second, ikha? 'how', with an initial i-, contrasts with ce kha? 'that way', as seen in:

(28) thal - ma mi? ce kha? okal' - i?
what - BENEF 2SG:NOM DEM way talk - DUR
'why do you talk that way?' (18)

Third, for at least two verbs, there is a contrast between a form prefixed with i- and one without i-, kham- 'do' and hah- 'say', whose prefixed form is inexplicably ičhah-. Thus compare the prefixed and unprefixed forms in the a. and b. examples below.

(29) a. thal mi? i - kham - i?
what 2SG:NOM INDEF - do - DUR
'what are you doing?' (222)

b. ah ce kham - i?
1SG:NOM DEM do - DUR
'I'm doing it' (222)

(30) a. thal mi? i - čhah - ši?
what 2SG:NOM INDEF - say - DUR
'what are you saying?' (257)

b. cephi ce hah - ši?
3SG:NOM DEM say - DUR
's/he's saying that' (257)

Evidence that this is an "indefinite" prefix and not an interrogative prefix comes from the following examples, where the i- appears in an indefinite non-interrogative environment:

(31) cephi thal i - kham - i?
3SG:NOM what INDEF - do - DUR
's/he's doing something' (222)

(32) cephi i - čhah - iš - lahkhi?
3SG:NOM INDEF - say - DUR - NEG
's/he's not saying anything' (257)

Finally, there are two verb forms in i- which appear in questions; though neither directly contrasts with a non-prefixed form, the fact that the root in both instances is kha- also suggests an older indefinite prefix. The first of these verb forms is another word for 'why' (cf. thal-ma 'why' in (19) and (28)), which has the form of a verb root ikha- plus a durative suffix:

(33) ikha - mi? mi? šawo nacey - ta?
do - DUR 2SG:NOM bread finish - PST
'why did you finish up the bread?' (lit., 'what (are you) doing, you finished up the bread?' (97)

The other verb form in i- also seems to be related to ikha? 'how'; it is ikhali- (see (21) and (22) above), which can be inflected and used as a stative predicate:

(34) cephi i - khali - khi?
3SG:NOM INDEF - how - STAT
'how is s/he?' (28)

C. Question words as indefinite pronouns

As we saw above with (31), and as in many languages, question words in Wappo are also used as indefinite pronouns in non-interrogative contexts. Here are some examples:

(35) cephi thal t'um'i - khi?
3SG:NOM what go:buy - STAT
's/he went to buy something' (373)

(36) thal - i te - cew - še?
what - NOM DIR - fall - DUR
'something is falling' (370)

(37) ah may Leo - thu thal te - hesi naw - ta?
1SG:NOM who Leo - DAT what DIR - give:DEP see - PST
'I saw someone give something to Leo' (348)

(38) may - i i naw - ta - lahkhi?
who - NOM 1SG see - PST - NEG
'nobody saw me' (23)

(39) thal - i i kat'a - tis - ta - lahkhi?
what - NOM 1SG laugh - CAUS - PST - NEG
'nothing makes me laugh' (23)

5.3 Comparatives

The Wappo comparative makes use of the morpheme **mahwewela?**, which we gloss COMP; this morpheme follows the Standard, so that the comparative clause may be schematized as follows:

(40) a. X Standard mahwewela? Quality

or

b. X Quality Standard mahwewela?

That is, the unit **Standard + COMP** can either precede or follow the predicate expressing the quality being compared. Here is a minimal pair showing the two possible orders:

(41) a. ce k'ew - i ce met'e mahwewela? tuč'a - khi?
DEM man - NOM DEM woman COMP big - STAT
'the man is bigger than the woman' (6)

b. ce k'ew - i tuč'a - khi? ce met'e mahwewela?
DEM man - NOM big - STAT DEM woman COMP
'the man is bigger than the woman' (6)

Here are some further examples:

(42) ew ah nočay' - še? k'ešu mahwewela?
fish 1SG:NOM enjoy - DUR meat COMP
'I like fish better than meat' (12)

(43) he k'eš - i chica mahwewela? čokali - khi?
DEM deer - NOM bear COMP go:fast - STAT
'this deer can run faster than the bear' (12)

(44) cephi i mahwewela? pesu le?a ne? - khi?
3SG:NOM 1SG COMP money much have - STAT
's/he has more money than I do' (28)

(45) cephi me okal' - i? mahwewela? haṭis
3SG:NOM 3CO speak - DUR COMP know:how

coy' - mi?
write - DUR
's/he writes better than s/he speaks' (28)

(46) cephi mi mahwewela? mul'ta heta
3SG:NOM 2SG COMP all:the:time here

tu - le - se?
DIR - come - DUR
's/he comes here more often than you do' (159)

(47) hehinta ah hu:ši?i:ya pihkah - se? sumi?
today 1SG:NOM good feel - DUR yesterday

mahwewela?
COMP
'I feel better today than I did yesterday' (159)

(48) Leo - i Karen mahwewela? hukali? otay' - mi?
Leo - NOM Karen COMP loud sing - DUR
'Leo can sing louder than Karen can' (282)

(49) ah George mahwewela? o - pa? - ta?
1SG:NOM George COMP UOP - eat - PST
'I ate more than George did' (283)

The same ambiguity of grammatical relations as is found in English can also be found in Wappo, as this example illustrates:

(50) ah k'ew haṭis - khi? met'e mahwewela?
1SG:NOM man know - STAT woman COMP
'I know the man better than I do the woman' or 'I know the man better than the woman does' (29)

There is no special morphology for expressing comparisons of equality; here are two examples which express this type of comparison, using the verb **pasakes**- and the comitative case marker on the referent compared:

(51) ce k'ew - k'a ah pasakes - khi?
DEM man - COM 1SG:NOM same - STAT
'the man and I are the same (size)' (15)

(52) cephi i - k'a k'ena pasakes - khi?
3SG:NOM 1SG - COM tall same - STAT
's/he and I are the same height' (15)

The superlative construction makes use of the morpheme **humisme?**, glossed SUP, as in:

(53) ah taka? humisme? tuč'a ne? - khi?
1SG:NOM basket SUP big have - STAT
'I have the biggest basket' (208)

(54) ce taka? humisme? tuč' - i nuh - khe?
DEM basket SUP big - NOM steal - PASS
'the largest basket was stolen' (208)

(55) i ce?e? humisme? k'a načew'is heta
1SG COP SUP person old here
'I'm the oldest person here' (209)

(56) he?e? i - me? humisme? ek'a tuč'a
COP 1SG - GEN SUP son big
'this is my biggest child' (339)

(57) winu chipe ce?e? humisme? hu:ši?i:ya
wine red COP SUP good
'red wine is the best' (340)

5.4 Predicate Nominal Clauses

Predicate nominal clauses are formed with a special copula morpheme. Its full form is **ce?e?** or **he?e?**, glossed COP, but it is generally shortened to **ce?** or **he?**. There are four pieces of evidence indicating that the copula is not a verb. First, its position is never clause-final, but always before the predicate nominal. Second, it takes no verbal inflections. Third, the subject of the predicate nominal construction never occurs with the nominative case, which is required for any clause with a true predicate. Fourth, in form the copula is related to the demonstrative: the unmarked form, used either with no deictic meaning or with a distal meaning, is **ce?e?**, paralleling the demonstrative **ce** 'that, the', while the marked form, used only with a proximate meaning, is **he?e?**, paralleling the demonstrative **he**, 'this':

(58) a. ce?e? te čhuya
COP 3SG house
'that's his house' (6)

b. he?e? te čhuya
COP 3SG house
'this is his house' (o)

Here are some further examples:

(59) ce met'e ce? i ek'a:pi
DEM woman COP 1SG daughter
'that woman is my daughter' (8)

(60) (te) ce? i ek'a
3SG COP 1SG son
'he's my son' (8)

(61) ce k'ew ce?e? i nokh
DEM man COP 1SG friend
'that man is my friend' (8)

(62) ce?e? k'ešu
COP deer
'that's a deer' (8)

(63) i ce?e? k'ano?ši?
1SG COP Indian
'I am an Indian' (11)

(64) ce k'ew ce?e? mi ek'a ha?
DEM man COP 2SG son Q
'is that man your son?' (16)

(65) he?e? i nokh
COP 1SG friend
'this is my friend' (22)

(66) ce?e? thal
COP what
'what's that?' (29)

(67) ce olol' - mek'an - i ce?e? k'ew tuč'a
DEM dance - master - NOM COP man big
'that dancing master is a big guy' (40)

(68) he taka? he?e? mi - me?
DEM basket COP 2SG - GEN
'this basket is yours' (50)

(69) may ce? mi
who COP 2SG
'who are you?' (72)

(70) he?e? may' - hu? - hec' - e:ma
COP self - face - wipe - PURP
'here's a face towel' (81)

(71) ce? hukahiya? te
COP maybe 3SG
'that must be him' (Text B, 189)

(72) ih pol'e? ce? te k'ena
which boy COP 3SG tall
'which boy is the taller one?' (340)

Predicate nominal clauses are negated by the negative morpheme without the **-khi?** predicating inflection, **-lah**. This **-lah** is also found with dependent clauses, which share with predicate nominal clauses the property of having zero-marked subjects. Here are examples of negative predicate nominal clauses:

(73) ce?e? k'ew tuč'a - lah
COP man big - NEG:DEP
'he's not a big man' (19)

(74) te ce?e? i ew - lah
3SG COP 1SG husband - NEG:DEP
'he's not my husband' (19)

(75) i ce?e? k'ew - lah
1SG COP man - NEG:DEP
'I am not a man' (43)

Though we have translated our examples with the English present tense, the Wappo predicate nominal is actually neutral between a present and a past interpretation, depending on context. If specific past time is to be expressed, a time adverb is used:

(76) ce?e? math i nokh
COP long:past 1SG friend
's/he used to be my friend' (704)

A predicate nominal clause in the future has no copula, but is rather a predicated clause, with a future tense suffix (see section 4.1.5) on the predicate nominal and a nominative subject:

(77) ah ay - iš - ya:mi?
1SG:NOM father - INCH - FUT
'I am going to become a father' (151)

(78) ah k'anihtuč'ma - si?
1SG:NOM chief - FUT
'I'm going to be chief' (151)

5.5 Existential and Possession Clauses

5.5.1 Existential clauses

There is no existential construction as such in Wappo. Existential messages are expressed by subject-predicate clauses, as in:

(79) c'ic'a - t - i hol - wil'uh le?a - khi?
bird - PL - NOM tree - on many - STAT
'there are lots of birds on the tree' (lit., 'the birds on the tree are many') (2)

(80) k'eš - i hella ho - wala: - la?
deer - NOM below DIR - walk - DUR
'there's a deer walking around below' (j117)

(81) layh - te eniya? le?a - khi? cew
white - PL too many - STAT there
'there are too many whites there' (73)

There is, however, a negative existential verb, la-khi? 'missing-STAT', which may be used to deny existence:

(82) ce k'ew - i la - khi?
DEM man - NOM missing - STAT
'that man is missing' (43)

(83) heta hut' - i la - khi?
here coyote - NOM missing - STAT
'there aren't any coyotes here' (86)

(84) he čhuy - i winu la - khi?
DEM house - NOM wine missing - STAT
'there's no wine in the house' (86)

As discussed above in section 4.10, there are many verbs predicating location which are semantically specific for the shape of the item which is in that location; yo?-khi? 'exist-STAT' is the most generally applicable of them.

(85) oya - newela? thal - i yo? - khi?
pot - inside what - NOM exist - STAT
'there's something in the pot' (lit., 'something exists in the pot') (14)

(86) ew - i ečum - uh yo? - khi?
fish - NOM river - LOC exist - STAT
'there are fish in the river' (113)

čoi:-khi? 'exist (in a full container) - STAT' is another:

(87) pol' - i čoi: - khi?
dirt - NOM exist - STAT
'there's a bucket of dirt' (j92)

5.5.2 Possession clauses

Wappo has transitive verbs for both 'to have', **ne?-khi?**, and 'to lack', **lah-khi?**. Here are some examples of the affirmative **ne?-khi?**:

(88) luče ne? - khi? hi? mi?
tobacco have - STAT Q 2SG:NOM
'do you have any cigarettes?' (14)

(89) ah winu ne? - khi?
1SG:NOM wine have - STAT
'I have wine' (21)

(90) cephi mayš milpa? ne? - khi?
3SG:NOM corn field have - STAT
's/he has a corn field' (23)

(91) ah pat'aw taka? mel ne? - khi?
1SG:NOM half basket acorn have - STAT
'I have half a basket of acorns' (24)

(92) taka? ah ne? - ukh hak' - še?
basket 1SG:NOM have - INF like - DUR
'I'd like to have some baskets' (123)

When a property of the item possessed is named, however, although a verb of possession is possible, as in (93):

(93) ec' - i hophihan t'aʔ neʔ - khiʔ
spider - NOM eight leg have - STAT
'spiders have eight legs' (43)

the preferred construction is one in which the possessed item's property is a predicate. (See Munro 1976 for a similar analysis of the Yuman language Mojave.) Compare (94) with (93):

(94) ec'e t'aʔ - i hophihan - khiʔ
spider leg - NOM eight - STAT
'spiders have eight legs' (43)

Here is another example of this "property-as-predicate" construction:

(95) te huc' - i šik'aṭ'is - khiʔ
3SG eye - NOM green/blue - STAT
's/he has blue eyes' (12)

As mentioned in section 3.3.9 on case, only one word in the NP typically shows case. Thus in the "possessed-item's-property-as-predicate" construction, we have minimal pairs of the following type:

(96) a. te huʔ - i tuč'a - khiʔ
3SG head - NOM big - STAT
'his/her head is big' (12)

b. cephi huʔ tuč'a - khiʔ
3SG:NOM head big - STAT
'his/her head is big' (12)

(97) a. hol pel - i chipe - te - khiʔ
tree leaf - NOM red - PL - STAT
'the tree has red leaves' (45)

b. hol - i pel chipe - te - khi?
tree - NOM leaf red - PL - STAT
'the tree has red leaves' (45)

Here, now, are examples of the negative verb of possession, lah-khi?:

(98) ah lel lah - khi?
1SG:NOM stone lack - STAT
'I don't have any money' (64)

(99) cephi t'ol lah - khi?
3SG:NOM hair lack - STAT
's/he has no hair' (85)

(100) cephi šawo hak' - še?, koto ah ce
3SG:NOM bread want - DUR but 1SG:NOM DEM

lah - khi?
lack - STAT
's/he wants bread, but I don't have any' (162)

Note that a distinction is made between la-khi?, as seen above in (82), (83), and (84), which is strictly intransitive, meaning 'is missing', and the nearly homophonous and synonymous lah-khi?, which is transitive and means 'to lack something'. Sometimes the same message can be expressed with either verb:

(101) a. hol - i pel lah - khi?
tree - NOM leaf lack - STAT
'the tree has no leaves' (lit., 'the tree lacks leaves') (64)

b. hol pel - i la - khi?
tree leaf - NOM missing - STAT
'the tree has no leaves' (lit., 'the tree's leaves are missing') (64)

(102) a. ah luče lah - khi?
1SG:NOM tobacco lack - STAT
'I don't have any cigarettes' (lit., 'I lack cigarettes') (o)

b. i - me? luč - i la - khi?
1SG - GEN tobacco - NOM missing - STAT
'I don't have any cigarettes' (lit., 'my cigarettes are missing') (62)

6. COMPLEX SENTENCES

Complex sentences consist of more than one clause, where "clause" can be defined as a predicate and its arguments. There are two types of complex sentences in Wappo: (1) those in which the constituent clauses are conjoined, that is, in which both clauses have the properties of independent clauses; (2) those in which one clause is dependent, that is, has at least one of the following three characteristics:

(a) Its verb is a non-finite, or dependent (DEP), form. Dependent verb forms typically drop the word-final glottal stop, as can be seen in the verb form **hak'se** in the example below, whose form in an independent clause would be **hak'še?**:

(1) **ah [ce k'ew i hak' - še] haṭis - khi?**
1SG:NOM DEM man 1SG like - DUR:DEP know - STAT
'I know that the man likes me' (r106)

(b) Its subject is in the zero-marked (i.e., accusative) case.

(c) If the main clause subject is a third person which is co-referential with an expressed referent in the dependent clause, that dependent clause mention must be the third person co-referential pronoun **me** (see section 3.9.3).

6.1 Conjunctions

Conjoining of two clauses in Wappo, as in many other languages, is often accomplished by juxtaposition, as in (2) - (5), for example:

(2) ceta te - thu calaha:ya nahweya? te - naw - is - ta?,
there 3SG - DAT things all:kinds DIR - see - CAUS - PST

ce may' - thu mu - wel - asa?
DEM REFL - DAT DIR - go - CAUS:DUR
'there (he) showed him all kinds of things, (and then) took them (lit., 'takes it') back (to himself) again' (Text B, 179)

(3) mi? uh otay' - ta?, he? ah otay' - si?
2SG:NOM already sing - PST now 1SG:NOM sing - FUT
'you sang already; now I'm going to sing' (77)

(4) mi? ew hak' - še?, ah ona? (ew hak' - še?)
2SG:NOM fish like - DUR 1SG:NOM also fish like - DUR
'you like fish and so do I' (33)

(5) sumi ah hu:ši?i:ya pihkah - se? , hehinta
yesterday 1SG:NOM good feel - DUR today

ah uwa pihkah - se?
1SG:NOM bad feel - DUR
'yesterday I felt (lit., 'feel') good, (but) today I feel bad' (36)

In addition, however, there are four coordinating conjunctions, as exemplified below:

6.1.1 **wey** 'and'

(6) eniya om - i še?i - khi? uči wey
much everywhere - NOM windy - STAT last:night and

i - me? wentana ke?te - khi?
1SG - GEN window break - STAT
'it was real windy last night and my window got broken' (16)

(7) is - i winu uk' - ta? wey luče po? - ta?
1PL - NOM wine drink - PST and tobacco smoke - PST
'we drank wine and smoked cigarettes' (38)

(8) cephi i peh - khi? wey (cephi) kat'ah - khi?
3SG:NOM 1SG look:at - STAT and 3SG:NOM laugh - STAT
's/he looked at me and laughed' (51)

(9) ah oma čopis čuteh - ta? wey ah
1SG:NOM everywhere warm forget - PST and 1SG:NOM

i - me? kapote ohkhuy' - ta?
1SG - GEN coat put:on - PST
'I forgot that it was warm and/so I put my coat on' (173)

(10) ce šu?u uwa pihkahlik - ta? wey ikha? maṭiṭa la?
DEM after bad feel - PST and how long:time EPIST

uwa pihkah - se?
bad feel - DUR
'after that, he felt bad, and I don't know how long he felt (lit., 'feels') bad' (Text B, 185)

6.1.2 **k'ota** 'but'

(11) is - i mamte - khi? k'ota is - i
1PL - NOM gamble - STAT but 1PL - NOM

owale - khi?
be:empty-handed - STAT
'we gambled but we didn't win anything' (518)

(12) cephi cey' nokh leʔa neʔ - khiʔ k'ota
3SG:NOM long:ago friend many have - STAT but

cephi heʔ nokh lah - khiʔ
3SG:NOM now friend lack - STAT
'long ago s/he had lots of friends, but now s/he doesn't have any friends' (506)

Concessive English elicitors were rendered in Wappo by **k'ota** sentences:

(13) om - i makh - iš - lahkhiʔ k'ota hol - i
everywhere - NOM rain - DUR - NEG but tree - NOM

eniya č'uhe - khiʔ
very dewy - STAT
'even though it isn't raining, the tree is damp with dew' (37)

(14) wey ikhaʔ maṭiṭa laʔ uwa pihkah - seʔ, k'ota
and how long:time EPIST bad feel - DUR but

maʔa ce šuʔu čhoʔel - khiʔ
just DEMPRO after die - STAT
'and I don't know how long he felt (lit., 'feels') sick, but after that he just died' (Text B, 185)

k'ota can even appear in concessive dependent clauses with indefinite pronouns:

(15) te thal ikhamu (ce) , k'ota maʔa ah te
3SG what do:DUR:DEP DEM but still 1SG:NOM 3SG

hak' - šeʔ
like - DUR
'whatever s/he does, I still like him/her' (281)

6.1.3 **cel'** 'then'

In addition to its use in marking conditional clauses (see section 6.5.3), **cel'** can be used to mark the sequencing of one event after another:

(16) ah k'ew šawo pa? - is - ta? , cel' ah
1SG:NOM man bread eat - CAUS - PST then 1SG:NOM

met'e winu uk' - is - ta?
woman wine drink - CAUS - PST
'I made the man eat the bread, and then I made the woman drink the wine' (66)

(17) cel' mi? thal ikham - ta?
then 2SG:NOM what do - PST
'what did you do then?' (258)

(18) wey učі ola šu?u meh - yok'el - khi? , cel' ečumu - h
and night four after DIR - sit - STAT then river - LOC

c'es - mi - khi?
swim - go:to - STAT
'and after four nights, he got up; then he went swimming in the river' (Text B, 182)

(19) cephi ce ošay' - mi? taka? - thi , tupulu - thi ,
3SG:NOM DEM pay - DUR basket - INST beads - INST

cel' isa eml - i hol te - he' - se? ...
then 1PL father:in:law - NOM wood DIR - carry - DUR
'he pays for them with baskets and beads, and then the father-in-law carries the wood in, ...' (Text F, 303)

6.1.4 **thu?** 'so, that's why'

There is no morphologically marked reason clause in Wappo. English reason clauses were all translated with **thu?**:

(20) cephi o - paʔo - lahkhiʔ thu? čʼoley - khiʔ
3SG:NOM UOP - eat - NEG so skinny - STAT
's/he's skinny because s/he doesn't eat' (27)

(21) ah he takaʔ mes - taʔ thuʔ cephi ce
1SG:NOM DEM basket make - PST so 3SG:NOM DEM

hakʼ - šeʔ
like - DUR
'I made this basket so s/he likes it' (65)

(22) cephi ceʔeʔ šikʼa mi nokh, thuʔ cephi mi
3SG:NOM COP close 2SG friend so 3SG:NOM 2SG

oh - tacʼ - taʔ
CAUS - slap - PST
'she's your close friend, that's why she slapped you' (Text D, 299)

6.2 Relativization[1]

In Wappo, there are two types of constructions by which a referent is identified by means of a clause. In neither of them is there any morphology or syntax identifying a "head noun" in any syntactic sense. Strictly speaking, then, they are not relative clauses, as linguists have used the term for western languages. We will refer to the clause which identifies a referent as the identifying clause and the other clause as the main clause. In what follows, we will have occasion to refer to the noun (phrase) which is interpreted as the head, but which is not the head in any syntactic sense; for convenience, following Kuroda (1976), we will call it the pivotal noun (even if it is a noun phrase).

1. This section is a revision of Li and Thompson (1978).

6.2.1 "Internal Head" constructions

An "internal head" construction involves a fully specified clause playing the role of a simple noun phrase in an independent clause. We first present an example of such a clause in the position of the subject, the object, the dative, and the predicate nominal, with the identifying clause enclosed in brackets:

As Subject:

(23) [i čhuya t'um - t] - i šoy'i - khiʔ
1SG house buy - PST:DEP - NOM burn - STAT
'the house that I bought burned down' (r107)

As Object:

(24) ah [i k'ew naw - ta] (ce) hak' - šeʔ
1SG:NOM 1SG man see - PST:DEP DEM like - DUR
'I like the man I saw' (r107)

As Dative:

(25) ah [ce k'ew ew ṭ'oh - ta] (ce) - thu
1SG:NOM DEM man fish catch - PST:DEP DEM - DAT

taka? ma - hes - taʔ
basket DIR - give - PST
(i) 'I gave the basket to the man who caught the fish' (r107)

As Predicate Nominal:

(26) ce met'e ceʔeʔ [omehwiliš i mehlah - ta]
DEM woman COP dancing:doctor 1SG catch - PST:DEP
'that woman is the dancing doctor who treated me' (318)

As indicated, the demonstrative pronouns are optional; we will return to this point.

Here are some further examples of the internal head construction:

(27) ah [ce k'ew luče po?o - lah] (ce)
1SG:NOM DEM man cigarette smoke - NEG:DEP DEM

haṭis - khi?
know - STAT
'I know the man who doesn't smoke' (20)

(28) [i te - ma o - mehwil - ta] ce?e? tuy'
1SG 3SG - BENEF UOP - tell - PST:DEP COP truth
'what I told him/her is true' (351)

(29) ah [ce k'ew ew t'um' - i]
1SG:NOM DEM man fish buy - DUR:DEP

hak' - še - lahkhi?
like - DUR - NEG
'I don't like that man who's buying fish' (22)

(30) cephi [i k'ešu ṭ'oh - ta] nuh - ta?
3SG:NOM 1SG deer catch - PST:DEP steal - PST
's/he stole the deer that I caught' (3)

(31) [ce k'ew olol] - i i peh - khi?
DEM man dance:DEP - NOM 1SG look:at - STAT
'the man who's dancing is looking at me' (n)

We also have a number of examples in which the identifying clause occurs sentence-initially. The demonstrative pronoun seems to be required when it is **cephi**, the nominative form, but optional when it is **ce**, the accusative form.

As Subject:

(32) [i čhuya t'um - ta] cephi šoy'i - khi?
1SG house buy - PST:DEP 3SG:NOM burn - STAT
'I bought a house, that one burned down' (r108) = 'the house I bought burned down'

(33) [ce k'ew kat'akh] cephi k'ešu peh - khi?
DEM man laugh:STAT:DEP 3SG:NOM deer look:at - STAT
'the man laughed, that one is looking at the deer' (227)
= 'the man who laughed is looking at the deer'

(34) [ce k'ew ew t'um - ta] cephi i naw - ta?
DEM man fish buy - PST:DEP 3SG:NOM 1SG see - PST
'the man bought the fish, that one saw me' (272) = 'the man who bought the fish saw me'

As Object:

(35) [i k'ew naw - ta] (ce) ah hak' - še?
1SG man see - PST:DEP DEM 1SG:NOM like - DUR
'I saw a man, I like that one' (r108) = 'I like the man I saw'

(36) [met'e te naw - ta] (ce) ah hak' - še?
woman 3SG see - PST:DEP DEM 1SG:NOM like - DUR
'the woman saw him/her, I like that one' (n) = 'I like the woman who saw him/her'

(37) [mi ce k'ew - thu taka? ma - hes - ta] (ce)
2SG DEM man - DAT basket DIR - give - PST:DEP DEM

ah naw - ta?
1SG:NOM see - PST
'you gave the man the basket, I saw that one' (316) = 'I saw the man you gave the basket to'

(38) [on omehwiliš mehwil - iš] (ce(koto)) ah
people story tell - DUR:DEP DEM(PL) 1SG:NOM

hak' - še?
like - DUR
'I like people who tell stories' (352)

The following example shows that the demonstrative pronoun is not used when the pivotal noun is not assumed to be shared information:

(39) [k'ew le?a lel ne? - ukh] ah ew - ukh
man much money have - STAT:DEP 1SG:NOM marry - INF

hak' - še?
want - DUR
'I want to marry a man with lots of money' (243)

There are several points to notice about this "internal head" strategy.

1. As pointed out above, there is a referent for the pivotal noun in each of the two clauses. That is, taking (36) as an example, both **met'e** 'woman' and **ce**, the demonstrative pronoun, have the same referent.
2. The identifying clause enclosed in brackets may occur in the position in which a simple noun with that function would typically occur, sentence-initial for the subject, pre-verbal for the object, pre-object for the dative, and post-copula for the predicate nominal, or it may occur sentence-initially. When the identifying clause is both sentence-initial and the subject, as in (32), (33), or (34), the demonstrative pronoun becomes obligatory.
3. When the identifying clause occupies the normal position for its role, the identifying clause is case-marked appropriately for the role of the pivotal noun, **-i** for the subject, **-ø** for the object, and **-thu** for the dative, and these case markers are clearly attached to the entire clause, since they follow the dependent verb. When the identifying clause is preposed, it is not marked for case, but the demonstrative pronoun following it carries the case of the pivotal noun.
4. The identifying clause is fully specified; there are no gaps in it.
5. As with an "internal head" strategy in any language, there is no head noun; the noun which is interpreted as the head is strictly a matter of inference.

This last property means that such a sentence may be ambiguous in isolation. Thus, to take (25) as an example, since there is no marking to signal which of the nouns in the dependent clause is to be interpreted as the head, there is nothing to prevent interpreting **ew** 'fish' as the head, in which case the sentence would be interpreted:

(25) *(ii) 'I gave the basket to the fish that the man caught'*

Note that in both interpretations (i) and (ii), whether **k'ew** 'man' or **ew** 'fish' is interpreted as the head noun, the agent-patient relation remains unchanged: it is the man who caught the fish in both cases. While it is true that in this case, the pragmatics of fish catching men render the reverse interpretation unlikely, it is also our observation that an SOV word order, with order signalling grammatical relations, seems to be more rigidly adhered to in dependent clauses than in independent clauses. In any case, the potential ambiguity of this type of sentence would typically not be an interpretative problem in actual discourse.

Still, this internal head strategy for referent identification is relatively non-transparent in the sense that the syntactic structure gives few clues to the semantic structure in which some referent is being identified or characterized by a clause. Perhaps for this reason, languages with "internal head" strategies also tend to display alternative referent-identifying strategies which are more transparent.

6.2.2 The "postposing" strategy

In Wappo, there is an alternative strategy which is essentially a discourse strategy, involving simple juxtaposition of two clauses. Here there is still no head noun, but the demonstrative pronouns are used to aid in identifying the noun which is to be interpreted as the head. We will call this the postposing strategy.

With this postposing strategy construction, the information-bearing, or main, clause is presented first, followed by the identifying clause, which is followed by a resumptive demonstrative pronoun:

As Subject:

(40) **čhuya - i šoy'i - khi? [i t'um - ta] cephi**
house - NOM burn - STAT 1SG buy - PST:DEP 3SG:NOM
'the house burned down, I bought (it), that one' (r108) = 'the house I bought burned down'

(41) ce k'ew - i i hak' - še? [ce ew
DEM man - NOM 1SG like - DUR DEM fish

t'um' - i] cephi
buy - DUR:DEP 3SG:NOM
'the man likes me, (he) is buying fish, that one' (n) = 'the man who's buying fish likes me'

As Object:

(42) ah k'ew hak' - še? [i naw - ta] ce
1SG:NOM man like - DUR 1SG see - PST:DEP DEM
'I like the man, I saw (him), that one' (r109) = ' I like the man I saw'

(43) ah ce k'ew - ta hak' - še? [(ceko:to) met'e
1SG:NOM DEM man - PL like - DUR 3PL woman

naw - ta] ce
see - PST:DEP DEM
'I like the men, they saw the woman, that one' (315) = 'I like the men who saw the woman'

A variation of this strategy allows an optional abstract noun k'a 'person' at the beginning of the identifying clause when the pivotal noun is human. Thus a variant of (42) would be:

(44) ah k'ew hak' - še? [k'a i naw - ta]
1SG:NOM man like - DUR person 1SG see - PST:DEP
ce
DEM
'I like the man, I saw the person, that one' (r112) = 'I like the man I saw'

There are four interesting properties of the examples exhibiting this postposing strategy.

Each identifying clause, enclosed in brackets in these examples, is simply juxtaposed to the main clause. That is, these identifying clauses are not in any

obvious way syntactically "subordinate" to their main clauses. Yet they are marked as dependent, both by the **-ø** accusative case marking of their subjects and by their dependent verb forms as mentioned above in the beginning of Chapter 6.

The anaphoric demonstrative pronouns, which we have underlined and translated as 'that one', are always found at the end of the identifying clause. Notice that the case of the demonstrative pronoun indicates the role of the pivotal noun in the information-bearing clause. Thus in (40), where the pivotal noun is the subject of the main verb **šoy'ikhi?** 'burned down', we find the nominative form of the pronoun **cephi**; conversely where the pivotal noun is the object of the main verb **hak'še?** 'like' in (42), the pronoun is in the accusative form **ce**.

With this postposing strategy, the identifying clause does have a gap.

These constructions can be thought of as similar to question-answer pairs. That is, to take (42) as an example, the material after the main clause can be thought of as answering the question 'which one?', as in:

(45) A: ah k'ew hak' - še?
1SG:NOM man like - DUR
'I like the man'

B: Which one?

A: [i naw - ta] ce
1SG see - PST:DEP DEM
'I saw (him), that one' = 'the one I saw'

Thus, these types of clauses are structurally parallel to question-answer pairs in which the identifying clause itself is the answer:

(46) Q: ih k'ew mi? hak' - še?
which man 2SG:NOM like - DUR
'which man do you like?'

A: [i naw - ta] ce
1SG see - PST:DEP DEM
'the one I saw' (r109)

We have many examples showing that this is the standard way to answer a 'which' question:

(47) A: ih šawo mi? hak' - še?
which bread 2SG:NOM want - DUR
'which bread do you want?'

B: [Leo mes - ta] ce
Leo make - PST:DEP DEM
'Leo made (it), that one' (341) = 'the one Leo made'

(48) A: ih taka? mi? mes - ta?
which basket 2SG:NOM make - PST
'which basket did you make?'

B: [te lamesa - uh yo? - okh] ce
3SG table - LOC sit - STAT:DEP DEM
'the one sitting on the table, that one' (341) = 'the one that's sitting on the table'

The postposing strategy, then, can be seen to involve the sentence-final demonstrative pronoun in the same way as the answer to a 'which' question does; it is a grammaticization of a discourse strategy. And because the demonstrative pronouns are case-marked for the role of the pivotal noun in the main clause, they provide an indication of which noun in the main clause is the pivotal noun. Thus, this postposing strategy is more transparent than the internal head strategy discussed earlier.

6.2.3 "Free" relatives

Free relatives are formed with a sentence-initial identifying clause which contains an indefinite pronoun (which are the same in form as question words). As expected, the identifying clause has both the properties of dependent clauses mentioned above: a special verb form and lack of nominative case marking for the subject. Here are some examples:

(49) [ma?a mi thal mes - ta] ah pa?e - si?
just 2SG what make - PST:DEP 1SG:NOM eat - FUT
'I'll eat whatever you made' (261)

(50) [te ita čo? - me] cew ah te - k'a
3SG where go - DUR:DEP there 1SG:NOM 3SG - COM

čo: - si?
go - FUT
'I'll go wherever s/he goes' (261)

(51) [may čhuya - nan - uh te - čo? - me] (ce) te
who house - mouth - LOC DIR - go - DUR:DEP DEM 3SG

kuyalis - lahkhi?
let:in:IMP - NEG
'whoever comes to the door, don't let them in' (281)

(52) [me thal t'um - ta] cephi te - man - ta?
3CO what buy - PST:DEP 3SG:NOM DIR - bring - PST
's/he brought in what s/he had bought' (302)

6.3 Causative[2]

Wappo exhibits three types of causatives: suffixal, periphrastic, and prefixal.

6.3.1 The suffixal causative

There is a causative suffix in Wappo. Its form varies, as we will show in the causative paradigms below. An epenthetic consonant appears when the root ends with a vowel, and seems to be an optional variant otherwise. The causee is in the unmarked (i.e., accusative) case. First we will discuss the form of the causative verb with the causative suffix, then we will present some examples.

A. The form of suffixal causative verbs

The causative verb forms are all based on the unmarked form (Form A) of the verb root (see section 4.3 for verb forms). As noted above, an epenthetic consonant appears when the root ends with a vowel, and seems to be an optional variant

2. See Li and Thompson (1977) for a more typologically oriented discussion of the Wappo causative.

Table 6-1. Causative Affirmative and Negative Paradigm Templates

Causative Durative	Form A + (C) + asa? CAUS:DUR
Causative Past	Form A + (C) + is - ta? CAUS - PST
Causative Future	Form A + (C) + is - ya:mi? (1) CAUS - FUT
Causative Imperative	Form A + (C) + asi? CAUS:IMP
Negative Causative Durative	Form A + (C) + asa - lahkhi? CAUS - NEG
Negative Causative Past	Form A + (C) + is - ta - lahkhi? CAUS - PST - NEG
Negative Causative Future	Form A + (C) + is - yawlahkhi? (1) CAUS - FUT:NEG
Negative Causative Imperative	Form A + (C) + is - lahkhi? CAUS:IMP - NEG

(1) These are the **ya:mi?** forms; for many of our verbs we have the **si?** forms as well, but not for all (see section 4.1.5 on the future tense).

Table 6-2. Causative Paradigm for olol- ‘dance’

Causative Durative	olol - asaʔ dance - CAUS:DUR *‘is making X dance’*
Causative Past	olol - is - taʔ dance - CAUS - PST *‘made X dance’*
Causative Future	olol - is - ya:miʔ dance - CAUS - FUT1 *‘will make X dance’*
Causative Imperative	olol - asiʔ dance - CAUS:IMP *‘make X dance!’*
Negative Causative Durative	olol - asa - lahkhiʔ dance - CAUS - NEG *‘isn’t making X dance’*
Negative Causative Past	olol - is - ta - lahkhiʔ dance - CAUS - PST - NEG *‘wasn’t making X dance’*
Negative Causative Future	olol - is - yawlahkhiʔ dance - CAUS - FUT1:NEG *‘won’t make X dance’*
Negative Causative Imperative	olol - is - lahkhiʔ dance - CAUS:IMP - NEG *‘don’t make X dance!’*

Table 6-3. Causative Paradigm for **hic-** ‘pound to make flour’

Causative Durative	**hic - asaʔ** **pound - CAUS:DUR** *‘is making X pound Y’*
Causative Past	**hic - is - taʔ** **pound - CAUS - PST** *‘made X pound Y’*
Causative Future	**hic - is - ya:miʔ** **pound - CAUS - FUT1** *‘will make X pound Y’*
Causative Imperative	**hic - asiʔ** **pound - CAUS:IMP** *‘make X pound Y!’*
Negative Causative Durative	**hic - asa - lahkhiʔ** **pound - CAUS - NEG** *‘isn’t making X pound Y’*
Negative Causative Past	**hic - is - ta - lahkihʔ** **pound - CAUS - PST - NEG** *‘wasn’t making X pound Y’*
Negative Causative Future	**hic - is - yawlahkhiʔ** **pound - CAUS - FUT1:NEG** *‘won’t make X pound Y’*
Negative Causative Imperative	**hic - is - lahkhiʔ** **pound - CAUS:IMP - NEG** *‘don’t make X pound Y!’*

Table 6-4. Causative Paradigm for **hinto-** 'sleep'

Causative Durative	**hinto - ʔasaʔ** **sleep - CAUS:DUR** *'is making X sleep'*
Causative Past	**hinto - ʔis - taʔ** **sleep - CAUS - PST** *'made X sleep'*
Causative Future	**hinto - ʔis - ya:miʔ** **sleep - CAUS - FUT1** *'will make X sleep'*
Causative Imperative	**hinto - ʔasiʔ** **sleep - CAUS:IMP** *'make X sleep!'*
Negative Causative Durative	**hinto - ʔasa - lahkhiʔ** **sleep - CAUS - NEG** *'isn't making X sleep'*
Negative Causative Past	**hinto - ʔis - ta - lahkihʔ** **sleep - CAUS - PST - NEG** *'wasn't making X sleep'*
Negative Causative Future	**hinto - ʔis - yawlahkhiʔ** **sleep - CAUS - FUT1:NEG** *'won't make X sleep'*
Negative Causative Imperative	**hinto - ʔis - lahkhiʔ** **sleep - CAUS:IMP - NEG** *'don't make X sleep!'*

otherwise. The causative affirmative and negative paradigm templates are given in Table 6-1.

Next we provide the causative paradigms for each of the three verbs roots whose full paradigms are given in section 4.2. The first two of these do not take an epenthetic consonant, as their roots end in consonants, but the third, **hinto-** 'sleep', does take an epenthetic consonant, here /**ʔ**/, as its root is vowel-final.

B. The form and function of suffixal causative clauses

The first example illustrates the past affirmative causative verb form; note the epenthetic in the causative suffix **-tis**:

(53) ah c'ani k'opa - tis - taʔ
1SG:NOM ice melt - CAUS - PST
'I melted the ice' (108)

Compare with:

(54) c'an - ti k'opa - khiʔ
ice - NOM melt - STAT
'the ice has melted' (108)

The causee is always zero-marked (i.e., in the accusative form), even when there is another patient in the clause. In (55) and (56) we see suffixal causatives with two-argument predicates; in (57) we see suffixal causatives with three-argument predicates (the causee is underlined in each case):

(55) ah te winu uk' - asa - lahkhiʔ
1SG:NOM 3SG wine drink - CAUS - NEG
'I don't let him/her drink wine' (21)

(56) cephi i oyaʔ keʔ - tis - taʔ
3SG:NOM 1SG pot break - CAUS - PST
's/he made me break the pot' (23)

(57) ah te chica - thu ew ma - hes - is - taʔ
1SG:NOM 3SG bear - DAT fish DIR - give - CAUS - PST
'I made him/her give the fish to the bear' (54)

Here are further examples:

(58) i ek' - i i kat'a - tis - ta?
1SG son - NOM 1SG laugh - CAUS - PST
'my son made me laugh' (22)

(59) cephi i kam - is - ta - lahkhi?
3SG:NOM 1SG cry - CAUS - PST - NEG
's/he didn't make me cry' (22) [3]

(60) ah te čhuya - nan č'a - č'el - is - ta?
1SG:NOM 3SG house - mouth DIR - open - CAUS - PST
'I made him/her open the door' (54)

(61) ah te čopal - asa?
1SG:NOM 3SG warm - CAUS:DUR
'I am making him/her warm' (67)

(62) ah te oya? ke? - tis - ta - lahkhi?
1SG:NOM 3SG pot break - CAUS - PST - NEG
'I didn't make him/her break the pot' (81)

(63) te kat'a - tis - lahkhi?
3SG laugh - CAUS:IMP - NEG
'don't make him/her laugh' (85)

(64) ah te o - pa? - asa - lahkhi?
1SG:NOM 3SG UOP - eat - CAUS - NEG
'I don't (ever) make him/her eat' (86)

3. We have found a certain amount of variation in the causative forms produced during our work with Laura; thus the negative causative of **kama-** 'cry', **kam - is**- in example (59), does not match the causative of **kama-** 'cry', **kam - tis**- in example (75). It is possible that some forms may have lexicalized, and it is also possible that Laura's access to infrequent causative verb forms was not very stable.

(65) maʔa k'oʔ - tasiʔ
just boil - CAUS:IMP
'just let (it) boil' (101)

(66) ah te k'u:wey - is - ya:miʔ
1SG:NOM 3SG run - CAUS - FUT
'I'm going to make him/her run' (357d)

The causer need not be animate:

(67) šeʔ - ti hol pheleʔi - tis - taʔ
wind - NOM tree fall:over - CAUS - PST
'the wind made the tree fall over' (24)

The causee need not even be mentioned:

(68) ah luče poʔ - is - taʔ
1SG:NOM tobacco smoke - CAUS - PST
'I made somebody/him/her smoke' (54)

6.3.2 The periphrastic causative

The periphrastic causative is formed with the verb **mes**- 'make' in the main clause and an infinitive form in the dependent clause; see section 6.4.1 for a discussion of infinitives. As in that chapter, we enclose the infinitive clause in brackets.

(69) ah [i ek'a may' peh - ukh] mes - taʔ
1SG:NOM 1SG son REFL look:at - INF make - PST
'I made my son look at himself' (31)

(70) ah [te [taka? wiš - ukh] mes - ukh]
1SG:NOM 3SG basket dry - INF make - INF

hak' - še?
want - DUR
'I want to make him/her dry the basket' (94)

(71) ah [te mansa:na? khen - ukh] mes - ta?
1SG:NOM 3SG apple peel - INF make - PST
'I made her peel the apple' (106)

6.3.3 The choice between the suffixal and the periphrastic causative

The suffixal and the periphrastic causatives were often both volunteered for a given elicitor sentence, and claimed to be identical in meaning, as, for example, in the following pairs:

(72) a. še? - ti hol phele?i - tis - ta?
wind - NOM tree fall:down - CAUS - PST
'the wind made the tree fall over' (24)

b. še? - ti [hol phele?i] mes - ta?
wind - NOM tree fall:down:INF make - PST
'the wind made the tree fall over' (24)

(73) a. cephi estufa šoy'i? - is - ta?
3SG:NOM stove hot - CAUS - PST
's/he made the stove hot' (55)

b. cephi [estufa šoy'i: - ya] mes - ta?
3SG:NOM stove hot - DUR make - PST
's/he made the stove hot' (55)

(74) a. cephi mul'ta te o - pacoy' - asa?
3SG:NOM all:the:time 3SG UOP - wash - CAUS:DUR
's/he$_i$'s always making him/her$_j$ wash the clothes' (96)

b. cephi mul'ta [te o - pacoy' - ukh]
3SG:NOM all:the:time 3SG UOP - wash - INF

mes - i?
make - DUR
's/he$_i$'s always making him/her$_j$ wash the clothes' (96)

However, in many contexts there is a difference between the suffixal and the periphrastic causative. There is ample evidence that the suffixal causative is preferred when the causation typically would not involve force:

(75) is - i te kama - tis - ta?
1PL - NOM 3SG cry - CAUS - PST
'we made/let him/her cry' (97)

(76) ma?a te kat'a - tasi?
just 3SG laugh - CAUS:IMP
'make/let him/her laugh' (98)

(77) ah kaphe k'o - tis - ta?
1SG:NOM coffee boil - CAUS - PST
'I made/let the coffee boil' (128)

Thus, in contexts in which the causation could either involve or not involve force, the periphrastic causative seems to involve more force.[4] Evidence for this claim is of two kinds. First, when asked to compare the two forms, Laura would suggest paraphrases, as in the following examples:

(78) a. ah ce k'ew ew pa? - is - ta?
1SG:NOM DEM man fish eat - CAUS - PST
'I made the man eat the fish' (I gave it to him to eat) (24)

4. It is possible that this difference is neutralized with non-animate causers or causees, as in (72) and (73).

b. ah [ce k'ew ew pa? - ukh] mes - ta?
1SG:NOM DEM man fish eat - INF make - PST
'I made the man eat the fish' (I forced him to eat it) (24)

(79) a. ah te luče po? - is - ta?
1SG:NOM 3SG tobacco smoke - CAUS - PST
'I made him/her smoke the cigarette' (I let him/her puff on mine) (54)

b. ah [te luče po? - ukh] mes - ta?
1SG:NOM 3SG tobacco smoke - INF make - PST
'I had him/her smoke the cigarette' (I made him/her do it) (54)

(80) a. ah te kom' - is - ta?
1SG:NOM 3SG fall - CAUS - PST
'I made him/her fall down' (I pulled him/her by the hand, accidentally or not) (63)

b. ah [te kom' - okh] mes - ta?
1SG:NOM 3SG fall - INF make - PST
'I made him/her fall down' (I pushed him/her) (63)

(81) a. cephi met'e oya? ke? - tis - ta?
3SG:NOM woman pot break - CAUS - PST
's/he made the woman break the pot' (it was accidental) (63, 99)

b. cephi [met'e oya? ke? - ukh] mes - ta?
3SG:NOM woman pot break - INF make - PST
's/he made the woman break the pot' (s/he did it on purpose) (63, 99)

(82) a. ah te yekhe k'el - is - ta?
1SG:NOM 3SG mush lick - CAUS - PST
'I let him/her eat mush' (94)

b. ah [te yekhe k'el - ukh] mes - ta?
1SG:NOM 3SG mush lick - INF make - PST
'I had him/her eat mush' (94)

(83) a. ah te otay' - is - ta?
1SG:NOM 3SG sing - CAUS - PST
'I made him/her sing' (I asked him/her to sing) (95)

b. ah [te otay' - ukh] mes - ta?
1SG:NOM 3SG sing - INF make - PST
'I made him/her sing' (I forced him/her to sing) (95)

(84) a. ah te me? neph - is - ta?
1SG:NOM 3SG hand bleed - CAUS - PST
'I let his/her finger bleed' (95)

b. ah [te me? neph - ukh] mes - ta?
1SG:NOM 3SG hand bleed - INF make - PST
'I made his/her finger bleed' (95)

(85) a. ah te hol k'eč' - asa - lahkhi?
1SG:NOM 3SG wood chop - CAUS - NEG
'I don't let him/her chop wood' (96)

b. ah [te hol k'eč' - ukh] mes - i - lahkhi?
1SG:NOM 3SG wood chop - INF make - DUR - NEG
'I don't make him/her chop wood' (96)

(86) a. ah te hol k'eč' - asa?
1SG:NOM 3SG wood chop - CAUS:DUR
'I'm letting him/her chop the wood' (97)

b. ah [te hol k'eč' - ukh] mes - i?
1SG:NOM 3SG wood chop - INF make - DUR
'I'm making him/her chop the wood' (97)

Second, when the eliciting sentence involved a situation in which the causation is most naturally interpreted as accidental, Laura volunteered the suffixal causative, as in (87) and (88):

(87) ah kaltu šoy' - tis - ta?
1SG:NOM stew burn - CAUS - PST
'I burned the stew' (121)

(88) cephi i winu ohč'ay - tis - ta?
3SG:NOM 1SG wine spill - CAUS - PST
's/he made me spill the wine' (23)

When she was asked about the periphrastic version of (88), she said that it meant 'he made me throw out the wine'; this underscores the semantic contrast:[5]

(89) cephi [i winu ohč'ay - ukh] mes - ta?
3SG:NOM 1SG wine spill - INF make - PST
's/he made me throw away the wine' (24)

Here is an especially illustrative minimal triplet, where each version involves, predictably, more force than the preceding one:

(90) a. ah čhuya - nan č'a - č'el - ta?
1SG:NOM house - mouth DIR - open - PST
'I opened the door' (108)

b. ah čhuya - nan č'a - č'el - tis - ta?
1SG:NOM house - mouth DIR - open - CAUS - PST
'I opened the door' (108) (as if it had been stuck)

c. ah [čhuya - nan ča - č'el - ukh] mes - ta?
1SG:NOM house - mouth DIR - open - INF make - PST
'I opened the door' (108) (I had to pry it open)

5. It also makes clear the difficulties faced by all field workers in glossing verb meanings.

6.3.4 The prefixal causative

The causative prefix **oh-** is generally used to form causatives of roots designating properties (those which would tend to be categorized as adjectives in English); compare (91) a. and b.:

(91) a. ce čhuy - i tuč'a - khi?
DEM house - NOM big - STAT
'that house is big' (o)

b. ah ce čhuya oh - tuč' - ta?
1SG:NOM DEM house CAUS - big - PST
'I made the house bigger' (25)

Here are further examples:

(92) oh - tuč'i - lahkhi?
CAUS - big:IMP - NEG
'don't make (it) bigger' (100)

(93) ah may' hu? oh - chipi: - ta?
1SG:NOM REFL face CAUS - red - PST
'I painted my face red' (25)

(94) ah may' huci oh - co: - ta?
1SG:NOM REFL eye CAUS - black - PST
'I made my eyes black' (25)

(95) cephi i oh - kal - e?
3SG:NOM 1SG CAUS - hurt - DUR
's/he's hurting me' (28)

(96) cephi hol oh - č'eph - mi?
3SG:NOM stick CAUS - bent - DUR
's/he is bending the stick' (360)

(97) [i taka? oh - wiš] - ti wiši - khi?
1SG basket CAUS - dry - NOM dry - STAT
'the basket I put out to dry, it dried' (100)

But it is found with non-property roots as well; we have no counterexamples to the hypothesis that it adds the idea of force to an otherwise transitive root. Compare:

(98) a. cephi i oh - p'oy' - ta?
3SG:NOM 1SG CAUS - kick - PST
's/he kicked me hard' (30)

b. cephi i pa - p'oy' - ta?
3SG:NOM 1SG ITER - kick - PST
's/he kicked me several times' (30)

(99) a. cephi te oh - waṭh - ta?
3SG:NOM 3SG CAUS - hit - PST
's/he hit him/her hard' (30)

b. cephi te pa - wath - ta?
3SG:NOM 3SG ITER - hit - PST
's/he hit him/her several times' (30)

Here are some other examples:

(100) ah may' me? oh - k'eč' - ta?
1SG:NOM REFL hand CAUS - cut - PST
'I cut my hand on purpose' (12)

(101) cephi oya? oh - pey' - ta?
3SG:NOM pot CAUS - break - PST
'he broke the pot on purpose' (73)

(102) ah hel oh - šuṭi: - ta?
1SG:NOM fire CAUS - go:out - PST
'I put the fire out' (82)

In the following example, Laura said that the addition of the **oh**- makes the command sound "cranky":

(103) šawo (oh) - mes - ti?
bread CAUS - make - IMP
'make the bread!' (55)

There are many examples of its use to add force to a periphrastic causative, as in the following examples:

(104) še? - ti ce hol č'eph - is (oh) - mes - ta?
wind - NOM DEM tree bend - INF CAUS - make - PST
'the wind bent the trees' (106)

With the **oh**-, the wind "really" bent the trees over.

(105) ah taka? wiši (oh) - mes - ta?
1SG:NOM basket dry:INF CAUS - make - PST
'I made the basket dry' (107)

A speaker would use **oh**- in (105) under the unusual circumstances in which a basket was dried by hard rubbing, rather than left to dry in the air.

(106) a. ah te kat'a - tis (oh) - mes - ta?
1SG:NOM 3SG laugh - INF CAUS - make - PST
b. ah te kat'ah (oh) - mes - ta?
1SG:NOM 3SG laugh:INF CAUS - make - PST
'I made him/her laugh' (55)

With the **oh**- in (106), the sentence implies that s/he was made to laugh against his/her will.

(107) ah [[te taka? wiš - ukh] (oh) - mes - ukh]
1SG:NOM 3SG basket dry - INF CAUS - make - INF

hak' - še?
want - DUR
'I want to make him/her dry the basket' (94)

Similarly, the oh- in (107) sounded to Laura as if the speaker is peeved with the causee, who doesn't want to dry the basket.

As expected, since the suffixal causative implies lack of force and accidental causation, as demonstrated in section 6.3.3 above, it is in most contexts not compatible with the oh- causative prefix:

(108) ah hel (*oh) - šuṭ - tis - ta?
1SG:NOM fire CAUS - go:out - CAUS - PST
'I let the fire go out' (82) (compare (102))

(109) ah te (*oh) - kat'a - tis - ta?
1SG:NOM 3SG CAUS - laugh - CAUS - PST
'I made her laugh' (99) (compare (106))

(110) cephi estufa (*oh) - šoy'i? - is - ta?
3SG:NOM stove CAUS - hot - CAUS - PST
's/he heated up the stove' (126)

However, when there is no opposition between a suffixal and a periphrastic causative, as with a verb with an inherently forceful meaning, then oh- is permitted:

(111) ah ce k'ew may' oh - waṭh - is - ta?
1SG:NOM DEM man REFL CAUS - hit - CAUS - PST
'I made the man hit him/herself' (274) (cf (99))

Though it is difficult to be certain, it appears that the use of oh- is lexicalized in such forms as the following:

(112) cephi maiš oh - yok' - ta?
3SG:NOM corn CAUS - live - PST
's/he grows corn' (23)

(113) čhuy - i oh - č'iči - se?
house - NOM CAUS - dark - DUR
'the house is getting dark' (123)

(114) ikhali mi? oh - ca? - še?
how:much 2SG:NOM CAUS - weigh - DUR
'how much do you weigh?' (219)

6.4 Sentential Complements

Sentential complements in Wappo display the predicted characteristics of dependent clauses: (1) they have the dependent verb form and (2) their subjects have no nominative case marking. In the following discussion, the complement clauses will be enclosed in brackets.

There are two complement types, distinguished by their verb morphology. The first we will refer to as the infinitive, the second as the non-infinitive. In neither case is there any morpheme which could be considered as a complementizer.

6.4.1 Infinitive complements

Infinitives in Wappo, typically characterized by the verb suffix -**ukh** or -**okh**, are found in many of the same contexts as in English, primarily to represent irrealis events. Causatives, which may also involve infinitives, are discussed separately in section 6.3.

A. Subject infinitives

We have managed to elicit only a few infinitives in subject position. Interestingly, these clauses do not take the nominative case marker (though relative clauses, for example, do):

(115) [k'ešu mehlah - ukh] uwa - khi?
deer hunt - INF bad - STAT
'hunting deer is bad' (14)

With the verbs meaning 'easy' and 'difficult', the infintive does not occupy the subject position; rather, "raising" of the infinitive clause or its subject seems to occur:

(116) oh! ceʔeʔ [čoč - ukh] tahwal' - lah
oh COP weave - INF job - NEG:DEP
'oh! that's easy (lit., 'not a job') to make (of basket)' (33)

(117) tahwal' - lah [chica ṭ'ol - ukh] [6]
job - NEG:DEP bear catch - INF
'it's easy (lit., 'not a job') to catch a bear' (34)

(118) [he taka? - i] eniya c'iti - khiʔ [čoč - ukh]
DEM basket - NOM very hard - STAT weave - INF
'this basket was very difficult to make' (33)

(119) [ce owil - i] [tay' - ukh] tahwal' - lahkhiʔ
DEM song - NOM sing - INF job - NEG
'this song is easy to sing' (285)

It is possible that there is English influence in the following example, leading Laura to use the benefactive case marker in an unprecedented way:

(120) [he taka? - i] i - ma eniya c'iti - khiʔ
DEM basket - NOM 1SG - BENEF very hard - STAT

[čoč - ukh]
weave - INF
'this basket was very hard <u>for me</u> to make' (33)

6. We can only assume that the negation form characteristic of copular clauses is being used in (116) and (117) (as compared to, say, (119)) because Laura considered the noun <u>tahwal'</u> 'job' to be a predicate nominal, possibly because of the wording of the English eliciting sentence.

B. Non-subject infinitives

(121) he k'ew - i [ew mehlah - ukh] hak' - še?
DEM man - NOM fish catch - INF want - DUR
'this man wants to catch fish' (i)

(122) ah [he k'ew taka? man - ukh] hak' - še?
1SG:NOM DEM man basket carry - INF want - DUR
'I want this man to carry a basket' (i)

(123) ah i ek'a [k'ešu mewi? - ukh] čuṭi: - ta?
1SG:NOM 1SG son deer catch - INF tell - PST
'I told my son to catch a deer' (4)

(124) ah [ce met'e luče po? - ukh]
1SG:NOM DEM woman tobacco smoke - INF

hak' - še - lahkhi?
want - DUR - NEG
'I don't want that woman to smoke' (20)

(125) cephi [k'ešu mewi? - ukh] c'ey - ta?
3SG:NOM deer catch - INF stop - PST
's/he stopped catching the deer' (28)

(126) is - i [o - pa? - ukh] homokhel - khi?
1PL - NOM UOP - eat - INF continue - STAT
'we kept on eating' (40)

(127) ah [čhuya ma - kuy – ukh] ena - me?
1SG:NOM house DIR - go - INF fear - DUR
'I'm afraid to go into the house' (53)

(128) chic - i [may' t'onuk' mewi? - ukh] cam' - i?
bear - NOM REFL tail catch - INF try - DUR
'the bear is trying to catch its (own) tail' (57)

When **haṭiskhi?** 'know' occurs with an infinitive, it acquires the meaning 'know how to':

(129) cephi [olol - ukh] haṭis - khi?
3SG:NOM dance - INF know - STAT
's/he knows how to dance' (40)

Before leaving the topic of infinitives, there is one further point worth a brief mention: there is a non-complement use of the infinitive in which the infinitive clause adverbially modifies the main clause in a similar way to the function of an English participial phrase. Here are some examples:

(130) ah [k'ešu peh - ukh] šawo pa? - ta?
1SG:NOM deer look:at - INF bread eat - PST
'I ate the bread watching the deer' (68)

(131) ah [lep - ukh] hintoše - lahkhi?
1SG:NOM stand - INF can:sleep - NEG
'I can't sleep standing up' (310)

(132) ah [luče po? - ukh] o - pa?o - lahkhi?
1SG:NOM tobacco smoke - INF UOP - eat - NEG
'I don't eat while smoking' (310)

(133) [may' mešukal' – ukh] cephi tu - le?a - khi?
REFL hurry - INF 3SG:NOM DIR - come - STAT
's/he came here in a hurry' (334)

6.4.2 Non-infinitive complements

We were not successful in eliciting any non-infinitive complements; (134) is one attempt. Note that 'good' in the English elicitor can be regarded as the main verb of its sentence. However, **hu:ši?i:aya** must be an adverb; it cannot be the main verb of

the Wappo sentence because **ah**, the first person singular pronoun, is in the nominative, rather than the accusative which would be necessary if it were the subject of a complement clause, and the only verb marked as finite is **ne?khi?** 'have':

(134) **hu:ši?i:ya ah ok'o:to ne? - khi?**
good 1SG:NOM children have - STAT
'it's good that I have children' (43)

All our examples of non-infinitive complements, then, are object complements. The complement typically precedes the main verb, as expected for objects; when the main verb's subject is **ah**, the first person singular, however, the complement was often volunteered in either final (as in (135)) or initial (as in (136)) position.

(135) **ah haṭis - khi? [te taka? mani - ya]**
1SG:NOM know - STAT 3SG basket carry - DUR:DEP
'I know s/he is taking the basket' (5)

(136) **[i ololo - o] ah hinčoh - ta?**
1SG dance - DUR:DEP 1SG:NOM dream - PST
'I dreamed that I was dancing' (68)

(137) **ah [ce hin na:čitis] natuy' - si?**
1SG:NOM DEM moon round believe - DUR
'I believe that the moon is round' (27)

(138) **c'ic' - i [may' - thi me otay' - uh]**
bird - NOM REFL - INST 3CO sing - DUR:DEP

kah - ši? hi?
hear - DUR Q
'did the bird hear itself singing?' (57)

(139) George - i [oma makha - wis - lah]
George - NOM everywhere rain - FUT:DEP - NEG:DEP

hok'om - se?
expect - DUR
'George doesn't think it will rain' (52)

(140) ah ce k'ew - thu hum' - i? [te hol
1SG:NOM DEM man - DAT blame - DUR 3SG stick

č'awaš - ta]
break - PST:DEP
'I blame the man for breaking the stick' (238)

(141) [i awa ce mehwil - ta] ah
1SG uncle DEM tell - PST:DEP 1SG:NOM

huhkal - še?
remember - DUR
'I remember my uncle telling that (story)' (74)

(142) [i sumi? mi naw - ta] ah
1SG yesterday 2SG see - PST:DEP 1SG:NOM

čuteh - ta?
forget - PST
'I forgot that I saw you yesterday' (74)

(143) ah haṭis - khi? [oma c'um]
1SG:NOM know - STAT everywhere cloudy:DEP
'I know it's cloudy' (173)

(144) ah huyek' - še? [te šawo pa? - ta]
1SG:NOM glad - DUR 3SG bread eat - PST:DEP
'I'm glad that s/he ate the bread' (20)

While **huyek'še?** 'glad' is a complement-taking verb, other expressions evaluating states of affairs may be adverbs in ordinary independent clauses, as with **hansoya** 'I'm sorry, regretfully':

(145) hansoya ah winu lah - khi?
I'm:sorry 1SG:NOM wine lack - STAT
'I'm sorry I don't have any wine'

Here is a minimal pair contrasting an infinitive and a non-infinitve complement:

(146) a. ah [te le?a okal' - ukh] hak' - še - lahkhi?
1SG:NOM 3SG much talk - INF like - DUR - NEG
'I don't like him/her to talk too much' (70)

b. ah [te le?a okal' - ih]
1SG:NOM 3SG much talk - DUR:DEP

hak' - še - lahkhi?
like - DUR - NEG
'I don't like it that s/he talks so much' (70)

Perception verbs take non-infinitive complements rather than infinitive complements:

(147) met'a - i [k'ew okal' - ih] naw - ta?
woman - NOM man talk - DUR:DEP see - PST
'the woman saw the man talking' (230)

The following example illustrates this, though the a. and b. clauses differ in terms of word order as well:

(148) ah haṭis - khi? ce k'ew uk'iš --
1SG:NOM know - STAT DEM man drink
'I know that man drinks --'

(149) a. ah sumi? naw - ta? ce k'ew uk'iš
1SG:NOM yesterday see - PST that man drink:DUR:DEP
'I saw that man drinking yesterday'

b. * ah sumi? ce k'ew uk' - uhk naw - ta?
1SG:NOM yesterday DEM man drink - INF see - PST
**'I saw that man to drink yesterday'*

There does not appear to be a distinction between the verb forms used in in indirect speech (such as the "sequence of tenses" found in English) and those found in complements in general. Here is an example of indirect speech:

(150) cephi [me tu - le?a - wis - lah]
3SG:NOM 3CO DIR - come - FUT:DEP - NEG:DEP

hah - ta?
say - PST
's/he$_i$ said s/he$_i$ wouldn't be here' (84)

(151) ah lakhu [ce k'ew nale? - ša] hah - ta?
1SG:NOM CLAR DEM man angry - DUR:DEP say - PST
'I said that the man was angry' (9)

Direct quotes, as would be expected, do not show special syntax; in particular the subject of a direct quote appears in the nominative case just as it would with any independent clause, rather than in the accusative, as it would if it were a dependent clause.

6.4.3 Indirect questions

The structure of indirect questions is entirely predictable: the subject of the indirect question does not appear in the nominative case, and its verb is in the dependent form.

A. Indirect question-word questions

Indirect question-word questions will contain at least one question word.

(152) [may chica ṭ'oh - ta] ah haṭasu - kh - lahkhi?
who bear kill - PST:DEP 1SG:NOM know - STAT - NEG
'I don't know who killed the bear' (9)

(153) [chica may ṭ'oh - ta] ah
bear who kill - PST:DEP 1SG:NOM

haṭasu - kh - lahkhi?
know - STAT - NEG
'I don't know who the bear killed' (9)

(154) [ce k'ew thal t'um - ta] ah i - ma
DEM man what buy - PST:DEP 1SG:NOM 1SG - BENEF

mehwile?
tell:IMP2
'tell me what the man bought' (9)

(155) [iha mi te naw - ta] ah čuteh - ta?
when 2SG 3SG see - PST:DEP 1SG:NOM forget - PST
'I forgot when you saw him/her' (500)

(156) haṭis - khi? ah [ikha? tehla ečU - wela]
know - STAT 1SG:NOM how far river - LOC
'I know how far it is to the river' (219)

Wappo also has an infinitival question-word indirect question:

(157) [ita mayok' - okh] i čuṭi?
where put - INF 1SG order:IMP
'tell me where to put (it)' (306)

(158) [thal pa? - ukh] ah haṭasu - kh - lahkhi?
what eat - INF 1SG:NOM know - STAT - NEG
'I don't know what to eat' (9)

Since question words are also used as indefinite pronouns, these indirect questions, particularly those which do not express doubt, may, in appropriate contexts, also be understood as complements with indefinite prounouns. For example, both (159) and (160) can have the two interpretations indicated:

(159) ce k'ew - ma mehwile? [mi thal naw - ta]
DEM man - BENEF tell:IMP2 2SG what see - PST:DEP

(i) 'tell the man what you saw' (170)
(ii) 'tell the man that you saw something' (170)

(160) ah huhkal - še? [te ita čoho - kh]
1SG:NOM remember - DUR 3SG where go - STAT:DEP

(i) 'I remember where s/he went' (170)
(ii) 'I remember that s/he went somewhere' (170)

B. Indirect yes-no questions

There is no morphology specific to indirect yes-no questions:

(161) ah haṭasu - kh - lahkhi? [i čo: - wis]
1SG:NOM know - STAT - NEG 1SG go - FUT:DEP
'I don't know whether I'm going or not' (288)

Indirect yes-no questions which actually express doubt allow an optional thal 'what'.

(162) [te yekhe hak' - še] (thal) ah
3SG acorn:mush like - DUR:DEP what 1SG:NOM

čuteh - ta?
forget - PST
'I forgot whether s/he likes acorn mush' (118)

(163) ah haṭasu - kh - lahkhi? [te čoho - kh]
1SG:NOM know - STAT - NEG 3SG go - STAT:DEP

(thal)
what
'I don't know whether he went' (168)

(164) [te c'esih - wis] (thal) ah te - thu
3SG swim - FUT:DEP what 1SG:NOM 3SG - DAT

cewis - ta?
ask - PST
'I asked her whether she could swim' (71)

Contrast (165) and (166):

(165) ah [te luče poʔo] (thal)
1SG:NOM 3SG tobacco smoke:DUR:DEP what

haṭasu - kh - lahkhi?
know - STAT - NEG
'I don't know whether he smokes' (29)

(166) ah [te luče poʔo - lah]
1SG:NOM 3SG tobacco smoke:DUR:DEP - NEG:DEP

(*thal) haṭis - khiʔ
what know - STAT
'I know that he doesn't smoke' (20)

In addition, there is another way to express doubt: the 'I don't know' epistemic marker laʔ:

(167) thal - i laʔ keʔte - khiʔ
what - NOM EPIST break - STAT
'I don't know what broke' (33)

(168) ita laʔ cephi čo: - khiʔ
where EPIST 3SG:NOM go - STAT
'I don't know where she went' (168)

6.5 Adverbial Clauses

Adverbial clauses in Wappo also exhibit, as expected, the two characteristics of dependent clauses: (1) the accusative form of the subject, and (2) a special verb form. In this section, we will discuss purpose clauses, temporal clauses, and conditional clauses. In the examples the adverbial clauses are enclosed in brackets.

6.5.1 Purpose clauses

Purpose clauses are characterized by a verbal suffix -e:ma, which we gloss as PURP. When the subjects of the two clauses have the same referent, the purpose clause subject is unexpressed.

(169) ce chic - i [c'ic'a ṭ'ol - e:ma] te - hew'i - khiʔ
DEM bear - NOM bird kill - PURP DIR - jump - STAT
'the bear jumped down in order to kill the bird' (vi)

(170) ah ečumu - h čo: - khiʔ [te i naw - e:ma]
1SG:NOM river - LOC go - STAT 3SG 1SG see - PURP
'I went to the river so s/he could see me' (31)

(171) ah lewa ma - kuyel - khi? [k'ešu naw - e:ma]
1SG:NOM outside DIR - walk - STAT deer see - PURP
'I went outside to see the deer' (83)

(172) taka? ah ne? - ukh hak' - še? [manaw' - e:ma]
basket 1SG:NOM have - INF want - DUR show - PURP
'I'd like to have some baskets to show' (128)

(173) [olol - e:ma] on pakan - ta?
dance - PURP people invite - PST
'(he) invited people for dancing' (Text B, 183)

(174) ah may' khuy'e - si? [čoh - e:ma]
1SG:NOM REFL dress:up - FUT go - PURP
'I'm going to dress up to go out' (263)

(175) A: ikhame:ma mi? ono?ši? okel haṭ - ukh
why 2SG:NOM Indian language know - INF

hak' - še?
want - DUR
'why do you want to learn Indian language?'

B: [on - thu okal - e:ma]
people - DAT talk - PURP
'so (I) can talk to people' (291)

In addition to its adverbial usage, a purpose clause can be used as a predicate nominal:

(176) he oye? (ce?(e?)) [k'ešu k'o? - e:ma]
DEM pot COP meat boil - PURP
'this pot is for cooking meat' (60)

(177) **he?e? [taka? hec' - e:ma]**
COP basket wipe - PURP
'{*here's* / *this is*} *(something) to wipe the dishes with' (194)*

A purpose clause may also be an adjunct to an indefinite head noun:

(178) **i - me? ok'o:t - i thal [ikha - e:ma] lah - khi?**
1SG - GEN children - NOM what do - PURP lack - STAT
'my children don't have anything to do' (311)

A verb form with a purpose suffix may be used as a noun; it is not clear to what extent this is a productive process. We have many examples, of which the following are representative:

wol -	'stir'	**wol - e:ma**	'paddle, stirrer'
k'o? -	'cook, boil'	**k'o? - e:ma**	'cooking vessel'
		k'ot - e:ma	
hec' -	'wipe'	**hec' - e:ma**	'towel'
coy' -	'pound'	**coy' - e:ma**	'pounding stick'
okal -	'talk'	**okal - e:ma**	'telephone'
očoč -	'weave'	**očoč - e:ma**	'weaving hook'
otay' -	'sing'	**otay' - e:ma**	'music box'
oyeh -	'trap (V)'	**o:yeh - e:ma**	'trap (N)'
chiw lat' - fly whip		**chiw lat' - e:ma**	'fly swatter'
hel khuṭ - fire build		**hel khuṭ - e:ma**	'stove'

6.5.2 Temporal clauses

There are three temporal clause conjunctions, **wen** 'when, while', **šu?u** 'after', and **yela** 'before'. Each of them occurs at the end of the dependent clause. We

present them as separate words, though we have no strong evidence for analyzing them as either words or suffixes.

A. **wen** *'when'*

The conjunction **wen** is used only in past contexts.

(179) [chica me mewiy' - ta wen] cephi
bear 3CO catch - PST:DEP when 3SG:NOM

pahčhoṭi - khi?
scared - STAT
'when the bear got hold of him/her, he got scared' (36)

(180) [i olol - o wen] cephi waraha
1SG dance - DUR:DEP when 3SG:NOM card

nayemi - se?
play - DUR
'while I was dancing, she was playing cards' (39)

(181) [i očoči - ta - lahukh wen] cephi
1SG weave - PST:DEP - NEG:DEP when 3SG:NOM

nale? - iš - khi?
angry - INCH - STAT
'when I didn't make(the basket), he got angry' (59)

(182) [i čhuya ma - kuy - se wen] ah i ek'a
1SG house DIR - go - DUR:DEP when 1SG:NOM 1SG son

huhkal - ta?
think - PST
'as I was going into the house, I thought of my son' (74)

(183) [i kutiya - kh wen] ah ew
1SG small - STAT:DEP when 1SG:NOM fish

pa? - ta - lahkhi?
eat - PST - NEG
'I didn't eat fish when I was little' (85)

(184) wey is - i isa - me? hayu naw - ta? [isa
and 1PL - NOM 1PL - GEN dog see - PST 1PL

te - welalu - kh wen]
DIR - return - STAT:DEP when
'and we saw our dog when we came back' (Text C, 233)

There does not appear to be any Wappo conjunction specific for reason clauses; our 'because' clause elicitor sentences were either rendered as conjunctions (see section 6.1.4) or translated with **wen**:

(185) k'anihtuč'm - i nale? - iš - khi? [k'ešu
chief - NOM angry - INCH - STAT deer

pulu:mek - ta wen]
run:away - PST:DEP when
'the chief got angry when/because the deer ran away' (7)

We have one instance of the conditional morpheme **cel'** (see section 6.5.3 below) being used to mark a past tense temporal clause (cf. (191) below):

(186) [isa čoho - kh cel'] ceko:t - i isa
1PL go - STAT:DEP COND 3PL - NOM 1PL

kat'ah - khi?
laugh - STAT
'when we left, they laughed at us' (38)

B. šu?u *'after'*

(187) [yekhe k'el - ta šu?u] ah ečumu - h
mush lick - PST:DEP after 1SG:NOM river - LOC

čo: - khi?
go - STAT
'after I ate the mush, I went to the river' (34)

(188) ceko:t - i [mesa o - pa? - ta šu?u]
3PL - NOM 3CO:PL UOP - eat - PST:DEP after

hinwey?a - khi?
sleep - STAT
'when they had finished eating, they went to sleep' (47)

(189) George - i [me ečumu - h c'es - ta šu?u]
George - NOM 3CO river - LOC swim - PST:DEP after

ce met'e naw - ta?
DEM woman see - PST
'after George went swimming in the river, he saw the woman' (62)

(190) [caha - mul' te - naw - is - ta šu?u] te - thu
thing - all DIR - see - CAUS - PST:DEP after 3SG - DAT

hopilak'a te - hes - ta?
quarter DIR - give - PST
'after (he) showed (him) everything, (he) gave him a quarter' (Text B, 180)

wen and šu?u can be interchangeable in certain contexts:

(191) [isa čoho - kh { wen / šu?u }] ceko:t - i isa
1PL go - STAT:DEP { when / after } 3PL - NOM 1PL

kat'ah - khi?
laugh - STAT
'when we left, they laughed at us' (38)

C. yela *'before'*

yela can also be used in either past or non-past contexts:

(192) ah šawo pa? - ta? [ce k'ew
1SG:NOM bread eat - PST DEM man

te - kuyalu - kh yela]
DIR - enter - STAT:DEP before
'I ate the bread before the man came in' (7)

(193) [me k'ešu k'eč'e - wis yela] cephi uh kučiya?
3CO meat cut - FUT:DEP before 3SG:NOM already knife

oh - hey - ta?
CAUS - sharp - PST
'before he can cut the meat, he (already) sharpened the knife' (37)

(194) mi - me? kučiya? oh - hey - e? [mi (keye) k'ešu
2SG - GEN knife CAUS - sharp - IMP 2SG OPT meat

k'eč'e - wis yela]
cut - FUT:DEP before
'before you cut the meat, sharpen the knife' (37)

6.5.3 Conditionals

The conditional conjunction is **cel'**, which we gloss as COND. Unlike any of the other dependent conjunctions in Wappo, it has a suppletive alternant which appears in negative conditional clauses, **kha**, glossed COND:NEG. We will illustrate each of these separately.

A. **cel'** *'if'*

(195) [i šawo ne? - khe cel'] keye ah
1SG bread have - STAT:DEP COND OPT 1SG:NOM

pa? - e
eat - HYP
'if I had some bread, I'd eat it' (35)

(196) [me yekhe k'ele cel'] keye cephi hu:ši?i:ya
3CO mush lick COND OPT 3SG:NOM good

pihkah - lah
feel - HYP
'if she ate some acorn mush, she'd feel better' (36)

(197) [i uwa pihkahli - kh cel'] ah winu
1SG bad feel - STAT:DEP COND 1SG:NOM wine

uk' - ši?
drink - FUT
'if I get sick, I'll drink some wine' (37)

(198) [mi te naw'i cel'] mi? te misi - si?
2SG 3SG find COND 2SG:NOM 3SG marry - FUT
'if you find her, you'll marry her' (61)

(199) [mi te o - me? - is cel'] keye cephi
2SG 3SG UOP - feed - CAUS COND OPT 3SG:NOM

čho?e - lahkhih
die - NEG:HYP
'if you had fed it, it wouldn't have died' (88)

(200) [te ceta ohc'om'ah cel'] ah te
3SG there squat COND 1SG:NOM 3SG

oh - waṭhih - si?
CAUS - hit - FUT
'if he squats there, I'll hit him/her' (609)

The conditional morpheme **cel'** is also used for habitual contexts:

(201) [phil' makha cel'] ah chach - še?
snow precipitate COND 1SG:NOM cold - DUR
'if it snows, I get cold' (36)

(202) [i winu uk'i cel'] ah uwa pihkah - se?
1SG wine drink COND 1SG:NOM bad feel - DUR
'when I drink wine, I feel bad' (207)

(203) [me ololi cel'] cephi huth - ša?
3CO dance COND 3SG:NOM crazy - DUR
'whenever he dances, he goes crazy' (150)

(204) [mi Jenny - k'a yok'i cel'] cephi mi
2SG Jenny - COM live COND 3SG:NOM 2SG

hopeh - se? he?
care:for - DUR Q
'when you stay with Jenny, does she take care of you?' (208''')

(205) [oma makha cel'] i phe? - i kali - ša?
everywhere precipitate COND 1SG foot - NOM hurt - DUR
'whenever it rains, my feet hurt' (281)

(206) cephi i peh - ša - lahkhi? [i me - thu
3SG:NOM 1SG look:at - DUR - NEG 1SG 3CO - DAT

okal'te cel']
talk COND
'she doesn't look at me when I talk to her' (286)

As in many languages, there is no morphological distinction between more and less certainty for future conditionals. The following examples of certain future situations are all translated with 'when' or 'while' in English, but treated as a subclass of conditionals in Wappo:

(207) may' hucati - ti? [mi k'ešu yekha cel']
REFL careful - IMP 2SG deer hunt COND
'be careful when you go hunting' (14)

(208) [isa čo: cel'] ceko:t - i isa kat'ah - si?
1PL go COND 3PL - NOM 1PL laugh - FUT
'when we leave, they'll laugh at us' (38)

(209) [isa he omehwiliš pikali - kh cel'] mi?
1PL DEM story listen - STAT:DEP COND 2SG:NOM

opa?ukh mes - ti?
food make - IMP
'while we listen to the story, you cook dinner' (39)

(210) [ce layh tu - le?a cel'] okal'te - lahkhi?
DEM white:person DIR - come COND talk:IMP - NEG
'when that white person comes, don't talk' (69)

(211) ah tuč' - iš hak' - še? [i hewa cel']
1SG:NOM big - INCH want - DUR 1SG grow COND
'I want to be big when I grow up' (94)

Concessive conditionals do not appear to have special morphology; rather concessive morphemes are found in the main clause (see section 6.1.2):

(212) [chica me mewiy'i cel'] kot'a ma?a cephi
bear 3CO catch COND but still 3SG:NOM

ce pahčhoṭi - kh - lahkhi?
DEM afraid - STAT:DEP - NEG
'even if a bear caught him/her, he wouldn't be afraid' (36)

B. kha *COND:NEG*

kha is used instead of cel' when the conditional clause is negative:

(213) [i k'ešu ṭ'oh - lah kha] keye cephi
1SG deer kill - NEG:DEP COND:NEG OPT 3SG:NOM

i - thu nale? - iš - lahkhih
1SG - DAT angry - INCH - NEG:HYP
'if I hadn't killed the deer, he wouldn't have gotten angry' (35)

(214) [mi o - pa?e - lah kha] mi?
2SG UOP - eat - NEG:DEP COND:NEG 2SG:NOM

ohak'lek - si?
hungry - FUT
'if you don't eat, you'll be hungry'

(215) [i te - wele - lah kha]
1SG DIR - return - NEG:DEP COND:NEG

nale? - iš - lahkhi?
angry:IMP - INCH - NEG
'if I don't come back, don't get mad' (59)

(216) [i ek'a ew t'ume - lah kha] ah
1SG son fish buy - NEG:DEP COND:NEG 1SG:NOM

nale? - iš - i?
angry - INCH - DUR
'if my son doesn't buy fish, I'll be angry' (114)

(217) paʔe - lahkhiʔ [mi hak'likh - lah kha]
eat:IMP - NEG 2SG like - NEG:DEP COND:NEG
'don't eat it if you don't like it' (204)

Appendix: Additional Verb Paradigms

In order to supplement the verb paradigms presented in section 4.2 and illustrate further the pattern of epenthesis and stem change described in section 4.3, we show additional paradigms for 20 verbs, with representative examples from each major verb class. Some of the blanks in these paradigms are due to the fact that we did not happen to collect those particular forms, but others represent forms that do not occur, as described in chapter 4. For example, the STAT suffix only occurs with stative verbs but not with active, which explains the blanks in the STAT row for DUR1 and DUR2 verbs, which are typically active.

The reader is invited to compare the paradigms here with the discussion in section 4.3 (particularly the summary table at the end of the section) to observe how the Wappo verb paradigm operates. Note, however, as with the verbs discussed in section 4.3, there are a small number of idiosyncratic exceptions in these paradigms as well. While we are unable to account for these exceptions, we believe the paradigms presented here serve as a good overview of the Wappo verb system.

For the FUT forms, we included only the FUT2 form from the two possible forms (see section 4.1.5) because we find they are virtually always used in the same manner

word	as	choy'	pitek	kham
gloss	leech	write	knock over by bumping into	do
DUR class	1	1	1	2
IMP class	1	1	2	1
INF class	1	1	1	1
DUR	as - mi?	choy' - mi?	piteku - mi?	kham - i?
PST	as - ta?	choy' - ta?	piteki - ta?	kham - ta?
STAT				
FUT	asi - si?	choy'ih - si?	pitekel - si?	khamih - si?
IMP	as - ti?	choy' - ti?	pitekel	kham - ti?
NEG	asu - lahkhi?	choy'o - lahkhi?	pitekise - lahkhi?	khamu - lahkhi?
NEG:FUT	asi - lahkhusi?	choy'ih - lahkhusi?	pitekel - lahkhusi?	khamih - lahkhusi?
NEG:IMP		choy'ih - lahkhi?	pitekel - lahkhi?	khamih - lahkhi?
INF	as - ukh	choy' - ukh	pitek - ukh	kham - ukh
CAUS	as - asa?	choy' - asa?	pitek - asa?	kham - asa?
PURP	as - e:ma	choy' - e:ma	pitekel - ma	
PASS	as - khe?	choy' - khe?	piteku - khe?	
-mime?	as - mime?	choy' - mime?	pitek - ime? / piteku - mime?	
-miti?	as - miti?	choy' - miti?	pitek - iti?	kham - iti?

word	heyh	čoč	wal'	nočay' - še?
gloss	saw wood	weave	call, ask for	enjoy by tasting
DUR class	2	2	3	4
IMP class	2	2	2	1
INF class	1	1	1	1
DUR	heyh - i?	čoč - i?	wal' - ši?	nočay' - še?
PST	heyh - ta?	čoči - ta?	wal' - ta?	
STAT				nočay'a - khi?
FUT	heyhe - si?	čoče - si?	wal'i - si?	nočay'a - si?
IMP	heyhe?	čoče?	wal'i?	nočay'a - ti?
NEG	heyh - i - lahkhi?	čoč - i - lahkhi?	wal' - iš - lahkhi?	nočay' - še - lahkhi?
NEG:FUT	heyhe - lahkhusi?	čoče - lahkhusi?	wal'i - lahkhusi?	nočay'a - lahkhusi?
NEG:IMP	heyhe - lahkhi?	čoče - lahkhi?		nočay'a - lahkhi?
INF	heyh - ukh	čoč - ukh	wal' - ukh	
CAUS	heyh - asa?	čoč - asa?		nočay' - asa?
PURP	heyh - e:ma	čoč - e:ma		
PASS	heyh - khe?	čoču - khe?		
-mime?	heyh - ime?	čoč - ime?		
-miti?	heyh - iti?	čoč - iti?	wal' - iti?	

word	mešik'	nale?	huyek'	čuteh
gloss	breathe	mad/angry at	glad	forget
DUR class	4	5	6	6
IMP class	2	2	1	2
INF class	1	3	1	1
DUR	mešik' - še?	nale? - ša?	huyek' - se?	čuteh - se?
PST				čuteh - ta?
STAT	mešik'el - khi?		huyek'i - khi?	
FUT	mešik'el - si?	nale?i - ši?	huyek'a - si?	čutehel - si?
IMP	mešik'el'	nale?ši?	huyek'a - ti?	čutehel'
NEG	mešik' - še - lahkhi?	nale? - ša - lahkhi?	huyek' - se - lahkhi?	čuteh - se - lahkhi?
NEG:FUT	mešik'el - lahkhusi?	nale?iš - lahkhusi?	huyek'a - lahkhusi?	čutehel - lahkhusi?
NEG:IMP	mešik'el - lahkhi?	nale?iš - lahkhi?		čutehel - lahkhi?
INF		nale? - is		čuteh - ukh
CAUS		nale? - asa?		čutehal - asa?
PURP				
PASS				
-mime?				
-miti?				

word	man	hočoh	pihil'	c'es
gloss	take out	walk around	shake (tree to get fruit)	swim, bathe
DUR class	7	8	10	11
IMP class	2	2	2	1
INF class	2	1	1	1
DUR	mani - yaʔ	hočoh - alaʔ	pihil' - siʔ	c'es - eʔ
PST	manumek - taʔ		pihil' - taʔ	c'es - taʔ
STAT				
FUT	manumekh - siʔ	hočohel - siʔ	pihil'e: - siʔ	c'esi - siʔ
IMP	manumaʔ	hočohel	pihil'eʔ	c'es - tiʔ
NEG	man - iya - lahkhiʔ	hočoh - ala - lahkhiʔ	pihil' - is - lahkhiʔ	c'es - e - lahkhiʔ
NEG:FUT	manumek - lahkhusiʔ	hočohel - lahkhusiʔ		c'esi - lahkhusiʔ
NEG:IMP	manumekh - lahkhiʔ	hočohel - lahkhiʔ	pihil'e: - lahkhiʔ	c'esi - lahkhiʔ
INF	manumekh	hočoh - ukh	pihil'h - ukh	c'es - ukh
CAUS		hočohal - asaʔ	pihil' - asaʔ	c'es - asaʔ
PURP			pihil' - e:ma	c'es - e:ma
PASS			pihil' - kheʔ	
-mimeʔ			pihil' - mimeʔ / pihil' - imeʔ	c'es - mimeʔ
-mitiʔ			pihil' - itiʔ	c'es - mitiʔ

word	mam	čoh	elu?	pika
gloss	gamble	go	stay with it, keep at it	listen to
DUR class	11	12	13	0
IMP class	2	2	?	3
INF class	1	1	2	1
DUR	mam - e?	čoh - me?	elu? - sa?	
PST			elu?is - ta?	pika - ta?
STAT	mamte - khi?	čo: - khi?		pika - khi?
FUT	mamte - si?	čo: - si?	elu?i - si?	pikalik - si?
IMP	mamte?	čo?		pika - la?
NEG	mam - e - lahkhi?	čoh - me - lahkhi?	elu? - sa - lahkhi?	pika - khi - lahkhi?
NEG:FUT	mamte - lahkhusi?	čo: - lahkhusi?	elu?is - lahkhusi?	pikalik - lahkhusi?
NEG:IMP		čo: - lahkhi?		pikalik - lahkhi?
INF		čoh - ukh	elu?is	pika - kh
CAUS		čoh - asa?		pikal - asa?
PURP	mam - e:ma	čoh - e:ma		
PASS				
-mime?				
-miti?				

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