

Sketch of Wichita, a Caddoan Language

DAVID S. ROOD

Phonology

1. Syllable Nuclei
 - 1.1. Vowels and Length
 - 1.2. Pitch and Stress
2. Syllable Margins
3. Syllables
4. Underlying Phonology

Grammar

5. Citation of Forms
6. Organization of the Description

Semantic Structure

7. The Verb
 - 7.1. Selectional Classes: Action, Process, Stative, Transitive, Impersonal, Benefactive

In 1991, Wichita was spoken by about a dozen people in central and south-central Oklahoma, principally around Anadarko and Gracemont, but also including Lawton. Together with Pawnee and Arikara, it forms the North Caddoan branch of the Caddoan family, of which Caddo is the only other living representative. Information is also available about one other North Caddoan language, Kitsai, which is extinct.

In the 1990s there were no dialect variations remaining among the various Wichita speakers, although formerly Waco, Tawakoni, and Wichita proper were recognized as separate dialects. For a survey of early recorded information about Caddoan languages and a discussion of the genetic relationships among them, see Taylor (1963, 1963a).

All fluent speakers in 1994 were older than 60. There were no living monolinguals. In 1965, speakers who could use the language tended to do so at every opportunity; older people gathered for socializing or for business preferred to conduct conversations in Wichita if possible; grandparents who wished to communicate about grandchildren with the parents of the children used Wichita as a "code," even though the parent was usually unable to respond in Wichita. These occasions never produced exclusively Wichita utterances; English words and sentences were frequently intermingled (see Rood 1989a for some detailed examples). Consequently, most of the continuous text data in Rood

7.2. Inflectional Possibilities: Mood, Evidential, Tense/Aspect

8. The Noun

- 8.1. Selectional Classes: Countable, Liquid, Collective, Animate, Activity
- 8.2. Inflectional Possibilities: Case, Number, Person, Focus, Definite

9. Modifiers

- 9.1. For Nouns
- 9.2. For Verbs
- 9.3. Intensifiers

10. Derivation

Surface Structure

11. Word and Morpheme Order
12. Conclusion
13. Selected Vocabulary

(1976, 1977) are in the form of stories or conversations that were dictated or staged expressly for the author.

In 1994 the language was spoken rarely, even by those who were able to do so.

Most of the data on which this description is based were collected in the summer of 1965 and throughout the academic year 1966-1967. Rood (1976) was based entirely on these data. Rood's main assistant from 1964 until the early 1980s was Bertha Provost (fig. 1), but information has also come from George Bates, May Lamar Davis (fig. 2), Berdina Holder, Doris Lamar (fig. 2), Elton Lamar, Leta Lamar, Vivian McCurdy (fig. 3), Frank Miller, Houston Miller, Clara Moonlight, Faye Owings, Bertha Picard, Helen Wheeler Querdibitty, Martha Reeder, and Lorraine Ross. Most of the texts from which the examples used below were drawn appear in Rood (1977).

PHONOLOGY

1. SYLLABLE NUCLEI

1.1. VOWELS AND LENGTH

Wichita utterances utilize three phonemic vowels: /i, e, a/. Each of these occurs either short, long, or overlong, with varying frequencies. In addition, a sequence of short vowel plus /w/ plus short vowel will often be pronounced [oː] (like the *oo* of German *Boot*), so that one



Fig. 1. Bertha Ross Provost (*ka'santatiyeh* 'following with a scalp', nicknamed *tikammac* 'grinding corn') (b. ca. 1890, d. 1983), and her great-grandson Lester Poolaw, Jr. Beginning in 1964, Provost shared much with Rood about traditional life and many Wichita stories, which she had learned from her grandmother.

Provost spoke only Wichita until she was 9 years old and was taken by force to the Riverside School in Anadarko, Okla. While she was a teenager her parents arranged her marriage to James Ross, who died soon after the birth of their second child. She then married William Henry Provost, a Sioux, who was a preacher. She helped him in his Bible classes and church services, often serving as the Wichita interpreter. Photographed probably at the Wichita and Pawnee gathering in Pawnee, Okla., about 1975 (digitally retouched).

actually hears four vowels (i, e, a, o) when listening to Wichita.

In this chapter, a raised dot following a vowel indicates that the vowel is held about twice as long as an unmarked vowel; a colon means it is held from two and one-half to three times as long as the short vowel.

1.1.1.

/i/ is phonetically mid or high front and unrounded. It can thus sound like any of the vowels in English *beat*, *bit*, or *bait* (although German *Beet* is closer than English *bait*). Usually it is higher (more like *beat*) when short, especially after [r], and lower (more like *Beet*) when lengthened, so that one hears [i] and [eː] or [eː]; nevertheless, this is not consistent, and the vowel is best described as ranging from [e] to [i], with these and all the phones in between being in free variation. This vowel occurs about equally often short, long, and overlong.

1.1.2.

/e/ is phonetically low, front unrounded [æ] or [ɛ]. It can thus sound like the vowel of either *cat* or *pet*. It very rarely occurs short, except in the sequence */eʔe/*; and it is by far the most frequent overlong vowel. This distribution, as well as the strange configuration of the vowel system in general and the parallelism of [oː] = [VwV], lead one to suspect that */e/* could be treated as

the sequence [ayi] or [iya]. But since there is often no evidence to motivate the choice of one of these sequences over the other, for the present */e/* must be retained in both the surface and underlying phonological representations of some forms (section 4).

1.1.3.

/a/ is usually a low, back, unrounded vowel [a]. It is thus similar to the English vowel of *cot-caught* in the speech of many western and southern Americans. Before or after */w/*, it is sometimes rounded slightly, to sound like the vowel of *caught* in most English dialects that separate *cot* and *caught*. When short in unstressed syllables, it is often raised and centralized to [ʌ] (like the *u* of *but*). The low central [a] (the vowel of *father*) is rarely heard anywhere. */aː/* and */aː/* are always low, back, and unrounded. Both */a/* and */aː/* are common, but */aː/* occurs in very few words. Contrast, however, *náːʔih* 'his' with *náːʔih* 'his child', or *hárah* 'there (used when pointing)', *haːríh* 'that one', and *haːrih* 'there, in that place'.

1.1.4.

[oː] is normally the only length variant for this phone. One word, [hoʔos] 'soon', presents the only other occurrence of a back, rounded vowel, but it does not force the conclusion that the language has a phoneme */o/* or */u/*. From various kinds of evidence, it can be deduced that this word should be represented as [hawʔas], and all the occurrences of [oː] represented as sequences involving [w]. Garvin (1950) contains several transcriptions of words with short */u/*, all of which actually represent */a/* in a backing and rounding environment (Rood 1975).

1.1.5.

/i/ and */a/* are voiceless in word-final position. The preceding consonant is always either */k/* or */ʔ/*. In the examples below, an underlying final vowel may be written after other consonants, but it is not pronounced there. There are no examples of */e/* in this environment, so there are no examples of voiceless */e/*. Voiceless vowels are always short and may carry secondary stress.

1.1.6.

There are no vowel clusters. Garvin (1950) does describe several of them, but reexamination and the addition of further data have revealed that each of his clusters is either */VyV/* or an erroneous treatment of */w/*. Furthermore, his discovery of variable length in certain environments was not confirmed by Rood (1965-1969).

1.2. PITCH AND STRESS

Every vowel will have either a high pitch (tone) (which in word-final position is a falling pitch contour) or a low pitch accompanying it. The distribution of pitches is entirely unpredictable and phonemic; stress, which



Fig. 2. Doris Jean Lamar (McLemore; b. 1927), standing, and her mother May Lamar (Davis; b. 1906). May grew up on her parents' allotment southeast of Gracemont Okla., and attended Riverside School in Anadarko and Haskell Institute in Kans. Doris was raised by her grandparents on the same allotment and grew up fluent in Wichita. For 30 years she worked as an educational aide at the boarding school. From about 1986 she was Rood's primary consultant. Both women were instrumental in producing a set of Wichita language lessons on tape. Photograph by Ron South, Chickasha, Okla., Aug. 1993.

occurs in three degrees (primary, secondary, and unstressed) can be predicted most of the time from the position of the pitches.

1.2.1.

The rules for stress prediction are complex, and unexplained counterexamples exist. For primary stress, a hierarchy of priorities exists: in a given word, all high-pitched syllables will have primary stress; if no high pitches occur in the word, long vowels receive primary stress; if neither high pitch nor a long vowel occurs in the word, the last voiced vowel has primary stress—except that in two-vowel words with only short, low-pitched vowels, neither vowel is more strongly stressed than the other.

1.2.2.

Once the primary stresses are established, secondary stress is assigned to alternate vowels (in either direction)

from the main stresses. A pattern of alternating stressed and unstressed syllables is thus developed, in which the stressed syllable can have either primary or secondary stress. If two primary stressed vowels occur in the same word and would seem to assign conflicting secondary stresses, the conflict is usually resolved by stopping at the place where the two overlap, allowing a sequence of two unstressed syllables if necessary.

1.2.3.

Examples are as follows. Bolding marks primary stress; underlining marks secondary stress; the acute accent marks high pitch.

- (1) *nahe'hárih* 'creek' is stressed [na-he'-**há**-rih], following the rule that primary stress coincides with high pitch, and the rule that secondary stress occurs on alternate vowels from the pitch in either direction.
- (2) *kinni'ca?ak?í'has?ih* 'alfalfa' (literally 'that which does not die out') is longer, but similar. The stresses are [kin-ni'-ca-?ak-**í**'-has-**í**h].
- (3) *k?íta'kski'ya'k?a* 'millet' (literally 'coyote tail') demonstrates a secondary stress on a voiceless vowel; the pattern is [**k**?í-ta'ks-ki'-ya'k-**a**].
- (4) *tikasi'sk** 'he has a beard', stressed [tí-ka-si'**sk***], illustrates primary stress on a long vowel, plus secondary on alternate vowels from the primary.
- (5) *niye'skic?i's* 'baby' (literally 'unripe child') shows two primary stresses, one on each long vowel, and no secondary stresses: [ni-**ye**'s-kic-**í**s].
- (6) *tika?acs* 'he is eating it' and *naka?acskih* 'the one who is eating it' illustrate words with short, low-pitched vowels and stress on the last vowel; note that the root, *-ka?ac-*, receives varying kinds of stress, depending on the shape of the rest of the word: [tí-ka-**acs**; na-ka-**acs**-**kih**].
- (7) *árasí:cíte'riw* 'you finished it (put an edge or border on it)', stressed [**á**-ra-si'-**cí**-te'-riw], shows the suspension of the secondary stress assignment rule where conflict results. *ára*- would demand that *-sí-* be stressed, while *-cí-* would demand that the preceding *-ra-* be stressed; the result would be ***[á-ra-si'-cí-...]**, which is not the actual form.
- (8) counterexamples to the rules are of three types:
 - (a) Sometimes secondary stresses occur on adjacent syllables, without obvious reasons why. Note [**sá**'-ri-í-tí-ka?a] 'Arapaho' as one instance.
 - (b) Secondary stresses sometimes occur on syllables adjacent to high pitches, as in [ka-kin-na-**k*****há**'c-í-ki] 'apple' (literally, 'some things that are red').



Fig. 3. Vivian McCurdy (*te'ska'hi'k'a* 'corn woman') (b. 1925), who provided Rood information on Indian names. She was the enrollment clerk for the tribe in the late 1970s and early 1980s. Photograph by Emma I. Hansen, Anadarko, Okla., 1981.

(c) In some situations, the counting of alternate syllables seems to extend farther from one primary stress than from another, as in [kiya'kíriwa'c'árasarikita'ahí'riks] 'he brought the big (quantity of) meat up to the top (by making many trips)'. Here both syllables of *-kita-* 'top' receive secondary stress, the *-ki-* under the influence of *-?á-*, the *-ta-* under the influence of *-hí-*. According to the general patterns described above, only the *-ta-* should have been stressed.

In situations where secondary stresses occur in unexpected places, they are marked with a grave accent. Thus the example in 8c would be written *kiya'kíriwa'c'árasarikità'ahí'riks*.

Probably the resolution of some of these problems lies in ordering the stress-placement rules with vowel deletion rules (section 4.5.). Some vowels that must be

counted to determine stress placement are apt to have been deleted by later rules, thus destroying the obvious surface regularity. But this will not account for 8c, because *kita* is a single morpheme.

2. SYLLABLE MARGINS

Wichita uses no true labials, and no phonemic nasals, in its consonant system except for two verb roots |kammac| 'grind corn' and |camma'ci| 'hoe, cultivate'. The system has the following 10 members:

	labio-velar	alveolar	palatal	velar	glottal
stops	k ^v	t		k	ʔ
affricate		c			
fricatives		s			h
approximants	w	r~n	y		

2.1.

The stops and affricate (*/c/* = [ts]) are voiceless, unaspirated, and tense (similar to French voiceless stops). */s/* is alveolar, and varies freely from grooved to flat articulation (but usually one speaker prefers one articulation, the next the other). The phoneme written */r~n/* is an alveolar flap or tap ([ɾ], the single *r* of Spanish *pero*) which is nasalized when it occurs before other alveolars, when it is geminate, or when it is in initial position before vowels. In other words, the medial or final clusters beginning with this phoneme include [nc, nt, ns, nn, ɾʔ, ɾh]; initially, [n] and [ɾh] occur (and [ɾ] is voiceless here); intervocally, [ɾ] is the allophone used. Both [ɾ] and */w/* (and the [w] component of */k^v/*) are voiceless in word-final position.

2.2.

Clusters of up to five consonants ([ncksk] in *nahi'inckskih* 'while sleeping' is the longest example) occur medially; up to four occur finally. These clusters are composed of alternating stop-continuant-stop-continuant sequences, or of series of continuants, or of both, where */c/* and */ʔ/* function as either stop or continuant (Garvin 1950:182). In addition to [nn], the geminate clusters are */ss/* and */cc/* ([tsts]). Word initially, besides */rh/*, the only clusters attested are */ks, th, kʔ, ch, k^vh, kh, ckh, and kskh/*. There is a contrast between initial vowel and initial */ʔ/* plus vowel: */ʔi/* marks the third person of the negative indicative tense, while */i/* marks the equivalent form of the directive tense.

/y/ does not participate in any (surface) consonant clusters. It usually occurs between */i/* or */e/* and */a/*, but rare instances of */iyel/*, */eyel/*, */ayel/* and */aya/* exist. For examples, compare *niye's* 'child', *ka'si'áre'ye'es?i* 'the place is unknown', *tà'yè'csà'as* 'he is bringing fire', and *ta'ya'rhàra'as* 'he is bringing wood'.

3. SYLLABLES

Every Wichita vowel is the nucleus of a syllable. In word-initial position only, the vowel may have from zero to four consonants preceding it: */a-k'í-thah/*

'above', /rhincʔa/ 'trousers', /ckharʔa/ 'night', /kskharʔa/ 'joint where thigh attaches to hip'. In other positions in the word, at least one (and usually only one) consonant must precede the vowel in its syllable. Up to four consonants may follow the vowel in the syllable. In word-final position, all syllables end with either a consonant or a voiceless vowel.

Much of the description of syllable structure follows from the description of consonant clusters (section 2.2.). Despite the general canon of (C)(C)(C)(C)V(C)(C)(C)(C), the longest medial cluster found consists of only five consonants; so there must be some restrictions on the sequences of syllable types.

Phonetically, /c/ and /s/ are often syllabic between other consonants, but the conditions for this have not been determined.

4. UNDERLYING PHONOLOGY

Many Wichita morphemes have several pronunciations, depending on their contexts. For example, /raʔk/ 'non-third-person is plural' may also be /raʔr/, /raʔs/, /haʔk/, /haʔs/, /aʔs/, /aʔk/, or even /aʔ/, depending on the particular word in which it occurs. By establishing a single phonological shape, called the underlying shape, for the morpheme, and listing a few rules that describe how underlying sounds change in various environments, all these variations and many more can be explained. The underlying shape for 'non-third-person plural' is thus [raʔk], identical in this case with one of the surface shapes.

The phonological system needed to account for all the morpheme variation differs somewhat from the surface structure system described above. The inventory of underlying phonological elements contains four vowels, |i, e, a, u| (and all but |u| occur both long and short); a pitch contrast; and 11 consonants: |kʷ, t, k, ʔ, c, s, r, w, y, h| and |R|.

4.1.

At the most easily recoverable level, the underlying vowel system contains four members, |i, e, a| and |u|. A system of three members, |i, a, u|, is probably correct at a slightly deeper level (section 1.1.3. discusses an alternative analysis of |e|).

Underlying |u| is surface /i/ or /i:/ in all environments; but discovering which surface /i/s are to be taken as representatives of |u| is not simple, except in two environments.

It is apparent that a rule of the form

(9) $i > a / _ ʔa$

(read: |i| changes to /a/ in the environment before |ʔa|) is needed to account for such variations as the following:

(10) |ti + taʔras + ʔak + ʔariki| (indicative third person + horse + plural + stand) > *titaʔrasʔakʔariki* 'the horses are standing'

(11) |ti + ʔak + ʔariki| (indicative third person + plural + stand) > *taʔakʔariki* 'they are standing'

That is, third-person indicative tense marker |ti| appears as /ta-/ before the |ʔa| of the plural marker.

Nevertheless, there are surface sequences of /iʔa/. The best account of these is to assume that the /i/ in this environment represents underlying |u|. Observe:

(12) |is + ru + ʔariki + iki| (imperative second-person + collective + stand + causative) > *issiʔariʔki* 'set them down'

(13) |is + ʔariki + iki| (imperative second-person + stand + causative) > *isʔariʔki* 'set it down'

(14) |ti + ʔariki + is| (indicative third person + stand + caustive imperfective) > *taʔariʔs* 'he set it down'

The explanation of surface sequences of /iʔa/ despite the rule that |i| changes to /a/ before /ʔa/ is thus accomplished by the establishment of an underlying |u|. The other environment where |u| solves a problem follows from the observation that a very general rule changes noninitial |t| to /c/ unless the |t| is followed by |u| or |a|. Hence the surface environment /-ti/ indicates an underlying |-tu|. Compare, for instance, 15-17. (In the examples, the term *preverb* refers to a separate part of some roots. Potentially, many morphemes may occur between the preverb and the rest of the root. Compare positions 5 and 10 in section 12.1.11.).

(15) |ta + t + i + iʔahi| (indicative + first-person subject + preverb + hold) > *taciʔeh* 'I am holding it'

(16) |ta + t + aʔ + uc + i + iʔahi| (indicative + first-person subject + reflexive + possessive + preverb + hold) > *tataʔciʔeh* 'I am holding my own'

(17) |ta + t + uc + i + iʔahi| > *tatiʔciʔeh* 'I am holding his' (glosses of individual morphemes as in 15 and 16)

Note in these examples the first-person marking /c/ in 15, where it occurs before |i|, but /t/ in 16 and 17, where it occurs before |a| or |u| respectively. Note, too, that here |u| disappears after |aʔ| but becomes /i:/ in other environments.

4.2.

The difference between long and short vowels (for *i* and *a* at least) is distinctive in the underlying system as well as in the surface system. However, the overlong vowels are probably to be derived from sequences of long vowel plus consonant plus short vowel, where the consonant has been deleted. Internal evidence for this is scanty, but informal comparison with related languages reveals that Wichita frequently loses intervocalic |h| and |y| where other languages preserve them. Nevertheless, until further work can be completed, it is necessary to preserve the contrast between long and

overlong to account for the differences in pairs of roots such as |ʔi:sʔ| ‘look at’ versus |ʔi:s| ‘see’, or |re:hi| ‘put plural object lying’ versus |re:hi| ‘buy; choose; pick up’. It is highly probable that these pairs are related, one form somehow derived from the other; but the details are not presently recoverable.

4.3.

Many forms with high pitch on a vowel can be derived from an underlying form without the pitch, but with a more complex sequence of consonants than the surface structure presents. An obvious example is the word for ‘house’, |akhahrʔa|. If the second vowel of this word is the last voiced vowel in a surface structure word, it is long; hence the pronunciation in isolation is *akha:rʔa*. Elsewhere that vowel is short and high pitched, as in the compound *akhákhac* ‘white house’, underlying |akhahr + khac|. When the |-hrkh-| cluster is simplified, it leaves a high pitch behind on the vowel.

It therefore seems reasonable to assume that high pitch is a kind of compensation for (or marking of) an underlying consonant cluster simplification. Yet the residue of forms that cannot be treated this way is not negligible. Noun roots such as *tés* ‘corn’ and *kʔita:ks* ‘coyote’ seem to have an inherent pitch on one of the root vowels; and neither internal reconstruction, nor morphophonemics, nor comparative evidence motivates an underlying form without pitch for such roots. It is therefore unavoidable that some vowels be marked for pitch in the underlying form.

4.4.

Underlying consonants include all those listed in the surface phonological description, plus |R|. The difference between |R| and |r| is that the latter coalesces with neighboring consonants to form clusters (e.g. |rs| > /ss/; |rt| > /c/; |rk| > /hk/; |rw| > /hkʔ/; |kr| > /rh/; etc.) while the former simply disappears in the same environments; both appear as [r̄] between vowels or as [n] word-initially before a vowel.

4.5.

The process of going from underlying to surface forms involves three steps. First, certain vowels of the underlying forms are syncopated (deleted); second, the consonant clusters that result are simplified; finally, sounds are assimilated to their environments as illustrated in tables 1 and 2. An illustration of exactly how this process works is the word ‘tree’, literally, ‘wood stands upright’. The underlying form is

- (18) |ta + i + ya:k + ri (ruʔ) + wi| (indicative + third-person subject + wood + collective + stand upright)

First, the |a| of |ta| and the |i| (or |u|) of |ri| are syncopated, although why these vowels are chosen instead of others is unexplained. Second, the intermediate form |tiya:krwi| undergoes consonant cluster simplification, in which |krw| becomes /hkʔ/, and the vowel of ‘wood’

Table 1. Cluster Simplification for Two-Consonant Clusters

Morpheme final	Morpheme initial									
	t	k	kʔ	ʔ	c	s	r	w	y	h
t	ct	ck	ckʔ	cʔ	cc	c	c	ckʔ		ch
k	st	k	kʔ	kʔ	ʔc	ks	rh	kʔ	h	kh
ʔ	t	k	kʔ	ʔ	c	s	r	w		
c	ct	ck	ckʔ	cʔ	cc	cs	c	ckʔ		{ch}
s	st	sk	skʔ	sʔ	sc	ss	ss	skʔ	ss	{cs}
r	c	hk	hkʔ	rʔ	nc	c	nn	hkʔ		{sh}
h	ʔ	k	kʔ	ʔ	ʔc	s	{r}	hw		{ss}
y	ʔ	k		y			{r}			rh
							{r}			h
							{r}			y

NOTES: */r/ occurs when a voiced vowel follows in the word; /r/ occurs otherwise.

A consonant on the left, followed by one on top, results in the surface structure consonants or cluster given at the appropriate intersection of the columns. A blank on the chart means no examples of the combination have occurred. There are no morphemes ending in /w/ or /kʔ/, so these phonemes are omitted from the vertical dimension of the chart. For |R| see section 4.4.

Table 2. Some Underlying Possibilities for Surface Consonants

Surface Structure	May represent underlying
kʔ	kʔ ; w / c, s, r, t_
t	t ; Rt
k	k ; kk ; Rk
ʔ	ʔ
c	c ; t ; cR ; tr ; rt ; rs
s	s ; r ; sR ; y ; hs ; k /_t
w	w
r	k /_h; R ; r
h	h ; y /#_ ; r /r, s_ ; r /_k, kʔ

NOTE: To the right of the slashes are indicated special environments; thus |k|/_t means “underlying |k| before t”, and |y|/#_ means “underlying |y| after word boundary.”

receives a high pitch as part of this process. Finally, the word-final |i| is devoiced, and because it is not following /k/ or /ʔ/, it is lost; this leaves /kʔ/ in word-final position, where the [w] element is devoiced. The result is the surface structure form

- (19) *tiyáhkʔ* ‘tree’.

In the case of this word, numerous related forms with more and different morphemes enable the recovery of the |ta| and the |rV| with a very high degree of certainty. However, in many of the data the determination of the precise shapes of the underlying forms is difficult, if not impossible. It is therefore frequently the case that so-called underlying forms will be given below as if step one of the phonological realization process had already been accomplished. For example, ‘tree’ would most likely be cited as |ti + ya:k + r + wi|, rather than as in 18.

4.6.

The consonant cluster simplification rules are given in table 1, for two-consonant clusters. Vowel rules not already mentioned are not included. Table 2 presents the consonant information from the point of view of the analyst seeking the underlying forms. These tables substitute here for the formal list of rules that would be needed in a complete grammar. See Rood (1975) for a more formal discussion of Wichita phonology.

GRAMMAR

5. CITATION OF FORMS

The examples used to illustrate Wichita grammar below will always be given in two forms. First, the surface phonemic form (an indication of pronunciation) will be presented, with the following modifications:

- (a) [ř] and [n] will be distinguished, for mnemonic reasons, as *r* and *n*;
- (b) [o'] will be written when the regular pronunciation of the form demands the contraction (the underlying form can be read from the second transcription);
- (c) Vowels with irregular secondary stress will be written with a grave accent wherever the rules given in section 1.2.2. do not predict it correctly.

Second, a morpheme-by-morpheme analysis will be presented. Here each Wichita morpheme will be transcribed in its underlying (morphophonemic) form and translated. In this analysis, the plus sign (+) will be used to separate bound morphemes; the semicolon (;) will separate forms that are independent words in the surface structure. Occasionally, underlying forms will be written with *n* rather than *r* to distinguish two morphemes that would otherwise look identical. The most frequent example of that is *na* 'participle', which contrasts with *ra* 'indicative interrogative'. Moreover, although most morphemes, including verb roots, do not occur as separate words, hyphens will not be written, and vertical bars will not be used in these analyses.

6. ORGANIZATION OF THE DESCRIPTION

The theoretical approach taken here is that outlined in Chafe (1970).

6.1.

It is assumed that the simplest sentence in any language consists of a verb only. Other sentences, up to the most complex, are in effect expansions of the verb through the addition of nominal expressions, or through the addition of adverbial limitations or expansions of the basic meaning of the verb root. There are thus three categories of sentence-building elements: verbs, nouns, and modifiers.

Each of these categories is subdivided by various selectional restrictions inherent in the meaning of any given root: restrictions on the type of constructions in which the root can occur. For example, the English

verb *talk* is selectionally restricted to occur with only human or anthropomorphized subjects, and normally does not take objects, while its semantically similar counterpart *say* must normally have an object that is in turn a sentence of some sort.

In addition, each of the classes of sentence-building elements has a set of possible inflectional units, which may optionally occur with it in any given sentence. These mark semantic variables such as tense, aspect, and number.

6.2.

The description of a language, therefore, proceeds most logically by first enumerating the selectional restrictions on verbs and then discussing verbal inflectional units. From there, it moves to similar discussion of nouns: first selectional, and then inflectional categories. Verbs are necessarily described first, for it is frequently the case that the choice of some verbal categories limits the choice of nominal categories in the sentence; but noun features never determine verb features. For full justification of this claim, see Chafe (1970:97ff.).

6.3.

The description will then move to explanation of how the enumerated elements and categories combine in the particular language under discussion, and what the phonological representations of the various categories might be.

6.4.

In such a description, the first stage (section 6.2.) is called the description of semantic structures, and the second (section 6.3.) is the description of the transformations that the semantic structures undergo in a particular language. This is followed by descriptions of linearization (statement of the sequences in which morphemes occur) and symbolization (the forms of the morphemes).

6.5.

No place was reserved for the modifier class of section 6.1. in the scheme outlined in sections 6.2.-3., because all those modifiers can ultimately be shown to be semantically either inflectional or verbal elements. However, proof of this is best left to discussion of linguistic theory, and for the purpose of describing a specific language and its structure, there will be many shortcuts. One section of this description will be devoted to various kinds of modifiers, without any attempt to take all of them back to their verbal origins.

Furthermore, there will be very few descriptions of those inflectional and selectional elements that have only covert effects on the surface structure, that is, that prevent rather than generate certain sentences or combinations of sentences. Instead, only those units that are reflected in specific Wichita morphemes will

be enumerated. A major exception to this policy is the initial description of selectional restrictions on verbs, because these verb classes are so important for understanding the rest of the grammar.

6.6.

The outline of this description is as follows: section 7 is devoted to description of the semantic selectional and inflectional possibilities for verbs; section 8 accomplishes the same task for nouns. Section 9 describes modifiers of both nouns and verbs.

Section 10 is then devoted to the topic of derivation, or how roots that are selectionally of one class or type can be changed or modified to fit a different class.

In a formal grammar section 11 would begin the description of constructions and transformational rules needed to establish semantic structures for sentences and to convert these semantic structures into surface structures. Since such rules are largely superfluous in an informal description, section 11 describes Wichita surface structures, using word and morpheme order as the organizational criterion for the section. Section 11.1. describes the sequences of words in sentences and of morphemes in words; section 11.2. describes a selected set of surface structure constructions, such as subject and object number marking, and marking of possession. Readers who are accustomed to item-and-arrangement grammars will find section 11 the most familiar part of this sketch, while those who are interested in what is obligatory and optional in the expression of ideas in Wichita will be more enlightened by sections 7-10. The combination of these two approaches should give everyone an idea of how meanings are symbolized by speakers of Wichita. Considerations of Wichita structure from other theoretical perspectives can be found in Rood (1973, 1981, and 1989).

SEMANTIC STRUCTURE

7. THE VERB

7.1.

Wichita verbs are subdivided into at least four large classes on the basis of selectional restrictions. These classes are defined by the number and type of nominal expressions that occur with them. There are no surface morphemes to indicate the class to which a given verb belongs; nevertheless, syntactic restrictions on the construction possibilities indicate this information clearly.

7.1.1.

Typologically, Wichita has a kind of split-ergative case structure. Third-person number marking and noun incorporation distinguish ergative (subject of transitive verbs) from absolutive (everything else) in a rather pure fashion, as do all the noun phrases in Basque and

many Australian languages. First and second person, in contrast, represent a split intransitive system, like that of Siouan languages: some intransitive verbs require for their subjects pronominal forms identical with the subject forms of transitive verbs, while other intransitive subjects match the object forms of transitive verbs.

Third-person pronominal forms exemplify a different version of the split-intransitive type. If any non-third-person pronoun is used, third person is unmarked (represented by \emptyset). Otherwise, the forms distinguish participants that are "in focus" from those that are "out of focus" (see 8.2.4.), but this contrast is suspended for those intransitive verbs that take transitive object pronouns for first and second persons. In these cases, only out-of-focus marking occurs.

Four category names from traditional grammar will be used here to label the relationships between nouns or pronouns and verbs. The names, and their semantic definitions, are as follows:

The agent is the person or thing which acts or controls the action. It is the single nominal with verbs like *go* and *dance*, and the active participant with verbs like *hit* or *eat*.

The patient is any nonactive or noncontrolling participant in an event. It is the only nominal found with a verb like *fall* or *be hungry*. (One is not actively hungry; one only suffers hunger.) With verbs like *hit* or *eat*, it is the suffering participant.

The subject is either the same as the agent, if there is one, or the only nominal in verb constructions that permit only one. Some subjects are therefore patients, while others are agents.

The object is the patient of a verb that has both an agent and a patient.

These four terms are used in two different ways in the following discussion (see table 3). If the terms are not qualified, the definitions just given will apply; in this case, the terms refer to the relationship between a predicate and its argument or arguments, that is, between a verb and the nouns or pronouns that occur with it.

But if the terms are used with "third person" and "non-third person," they are the names of particular morphemes. "Non-third-person subjects" are the forms that represent semantic agents, or the patients of Class 1 verbs (see next section); "non-third person objects" are the forms used for objects, and for the patients of class 2 verbs (see below). "Third-person agents" are the agents of transitive verbs, that is, the forms that would be in the ergative case in a straightforwardly ergative language. "Third-person patients" are everything else: subjects of intransitive verbs, and objects of transitive verbs.

In the examples here usually only "in focus" third persons are used, and the morpheme is glossed 'third-person subject'.

Table 3. Noun-Verb Relationships

Wichita Class	Verb	Noun or Pronoun			
	Semantic type	Semantic structure	Wichita third person number marking	Wichita non-third person	Wichita third person pronouns
1	active ('come', 'sing')	agent	patient	subject	+focus or -focus
	stative ('be dirty')	patient	patient	subject	+focus or -focus
2	stative ('be hungry')	patient	patient	object	-focus
	process ('fall')	patient	patient	object	-focus
3	transitive ('see')	agent and patient	agent and patient	subject and object	+focus or -focus subject; object unmarked ^a
4	process impersonal ('rain')	—	—	—	+focus
	stative impersonal ('be a creek')	—	—	—	+focus or -focus (see examples 50 and 51)

^aIf a non-third-person pronoun is present, third person is always represented by zero.

7.1.2.

The verb classes are as follows:

Class 1 includes action verbs, which have agents in the semantic structure. In the surface structure, first- and second-person pronouns are in the subjective case, while third-person forms may be either in or out of focus, and third-person number marking follows the rules for patient inflections. Examples are *u...?a* 'come', *hisha* 'go', *kira'h* 'sing', and *wa'wa?a* 'dine'. Many semantically stative verbs belong to this class in Wichita, too: verbs like *tac ?i* 'be big', *he'c ?i* 'be fat', *k*ha'c ?i* 'be red', and *ne?estha'r ?i* 'be dirty'.

Class 2 contains process verbs and those stative verbs not included in class 1. In the semantic structure, these verbs have only patients; in the surface structure, first- and second-person pronouns take their objective case forms, while third-person pronouns are always out of focus, and third-person number marking utilizes the forms for patient inflections. Examples are *u...we?eha* 'fall', *?ac* 'be cold', and *hiya* 'be hungry'.

Class 3, transitive verbs, have both an agent and a patient in the semantic structure. Here the surface structure forms for first- and second-person pronouns are subjective for agents, and objective for patients. Third-person subjects may be either in or out of focus if both subject and object are third person; anything else (any third person with a first or second person in another role, or a third-person object) is unmarked. Third-person number forms are agent for subjects, patient for objects. Examples of such verbs include *?i:s* 'see', *ka?ac* 'eat', and *irasi* 'find'.

Class 4 contains only impersonal verbs. These verbs have no nominal in the semantic structure, and permit only third-person singular inflections in the surface structure. They include *a...hiri?a* 'rain', *a...?i:?a* 'snow', *wa'wk*ic* 'heat lightning', *re?erha* 'be a village or encampment', and *he'ha* 'be a creek' among many others. Most of these verbs take in-focus subjects, but at least one, *hanthiri* 'be daylight' requires an out-of-focus subject (see examples 50-51). Table 3 summarizes the facts about theoretical and Wichita verb classes and nominals.

7.1.3.

There may be a fifth class, beneficiary verbs, which have a beneficiary nominal in construction with them instead of or in addition to agents and patients. The only candidate for membership in this class and no other is the verb *uc...?i* 'be in a state' (used in expressions such as 'How are you?'); and even this is ambiguous, for the *uc* could be considered simply a preverb of this verb rather than the marker of a beneficiary, and the verb then placed in class 1. The analysis of other beneficiaries could take one of two directions: they could be considered subclasses of each of the classes already named, or they could be considered a fifth class, subdivided according to the criteria used to separate classes 1-4. The analysis that makes 'beneficiary' a selectional feature for verbs of classes 1-3 appears to be the more useful.

Class 1 verbs that require a beneficiary in addition to an agent include *uc...tate'tu* 'help'.

Class 2 verbs that require a beneficiary in addition to a patient are illustrated by *uR...?i* 'own, possess'.

Class 3 verbs that require a beneficiary in addition to an agent and a patient include *uc...?ih* 'give (as a gift)'.

Verbs such as (*uc*)...*i?ahi* 'hold, keep' and many others permit an optional beneficiary, and the *uc* occurs only if such a beneficiary is expressed.

7.2.

The inflectional categories in Wichita verbs include mood, evidential, tense, and aspect. A slightly different version of sections 7.2.1.-7.2.4. appears in Rood (1975a).

7.2.1.

Mood has two members, subordinate and nonsubordinate or independent. The subordinate verbs occur only in sentences that also contain an independent verb.

7.2.2.

Evidential describes a statement by the speaker about the source of information: the quotative implies that the information was heard from someone else; the nonquotative means the speaker saw the event happen personally. This distinction occurs with (and is obligatory with) the aorist (past), the perfect, and the future tense forms; statements using other tenses are not marked obligatorily for evidential.

7.2.3.

Tense and aspect cooccur in a rather complex, overlapping set of categories, illustrated for independent verbs in figure 4.

7.2.3.1.

Figure 4 illustrates the tense and aspect structure as if it were a set of choices that Wichita speakers must make as they select the markers they will use for independent verbs in a given sentence. See figure 5 and section 7.2.3.2. for specific forms that illustrate the discussion.

First, speakers must decide whether to express a personal opinion about the statement, or simply to report the facts impersonally (note that this is not the evidential choice; that has to do with source of information, not opinion). If they elect to be impersonal, they must then determine whether or not time is important to their statement. Depending on this choice, they will continue along either the time or the -time branch of the tree.

If time does not matter, that is, if the -time branch is followed, speakers must nevertheless select an aspect; but they can elect to use an "unmarked" aspect if they wish. ("Unmarked" refers to the normal, ordinary state of affairs, the one that needs no special comment from the speaker.) If, however, they select a marked aspect, speakers have four choices here:

Perfective indicates that the act is completed and finished. If this aspect is chosen, evidence for the statement must also be given.

Intentive indicates that the subject plans or planned

to carry out the act.

Habitual indicates that the act is habitual for the subject of the sentence ('he smokes', rather than 'he is smoking'.)

Durative indicates that the verb describes an activity that is coextensive with something else. English translations of this aspect usually contain phrases such as 'and all the time' or 'and at the same time' or 'meanwhile'.

The [-time] choice is analyzed as implying the absence of any time reference, rather than as present time, because this fits the facts more closely. The aspect clearly takes precedence in meaning over the time reference, and English translations vary in tense for individual forms. Perfective translates as English past; intentive usually translates as the "going to" future; habitual and durative regularly translate as present tense, with adverbs like 'always' or 'meanwhile' to support the aspectual interpretation. The unmarked timeless aspect is a simple indicative, sometimes translated as past, sometimes as present progressive.

Going back up the tree, if speakers decide that time is indeed important to their statements, they must choose between past and future time. Again, they choose either a marked or an unmarked aspect. With future time, the marked aspect will be either imperfective (indicating that there is no information about the state of the act with respect to completion) or habitual. With past time, they may choose either of these, or intentive. Moreover, bringing time into the picture obliges speakers to add something about their source of information, too. Observe that the durative aspect is not compatible with a time reference and that intentive cannot occur together with future time markers.

If, on the other side of the tree, the speakers first elect to offer personal opinions about the event together with their reports, they must then decide whether just to show surprise (by choosing the exclamatory tense marker), or whether to express an attitude about the subject of the verb. They may inflectionally state one of four such attitudes: that they are commanding the subject to do something; that they are wishing that the subject would do something; that they are stating an obligation or duty of the subject to do something; or that they are reporting some sort of plan on the subject's part.

Once they have chosen one of these opinions to offer, the rest of their choices are determined by the facts. If they are commanding, they can do it by giving instructions (directions, as in dictating a recipe or describing how something is made), or by giving direct orders. Instructions are implied if the directive tense markers are used; commands, if the imperative is chosen. If the imperative is used, it can be marked for future time (implying that the command need not be carried out right away), and if the future imperative is used, speakers can indicate whether the command is to

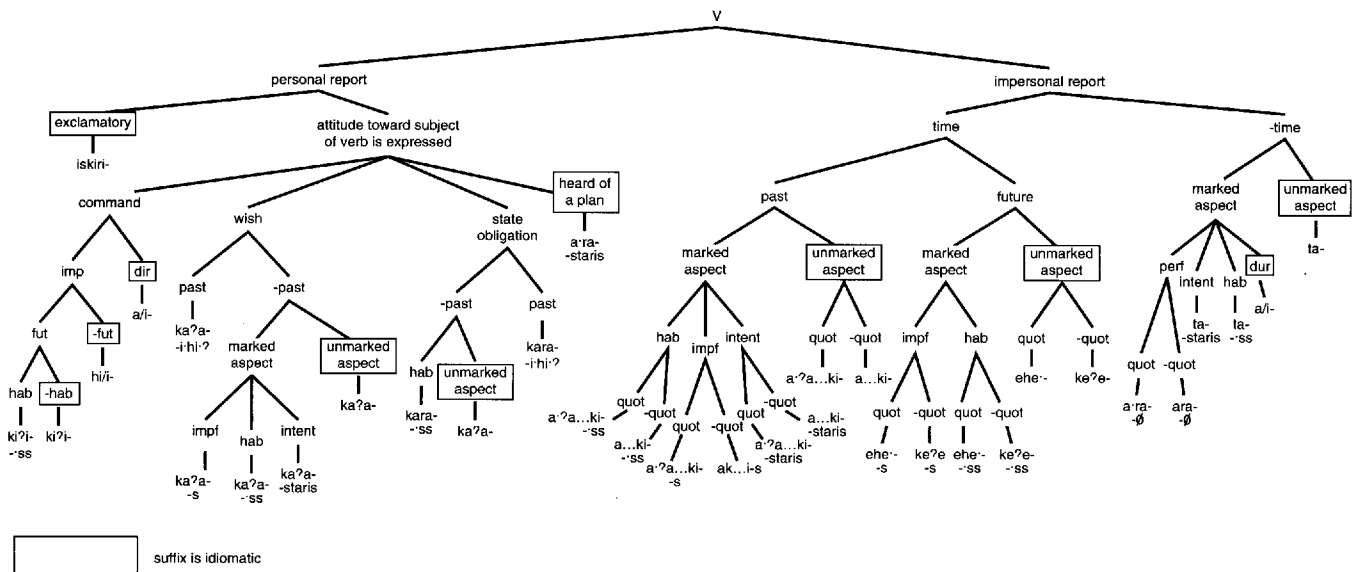


Fig. 4. Tense and aspect categories and inflections in Wichita independent verbs.

be followed once or habitually, by choosing or not choosing the habitual aspect.

When speakers decide to express a wish about the subject of the sentence or to state that the subject has a duty or obligation, they may again let time enter the picture if it is already too late. That is, they may inflect the verb for past if they are commenting on something that might have happened but in fact did not. The resulting English translation would be 'I wish she had' or 'he should have'.

Alternatively, they can assume that it is not too late and select either a marked or an unmarked aspect for the action. The only marked aspect for obligation or duty is habitual; for wishes, habitual, imperfective, and intensive are all possible.

7.2.3.2.

At the bottom of each branch of the tree in figure 4 is a prefix and a suffix for the completed verb form, the combination of which will express the sum of any meanings selected while passing through the tree. Each of these prefixes and suffixes can be given a mnemonic label, as has been done in the heads of the rows and columns of figure 5, where the possible combinations of (independent mood) prefixes and suffixes are given typical translations with the verb 'cook'.

Note that while both a prefix and a suffix must be used, and while the suffix labels are all aspectual in nature, not all the prefix labels are tenses. Note further that what has been called the unmarked aspect in the description of the semantics of the system is idiomatically sometimes imperfective, sometimes perfective,

depending on the prefix involved.

The [t] of the indicative morpheme changes to [r] for a question, and to [ʔ] for a negative statement, and the [a] of the aorist is dropped in questions.

7.2.3.3.

For the subordinate verbs, the choices are far fewer. Only two suffixes, perfective *h* and imperfective *skih*, are possible, and only five prefixes can occur:

[hi~i] 'conditional' (translated 'if' or 'when'). Note that this prefix is the same as that for imperative with independent verbs; only the mood marker distinguishes these forms.

[ha...ki] 'subjunctive'. This [ki] is the same as that of the aorist. The form is used where English would use 'would' or 'might' and often where English would use an infinitive, with or without *for* ('for him to go').

[na] 'general participle'. Translations are numerous, but all are nominalizations of sentences or temporally subordinate clauses, such as 'the one who...', '...ing', 'while ...ing', 'after ...ed', etc.

[ki] 'past participle'. This [ki] is also the same as the aorist and subjunctive [ki]. Translations are past tense forms of nominalized sentences. This form is the most frequently used one in personal names: *ki:c?ak?akhari?a'w* 'he who spoke to them' is an example.

[kara] 'debetative participle'. A subordinate sentence expressing the speaker's opinion that the subject of the sentence should or was supposed to do something. Translations usually include 'the time...was supposed to...' but can also be 'the one who was supposed to...'.

Fig. 5. Synopsis of tense aspect possibilities for a Wichita verb. Note that the actual prefixes and suffixes used with the verb, *?arasi* 'cook', do not correspond precisely with the underlying forms given at the row and column headings. The explanation lies in the morphophonemics of the verb for the prefixes and in the fact that this verb takes a causative suffix before aspect suffixes.

P R E F I X E S	S U F F I X E S				
	perfective (-Ø)	imperfective (-s)	intensive (-staris)	habitual (-.ss)	too late (-i-hi-?)
aorist <i>a...ki-</i>	'She cooked it.' <i>áka?árasiki</i>	'She was cooking it.' <i>áka?arásis</i>	'She was going to cook it, but didn't.' <i>áka?arásistaris</i>	'She always used to cook it.' <i>áka?arásiki-ss</i>	_____
aorist quotative <i>a-?a...ki-</i>	'I heard that she cooked it.' <i>á-ka?árasiki</i>	'I heard she was cooking it.' <i>á-ka?arásis</i>	'I heard she was going to cook it.' <i>á-ka?arásistaris</i>	'I heard she always used to cook it.' <i>á-ka?arásiki-ss</i>	_____
future <i>ke?e-</i>	'She will cook it.' <i>ke-?árasiki</i>	'She'll be cooking it.' <i>ke-?arásis</i>	_____	'It will be her job to cook it every time.' <i>ke-?árasiki-ss</i>	_____
future quotative <i>ehe--</i>	'I heard she'll cook it.' <i>ehè-?árasiki</i>	'I heard she'll be cooking it.' <i>ehè-?arásis</i>	_____	'I heard it will be her job to cook it every time.' <i>ehè-?árasiki-ss</i>	_____
perfect <i>ara-</i>	'She's cooked it.' <i>ara?arásiki</i>	_____	_____	_____	_____
perfect quotative <i>a-ra-</i>	'I heard she's cooked it.' <i>á-ra?arásiki</i>	_____	'I heard she is going to cook it.' <i>á-ra?arásistaris</i>	_____	_____
indicative <i>ta/i-</i>	_____	'She's cooking it; She's cooked it.' <i>ta?arásis</i>	'She's going to cook it.' <i>ta?arásistaris</i>	'She is always the one who cooks it.' <i>ta?arásiki-ss</i>	_____
exclamatory <i>iskiri-</i>	_____	'Look! She's cooking it!' <i>iskirá-rásis</i>	_____	_____	_____
durative <i>a/i-</i>	_____	'And all the time, she was cooking it.' <i>a?arásis</i>	_____	_____	_____
directive <i>a/i-</i>	_____	'(And then) one cooks it.' <i>a?arásis</i>	_____	_____	_____
imperative <i>hi/i-</i>	'Let her cook it.' <i>ha?arásiki</i>	_____	_____	_____	_____
future imperative <i>ki?i-</i>	'And then you must let her cook it.' <i>ki-?arásiki</i>	_____	_____	'Let her always be the one to cook it.' <i>ki-?arásiki-ss</i>	_____
optative <i>ka?a-</i>	'I wish she would cook it.' <i>ke?e?árasiki</i>	'I wish she would be cooking it.' <i>ke?e?arásis</i>	'I wish she'd plan to cook it.' <i>ke?e?arásistaris</i>	'I wish she'd always cook it.' <i>ke?e?arásiki-ss</i>	'I wish she had cooked it.' <i>ke?e?arásiki-hi-?</i>
debetative <i>kara-</i>	_____	'She ought to cook it.' <i>kára?arásis</i>	_____	'She ought always to be the one to cook it.' <i>kára?arásiki-ss</i>	'She should have cooked it.' <i>kára?arásiki-hi-?</i>

7.2.4.

Other moods and aspects are expressed periphrastically in Wichita, much as they are in English. Ability, for instance, involves the use of a verb equivalent to 'to be able' or 'can':

- (20) |hi[?]incó[?]wisir[?]i| 'be able'. (analysis uncertain except for *hi[?]ir* 'patient is animate'.)
- (21) *cháh tachi[?]incó[?]wisir[?]i hatáki[?]árasiki[?]h* 'I can still cook my own (food).' (*chah* 'still'; *ta* 'indicative' + *t* 'first-person subject' + *hi[?]incó[?]wisir[?]i* 'be able'; *ha...ki* 'subjunctive' + *t* 'first-person subject' + *a* 'reflexive' + *uc* 'dative' + *?arasi* 'cook' + *iki* 'causative' + *h* 'subordinate mood'.)

Similarly, possibility (English 'might') is expressed by the use of adverbs and the future:

- (22) *e[?]k[?] hó[?]os ke[?]eti[?]ch* 'I might do it.' (*e[?]k[?]* 'maybe'; *hó[?]os* 'soon'; *ke[?]e* 'future' + *t* 'first-person subject' + *uc* 'preverb' + *hi* 'do'.)

English *must* has varying translations, depending on which particular meaning it has in a given instance. When it implies a very firm but nevertheless polite imperative, Wichita uses the future imperative:

- (23) *ki[?]isk[?]* 'You must go.' (*ki[?]i* 'future imperative' + *s* 'second-person subject' + *wa* 'go, perfective'.)

When *must* implies inevitability for the event, the adverb *te:?* 'anyway' is used. A typical sentence might be translated 'I'll have to do it anyway' or 'I must do it.' Another meaning of *must*, namely, that the sentence is the result of a deduction, will be translated with the adverb *wérah* 'maybe; probably; I guess':

- (24) *k[?]íta[?]ks wérah has[?]a[?]ákicità[?]he[?]èh* 'Coyote must have had his knife with him'. (*k[?]íta[?]ks* 'Coyote'; *wérah* 'maybe; must'; *has[?]a* 'this is a story' + *a[?]* 'quotative' + *á* 'third-person subject and reflexive object' + *ki* 'aorist' + *uc* 'dative' + *i* 'extra vowel' (see section 12.1.10.) + *ta[?]ha* 'knife' + *i[?]ahi* 'hold'.)

8. THE NOUN

8.1.

Nouns have selectional restrictions that are like the arbitrary gender-class assignments in, for example, Latin and German, in that they are inherent in the nouns and determine certain surface structure configurations of morphemes. However, in Wichita the assignment of these restrictions appears to correlate fairly consistently with physically observable facts about the object named by the noun.

The hierarchy of semantic selectional features in figure 6 summarizes the system. Each of the features named is of importance but, as in figure 4, the surface structure representation is of a whole branch of the tree, rather than of a single unit.

The first division of nouns is into those that can be counted and those that cannot. In general, this correlates with the possibility for plural marking: +count nouns can be marked for dual or plural; if not so marked, they are assumed to be singular. -Count nouns, on the other hand, cannot be pluralized.

8.1.1.

Those -count nouns that are also liquids are marked as such by a special morpheme, *kir*, that occurs in every sentence in which such a noun is a patient, such as in example 25:

- (25) *ta[?]tí[?]sa[?]skinna[?]as* 'He is bringing (liquid) medicine' (*ta* 'indicative' + *i* 'third-person subject' + *a[?]* 'preverb' + *tí[?]sa[?]s* 'medicine' + *kir* 'liquid' + *ri* 'portative (changes motion verb to carry verb)' + *?a* 'come' + *s* 'imperfective'.)

8.1.2.

Those -count nouns that are not liquid are not otherwise marked in Wichita. This feature is labeled dry mass. Forms such as *ye[?]c* 'fire', *kir[?]i[?]c* 'bread', and *ka[?]hi[?]c* 'salt' are included in this category.

- (26) *tà[?]yè[?]csà[?]as* 'He is bringing fire.' (*ta* + *i* + *a[?]* + *ye[?]c* 'fire' + *ri* + *?a* + *s*; un glossed morphemes as in 25.)
- (27) *ta[?]ká[?]hi[?]csa[?]as* 'He is bringing salt.' (Analysis as in 26, with *ka[?]hi[?]c* 'salt' in place of *ye[?]c*.)

8.1.3.

Wichita [+count] nouns are divided into those that are collectives and those that are not. The collective category includes most materials, such as wood; anything that normally comes in pieces, such as meat, corn, or flour; and any containers such as pots, bowls, or sacks when they are filled with pieces of something. However, it is not always clear to a speaker of English just why one noun should be in this category, while another fits into the dry mass classification. For example, salt is a noncountable dry mass, while flour, which is also powdery, is collective. Moreover, it is not always clear what the singular form of a collective will

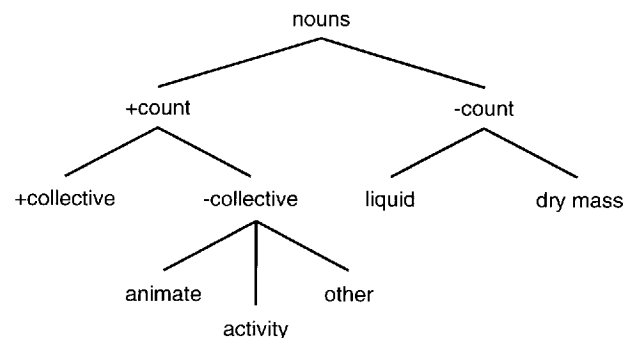


Fig. 6. Semantic selectional features that subclassify Wichita nouns.

mean. The singular of 'corn' means 'one ear of corn', while the singular of 'wood' means 'one piece of chopped wood'; and the singular of 'flour' is meaningless. Observe the behavior of the various nouns in 28-32, and the restrictions on referents that result from various verb markings in 33-36:

- (28) *ta'rássara?as* 'He is bringing meat.' (This is the normal response when speakers are asked to translate the English sentence.) (*ta + i + a'* as in 25 + *?aras* 'meat' + *ra* 'collective' + *ri + ?a + s* as in 25.)
- (29) *ta'rásša?as* 'He is bringing (one piece of) meat.' (This is the semantically less probable form and is sometimes given reluctantly.) (The analysis is the same as 28, without *ra*.)
- (30) *ta'ya'rhára?as* 'He is bringing wood.' (*ta + i + a' + ya'k* 'wood' + *ra* 'collective' + *ri + ?a + s* as in 25.)
- (31) *ta'ya'rhá?as* 'He is bringing one piece of chopped wood.' (This form is declared to "sound funny" by some speakers.) Analysis same as 30, but without *ra* 'collective'.)
- (32) *ta'tí'sa'ssara?as* 'He is bringing medicine.' (Analysis same as 25, but with *ra* 'collective' in place of *kir* 'liquid'.)
- (33) *is?ari'ki* 'Set it down' (refers to something countable, such as a chair). (*i* 'imperative' + *s* 'second-person subject' + *?arik* 'stand' + *iki* 'causative'.)
- (34) *issi?ari'ki* 'Set it down' (refers to a sack or pot with something in it, or to wood, corn, etc.). (Same as 33, but with *ru* 'collective' before the portative.)
- (35) *is?ak?ari'ki* 'Set it down' (refers to the plural of whatever was possible in 33). (Analysis same as 34, but here *?ak* 'noncollective plural' replaces *ru* 'collective'.)
- (36) *issi?ak?ari'ki* 'Set them down' (refers to sacks, pots, or chairs). (Combines the *?ak* of 35 and the *ru* of 34 in a single form.)

It is easy to understand the distinction between 'collective' and plural through contrasting 34 with 35, but it is not clear why 36 should be equally applicable to both collective and noncollective nouns.

8.1.4.

Some of the noncollective nominals are also marked for other selectional restrictions. In particular, with some verbs, animate nouns (including first and second-person pronouns) require special treatment when they are patients in the sentence. Activities are also a separate category (see section 8.1.5.).

Whenever there is an animate patient or object of certain verbs such as *u...ra?a* 'bring' or *irasi* 'find', the morpheme $[hi?ri]$ ($/hir?/, /hi?r/, /hir?i/$) also occurs with

the verb. The use of this morpheme is not predictable by rule and must be specified for each verb in the language that requires it. Note that the regular translation of 'bring' with an animate patient is 'lead'.

- (37) *tí'rass* 'He found it (inanimate).' (*ta* 'indicative' + *i* 'third-person subject' + *irasi* 'find' + *s* 'imperfective'.)
- (38) *tíhir?í'rass* 'he found it (animate).' (Analysis same as 37, with *hir?i* 'patient is animate' added before the root.)
- (39) *ta'ra?as* 'He is bringing it (inanimate, noncollective).' (*ta + i + a' + ri + ?a + s*, glosses as in 25.)
- (40) *ta'hi?nna?as* 'He is leading it (bringing animate object).' (Analysis same as 39, with *hi?r* before the portative.)
- (41) *he'hir?í'ras* 'Let him find you.' (*hi* 'imperative' + *a'* 'second-person object' + *hir?i + irasi* as in 38.)
- (42) *tàkihí?í'rass* 'He found me.' (Same as 38 except that *ki* 'first-person object' replaces *i* 'third-person subject'.)

8.1.5.

One other subcategory of nouns contains those that are names of activities. Naturally enough, most of these are nominalized verbs (section 10.3.). Like *hi?ri* 'patient is animate', the morpheme in question here, *wakhahr*, means 'patient is an activity'. It may occur without an overt noun, in which case it is often translated into English as 'way (of doing)' or 'what is going on'; or it may simply be an agreement feature in the verb, reflecting the active nature of the patient noun. Examples 43-46 demonstrate the use of this morpheme alone. Comparison of 43 with 44 shows that the activities are countable; 45 contrasted with 46 shows the change in meaning when *wakhahr* is left out. In 47, *wakhahr* agrees with an action noun but is left out when the noun is not an action.

- (43) *né?ah né'wakhárikih* 'devil' (literally, 'one who has bad ways'). (*né?ah* 'bad'; *na* 'participle' + *uR* 'possessive' + *wakhahr* 'patient is an activity' + *?iki* 'be plural' + *h* 'subordinate mood'. Possession is discussed in 12.2.1.)
- (44) *wí'c wítího'h té'wakhá'r?i* 'A man has a different way.' (*wí'c* 'man'; *wítího'h* 'different'; *ta* 'indicative' + *i* 'third-person subject' + *uR* 'possessive' + *wakhahr* + *?i* 'be singular'.)
- (45) *to'khar?í'ckh* 'It's the end (of an action).' (*ta* 'indicative' + *i* 'third-person subject' + *wakhahr* + *?í'ckha* 'be the end'.)
- (46) *tí?í'ckh* 'It's the end (of something like a rope or ribbon)'. (Analysis same as 45, but here without *wakhahr*.)
- (47) (a) *wíckhé?es tikínni'ciri?í:hiris?i* 'It's a funny car'. (*wíckhé?es* 'funny'; *ta* 'indicative' + *i* 'third-person subject' + *kínni'ciri?í:hiris* 'car' (see 72) + *?i* 'be'.)

(b) *wickhé?es to'kha'r?i na'ʔáskih* 'It's funny he came.' (*wickhé?es* 'funny'; *ta* 'indicative' + *i* 'third-person subject' + *wakhahr* + *?i* 'be'; *na* 'participle' + *a* 'preverb' + *?a* 'come' + *skih* 'subordinate imperfective'.)

8.1.6.

Countable nouns that are neither animate nor activities, such as chairs, apples, rocks, or body parts, do not require any semantic class agreement morphemes in the surface grammar of Wichita.

8.2.

The inflectional categories of nouns include case, number, person, focus, and definiteness.

8.2.1.

The important case categories in the semantic structure are agent, patient, and dative. These identify the nominal relationships with respect to verbs (section 7.1.). The surface reflections of these relationships are complex and differ from one type of nominal to another. See the sections on subject and object order (section 11.1.5.), person reference (section 11.1.11., nos. 4 and 6), possession (section 11.2.1.) and number marking (section 11.2.2.) for discussion of some of this complexity.

8.2.2.

Wichita nominals (if selectionally marked [+count]) can be inflected for singular, dual, or plural. In the case of collective nouns, plural is the normal condition, and dual probably never occurs; for other countable nouns, singular is the unmarked condition, and either dual or plural can occur with them. The surface details of number marking are described in section 11.2.2.

8.2.3.

Any animate Wichita noun can be inflected for person. The choices are first, second, inclusive, and third. The nonsingular first person is automatically exclusive, that is, it implies 'he or they and I', while the inclusive (which is always nonsingular) means 'you and I'. Non-third-person nouns with additional lexical information are of course rare, but examples include things such as first-person marking in 'chief' in an expression that is translated 'I, the chief,' and in 'women' in the phrase translated 'some of us older women'. The surface structure marks person in the verb (cf. section 11.1.11., nos. 4 and 6, and also example 77).

8.2.4.

Third-person nominals are marked in Wichita for position relative to the focus of attention. +Focus is the normal condition; -focus is used (a) when a subordinate character in a story is the subject of the verb; (b) to indicate that a named noun is patient rather than agent in a given sentence, or to mark the patient of a class 2 verb (see section 7.1.2.); and (c) to mark the agent of an

active verb as indefinite or plural. The English equivalent to (b) with transitive verbs is often a passive construction; (c) is parallel to an impersonal or indefinite 'they' in some constructions, such as 'somebody forgot their coat' or 'they speak French in Algeria'. In this sketch, generally only examples of +focus marking are used, and the morpheme is referred to as 'third-person subject'.

8.2.5.

Third-person nouns in Wichita may be inflectionally marked definite; if they are not so marked, they are presumed to be indefinite. See section 11.2.3. for further discussion.

9. MODIFIERS

Modifiers really have no place in the description of the semantic structure of languages; they are ultimately all verbal or inflectional elements of some kind. Nevertheless, the picture of Wichita structure is considerably simplified if modifications of semantic structure are allowed, at least to the extent discussed below.

9.1.

Noun modifiers are best subdivided into three groups: quantifiers, demonstratives, and adjectives.

The quantifiers are much the same as in other languages. In the surface structure, they are either preposed or postposed to the noun they modify. Examples are *assé'hah* 'all', *ta'w'ic* 'few', and the numbers.

There are two demonstratives: *ti'ih* 'this' and *ha'ri'h* 'that'. They may occur with or without the definite inflection, and they may either precede or follow the noun they modify.

Surface structure adjectives are probably always stative verbs in the semantic structure; but in Wichita, a few descriptive adjectives such as 'big' and 'old' have surface forms different from the equivalent predicatives. It is almost as if the descriptive forms were inflections on noun stems, or the second elements of noun compounds, rather than adjectival modifiers:

- (48) *akháriwa'c* or *akha'r?a niwa'c* 'big house'. (*akhahr* 'house'; *Riwa'c* 'big'. Final *-?a* is a noun suffix only used on certain roots when these are pronounced slowly or in isolation.)
- (49) *akha'r?a tac ti'ʔi* or *tac ti'ʔi akha'r?a* 'The house is big.' (*tac* 'big'; *ta* 'indicative' + *i* 'third-person subject' + *i* 'extra vowel' (section 11.1.11., item 11) + *?i* 'be').

In the examples, 48 shows the adjective 'big' (which is the word that the Wichita speaker will give first when asked to translate 'big', namely, *niwa'c*), while 49 shows the stative verb construction 'is big', *tac ti'ʔi*. Because of the lexical changes involved here, it is unlikely that either of these constructions can be derived from the other except at the semantic level; therefore, it seems best to recognize an adjective classification for morphemes such as *Riwa'c* 'big', *Rikic*

'little', *riya's* 'old', and for the colors (such as *khac* 'white' and *k^wha'c* 'red'). These will be referred to as "true adjectives" below.

There are no Wichita constructions exclusively parallel to what are usually called relative clauses in other languages. For substitutes, see section 10.3.

9.2.

Verbal modifiers are traditionally separated into expressions of time, manner, and place. In Wichita, most time and manner modifications are formally subordinate sentences.

- (50) *hi[?]hánthirih* 'tomorrow' (literally 'when it is day'.) (*hi[?]* 'conditional third-person out-of-focus subject' + *hanthiri* 'be daylight' + *h* 'subordinate mood'.)
- (51) *ti[?]ikhánthiris[?]ih* 'yesterday' (literally 'this which was day'.) (*ti[?]* 'this' + *i* 'out-of-focus subject' + *ki* 'aorist participle' *hanthiri* 'be daylight' + *s* 'imperfective' + *ʔi* 'stative' + *h* 'subordinate mood'.)
- (52) *chih áki[?]ʔrakháris[?]ʔh* 'suddenly' (literally something like 'it was continuing in the state of happening'.) (*chih* 'continues'; *a[?]* 'third-person subject quotative' + *ki* 'aorist' + *ʔrakhari* 'happen' + *s* 'imperfective' + *ʔi* 'be' or 'stative' + *h* 'subordinate'. Analysis is tentative.)

There is thus no need to regard these as anything but verbal constructions at any level. But a few time modifications, some manner modifications, and most place modifications are best treated as separate kinds of elements.

9.2.1.

The few particles that must be termed "time adverbs" are structurally proclitics some of the time, midway between words and prefixes. The rest of the time they are separate words, postposed to the verb they modify. They are accepted as separate words by speakers, but when they are preposed to the verb form, they condition a change in the phonology of the form through the insertion of an "extra" vowel after the preverb. Note what happens to 'I went' in example 53, depending on whether *hir[?]ʔs* 'first' precedes or follows it.

- (53) *hir[?]ʔs taci[?]his* or *tachis hir[?]ʔs* 'I went first.'
(*hir[?]ʔs* 'first'; *ta* 'indicative' + *t* 'first-person subject' + *i* 'extra vowel' (in the first variant) + *hisha* 'go'.)

Some other morphemes that parallel the behavior of *hir[?]ʔs* are *ti[?]* 'at once', *has* 'permanently', *wah* 'already', *chah* 'still', and *chih* 'continues'.

9.2.2.

Instrumentals may be expressed in one of two ways: either they are independent nouns, in which case the

suffix *Rá[?]hir[?]* identifies them; or they are body parts, in which case they are marked as instrumental by a characteristic location in the verb complex.

- (54) *kirikir[?]i[?]sá[?]hir[?]* 'in Wichita (the language)'.
(55) *harhiwi[?]cá[?]hir[?] assi[?]ari[?]s* 'Put it aside in a bowl.' (*harhiwi[?]c* 'bowl' + *Rá[?]hir[?]* 'instrumental'; *a* 'directive tense' + *s* 'second-person subject' + *ru* 'collective' + *ʔariki* 'stand' + *is* 'causative imperfective'. More literally, the form means 'using a bowl, cause it (collective) to stand'.)
(56) *ta[?]ickhité[?]shas* 'I peeked over the edge.' (*ta* 'indicative' + *t* 'first-person subject' + *ʔicka* 'face, instrumental' + *hita* 'edge' + *hishas* 'go past'. Literally, then, the form means 'using the face, I went over the edge'.)

9.2.3.

Another kind of adverbial, having the form of bound morphemes, occurs in two subtypes. One type has only one attested representative: *hí[?]riks* 'repeatedly', which occurs near the end of the verb form (section 11.1.11., no. 26).

The other type occurs toward the end of the first part of the verb (section 11.1.11., no. 15). Eight representatives have been identified: *Re[?]ʔR* 'first'; *i[?]se[?]ʔR* 'for a while', *ʔici* 'repeatedly', *ʔi[?]r[?]ʔR* 'quickly', *ʔiyarhe[?]R* 'although', *ʔʔR* 'accidentally', *re[?]R* 'this is new information for you', and *i[?]ʔR...hrih* 'this is a polite suggestion'. In the last example, the second element is the same as the verbal locative suffix.

9.2.4.

The independent particles that have adverbial functions include those like *ak^withah* 'above' and *ha^wʔic* 'below', which are locative, and those like *ísa[?]* 'thus, in this way', which are manner adverbials. Unlike the time particles described above, these do not change the phonology of the following verb, but like them, they may either precede or follow the forms with which they occur.

9.2.5.

Locative adverbs may be: demonstratives (*ti[?]rih* 'here', *harah* 'there', *hí[?]raka[?]h* 'way off'); nouns marked by the suffix *kiyah* (*ʔika[?]kíyah* 'where the rock is'); verb particles marked by the suffix *hrih* (*niya[?]hk^wírih* 'where the tree is'); bound morphemes in the verb, situated just before the root (no. 22 of section 11.1.11.) (*kita* 'on top', etc.); or a combination of these.

- (57) *ʔika[?]kíyah tikite[?]ècaki* 'He is sitting on top of the rock.' (*ʔika[?]* 'rock' + *kiyah* 'locative'; *ta* 'indicative' + *i* 'third-person subject' + *kita* 'top' + *ʔicaki* 'sit'.)
(58) *niya[?]hk^wírih tikite[?]ècaki* 'He is sitting in the top of the tree.' (*na* 'particle' + *ya[?]k* 'wood' + *r*

'collective' + *wi* 'stand upright' + *hrih* 'locative'; remainder as in 57.)

There are between 20 and 30 morphemes like *kita*, and some of them can combine with each other. Additional examples include *hita* 'edge', *kata* 'on the side', (*i*)*wac* 'outside', *ha* 'in water', *ka* 'in a topless enclosure', and *ka* 'in a completely enclosed space'. Combinations include things like *kataska* 'in an open area' + *?ir* 'in a direction', giving *kataske?er* 'through the yard', or this plus *iwac* 'outside', giving *kataske?ero?c* 'out the other way from the yard'.

9.3.

Modifiers of modifiers include principally intensifiers. There are several of these, one of which is the word *wickhé?h* 'very'; sometimes *kas* 'hard' is used in the same way. Alternatively, a bound morpheme in absolute initial position on the verb is used, as in examples 59 and 60:

- (59) *kirikiyákihare?s?i* 'They were deep in the water.' (*kiri* 'intensive' + *kiya* 'quotative' + *ki* 'aorist' + *ha* 'in water' + *re?hi* 'put plural object' + *s* 'imperfective' + *?i* 'stative'.)
- (60) *kà?à?à?kó?khár?a* 'Long ago it came to pass that...' (traditional opening for a story). (*ka?* 'intensive' + *a?* 'quotative' + *a* 'third-person subject and preverb' + *ki* 'aorist' + *wakhahr* 'patient is an activity' + *?a* 'come'.)

9.4.

From the surface structure point of view, modifiers are thus of four types: particles, phrases, bound morphemes, and subordinate sentences. But these formal classes bear no resemblance to semantic classes; adjectives and adverbs are both represented by more than one type.

Particles can be true adjectives, such as *Riwa?c* 'big'; stative verbs such as *tac* (*?i*) '(be) big'; temporal proclitics, such as *has* 'permanently'; or intensives, such as *wickhé?h* 'very'.

Phrases can be locative adverbs or instrumental adverbs.

Bound morphemes can be true adjectives, as when *Riwa?c* 'big' is suffixed to a noun; adverbs such as *?i?R* 'by accident' or *hí?riks* 'repeatedly'; intensifiers such as *kiri*; or locative specifications such as *to?ra* 'down in'.

Subordinate sentences can be adjectives, as when participles function similarly to English relative clauses (see section 10.3.); or adverbs such as example 50 'tomorrow'.

10. DERIVATION

There are two kinds of derivation important in Wichita; one alters some of the inherent features of nouns or verbs, and the other changes forms from one class to another.

10.1.

Verbs may be derived to fit a selectional class (section 7.1.) in which they do not basically belong.

10.1.1.

A stative verb may be changed into a process verb by use of one of the roots *?ahrih* 'become' or *hi* 'do'; or it may be changed to a transitive verb by use of the root *ra?i* 'make'. Note what happens to the stative root *kakic* *?i* 'be dry' when it becomes a process verb (examples 61-64) and to the stative root *tariwi?k* *?i* 'be round' when it becomes a transitive verb (examples 65 and 66):

- (61) *tikakic?áris* 'It is drying.' (*ta* 'indicative' + *i* 'third-person subject' + *kakic* 'dry' + *?ahrih* 'become' + *s* 'imperfective'.)
- (62) *tikakics* 'It is drying.' (*ta* + *i* + *kakic* + *hi* 'do' + *s*.)
- (63) *tikakicahis* 'They are getting dry.' (*ta* + *i* + *kakic* + *ra* 'collective' + *hi* + *s*.)
- (64) *á?rakakicsh* 'They got dry.' (*a* 'quotative' + *ara* 'perfect third-person subject' + *kakic* + *ra* + *hi*.)
- (65) *títáriwi?k?i* 'It's round.' (*ta* + *i* + *tariwi?k* 'round' + *?i* 'be'.)
- (66) *títariwi?rhír?is* 'He is making them round.' (*ta* + *i* + *tariwi?k* + *ru* 'collective' + *ra?i* 'make' + *s*.)

10.1.2.

Process (and some active) verbs are changed to transitive verbs through the use of the causative suffix *iki* 'perfective', *is* 'imperfective'. Frequently this coalesces with the root in unexpected ways. Thus *?ariki* 'stand' becomes *?ari?ki* 'cause to stand; put, perfective' and *?ari?s* 'cause to stand, imperfective', while *?arasi* 'cook' becomes *?arasiki~?arasis* 'cook, causative (transitive)'. Example 67 is thus ambiguous, while 68 and 69 are clearly separate:

- (67) *ta?arásis* 'It is cooking' or 'She is cooking it.' (*ta* 'indicative' + *i* 'third-person subject' + *?arasi* 'cook' + either *s* 'imperfective' or *is* 'causative imperfective'.)
- (68) *á?ra?arásiki* 'I heard she cooked it.' (*a* 'quotative' + *ara* 'perfect third singular subject' + *?arasi* 'cook' + *iki* 'causative imperfective'.)
- (69) *á?ra?aras* 'It cooked.' (Analysis same as 68, without *-iki*.)

10.1.3.

Additionally, active verbs of motion are derived to be transitive verbs of carrying by the use of *ri* 'portative': *u...?a* 'come' thus becomes *u...ra?a* 'bring'; *riya?s* 'go randomly' becomes *ririya?s* 'carry around; pace the floor with'; *hi?iyas* 'cross water' becomes *rhi?iyas* 'take across water'.

10.1.4.

Equally easily, many active or transitive verbs may be derived to express states. This is done by simply adding

the verb *uc...ʔi* 'be in a certain state' to the completed form; the result is the meaning 'is in the state of' + the verb. Compare 70 and 71:

(70) *tackira's* 'I am singing.' (*ta* 'indicative' + *t* 'first-person subject' + *kira'h* 'sing' + *s* 'imperfective'.)

(71) *tati'ckira:sʔi* 'I like to sing; I am a singer.' (*ta* + *t* + *uc* 'preverb' + *kira'h* + *s* + *ʔi* 'be'.)

10.1.5.

Other verbs have irregular derivational mechanisms for changing to stative meaning. Motion verbs, for instance, such as 'come' and 'go', incorporate another root, such as *hiss* 'arrive there' or *wiss* 'arrive home' before the basic motion root to form stative stems. Process verbs tend to employ a simple perfective aspect inflection instead of derivational devices, so that 'It has fallen over' is equivalent to 'It is in the state of having fallen over; it's lying there'.

10.1.6.

Finally, there are phonologically unrelated roots whose meaning differs only in the selectional restrictions placed on them. Clearest are these: *wa'waʔa* 'eat' is active, but intransitive (cf. English 'dine'), while *kaʔac* 'eat' is always transitive.

10.2.

Nouns are covertly derived to fit noninherent selectional classes. Recall *tʔsa's* 'medicine' in examples 25 and 32 above, where the inherently collective root (of 32) is derived to represent a liquid root to fit example 25. In addition, of course, many animals become human in stories, with the consequence that 'human' morphological elements (such as *kiya* 'someone') may occur with them.

10.3.

By far the most common example of derivation is the device used to form nouns from verbs. This is simply the participle inflection described in section 7.2.3.3. By using participle markings, any verb or sentence can be nominalized, and the resulting construction can translate into English as a noun ('the eater'), a relative clause ('the one who is eating' or 'the thing she ate'), or a subordinate sentence with implications of preceding or simultaneous action ('after he ate', 'while she was eating', 'when he had eaten'). The Wichita for any of these translations would be *nakaʔacskih*.

This is also the principal device for accommodating new cultural items to the language. Note these forms:

(72) *kinni'ciriʔi:hiri* 'automobile' (literally, 'what goes without a harness'). *kiri* 'not' + *na* 'participle' + *uc* 'preverb' + *i* 'extra vowel (cf. 11.1.11., item 11) + *riʔi*: 'be harnessed'; remaining analysis uncertain, perhaps + *hir-* 'go' as in *hirʔa* 'go and stop' + *hrih* 'locative'.)

(73) *ka'kinnakʰaʔcʔiki* 'apple' (literally 'some things which are red'). (*ka* 'indefinite pronoun' + *kiri* 'thing' (combination means 'something') + *na* 'participle' + *kʰaʔc* 'red' + *ʔiki* 'be plural' + *h* 'subordinate mood'.)

(74) *na:sa'khiʔnnih* 'Sunday' (literally 'when it is his day'). (*na* 'participle' + *uR* 'possessive' + *sa'khir* 'sun; day' + *ʔi* 'be' + *hrih* 'locative'.)

(75) *kiriwaré'sa'khiʔnnih* 'Monday' (literally, 'when it is no longer his day'). (*kiri* 'not' + *wa* 'already' + *na* + *uR* + *i* 'extra vowel demanded by *kiri*' + *sa'khir* + *ʔi* + *hrih* as in 74.)

For further examples, see the selected vocabulary, noting especially the names for other days of the week and terms for additional items borrowed from White culture.

SURFACE STRUCTURE

11. WORD AND MORPHEME ORDER

Wichita is a typical example of a polysynthetic language. Almost all the information in any simple sentence is expressed by means of bound morphemes in the verb complex; the only exceptions to this are: noun stems, specifically those functioning as agents of transitive verbs, but sometimes those in other functions as well; and specific modifying particles, mostly those described in section 9.2. This means, then, that most of the semantic units enumerated above show up as parts of the verb complex; whether they are semantically verb or noun units does not matter.

Nevertheless, one-word sentences are relatively rare. Any actual surface structure is apt to be complex, consisting of numerous subordinated sentences. A typical sentence from a story is the following:

(76) *wá:cʔarʔa kiya:kiriwaʔcʔárasarikitáʔahírikss niya'hkʰírih*. 'The squirrel, by making many trips, carried the large quantity of meat up into the top of the tree, they say.' (*wá:cʔarʔa* 'squirrel'; *kiya* 'quotative' + *a...ki* 'aorist' + *a* 'preverb' + *Riwaʔc* 'big (quantity)' + *ʔaras* 'meat' + *Ra* 'collective' + *ri* 'portative' + *kita* 'top' + *ʔa* 'come' + *híriks* 'repetitive' + *s* 'imperfective'; *na* 'participle' + *yaʔk* 'wood' + *r* 'collective' + *wi* 'be upright' + *hrih* 'locative'.)

Note that 'squirrel', the agent, occurs by itself, with no morphemes indicating number or anything else. The verb, in addition to the verbal units of 'quotative', 'aorist', 'repetitive', and 'imperfective', also contains morphemes that indicate that the agent is singular, the patient is collective, the direction of the action is to the top, and all the lexical information about the whole patient noun phrase, 'big quantity of meat'. The location is then further specified by another word, a locativized, nominalized verb that comes out in English as

'tree' but that is formally a subordinate sentence in Wichita. Note also:

- (77) *ka'hi:k?a ho'h natíra:k'akhàr?ih* 'We women also had certain ways of doing things.' (*ka'hi:k?a* 'woman'; *hawah* 'also'; *na* 'participle' + *t* 'first-person subject' + *uR* 'possessive' + *ra:k* 'non-third-person is plural' + *wakhahr* 'patient is an activity' + *?i* 'be' + *h* 'subordinate mood'.)

Here again, the agent is a noun, expressed by a simple noun stem first in the sentence. The next element is a conjunctive particle, of which there are fewer than 10. Then comes the verb, in which all the other semantic information is incorporated: that the subject 'woman' is the first-person plural is shown by the *t* + *ra:k*; that the object is an activity is shown by the *wakhahr*. The purely verbal concepts of 'have' ('possessive' + 'be'), tense, and aspect are also part of the verb, but the point is that many of the semantically nominal units are expressed in the verb rather than in the noun.

Surface structure word classes can thus be seen to be three: nouns, verbs, and particles. Verbs are defined by their ability to take the affixes of figure 5, nouns by their ability to be incorporated, and particles by the absence of both of these properties. But since sentences often take over the functions of either nouns or particles, and since particles have many different functions, this classification of words gives little insight into the way Wichita sentences are constructed. For this, refer to the semantic structure descriptions above.

11.1.

The general outlines of the surface-structure ordering of sentence elements are as follows. The ordering of elements outside the verb ("independent words") is discussed before the verb complex itself. In general, the ordering is described as repeatedly coming from the center of the sentence. Thus if A B C is the first sequence described, and B is then ordered with D and E to the sequence D B E, the ultimate sequence will be A D B E C; in effect, D...E has pushed A and C farther "out" by its very presence.

11.1.1.

If two sentences are paired as hypothetical cause and effect (if..., then...), the "then" sentence comes first if it is a question; otherwise, either order is possible.

- (78) *é:si'h karasi'chis kiyaháre?íriyari'skih* 'What would you do if someone were to scare you?' (*é:* 'interrogative pronoun' + *si'h* 'event'; *kara* 'debetative tense' + *s* 'second-person subject' + *uc...hi* 'do' + *s* 'imperfective'; *kiya* 'someone' + *hi* 'conditional' + *a* 'second-person object' + *re'R* 'this is new information for you' + *?iriyari* 'go randomly' + *is*

'causative imperfective' + *kih* 'imperfective subordinate'.)

- (79) *té:riya'h icihir?írasih* 'He better watch out if I find him!' (*té:riya'h* 'He better watch out!' (idiom, not further analyzable); *i* 'conditional' + *t* 'first-person subject' + *i* 'extra vowel' + *hir?i* 'patient is animate' + *irasi* 'find' + *h* 'subordinate perfective'.)
- (80) *ti?i ísa? icak?ah hinnih ke?eci:cá:sto'ra'w* 'When I give this signal, we will all go down (into the canyon).' (*ti?i* 'this'; *ísa?* 'thus; in this manner'; *i* 'conditional' + *t* 'first-person subject' + *rak?a* 'say' + *h* 'subordinate mood'; *hinnih* 'and'; *ke?e* 'future' + *ciy* 'inclusive subject' + *uc* 'preverb' + *ra:k* 'non-third-person is plural' + *to'ra* 'down into (a ditch or canyon)' + *wa* 'go, perfective'.)

11.1.2.

If a subordinate sentence describes a previous action, it will precede the main verb. This is a very common device for describing sequential actions in a story.

- (81) *nahi?iyasisah nahité:tiskih kiyakí:ctawi? hako:citih* 'After he had crossed the water and after he had gone out onto the bank, it was hard for him to get out from inside (where he had been sitting).' (*na* 'participle' + *hi?iyas* 'cross water' + *hisha* 'go, imperfective' + *h* 'subordinate'; *na* 'participle' + *hita* 'edge, bank' + *itu* 'exit' + *skih* 'imperfective subordinate'; *kiya* 'quotative' + *ki* 'aorist' + *uc...tawi?* 'be difficult for'; *haki* 'subjunctive third-person subject' + *wac* 'outside' + *itu* 'exit' + *h* 'subordinate'.)

In this example, the first two clauses are translated with English 'after', which implies a time sequence for the events; the Wichita contains no equivalent word, but the relationship is clear from the sequence of the sentences themselves. The main verb is marked for tense, 'it was difficult', and another subordinate sentence, a 'for...to' clause, follows the main verb.

11.1.3.

Any sentence that functions as a modifier in the surface structure and that is not a participle (unless it fits the category of "prior action" described in section 11.1.2.) precedes the main verb. Examples are *á:ki?í:rakhann* 'suddenly', *chih á:ki?í:rakháris?i?* 'all at once', *ciyaré:sirih* 'in plain sight', and *hi'hánthirih* 'tomorrow'.

11.1.4.

The only other kind of word that regularly occurs early in the surface sentence is a locative demonstrative; *ti?rih* 'here', *hi:raka'h* 'way over there', and *hárah* 'there' are the most common examples. Otherwise, the regular tendency in sentence construction is to place modifiers after whatever they modify. In example 81,

the “for...to” clause modifies the main verb and follows it; in example 57, ‘tree’ modifies the main clause and follows it. Example 82 illustrates the principles of sections 11.1.3. and 11.1.4. together.

- (82) *á'ki'í'rakhann a'ki'í'ckhité's nare'he'hárih niya'rhi'í'rika'wrih.* ‘Suddenly he peeked over the edge of the water where the tree leaned over it.’ (*á'ki'í'rakhann* ‘suddenly’; *a'ki* ‘aorist third-person subject quotative’ + *í'ckha* ‘face, instrumental’ + *hita* ‘edge’ + *hisha* ‘go’; *na* ‘participle’ + *re'R* ‘the’ + *ha* ‘water, locative’ + *yiha* ‘be a place’ + *hrih* ‘locative’; *na* ‘participle’ + *ya'k* ‘wood’ + *ri* ‘collective’ + *í'rika'wi* ‘lean over’ + *hrih* ‘locative’.)

In this example, a nonparticiple modifier is a sentence (‘suddenly’) preposed to the main verb; then two modifiers follow the main verb, both of which are participles, yet neither of which describes sequential activity prior to that of the main verb.

11.1.5.

The rules for ordering subject and object nouns with verbs depend on the surface structure form of the noun, and on the case relationship which is manifested by the noun.

If the noun is a participle (nominalized sentence) and is a patient, it will follow the verb. If there is a noun agent in the same sentence, it will precede the verb.

If the noun is one of a certain set of kinship terms (but not body parts), it must be possessed. But only if the syntax forbids the nouns from being incorporated (inserted in the main verb) does the actual verb ‘have’ show up in the surface structure. Compare the discussion of possession marking, section 11.2.1.

Other nouns that are patients may occur incorporated into the verb complex (see ‘wood’ in ‘tree’ in example 82, or ‘meat’ in example 76), or they may be preposed to the verb outside it. Then, if an agent occurs, it can either precede or follow this complex. This means that for sentences with unincorporated non-sentence patients, the order S-O-V or O-V-S is normal. Preposed agents were illustrated in 76 and 77, but both of these sentences showed incorporated patients. Other possibilities are as follows:

- (83) *ka'hi'rá'íc'a naré'r'ih ha'khas'a á'kikakack* ‘The old woman cut the ropes.’ (S-O-V). (*ka'hi'* ‘woman, combining form’ + *rá'íc* ‘be old’ + *'a* ‘noun formative’; *na* ‘third-person participle’ + *re'R* ‘the’ + *'ih* ‘be subordinate’; *ya'khas'a* ‘rope’; *á'ki* ‘third-person subject quotative aorist’ + *kakack* ‘cut plural object’.)
- (84) *ka'hi'k'a kiyararé'r'ih wérah ni'í'skih ti'í wi'c kíyararé'r'ih.* ‘This man must have seen the woman.’ (O-V-S). (*ka'hi'k'a* ‘woman’; *kiya* ‘subject is human’ + *na* ‘participle’ + *re'R* ‘the’ + *'i* ‘be’ + *h* ‘subordinate’; *wérah*

‘maybe, must’; *na* ‘participle’ + *i...?i:s* ‘see’ + *kih* ‘imperfective subordinate’; *ti'í* ‘this’; *wi'c* ‘man’; *kíyararé'r'ih* ‘the’ as analyzed earlier in the sentence.)

11.1.6.

If only one noun occurs in the sentence (with any except class 3 verbs), it will be the subject of the verb, whether it is semantically agent or patient. With class 3 verbs, it will be the object. In either case, the word order does not signal the case relationship: the noun may follow the verb (85), be incorporated in it (86), or precede it (87):

- (85) *ká'á'á'kíhi'í'ké's'a né'rhir'a* ‘Then the buffalo came down to the creek.’ (*ka'á* ‘this is a new topic’ + *a'á* ‘quotative’ + *a...ki* ‘aorist’ + *a* ‘preverb’ + *hi* ‘ditch and creekbed’ + *'ike's* ‘down into’ + *'a* ‘come’; *né'rhir'a* ‘buffalo’.)
- (86) *kiyaki'cíwa'cé'rhir'as'irhaw* ‘There lay the big buffalo.’ (*kiya* ‘quotative’ + *ki* ‘aorist’ + *uc...?irhawi* ‘be lying’ + *Riwa'c* ‘big’ + *né'rhir'as* ‘buffalo, combining form’.)
- (87) *né'rhir'a a'ki'we'eh* ‘The buffalo fell over.’ (*né'rhir'a* ‘buffalo’; *a'ki* ‘aorist third-person subject’ + *u...we'eha* ‘fall over’.)

11.1.7.

Dative objects may either precede or follow the verb, but they usually follow. If there is also a patient, it will either precede the verb or be incorporated. There are no examples of nonpronominal agent, patient, and dative all occurring with the same verb.

- (88) *té's tac'arhara'as ne'e'h* or *tac'asté'ssara'as ne'e'h* ‘He is bringing corn to the chickens’.
(*té's* ‘corn’; *ta* ‘third-person subject indicative with preverb’ + *uc* ‘dative’ + *'ak* ‘dative plural’ + *ra* ‘collective’ + *ri* ‘portative’ + *'a* ‘come’ + *s* ‘imperfective’; *ne'e'h* ‘chicken’.)

11.1.8.

Adjectives modifying nouns are of three types, when word order is considered (section 9.1. and examples 48 and 49; Rood 1986). Those that are true adjectives will follow the noun they modify (see 48); of those that are stative verbs, construed with the verb ‘be’, some will precede the appropriate form of ‘be’ (see *icákis* in 89-91) while others will be incorporated in it (see *he'c* in 92 and 93). The noun will then precede (see 89 and 92), follow (see 90 and 93), or be incorporated into the resulting complex (if the adjective is not already incorporated) (see 91). ‘The rock is pretty’ can thus be expressed in three ways, while ‘the horse is fat’ has two translations (glosses are *icákis* ‘pretty’, *he'c* ‘fat’, *'ika'(?a)* ‘rock’, *kawá'rah* ‘horse’, *ti* ‘indicative third singular subject’, and *'i* ‘be’):

- (89) *'ika'(?a) icákis ti'í* ‘The rock is pretty.’
(90) *icákis ti'í 'ika'(?a)* ‘The rock is pretty.’

- (91) *icákis tiʔikaʔi* ‘The rock is pretty.’
 (92) *kawárah tiheʔcʔi* ‘The horse is fat.’
 (93) *tiheʔcʔi kawárah* ‘The horse is fat.’
 (94) *kawárah nahéʔcʔih icákis tiʔi* ‘The fat horse is pretty.’

Example 94 shows the stative verb ‘be fat’ used as an adjective.

11.1.9.

When one noun modifies another, the order is modifier-modified (cf. ‘Wichita’ in the selected vocabulary for a possible exception). There are three uses for this construction:

- (a) in forming noun compounds:
 (95) *issiʔstarac* ‘needle’ (*issiʔs* ‘sinew’ + *taʔrac* ‘awl’).
 (96) *eʔckicʔa* ‘milk’ (*eʔcʔa* ‘breast’ + *kicʔa* ‘liquid’).
 (b) in indicating the possessor of certain body parts:
 (97) *nérhírʔaskáhkaksʔa* ‘buffalo intestines’ (*nérhírʔas* ‘buffalo, combining form’ + *káhkaksʔa* ‘intestines’).
 (c) for appositive constructions:
 (98) *niʔhasʔskʔariks nérhírʔa* ‘the old-man buffalo’ (*niʔhasʔ* ‘uncle’ + *waʔriks* ‘old’). This is not a name, but does refer to a specific, venerable buffalo in a story.

11.1.10.

Closest to the verb is the set of so-called proclitics (section 9.2.1.). These are semibound forms that may occur either immediately preceding or immediately following the verb complex, but that, if preceding, force a change in the phonology of the verb through the addition of an extra vowel at position 11 below (see section 11.1.11.). The order seems to be arbitrary when more than one of these proclitics occur together.

In addition to the time markers mentioned in section 9.2.1., this class includes *khíʔas* ‘poor’, which shows sympathy with the subject on the part of the speaker (‘the poor thing’), and some of the preposed stative verbs (section 11.1.8.). Still phonologically in the proclitic class, but generally found only preposed to the verb and following the items just listed, are *kírih* ‘negative, not’ and *kiri* or *kaʔ* ‘intensive’, *kiya* ‘someone’, and *hasʔa*, which indicates that the word is part of a story. Frequently *kiya* and *hasʔa* coalesce to */kiyaʔsʔa/*. If any of these items occur together, they do so in the order in which they are listed.

11.1.11.

Here is the order of elements within the verb itself:

1. $|\text{hi}(\text{?})|$ ($|\text{i}(\text{?})|$ before aorist forms, $|\text{i} \cdot \text{k}|$ before quotative aorists or perfects), indicating various things about the number of agents or patients (section 11.2.2.).
2. Quotative, either $|\text{kiya}|$ or $|\text{a}(\text{?})|$ with the aorist, $|\text{a} \cdot |$ with the perfect. With the future, the quotative

coalesces with the future tense marker (position 3) to produce $|\text{ehe} \cdot |$ ‘future quotative’.

3. All tense/aspect prefixes except the aorist; the forms are given in figure 5, with additions as described in section 7.2.3.2. and 7.2.3.3. In the case of the subjunctive and the aorist, which are discontinuous, the first part of the morpheme occurs here.

4. Person of the subject or of the possessor of the subject. Morphemes are $|\text{t}|$ ‘first person’ (often $|\text{c}/$ in actual forms, due to morphophonemic rules); $|\text{s}|$ ‘second person’; $|\text{i}|$ or zero ‘third person’ (choice of form depends on the tense being used); $|\text{i} \cdot |$ or $|\text{i} \cdot |$ or $|\text{i} \cdot |$ (underlying $|\text{iy}|$) ‘out-of-focus or indefinite person’; $|\text{ciy}|$ ‘inclusive person’. Note that the third-person and the indefinite person markers occur only when there is no object or when the object is also third person. In other words, they do not occur with any of the morphemes at position six except ‘reflexive’.

5. The preverb of *ʔa* ‘come’, which seems to be $|\text{u}|$ with first- and second-person subjects, but $|\text{a}|$ with third-person and all object forms; or the morpheme $|\text{uR}|$ ‘possessive’.

6. Direct or dative object person markers, or marker for the person of a possessor when the possessed thing is the patient of the verb. Morphemes are $|\text{a} \cdot |$ ‘reflexive’, $|\text{ki}|$ ‘first person’; $|\text{a}(\cdot)|$ ‘second person’; zero ‘third person’; $|\text{ca} \cdot \text{ki}|$ ‘inclusive’.

7. The aorist $|\text{ki}|$ (section 7.2.3.3.).

8. If the object of the verb is something stated to be unknown, Wichita marks it by the use of a discontinuous morpheme, $|\text{a} \dots \text{ré} \cdot \text{R}|$, the first part of which occurs here. The equivalent of the English sentence “I don’t know what he is eating”, for instance, is *taʔarékaʔacs*, literally ‘He is eating something unknown’.

9. The form $|\text{uc}|$ ‘dative’.

10. Regular preverb of the root, except ‘come’ or ‘possessive’ (see position 5, and section 11.2.).

11. The so-called “extra vowel” demanded by the proclitics or the tense exclamatory (section 11.1.10. and examples 53, 72, 75).

12. In negative sentences, the morpheme $|\text{yis}|$ in this position marks the statement as definitely true.

13. The morpheme $|\text{ra} \cdot \text{k}|$, which marks any or all non-third persons in the sentence as plural (section 11.2.2.).

14. The demonstrative $|\text{re} \cdot \text{R}|$ ‘the’.

15. One of the adverbial particles described in section 9.2.

16. The second part of $|\text{a} \dots \text{ré} \cdot \text{R}|$ ‘unknown’.

17. $|\text{ʔak}|$ ‘dative or possessor is nonsingular’.

At this point, a patient noun or noun phrase can be incorporated. This is considered a syntactic rather than a morphological position, and the slot is not numbered for that reason.

18. The morpheme for ‘collective’ or ‘patient is not

singular'. The shape of this varies from verb to verb, but the collective is usually |ru|, |ra|, or |r|.

19. The noncollective plural, usually |ʔak|. Instead of a morpheme here, some roots change form to mark plural. Examples include ʔarasi 'cook', plural *warasʔirʔi*; *kaʔac* 'eat', plural ʔa; and *ki* 'kill', plural ʔessa 'imperfective', and ʔe'se'ʔ 'perfective'.

20. The morphemes required by the selectional features of the nouns: |hirʔi| 'patient is animate', |kir| 'patient is liquid', and |wakhahr| 'patient is an activity' (section 8.1.).

21. Either the portative (|ri|), which changes a verb of motion to one of carrying ('come' becomes 'bring', 'go' becomes 'take'), or a noun used instrumentally occurs here. Since these have never occurred together in the same word, the order that they might follow is still undetermined.

22. The locatives described in section 9.2.

23. |wa| 'dual' in a few verbs; see section 11.2.2.

24. The verb itself, which will include the root and derivational morphemes such as |ʔiri| 'while in a lying position', and |tata| 'while following'.

25. The distributive |(a)wa| is actually an infix, occurring just before the last consonant of the verb root. Compare examples 99 and 100:

(99) *na'ckithah* 'It is scattered in front of you.' (*na* 'participle' + *uc* 'preverb' + *kitha* 'be scattered' + *h* 'subordinate mood'.)

(100) *na'ckitawa'hah* 'A lot of it is scattered all over.' (Same as 99, but with *awa* 'distributive' infixed before the last consonant of the root.)

26. The morpheme for 'repeatedly', |hi'riks|; see section 9.2.

27. The causative.

28. Any of the aspect suffixes listed across the top of figure 5, except 'too late'.

29. |ʔasʔ|, the second half of a discontinuous form meaning 'place' (section 11.2.4.) or any one of various derivational verb roots such as 'come', 'go', 'be', or 'be continual'. These verbs signify an activity or state simultaneous with the main verb. Many times these added roots then behave as if they were in position 24 and accept the affixes of positions 25-28 (especially 28) themselves.

30. Subordinate aspect markers, |h| 'perfective' or |skih| 'imperfective'.

31. The 'too late' aspect marker (cf. fig. 5).

32. |hrih| 'locative'.

These 32 positions for morphemes in the verb are absolutely rigid; there is no freedom of arrangement here at all, in contrast with the relative freedom described among independent elements in section 11.1.1.-11.1.10.

11.1.12.

The few morphemes that occur with nouns instead of in the verb are easily described. All the bound forms are

suffixes, and include only *kiyah* 'locative', *Ra'hirʔ* 'instrumental', and (usually) for animate nouns *s* 'combining form'. The combining form is used in compounds of noun with noun (section 11.1.9.) or noun with true adjective (section 9.1.), and when the noun is incorporated in the verb.

A few nouns have irregularities in the combining forms. Those that end in /c/ or /s/ already in the citation form do not generally change in the combining form. Examples are *wa:khac* 'cow', *kikʔi's* 'turtle', *wi'c* 'man', *niye's* 'child', and *kʔita:ks* 'coyote'. Those that end in suffixes other than ʔa in the citation form, such as |hrʔa| (*akhahrʔa* 'house', *ha'hirahrʔa* 'body of water', *ksahrʔa* 'bed') or |kʔa| (*ka'hi-kʔa* 'woman', *ti-kʔa* 'pole') lose the suffix to derive the combining form (|akhá| 'house' or |ka'hi| 'woman', for example). In addition, *kawá'rah* 'horse' has a suppletive combining form, *ta'ras*. Although *wa:khac* 'cow' and *kawá'rah* 'horse' are apparently loanwords, ultimately from Spanish, they seem to be fully integrated into Wichita structure except as just noted.

The free forms that modify nouns include only the demonstratives *tiʔi* 'this' and *ha'ri'h* 'that', and they may either precede or follow the noun. Other potential complexities in noun phrases—adjectives, possessives, the definite article—are always verb participles or subordinate sentences, so the result is treated as part of the syntax of complex sentences.

11.2.

Section 11.1. has presented the linear features of the surface structure of Wichita, outlining the order in which simple sentences are joined to form more complex structures and indicating in list form the morphemes and their order in simple sentences. More important than morpheme order are the details of surface structure expression of many of the semantic concepts outlined in the first part of this chapter. Six of these have been selected for detailed discussion: possession, number marking, the definite article, nonspecific pronouns, geographical terms, and indirect statements and questions.

11.2.1.

Surface structure marking of possession in Wichita is complex and varies according to whether the possessed entity is agent or patient, and again, according to whether the patient is marked as a surface structure subject or object.

The verb 'have, possess' in Wichita is *uR...ʔi*, a combination of the preverb 'possessive' and the root 'be'. Possession of a noun can be expressed by incorporating that noun in this verb and indicating the person of the possessor by the subject pronoun; the complex then receives participle markings, and the result is a noun.

(101) *nai'ʔakʔih* 'my wife'. (*na* 'participle' + *t* 'first-person subject' + *uR* 'possessive' + ʔak

'wife' + *?i* 'be' + *h* 'subordinate'.)

- (101) *niye's nat'ikih* 'my children'. (*niye's* 'child'; *na* 'participle' + *t* 'first-person subject' + *uR* 'possessive' + *?iki* 'be plural' + *h* 'subordinate mood'.)

In example 102, the morphological construction is the same as in 101, but in 101 the noun is incorporated, in 102 it is not. Note that number is marked as if the surface structure noun were the subject of 'be', rather than the object of 'have', even though the pronoun indicating the possessor is also a subject in form.

Constructions such as 101 or 102 must be used if the possessed entity is the agent of a transitive verb. They may optionally be used for any other possessed nouns, too. However, if the possessed noun is the agent of an intransitive (active) verb, or a patient, it may be incorporated in the main verb instead of being marked by 'have'. In this case, the fact of possession is shown by the use of *uR* or *uc* at positions 5 or 9, respectively, of the verb. The person of the possessor will be marked by the subjective pronoun (position 4) if the possessed entity is the subject of the verb, but by the objective (or reflexive) pronoun (position 6) if the possessed entity is the surface object of the verb. The distinction between *uR* and *uc* is that the former is used with subjective pronouns, the latter with objective ones.

- (103) *tati:c?i:s* 'I saw his.' (*ta* 'indicative' + *t* 'first-person subject' + *uc* 'dative' + *?i:s* 'see'.)

In 103, the possessed entity is the surface object of the verb; the objective third-person pronoun is zero, but the fact that an objective rather than a subjective pronoun represents the possessor is indicated by the choice of *uc* rather than *uR*. Further examples include 104 and 105:

- (104) *taki:c?i:s* 'He saw mine.' (Same as 103, but with *ki* 'first-person object' instead of *t*.)
(105) *taki:cta:he?eh* 'He is holding my knife.' (*ta* 'indicative' + *ki* 'first-person object' + *uc* 'dative' + *ta:ha* 'knife' + *i?ahi* 'hold'.)

In 104, the possessed entity is object, as shown by the choice of *ki* to mark the person of the possessor. Example 105 shows the same relationships, but a possessed noun 'knife' appears in the construction as well.

Now compare 106, an active intransitive verb that has a surface subject and no object, with 107, a stative verb that has a surface structure object (and no subject):

- (106) *tati:tà:rashìs* 'My horse went.' (*ta* 'indicative' + *t* 'first-person subject' + *uR* 'possessive' + *ta:ras* 'horse, combining form' + *hisha* 'go'.)
(107) *ta:kick'ita?as* 'Mine is boiling.' (*ta* 'indicative' + *a* 'preverb' + *ki* 'first-person object' + *uc* 'dative' + *wita* 'boil' + *?a* 'come' + *s* 'imperfective'.)

These two examples show clearly the difference between surface structure subject role for the possessed noun and surface structure object role for the same form, since in 106 the possessor is marked by the subject case

morpheme, while in 107 the object morpheme is used.

To summarize, possessed agents of transitive verbs are marked by subordinate sentences indicating possession. Possessed subjects of intransitive verbs are marked by using the subject pronoun indicating person of possessor, plus the morpheme *uR*, and incorporating the noun in the verb (106). Possessed patients (104, 105, 107) are marked by using the object case form of the pronoun showing the person of possessor, the morpheme *uc*, and then incorporating the noun.

11.2.2.

Number marking in the surface structure is not nearly as neat and simple as the description in the semantic structure would indicate. The assertion that all countable, noncollective nouns can be marked semantically singular, dual, or plural, section 8.2.2., seems to be true. But the surface structure forms are frequently ambiguous in a number of ways.

First, third-person nominals must be distinguished from those that are not third person. Second, surface agents must be distinguished from patients among the third-person forms, and surface subjects from objects among the non-third-person forms. Figure 7 gives an idea of this hierarchy.

Each of these four categories is marked for number differently, making a possible total of 12 markers for verbs with one nominal, or 24 for those with two. In fact, there are only six morphemes or combinations of morphemes (including zero) available to distinguish these 24 categories, so some ambiguity is inevitable. In this discussion, plural will mean 'more than two', and nonsingular will mean 'two or more'. Moreover, the discussion will frequently refer to the morpheme *?ak*, which includes all the idiosyncratic number-marking devices mentioned at positions 18 and 19 of section 11.1.11.

A surface structure object in the non-third-person category can be clearly marked as singular, dual, or plural. The morpheme *ra:k* (position 13) marks plurality; a combination of *hi* (position 1) and *?ak* (position 19) marks this object as dual. Singular is marked by zero. When the non-third-person object is marked for either dual or plural, it is impossible to indicate number for the subject or agent; consequently, the number of this entity is completely ambiguous. However, if the object is marked singular (by using zero), some indications of the subject number can be made. If that subject is also non-third-person, it can be marked singular (by zero) or nonsingular (by *hi* of position 1).

If both agent and patient are third person, a few intransitive verbs permit the same distinctions for patients as are possible for non-third objects: singular, dual, and plural. These verbs (such as 'come' and 'sit', and very few others) allow the morpheme *wa* to occur at position 23 to mark 'dual patient'. In all other cases, a position 18 or 19 morpheme such as *?ak* means 'patient is plural'.

In the absence of *ʔak* or *wa*, a third-person agent may be marked nonsingular by the use of *hi* (position 1), or singular by the use of zero. But if position 18 or 19 is filled, there is no way to mark agent number: whether *hi* occurs or not, the number of the subject remains completely ambiguous. The result is the strange situation of extremely few morphemes to mark number, and yet free variation with no change in meaning between two of the possibilities. With nonsingular patients, the agent may be clearly marked singular by the absence of *hi*; but *hi* may also occur even if the agent is singular.

For verbs where both agent and patient are third person, then, patients are regularly marked singular or nonsingular, and if the patient is singular, agents may also be differentiated into singular or nonsingular. But if a patient is nonsingular, the agent is either shown to be singular or is unmarked for number.

What happens if the classes outlined in figure 7 are mixed and have subjects and objects that do not match in person class? Two possibilities exist.

If the patient is third person and the subject is non-third-person, that subject may be marked singular (by zero), nonsingular (by *hi*), or plural (by *ra'k*). Thus a dual subject will necessarily be marked by *hi*, but plural subjects may also be so marked. The patient may continue to be marked as described above.

When the roles are reversed, and the agent is third person while the object is non-third, the situation is similar to that for non-third to non-third: if the object is either dual or plural, it will be marked as already described, by *hi...ʔak* or *ra'k*, respectively, and subject number will be ambiguous. But if the object is singular, the subject can

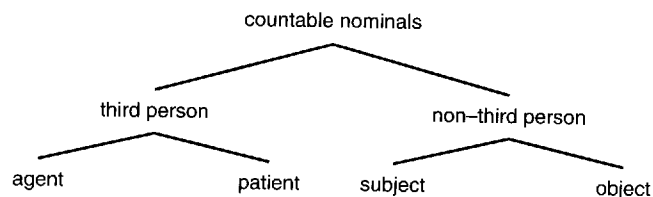


Fig. 7. Syntactic-role categories of third-person and non-third-person nominals.

be marked singular (by zero), or nonsingular (by *hi*).

Another way to examine this would be from the point of view of the hearer. Which combinations of number morphemes occur, and what do they mean? Partial glosses are as follows:

- |hi| 'subject is nonsingular' (but cf. *hi...ʔak*)
- |ʔak| 'third-person patient is nonsingular'
- |ra'k| 'non-third-person is plural'. If both the subject and object are non-third person, reference is to the object only.
- |hi...ʔak| 'non-third-person object is dual. If the form has no non-third-person object, the meaning is the same as for *ʔak* alone.
- |ra'kʔak| 'combine meanings of *ra'k* and *ʔak*'
- zero 'singular'

Note that *hi* never occurs with *ra'k*, and that when the object is non-third-person, *hi...ʔak* can refer only to that object—the usual reference of *hi* to the subject is suspended in this situation. See table 4 for a summary. In the table, the morphemes that can refer to the given combination of subject and object are represented, with

Table 4. Morphological Marking of Subject and Object Number Categories

Subject	Object									
	Third-person singular		Third-person nonsingular		Non-third-person singular		Non-third-person dual		Non-third-person plural	
Third-person singular	∅	∅	(∅)	(hi)...ʔak	∅	∅	—	hi...ʔak	—	ra'k
Third-person nonsingular	hi	∅	—	hi...ʔak	hi	∅	—	hi...ʔak	—	ra'k
Non-third-person singular	∅	∅	(∅)	(hi)...ʔak	∅	∅	—	hi...ʔak	—	ra'k
Non-third-person dual	hi	∅	—	hi...ʔak	hi	∅	—	hi...ʔak	—	ra'k
Non-third-person plural	{ra'k}	∅	{ra'k}	ʔak	hi	∅	—	hi...ʔak	—	ra'k
	{hi}		{hi}							

NOTE: The morpheme for subject number is given on the left of the column; that for the object number is on the right. For verbs with only one nominal, use the appropriate object (patient) marking. The dash indicates categories for which number cannot be marked and is therefore ambiguous.

the form referring to the subject on the left, the one referring to the object on the right. Parentheses mean the morpheme may or may not be present, but there is no necessary change of meaning when it is missing. The possibility of dual patients that are also third person (marked by *wa*) is ignored.

11.2.3.

The use of the definite article in Wichita is rather different from that of English. It appears that the form in Wichita means exclusively 'the one to which we have already referred' and is thus normally used only in a narrative or in connected conversation.

The morpheme is |ré'R| or |re?eh|, plural |ri?ih|, and may occur in a number of positions: suffixed to the noun, incorporated in the verb 'be' and treated as a participial modifier of the noun, or as a bound form in the verb at position 14. Examples 108 and 109 show the difference in meaning between presence and absence of the form; examples 110-114 show variations in place of occurrence.

- (108) *k?íta'ks hinnih naré?ak?ih* 'The Coyote and his (the aforementioned, i.e., Coyote's) wife (*k?íta'ks* 'coyote'; *hinnih* 'and'; *na* 'participle' + *uR* 'possessive' + *ré'R* 'the' + *?ak* 'wife' + *?i* 'be' + *h* 'subordinate'.)
- (109) *k?íta'ks hinnih ná:k?ih* 'Coyote and his (the other's) wife'. (Analysis as in 108, except that *ré'R* is missing here.)
- (110) *k?íta'ks naré?ih ná:k?ih* '(The) wife of the (previously mentioned) coyote' (*k?íta'ks* 'coyote'; *na* 'participle' + *ré'R* 'the' + *?i* 'be' + *h* 'subordinate mood'; 'wife' as in 109.)
- (111) See example 84 for two more examples of *ré'R* in the participle of 'be'.
- (112) *wi:cé?eh* 'the man' *wi:c* 'man' + *re?eh* 'the'.
- (113) *k?íta'ks naré?ak?ih* 'The coyote's wife'. (Same as 110, but with 'the' incorporated as part of the 'his wife' form. Compare 108.)
- (114) *naré?ira'ci?ih ne?e:skih* 'when her (the previously mentioned one's) brother saw her,' (*na* 'participle' + *ré'R* + *?ira'ci* 'brother of a woman' + *?i* 'be' + *h* 'subordinate mood'; *na* 'participle' + *?i:s* 'see' + *kih* 'imperfective subordinate'.)

11.2.4.

Indefinite, negative, and interrogative pronouns (who?, someone, no one, something, nothing) form a coherent and consistent subset of vocabulary items in Wichita. One set of prefixes can occur with another set of indefinite nouns to form multiple pronouns. The prefixes are |ha's| 'indirect', |e'| 'interrogative', |ka'| 'indefinite', and |ká'| 'negative'. The nouns include |kirih| 'thing', |kiyah| 'person', |ckinc| 'amount', |sis| 'extent of time or space', |ka'h| or |si'h...?as?| 'place', and |si'h| 'event'. Combinations are translated as in the following examples:

- (115) *ha'skiyah* 'who' (in indirect questions)
- (116) *ka'kiyah* 'somebody'

- (117) *ká'kiyah* 'nobody'
- (118) *e'kiyah* 'who?'
- (119) *e'ka'h* 'where?'
- (120) *e'ckinc* 'how much?; how many?'
- (121) *ka'ckinc* 'a certain number; so many; so much'
- (122) *ka'sis* 'a certain distance; sometime'
- (123) *e'si'h* 'how?; what event?'
- (124) *ká'kirih* 'nothing'

11.2.5.

Wichita nouns that are names of geographical phenomena are regularly formed from the locative verb markers (section 9.2.) and the verb *yiha* 'be a place'. To translate the English nouns, the participle of the verb is formed, using the locative indicator, and the result may be treated as either a noun or, if the locative ending *hrih* is attached to the participle, a locative expression.

- (125) *nahe'hárih* 'where the creek is' (*na* 'participle' + *ha* 'water, locative' + *yiha* 'be a place' + *hrih* 'locative'.)
- (126) *nihí'ke'hah* 'ditch; ravine; canyon' (*na* + *iy* 'out-of-focus subject' (here implying plural) + *hi'ka* 'down in' + *yiha* 'be a place'.)
- (127) *nakatáske'hárih* 'where the prairie is' (*na* 'participle' + *kataska* 'open space' + *yiha* 'be a place' + *hrih* 'locative'.)

In actual usage in Wichita, these forms are clearly verbs and can take any of the verbal inflections that seem appropriate to the context. Hence sentences like 128:

- (128) *tikité'h* 'There is a hill.' (*ti* 'third-person subject indicative' + *kita* 'top' + *yiha* 'be a place'.)

11.2.6.

English and other Indo-European languages have a special construction for sentences that are the objects of verbs of mental activity—verbs like 'think', 'ask', 'say', and 'wonder'. These are usually called indirect statements or questions. *I wonder who he is*, or *Ask him where he's been* can serve as examples. In Wichita this kind of construction is possible, but it is used only in formal, narrative style. Ordinarily, the Wichita sentences translating these examples would be direct, nonsubordinate statements, more like *I wonder*, "Who is he?" or *Ask him*, "Where have you been?". The construction used in the narratives involves substituting a pronoun prefixed by *ha's* (see section 11.2.4.) for the subject of the sentence, and then using the conditional tense for the verb.

- (129) *kiri?o'k?as ha'skiyah hí?ih* 'He did not say who it was.' (*kiri* 'negative' + *?i* 'third-person subject, present negative' + *wak?a* 'say' + *s* 'imperfective'; *ha's* 'indirect pronoun' + *kiyah* 'person'; *hi* 'conditional' + *iy* 'out-of-focus subject' + *?i* 'be' + *h* 'subordinate'.)

12. CONCLUSION

In the picture of Wichita structure that emerges from the preceding information certain generalities are

apparent. The surface phonology, while somewhat unusual (since it utilizes three degrees of length, no phonemic nasals, and no phonemic labial consonants, as well as a vowel system with only height distinctions and no front-back dimension) is nonetheless quite simple: the number of phonemes is small and the complexity of structure limited.

The morphophonemic system, on the other hand, is extremely complex, involving numerous changes when sounds come together in words.

The semantic system includes a number of obligatory distinctions that are foreign to English and omits others that English requires. For example, evidential is sometimes obligatory, focus distinctions in third-person pronouns are important, and both dual number and the inclusive-exclusive distinction are regularly expressed. On the other hand, there is no gender distinction in the pronouns, morphemes corresponding closely to the English articles are missing, and there is no construction used exclusively for relative clauses. Moreover, some predicate adjectives are different from their semantically equivalent descriptive correlates.

Finally, Wichita surface grammar is characterized by heavy use of bound morphemes in the verb, sentence constructions that depend on word structure rather than word order, and a high frequency of subordinate sentence constructions where English uses phrases or even unanalyzable particles.

13. SELECTED VOCABULARY

The words in the following list are citation forms, transcribed phonemically, except that verbs are given as verb stems (with leading hyphens in this list only); they can be cited only by adding tense and person prefixes and an aspect suffix to them (filling positions 3, then 4 or 6, and 28, 30, or 31 as described in section 11.1.11.).

acorn *hawaːc*

all *asséːhah*

and *hinnih*

and then *híriwaːh*

animals *íyarisːa* 'those which walk around'

ankle *askiːsːa* 'foot bone'

Apache (Arizona) *issikːitáːa*

Apache (Fort Sill) *kinneːs* Also used for the 'enemy' or the 'bad guys' in stories.

arbor *akhátawaːa* 'hanging house'

arm *wiːrːa*

lower arm *issaːcːa*

upper arm *wíkeːsːa*

arrow *nikwaːcːa* Also used for 'bullet'.

ashes *ickharːa* Also 'dust, sand'. If differentiation is required, *niyeːckhárhikicːa* 'lye water' is used.

Compare *yeːc* 'fire'.

back *nikiriːa*

bad *néːːah*

bark (tree) *tíːkːacːiːyaːcːa* 'pole shell'

bead (for hand game) *kéːris*; for craftwork use *kiːsːa* 'bone' for large size, *niyáːkhac*, lit. 'white thing', for smaller sizes

because *hiːwéːewakharːa*

belly *káːkːiːcːa*

big *tac* (stative verb); *Riwaːc* (adjective)

bird *ichiri*

bite *-taːa*

black *kaːrːiːs*; *cawicːa* 'dark; black'

blood *waːckicːa* Cf. *kicːa* 'water; liquid'.

blow *-waːriːc*

bone *kiːsːa*

book *kháːkiːsːa* Also used for 'paper'. Originally 'a transparent membrane'.

bow *ksiːcːa* Also 'gun'.

bread *kirːiːcːa*

breast *eːcːa*

breathe *-hisciyaːs*

brother (of a man) *-aːːiːrás* (Verb root, meaning more nearly 'he is a brother of...')

brother (of a woman) *raːciː?* (Always possessed).

buffalo *néːrhirːa* (male); *taːrha* (female)

burn *-hiri*

buttocks *niːːis*

caddo *téːsaːa* 'friendly ones'

chair *háːkasskiː* 'wood-feet stand upright'.

chief *íriːːa*

child *niyeːs* incorporated form *aː*

claw *iskːicːa*

clothing *akːaːharːa*

cloud *keːeːrːa*

come *u~a...ːa*

Comanche *naːtaːáːh*

cook *-ːarasi*

corn *téːs*

corn (coarsely ground) *cákaːsːa*

corn cob *kíyáːkhirːa*

corn, ear of *niːːacːa*

corn husk *tasaːrːa*

corn (parched) *kaːsasːa*

corn silk *niːːaːwicːa*

corn stalk *tacːa*

corn tassle *nikiriʔa*
 count *-ʔakʔi:ri:ki*
 coyote *kʔita:ks*
 cut *-tara; -kack*
 dance *ichas* (noun); *-ichasi* (verb)
 day *hiráthirisʔa* or *hánthirisʔa* Also use *sakhirʔa* 'sun'
 die *-teʔes* This is basically a taboo word, and as such is not used for people. *kiriwaʔiʔi* 'He is no longer (here)' translates 'He is dead'. For plants, use *-kakichi* 'dry up'.
 dig up *-hawati; -hirá:ra*
 dirty *neʔestha:r*
 doctor *ikiwiraʔa*
 dog *kiciyeʔh; wáseʔekʔa*; combining form *weʔes*
 drink *-kikʔa*
 dry *kakic*
 dull *kʔi:c*
 dust *neʔeckha:rʔa*
 eagle *ko:s*
 ear *a:cʔa*
 earth *hira:rʔa*
 Mother Earth *hiraciya:ká:hí:kʔih neʔerʔiriwah* 'Our mother who is lying down' is the addressee of prayers offered before eating.
 eat *-kaʔac* (singular object); *-ʔa* (plural object) (transitive); *-wa:waʔa* (intransitive)
 egg *nikʔi:kʔa*
 eight *kiyátaw* Cf. *taw* 'three'
 elm *teʔe:c*
 eye *kirikʔa*
 face *ickaʔa*
 fall (down) *-a:c...rirakʔ*
 (over) *-iweʔeha*
 (off) *-taksi*
 far *tac tiʔi:wah tac* 'big' + *tiʔi:wah* 'it extends'
 fat *he:c; kira:sʔa* 'grease, lard'
 father *tá:tah* (vocative); *ʔiʔassi* (possessed)
 fear *-u...wakhánniya:s* 'be afraid'; *-hisica:s* 'be frightened'
 feather *ni:sʔa*
 few *tawʔic*
 fight *-ʔica:ri*
 finger *iskʔicʔa*
 fire *ye:cʔa* (noun); *-keʔe* 'be fire' (verb); *icka* (locative); *chirʔa* 'flame'. (Initial [y] is pronounced /h/.)

fish *ka:cʔa*
 five *iskʔi:c*
 float *-a~u...hicaʔa* 'float to surface'; *-hicaʔiriya:s* 'float around on the surface'. Cf. *hi* 'water', *ca* 'surface', *ʔa* 'come' and *ʔiriya:s* 'go randomly'.
 flow *-uc...kiris*, from *kir* 'water' + *hisha* 'go'.
 flower *a:wicʔa*
 fog *-ʔiskʔa:wi* (verb)
 foam *waʔhi:sʔa*
 foot *asʔa*
 four *tá:kʔic*
 freeze *-ra:hi*
 Friday *acs nasa:khashkírih* 'When a good day is going by.'
 fruit No generic term
 full *táwa:wi*
 gamble *-a:c...ʔaris*
 gambler *wakháteʔ*
 give *-reʔehisha* (imperfective), *-raʔa:w* (perfective) 'hand over'; *-uc...ʔih* 'as a gift'
 good *acs*
 grass *hí:ya:kha:rʔa; hanc* 'hay; dry grass'
 green *kawʔac*
 guts *niya:cʔa*
 hair *tiya:cʔa*
 hand *iskʔa*
 he *ha:ri:h* 'that one'
 head *weʔekʔa; icki:sʔa* 'forehead; top of head'
 hear *-ʔa:ckhéʔe; -ʔa:ckhikeʔe*. Cf. *a:cʔa* 'ear'
 heart *sikicʔa*
 heavy *kikʔi:c*
 here *tiʔrih*
 hip *ka:ski:sʔa* 'leg bone'
 hit *-ti:kʔ* 'snap; tap; hit'; *ʔisi* 'hit; sock'
 hold *-iʔahi*
 horn *ʔarikʔa*
 horse *kawá:rah* Combining form *ta:ras*. Probably a loan from Spanish *caballo*.
 house *akha:rʔa*
 grass house *hancʔakha:rʔa*
 how *e:si:h*
 hunt *-r...kiya:shis*
 husband *kirʔa* (always possessed)
 I *nacʔih*
 ice *na:hicʔa*
 if No single word. Use conditional tense forms.

in *ka* 'in topless enclosure; *ka* 'in completely enclosed space'; *kha* 'on the bottom inside'.
kill -*ki* (singular object); -*essa* (plural object); -*riya:kʔaw* 'murder'; also, for animals, -*teʔesiki* 'cause to die'
Kitsai *kí:cheʔs*
Kiowa *ká:hiʔwaʔ*
knee *ki:skʔasʔa*
knife *ta:haʔa*
know -*wickaʔa*; non-third-person pronouns demand -*Rickaʔa* (cf. say); -*ʔi:kha:rʔi* (optional for plural subject); -*riyakha:rʔi* 'know how'
lake No special word. Use *ha:hira:rʔa* 'body of water'
laugh -*wakharikikʔ*
leaf *kiʔinca:cʔa*
left (side) *assa:hah*
leg *ka:sʔa* 'above knee'; *ʔiki:sʔa* 'below knee'
lie -*ʔirhawi* 'be in a lying position'
lie *wákhíʔa* 'untruth'; -*iwákhíya:s* 'tell a lie'
live -*ʔicaki* 'sit; dwell'
liver *karikʔa*
long *tac tá:ki* 'big' + 'be a size'
louse *wi:c* Homonymous with 'man'
lungs *hákarí:s*
man *wi:c*
many *ʔiyarhah*
meat *ʔarasʔa*
Monday *kíriwaré:sa:khiʔnnih* 'when it is no longer his day' (See example 75)
moon *wá:h*
mother *éciye:h* (vocative); -*ka:hi:k-* 'woman' (possessed). Cf. 'earth'
mountains -*wa-* in e.g. *nawa:reʔerhárih* 'where there are mountains' (verb only)
mouth *ha:kaʔa*
mucus *incʔa*
name *hissa:rʔa*
narrow *kʔi:s tikateʔe* 'the side is small'
navel *niwi:cʔa*
near *tharah*
neck *kiticʔa*
new *hoʔos*; also 'recent, soon'
night *ckha:rʔa*
nine *chiʔass kíntiʔi* 'one is not'
nose *tisʔa*
not *kírih*

old *tackʔah*
one *chiʔass* Occasionally in sentences *ass* is used. *chiʔ* 'only'
other *wittho:h* 'different'
paint *sis*
Pawnee *awá:hí:h*
penis *wacʔa*
person *iha:s*
play -*a:c...ʔicha* Cf. 'dance'. -*irikwi* 'play ball'..
pole *ti:kʔa*
potatoes *kakickhárik* 'thick and dry'
pull -*hawati* 'from ground'
pumpkin *kéʔess*
rabbit *kó:kis*
rain -*a...híriʔa* (verb only)
red *kʔha:c*
rib *sacʔa*
right (true) -*wé:h* (verb root; also means 'yes')
right side *acskʔikeʔe:s* 'good arm side'
river *nahe:hárih* 'where the water-place is'; cf. lake
road *hachirʔa* (noun); -*yac* 'be a road' (verb)
root *ʔaski:cʔa*
rope *ya:khasʔa* (Initial *y* is pronounced /h/.)
rotten *ke:cʔa* Also used for 'brown'
rub -*teʔeriyar* 'rub against'; -*kiri* 'rub on'
salt *ka:hi:c*
sand *ki:cha:rʔa*
Saturday *wa:khácsa:khirʔa* 'cow day'
say -*wakʔa* (non-third-person pronouns use -*Rakʔa*)
scalp *ʔicki:sʔa* 'top of head'; *e:ssa:rʔa* 'captured scalp'
see -*ʔi:s*
seed *hikaʔasʔa*; *nikí:sʔa* 'seed for planting'
seven *kíyáhwic* Cf. 'two' and 'eight'
sew -*riya:tíri*
sharp -*riʔacʔi* 'of a blade'; -*ʔickhacʔi* 'of a point'
shoot -*ʔiyaca* 'an arrow'; -*ʔiya:c* 'a person'
shoot at -*iwariki*
short *thara tihírʔak* 'close' + 'be a height'
sing -*kira:h*
sit -*ʔicaki*
six *kíyehes*
skin *kitha:rʔa*

sky *askha·rʔa*; *askhákasir*
 sleep *-hiʔinck*
 small *kʔi·s* (stative verb); *Rikic* (adjective)
 smoke *wíʔi·kʔa* ‘tobacco; tobacco smoke’;
ickʷeʔe·kʔa ‘fire smoke’
 snake *hi·c*
 snow *hiraʔa* (noun); *-a...ʔi:ʔa* (verb)
 spit (out) *-hawati*
 star *hí·kʷirikʔa*; North Star *ka·hasá·rkih* ‘it always
 stands still’; Big Dipper *kiyahwicʔih* ‘The Seven’;
 Morning Star *hasé·yasiraʔah* ‘It brings’.
 stick *ya·kʷsʔa* (Initial [y] is pronounced /h/.)
 stone *ʔikaʔa*
 sun *sa·khirʔa* Also used for ‘day’.
 Sunday *ná·sa·khiʔnnih* ‘when it is his day’ (See
 example 74)
 tail *ki·ya·kʔa*
 ten *iskhiriʔawá:s*
 testicles *nikwi·kʔa* ‘egg’
 that *ha·rí·h*
 there *harah*
 thick *tac ta·cikit* ‘big’ + ‘it has thickness’
 thin *kʔi·s ta·cikit* ‘small’ + ‘it has thickness’
 think No separate word. Use ‘know’.
 this *tiʔi*
 thou *nasʔih*
 three *taw*
 throw *-riwihi*
 Thursday *ní·cʔarhiʔirhé:sishah* ‘the day they go to
 stay overnight’
 tie *-thiyaki*
 toe *ʔaskʔicʔa*
 toenail *ʔaskwicʔa*
 tongue *hacʔa*
 tooth *a·kʔa*
 Tawakoni *tawa·kháriw*
 tree *tiya·hkw*
 Tuesday *wicha kinné:sa·khiʔinnih* ‘twice it’s not his
 day’
 turn *-tarʔa·ti*
 twenty *chiʔass ti·ciksiʔi*; *wicha*
kiʔiskhiriʔawá:sʔarih ‘two tens’
 two *wic*
 urinate *-a·has*
 urine *ka·hásskicʔa*
 vagina *ta·cʔa*

Waco *wí·koʔ*
 warm *wari·c*
 wash *-u...hicaki*
 water *kicʔa* (isolation form); *kir* (combining form);
ha, hi (locative)
 we *hiracʔyarih* ‘dual inclusive’; *hiracʔarih* ‘dual
 exclusive’; *nací·ra·kʔih* ‘plural inclusive’; *nacá·kʔih*
 ‘plural exclusive’
 Wednesday *nackháti·kih* ‘the middle day’
 what? *e·kirih*
 when? *e·sis*
 where? *e·si·h...ʔasʔ*; *e·ka·h*
 white *khac*
 White man *istá·hiʔi*
 who? *e·kiyah*
 Wichita *kirikirʔi·s*, is usually said to mean
 ‘Raccoon-Eyed’, referring to the custom of
 tattooing the face, especially around the eyes. If
 this analysis is correct, the grammar of this
 compound is unique: *kirik* ‘eye’ + *kirʔi·s* ‘raccoon’
 violates the regular pattern of combining noun
 roots in the order modifier-modified. A possible
 explanation is that **kirʔi·skirik(ʔa)*, the expected
 form, would mean ‘hole in a raccoon’, because of
 the homonymy of *kirik* ‘eye’ and *-kirik-* ‘hole in’.
 It is more likely that this is a compound of an
 obsolete word, *kirika* (found in Kitsai) meaning
 ‘person’, and *hirʔi·s* ‘first’, meaning ‘first people’.
 The most serious problem with this etymology is
 that the loss of initial *h-* from the second element
 of the compound is unusual.
 wide *tac tikáteʔe* ‘The side is big’.
 wife *-ʔak-* (possessed only)
 wind *niweʔé·rʔa* Also used for ‘air’.
 wing *wíkariya·kʔa*
 witch *niyá·khis*
 with suffix *Rá·hirʔ* ‘instrumental’; use ‘and’.
 wolf *wáseʔekha·rʔa*
 woman *ka·hi·kʔa*
 woods *niya·khánnʔí·rih* ‘where there is much
 timber’
 worm *keʔe·c*
 yellow *narisis*
 yes *wé·h*