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A GRAMMAR OF KIOWA

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A GRAMMAR OF KIOWA

by

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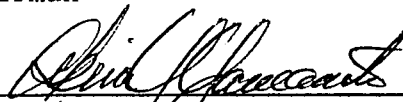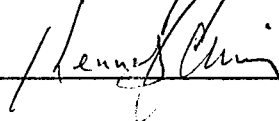
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To Yĩsàum

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CONTENTS

TABLES

ABBREVIATIONS AND SYMBOLS

abl	ablauted form	inv	inverse
adv	adverb(ial)	ipf/fut	imperfective future
agt	agent		
an	animate	ipf/hsy	imperfective hearsay
anph	anaphoric relative particle	ipf/imp	imperfective imperative
aux	auxiliary	itr	intransitive
bas	basic	loc	locative
detr	detransitive	N	nasalization
dir	directional	neg	negative
distr	distributive	nom	nominalizer
du	dual	obj	object
dur	durative	pat	patient
fut	future	pf	perfective
hab	habitual	pl	plural
hsy	hearsay	poss	possessive
imp	imperative	ppfx	pronominal prefix
impf	imperfective	proh	prohibitive
inan	inanimate	Q	interrogative
indef	indefinite	refl	reflexive
instr	instrumental	rel	relative marker

sg	singular
stat	stative
sub	subordinator
tr	transitive
vb	verb
x	implied unspeci-fied agent
1	first person
2	second person
3	third person
F	falling tone
H	high tone
L	low tone
TL	tone-lowering
-	morpheme boundary
+	compound boundary
/	separates morpheme glosses when not separable by morpheme boundary
=	separates elements of gloss required by translation
$	syllable boundary
C	consonant
V	vowel
R	resonant
*	non-occurring, ill-formed
**	reconstructed form

CHAPTER ONE

Introduction

The Kiowas are a Plains tribe whose language is
related to that of the Tanoan pueblos of New Mexico and
Arizona. Mooney (1898) places the Kiowas near the head of
the Missouri River around 1700 and traces their migration
east to the Black Hills of South Dakota, during which time
they established friendly ties with the Crow, and then
gradually south to the Platte and beyond to the area be-
tween the Arkansas and Red Rivers. We have no record dat-
ing much before 1700, however. Today, Kiowas live primar-
ily in southwestern Oklahoma, and especially in Caddo,
Kiowa, and Comanche counties.

Of long-standing interest has been the linguistic
affiliation of the Kiowa language. The Powell classifica-
tion of 1891 lists Kiowan as a family distinct from Tanoan
and whose sole representative is Kiowa. John P. Harring-
ton had noted numerous resemblances between Tanoan and
Kiowa in his Vocabulary of the Kiowa Language (1928), but
Whorf and Trager (1939) preferred to leave open the ques-
tion of the exact relationship of Kiowa to their proposed

Uto-Aztecan stock. Detailed support for a closer rela-
tionship between Kiowa and Tanoan did not appear until
Miller (1959) and later that year Trager and Trager (1959)
provided lexical comparisons from Taos and Kiowa. Hale
(1962, 1967) demonstrated definitively, with a reconstruc-
ted consonant inventory and partially reconstructed roots,
that Kiowa-Tanoan is indeed a closely related family.

The broader affiliation of Kiowa-Tanoan with Uto-
Aztecan is still unproven, but as knowledge of the indivi-
dual Kiowa-Tanoan languages increases and detailed recon-
structions are available, we will soon be in a position to
assess the Aztec-Tanoan question with greater confidence.

Even the internal relationships of Kiowa-Tanoan are
poorly understood. On the basis of incomplete investiga-
tions of both phonological and grammatical correspondences
within the family, it seems clear that the differences
among the four subgroups (Tiwa: Taos, Picurís, Sandia, Is-
leta; Tewa: San Juan, Santa Clara, San Ildefonso, Nambe,
Tesuque; Towa: Jemez; Kiowa) are not so great as to war-
rant a hyphenated name. In other words, the label Kiowa-
Tanoan reflects a cultural division but not an obvious
linguistic one; Kiowa looks very much like a Tanoan lan-
guage and it is difficult to point to any constellation of
features that might indicate a particularly long period of
separation from Tanoan before the Tanoan languages split
from each other. Of special interest are the striking
similarities that can be found in the uncommonly complex

systems of noun (number) classification and pronominal prefixes, in addition to the detailed correspondences in consonantal ablaut outlined by Hale (1967).

The first modern linguistic data on Kiowa appears in Harrington (1928). The Vocabulary is a rich source of information on Kiowa despite Harrington's occasional mishearing of the voiceless unaspirated vs. voiced stop contrast and the infrequent marking of tone. Apart from a brief article by Crowell (1949), the major research on Kiowa was published in a valuable series of articles in IJAL in the 1950's: Wonderly, Gibson and Kirk (1954), Sivertsen (1956), and two papers by Merrifield (1959). The contributions of these linguists are cited in the grammar in the appropriate sections. Other materials include texts by Harrington (1947), an unpublished dissertation and a paper on the pronominal prefixes by E.C. (Trager-) Johnson (1960, 1972), and McKenzie and Harrington's (1948) popular survey of the language. My own research has appeared more recently (1976, 1977, 1978, 1979).

The strength of this grammar lies in the range of data on which it is based; the pleasure of it lies in the Kiowa people I have worked with. Field work began in 1974 with Belle G. Kayitah, who was in her early sixties then and working as a dormitory counselor at Haskell Indian Junior College in Lawrence, Kansas. Although she had lived in Lawrence for some thirty years, she returned frequently to her home in Carnegie, Oklahoma and maintained ties with

her family there. Her patience, warmth, and good humor
eased the first difficult months and she taught me a great
deal about the Kiowa way, both in her actions and in sev-
eral short narratives on Kiowa life. As is the case for
all of the Kiowa speakers I have worked with, Mrs. Kayitah
learned Kiowa first as a child and was not exposed to Eng-
lish until she was sent to school around the age of nine.

By happy coincidence and the intervention of the
Smithsonian Institution, Parker McKenzie and I met in the
fall of 1977 and began work in the summer of 1978. Mr.
McKenzie was born in 1897 near Rainy Mountain (sépyàldà)
and spoke no English until he began attending school at
about the age of eight. In 1918 he was a part-time in-
formant for Harrington, who was in Oklahoma for the summer
gathering data for the Vocabulary. That early exposure to
a linguistic perspective awakened in Mr. McKenzie an abid-
ing interest in the analysis and preservation of the Kiowa
language. It is only through his interest and perseverance
that certain data are available, in particular texts tran-
scribed in the forties from older respected speakers and
more recently letters written to the late Charlie Redbird,
who had worked with Summer Institute of Linguistics field
courses and also wrote Kiowa. In addition, Mr. McKenzie
has through the years kept written records of words now
rarely used and has in general maintained a sensitive ear
to the styles and variations of Kiowa speech.

Mr. McKenzie's contribution is not only one of data, however. His painstaking attention to detail and sensitivity to nuances of meaning have greatly enriched my understanding of Kiowa. In particular, the discussion of tone, the finer points of the system of noun classification, and the completeness and accuracy of the verbal paradigms and pronominal prefixes owe much to his careful attention. The fact that we have been able to correspond using his orthography (see Appendix 2) has meant not only that questions are not forgotten from one trip to the next but that a wealth of unelicited Kiowa is preserved. Many examples in the grammar are from such spontaneous communication. What is not so evident in the pages of the grammar is Mr. McKenzie's wit and sense of humor, which make our work together so enjoyable.

In addition to these two primary consultants, three other speakers of Kiowa have provided texts and vocabulary. Florence Saumty, Mrs. Kayitah's sister, and her husband the Reverend George Saumty recorded several texts on life in the old days. One of Mrs. Saumty's stories appears in Chapter Five. I remember with great pleasure the hospitality offered me by the Saumtys in the form of an old-style Kiowa meal of kí:sɔn 'boiled meat', corn, and fry bread. The late Beulah Hall, who was born in 1900 and was 75 when we worked together, provided vocabulary and some songs. Her vibrant personality and reminiscences made the old days a reality for me.

Although tribal membership is in the thousands, the number of speakers of Kiowa is far below that figure. Mr. McKenzie estimates, based on personal records, that there are no more than about five hundred speakers; that number diminishes with each year. There are virtually no fluent speakers under the age of fifty and Kiowa children do not learn the language except perhaps in a few rare cases.

This is the first complete grammar of Kiowa, and it is intended as a starting point for continued recording and investigation of the richness and complexity of the language. The grammar is organized along traditional descriptive lines: phonology, morphology, syntax, texts. There is no denying that arbitrary decisions must be made as to the appropriate category for some phenomena, but in all, the organization has served the structure of Kiowa fairly well.

It is through the data that the analysis can be judged and improved upon. I have therefore tried to include as many examples as possible within the limits of time and space. Moreover, these examples have been selected from spontaneous data (e.g., texts, letters) whenever possible. Examples have been given interlinear glosses (see Abbreviations and Symbols) and provided with an English translation, often by Mr. McKenzie, that is intended to capture the flavor of the original Kiowa.

This grammar will, I hope, provide a basis for fur-

ther investigation of topics that could not be fully elab-
orated. In addition, I hope that it will stimulate gram-
matical and syntactic comparisons with the Tanoan lan-
guages. The comparative perspective can only improve our
understanding of the individual languages of the family.

CHAPTER TWO

Phonology

2.0. <u>Introduction.</u> The phonological description
which constitutes this chapter begins with an introduction
to the traditional phonemes and their subphonemic variants.
The essentially phonemic orthography is equally well-suited
to representing the necessary surface contrasts and the un-
derlying forms which can be posited on the basis of mor-
phophonological alternations. That the orthography serves
both purposes reflects no lack of complexity in the phono-
logy of Kiowa but is instead the result of the relatively
non-abstract approach I have taken. In only a few cases
is the underlying form of a morpheme not one of the ac-
tually occurring allomorphs.

Although the status of the segmental phonemes has
been established for some time, with the exception of glot-
tal stop (see, e.g., Wonderly, Gibson and Kirk (1954),
Sivertsen (1956), Merrifield (1959a), and Trager (1960)[1]
for their inventories of phonemes), problems in analyzing
tone, vowel length, consonant-glide clusters and laryngeal
features have not been entirely resolved. Only Sivertsen
(1956) has provided detailed discussion and conclusions
about suprasegmental phenomena. These more controversial

aspects of Kiowa phonology have been given special attention.

Phonological rules which describe the segmental alternations of morphemes are brought together in 2.7. They vary in generality from entirely automatic alternations to alternations for which a morphological as well as a phonological environment must be specified. The latter type is far more common. Alternations which appear to have been phonological in origin but which are so irregular as to defy generalization in phonological terms are discussed in the sections in which the morphemes are presented.

2.10. <u>Phonemes.</u>

2.11. <u>Consonant inventory.</u>

Table 1: Consonants

	Labial	Dental	Alveolar	Palatal	Velar	Laryngeal
Stops						
Ejective	p'	t'			k'	
Aspirated	p^h	t^h			k^h	
Voiceless	p	t			k	(?)
Voiced	b	d			g	
Affricates						
Ejective				c'		
Voiceless				c		
Fricatives						
Voiceless			s			h
Voiced			z			

Table 1 (cont.)

Labial Dental Alveolar Palatal Velar Laryngeal

Resonants

Nasal	m	n	
Liquid		l	
Glide			y

Contrasts among the consonants are easily demon-
strated with an abundance of minimal and near-minimal
pairs. There are no contrasts between the presence of
initial glottal stop and its absence (see 2.3 for discus-
sion).

(1) /p'/ p'í: 'female's sister'   p'ɔ́:   'river, stream'

  /pʰ/ pʰí: 'fire; hill; heavy' pʰɔ́:- 'body hair'

  /p/   pɪ́:- 'food/eating'   pɔ́:   'eat'

  /b/   bɪ́:- 'foggy'   bɔ́:   'bring'

  /t'/ t'áp   'deer'   t'ó: 'cold'

  /tʰ/ tʰáp   'dry'   tʰó: 'lap'

  /t/   tá:- 'eye'   tó: 'tepee, house'

  /d/   dá   'must'   dó: 'hold, wear'

  /k'/ k'í: 'male, husband'   k'úl   'be lying pl'

  /kʰ/ kʰí:- 'day'   kʰûl   'pull off'

  /k/   kí: 'meat'   kûy   'coyote'

  /g/   gɪ́:- 'night'   gúy   'outside'

/c'/	c'é:	'thick'	c'ó:	'rock, stone'
/c/	cé:	'short'	có:-	'be lying sg'
/s/	sép	'descend; sew'	són	'grass'
/z/	zép	'flow; breast'	zón	'pull out'
/h/	hé:bà	'enter'	hón-	'last, end'

The ejective and aspirated stops are articulated forcefully. The unaspirated voiceless stops are tense, while the voiced stops are lax.[2]

The alveolar affricates /c'/ and /c/ are always [ts'] and [ts] respectively. The series is thus defective with respect to the non-continuent obstruents in lacking aspirated *c͟h and voiced *z̧.

The voiceless alveolar fricative /s/ is pronounced [š] before /y/ (see 2.4 for discussion of Cy clusters).

(2) /sét/   [sét]   'bear'

/syân/   [šȩ̂nˀ]   'be small pl'

/sân/   [sậnˀ]   'child'

The lateral /l/ is realized as [l] in syllable-initial position, as lightly affricated [ᵈl] in syllable-final position, and slightly devoiced in utterance-final position [ᵈl̥]. /l/ does not occur word-initially.

(3) /cé:lê:/   [cé:ʸlê:ʸ]   'set/ipf/hsy sg/obj'

/gúldɔ̀:/   [gúᵈldɔ̀:]   'be red, painted'

/sál/   [sáᵈl̥]   'be hot'

The dental resonants /l/ and /n/ are palatalized be-
fore /i/.

(4) /tʰàlí:/ [tʰàlʸí:]   'boy'

    /bǫ́:nî:/ [bǫ́:ʷnʸî̧:] 'see/ipf/hsy'

The phone [w] occurs in a very few interjections and
loanwords, the latter mostly unassimilated Comanche terms.

(5) [wį́:stè]   (exclamation of dismay, as in missing a shot)

    [wáhò]   (nonsense syllables in lullabies)

    [wé:]   (old word of welcome to travelers)

2.12. <u>Vowel inventory.</u> Kiowa distinguishes six
vowel qualities, with three distinctive levels of height
and a front-back contrast. All six vowels may be long or
short, oral or nasal. Four of the vowels occur as diph-
thongs with a high front offglide.

Table 2: Vowels

	Front	Back	Diphthongs	
High	i	u		uy
Mid	e	o		oy
Low	a	ɔ	ay	ɔy

The contrastive status of vowel length is a complex
matter and will be discussed more fully in 2.5. Nasal vow-
els contrast with oral vowels in a straightforward fashion.

(6) /i:/   kî: 'meat'   /ɨ:/   kî̧:   'pull'

     /e:/   pé: 'dead'   /ę:/   pȩ̂:   'turkey'

     /a:/   tá:-   'eye'   /ą:/   tá̧:   'star'

     /u:/   gú: 'wise'   /ų:/   gú̧:   'horn'

     /o:/   tó: 'tepee'   /ǫ:/   tó̧:-   'talk, say'

     /ɔ:/   ɔ́:   'gamble'   /ɔ̧:/   ɔ̧́:   'give'

Any vowel adjacent to a nasal consonant in the same syllable is nasalized, as in the following non-alternating forms. Nasalization also spreads phonetically across sonorants.[3]

(7) /né/   [nę̂]   'but'   /nɔ́:/   [nɔ̧́:]   'I, we'

     /má:/   [má̧:]   'up, high'   /mɔ́n/   [mɔ̧́n]   'probably'

     /hóɔ̀n/   [hó̧ɔ̧̀n]   'road'   /kʰɔ́ɔ̀n/   [kʰɔ̧́ɔ̧̀n]   'poor'

The high vowels /i/ and /u/ have lowered variants [ɪ] and [ʊ] respectively preceding nasals.

(8) /mîn/   [mɪ̂n]   'about to'

     /bímkʰɔ̀y/   [bɪ́mkʰɔ̀y]   'bag'

     /kíl/   [kí^{d}l̥]   'dwell, be camped'

     /gún/   [gʊ́n]   'dance/pf'

     /gûl/   [gû^{d}l̥]   'write/imp'

The mid vowels /e/ and /o/ have homorganic offglides when long.

(9) /hé:bà/   [hé:^{y}bà]   'enter'

/sép/   [sép]   'rain'

/tó:kyà/   [tó:ᵂkyæ̀]   'at the house'

/tón/   [tǫ́n]   'be fat'

The low front vowel /a/ is fronted and raised after /y/. When the vowel is long, its quality is [æ]; when short preceding a nasal, it ranges from [ɛ] to [æ]. Otherwise it is realized as [a].

(10) /k'yą́:hį̂:/   [k'yǽ̨:hį̂:]   'man'

      /k'yám/   [k'yǽ̨m]   'lazy'

      /yán/   [yɛ̨́n]   '2sg/pat:pl/obj'

      /sál/   [sá^d_ol]   'be hot'

The low back vowel /ɔ/ is only slightly rounded and fairly far back, varying between [ɑ] and [ɔ]. In a short open syllable, /ɔ/ is often centralized to [ʌ].

(11) /dɔ́m/   [dɔ̨́m]   'earth, ground'

      /k'ɔ́:lé:/   [k'ɔ́:lé:ʸ]   'bite/pf'

      /dɔ̀póm/   [dʌpǫ̂m]   'despicable, worthless'

The four diphthongs, like the simple vowels, may be oral or nasalized.

(12) /ay/   páy   'sun'   /a̧y/   pʰâ̧y   'tie'

      /uy/   kûy   'coyote'   /u̧y/   kû̧y   'mess up'

      /oy/   cóy   'liquid'   /o̧y/   tʰǫ́y   'club'

      /ɔy/   kɔ́y-   'Kiowa'   /ɔ̧y/   kʰɔ̨́y/   'bark, rind'

2.13. _Phonotactics._ All consonants may begin a
syllable but /1/ may not occur word-initially.[4] The only
consonants which may terminate a syllable are /p,t,m,n,1,
y/.

Certain sequences of consonant and vowel do not oc-
cur: a) dental and alveolar obstruents preceding /i/
(*t'i, *t^{h}i, *ti, *di, *c'i, *ci, *si, *zi) and b) velars
and /y/ preceding /e/ (*k'e, *k^{h}e, *ke, *ge, *ye). See
2.73 for a discussion of Dental-Velar Switch and the mor-
phophonological alternations this rule describes.

The glide /y/ automatically occurs between all velars
and /a/. The status of this and other Cy clusters is dis-
cussed in 2.4.

The high back vowel u (long or short, oral or nasal)
occurs only following velars.[5]

2.20. _Syllable canon._ Although the definition of
the syllable and universal syllabification principles re-
main unresolved theoretical problems, both prosodic and
segmental phenomena in many languages are more naturally
and adequately described with reference to the syllable.
In Kiowa, vowel length and tone are best explained if
their domain is the syllable.

The basic structure of the syllable consists of a
vocalic nucleus, optionally preceded by one consonant (or
Cy cluster, see 2.4) and optionally followed by one con-
sonant from the set /p,t,m,n,1,y/. In other words, apart

from the sequence of consonant and palatal glide, there
are no tautosyllabic consonant clusters. The syllable can
be schematized: (C)V($\left\{\begin{smallmatrix} C \\ : \end{smallmatrix}\right\}$).

Table 3: Syllable types

V	è-	'3du/itr	V:	ą́:	'come'
	à-	'1sg/itr'		ó:-	'throat'
CV	bà-	'2sg/itr'	CV:	k'ɔ̂:	'knife'
	cégùn	'dog'		há:têl	'who'
CyV	k'yátây	'chiefs'	CyV:	k'yą́:hį̂:	'man'
VC	ám	'you'	CVC	t'áp	'deer'
	óp	'pour/pf'		kóm	'friend'
CyVC	kyáp	'remainder'			
	k'yám	'lazy'			

Syllabification follows a few simple principles. In
the examples that follow, $\underline{\$}$ represents a syllable boundary,
the place where speakers pause if asked to say the word
slowly. Vowels immediately following the syllable bound-
ary are preceded by a glottal onset in careful speech (see
2.3).

2.21. A syllable boundary occurs between adjacent
consonants, except $\underline{Cy}$: VC$C(y)V.

(13) pʰânsę́:   'seven' bôntɔ̂: 'bend/fut' gúldɔ́: 'be red'
     pʰân$sę́:   bôn$tɔ̂:   gúl$dɔ́:

(13) pʰátkyá   'quilt'   pâydà   'summer'   kyápté 'remainder'

phát$kyá   pây$dà   kyáp$té

    2.22.   A syllable boundary occurs between adjacent

vowels:[6] V(:)$V(:).

(14) hóɔn   'road'   p'ɔ̞́ɔ̞́:   'wash'   pʰą́:ò: 'three'

hó$ɔn   p'ɔ̞́$ɔ̞́:   pʰą́:$ò:

    tóòbà   'quiet'   áál   'glands'   k'ɔ̀âl   'dishes'

tó$ò$bà   á$ál   k'ɔ̀$âl

    2.23.   A syllable boundary occurs after any vowel

preceding a single consonant or Cy cluster: V(:)$C(y)V.

(15) yí:kyá 'four'   bǫ̀:tɔ́: 'see/fut'   hę̀:mà 'die/impf'

yí:$kyá   bǫ̀:$tɔ́:   hę̀:$mà

    mà:yį̀   'woman'   mátʰɔn 'girl'   yɔ́kɔ́y 'young
                                                          woman'
mà:$yį̀   má$tʰɔn   yɔ́$kɔ́y

    tógúl   'young   pálá:dɔ̀ 'quilt'   tʰàlí: 'boy'
                man'
tó$gúl   pá$lá:$dɔ̀   tʰà$lí:

    If the preceding and following vowels are both short

and the single consonant is one of the syllable-finals

(i.e., /p,t,m,n,l,y/), then there is some fluctuation in

syllable boundary. The tendency is for the consonant to

belong to the preceding syllable in careful speech, thus

reflecting the morphological boundary in most cases, but

to the following in casual speech.

(16) k'ópéttɔ̀   'big mountain (<k'óp 'mountain' + éttɔ̀
                 'big/sg/inv)

   k'óp$ét$tɔ̀   (careful)

   k'ó$pét$tɔ̀   (casual)

   tʰónɔ̀t'ɔ̀̃y   'oppossum (<tʰón 'tail' + ɔ́:t'ɔ̀̃y
                 'smooth')

   tʰón$ɔ̀$t'ɔ̀̃y (careful)

   tʰó$nɔ̀$t'ɔ̀̃y (casual)

   This tendency to maintain open syllables is also
manifested across word boundaries in casual speech. In
(17), note also that with the shift to syllable-initial
position, the /p/ is voiced (see 2.771).

(17) sà:nóp è-ɔ́y   (snake/inv [3inv]-be=many) 'There are
                     a lot of snakes.'

   sà:$nóp$è$ɔ́y   (careful)

   sà:$nó$pè$ɔ́y   [sà:nóbè?ɔ́y] (casual)

   2.30. <u>Glottal stop.</u> The phonemic status of glottal
stop and laryngealization in Kiowa has been a controver-
sial issue over the years. Glottal stop was treated as a
phoneme by Trager (1960), as problematic and not entirely
predictable by Wonderly, Gibson and Kirk (1954), but as
predictable and thus not phonemic by Sivertsen (1956) and
Merrifield (1959). The source of the controversy lay in
the doctrine of autonomous phonemics. Briefly, while glot-

tal stop is never contrastive, it cannot be assigned un-
ambiguously to any one phoneme. It is predictable, how-
ever, in the four environments in which it occurs: 1) as
glottal onset with syllable-initial vowels (2.31), 2) in
alternation with /p,t/ before consonants (2.32), 3) as a
phonetic concomitant of falling tone (2.63), and 4) as a
glottal increment before unaspirated voiceless stops
(2.792).

2.31. <u>Syllable-initial glottal stop</u>. All syllable-
initial vowels are preceded in careful speech by a glottal
onset. In connected speech, this glottal stop is fre-
quently elided, word-initially as well as medially. The
examples in (18) illustrate the occurrence of glottal stop
in citation forms and its frequent absence in informal
speech. When the glottal onset does not occur between ad-
jacent vowels, the second vowel usually retains its syl-
labic pulse, but general processes of contraction (2.9)
can result in the reduction of the second syllable, as in-
dicated by the phonetic variants listed after the slash.

(18)   <u>Formal</u>   <u>Informal</u>

[hǫ́ʔɔ̰̀n]   [hǫ́ʷɔ̰̀n]   'road'

[p'ɔ̰́ʔɔ̰́:]   [p'ɔ̰́ɔ̰́:]/[p'ɔ̰́:]   'wash'

[sɔ̰́ʔɔ̰̀:dè]   [sɔ̰́ɔ̰̀:dè]/[sɔ̰̂:dè]   'get angry'

[mɔ̀ʔɔ́ybè]   [mɔ̀ɔ́ybè]   'be difficult'

[háyá́ʔàᵈl]   [háyá́àᵈl]/[háyàᵈl]   'every which way'

There is some evidence to suggest that stress or prominence (see 2.66) plays a role in the occurrence of prevocalic glottal onset. In connected speech the glottal stop is more likely to occur when the syllable it initiates is prominent, i.e., when the syllable is long and has high or falling tone. In the following examples, taken from the second text in Chapter Five ('Grandmother Telling Stories'), the prominent syllables are underscored.

(19) a. dɔ́mgyá àn á̧:gyà   [dɔ̧́mgyæ̀:nˀá̧:gyɛ̀]

'she would sit on the ground'

b. nègɔ́ ɔ́yhɔ̀: è-cán   [nȩ̀gɔ́ˀɔ́yhyɔ̀ècá̧n]

'and that's where we came'

c. gɔ̀ étté ɔ́:k'óbé ét-dȩ̀:mɔ̀: [gɔ̀éˀtéˀɔ́:k'óbéˀdȩ̀:mɔ̧̀:]

'and we all lay down in a circle'

Prevocalic glottal stop is most simply treated as a systematic phoneme (i.e., underlying) which is deleted under varying conditions. However, it will not be written in surface representations, where its presence can be predicted.

2.32. Glottal stop also alternates predictably with syllable-final stops /p,t/ preceding another consonant.

(20) $\begin{bmatrix} - \text{son} \\ - \text{cont} \\ - \text{voice} \end{bmatrix} \rightarrow [- \text{cons}] / \underline{\quad} \begin{bmatrix} + \text{cons} \\ - \text{syll} \end{bmatrix}$

The stylistic conditions for alternation are similar to those for deletion of glottal onset: in careful speech, particularly in citation forms, the underlying stop is most likely to occur, but in informal connected speech, glottal stop usually replaces /p/ and /t/ in preconsonantal position.

(21)   <u>Formal</u>   <u>Informal</u>

      [tʰópkyæ`y]    [tʰóʔkyæ`y]   'pierce through'

      [tʰɔ́pkɔ̂:]   [tʰɔ́ʔkɔ̂:]   'shoot/neg'

      [t'átkyɛ́]   [t'áʔkyɛ́]   'sever/sg/detr'

      [bàtpɔ́:]   [bàʔpɔ́:]   'eat/imp(2sg)'

With slightly less regularity, utterance-final stops are also replaced by glottal stop.

(22) cóy à-óp   [cóyàʔóʔ]   'Pour him some coffee.'

      nén-tó:bèhòp   [nḛntó:ʷbèhòʔ]   'Tell them to be quiet.'

2.40. <u>Cy clusters.</u> The only consonant clusters permitted within a syllable are those consisting of a consonant followed by the palatal glide /y/. The consonants occurring in such clusters are the following:

(23) a. $\left\{ \begin{matrix} k', k^h, k, g \\ n, l, s \\ p', p^h \end{matrix} \right\}$ y / ___ a

     b. {k', kʰ, s} y / ___ ɔ

There are good reasons, which will be discussed in the remainder of this section, for considering the /y/ in the (23a) clusters to be the reflex of the first segment of an earlier diphthong **ia. In a few instances (23b), **iɔ must also be internally reconstructed.[7] Both roots and affixes exhibit alternations involving some part of the set i(:)~ya~a ; a synchronic rule of glide formation (2.742) independently supports a shift of /i/ to /y/.

2.41. <u>Roots.</u> The palatal glide /y/ occurs automatically between all velars (/k', k^h, k, g/) and a following /a/. This appears at first glance to be merely a low-level rule that would not normally be represented orthographically.

(24) /k'ya/   [k'y ǽ:hɨ̂:]   'man'

      /k^{h}ya/   [k^{h}y ǽn]   'disperse'

      /kya/   [ky æ̂y]   'Comanche, enemy'

      /gya/   [gy ǽ]   'in/at (a point)'

However, there are a number of roots with alternating forms <u>Ci:~Cya</u>. The alternants appear not to be predictable although tone and vowel length (see 2.66) may have been important conditioning factors historically. In (25), the roots <u>k'í:</u> 'male, husband' and <u>k^{h}í:</u> 'day' have alternating forms in compounds.[8]

(25) a. <u>k'í:</u>   'male'   <u>k'yǽ:hɨ̂:</u>   'man'

        dɔ̀:<u>k'í:</u>   'God'   dɔ̀:<u>k'yàí:</u>   'Christ'

b. k^hí:dá   'day'

dɔ́:k^hí:dá   'Sunday'

dɔ́:k^hító: 'church'   dɔ́:k^hyátó: 'church'

Similar alternations (i~ya) occur following /g/
('uncle') and /y/, as in the numerals based on 'two' and
the verb root 'disappear' in (26).

(26) a. sègî: 'uncle/voc' sègyây 'uncle/name'

b. yí: 'two'   yátsę́: 'eight'

yí:kyá   'four'   yátkyát^{h}ą̀: '14'

yí:kyákɔ̀:dòk^{h}į̀: '400'   yátkyák^{h}į̀: '40'

c. yî:yà   'disappear/impf' yây 'disappear/pf'

Moreover, this alternation in roots is not restric-
ted to velars and /y/, occurring with a few labials as
well. Although p'yą́y- 'quarrel' (27) does not alternate,
'fire' has competing forms p^{h}í:~p^{h}yá in several compounds.
Older speakers favor the Ci: version but occasionally use
Cya and report that they remember its being used by their
grandparents.

(27) a.   p'yą́y-   'quarrel'

b. p^{h}í: 'fire'   p^{h}yáysón   'fire materials'

p^{h}ítɔ́m 'firepit' p^{h}yátɔ́m   'firepit'

p^{h}í:bǫ́á:dɔ̀ 'lamp' p^{h}yábǫ́á:dɔ̀ 'lamp'

The sequence /sya/ does not alternate with */si/ but
instead contrasts with /sa/. Mr. McKenzie reports that

for older speakers, among them his grandmother, the words
for 'child' and 'be small du/pl' were both pronounced
[ç'ę̂nʔ].

(28)   /syân/   [šę̂nʔ]   'be small du/pl'

        /sân/   [są̂nʔ]   'child'

2.42.   Automatic alternations.   All three phases of
the i:∿ya∿a alternation are represented in the pronominal
prefixes. This distribution is:

(29) a. /i:/ occurs with falling tone following a short
         syllable, e.g., bágî: '2pl/agt:(1,3sg/pat):pl/
         obj'

      b. /ya/ occurs following velars, e.g., gyà '1sg/agt:
         sg/obj'

      c. /a/ occurs following labials, e.g., bàt '2sg/agt:
         pl/obj'

Similarly, the imperfective intransitive suffix is
/à/ following labials and /yà/ elsewhere.

(30) hę̂:mà   'die/impf'   ɔ́:lyà   'cry/impf'

      bánmà   'go/impf'   hį́:nyà   'get dug/impf'

      ɔ̧́:mà   'happen/impf'   gú:lyà   'get written/impf'

If we posit an underlying ia in the case of these
automatic alternations, the variants can be derived by a
simple set of rules, discussed in 2.74. The historical

sequence likely involved the weakening of the i portion of
the diphthong following a consonant unless the syllable
also carried a falling tone. Subsequently the glide y
(<i) was lost following voiced labials.

Additional weak support for the postulated **ia is
found in Harrington's (1928) use of the digraph ia for
what I have consistently recorded as /i/. He commented
that "the second element of the diphthongs uɔ, ia is fre-
quently elided"(p. 2). What is not clear is the degree to
which Harrington regularized the ia notation since he lists
all instances of modern /i/ as ia or i(a). The interesting
historical question is whether all occurrences of /i/ are
in fact derived from **ia. In the case of non-alternating
forms, e.g., bîn 'be large du/pl', gí:- 'night', pʰíl
'wipe', í: 'son, offspring', it is impossible to say at
this stage.[9] Therefore, **ia is posited as the under-
lying vowel only where the synchronic alternations are
automatic.

Thus, despite the predictability of post-consonan-
tal /y/ in some environments, /y/ will be written through-
out the grammar. This approach is faithful to the phonet-
ic realization and reflects, apparently, a change in
progress, the conditions for which are not entirely under-
stood and which ought not to be obscured by notational
regularization until they are.

2.50. <u>Vowel length.</u> The distribution of long and
short vowels in certain environments suggests that histor-
ically vowel length was not phonemic. Synchronically,
however, vowel length is predictable only in closed syl-
lables. Short vowels only are permitted in closed sylla-
bles but both long and short vowels occur in open sylla-
bles. At the underlying level, then, long and short vowels
must be specified.

2.51. <u>Closed syllable shortening.</u> The majority of
verbal and nominal roots exhibit alternating long and
short vowels, long in open syllables and short in closed
syllables. Because there are short vowels which never al-
ternate, vowels that do are considered to be underlying
long vowels. The shortening rule is:

(31) $[+ \text{syll}] \rightarrow [- \text{long}] /$ _____ $C\$$[10]

Closed syllable shortening is illustrated in verbs
(32), nouns (33-34) and adverbials (35).

(32) | Root | Ipf/hsy | Imp | Future | |
|------|---------|-----|--------|---|
| bá: | bá:nê: | bá: | bá:t'ɔ́: | 'go' |
| ɔ̰́:m | ɔ̰́:mè: | ɔ̂m | ɔ́mtɔ́: | 'do, make' |
| gṵ́:n | gṵ́:nê: | gûn | gúntɔ̀: | 'dance' |
| â:y | â:yì: | ây | âytɔ̀: | 'start off' |
| gú:l | gú:lê: | gûl | gúltɔ̀: | 'write' |

(33) tó: 'house'

      tó:kyà   'at the house'

      tôy   'in the house; room'

(34) cát   'entrance, doorway'

      cá:dɔ̂:   'from the doorway'

      cátpé   'against the doorway'

(35) tʰɔ́:   'beyond'

      tʰɔ́:dèkʰì: 'next day'

      tʰɔ́p   'at a point beyond'

2.52. <u>Initial syllable shortening.</u> Disyllabic
words frequently consist of a short syllable followed by a
long syllable. A short syllable is any syllable ending in
a short vowel; a long syllable ends in a long vowel or
vowel plus consonant. Many of these short-long sequences
are synchronically unanalyzable,[11] as in (36), but others
are old compounds, as in (37).

(36) tógúl   'young man'   yɔ́kɔ́y   'young woman'

      sɔ̀pʰól 'owl (large)'   pàhį́:   'surely'

      mɔ̀hį́: 'owl (small)'   kɔ́bót   'bullboat'

      k'ɔ̂l   'dishes'   tę̀dán   'sparrow hawk'

      k'ókɔ́y 'elk'   bósèn   'buzzard'

(37) cégùn   'dog'   (<cę̀: 'dog' + gún 'tepee pole')[12]

      mátʰɔ̀n 'girl' (<mà: 'woman' + tʰɔ́n 'small')

      pʰíkút 'design' (<pʰí: 'fire' + kút 'mark')

(37) tòdôm   'floor'   (<tó: 'house' + dôm 'beneath')

      tékʰì: 'every day'   (<té: 'all' + kʰí: 'day')

      t'ópʰòt 'shade, breeze'   (<t'ó: 'cold' + pʰót 'blow')

      hóɔ̀n   'road'   (<hó: 'travel' + ɔ́n 'path')

The roots from which the initial syllables of the words in (37) are derived all have underlying long vowels. Postulating a rule that shortens a long vowel in an initial syllable when the following syllable is long both explains the compounds in (37) and accounts for the distribution of short vowels in (36).

(38) $[+ \text{syll}] \rightarrow [- \text{long}] /$ ## (C)_____ $(C)V\left\{\begin{matrix} C \\ : \end{matrix}\right\}$ ##

Many disyllabic words, however, consist of a sequence of long vowels. Moreover, several roots have long vowels in the initial syllables of some compounds and short vowels in others (39). There appear to be neither phonological nor semantic grounds on which to predict the length of the vowel in the initial roots.

(39) a. tǫ́:- 'speak'   t̲ǫ́:hâ: 'get up to talk'

                         t̲ǫ́:cán   'come to council'

                         t̲ǫ́hɔ̂n   'quit talking'

                         t̲ǫ́ɔ́n   'speak (of thunder)'

     b. tʰǫ́: 'water'   t̲ʰǫ́:cép   'flood'

                         t̲ʰǫ́zótkót 'rapids'[13]

(39) c. t'ɔ̀:- 'strike' <u>t'ɔ̀:sá:</u> 'shatter by striking'

                        <u>t'ɔ̀gû:</u> 'nail'

A diachronic explanation for the vowel length alter-
nations in (39) is suggested by the fact that compounds
with the long-long sequence are fully analyzed whereas
those with the short-long sequence are sometimes only par-
tially analyzed and sometimes entirely opaque. The rule
of initial syllable shortening, by which the examples in
(36) and (37) were derived, is hypothesized to have been
lost historically, leaving compounds formed after rule
loss with the underlying long-long sequences. Although
there are no obvious independent clues as to which of the
compounds in (39) might be more recent, compounds based on
two other roots support this hypothesis.

First, there are a number of compounds with the ini-
tial root p̧ɨ́:- 'food/eating'. In most of these compounds
the vowel of the initial syllable is long, e.g., p̧ɨ́:kʰɔ́y
'tablecloth', p̧ɨ́:cɔ́: 'fork', and p̧ɨ́:ɔ́mtó: 'kitchen (eat+
make+house)'. One compound has a short vowel, p̧ɨ́á:dɔ̀
'table (eat+wood)'. Although 'table', like the other com-
pounds, would appear to be an introduced item of European
culture and thus a relatively recent formation, a very
early photograph of a Kiowa family in their camp shows the
p̧ɨ́á:dɔ̀ or 'eating board', a plank of wood on the ground on
which cooking utensils were set. We should not, therefore,
rule out the possibility that p̧ɨ́á:dɔ̀ is an old compound

that predates white contact. When asked whether the same
compound pronounced with a long vowel, i.e., pį́:á:dɔ̀, could
be a Kiowa word, Mr. McKenzie suggested that the term
could be used to refer to chopsticks.

A second set of compounds with the initial root kí:
'meat' also lends some support to the hypothesis that com-
pounds with long vowels in the first syllable are more
recent than those with short vowels. In particular, the
semantic distinction between the two kinds of dried meat
suggests that kít^{h}àp, with a short vowel, is the earlier.

(40) a. kí:sɔ̀n 'boiled meat (meat+boil)'

kí:còy 'stew (meat+liquid)'

kí:t^{h}àp 'dried meat, jerky (meat+dry)'

b. kíbòl   'rancid meat (meat+rotten)'

kít^{h}àp '(Kiowa-style) dried meat (meat+dry)'[14]

2.53. Long-short-long sequences. A very common
pattern of syllable length found in longer compounds is
the sequence long-short-long. Among those compounds that
are fully identified, their short second syllables are
all derived from roots with long vowels. A rule is there-
fore postulated which shortens a long vowel when it occurs
second in a sequence of three long syllables.

(41) ·[+ syll] → [- long] / (C)V$\begin{Bmatrix} C \\ : \end{Bmatrix}$$(C)_____$(C)V$\begin{Bmatrix} C \\ : \end{Bmatrix}$

The examples in (42) illustrate several compounded
roots in shortening and non-shortening environments. The

examples in (43) illustrate the pervasiveness of the long-short-long pattern in unanalyzed and partially analyzed compounds.

(42) a. ólhɔ́:gyà   'money (head+metal)'

    ólhɔ̨́tò: 'bank (money+house)'

    ólhɔ̨́bòt   'get one's fill of money'

  b. kʰɔybátô:léɔ̲̀:t'ɔ̨̂y   'bat (butterfly+smooth)'

    sà:néɔ̲̂:t'ɔ̨̂y 'whipsnake (snake+smooth)'

    tʰónɔ̲̀t'ɔ̨̂y   'oppossum (tail+smooth)'

    c'ólɔ̲́t'ɔ̨̂y   'devil (wing+smooth)'

  c. pʰɔ̨́:hèl   'stop/hsy'

    dę̀:pʰɔ̨́hâ: 'get up from sleeping (sleep+stop+arise)'

    kútpʰɔ̨̂kʰì: 'get out of school (school+stop+exit)'

  d. tʰɔ̨́:hâ: 'get up to drink (drink+arise)'

    tʰɔ̨́:sô:yà   'get down to drink (drink+descend)'

    cóytʰɔ̨́sô:yà 'get down to drink (liquid+drink+descend)'

    dóytʰɔ̨́k'ɔ̂n   'grimace from taking medicine (medicine+drink+grimace)'

  e. tȩ̂:hèl   'grab/hsy'

    tòptȩ́à:dɔ̀   'cane (handle+grab+stick)'

(43) tʰónɔ̲̀k'ɔ̀t   'rough-tailed turtle'

  tʰónpʰɔ̲̀yî:yì 'swallow-tail kite'

  tʰɔ̨́:pʰɔ̲hól   'bird of prey (leg+furry+intensive)

  pà:tá̲è: 'banana'

(43) kʰɔ́:lék'yâ:lé   'frog'

    cènbót'ɔ̀:dè   'cow's gall bladder (<cènbô: 'cow')'

    t'ɔ́lkʰɔ̀t'ɔ̂:lé   'marsh hawk (<kʰɔ́: 'black')'

    á:gùntʰàp'ɔ́:   'Washita River (<tʰá: 'sever/pl')'

The root á: 'wood(s), stick, tree, brush', which frequently occurs in compounds, e.g., sɔ́gù:dà 'prairie falcon' and á:sɔ̀gù:dà 'sharp-shinned hawk', provides several nice examples of this medial length alternation. Although the variants for 'tricolored blackbird' (44) are partially unanalyzed, the initial optional syllable á: is no doubt 'wood', which shortens kɔ́:. In (45) the root á: is an independent noun in the first version but incorporated in the verb in the second, thereby creating the environment for shortening the vowel of t'ɔ̂:- 'by striking'.

(44)   kɔ́:dɔ̀t'ɔ̀m   'tricolored blackbird'
      á:kɔ̀dɔ̀:t'ɔ̀m[15]

(45)   á: gyàt-t'ɔ̀:tʰâ:gù   'I was cutting wood.'
      gyàt-á:t'ɔ̀tʰà:gù[16]

Just as there are many exceptions to initial syllable shortening (2.52), many sequences of three long syllables retain a long vowel in the second syllable. For example, compounds in (46a) illustrate that a main verb and its inflectional suffixes are never shortened by this rule; (46b) and (46c) illustrate verbal and nominal com-

pounds with three long syllables.

(46) a. dè̞:mɔ̂:tɔ̀:   (not *dè̞:mɔ̂tɔ̀:)   'lie down to sleep/
                                          fut'

        pé̞:nê:c̞è̞:   (not *pé̞:nêc̞è̞:)   'butcher/ipf/hsy-
                                          when'

        tʰáyhì̱:tɔ̀:   (not *tʰáyhì̱tɔ̀:)   'accompany/fut'

        kúnc̱ò:dè: (not *kúnc̱òdè:)   'lie discarded/ipf/
                                          hsy'

    b. gí̞:hò̱:dɔ̀:hì̱:t'ɔ̀:   'keep on night-traveling'[17]
       p'ɔ́yc̞ò̞:sè:bɔ̀   'accidentally needle-prick'[17]

    c. ɔ́:pí̞:sân   'minnow (fish+small)'
       k'óptʰá̱:kîl   'partridge (mountain+prairie
                      chicken)'

Just as for initial syllable shortening, a plausible
explanation for medial length alternations seems to be the
existence of a vowel shortening rule that is no longer
productive.

2.54. <u>Deverbal shortening.</u> One process by which
nouns are derived from verbs (see also 3.113) is the
shortening of the underlying long vowel of the verb root.

(47) a. dɔ̀msá̱:   'plow/pf (earth+shatter)'
        dɔ̀msá̱   'plow'

    b. kʰúypʰà̞:   'be hitched (drag+be=tied)'
       kʰúypʰà̞   'wagon, buggy'

    c. kɔ́ytò̞:-   'speak Kiowa'
       kɔ́ytò̞gyà   'Kiowa word(s), language'

2.55. <u>Emphatic length.</u> Extra degrees of length may be used for rhetorical effect. The lengthening is frequently accompanied by extra high pitch and may be as much as three times the normal duration for a long vowel. Emphatic lengthening is used especially as a narrative device (see n. 8, 5.24) but also occurs frequently in ordinary conversation.

(48) a. óy gyà-bǫ́:   'I saw him over there.'

      ó::y gyà-bǫ́:   'I saw him <u>way</u> over there.'

   b. hâòy   'later'

      há::òy   'much later'

   c. à-kò:dódàmgyàdɔ̀:   'I'm really tired.'

      à-kò::dódàmgyàdɔ̀: 'I'm <u>really</u> tired.'

2.6.   <u>Tone.</u> Pitch is contrastive at the lexical level in Kiowa. The underlying tones are /ˊ/ 'high' (H) and /ˋ/ 'low' (L). In addition, there is a sequence of HL /ˆ/ 'falling' (F) permitted on a long vowel or vowel plus resonant sequence. On a short syllable, only H or L may occur. There is no LH or 'rising' tone.

2.61.   Tones are distributed according to syllable type as shown in Table 4 (below), where VV represents a long vowel (V:) in order to show the parallel with VR, vowel plus resonant /m,n,1,y/.

Table 4: Tones

High	(C)V́(C)	(C)V́V́	(=V́:)	(C)V́Ŕ
Low	(C)V̀(C)	(C)V̀V̀	(=V̀:)	(C)V̀R̀
Falling	---	(C)V́V̀	(=V̂:)	(C)V́R̀

Although the falling tone can be considered to be a
sequence of underlying HL on the basis of its distribution,
it and the simple tones H and L will be written over the
vowel. Apart from practical orthographic considerations,
tone has the syllable as its domain. When a morpheme is
syllabified differently according to vowel length alterna-
tions (see 2.5), F remains associated with the long vo-
calic segment.

2.62. Phonetically, a long H has a gradually fall-
ing pitch; when short, the H is generally level. F, on
the other hand, is characterized by an abrupt drop in
pitch and is often accompanied by creakiness (2.63). Si-
vertsen's (1956:124) instrumental studies show a sudden
lowering of pitch associated with the falling tone of from
206 to 150 Hz in one instance and from 225 to 160 Hz in
another. In addition, there is a gradual lowering or
downdrift of the pitch of H tones across a phrase or
breath group, which constitutes the major intonational
feature of Kiowa. L tones for the most part remain at the
same pitch level across a phrase.

2.63. <u>Tone and laryngealization.</u> Laryngealized or

creaky vowels and resonants are frequently associated with
the falling tone in Kiowa. The occurrence of this tonal-
ly conditioned laryngealization is extremely variable from
speaker to speaker and in different linguistic contexts.
Phonetically it varies from full closure, i.e., glottal
stop, to creakiness or a noticeable tensed quality to the
vibration.

Sivertsen (1956:124) described three phonetic mani-
festations of laryngealization associated with low tone:
a) "a rearticulation of the vowel with an intervening
glottal constriction", b) "rearticulation without such
constriction", or c) "simply laryngealization of the long
vowel." She went on to say that spectrographic analysis
of laryngealized syllables revealed

> little consistent difference in resonance patterns,
> as seen from the wide filter pictures, whereas there
> is a consistent difference in pitch relationships...
> the so-called laryngealized syllable has a marked fall,
> or rather step-down, in pitch in the middle, whereas
> the non-laryngealized syllable has no such step-down.

In the data collected over the last five years, com-
plete closure, i.e., [ʔ], most often occurs when F is car-
ried on a final syllable. What Sivertsen described as a
rearticulation of the vowel is heard as the voiceless re-
lease of the glottal closure, usually schwa-like but with
some coloring of the preceding vowel.

(49)   bǫ́:mɔ̂:   [bǫ́:ʷmɔ̂ʔᵊ]   'see/neg'

       hêm   [hê̜mʔᵊ]   'die/pf'

(49)   tɔ̂:   [tɔ̂ʔˀ]   'father/voc'

Creaky voice [⌣] is more frequent on a long medial vowel than on a vowel-resonant sequence.

(50)   bǫ́:nî:tɔ̂:gɔ̀   [bǫ́:ʷnyḭ̂:tɔ̰̀:gɔ̀] 'see/ipf/fut/same'

       sâ̰:dɔ̀   [sâ̰:dɔ̀]   'shildren'

Hombert (1978:96) has suggested the following phys- iological explanation for this phenomenon:

> After a low tone (especially a low falling tone) the vertical displacement of the larynx, which seems to be the main mechanism for F_o lowering, (Ohala, this vol- ume) as well as the relaxation of the cricothyroid muscle, may affect the vibratory conditions suffi- ciently (Stevens, 1975) to lead to irregular vibra- tions of the cords, which will be perceived as creaki- ness (sometimes called laryngealization). This is probably what happened in Kiowa (Sivertsen, 1956). Another possibility is that the vibratory conditions deteriorate sufficiently so that voicing stops.

The cessation of voicing apparently also plays a role in the creation of a glottal increment, discussed more fully in 2.79.

In general, laryngealization among the speakers I have heard is most common with falling tone, although Sivertsen described it as associated with low tone, i.e., on long low syllables as well. Experimental studies and a broader sample of speakers would help to determine more precisely the range and environments for this variable feature. Nevertheless, Sivertsen's conclusion that laryn- gealization is predictable if tone and length are con-

trastive is supported by my data.

2.64. <u>Distribution of tones.</u> Contrasts between H and L are rare on monosyllables but can be found on the pronominal prefixes (51), where tone carries grammatical information (see 3.235).

(51) a. ę́-   '(2,3sg/agt):1sg/pat:sg/obj'

ę̀-   '3du/intransitive'

b. èm-   '3sg/reflexive'

ém-   '3pl/reflexive'

c. án-   '(2,3sg/agt):3sg/pat:pl/obj'

àn   'durative particle'

Contrasts between H and F, on the other hand, are more numerous on lexical roots.

(52) a. k'ɔ́:   'cold'   b. pʰę́y   'dust, dirt'

k'ɔ̂:   'knife; cut'   pʰę̂y   'tie'

c. gú: 'clever, wise'   d. kɔ́l   'bison cow'

gû: 'hit'   kɔ̂l   'cross, turn'

Apart from a tone lowering rule (2.651) which accounts for the scarcity of F-H or F-F sequences, H, L, and F occur freely in disyllabic words.

(53)	H-H		H-L		H-F	
	tógúl	'young man'	cégùn	'dog'	hę́:mɔ̂:	'die/neg'
	ɔ́:pį́:	'fish'	kú:tò	'bird'	há:têl	'who'
	yí:kyá	'four'	pʰą́:ò:	'three'	pá:lê	'weak'

(53)   <u>L-H</u>   <u>L-L</u>

tʰàlí: 'boy'   tʰʾo̜gɔ̀:   'long ago'

sà:né   'snake'   ɔ̀:mày   'far up'[18]

tę̀dán   'sparrow hawk'   ɔ̀:tʰɔ́p   'far beyond'[18]

         <u>L-F</u>   <u>F-L</u>

k'ɔ̂âl   'dish'   cê̜:gɔ̀   'horse'

pà:bî: 'male's bro-   hî̜:yì: 'die/ipf/hsy'
         ther/voc'

tò:hî̜:   'tepee'   kɔ̂:kʰìn 'by tens'

2.65. <u>Tone rules.</u> Tone alternations in Kiowa are conditioned phonologically and morphologically. The domain for all tone rules is the word. Morphological tone lowering (2.653) is conditioned only by compounded morphemes.

2.651. <u>Tone lowering.</u> A H or F is lowered to L following F. The rule as formalized in (54), where F is represented as [+ H][- H], makes clear the assimilatory nature of the rule.

(54)   [+ H] → [- H] / [+ H][- H] X ____

Examples in (55) illustrate the effect of the rule on the inverse suffix -<u>Cɔ́</u>/-<u>Cú</u> (3.12). When attached to stems with F, the tone of the suffix is lowered to L.

(55)   tʰǫ̂:-<u>gɔ́</u>   'legs'   cê̜:-<u>gɔ̀</u>   'horses'
        pó:-<u>dɔ́</u>   'bugs'   sâ̜:-<u>dɔ̀</u>   'children'

(55)   kɔ́y-gú   'Kiowas'   kyây-gù   'Comanches'

Juxtaposition of morphemes with underlying F arises frequently in verb inflection. The F of -ê: 'imperfective hearsay' and -î: 'imperfective imperative', for example, is lowered when preceded by F (56a). When preceded by H, the F of the suffixes remains (56b).

(56) a. $t^h\hat{e}$:m-ê: → $t^h\hat{e}$:mè: 'break-ipf/hsy'

         $t^h\hat{e}$:m-î: → $t^h\hat{e}$:mì: 'break-ipf/imp'

         î:1-ê: →   î:1è: 'warn-ipf/hsy'

         î:1-î: →   î:1ì: 'warn-ipf/imp'

         câ:n-ê: →   câ:nè: 'arrive-ipf/hsy'

         hê:b-ê: →   hê:bè: 'bring=in-ipf/hsy'

     b. dɔ́:n-ê: →   dɔ́:nê: 'seek-ipf/hsy'

         dɔ́:n-î: →   dɔ́:nî: 'seek-ipf/imp'

         té:1-ê: →   té:1ê: 'tell-ipf/hsy'

         té:1-î: →   té:1î: 'tell-ipf/imp'

Further illustration is provided by nominal and verbal compounds.

(57) $k^h\hat{i}$: + é:t^hâl   → $k^h\hat{i}$:ě̆:t^hàl   'popcorn (bloom + corn)'

     pí: + êl + k^hí:dà   →   pí:êlk^hì:dà   'Thanksgiving (eat + big + day)'

     hôl + tó: →   hôltò: 'hospital (sick + house)'

     dôy + kyɔ́y   →   dôykyɔ̀y   'be too tall/long (too + long)'

It is important to note that <u>all</u> subsequent tones in the word are lowered following F.

(58) bô: + bǫ́:nî:tɔ̀: → bô:bǫ̀:nî:tɔ̀: 'always + see/ipf/
                                                fut'

2.652. <u>Exceptions to lowering.</u> There are three morphologically conditioned exceptions to lowering after F.

2.6521. <u>Negative.</u> The F of the negative suffix (3.329) is never lowered phonologically. If the second of two adjacent falling tones is on the negative, then a minor rule assimilates the low portion of the first F to the following H.

(59) $[- H] \rightarrow [+ H] \ / \ [+ H] \ \rule{1cm}{0.15mm} \ (C)[+ H][- H]_{neg}]$

Thus, verbs with or without an underlying F have identical tonal patterns when negative.

(60)   <u>Root</u>   <u>Negative</u>

     a.   kǫ̂:n   kǫ́:nɔ̂:   'bring'

          t^{h}ȩ̂:m   t^{h}ȩ́:mɔ̂:   'break'

          hâ: há:gû: 'arise'

     b.   gṵ́:n   gṵ́:nɔ̂:   'dance'

          ɔ̧́:m   ɔ̧́:mɔ̂:   'do, make'

          á̧:   á̧:mɔ̂:   'come'

2.6522. <u>Interrogative.</u> Most interrogative words are distinguished from their indefinite counterparts (see

3.4) by F on the root, e.g., há:-yá (indef) '(to) some-
where', hâ:-yá (Q) '(to) where?'.[19] Tone lowering is
blocked if the F of the indefinite/interrogative stem is
preceded by interrogative F.

(61)   Indefinite   Interrogative
        há:-têl   hâ:-têl   'who'
        há:-bê: hâ:-bê: 'which'
        há:-gyâ-y   hâ:-gyâ-y   'which one'

   2.6523. Deverbal tone raising. Finally, many com-
pound deverbal nouns violate the lowering rule in having a
F-H sequence. Most of the nouns are animal terms in the
form of descriptive phrasal compounds and many are not
synchronically analyzable. Those that can be analyzed
(e.g., 'travois dog' and 'squirrel') are derived from
verbs to which the phonological lowering rule applies,
e.g., -t^{h}â:pè<hâ:pè 'pick up'.

(62) gùn+t^{h}â:pé 'travois dog (tepee=pole+pick=up)'
     t'èl+k^{h}yĝ:dé 'bird species (rump+pulsate)'
     zòn+t^{h}â:pé 'squirrel (pine+pick=up)'
     t^{h}ǫ́:+t'ɔ̂:dé   'faucet (water+burst)'
     k^{h}ɔ́:lé+k'yâ:lé 'frog'
     k'ɔ́:lɔ́t+kɔ̂:yí   'grasshopper'

   2.653. Morphological tone lowering. In compounds,
some morphemes cause all subsequent tones to be lowered

while other morphemes do not affect following tones. Because this tonal effect cannot be predicted on phonological or semantic grounds, every morpheme except those with underlying F (which automatically lowers subsequent tones) must be specified in the lexicon as tone-lowering (TL) or non-tone-lowering. The examples in (63) illustrate non-lowering morphemes in compounds; those in (64) illustrate lowering (TL) morphemes.

(63) pí̤: + tôy → pí̤:tôy   'restaurant (eat+room)'

 tʰó̤: + sô: → tʰó̤:sô: 'get down for a drink (drink+descend)'

 dè̤: + k'ɔ́: → dè̤:k'ɔ́:   'be asleep/in bed (sleep+be=lying/sg)'

(64) ɔ́: + dé: → ɔ́:dè: 'be standing waiting (wait+stand)'

 hó: + ây → hó:ày   'drive off (travel+start=off)'

 kò:dó + dámgyá → kò:dódàmgyà   'get very tired (very+get=tired)'

Several pairs of homophones are distinguished only by their effect on the following tones in a compound. Those roots identified so far (there are likely several others) are listed in (65-71). The effect of the TL morphemes is illustrated with hé̤: 'away, gone' (e.g., hé̤: ∅-dɔ́: (gone [3sg]-be) 'he's gone/not here'), which as the compounded existential negative (see 4.15) can be glossed 'without x', 'x-less', or 'not x'.[20]

	Root		+ hȩ́:
(65) a. p'ɔ́:	'river, stream'		p'ɔ́:hȩ́:
b. p'ɔ́: (TL)	'moon, month'		p'ɔ́:hȩ̀:
(66) a. sȩ́:	'odor, scent'		sȩ́:hȩ́:
b. sȩ́: (TL)	'cactus, peyote'		sȩ́:hȩ̀:
(67) a. pʰî:	'fire; hill'		pʰî:hȩ́:
b. pʰî: (TL)	'heavy'		pʰî:hȩ̀:
(68) a. pé:	'dead'		pé:hȩ́:
b. pé: (TL)	'sand'		pé:hȩ̀:
(69) a. tʰêl	'chalk'		tʰélhȩ́:
b. tʰêl (TL)	'cut open'		tʰélhȩ̀:
(70) a. tól	'flimsy, frail'		tólhȩ́:
b. tól (TL)	'handle, peg'		tólhȩ̀:
(71) a. t'ó:	'face'		t'ó:hȩ́:
b. t'ó: (TL)	'cold'		t'ó:hȩ̀:

This differential tonal effect in compounds pro-
vides an explanation for the tonal behavior of certain
verbal suffixes. If the future -tɔ́:/-t'ɔ́: (3.325) and
the hearsay -hêl (3.327) are treated as compounded, then
the fact that they carry low tone following verb stems
which can be identified in other environments as TL mor-
phemes is explained quite simply. In contrast, the tone
of ordinary inflectional suffixes is not lowered by TL
roots, e.g., gú̧:n-ê: → gú̧:nê: 'dance-ipf/hsy'. A non-
lowering root (bó̧:∿pó̧:-) and a TL root (gún∿kún) are il-

ˈlustrated in (72) and (73).

(72) <u>Non-lowering</u>

    a. pǫ́:+t'á:gyà → pǫ́:t'á:gyà 'nice-looking (look+
                                                    nice)'

    b. pǫ́:+ǫ́: → pǫ́:ǫ́:   'show (look+give)'

    c. bǫ́:+tɔ́: → bǫ́:tɔ́:   'look+fut'

    d. bǫ́:+hêl → bǫ́:hêl   'look+hsy'

(73) <u>Lowering</u> (TL)

    a. kún+có:dè: → kúncò:dè: 'be lying discarded (dis-
                                                  card+lying/ipf/hsy)'

    b. kún+ą́: → kúną̀:   'come to dance (dance+come)'

    c. gún+tɔ́: → gúntɔ̀:   'dance/discard+fut'

    d. gún+hêl → gúnhèl 'dance/discard+hsy'

    It is important to note that TL morphemes also low-
er the tone of the negative suffix, which is not lowered
phonologically following F (2.6521). In (74) the root
tone of <u>hâ:</u> 'arise' is preserved in (a), raised before the
F of the negative in (b), and lowered, along with the F
of the negative, following the compounded TL adverbial
ɔ́:- 'temporarily' in (c).

(74) a. hâ:-gù   'arise-impf'

    b. há:-gû: 'arise-neg'

    c. ɔ́:+hà:-gù: 'temporarily+arise-neg'

    2.654. <u>Tone raising</u>. Although the general direc-
tion of tone rules is lowering, rules raising tone also

exist.

2.6541. <u>Lexical raising.</u> A number of lexical roots
have low tone whenever they occur in compounds but high
tone when independent or inflected.[21] If these roots are
treated as having underlying L, then they need not be
specially marked. Lexical raising is blocked only by a
compound boundary.

(75)   [- H] → [+ H] / ## (C)____ lexical]

This raising affects lexical, i.e., inflected, roots but
not particles, a few of which have underlying L, e.g.,
àn 'habitual'.[22]

In examples (76-79), independent and inflected forms
are compared with compounded forms. A few roots with L
never occur independently, e.g., ɔ̀n- 'foot' and dè:-
'sleep'.

(76) a. <u>Compounded</u>

    tò:+hį̂:   'tepee (house+real)'
    tò:+gúl   'red house (house+red)'
    tò:+cán+ày   'run off home (house+arrive+run)'
    tò:+t'ó+pʰòt 'shade of house (house+cold+blow)'

 b. tó: 'house, tepee'
    tó:-kyà   'at the house'
    tô-y   'in the house; room'

(77) a. <u>Compounded</u>

    dɔ̀m+sá: 'plow (earth+shatter)'

    dɔ̀m+kû: 'hoe (earth+hit)'

    dɔ̀m+tʰó:yà   'go on a foray (earth+wander)'

  b. <u>Non-compounded</u>

    dɔ́m   'earth'

    dɔ́m-gyá   'on earth, on the ground'

    dɔ́m-gú   'toward the ground'

(78) a. <u>Compounded</u>

    cèn+ǫ́:   'be very muddy (mud+intensive)'

    cèn+p'ɔ́:   'Rainy Mountain Creek (mud+stream)'

    cèn+hę́:   'not muddy (mud+gone)'

  b. <u>Non-compounded</u>

    cén   'mud'

    cén-gyá   'in the mud'

(79) a. <u>Compounded</u>

    pɔ̀:+kʰôy   'lead back (bring+return)'

    pɔ̀:+sép   'lead down (bring+descend)'

  b. <u>Non-compounded</u>

    bɔ́:   'bring'

    2.6542. <u>Compound raising</u>. A small group of disyllabic words has an initial L, e.g., <u>t'è̜:né</u> 'bird', that is raised to H following a compounded non-TL root, e.g., <u>tʰǫ́:t'ę́:né</u> 'killdeer (water+bird)'. Following a TL root, however, there is no modification of the tone, an addi-

tional peculiarity as TL roots normally lower all fol-
lowing tones in a word (2.653).

(80) a. t'è̱:né   'bird'

    t'è̱:né+gùl   'summer tanager (bird+red)'

    pé:+t'è̱:né   'seagull (sand(TL)+bird)'

  b. sá:+t'e̱:né   'snow bunting (winter+bird)'

    tʰo̱:+t'e̱:né   'killdeer (water+bird)'

(81) a. sà:né   'snake'

    sà:né+ɔ̀:t'ɔ̱̀y 'whipsnake (snake+smooth)'

    sà:né+hɨ̱:   'rattlesnake (snake+real)'

    á:+sà:né   'tree snake (tree(TL)+snake)'

  b. tʰo̱:+sá:né   'water moccasin (water+snake)'

(82) a. mɔ̀:sɔ́   'crow, raven'

    mɔ̀:sɔ̀+hɨ̂:[23]   'raven (crow+real)'

  b. tʰo̱:+mɔ́:sɔ́   'cormorant (water+crow)'

(83) a. sɔ̀pʰól   '(large) owl'

  b. k'óp+sɔ́pʰól   'mountain ogre (mountain+owl)'

    Raising of an underlying low tone in compounds ap-
pears to be a synchronic rule affecting verbal incorpora-
tion as well. The examples are few, but the conditions
are identical; a root with underlying L is raised follow-
ing a non-TL root.[24] In (84), the affected syllable is
underscored.

(84) pí̜:+pɔ̀:+kôn → pí̜:pɔ́:kôn 'arrive bringing food (food+
                                              bring+bring)'

kʰí̜:sɔ́+dè̜:+k'ɔ́: → kʰí̜:sɔ́dé̜:k'ɔ́: 'take an afternoon
                                              nap (afternoon+
                                              sleep+be=lying)'

pí̜:+mɔ̀ɔ́:dèp → pí̜:mɔ́ɔ́:dèp 'have trouble eating (eat+
                                              have+trouble)'

    2.66. Stress. Stress is not contrastive lexically
in Kiowa, but its function over a phrase or sentence is
not entirely clear at this point. Sivertsen's (1956:125)
studies involving acoustical pressure tracings provide
the only experimental data to which impressionistic judg-
ments can be compared. Her conclusions concerning the
correlations between stress measured as acoustical pres-
sure and tone and vowel length correspond nicely to my
notation of prominent syllables at the word or clause lev-
el. Among Sivertsen's conclusions are the following:
a) syllables with high and falling tone are more stressed
than those with low tone, b) a long syllable is more
stressed than a short one, and c) length combined with
high or falling tone makes stress "particularly marked"
(p. 126). Furthermore, Mr. McKenzie consistently marks
tone and vowel length but does not feel that stress is an
independent feature.

    Several passages from the second text in Chapter
Five (5.2) illustrate the interplay of tone and length
that results in syllable prominence. A long syllable

with H or F is particularly prominent if it is immediate-
ly preceded by a short L syllable. Prominent syllables in
the text excerpts in (85), numbered as they are in 5.2,
are underscored.

(85) (1) tʰà:lyôy kʰópdɔ́: gɔ̀ dɔ́mgyá àn á̰:gyà.

  (2) pálc'è: án-k'úldéḛ̀: àn á̰:gyà nègɔ́ ɔ́yhɔ̀: è-cán.

  (6) hègɔ́ è-k'úl.   (7) hègɔ́ mɔ́n è-dḛ̀:hêm nɔ̀ há̰::òy
      yá̰-tây nɔ̀ hétɔ́gṵ́: án-hḛ̀:tèpò̰:gyà: gɔ̀ háyáàl
      èm-t'ɔ̰́:mɔ̀.

  (8) gyà-yí:dɔ́ gɔ̀ bà-tɔ́:, "tʰà:lî:, bè-kʰódḛ̀:mɔ̀:,
      hègɔ́ kʰyápʰɔ̰́ygyá," bà-tɔ́: né hétɔ́ án-hḛ̀:tè-
      pò̰:gyà:.

    2.70. Phonological rules. The rules described in
this section represent phonological alternations that are
limited to specific morphological environments as well
as those that occur automatically. The pronominal pre-
fixes, for example, constitute one domain to which some
rules are limited. Phonological features used in the
formalization of rules are listed in Appendix 1. Rules
are applied in order, although not all of the rules must
be strictly ordered with respect to each other. Some of
the rules for which extrinsic ordering has been specified
can be applied in random sequential order, i.e., whenever
their structural descriptions are met, given a more de-
tailed specification of environment. Others must be ex-

trinsically ordered to block rule application which would counterfeed. The theoretical arguments for and against rule-ordering involve trade-offs. What is lost in a model with unordered rule application, among other things, is the historical information that can be inferred from ordered rules. Of course, underlying forms and ordered rules do not directly reflect the phonological history of a language, but we know so little about the Kiowa-Tanoan family that we cannot afford to ignore what diachronic information is available, however meager it may be,

In particular, the phonologically regular allomorphs of several morphemes appear to be derived by a set of early rules involving assimilation in nasality and/or place of the initial consonant of the suffix to the final consonant of the stem and subsequent reduction of the cluster. It is impossible at this stage to determine non-arbitrarily what the underlying form of the suffixes might be and thus to give anything more than a very general formulation of the rules. Both comparative and internal reconstruction will no doubt provide clues, but the answers are not yet available. Therefore, such morphemes as 'inverse' (-C $\acute{\text{5}}$), 'negative' (-C $\acute{\text{5}}$:), and 'imperfective' (-C $\grave{\text{5}}$) will be represented with the cover symbol C and the early rules affecting the shape of the consonant summarized as Cluster Reduction.

Unless otherwise indicated, the phonological rules

are assumed to apply within a root or across a morpheme boundary but are blocked by a compound boundary.

    2.71. <u>Tonal devoicing.</u> The alternation of voiced stops with the corresponding voiceless unaspirated stops can be predicted in two general cases by an immediately preceding falling tone. Devoicing is blocked in a nasal environment.

(86)
$$\begin{bmatrix} - \text{ son} \\ - \text{ cont} \\ + \text{ voice} \end{bmatrix} \rightarrow [- \text{ voice}] \; / \; \begin{bmatrix} + \text{ syll} \\ - \text{ nasal} \\ [+ \text{ H}][- \text{ H}] \end{bmatrix} \underline{\hspace{1cm}} [+ \text{ syll}]$$

The most striking examples of the application of this rule are in derived thematic stems where the initial voiced stop of the thematic suffix is devoiced following roots with falling tone.[25]

(87)

Voiced		Voiceless	
tó:-b̲è-	'calm down'	kʰî̂:-p̲è-	'fly off'
hâ:-b̲è-	'smoke'	hâ:-p̲è-	'pick up'
k'ɔ́:-b̲è-	'tip, fell'	bɔ̂:-p̲è-	'swarm'
t'á:-d̲è-	'block'	pâ:-t̲è-	'sharpen'
í:-d̲é-	'miss intentionally'	î:-t̲è-	'apportion'
p'ó:-d̲é-	'save'	tô:-t̲è-	'gather'

Because themes are not devoiced following the falling tone of imperfective stems (3.316), as in (88), there is some further restriction on the rule, the nature of which is not clear. Tonal devoicing also accounts for

inverse forms of nouns ending in -1 (see 2.791), but in
these cases the falling tone may be underlying or an allo-
morph of inverse (89).

(88)   Perfective stem   Imperfective stem

    k'ɔ́:-bé-   k'ɔ̂:-bè-   'tip, fell'

    sé:-bé-   sê:-bè-   'prick'

    hɔ́:-dé-   hɔ̂:-dè-   'tear off'

    yí:-dé-   yî:-dè-   'touch, feel'

(89)   Basic   Inverse

    pól   pó:dɔ́   'bug'

    sôl   sô:tɔ̀   'onion'

    k'ɔ́l   k'ɔ̂:tɔ̀   'neck'

The phonetic explanation for this devoicing appears
to be cessation of vibration accompanying falling tone,
as discussed in 2.63.[26] However, the rule apparently op-
erated at a stage when thematic stems (and inverse forms)
were first derived. With subsequent detransitive deriva-
tion via the raising of falling to high, the voiceless
stop remains, e.g., hâ: 'arise/refl/tr'>hâ:pè- 'raise,
pick up/tr'> há:pé- 'rise, get picked up/itr'.

    2.72.   Vowel truncation. In a sequence of vowels,
the first vowel is deleted.

(90)   [+ syll] → ∅ / ____ [+ syll]

Long vowels and diphthongs are not sequences of syllabic segments and undergo shortening or simplification in other ways.

Adjacent vowels occur most frequently in the underlying forms of the pronominal prefixes and thematic verb stems. A derivation of each type is given in (91) illustrating the operation of Vowel Truncation.

(91) a. '(x/agt):2pl/pat:pl/obj'

      b-ɔ́-ia-d   (underlying)

      biád   (V truncation)

      byád   (Glide formation)

      bád   (Glide deletion)

      bát   (Final devoicing)

      <u>bát</u>   (surface)

   b. 'smoke-theme-pf'

      há:-bè-ɔ̀   (underlying)

      há:bɔ̀   (V truncation)

      <u>há:bɔ̀</u>   (surface)

In the pronominal prefixes there is a morphological restriction on Vowel Truncation. If the first of the adjacent vowels is <u>e</u>- 'dual/inverse third person', then the second vowel is truncated rather than the first. In (92), the result of truncation is <u>e</u>- rather than <u>ia</u>-.

(92) '(x/agt):3inv/pat:pl/obj'

    b-é-ia-d   (underlying)

    bêd   (V truncation)

    bêt   (Final devoicing)

    <u>bêt</u>   (surface)

Vowel truncation also applies across a word boundary in contractions, as described in 2.9. Deletion of glottal stop and /h/ results in adjacent vowels, thus creating the environment for truncation. However, not all adjacent vowels automatically truncate. Morphologically complex words with medial syllable-initial vowels rarely truncate when preceded by a vowel, as in (93). Although the blocking of truncation might be explained by the presence of underlying glottal stop, even when the glottal onset is deleted in informal speech, truncation rarely occurs.

(93) há-ʔò-tè [háʔòtè] or [háòtè] 'how many, several'

      tó-ʔò-bà [tóʔòbà] or [tóòbà] 'quiet'

      k'ɔ́-ʔâl [k'ɔ́ʔâl] or [k'ɔ́âl] 'dishes'

2.73. <u>Dental-velar switch.</u> Restrictions on consonant-vowel sequences, discussed in 2.13, include the lack of velars preceding /e/ and of dentals preceding /i/, both in non-alternating roots and in alternations that occur in several inflectional categories. The non-occurrence of the sequences *<u>di</u> and *<u>ge</u> in alternating forms, as well as

the distributional restrictions on dentals and velars,
is captured in the rule of Dental-Velar Switch, formalized
in (94). The rules shifts a dental obstruent to a velar
preceding the high front vowel i and a velar obstruent to
a dental preceding the mid-front vowel e, informally,
a) dental → velar / ___ i and b) velar → dental / ___ e.[27]

$$(94) \quad \begin{bmatrix} + \text{cons} \\ - \text{son} \\ -\alpha \text{ ant} \\ -\alpha \text{ cor} \\ \alpha \text{ high} \end{bmatrix} \rightarrow \begin{bmatrix} \alpha \text{ ant} \\ \alpha \text{ cor} \\ -\alpha \text{ high} \end{bmatrix} / \underline{\hspace{1cm}} \begin{bmatrix} + \text{syll} \\ - \text{back} \\ -\alpha \text{ high} \end{bmatrix}$$

The effect of Dental-Velar Switch is best illus-
trated in the pronominal prefixes. The derivations in
(95a) have initial d- 'first person' and those in (95b)
have initial g- 'second singular patient'. Dental-Velar
Switch results in homophony of the dual and plural object
forms.

(95) a. '(x/agt):1pl/pat:obj'

sg/obj	du/obj	pl/obj	inv/obj	
d-ɔ́-∅	d-ɔ́-e-d	d-ɔ́-ia-d	d-ɔ́-ɔ-d	(underlying)
dɔ́	déd	diád	dɔ́d	(V truncation)
---	---	giád	---	(D-V switch)
---	---	gyád	---	(Glide formation)
---	dét	gyát	dɔt	(Final devoicing)
d<u>ɔ́</u>	d<u>ét</u>	<u>gyát</u>	d<u>ɔ́</u>t	(surface)

(95) b. '(x/agt):2sg/pat:obj'

sg/obj	du/obj	pl/obj	inv/obj	
g-ɔ́-∅	g-ɔ́-e-d	g-ɔ́-ia-d	g-ɔ́-ɔ-d	(underlying)
gɔ́	géd	giád	gɔ́d	(V truncation)
---	déd	---	---	(D-V switch)
---	---	gyád	---	(Glide formation)
---	dét	gyát	gɔ́t	(Final devoicing)
gɔ́	dét	gyát	gɔ́t	(surface)

Dental and velar stops also occur in alternating environments in thematic verb stems. Dental-Velar Switch predicts the occurrence of /d/ before -ê: 'imperfective hearsay' and of /g/ before -î: 'imperfective imperative' for both themes -de and -ge. Note that the vowel of the theme is deleted by Vowel Truncation whenever a suffix with an initial vowel follows.

(96) a. 'shout'

pf	ipf/hsy	ipf/imp	
há:-dè-ɔ̀	há:-dè-ê:	há:-dè-î:	(underlying)
há:dɔ̀	há:dê:	há:dî:	(V truncation)
---	---	há:gî:	(D-V switch)
há:dɔ̀	há:dê:	há:gî:	(surface)

b. 'feed'

má:-gè-ɔ̀	má:-gè-ê:	má:-gè-î:	(underlying)
má:gɔ̀	má:gê:	má:gî:	(V truncation)
---	má:dê:	---	(D-V switch)

(96) b. 'feed'

pf	ipf/hsy	ipf/imp	
máːgɔ̀	máːdêː	máːgîː	(surface)

Detransitive thematic verbs illustrate the same alternations. The suffix -iá(y) 'detransitive perfective' creates another environment in which both thematic stems -de and -ge occur on the surface with /g/. In (97a), tʰém-gé- 'break/itr' is derived from transitive tʰêm 'break in two/tr'. The transitive and intransitive pairs in (97b) and (97c) are both derived from the thematic stem sɔ̰́ː-dé- 'lower'.

(97) a.   'break/itr'

pf	neg	fut	
tʰém-gé-iá	tʰém-gé-ɔ̂ː	tʰém-gé-t'ɔ̀ː	(underlying)
tʰémgiá	tʰémgɔ̂ː	---	(V truncation)
---	---	tʰémdét'ɔ̀ː	(D-V switch)
tʰémgyá	---	---	(Glide formation)
tʰémgyá	tʰémgɔ̂ː	tʰémdét'ɔ̀ː	(surface)

ipf/fut	
tʰém-gé-îː-t'ɔ̀ː	(underlying)
tʰémgîːt'ɔ̀ː	(V truncation)
tʰémgîːt'ɔ̀ː	(surface)

(97) b. 'get lowered/itr'

pf	neg	fut	
sǫ́:-dé-iáy	sǫ́:-dé-ɔ̂:	sǫ́:-dé-t'ɔ̂:	(underlying)
sǫ́:diáy	sǫ́:dɔ̂:	---	(V truncation)
sǫ́:giáy	---	---	(D-V switch)
sǫ́:gyáy	---	---	(Glide formation)
sǫ́:gyáy	sǫ́:dɔ̂:	sǫ́:dét'ɔ̂:	(surface)

ipf/fut	
sǫ́:-dé-î:-t'ɔ̂:	(underlying)
sǫ́:dî:t'ɔ̂:	(V truncation)
sǫ́:gî:t'ɔ̂:	(D-V switch)
sǫ́:gî:t'ɔ̂:	(surface)

c. 'lower/tr'

pf	ipf/hsy	ipf/imp	
sǫ́:-dé-ɔ́	sǫ́:-dé-ê:	sǫ́:-dé-î:	(underlying)
sǫ́:dɔ́	sǫ́:dê:	sǫ́:dî:	(V truncation)
---	---	sǫ́:gî:	(D-V switch)
sǫ́:dɔ́	sǫ́:dê:	sǫ́:gî:	(surface)

A few detransitive thematic verbs have the unexpected sequence -dá(y), derived from thematic -de plus -iá(y) 'detransitive perfective', where Dental-Velar Switch should result in -gyá(y) (<diá(y)). Because underlying thematic /d/ does alternate with /g/ before /i/ (e.g., -î:-t'ɔ̂: 'imperfective future' in (98)), it does not appear that we are dealing with an alternating

vs. a non-alternating /d/. The solution is likely to be found in the loss of the first segment of -iá, but why the loss is restricted to a small set of verbs (t'á:dáy 'get blocked', tʰá̧:dáy 'get wet', hɔ́:dáy 'get torn off', bó:dáy 'be denied', hȩ́:dáy 'get removed', p'é:dà 'appear', bɔ́:dà 'emerge') is not in the least clear.

(98) 'emerge'

pf	neg	fut	
bɔ́:-dè-(i)à	bɔ́:-dè-ɔ̂:	bɔ́:-dè-t'ɔ̂:	(underlying)
bɔ́:dà	bɔ́:dɔ̂:	---	(V truncation)
bɔ́:dà	bɔ́:dɔ̂:	bɔ́:dèt'ɔ̂:	(surface)

ipf/fut	
bɔ́:-dè-î:-t'ɔ̂:	(underlying)
bɔ́:dî:t'ɔ̂:	(V truncation)
bɔ́:gî:t'ɔ̂:	(D-V switch)
bɔ́:gî:t'ɔ̂:	

2.74. Diphthong reduction. Underlying /ia/, discussed in 2.4, surfaces in alternating forms as /ya/ following velars, as /a/ following labials and as /i:/ if accompanied by falling tone. /ya/ is derived via Glide Formation (99), in which i>y preceding another vowel.[28]

(99) $\begin{bmatrix} + \text{syll} \\ + \text{high} \\ - \text{back} \end{bmatrix} \rightarrow [- \text{syll}] / \underline{\quad\quad} [+ \text{syll}]$

The resulting glide is deleted (Glide Deletion) following voiced labials or initially (100).[29]

$$(100) \quad \begin{bmatrix} + \text{ son} \\ - \text{ syll} \\ + \text{ high} \end{bmatrix} \rightarrow \emptyset \Big/ \left\{ \begin{bmatrix} + \text{ cons} \\ + \text{ voice} \\ + \text{ ant} \\ - \text{ cor} \\ \# \# \end{bmatrix} \right\} \underline{\quad\quad}$$

/ia/ is flattened to /i:/ if accompanied by falling tone. The regular occurrence of /ia/ as /i:/ is limited to the pronominal prefixes. It is clear, however, that to account for the alternating roots discussed in 2.4 (e.g., k'í:∿k'yá 'male'), other prosodic features will have to be examined. For the present, Monophthongization describes only the inflectional alternations with falling tone.

Derivations of pronominal prefixes with a plural object (ia) illustrate the three rules.

(101) **Plural object prefixes**

'(x/agt):2sg/pat:obj'	'(x/agt):2pl/pat:obj'	
g-iá-ia-d	b-ó-ia-d	(underlying)
giád	biád	(V truncation)
gyád	byád	(Glide formation)
- - -	bád	(Glide deletion)
gyát	bát	(Final devoicing)
gyát	bát	(surface)

(101) '2pl/agt:(1,3sg/pat):pl/obj'

      b-iá́-ia-d-iâ   (underlying)

      biádiâ   (V truncation)

      biágiâ   (D-V switch)

      byágî: (Monoph./Glide formation)

      bágî: (Glide deletion)

      <u>bágî:</u>   (surface)

Glide formation also accounts for the inverse form of nouns whose roots end in <u>i</u>.

(102) 'sister-inv' 'boy-inv'

    p'í:-óy   tʰàlí:-óy   (underlying)

    p'yóy   tʰàlyóy   (Glide formation)

    <u>p'yóy</u>   <u>tʰàlyóy</u>   (surface)

2.75. <u>Nasalization.</u> Nasalization of voiced stops operates automatically only within the domain of the pronominal prefixes: voiced stops become the corresponding nasals either preceding or following a nasal.[30] The velar nasal that is derived from /g/ is deleted; there is no /ŋ/ in Kiowa.

(103) $\begin{bmatrix} + \text{cons} \\ - \text{cont} \\ + \text{voice} \end{bmatrix} \rightarrow [+ \text{nasal}] \ / \ [+ \text{nasal}]_{\text{ppfx}}$

In the following sets of derivations, nasality is a morpheme indicating the <u>dual</u> patient and constitutes the only underlying difference between the two sets of prefixes.

(104) '(x/agt):2du/pat:obj'

sg/obj	du/obj	pl/obj	inv/obj	
b-ɔ�-Ø	b-ɔ̣-e-d	b-ɔ̣-ia-d	b-ɔ̣-ɔ-d	(underlying)
bɔ̣	bę́d	biá̧d	bɔ̣́d	(V truncation)
---	---	byá̧d	---	(Glide formation)
---	---	bá̧d	---	(Glide deletion)
mɔ̣́	mę́n	má̧n	mɔ̣́n	(Nasalization)
mɔ́	mén	mán	mɔ́n	(surface)

'(x/agt):2pl/pat:obj'

sg/obj	du/obj	pl/obj	inv/obj	
b-ɔ́-Ø	b-ɔ́-e-d	b-ɔ́-ia-d	b-ɔ́-ɔ-d	(underlying)
bɔ́	béd	biád	bɔ́d	(V truncation)
---	---	byád	---	(Glide formation)
---	---	bád	---	(Glide deletion)
---	bét	bát	bɔ́t	(Final devoicing)
bɔ́	bét	bát	bɔ́t	(surface)

The derivations in (105) illustrate the interaction of Dental-Velar Switch and Nasalization. Nasality distinguishes the first person singular patient in (a) from the first person singular agent in (b).

(105) a. '(2,3sg/agt):1sg/pat:obj'

sg/obj	du/obj	pl/obj	inv/obj	
iá̧	d-iá̧-e	d-iá̧-ia	d-iá̧-ɔ	(underlying)
---	dę́	diá̧	dɔ̣́	(V truncation)

(105) a. '(2,3sg/agt):1sg/pat:obj'

sg/obj	du/obj	pl/obj	inv/obj	
---	---	giá̧	---	(D-V switch)
---	---	gyá̧	---	(Glide formation)
---	nę́	ŋyá̧	nɔ̧́	(Nasalization)
---	---	yá̧	---	(ŋ deletion)
ę́	---	---	---	(Raising)
é	né	yá̧	nɔ́	(surface)

b. '1sg/agt:obj'

sg/obj	du/obj	pl/obj	inv/obj	
d-ià-∅	d-ià-ę-d	d-ià-ia-d	d-iá-e	(underlying)
dià	dę̀d	diàd	dé	(V truncation)
già	---	giàd	---	(D-V switch)
gyà	---	gyàd	---	(Glide formation)
---	nę̀n	---	---	(Nasalization)
---	---	gyàt	---	(Final devoicing)
gyà	nèn	gyàt	dé	(surface)

Nasalization does not apply within lexical roots.
Although voiced stops preceding nasalized vowels are not
common, they occur in both verbal and nominal roots.[31]

(106)

	Nasal V		Oral V	
/b/	bǫ̂:	'look'	bô:-	'always'
	bí̧:-	'foggy'		
/d/	dę̀:-	'sleep'	dé:	'be standing'
	dǫ́:-	'beneath'	dó:	'hold, wear'

(106)   <u>Nasal V</u>   <u>Oral V</u>

    /g/   gí̜:-   'night'   gítk-   'rub against'

          gú̜:   'horn'   gú: 'get well'

Historically, nasalization may have applied more widely, but always across a morpheme boundary. A few suffixes have initial nasal stops when the root ends in a nasal, as in (107), where the thematic stative suffix <u>-bé</u> becomes <u>-mé</u> following stems with final nasal segments. However, many suffixes, e.g., the thematic active suffixes (<u>hé̜:dè-</u> 'remove'), are not nasalized by a preceding nasal.

(107)   <u>Oral</u>   <u>Nasal</u>

    mɔ̀ɔ́y-bé   'difficult'   mɔ̀:kú̜y-mé   'useful'

    p'ɔ́y-bé   'hard to solve'   tʰá̜y-mé   'isolated'

    sɔ́y-bé   'slow'   ɔ̜́y-mé   'nice, lovable'

    zél-bé   'terrible'   cá̜y-mé   'hurried'

    kól-bé   'strong, fit'   hén-mé   'beautiful'

2.76. <u>Lateral obstruentization.</u> In verbs, a root-final /l/ alternates with the corresponding obstruent /d/ preceding a consonant, the stop devoicing to /t/ in syllable-final position (2.771). The rule is blocked across a compound boundary.[32]

(108)   [+ lat]   → $\begin{bmatrix} - \text{ son} \\ - \text{ lat} \end{bmatrix}$/ _____ [+ cons]$_{\text{verb}}$

Derivations illustrating Lateral Obstruentization are

shown in 2.771.

2.77. <u>Obstruent devoicing.</u> Obstruents are devoiced in two environments: in syllable-final position and following a voiceless obstruent.

2.771. <u>Syllable-final devoicing.</u> Voiced stops are devoiced in syllable-final position without exception. In effect, the rule applies only to /b/ and /d/ since velars are prohibited in final position.

(109) $\begin{bmatrix} - \text{ son} \\ + \text{ voice} \end{bmatrix} \rightarrow [- \text{ voice}] / \underline{\quad} \$$

Final Devoicing is illustrated in nouns in (110a-b), in pronominal prefixes (c) and in verbs, where it follows Lateral Obstruentization, in (d).

(110) a. 'doorway' 'doorway-at'

cá:d	cá:d-ɔ̂:	(underlying)
cád	---	(Closed-$ shorten.)
cát	---	(Final devoicing)
<u>cát</u>	<u>cá:dɔ̂:</u>	(surface)

   b. 'stomach' 'stomach-along'

bó:d	bó:d-pé	(underlying)
bód	bódpé	(Closed-$ shorten.)
bót	bótpé	(Final devoicing)
<u>bót</u>	<u>bótpé</u>	(surface)

(110) c. '(x/agt):2pl/pat:du/obj'

b-ɔ́-e-d	(underlying)
béd	(V truncation)
bết	(Final devoicing)
<u>bết</u>	(surface)

  d. 'write-ipf/hsy' 'write-detr/ipf'

gú:l-ê:	gú:l-ià	(underlying)
---	gú:lyà³³	(Glide formation)
<u>gú:lê:</u>	<u>gú:lyà</u>	(surface)

   'write+fut' 'write-detr-pf'

gú:l+tɔ̀:	gú:l-gé-iá	(underlying)
---	gú:lgiá	(V truncation)
gúltɔ̀:	gúlgiá	(Closed-$ shorten.)
---	gúdgiá	(L obstruent.)
---	gútgiá	(Final devoicing)
---	gútkiá	(Cluster devoicing)
---	gútkyá	(Glide formation)
<u>gúltɔ̀:</u>	<u>gútkyá</u>	(surface)

 2.772. <u>Cluster devoicing.</u> Informally stated, stops
are voiceless following a voiceless obstruent.

(111) $\begin{bmatrix} - \text{son} \\ - \text{cont} \\ + \text{voice} \end{bmatrix} \rightarrow [- \text{voice}] \; / \begin{bmatrix} - \text{son} \\ - \text{voice} \end{bmatrix} \underline{\hspace{1.5em}}$

 As formulated, Cluster Devoicing must follow Final
Devoicing. A variety of suffixes with initial stops is

illustrated in derivations (112a-c).

(112) a. 'do-detr-pf'   'sever-detr-pf'

    ǫ̂:m-gé-iá   t'á:l-gé-iá   (underlying)

    ǫ̂:mgiá   t'á:lgiá   (V truncation)

    ǫ̂mgiá   t'álgiá   (Closed-$ shorten.)

    ---   t'ádgiá   (L obstruent.)

    ---   t'átgiá   (Final devoicing)

    ---   t'átkiá   (Cluster devoicing)

    ǫ̂mgyá   t'átkyá   (Glide formation)

    <u>ɔ́mgyá</u>   <u>t'átkyá</u>   (surface)

  b. 'rip-theme-pf''unravel-theme-pf'

    dɔ̂y-gè-ɔ̀   hép-gé-ɔ́   (underlying)

    dɔ̂ygɔ̀   hépgɔ́   (V truncation)

    ---   hépkɔ́   (Cluster devoicing)

    <u>dɔ̂ygɔ̀</u>   <u>hépkɔ́</u>   (surface)

  c. 'short-adv'   'strong-adv'

    cé:-dè   kót-dé   (underlying)

    ---   kótté   (Cluster devoicing)

    <u>cé:dè</u>   <u>kótté</u>   (surface)

Several of the locative/directional suffixes have paired allomorphs with initial voiced and voiceless stops which give the appearance of being phonologically conditioned. Although the degree of regularity strongly suggests a phonological explanation historically, the alter-

nations must be treated as morphological synchronically. The distribution of allomorphs in (113) indicates that the initial stops are voiced following a nasal segment.

(113) <u>Nasal-Voiced</u>   <u>Oral-Voiceless</u>

   dɔ́m-<u>gy</u>á   'earth-at'   bót-<u>ky</u>á   'stomach-at'

   dɔ́m-<u>b</u>é   'earth-along'   bót-<u>p</u>é   'stomach-along'

   ɔ́lt^hɔ̨́:-<u>b</u>è 'head-along'   ɔ̀nsó-<u>p</u>è   'foot-along'

   gį́:-<u>gy</u>à   'night-at'   tó:-<u>ky</u>à   'house-at'

However, there are exceptions of both possible types to a rule of voicing following nasals. A voiceless-initial suffix may occasionally follow a nasal segment and a voiced-initial suffix may follow a non-nasal segment, as illustrated in (114). Speakers on occasion disagree as to the voicing of the initial stop of the suffix. The cases recorded show the more commonly heard <u>pį́á:-ky</u>à 'table-at' and <u>t^há:ɔ̀n-ky</u>à 'town-at' alongside the less common <u>pį́á:-gy</u>à and <u>t^há:ɔ̀n-gy</u>à.[34]

(114) <u>Oral-Voiced</u>   <u>Nasal-Voiced</u>

   t'ó:-<u>b</u>á   'face-against'   mɔ́n-<u>p</u>à   'hand-against'

   t'ó:-<u>gy</u>á   'face-at/in'   mɔ́n-<u>ky</u>à   'hand-at/in'

   p'ɔ́:-<u>g</u>ù   'river-toward'   t^há:ɔ̀n-<u>k</u>ù 'town-toward'

Moreover, there are many non-alternating inflectional and derivational suffixes, some with initial voiceless stops and others with initial voiced stops, e.g., <u>-t</u>ò̀ 'in-

strumental', -dò '(number of) times', -kyá: 'while x-ing',
-gyá 'deverbal nominal'.

2.78. Laryngeals.

2.781. Glide spread. The palatal glide /y/ spreads
across the laryngeals /h/ and /ʔ/, yielding a glide onset,
a brief moment of coarticulation and a glide release.[35]
The rule operates across word boundaries as well as word
internally.

(115) a. ʔɔ́-y-hɔ̀:   [ʔɔ́yhɔ̀:]   'there, that'

      b. ʔâY-hèl   [ʔâyhyè^dl]   'start off-hsy'

      c. kʰúy-hà:pè   [kʰúyhyà:pè]   'drag off'

(116) a. tɔ̀:tɔ̂y ʔɔ̞́:mé: [tɔ̀:tɔ̂yʔyɔ̞́:mɛ̞́:] 'Father built it.'

      b. ʔà-ʔɔ́1kʰɔ́y-ʔɔ̞́: [ʔà ʔɔ́1kʰɔ́yʔyɔ̞́:] 'I was really
                                              crazy.'

2.782. Laryngeal deletion. The laryngeals /h/ and
/ʔ/ are variably deleted between sonorants. Like Glide
Spread, the rule also applies across a word boundary and
thus plays a role in allegro contraction (see 2.9). Loss
of glottal stop was illustrated in 2.31; loss of /h/ is
shown in (117).

(117) a. ʔèmhą̂:mé   [ʔę̀mą̂:mɛ̞́]   'ant'

      b. pę́nhà: [pę́ną̀:]   'sugar, honey'

      c. ʔę́:hɔ̀dèkʰì: [ʔę́:ɔ̀dèkʰì:]   'today'

Frequently /1/ is slightly devoiced and spirantized

preceding /h/. có1-hɔ̀: 'thus-adv' is heard as [cóɫɔ̀:] and [cóḽɔ̀:] as well as [cólhɔ̀:]. Nasals /m/ and /n/ are also occasionally devoiced with the loss of /h/, as in (117a) [ʔèm̥âːm̥è] 'ant'.

2.79. <u>Glottal increment.</u> Epenthetic glottal stop occurs in two environments: a) following a falling tone and b) between a short vowel and a voiceless unaspirated stop.

2.791. <u>Falling tone.</u> Competing phonetic forms exist for a number of words, shown schematically in (118), the variant with glottal stop occurring more frequently than the variant with a long vowel and falling tone (C = voiceless unaspirated stop).

(118) V̂:CV̀ vs. V́ʔCV̀

(119) a. hábê:+tɔ́: [hábê:tɔ̀:] or [hábéʔtɔ̀:]
         'act annoyingly (annoying+behave)'
      b. háyâ:+tò [háyâ:tò] or [háyáʔtò] 'maybe, might'

It is interesting to note that Mr. McKenzie writes the glottal increment as <u>t</u>, e.g., <u>háyâtò</u> or <u>háyáttò</u>, which is a natural choice given the absence of phonemic/ortho-graphic glottal stop and the alternation of /p,t/ with glottal stop in preconsonantal position (see 2.3).[36]

The source of the glottal increment appears to lie in the phonetic effects of falling tone, specifically laryngealization (see 2.63), which is manifested variably

as creakiness or full glottal closure. Speakers have apparently interpreted the glottal closure as an independent segment. Moreover, with the creation of a syllable-final glottal stop, the syllable is no longer open and the vowel is shortened (2.51). The low component of the falling tone is also lost, but its effect remains in the low tone of subsequent morphemes. The progression is thus understood to be: $\hat{V}{:}C\grave{V} \rightarrow \hat{V}{:}?C\grave{V} \rightarrow \acute{V}?C\grave{V}$.

It is likely that this tonally induced glottal increment is also the source for competing inverse forms (3.121) of nouns ending in $-\hat{V}1$. Like the examples in (119), one variant has a long vowel with falling tone, the other a short vowel followed by glottal stop.

(120) <u>Basic</u>   <u>Inverse</u>

    k'ɔ̂l   [k'ɔ̂:tɔ̀] or [k'ɔ́?tɔ̀]   'dish'

    é:t^{h}âl   [é:t^{h}â:tɔ̀] or [é:t^{h}á?tɔ̀]   'corn'

Other nouns with underlying $-\hat{V}1$ regularly have one or the other of these variants.

(121) <u>Basic</u>   <u>Inverse</u>

    sô1   [sô:tɔ̀]   'onion'

    dɔmt^{h}âl   [dɔmt^{h}á?tɔ̀]   'toad'

    tâl   [tá?tɔ̀]   'skunk'

The variant with a long vowel and falling tone appears to be derived in the same way that the inverse forms

of all resonant-final nouns are derived. As discussed in
2.7, the initial consonant of the suffix -Có assimilates
in place and voicing to the final consonant of the stem.
The cluster is then reduced by loss of the stem-final
resonant (Cluster Reduction). Tonal devoicing (2.71) re-
sults in the change of /d/ to /t/ following an underlying
falling tone. The derivations in (122) illustrate these
developments.

(122) 'friend' 'heart' 'bug'   'onion'

kǫ́:m-bɔ̀	tʰę́:n-dɔ̀	pó:1-dɔ́	sô:1-dɔ̀	(underlying)
kǫ́:bɔ̀	tʰę́:dɔ̀	pó:dɔ́	sô:dɔ̀	(Cluster reduct.)
---	---	---	sô:tɔ̀	(Tonal devoicing)
kǫ́:bɔ̀	tʰę́:dɔ̀	pó:dɔ́	sô:tɔ̀	(surface)

Glottal increment and closed-syllable shortening
then account for the variant V́ʔtɔ̀(<V̂:tɔ̀).

(123) 'corn'   'corn-inv'

é:tʰâ:1	é:tʰâ:1-dɔ̀	(underlying)
---	é:tʰâ:dɔ̀	(Cluster reduct.)
---	é:tʰâ:tɔ̀	(Tonal devoicing)
---	é:tʰâ:ʔtɔ̀	(Glottal increment)
é:tʰâl	é:tʰáʔtɔ̀	(Closed-$ shorten.)
é:tʰâl	é:tʰáʔtɔ̀	(surface)
	é:tʰáttɔ̀	(orthographic)

While another possible source of the variants with

V́ʔtɔ̀ might be l>d>t>ʔ via Lateral Obstruentization (2.76)

and Syllable-Final Devoicing (2.71), there would remain

the problem of explaining the cases with underlying high

tone, where no glottal increment appears, e.g., pól/

pó:dɔ́.[37] The fact that epenthetic glottal stop appears in

forms without /l/ (e.g., hábê:tɔ̀:/hábéʔtɔ̀: 'act annoying-

ly') supports the analysis outlined above.

Many noun stems ending in -V́l, with underlying high

tone, have competing inverse forms just as do stems with

underlying falling tone. Because falling tone is one

allomorph of inverse and occasionally cooccurs with other

inverse allomorphs (see 3.121), it seems likely that these

nouns are just doubly marked for inverse, by suffix and

by falling tone. The phonetic results are the same as

those for underlying falling tone.

(124) Basic   Inverse

k'ɔ́dál   [k'ɔ́dâ:tɔ̀] or [k'ɔ́dáʔtɔ̀]   'wagon'

c'ól   [c'ô:tɔ̀] or [c'óʔtɔ̀]   'wing'

áál   [áâ:tɔ̀] or [ááʔtɔ̀]   'lymph gland'

k'ól   [k'ô:tɔ̀]   'neck'

It remains an open question whether the imperfective

form of verbs with final -l, i.e., V́ʔtɔ̀ or orthographic

V́ttɔ̀, can be explained similarly as the result of glottal

increment. The overwhelming majority of l-final verbs

. have either underlying falling tone or imperfective stems with falling tone (see 3.316). Thus, the tonal and segmental environments parallel those for glottal increment in nouns.

(125) Imperfective (via glottal increment)

'drill'	'sever'	'write'	
hâ:1-dɔ̂	t'â:1-dɔ̂	gû:1-dɔ̂	(underlying)
hâ:dɔ̂	t'â:dɔ̂	gû:dɔ̂	(Cluster reduction)
hâ:tɔ̂	t'â:tɔ̂	gû:tɔ̂	(Tonal devoicing)
hâ:ʔtɔ̂	t'â:ʔtɔ̂	gû:ʔtɔ̂	(Glottal increment)
háʔtɔ̂	t'áʔtɔ̂	gúʔtɔ̂	(Closed-$ shorten.)
háʔtɔ̂	t'áʔtɔ̂	gúʔtɔ̂	(surface)
háttɔ̂	t'áttɔ̂	gúttɔ̂	(orthographic)

Two 1-final verb stems have been identified to be without falling tone: tél 'tell' and tʰél 'cut open'.[38] In these few cases there appears to be no phonetically motivated explanation for the appearance of glottal stop. Historically, leveling within the imperfective paradigm likely occurred. Paradigmatic pressures were apparently weaker in the case of nouns, where the variation is extensive and in some cases phonetically unexplained.[39] In the verbal paradigm, there are far fewer irregularities.

On the other hand, Lateral Obstruentization, the application of which is restricted to verbs, perhaps provides a better motivated explanation. The derivations in

(125) would be derived alternatively as illustrated in
(126). The choice of solutions depends on arbitrary de-
cisions at this stage.[40]

(126) Imperfective (via lateral obstruentization)

    'drill' 'sever'   'write'

    hâ:1-dɔ̀ t'â:1-dɔ̀ gû:1-dɔ̀   (underlying)

    hâ:ddɔ̀ t'â:ddɔ̀ gû:ddɔ̀   (L obstruentization)

    háddɔ̀ t'áddɔ̀ gúddɔ̀   (Closed-$ shorten.)

    hátdɔ̀ t'átdɔ̀ gútdɔ̀   (Final devoicing)

    háttɔ̀ t'áttɔ̀ gúttɔ̀   (Cluster devoicing)

    háʔtɔ̀ t'áʔtɔ̀ gúʔtɔ̀   (Glottal substitute)

    háʔtɔ̀ t'áʔtɔ̀ gúʔtɔ̀   (surface)

    2.792. <u>Non-tonal glottal increment.</u> An intrusive
glottal stop occurs following a short vowel before a
voiceless unaspirated stop or affricate, i.e., /p,t,c,k/.
Such sequences typically arise across a morpheme boundary,
as illustrated in (127).

(127) a. hɔ̂ndé-tò   [hɔ̂ndéʔtò]   'what-with?'

    b. té-kʰì:dà-pà   [tékʰì:dàʔpà]   'all-day-on'

    c. ó:sè-kyà   [ó:sèʔky`æ]   'throat-in'

    d. sɔ́:té-kyà: [sɔ́:téʔky`æ:]   'work-while'

    e. ɔ̀n-pá-tó:bɔ̀ [ɔ̀npáʔtó:bɔ̀]   'foot-on-press'

    f. ɔ́yhɔ̀:-dò-tò [ɔ́yhyɔ̀dòʔtò]   'that-because-with'

    g. t'è:né-cèyò: [t'è:néʔcèyò:]   'bird-pet'

    h. hóldà-pà   [hóᵈldàʔpà]   'dress-on'[41]

In a very few unanalyzed disyllables a voiceless stop following a short vowel gives the impression of being slightly more tense or of having a glottal stop of very short duration preceding it. This effect is variable from utterance to utterance but has been recorded in the speech of all my informants.

(128) a. yɔ́kɔ́y   [yɔ́ʔkɔ́y]   'young woman'

      b. hétɔ́   [héʔtɔ́]   'still'

Underlying long vowels that are shortened by rule are also input to glottal increment. Although not all the underlying long vowels in (129) are independently attested in shortened form, the pattern is clear from those that are. Two stages are posited: vowel shortening followed by intrusion of glottal stop.[42]

(129) a. tò:-pá-k'ʉ̀y → [tòʔpák'ʉ̀y]   'house-against-around/corner' (cf. tò:-tʰáydè 'roof (house-upon/nom)' Orthographic: tòppák'ʉ̀y[43]

      b. p'ɔ́:-pá-cát-kyá → [p'ɔ́ʔpácáʔkyá]   'river-against-entrance-at' Orthographic: p'ɔ́ppácátkyá

      c. á:-tʰɔ̀:-pà-hà: → [á:tʰɔ̀ʔpà:]   'wood-sit-against-adj' (cf. tʰɔ̀-dámgyá 'sit-tire')

      d. tá:-pá-tɔ̀: → [táʔpátɔ̀:]   'watch over (eye-against-behave)' (cf. tá-hòt-gʉ̀: 'watch everywhere (eye-travel-distr)' Orthographic: táppátɔ̀:

Phonetically the explanation appears to be antici-
pation of the stop, with cessation of vibration inter-
preted as glottal closure: V?CV.

2.80. Verb-root-initial ablaut. A striking feature
of verbs in Kiowa and the Tanoan languages is the alterna-
tion of root-initial consonants. Harrington (1928:11)
introduced examples of the alternations under the label
"hard and soft forms of consonants." Hale (1967:113)
discussed in detail "the morphophonemic ablauting of cer-
tain verb-stem-initial consonants under specific morpho-
syntactic conditions." Those conditions are: a) incorpora-
tion in the verb, b) nominalization, and c) stative deri-
vation.[44] The alternations are of two phonological types;
voiced obstruents alternate with voiceless unaspirated
obstruents and /h/ alternates with aspirated stops.

2.81. Voiced-voiceless ablaut. Voiced obstruents
/b,d,z,g/ become /p,t,c,k/ in ablauting environments.[45]
Ablauting roots, which must be marked in the lexicon, are
listed in Table 5. The examples in (130) following the
table illustrate the morphosyntactic conditions under
which ablauting occurs.

Table 5: Voiced-voiceless ablaut

b>p	bǫ́:	pǫ́:	'look at'
	bɔ́:	pɔ̀:	'bring'
	bɔ́:dè-	pɔ́:dè-	'appear, emerge'

Table 5 (cont.)

d>t	dó:	tó:	'hold, put on'
	dón	tǫ́:[46]	'seek'
	dɔ̂ygè-	tɔ̂ygè-	'rip'
z>c	zó:- (∿zép)[47]	cép	'flow'
	zón	cón	'pull out'
	zǫ̂y	cǫ̂y	'knead, mash'
	zângè-	cângè-	'shake'
g>k	gúl	kút	'write'
	gún	kún	'dance'
	gú:	kú:	'get well'
	gû:	kû:	'hit'
	-gǫ̂: (∿góm)[47]	-kôm	'distributive'[48]
	gó:bè-	kó:bè-	'capture, miss'

(130) Ablauting environments

    a. incorporation

        (bǫ́:) ę́-pǫ́:-cán ([(2,3sg/agt):1sg/pat:∅/obj]-see-
            come) 'He came to see me.'

        (bɔ́:) pɔ̀:-dô: (bring-hold) 'take care of'

        (gúl) kút-ą̀:gyà (write/book-sit) 'be in school'

    b. nominalization

        (zón) kʰúy-còn (drag-pull=out) 'drawer'

        (zép) tʰǫ́:-cép (water-flow) 'flood'

        (gû:) dɔ̀m-kû: (earth-hit) 'hoe'

(130) c. derived statives

        (gǔ:)   <u>kú:</u>-dɔ̀:   'be well'

        (gǔl)   <u>kút</u>   'be marked'

        (dó:)   <u>tó:</u>-dɔ́:   'be showing signs of wear'

        (bɔ́:dè-)   <u>pɔ́:</u>dà 'be protruding'

     2.82. <u>/h/-aspirate ablaut.</u> The second set of alternations is that of /h/ with the aspirated stops /p^h, t^h, k^h/. While there are several examples each of the dental and velar aspirates, listed in Table 6, there is but one marginal example of /h/∿/p^h/. Most speakers today use <u>té:p^hɔ̀y</u> 'everyone' but <u>té:hɔ̀y</u> has been reported, usually identified as an older form no longer used.

     Given a verb root with initial /h/ there is no way to predict whether it alternates with /t^h/, with /k^h/, or not at all. Thus, /h/-aspirate ablaut is most simply predicted from the ablaut form, which must be marked in the lexicon: [+ aspirate] → [h].[49]

        Table 6: /h/-aspirate ablaut

h<t^h	hâ:(-pè)	t^hâ:(-pè)	'arise'
	hâl	t^hâl	'drill, bore'
	hân	t^hân	'eat up'
	há:bè-	t^há:bè-	'smoke'
	hé:bè-	t^hé:bè-	'enter'
	hépké-	t^hépké-	'unravel'

Table 6 (cont.)

h<tʰ	hȩ́:dè-	tʰȩ́:dè-	'remove'
	mɔ̀-hém	mɔ̀-tʰém	'teach'
h<kʰ	hɔ́n	kʰɔ́n	'exhaust'
	hɔ́:dé-	kʰɔ́:dé-	'tear off'
	hɔ́:	kʰɔ́:	'get, obtain'
	mɔ̀:-hól	mɔ̀:-kʰól	'prepare'

(131) Ablauting environments

    a. incorporation

       (hé:bè-)   tʰé:bà-mɔ̀ɔ̀:dèp   'enter-have=trouble'

       (hȩ́:dè-)   tʰȩ́:dà-mɔ̀ɔ̀:dèp   'remove-have=trouble'

    b. nominalization

       (hâ:pè-)   zòn-tʰâ:pé   'squirrel (pine-pick=up)'

       (mɔ̀hém)   mɔ̀tʰém-k'ì: 'teacher-male'

    c. derived statives

       (hâl)   tʰâl-dɔ̀:   'be a hole'

       (hɔ́n)   tʰáp-kʰɔ́n-dɔ̀:   'be dried up (dry-exhaust-be)'

       (mɔ̀:hól) mɔ̀:kʰól-dɔ̀:   'be ready'

2.83. A third type of initial ablaut was suggested by Harrington (1928:11), but it does not operate under the same conditions as the verb-root ablaut. It is, in fact, marginal in Kiowa and the examples are not very convincing, although it apparently reflects some cognate correspondences in the Tanoan languages.[50] In the only examples

given by Harrington, the glottalized stops alternate with zero (or underlying glottal stop).[51]

(132)   Glottalized   Ablaut form

    p'>∅   p'ɔ́:   'river'   ɔ́:-pį́: 'fish (water-food)'

    t'>∅   t'ɔ̨́:-   'mean'   ɔ̨́:-dè 'be mean'

    k'>∅   k'ól   'neck'   ó:-sè   'throat, voice'

    2.90.   <u>Allegro contraction.</u>   All types of speech from casual conversation to more formal narratives are characterized by contractions.   These reductions and fusions of independent words typically involve the loss of a laryngeal (/h/ or glottal stop) and the deletion of the first of two contiguous short vowels, normally in grammatical morphemes such as syntactic particles and pronominal prefixes.   The phonological rules of Laryngeal Deletion (2.782) and Vowel Truncation (2.72) thus operate both within and across word boundaries.   Examples (133b-d) are very common and have nearly become lexical units.

(133) a. nɔ̀ ʔèt- (and ppfx) → nɔ̀èt → <u>nèt</u>

    b. hétɔ́ ʔàn (still hab) → hétɔ́àn → <u>hétàn</u>

    c. nɔ̀ hègɔ́ (and now) → nɔ̀ègɔ́ → <u>nègɔ́</u>

    d. nɔ̀ hɔ̀ndô: (and why) → nɔ̀ɔ̀ndô: → <u>nɔ̀ndô:</u>

    e. hétɔ́ hɔ́n (still neg) → hétɔ́ɔ́n → <u>hétɔ́n</u>

Longer strings are subject to the same rules, as illustrated in (134).   Note that contractions constitute

the only instances where phonotactic restrictions are
violated, e.g., the occurrence of /g/ before /e/ and the
absence of /y/ between a velar and /a/.

(134) nɔ̀ hègɔ́ ʔémgɔ̀ ʔá-cá̧:dé: (and now here/along ppfx-
vb) → nɔ̀ègɔ́émgɔ̀ácá̧:dé: → nègémgá:cá̧:dé:

Occasionally, final short vowels are deleted, as in
hóldàp 'on the dress' from hóldà-pà (dress-on/against).
Several locative words appear to be derived in the same
way, e.g., gúp 'outside/specific location (<gú:-pá)' and
tʰɔ́p 'beyond/specific location (<tʰɔ́:-pá)'. Similarly,
pronominal prefixes can lose their vowels when contracted
with a preceding word. The resulting forms are interest-
ing in that they reveal the underlying identity of the
initial stop of the prefix. In (135) the underlying form
of the prefix is dià. Final vowel deletion and syllable-
final devoicing produce the surface contraction nɔ̀t, where
/t/ is all that remains of the prefix. In (136) the un-
derlying form of the prefix is iàd; following metathesis
to dià (see 3.234), the rules apply as in (135).

(135) nɔ̀ gyà-tét (and ppfx-vb

    nɔ̀ dià   (underlying)

    nɔ̀d   (Final vowel deletion)

    nɔ̀t   (Final devoicing)

    nɔ̀t   (surface)

(136) hɔ́ndé gyà-k^hó:bé   (how ppfx-vb)

      hɔ́ndé iàd   (underlying)

      hɔ́ndé dià   (Metathesis)

      hɔ́ndéd   (Final vowel deletion)

      hɔ́ndét   (Final devoicing)

      hɔ́ndét   (surface)

Notes

1. Trager differs from the others in treating the ejectives and aspirates as clusters.

2. For most speakers the voiced series is realized as voiceless lax at least some of the time. This appears to vary a great deal from utterance to utterance and disappears in careful speech and citation forms. There is no clear picture of phonological environments favoring a voiceless articulation, but /d/ and /g/ are more frequently voiceless lax than /b/.

3. Underlying nasal vowels will be marked with a nasal hook $/_ι/$ only when they do not occur in the same syllable with a nasal stop.

4. In fact, /l/ occurs in syllable-initial position only by virtue of shifting syllable boundaries. It should probably be reconstructed in morpheme-final position only. The distribution of /l/ in the Tanoan languages, if it exists, is also restricted. See Hale (1967:115) for a brief discussion of Proto-Kiowa-Tanoan **d and its reflexes.

5. As Hale (1967:119) has suggested, it appears that u has developed from Proto-Kiowa-Tanoan labialized velars, the velar having lost its feature of rounding. Harrington's (1928:83) one example of u following h was apparent-

ly misheard; the word is /hóɔn/ 'road, route (travel+ path)', not /húɔn/.

6. Alternatively, given underlying glottal stop preceding root-initial vowels (2.3), the syllable boundary in these examples would be predicted according to the third principle, i.e., after a vowel preceding a single consonant.

7. The modern reflexes of a reconstructed **iɔ are not numerous: k'yɔ́tkɔ́ 'drink/eat greedily/pf', k'yɔ́:tɔ̀: 'act romantically, court', kʰyɔ̂:dɔ̀ 'throb, pulsate/pf', kʰyɔ̂:tɔ̀ 'loosen/pf', and syɔ́n 'small/sg'.

8. Mr. McKenzie has commented that speakers occasionally "slip" and say /k'îl/ 'call, invite/imp' rather than /k'yâl/, which is considered by most to be correct. It is interesting that some alternating forms are considered equally acceptable whereas others are felt to be incorrect.

9. Vowel correspondences are still so poorly understood in Kiowa-Tanoan that it is difficult to draw on any comparative evidence either.

10. The environment could be represented formally as $C\left\{{C \atop \#\#}\right\}$, but C$ (syllable boundary) makes explicit what is significant, i.e., that it is a closed syllable.

11. Actually, several of these nouns are partially analyzed, although the roots cannot be identified with any synchronically independent roots.

12. An older term for 'dog', rarely used now, is cê̜:-hi̜: (dog-real) and cê̜: is 'horse' today. This is a common and

familiar pattern: t̀ò:-hî̠: 'moccasin (tó:dé 'shoe')', t̀ò:-
hî̠: 'tepee (tó: 'house, building')', c̀ò̠:-hî̠: 'awl (c̀ó̠:
'needle')'. cégùn recalls the time when the dog served as
beast of burden and carried tepee poles (gún) lashed into
a travois.

13. t^hǫ̠zótkót 'rapids' is the only example of a trisylla-
bic compound with shortened initial syllable. It is pos-
sible that it reflects two stages of compounding, the
first being t^hǫ̠zót (water+flow).

14. The Kiowa had a special way of cutting meat for dry-
ing: a single piece of meat was cut in a continuous spiral
to produce one long strip to be laid out on a frame.

15. This pair illustrates the left-to-right iteration of
the rule. Given the two forms, an underlying *á:kɔ̀:dɔ̀:-
t'ɔm can be postulated for the prefixed version. á:
'wood' (TL) lowers the high tone on following syllables.

16. The fact that the pronominal prefixes (gyàt-) do not
affect the environment for medial shortening lends further
support to an analysis of these fused morphemes as clitics.

17. Some verbal compounds are the result of productive
processes of incorporation (see 4.2) and are thus certain-
ly recent.

18. The intensifying prefix ɔ̂:- is a TL morpheme (see
2.653), which lowers the tone on the adverbs t^hɔ́p 'beyond'
and máy 'up' resulting in the rare LL sequences.

19. A few have identical interrogative and indefinite

forms, e.g., há:cò 'how'.

20. There is comparative evidence that the tonal behavior of these homophones in Kiowa developed out of different tones in Proto-Kiowa-Tanoan. In Rio Grande Tewa and Taos 'moon' has high tone and 'water' has low tone: Tewa (Speirs, 1968) p'ó: moon', p'ò: 'water' and Taos (Hull, 1973) p'ó- 'moon' and p'ò- 'water'.

21. Some forty roots with L have been identified, but this is no doubt just a minimum figure.

22. The result is a kind of accentual patterning in which, over the course of a clause, tone drops from H to L after a TL or F root or on particles. Given the greater percentage of TL and F roots, verbal and nominal compounds will more likely than not have a stretch of L syllables. The change to a H syllable, then, usually marks the end of one word and the start of another. The raising rule ensures that lexical roots will be relatively prominent, i.e., have H on a long syllable. The reader is directed to the texts in Chapter Five to examine the progression of tones in an extended sample of speech.

23. The lowered tone of the second syllable in mò:sòhî: <mò:só 'crow, raven' is unexplained, but there is one other example of an underlying L root followed by one lowered tone: tò:+óm+k'í: → tò:òmk'í: 'carpenter (house+ make+male)'.

24. There are many words with H-L-H or H-L-F so it is not

simply a matter of tone sequence: t'ɔ́lkʰɔ̀t'ɔ̂:lé 'marsh
hawk', tʰɔ́nkùtkû:té 'raccoon'.

25. There are several unexplained exceptions with a
voiceless thematic stop following a high tone. Some of
the verbs are also exceptional in their cooccurrence with
perfective -é: (rather than -ɔ́): k'ɔ́:té: 'meet', zémhá:té:
'chew', t'ɔ̧́ykɔ́:té: 'roll', dɔ́:pé: 'request'. Two others
have the expected perfective form: t'é:tɔ́ 'squeeze', tó:tɔ́
'cause to flap'.

26. Following tonal devoicing, glottal increment (see
2.791) never occurs in main verb stems, possibly because
the long vowel of a verb root is never shortened in an
open syllable. It is likely that glottal increment and
vowel shortening did not occur in two distinct stages but
were rather nearly simultaneous.

27. The synchronic rule, which collapses parts (a) and
(b), does not reveal what was likely a two-part palatali-
zation: $g > g^y$ / ___ e and $d > d^y$ / ___ i. The acoustic
similarity of the palatalized stops (or a later stage of
palatal stops) and potential confusion, resulted in a re-
interpretation of g^y as d^y and of d^y as g^y, not necessari-
ly at the same time. Subsequent depalatalization would
yield the modern forms. I am grateful to Eric Hamp for
suggesting the outline of the changes involved.

28. It is possible that at an early stage in Kiowa the
diphthong was already partially reduced, e.g., i̯a.

29. Voiced labials are specified in the environment because /y/ is retained in a few alternating roots with voiceless labials, e.g., p'yáy- 'quarrel'.

30. It is tempting to treat nasalization as a prosodic feature in the analysis of the pronominal prefixes. Nasality constitutes the only feature of the third dual person morpheme and the entire prefix is nasalized, making directionality difficult to determine. On the other hand, that nasalization does not operate in roots suggests a more typical nasal assimilation rule.

31. In the Tanoan languages, voiced and nasal stops are in complementary distribution preceding oral and nasalized vowels. Where the Tanoan languages assimilated a voiced stop to the nasality of a following vowel, Kiowa retained the voiced stop. In addition, Kiowa lost the nasality feature on the vowel in several unexplained cases; compare Kiowa bǫ:, Tewa mú? 'see, look at' and Kiowa bɔ́:, Tewa mạ? 'bring'.

32. /l/ also becomes /d/ (then /t/) inexplicably in the perfective, e.g., gút 'write/pf', where no stop follows. One could arbitrarily posit a final stop which was deleted, but given the present data there is no justification for such a segment. The /l/∿/d/ alternation is a complex matter, the details of which are not entirely understood. Obstruentization occurs in the ablauting root gúl∿kút 'write, mark' and in several derivational sets: kól-bé

'strong, fit', kò:dó 'very, really, kót 'hard, strong, expensive'.

33. The /y/ here, having been derived fairly recently from **ia, should be considered vocalic rather than consonantal.

34. It would seem that the voiceless-initial suffixes in these cases are probably older and, moreover, that when voiced -gyá is used, speakers have moved in the direction of a more general phonological rule, i.e., voicing assimilation. Mr. McKenzie, remembering the speech of his grandmother, with whom he spent a great deal of time as a child, prefers these forms with -kyá. However, as suffixes on the interrogative/indefinite stem há:-, the initial stop is always voiced: há:gyá '(at) somewhere', há:bá '(at/against) somewhere', há:bé '(along) somewhere'.

35. Harrington (1928:11) refers to this as "retrogression of laryngeals".

36. In general, Mr. McKenzie writes preconsonantal glottal increment with a homorganic stop, i.e., [ʔt] as tt and [ʔp] as pp, but [ʔk] as tk because /k/ does not occur syllable-finally.

Because the word is unanalyzed, [éʔpát^{h}è:] 'bully, force, threaten' is one example where an arbitrary choice must be made; Mr. McKenzie has recorded it as both étpát^{h}è: and éppát^{h}è:.

37. There are only three such nouns with H: pól/pó:dɔ́

'bug', tógúl/tógú:dɔ́ 'young man', and ɔ́l/ɔ́:dɔ́ '(head) hair'. This suggests that F is as common an allomorph of inverse for l-final nouns as the imperfective stem with F is for l-final verbs.

38. A few other irregular verbs also have the imperfective form V̂ʔtɔ̀ without also having F, e.g., pɔ́ttɔ̀ [pɔ́ʔtɔ̀] 'eat/impf', pɔ́:lê: 'eat/ipf/hsy', pɔ́:gyà 'eat/pf' (not *pɔ́t).

39. Some unexplained inverse forms are: tʰé:tɔ́ (tʰél-) 'chalk, gypsum', where the suffix should be -dɔ́ if there is no falling tone; kɔ́:tɔ̂: (kɔ́l) 'bison', where the falling tone on the suffix occurs uniquely in this lexical item; ɔ̀ntʰáttɔ́ (ɔ̀ntʰál) 'toe', where a falling tone that produced the glottal stop ([ɔ̀ntʰáʔtɔ́]) should also have lowered the tone on the suffix, i.e., *ɔ̀ntʰáttɔ̀.

40. These imperfective forms have traditionally been written (by linguists) as V̂ttɔ̀, presumably because the first t is identified with the underlying l. Phonetically the t is usually [ʔ]. Either development, [ʔ] interpreted as /t/ or /t/ as [ʔ] is likely within the phonological system of Kiowa. Throughout the rest of the grammar I have followed Mr. McKenzie's practice of writing t (or p) for preconsonantal glottal stop.

41. When the final vowel is deleted in informal speech (see 2.9), there is no glottal increment: hóldà-pà → hóldàp 'on the dress'.

42. See fn. 26. Note also that the /t/ of t͗ɔ: 'act, be-
have', the auxiliary with derivational function, does not
generate glottal increment.

43. See fn. 36. Harrington's practice was to assume
these to be t̀: t'ęįnęį̀t-tseiou 'chicken' and ʔa:ʔ-tʰɔtba-
hàt̀dɔ 'chair'.

 Glottal increment also occurs following a short
nasal vowel: ǫ́:-pá-tɔ̀: 'act superior' → [ǫ́ʔpátɔ̀:], which
Mr. McKenzie captures orthographically as ómppátɔ̀:. How-
ever, glottal increment following a nasal vowel is not
the preferred variant.

44. Ablaut reflecting derived statives often overlaps
with incorporation as many such derived forms must occur
incorporated with dɔ́: 'be, exist'. Among the ablauting
verbs, kút 'be marked, written' need not be incorporated.

45. Hale (1967:115) has argued for the reconstruction of
an affricate **ȥ as the antecedent of Kiowa /z/ and Tanoan
/y/. The voicing ablaut can then be seen to have con-
sisted originally of the non-continuant obstruents. Re-
construction of the affricates in Kiowa-Tanoan appears to
be more complex, however. /z/ alternates with /c/ in
Kiowa, but Kiowa /c/ is not accounted for at all in Hale's
reconstruction. In fact, Kiowa /c/ does seem to corre-
spond to Tanoan /c/ in some cases.

46. A few verbs lose the final consonant when incorpo-
rated: in addition to dón/tɔ̨́: 'seek', tél/té: 'tell' and

k^{h}ɔ̃m/k^{h}ɔ̃: 'name, call'. The latter two are not ablauting verbs.

47. See 3.321 for a discussion of this vocalic ablaut.

48. See 3.332 for a discussion of the active distributive. While it is synchronically a bound morpheme, it no doubt was once an independent verb. The ablauted form occurs only in a colloquial term for 'coyote', hòtkôm (travel+distributive), which is also applied to a person who is active and does not stay in one place for very long.

49. Two roots with initial /h/ have entirely suppletive forms when incorporated: hó:/dɔ́:- 'kill' and hîn/t^{h}ón- 'dig'. The only other verbs with suppletive incorporating forms are the non-ablauting sɔ́:/t^{h}ɔ̀:- 'seat/sit' and pɔ́:/pį́:- 'eat'.

50. For, example, the numeral 'five' has initial p' in the Tanoan languages but an initial vowel (with glottal onset) in Kiowa: Taos p'anyuo, Tewa p'ąnų, Jemez p'į:t'o, Kiowa ɔ́nt'ɔ̀ [ʔɔ̃́nt'ɔ̀].

51. These roots with initial vowels begin automatically with a glottal onset, which is synchronically predictable. The historical status of [ʔ] in Kiowa-Tanoan remains an interesting question.

CHAPTER THREE

Morphology

3.0. <u>Introduction.</u> This chapter describes the internal structure of words in Kiowa. The two inflected word classes are nouns (3.1) and verbs (3.3). Because of their complexity, the pronominal (verb agreement) prefixes are discussed in a separate section (3.2). Finally, miscellaneous derivational processes are treated in 3.4. Uninflected particles, including adverbials, modals, and numerals, are presented in Chapter Four according to their syntactic functions.

3.1. <u>Nouns.</u>

3.10. <u>Introduction.</u> Nouns are formally distinguished from other word classes in Kiowa by two criteria: a) their inflection for number by suffix and b) their occurrence in constructions with demonstratives. Noun classification will be examined with reference to three features: a) number suffixes, b) pronominal prefixes associated with the verb, and c) demonstratives and number-differentiated verbals. The section will conclude with independent pronouns, possessive affixes, and nominal derivation.

3.11. Stem formation. Noun stems are of three
general types: a) free roots, b) bound roots, and c) com-
pounds of varying degrees of synchronic analyzability.

3.111. Free roots. A large number of noun roots
constitute freely occurring lexical items. The canonical
shape of these roots, as of verb roots, is (C)V$\left\{\begin{matrix} C \\ : \end{matrix}\right\}$.
There are no noun roots with a final short vowel: nouns
exhibiting a final short vowel are derived. Examples
from all noun classes (see 3.12) are listed in (1).

(1) V: î: 'child, offspring, son' (I)

     é: 'seed, grain, bread' (II)

     á: 'wood' (II)

VC   ám   'man's BrSo' (I)

     ɔ́l   '(head) hair' (III)

CV: tá̧:   'star' (I)

     k'ɔ̂:   'knife' (I)

     tʰó̧:   'water' (IVb)

CVC dén   'tongue' (I)

     kɔ́l   'bison' (I)

     t'áp   'deer' (I)

     bót   'belly, entrails' (II)

3.112. Bound roots. A smaller number of roots of
the same canonical shape as free roots occurs in root form
only in compounds or with locative suffixes. In absolu-
tive usage they occur with one of several 'basic' number

suffixes (3.13).

(2)   tá:-   'eye' (I)   pǫ́:-   'bead' (II)

       tʰǫ́:-   'leg' (I)   ɔn-   'foot' (II)

       kɔ́y-   'Kiowa' (I)   zê:-   'arrow' (II)

3.113. Compounds. Kiowa is rich in both nominal
and verbal compounds. The process of compounding is pro-
ductive. In addition to transparent compounds, there are
polysyllabic nouns which can be tentatively regarded as
old compounds on the basis of identification of at least
one element with synchronically occurring forms. Still
other polysyllabic nouns are entirely unanalyzable, but
given the monosyllabic structure of roots and the tonal
patterns of known compounds, they can safely be inferred
to be old compounds.

Disyllabic nouns constitute a large group of trans-
parent and tentative compounds. One or both morphemes are
identifiable, but the synchronic form may be modified in
the compound, usually by a) a shortened vowel in the first
syllable (e.g., 'girl') and/or b) a lowered tone in the
second syllable (e.g., 'road'). Some clearly identified
disyllabic compounds are:

(3) má+tʰɔ́n   'girl' (<má: 'woman' + tʰɔ́n 'small')

    t'ɔ́l+tʰɔ́n   'kidney' (<t'ɔ́l 'liver' + tʰɔ́n 'small')

    k'yá̧:+hî̧:   'man' (<k'í: 'male, husband + hî̧: 'real')

(3) hó+ɔ̀n   'road' (<hó: 'travel' + ɔ̀n 'path')

     t'è̀l+bộ̧:   'knee' (<t'él 'buttocks' + ?)

     dɔ̀m+t^{h}âl   'toad' (<dɔ́m 'ground' + t^{h}âl 'hole/borer')

Other disyllabic nouns may be old compounds but their constituent roots cannot be identified with any synchronic material.

(4) tógúl   'young man'   mɔ́sɔ́[1]   'six'

     yɔ́kɔ́y   'young woman'   tẹ̀dán   'sparrow hawk'

     k'ókɔ́y   'elk'   àyp'í   'willow'

     mɔ̀hị́:   '(small) owl'

The roots comprising nominal compounds are typically a noun+noun or noun+verb sequence. Occasionally some other formative, often -pá 'at/against', occurs in a kind of phrasal compound.

(5) <u>Noun+noun</u>

     t^{h}ọ́:+sá:né   'water moccasin (water + snake)'

     mɔ́n+k^{h}ɔ́y   'glove (hand + cloth)'

     góm+t^{h}ọ̀:   'spine (back + bone)'

     hị́:+t^{h}ọ̀:   'axe (metal + club)'

     t'ɔ̀+á: 'earring (ear +stick)'

(6) <u>Noun+verb</u>

     k'ól+p^{h}ạ̀:   'necklace (neck+be=tied)'

     mɔ̀:k'ɔ̀n+t'ạ́y   'mudhen, coot (nose/beak+white)'

(6) <u>Noun+verb</u>

tʰón+gùl   'red-tailed hawk (tail + red)'

mɔ́n+só:dè   'bracelet (hand + hook=on)'

mɔ́n+pà+tò: 'weapon (hand + against + hold)'

Nominal compounds derived from verbs undergo additional modification in some cases. If the verb is an ablauting root (see 2.8), then the ablauted form occurs in these nominal items, e.g., <u>mɔ́npàtò:</u> 'weapon' (above) where the final root <u>tó:</u> is derived from <u>dó:</u> 'hold, put on'. Similarly, the second root of <u>dɔ̂m+kû:</u> 'hoe' is derived from <u>gû:</u> 'hit'.

Nominal compounds are also derived from verbal compounds by shortening of the root-final vowel of the verb (see also 2.54). That this is a modification of derived nouns and not of compounds in general can be seen in the corresponding verbal compounds with long vowels.

(7)   <u>Verb</u>   <u>Noun</u>

    á:+tʰà: 'saw/pf (wood+cut)'   á:tʰà   'saw'

    dɔ̀m+sá: 'plow/pf (earth+break)' dɔ̀msá   'plow'

Finally, some polymorphemic compounds are modified tonally in special ways. Several of these forms are characterized by a falling tone on the verb, the source of which is not always identifiable.[2] The syllable following the falling tone has, contrary to the lowering effect of

F (see 2.651), a high tone. Other compounds with a final verb stem undergo no modification, e.g., 'bracelet'.

(8) zòn+tʰâ:pé   'squirrel (pine+pick=up (<hâ:pè))'

   tʰǫ́:+t'ɔ̂:dé   'faucet (water+flow (<t'ɔ́:dé))'

   mɔ́n+sɔ́:dè   'bracelet (hand+hook=on (<sɔ́:dè))'

   kʰɔ̀y+bá+tô:lé   'butterfly (cloth+against+quiver
                              (<tɔ́:lyà))'

Many animal terms exhibit similar morphological and tonal patterns although not all of the roots can be identified.

(9) t'ɔ́l+kʰǫ̀+t'ɔ̂:lé   'marsh hawk (liver+black+ ?)'

   tʰɔ́n+kùt+kû:té   'raccoon (tail+marked+ ?)'

   cá+k'òm+zâ:lé   'ground squirrel (prairie=dog+ ? + ?)'

   kyây+sɔ̀:té   'mourning dove (?enemy+ ?)'

   á:+k'ǫ̂:dé   'chimney swift (?wood+ ?)'

   kʰɔ́:lé+k'yâ:lé   'frog (? +?caller)'

   tè:+gú:+tê:pé   'leech (?)'

3.12. Number. The number-based classification of nouns in Kiowa was first demonstrated by Wonderly, Gibson, and Kirk (1954) and later refined by Merrifield (1959b). The analysis presented here follows in large part their excellent discussion and adopts the terminology they introduced for the underlying categories. A summary of the major features of noun classification will precede a more

detailed look at the morphology of the individual classes.

Every noun stem has an inherent or implicit number when it occurs without the suffix -gó 'inverse'. One class of nouns, primarily composed of animates, is inherently singular/dual; the suffixation of -gó indicates plural. Nouns in a second class, inanimates, are inherently dual/plural; with these nouns -gó indicates singular. An unsuffixed noun thus implies its inherent or basic number. The suffixation of -gó switches the number of the noun to the complementary number or inverse. The complement or inverse of basic dual/plural is singular. The inverse category can be understood as superimposed on the three-way number distinction of singular, dual, and plural. However, only singular and plural may be supercategorized as inverse; dual is always basic.

The ambiguity that exists in basic number, e.g., singular/dual (inverse:plural) or dual/plural (inverse: singular), is eliminated in clauses where nouns are co-referenced in the pronominal prefixes associated with the verb. These verb agreement prefixes (see 3.2) signal four distinct number categories for third person referents: singular, dual, plural, and inverse. Through these prefixes, then, basic singular/dual or dual/plural can be disambiguated in a given predication.

Four major classes of nouns can be distinguished on the basis of the distribution of the inverse suffix -gó,

as shown in Table 7. Further subclassification is based
on the pronominal prefixes, of which the intransitive
third person prefixes (Table 8) are listed as illustration.
All animate nouns belong to class I while inanimates are
distributed throughout the classes. The subclasses deter-
mined by contrasting verbal prefixes, as well as the un-
derlying semantic organization of the classes, will be
discussed in the following sections.[3]

Table 7: Noun classes

	SG		DU		PL	
	Inv sfx	Itr pfx	Inv sfx	Itr pfx	Inv sfx	Itr pfx
a) Class I	--	∅-	--	è̗-	-gɔ́	è̠-
b) Class II	-gɔ́	è̠-	--	è̗-	--	(a) gyà- (b) ∅-
c) Class III	-gɔ́	è̠-	--	è̗-	-gɔ́	è̠-
d) Class IV (a)	--	∅-	--	è̗-	--	gyà-
(b)	--	∅-	--	è̗-	--	∅-
(c)	--	gyà-	--	gyà-	--	gyà-

Table 8: Intransitive third person prefixes[4]

∅-	'singular'
è̗-	'dual'
gyà-	'plural'
è-	'inverse'

3.121. <u>Inverse allomorphs.</u> The inverse suffix -gɔ́ has numerous allomorphs, which are distributed across all the noun classes. Although no single class exhibits all the allomorphs, there is no evidence that the distribution is conditioned by class membership.[5]

Most of the variants of -gɔ́ are conditioned phonologically, the rules for which are more fully discussed in 2.7. The range of forms can be reduced to the following set: -Cɔ́, -gú, -ɔ́y, -ɔ́p, falling tone. A few nouns from classes I, II, and III are listed below to illustrate the allomorphs.

(10) <u>-mɔ́</u> / V̨y___   t'ą́y/t'ą́ymɔ̀ 'egg (I); sheet (II)'

    <u>-bɔ́</u> / m___   kɔ́m/kɔ̨́:bɔ̀   'friend' (I)

    <u>-dɔ́</u> / n___   k'ɔ̂n/k'ɔ̨̂:dɔ̀ 'tomato' (III)

    / V̂l___   tɔ́gúl/tɔ́gú:dɔ́ 'young man' (I)

    <u>-tɔ́</u> / V̂l___   tâl/táttɔ̀   'skunk' (I)

    <u>-gú</u> / y___   kɔ́y-/kɔ́ygú   'Kiowa' (I)

    <u>-ɔ́y</u> / i___   p'í:/p'yɔ́y   'female's sister' (I)

    <u>-ɔ́p</u>/ e___   sà:né/sà:nɔ́p 'snake' (I)

(10) -gɔ́ / elsewhere[6]   cḛ̂:/cḛ̂:gɔ̀   'horse' (I)

   tʰó̰:sè/tʰó̰:sègɔ̀   'bone' (II)

Allomorphs -bɔ́ and -dɔ́ also occur unpredictably with several vowel-final stems, listed in (11). The three nouns with -bɔ́ are interesting in that they are dialect variants of the more widely distributed allomorph -gɔ́; some speakers regularly use é:-gɔ́ 'bread', álɔ̀:-gɔ̀ 'plum, apple', and tʰó̰t'ólɔ̰̀:-gɔ̀ 'orange' while others use -bɔ́ for these same three nouns. Of the nouns with -dɔ́, only 'fish' has been recorded with the variant -gɔ́.

(11)   -bɔ́

   é:-bɔ́   'bread, grain' (II)

   álɔ̀:-bɔ̀   'plum, apple' (III)

   tʰó̰t'ólɔ̰̀:-bɔ̀ 'orange' (III)

   -dɔ́

   á:-dɔ̀   'wood' (II)

   gú:-dɔ̀   'rib' (II)

   pʰí:-dɔ̀   'fire' (II)

   kʰɔ́:-dɔ́   'shawl' (II)

   ɔ́:pḭ́:-dɔ́   'fish' (I)

Falling tone is not predictable phonologically.[7] It may be the only allomorph of inverse, as in 'nose' and 'White' (12), or it may cooccur with some irregular seg-mental modification, as in 'wife' and 'foot'. It was

also argued in 2.791 that falling tone marks the inverse of most nouns ending in -l, which also have the phonologically regular suffix -dɔ́.

(12) | Basic | Inverse | | |
| --- | --- | --- | --- |
| t'ɔ́kʰɔ́y- | t'ɔ́kʰɔ̂y | 'White' | (I) |
| mɔ̀:k'ɔ́n | mɔ̀:k'ɔ̂n | 'nose' | (II) |
| tʰá: | tʰê: | 'wife' | (I) |
| ɔ̀nsó: | ɔ̀nsôy[8] | 'foot' | (II) |
| sékʰǫ́: | sékʰǫ̂y[8] | 'large intestine' | (II) |

3.122. Class I nouns. Nouns of class I are inherently singular/dual, so the inverse suffix -gɔ́ indicates plural. The pronominal prefixes likewise signal singular, dual, and inverse, as shown in Table 7a.

Table 7a: Class I nouns

	ŚG		DU		PL	
	Inv sfx	Itr pfx	Inv sfx	Itr pfx	Inv sfx	Itr pfx
Class I	--	∅-	--	ȩ̀-	-gɔ́	è-

All animate nouns belong to class I, including terms for human beings (e.g., tógúl 'young man', mátʰɔ̀n 'girl', mà:yí 'woman', k'yá̧:hǫ̧́: 'man'), kinship terms (e.g., p'í: 'female's sister', pà:bí 'male's brother', tɔ́l 'father', í: 'child, offspring'), and tribal names (e.g., kɔ́y- 'Kio-

wa', kyây- 'Comanche', t^{h}ɔ́gúy 'Kiowa-Apache').

All animal terms, including insects and birds, belong to this class as well (e.g., t'áp 'deer', tâl 'skunk', pól 'bug', zònt^{h}â:pé 'squirrel', kú:tò 'bird', k^{h}ɔ̀ybátô:lé 'butterfly').

A large proportion of body parts also belongs to this class, the remainder to be found in class II. What distinguishes membership in I or II is not certain, but most of the class I nouns are either paired (eye, ear) or individual organs, i.e., inherently singular or dual. The following body parts are in class I:

(13)

dén	'tongue'	gómt^{h}ǫ̀	'spine'
k'ól	'neck'	mɔ̀nc'ǫ́	'fingernail'
k^{h}ɔ́y	'hide'	ɔ́:bį̀:	'tripe'
gų́:dé	'horn'	pí:t^{h}èl	'hip'
ɔ̀nt^{h}ál	'toe'	tá:dè	'eye'
t'ą́y	'egg'	t'ɔ́lèl	'liver'
pâysèn	'spinal cord'	t'ɔ́lt^{h}ɔ̀n	'kidney'
t'él	'buttocks'	t^{h}én	'heart'
t'èlbǫ̂:	'knee'	zǫ́:	'tooth'
t'ɔ́:dé	'ear'	t^{h}ǫ́:dé	'leg'
t'ǫ̂:dé	'gall bladder'		

Although class I contains primarily animate nouns, there are a number of zoologically inanimate nouns included in the class. A few of the inanimate nouns are of the

type that might have an animate source in legend (e.g.,
tá: 'star', p'ɔ́: 'moon', páy 'sun'), be originally of ani-
mal material (e.g., t'ɔ́: 'spoon (of buffalo horn)', cɔ́:
'awl, needle (of bone)'), or be a representation of an
animate being (e.g., hê̜:ì̜: 'doll (play+child)'). Others,
several of which are deverbal compounds, suggest no simi-
lar explanation.[9]

(14)   Class I inanimates

k'ɔ́dál	'wheel, wagon, vehicle'
kʰɔ̂:	'car (<English)'
ɔ́lp'ɔ́ɔ̜́:	'soap'
p'ɔ́:	'river, stream'
k'ɔ̂:	'knife (<cut)'
hɔ̜́:tʰɔ̜̀:	'axe (metal+club)'
k'ɔ̂:sɔ̜̀:	'whetstone (knife+grind)'
dɔ̀mkû:	'hoe (earth+hit)'
ɔ̀:kɔ̀sɔ́m	'window, mirror'
t'á̜ykʰɔ́tʰá:	'scissors (white+cloth+sever)'
hô:c'ò	'decorative silver button worn at the top of the head'

A defining characteristic of class I nouns, as we
have said, is the use of inverse pronominal prefixes when
the referent is plural. The exception to this rule arises
in the interesting case of tribal names. All tribal names,
belonging to class I, carry the inverse suffix in the plu-

ral: kɔ́ygú 'Kiowas', kyâygù 'Comanches', tʰɔ̀gûy 'Kiowa-
Apaches'. However, a Kiowa speaker will typically use the
third human plural prefix á- to refer to fellow tribal
members but the third inverse prefix è- for members of
other tribes.[10] For example, a Kiowa would use (15a) to
describe the location of his fellow Kiowas but (15b) for
any others, even though the nouns naming the tribes are of
the same class and the actual number the same.

(15) a. kɔ́ygú á-kú:yɔ́ (Kiowa/inv [3pl]-be=lying/pl/distr)
        'Kiowas are camped about.'
     b. kyâygù è-kú:yɔ́ (Comanche/inv [3inv]-be=lying/pl/
        distr) 'Comanches are camped about.'

One class I noun, t'áp 'deer', is invariant, that is,
it does not carry the inverse suffix for a plural referent.
Nevertheless, it can be included in class I on the basis
of its distribution with pronominal prefixes signaling an
inverse object when the referent is plural. Invariant
t'áp is compared with cę̂: 'horse', a regular class I noun,
in (16) and (17).

(16) a. cę̂: gyà-tʰɔ́n (horse [1sg/agt:sg/obj]-find/pf)
        'I found (one) horse.'
     b. cę̂: nèn-tʰɔ́n (horse [1sg/agt:du/obj]-find/pf)
        'I found (two) horses.'
     c. cę̂:gɔ̀ dé-tʰɔ́n (horse/inv [1sg/agt:inv/obj]-find/
        pf) 'I found (several) horses.'

(17) a. t'áp gyà-tʰɔ́n (deer [1sg/agt:sg/obj]-find/pf)

     'I found (one) deer.'

 b. t'áp nèn-tʰɔ́n (deer [1sg/agt:du/obj]-find/pf)

     'I found (two) deer.'

 c. t'áp dé-tʰɔ́n (deer [1sg/agt:inv/obj]-find/pf)

     'I found (several) deer.'

3.123. Class II nouns. Nouns belonging to class II are inherently dual/plural and therefore carry the inverse suffix when singular. They can be further subclassified according to the pronominal prefixes they require. Subgroup (a) occurs with the prefixes assigned on the basis of actual number, i.e., the plural suffix when the noun refers to plural items. Subgroup (b) requires the singular prefix in the case of plural items.

Table 7b: Class II nouns

	SG		DU		PL	
	Inv sfx	Itr pfx	Inv sfx	Itr pfx	Inv sfx	Itr pfx
Class II (a)	-gɔ́	è-	--	è̜-	--	gyà-
(b)	-gɔ́	è-	--	è̜-	--	∅-

Class II is composed of inanimate nouns, including plants and plant material, natural and man-made objects and a small number of body parts not included in class I.

Among body parts in class II are:

(18)

tʰǫ́:sè	'bone'	áál	'lymph gland'
c'ǫ́:gyà	'downy feather'	ɔ̀nsó:	'foot'
á:	'hard-stem feather'	sóp	'penis'
gú:	'rib'	ɔ́:zá:	'udder'
mɔ̀:k'ɔ́n	'nose, beak'	sékʰǫ́:	'large intestine'
ɔ́ltʰǫ́:	'head'		
tá:pʰɔ̀l	'eyelash'	sét'ą́y	'small intestine'
tę́:	'sinew' - ·	k'yágòp	'brain'
kyâyp'ɔ̀n	'scalplock'	c'ól	'wing'

Since the membership of class II is large, it is
easier to give a negative list: all plants, natural and
man-made objects not in classes III and IV (and those al-
ready listed in I) belong to class II. The reader is di-
rected to 3.124 and 3.125 to determine some of the nouns
thus excluded.

The semantic basis for the treatment of plurals in
the two subclasses is problematic. For the most part, a
listing of members of IIa and IIb is uninstructive. Among
IIa nouns are dɔ̀ál 'bucket', á:tʰà 'saw', zê:bà 'arrow',
móc'ą́y 'paper', són 'grass', tʰǫ́:é: 'watercress'. Class
IIb includes t'ą́y '(bed) sheet' (<'white'), tól 'peg,
stake', sę́: 'peyote, cactus', é:tʰâl 'corn', k'óp 'moun-
tain'. Interestingly, one root participates in both
classes and the distribution of meanings for this root,

á: 'wood', provides a clue to the underlying semantic or-
ganization of the entire noun classification (see 3.126).

The root á: is variously translated 'wood, stick,
pole, brush, timber'. Compounds based on á: are distrib-
uted in the two subclasses of class II in the following
way:

(19) IIa

á: 'pole, stick'

séá: 'willow'

kútà: 'pencil (write+stick)'

pį́á: 'table (eat+board)'

kʰį̂:gùlà: 'redbud (bloom+red+stick)'

tʰépsɔ̀yà: 'weed'

IIb

á: 'tree'

á:hį̀:   'cottonwood (tree+real)'

zónà: 'pine tree'

kɔ́1à: 'elm'

á:è:pʰèp   'hackberry (tree+fruit+bush)'

zépgùtk'ɔ̀à: 'Osage orange (bow+yellow+tree)'

The pronominal prefixes required for á: (IIa) 'stick,
pole' and á: (IIb) 'tree' are illustrated in (20) and
(21). Note that the number-differentiated verbs cé1 'be
set, standing sg/du' and sɔ́1 'be set, standing p1' reflect
the actual number of the object, e.g., the plural verb sɔ́1

in (21c) although the prefix is ∅- '3sg'.

(20) a. á:dɔ̀ è-cél (pole/inv [3inv]-be=set/sg/du) 'A
        pole is set up there.'

   b. á: ę̀-cél (pole [3du]-be=set/sg/du) '(Two) poles
        are set up there.'

   c. á: gyà-sɔ́l (pole [pl]-be+set/pl) '(Several) poles
        are set up there.'

(21) a. á:dɔ̀ è-cél (tree/inv [3inv]-be=set/sg/du). 'A tree
        is standing/growing there.'

   b. á: ę̀-cél (tree [3du]-be=set/sg/du) '(Two) trees
        are standing/growing there.'

   c. á: ∅-sɔ́l (tree [3sg]-be=set/pl) '(Several) trees
        are standing/growing there.'

In IIb plural items are treated as singular, i.e.,
as a set or unit. Nouns in IIa referring to three or more
items are, on the other hand, treated as individualized
plurals. A distinction between collective plural and dis-
tributive plural is thus revealed in the subclassification
of class II. Further evidence for a set vs. item catego-
rization is found in classes III and IV.

As in class I, there are nouns in class II which are
invariant, but the pronominal prefixes identify them as
members of class II: bímkʰɔ̀y 'bag, sack', kʰɔ́y 'rag', k'óp
'mountain', cát 'door, entrance', kɔ́bót 'bullboat', é:t'áp-
pây 'pie'.

3.124. <u>Class III nouns.</u> Nouns in class III are inherently dual and take the inverse suffix when singular or plural. It is a small closed class consisting of the nouns listed in (22).

(22) álɔ̀:   'plum, apple'   k'ɔ̂n   'tomato'

     tʰó̰t'ólɔ̰̀:   'orange'   ɔ́l   '(head) hair'

Table 7c: Class III nouns

	SG		DU		PL	
	Inv sfx	Itr pfx	Inv sfx	Itr pfx	Inv sfx	Itr pfx
Class III	<u>-gɔ́</u>	<u>è-</u>	--	ḛ̀-	<u>-gɔ́</u>	<u>è-</u>

For a singular or plural referent of class III, i.e., the inverse, pronominal prefixes must indicate an inverse object, as in (23).

(23) álɔ̀:bɔ̀ nɔ́-bɔ́:   (apple/<u>inv</u> [(2,3sg/agt):1sg/pat:<u>inv/</u>
    <u>obj</u>]-bring/imp) 'Bring me one/several apple(s).'

For a dual referent, the noun is basic, i.e., unsuffixed, and the prefix must signal a dual object (24).

(24) álɔ̀: né-bɔ́:   (apple [(2,3sg/agt):1sg/pat:<u>du/obj</u>]-
    bring/imp) 'Bring me (two) apples.'

Interestingly, a basic noun of class III can also refer to three or more separate collections of a single

type, e.g., varieties of apples in separate piles or bags.
In this case the prefix associated with the verb must sig-
nal a singular object, as in (25).

(25) álɔ̀: bâ:-bɔ̀: (apple [2pl/agt:(1,3sg/pat):sg/obj]-
    bring/imp) '(You-all) bring me some apples (of dif-
    ferent varieties, e.g., a bag of Jonathans, a bag of
    Pippins, a bag of Macintosh).'

Similar examples can be cited for other nouns of
class III. In (26a-b), 'hair' refers to one (singular) or
many (plural) strands and therefore takes the inverse suf-
fix: ɔ́:dɔ́ 'hair/inv'. Note that the number-differentiated
verbs k'ɔ́: 'be lying sg/du' and k'úl 'be lying pl' serve
to disambiguate the number of the referent. In (26c)
'hair' is unsuffixed, implying the basic number of the
class, i.e., dual. In this case, it can mean two strands
or two collections of hair. Finally, in (26d) the refer-
ence is to more than two sets of hair, i.e., heads of hair
belonging to different individuals. The prefix signals a
singular object despite the plural referents. This use of
a singular prefix for plural items (in this case plural
sets) is analogous to that in class IIb[11] (3.123) and, we
shall see, in class IVb (3.125).

(26) a. ę́:gɔ̀ ɔ́:dɔ́ è-k'ɔ́: (there hair/inv [3inv]-be=lying/
    sg/du) 'There's a strand of hair lying there.'

(26) b. ɔ́:dɔ́ hóldàp nɔ́-k'úl (hair/inv dress/on [(2,3sg/
    agt):1sg/pat:inv/obj]-be=lying/pl) 'I've got some
    hair on my dress.'

    c. ɔ́l ę́:gɔ̀ ę̀-k'ɔ́: (hair there [3du]-be=lying/sg/du)
    'There are two strands/two toupees lying there.'

    d. hɔ́ndé ɔ́l bɔ́-sʝ́:mí: (what/indef hair [(x/agt):
    2pl/pat:sg/obj]-interesting) 'What interesting
    (kinds of) hair you-all have.'

    3.125. Class IV nouns. Nouns in class IV never oc-
cur with the inverse suffix. Consequently, they are never
signaled as inverse in the pronominal prefixes. On the
basis of their distribution with respect to the prefixes,
however, they can be subclassified into three groups
(Table 7d).

Table 7d: Class IV nouns

		SG		DU		PL	
		Inv sfx	Itr pfx	Inv sfx	Itr pfx	Inv sfx	Itr pfx
	(a)	--	∅-	--	ę̀-	--	gyà-
Class IV	(b)	--	∅-	--	ę̀-	--	∅-
	(c)	--	gyà-	--	gyà-	--	gyà-

    Nouns of subclass (a) are signaled in the prefixes
according to actual number, i.e., singular, dual, or plu-

ral, as illustrated in (27). Nouns in this group include
c'ó: 'rock, stone', kí: 'meat', t'ɔ́á: 'earring', hɔ̨́:t'ɔ̀kù:
'nail', tó:dé 'shoe'.

(27) a. c'ó: gyà-tʰɔ́n (rock [1sg/agt:<u>sg/obj</u>]-find/pf) 'I
       found (one) rock.'

   b. c'ó: nèn-tʰɔ́n (rock [1sg/agt:<u>du/obj</u>]-find/pf) 'I
      found (two) rocks.'

   c. c'ó: gyàt-tʰɔ́n (rock [1sg/agt:<u>pl/obj</u>]-find/pf)
      'I found (several) rocks.'

Nouns of subclass (b) differ from those in (a) in
that plural items take a singular rather than a plural
prefix. IVb is thus analogous to IIb where plural objects
are treated collectively as a set, indicated by the singu-
lar prefix. Nouns in IVb include hóɔ̀n 'road', tó: 'house,
building', sé:có 'pond', cóy 'liquid'.

Nouns of subclass (c) are treated as plural in the
prefixes regardless of their actual number. Among these
nouns are k'ólpʰą̀: 'necklace (neck+tie)', hóldà 'dress,
shirt', kút 'book, letter, school (<gúl 'write')', kʰɔ́:dé
'trousers', pál 'quilt', t'ǫ́:gyà 'shirt, clothing', tó:
'tepee'.

The root tó: 'dwelling, house, tepee' belongs to
IVb with the meaning 'house, building' (28) but to IVc
when it means 'tepee' (29). Note also that IVc 'tepee'
has the plural verb sɔ́l throughout.

(28) a. tó: ∅-cél (house [3sg]-be=set/sg/du) 'There is

   (one) house standing there.'

b. tó: ę̀-cél (house [3du]-be=set/sg/du) 'There are

   (two) houses standing there.'

c. tó: ∅-sɔ́l (house [3sg]-be=set/pl) 'There are

   (several) houses standing there.'

(29) a. tó: gyà-sɔ́l (tepee [pl]-be=set/pl) 'There is

   (one) tepee standing there.'

b. tó: gyà-sɔ́l (tepee [pl]-be=set/pl) 'There are

   (two or more) tepees standing there.'

Like an analogous root in class II (á: 'wood'), the
dual class membership of tó: 'house, tepee' sheds more
light on the semantic categories underlying this complex
classification. Merrifield (1959:270) describes subclass
IVc as "distributive plural...where perhaps even a single
item is looked upon as having several constituent parts."
Thus, kút 'book, letter, writing' is composed of many
marks and k'ólp^hą̀: 'necklace' of many bone beads, he sug-
gests. We might add that the tepee was likewise composed
of several parts, poles, skins, etc., which were constant-
ly disassembled, transported, and reassembled. The modern
house (IVb), on the other hand, is viewed as a unit whose
constituent parts are not significant.

   3.126. Underlying classification. Although it is
difficult to determine in every case exactly why a noun

has been assigned to one class or another, the main out-lines of the underlying classificatory scheme are clear.[12] Persons and objects are broadly categorized on the basis of individuality. Humans and animals in particular are inherently individual with a basic number of singular/du-al (class I). Most inanimate objects are inherently not individuals, not conceived of as uniquely identifiable (e.g., leaves, onions). These nouns are basic dual/plural and specially marked by inverse when viewed as individual items (classes II and III). Nouns of class IV are inde-terminate for inherent individuality, but like those in class II, they are treated as items or sets by the prefix system. The use of singular object prefixes for plural items (IIb, IVb, and III when referring to plural sets) reflects a view of such objects as occurring in sets, that is, as a collection constituting a unit. Other nouns are always treated as plurals (IVc), reflecting the saliency of their constituent parts.

3.127. _Productivity._ The noun classes are produc-tive today. Kiowa speakers make fairly frequent use of unassimilated English nouns, all of which must be assigned to some class for the purposes of determining pronominal prefixes. Animates, e.g., _sloth_, are assigned to class I. Inanimate but tangible objects, e.g., _spacecraft_, _jello_, _antenna_, are assigned to class II. Abstract inanimates, e.g., _zero_, _biology_, _adverb_, are assigned to IVc. Because

plural object prefixes are used for an unidentified or un-specified object (see 3.2621), this assignment of abstract nouns to IVc, for which the verbal prefixes always signal a plural referent, seems a natural extension within the system. One expects the inexplicable in a classificatory scheme that reaches back to Proto-Kiowa-Tanoan times,[13] but the underlying semantic features are still productive and discernible synchronically.

3.13. <u>Bound roots.</u> As discussed in 3.11, most basic nouns are either roots or compounds. Distributed throughout the noun classes, however, there are bound roots (3.112) which require a 'basic' suffix in absolutive usage. These basic suffixes can be distinguished by their distribution with respect to the inverse suffix. Suffixes <u>-dé</u>, <u>-gyá</u>, and <u>-bá</u> never cooccur with the inverse suffix, <u>-sé</u> is retained when inverse is attached, and <u>-dá</u> is suffixed to roots in class IV, which are never inverse.

3.131. <u>-dé 'basic'.</u> Nouns occurring in basic form with the suffix <u>-dé</u> belong to classes I, II, and IV, effectively all classes. They take the inverse suffix allomorph <u>-gɔ́</u> unless they belong to class IV, which permits no inverse suffix.

(30) <u>Root</u>   <u>Basic</u>   <u>Inverse</u>

    tá:-   tá:-dè   tá:-gɔ̀   'eye' (I)

    t'ɔ́:-   t'ɔ́:-dé   t'ɔ́:-gɔ́   'ear' (I)

(30)　　Root　　　　Basic　　　　　Inverse

　　　tʰǫ́:-　　　　tʰǫ́:-dé　　　　tʰǫ́:-gɔ́　　　　'leg' (I)

　　　gṹ:-　　　　gṹ:-dé　　　　gṹ:-gɔ́　　　　'(cow) horn' (I)

　　　tɔ̂y-　　　　tɔ̂y-dè　　　　tɔ̂y-gòp[14]　　'g-string' (II)

　　　kʰɔ́:-　　　　kʰɔ́:-dé　　　　---　　　　　'trousers' (IVc)

　　　tó:-　　　　tó:-dé　　　　　---　　　　　'shoe' (IVa)

The striking feature common to these nouns is that they refer to things normally occurring in pairs. While synchronically these basic nouns imply both singular and dual, they are most likely relics of an earlier dual marking, which has been retained only on nouns with saliently dual referents. Examples in (31) illustrate the suffixation of -dé 'basic' in absolutive usage (a,b) and its absence with locative suffixes (c) and in compounds (d).

(31) a. tá:-dè ę́-kʰóp (eye-bas [(2,3sg/agt):1sg/pat:sg/obj]-hurt) 'My (one) eye hurts.'

　　b. tá:-dè né-kʰóp (eye-bas [(2,3sg/agt):1sg/pat:du/obj]-hurt) 'My (two) eyes hurt.'

　　c. tá:-gyà hɔ́ndé ę́-cél (eye-in something [(2,3sg/agt):1sg/pat:sg/obj]-be=set/sg/du) 'There is something in my eye.'

　　d. tá+hòt+gǜ: (eye+travel+distr) 'watch everywhere'

It is important not to confuse nominal roots plus basic suffix -dé with deverbal compounds in which the form

is only superficially identical. For example, in 'nut'
and 'bracelet' (32), the second stem is derived with
thematic -dé, analogous to thematic -pé in 'squirrel' (see
3.315). The resemblance between these deverbal nouns and
nouns with -dé 'basic' is fortuitous.

(32) zém+k'ɔ́:dè/zémk'ɔ́:dòp (inv) 'nut (tooth+crack)'

   mɔ́n+sɔ́:dè/mɔ́nsɔ́:dòp (inv) 'bracelet (hand+hook=on)'

   zòn+tʰâ:pé/zòntʰâ:póp (inv) 'squirrel (pine+pick=up)'

   3.312. -gyá 'basic'. A second group of nouns oc-
curs with -gyá 'basic', which is paired with the inverse
allomorph -gɔ́t (see fn. 6). Like nouns with basic -dé,
these nouns occur in root form when compounded.

(33) Basic   Inverse

   pǫ́:-gyà   pǫ́:-gɔ̀t   'beads' (II)

   hɔ́ʲ̨:-gyà   hɔ́ʲ̨:-gɔ̀t   'metal' (II)

   c'ǫ́:-gyà   c'ǫ́:gɔ̀t   'downy feathers' (II)

   pé:-gyà   pé:-gɔ̀t   'sand' (II)

   pʰát-kyá   pʰát-kɔ́t   'fabric, dry goods' (II)

   dǫ́:-gyà   dǫ́:-gɔ̀t   'seeds' (II)

   pʰídát-kyá   pʰídát-kɔ́t   'muskmelon' (II)

   á:kʰʲ̨:-gyà   á:kʰʲ̨:-gɔ̀t   'flowers' (II)

   bélkít-kyà   bélkít-kɔ̀t   'screech owl' (I)

   ì:p'ɔ́:-gyà   ì:p'ɔ́:-gɔ̀t   'baby' (I)

   t'ǫ́:-gyà   ---   'shirt, clothing' (IVc)

With the exception of 'baby' and 'screech owl', both
of which are compounds,[15] the nouns with -gyá belong to
class II or IVc where inherent number is (dual)/plural.
It seems plausible to suggest, on the basis of this dis-
tribution, that whereas -dé was earlier a dual marker,
-gyá was earlier a plural marker.

3.133. -bá 'basic'. There are just a few nouns
that take the basic absolutive suffix -bá, paired with in-
verse -bɔ́t. They are otherwise like nouns with basic -gyá.
As these nouns are restricted to class II (inherently
dual/plural), -bá was likely also a plural marker.

(34) Basic   Inverse

    zê:-bá   zé:-bɔ́t   'arrow' (II)

    tǫ́:-bá   tǫ́:-bɔ́t   'flute, reed pipe' (II)

    tʰá:-bá   tʰá:-bɔ́t   'tobacco'[16]

3.134. Number concord. A striking pattern emerges
when we consider the vowels of the basic and inverse suf-
fixes. The reconstructed **-dé 'dual', **-gyá 'plural',
and **-gɔ́ 'inverse' reveal just the correlation between
vowel and number that is found in the verbal prefixes:
morphemes indicating object number (3.233) are e 'dual',
a 'plural', and ɔ 'inverse' (patient and mixed paradigms).

3.135. -sé 'basic'. Of the two remaining basic ab-
solutive suffixes, -sé occurs with just a few class II
roots (35). The inverse allomorph -gɔ́ is added to the

basic stem.

(35) Basic   Inverse

tʰǫ́:-sè   tʰǫ́:-sè-gɔ̀   'bone' (II)

sé:-sè   sé:-sè-gɔ̀   'arrowhead' (II)

ó:-sè   ó:-sè-gɔ̀   'throat, voice' (II)

kʰòm-sé   ---   'inner tepee lining, old
                                canvas' (II)

ó:-sè 'throat, voice' is illustrated in absolutive
usage (36a) and in compounds (36b).

(36) a. ó:-sè á-ét (throat-bas [(2,3sg/agt):3sg/pat:sg/

        obj]-big/sg) 'He has a big voice.'

    b. ó:+pòmk'ɔ̀l (throat+cartilage) 'Adam's apple'

       ó:+èl+tǫ̀+k'ì: (throat+big+speak+male) 'camp crier'

       ó:+hà: (throat+arise) 'crane one's neck up to see'

    3.136. -dá 'basic'. -dá is suffixed to nouns re-
ferring to periods of time and a few other non-count items.
These nouns are always basic (i.e., class IV) and usually
require a singular prefix. Like the other basic suffixes,
-dá does not occur when the noun is compounded, as in
(38).

(37) Basic

      k'yákôm-dà   'life'

      sá:-dá   'winter, year'

      kʰí:-dá   'day'

(37) <u>Basic</u>

    pây-dà   'summer'

    yál-dá   'rise, knoll'

    pʰí:-dà   'swelling, lump'

(38) a. k'yákôm-<u>dà</u> Ø-mâ:-ǫ̀: (life-<u>bas</u> [3sg]-indeed-good)

       'Life is really good.'

   b. Ø-k'yákôm-tǫ̀:-bà:-hèl ([3sg]-life-seek-go-hsy)

       'He went to search for life.'

    3.14. <u>Demonstratives.</u> The demonstrative stems ę́:- 'near' and óy-[17] 'distant' take the nominal suffixes -dé 'basic' and -gɔ́ 'inverse' (see 3.182) when they occur in construction with a noun. The choice of suffix depends on the number and class of the head noun. If the noun is categorized as basic, the demonstrative takes -dé, and if it is categorized as inverse, the demonstrative takes -gɔ́.[18] Actual number, i.e., singular, dual, or plural, plays no role in the choice of demonstrative suffix.

    For example, the class I noun <u>sân</u> 'child' is <u>basic</u> singular/dual and <u>inverse</u> plural, which is reflected in the demonstratives ę́:-dè 'this-basic' and ę́:-gɔ̀ 'this-inverse', as in (39). The invariant class I noun <u>t'áp</u> 'deer' is categorized in the same way (40) even though the noun itself does not carry the inverse suffix (see 3.122).

(39) a. ę́:-<u>dè</u>/óy-<u>dè</u> sân Ø-kʰóp-dɔ́: (this-<u>bas</u>/that-<u>bas</u> child/<u>bas</u> [3sg]-hurt-be) 'This/that (one) child is

(39)   sick.'

    b. ę́:-dè/óy-dè sân ę̀-kʰóp-dɔ́: (this-<u>bas</u>/that-<u>bas</u>
       child/<u>bas</u> [3du]-hurt-be) 'These/those (two) chil-
       dren are sick.'

    c. ę́:-gɔ̀/óy-gɔ̀ sę̂:dɔ̀ è-kʰóp-dɔ́: (this-<u>inv</u>/that-<u>inv</u>
       child/<u>inv</u> [3inv]-hurt-be) 'These/those children
       are sick.'

(40) a. ę́:-dè t'áp Ø-hę̂:mà (this-<u>bas</u> deer [3sg]-die/impf)
       'This (one) deer is dying.'

    b. ę́:-dè t'áp ę̀-hę̂:mà (this-<u>bas</u> deer [3du]-die/impf)
       'These (two) deer are dying.'

    c. ę́:-gɔ̀ t'áp è-hę̂:mà (this-<u>inv</u> [3inv]-die/impf)
       'These deer are dying.'

    Class II nouns, on the other hand, are inverse when
singular. Therefore, the demonstratives take the inverse
suffix <u>-gɔ́</u> for singular nouns, regardless of whether the
noun carries the suffix. Class II <u>sôl</u> 'onion' is illus-
trated with demonstratives in (41) and invariant <u>kɔ́bót</u> in
(42).

(41) a. ę́:-gɔ̀ sô:tɔ̀ (this-<u>inv</u> onion/<u>inv</u>) 'this (one)
       onion'

    b. ę́:-dè sôl (this-<u>bas</u> onion/<u>bas</u>) 'these (two or
       more) onions'

(42) a. óy-gɔ̀ kɔ́bót   (that-inv boat) 'that (one) boat'

   b. óy-dè kɔ́bót   (that-bas boat) 'those (two or more) boats'

Nouns of class IV are never categorized as inverse. Consequently the demonstratives never take the inverse suffix -gɔ́ with class IV nouns. Class IVa c'ó: 'rock' illustrates the use of the demonstratives with basic -dé for all numbers in (43). Note that it is only by means of the different pronominal prefixes that the actual number of the referent can be disambiguated.

(43) a. ę̀:-dè c'ó: gyà-tʰɔ́n   (this-bas rock [1sg/agt:sg/ obj]-find/pf) 'I found this (one) rock.'

   b. ę̀:-dè c'ó: nèn-tʰɔ́n   (this-bas rock [1sg/agt:du/ obj]-find/pf) 'I found these (two) rocks.'

   c. ę̀:-dè c'ó: gyàt-tʰɔ́n   (this-bas rock [1sg/agt:pl/ obj]- find/pf) 'I found these (several) rocks.'

The demonstratives also serve as independent third person pronouns, taking the suffix dictated by the number and class of the antecedent noun. For example, persons and animals (class I) are ę́:dè/óydè when singular/dual (basic), ę́:gɔ̀/óygɔ̀ when plural (inverse). See 3.16 for first and second person independent pronouns.

(44) a. ę̀:-dè bàt-pɔ́:   (this-bas [2sg/agt:pl/obj]-eat/imp) 'Eat this (e.g., pį́:gyá 'food' IV/bas).'

(44) b. ę̀:-g̱ò̱ bé-dó:dé (this-inv [2sg/agt:inv/obj]-hold/.

imp) 'Hold this (e.g., á:dò̱ 'stick' II/inv).'

c. óy-ḏè mé-cáy (that-bas [(x/agt):3du/pat:sg/obj]-

ask/imp) 'Ask those two.'

d. óy-g̱ò̱ è-kį̀:nį́: (that-inv [3inv]-tall/pl) 'They

(e.g., tʰà̱lyóy 'boys' I/inv) are tall.'

3.15. Noun modification. Noun modification in Kio-
wa is accomplished in one of two ways, either by relativi-
zation (see 4.31) or by compounding a noun and stative
verb. Compounding will be discussed in this section.

As there is no class of adjectives distinct from
stative verbs, adjectival modification of a noun consists
of compounding a noun and stative verb, the resulting con-
struction being inflected like a noun; i.e., as basic or
inverse depending upon the number and class of its head.
A few examples of these freely created constructions are
given in (45).

(45) a. t'ò̱:+bôn (spoon+bent) 'bent spoon sg/du' (I)

t'ò̱:bô̱:dò̱ (inverse) 'bent spoons'

b. á:hį̀+pè: (cottonwood+dead) 'dead cottonwoods'(II)

á:hį̀pè:g̱ò̱ (inverse) '(one) dead cottonwood'

c. k'ò̱ál+sà: (dish+shatter) 'broken dishes' (II)

k'ò̱álsà:g̱ò̱ (inverse) '(one) broken dish'

d. k'yą́:hį̀+k'ò̱m (man+old) 'old man sg/du' (I)

k'yą́:hį́k'ò̱:bò̱ (inverse) 'old men'

When the four number-differentiated adjectival sta-
tives (see 3.314) occur in these nominal compounds, only
'small' does not maintain the singular vs. dual/plural
number distinction: -êl/-bîn 'big', -kyǫ́y/-kɨ́:nɨ́: 'tall,
long', -cé:/-cá:dó: 'short', and syɔ́n/-syân[19] 'small'
(syân only in compounds). Examples in (46) and (47) il-
lustrate 'small' and 'tall' with class I nouns, where the
inverse suffix occurs on plural nouns.

(46) a. mát^{h}ɔn+syân (girl+small) '(one or two) little
        girl(s)'

   b. mát^{h}ɔn+syạ̈:dɔ̀ (girl+small/inv) '(several) little
        girls'

(47) a. t^{h}àlì:+kyǫ́y (boy+tall/sg) '(one) tall boy'
   b. t^{h}àlì:+kɨ́:nɨ́: (boy+tall/du/pl) '(two) tall boys'
   c. t^{h}àlì:+kɨ́:nɨ́:gɔ̀ (boy+tall/inv) '(several) tall
        boys'

   With a class II head noun, as in (48), the singular
noun takes the inverse suffix.

(48) a. á:+kyǫ̀ymɔ̀ (pole+long/sg/inv) '(one) long pole'
   b. á:+kɨ̀:nì: (pole+long/du/pl) '(two or more) long
        poles'

   Nominal compounds with -êl[20]/-bîn 'big' are similar-
ly revealing of underlying number and noun class. For

class I nouns in particular, all three numbers (sg, du, pl) are unambiguously identified because of the interaction of inverse (plural) with bîn (du/pl).

(49) a. tʰàlì:+êl (boy+big/sg) '(one) big boy'

    b. tʰàlì:+bîn (boy+big/du/pl) '(two) big boys'

    c. tʰàlì:+bî̤:dɔ̀ (boy+big/du/pl/inv) '(several) big boys'

Invariant class II k'óp 'mountain' nicely illustrates the role these adjectival modifiers can play in revealing noun class membership. k'óp never occurs with the inverse suffix but the adjectival compound is inflected like an ordinary class II noun.

(50) a. k'óp+éttɔ̀ (mountain+big/sg/inv) '(one) big mountain; Mt. Scott'

    b. k'óp+bîn (mountain+big/du/pl) '(two or more) big mountains'

    3.16. Independent personal pronouns. There are only two personal pronouns, neither of which is distinguished for number or gender: nɔ́: 'first person' and ám 'second person'.

    The demonstratives ę́:dè/é:gɔ̀ and óydè/óygɔ̀ (see 3.14) are used as independent third person pronouns, óydè being more common for 'he, she, it'. There is also a reflexive/ reciprocal particle which functions as a pronoun in some

syntactic constructions: ɔ̰́:gɔ́ 'self, (one's) own'.

These independent pronouns are optional and uncommon. They function primarily as loci for locative post-positions (51a) and contrastive stress (51b). Occasionally they are used when a pronominal prefix leaves the referent ambiguous (51c), although non-linguistic context usually makes the referent clear. See 4.12 for more discussion of independent pronouns.

(51) a. hábé ḛ̀-cán-t'ɔ̀: ám-ḛ̀: nɔ̀ dá mèn-pḭ́:-sɔ́y (sometime
        [3du]-arrive-fut you-at and/diff must [2sg/agt:
        du/obj]-eat-seat/imp) 'If they come to your place
        sometime, you must feed them.'

    b. nɔ́: èm-tɔ̰́:tʰáy (I [1sg/agt:2sg/pat]-speak=with/
        pf) 'I'm the one who talked with you.'

    c. cḛ̀:gɔ̀ nɔ́: ḛ́nɔ̂:-àl-kɔ̀n (horse/inv I [3du/agt:(1,
        3sg/pat):inv/obj]-herd-bring/pf) 'They (du) drove
        the horses in for me (i.e., not him).'

3.17. Possession. Possession is indicated in two ways: a) by possessive affixes and/or b) by pronominal prefixes in which the possessor is signaled as a patient (see 3.243). Nouns may be grouped into three classes on the basis of the possessive affixes they take: a) body parts, b) kinship terms, and c) others. Body parts permit no possessive affixes; a possessor is indicated in the pronominal prefixes associated with the verb. Kinship

terms take the possessive affixes. Possession for all
other nouns is indicated by compounding the independent
pronouns. Table 9 shows the three possession types.

Table 9: Possession types

	Body parts	Kin terms	Others
Possessor			
1		nɔ́:-`	nɔ́:-`
2	(none)	á-´	ám-`
3		á-` -dè	

3.171. <u>Body parts</u>. Possessive affixes do not occur
with body parts. The possessor is indicated instead by a
patient prefix.[21] Sentences (52a-b) illustrate a first
person possessor with dual (eyes) and inverse (head) body
parts.

(52) a. tá:dè né-k^{h}óp (eye [(2,3sg/agt):<u>1sg/pat</u>:du/obj]-
      hurt) '<u>My</u> (two) eyes hurt.'

   b. ɔ́lt^{h}êm nɔ́-ʀk^{h}óp (head/inv [(2,3sg/agt):<u>1sg/pat</u>:
      inv/obj]-hurt) '<u>My</u> head hurts.'

Body parts are frequently incorporated in the verb,
in which case either intransitive (53a) or reflexive (53b)
prefixes are used.

(53) a. à-ɔ́lt^{h}ǫ́-k^{h}ɔ̀p-dɔ̀: ([1sg]-<u>head</u>-hurt-be) 'I have a
      headache.'

(53) b. bè-mɔ́n-pʰì1 ([2sg/refl]-hand-wipe/imp) 'Wash your

   hands.'

   3.172. Kinship terms. Possessive prefixes for kin-
ship terms are nɔ́:- 'first person', á-ˊ 'second person',
and á-ˋ 'third person'. Third person possessor also re-
quires the suffix -dé (∿-té, the choice of allomorph not
predictable), if the kin term is basic (i.e., sg/du). If ·
the kin term is inverse (i.e., pl), the final vowel of the
inverse suffix is lengthened; e.g., dóm 'father/son-in-
law', dǫ̀:bɔ́ (inverse) becomes á-dǫ̀:bɔ́: 'his/their fathers/
sons-in-law' with third person possessor.

   Note that whereas á-ˊ 'second person possessor' does
not lower subsequent tones, both first and third possessor
prefixes do. Like the independent pronouns, to which
these affixes are clearly related, the possessive prefixes
are not distinguished for number or gender. A few terms
are illustrated in (54).

(54) a. k'í: 'husband'   nɔ́:-k'ì: 'my husband'

                         á-k'í: 'your husband'

                         á-k'ì:-dè   'her husband'

   b. tʰá: 'wife'   nɔ́:-tʰà: 'my wife'

                         á-tʰá: 'your wife'

                         á-tʰà:-dè   'his wife'

   c. í: 'son'   á-í: 'your son'

                         á-ì:-tè   'his/her/their son'

(54) d. í:tʰá: 'daughter'   á-í:tʰá: 'your daughter'

                              á-ì:tʰà:-dè 'his/her daughter'

    e. tǫ́: 'opposite sex   á-tǫ̀:-tè 'his sister, her
           sibling'   brother'

    f. p'í: 'female's   á-p'í: 'your sister'
           sister'

                      á-p'ì:-tè 'her sister'

    g. pá:bí 'male's   á-pà:bí   'your brother'
           brother'

                      á-pà:bì-tè 'his brother'

    h. kóm[22] 'friend'   nó:-kòm   'my friend'

                      á-kóm   'your friend'

                      á-kòm-dè   'his/her friend'

Many kinship terms occur in three forms depending on their use a) to denote a relationship (referential (ref)), b) for address (vocative (voc)), and c) as a name substitute (name). The referential form is the one which is inflected for possession and like all class I nouns is inverse when plural, as in (55).

(55)
Basic (sg/du)	Inverse (pl)	
k'í:	k'yóy	'husband'
kóm	kǫ́:bɔ̀	'friend'
tʰá:	tʰê:	'wife'

The vocative and naming forms are basically substitutes for personal names in relationships where names are tabooed. For example, a woman addresses her grandson (ref: mó:gí 'female's grandson') by his given name, but

grandmothers are addressed by the vocative terms, never by name; e.g., t̪ʰą́: 'MoMo/voc (ref: t̪ʰą̀:kí) and t̪ʰà:lî: 'FaMo/voc' (ref: t̪ʰál).

The vocative and naming forms frequently differ substantially from the referential term. Vocatives are often distinguished by falling tone and/or the absence of the referential suffix, e.g., the grandmother terms above and pá:bí (ref), pà:bî: (voc) 'male's brother'. More often, however, the vocative is totally distinct from the referential, e.g., t'ê̞: (ref), sègî: (voc) 'MoBr' and í: (ref), bôl (voc) 'son'.

The vocative forms can be regarded as the stem on which the naming form is based. Occasionally they are identical, e.g., yátmà: (voc/name) 'sister-in-law'. When the two differ, the naming form is usually derived from the vocative by suffixing -dé or -(ó)y. In (56) and (57), compare the vocative forms (a) with naming forms (b).

(56) a. bôl, èm-ą́: (son/voc, [2sg]-come/imp) 'Son, come here.'

b. kʰí:dêl bóltè ∅-cán (yesterday son/name [3sg]-arrive/pf) 'Son came yesterday.'

(57) a. t̪ʰà:lî:, dɔ́-t̪ʰò̞gɔ̂y-hè̞:tèl (FaMo/voc, [(x/agt.): 1pl/pat:∅/obj]-old-story=tell/imp) 'Grandmother, tell us an old-time story.'

b. t̪ʰà:lyôy ∅-kʰóp-dɔ́: (FaMo/name [3sg]-hurt-be)

(57)   'Grandmother was sick.'

These naming suffixes also occur on personal names, particularly those of descriptive origin, as illustrated by the names of two famous Kiowa chiefs.

(58) sét-t'ą́y-dè   (bear-white-name)   'Satanta'

    sét-ą̀:gyà-y   (bear-sitting-name)   'Satank'

The terms for 'mother' and 'father' are complicated by the use of different referential forms for first and third vs. second person possessor. 'Mother' (59) is represented by two roots whereas 'father' (60) is a single root modified for second person possessor. First person nɔ́:- is uncommon (but possible) with the referential terms, the naming form normally being used for any reference to one's own mother or father.

(59)   'mother'   Ref: cɔ́:   (1, 3 possessor)

                            kɔ̀:kɔ́   (2 possessor)

                    Voc: kɔ̂:

                    Name: kɔ̀:kɔ̂y

(60)   'father'   Ref: tɔ́l   (1, 3 possessor)

                            tɔ̀:tɔ́   (2 possessor)

                    Voc: tɔ̂:

                    Name: tɔ̀:tɔ̂y

The possessor in kin relationships is ordinarily indicated in the pronominal prefixes when it is the relationship that is asserted. For example, (61a) asserts the sister-in-law relationship for a second singular possessor/patient whereas (61b) merely identifies the individuals.

(61) a. tʰá̧:dò gó-dó: (sister=in=law/inv [(x/agt):2sg/ pat:ĩnv/obj]-be) 'They are sisters-in-law to you.'

   b. á-tʰá̧:dò è-dó: (your-sister=in=law/inv [3inv]-be) 'They are your sisters-in-law.'

Assertion of a kin relationship can also be indicated by an incorporated kin term, usually with the stative position verb k'ó: 'be lying'.

(62) a. óydè ȩ́-kóm-k'ó: (that/bas [(2,3sg/agt):1sg/pat: sg/obj]-friend-be=lying/sg/du) 'He/she is my friend.'

   b. hón ȩ́-tó̧:-có:-gô: (neg [(2,3sg/agt):1sg/pat:sg/ obj]-sibling-be=lying/sg/du-neg) 'He/she isn't my brother/sister.'

3.173. Other nouns. Possessive constructions with other nouns consist of compounds in which the possessor is indicated by the personal pronouns nó: 'first' and ám 'second' (see 3.16) or the demonstratives (3.14) for third person possessor. All three lower the tone of the sub-

sequent morphemes of the compound.

(63) a. cê̂: 'horse'   nɔ́:+cê̂:   'my horse'

ám+cê̂:   'your horse'

óydè+cê̂:   'his/her/their horse'

   b. tó: 'house'   nɔ́:+tò: 'my house'

ám+tò: 'your house'

óydè+tò: 'his/her/their house'

The possessor may or may not be signaled in the pro-nominal prefixes depending upon the saliency of the owner relationship. In (64a) ownership is asserted; in (64b) it is not.

(64) a. nɔ́:+bàò: né-dɔ́: (my+cat [(2,3sg/agt):1sg/pat:du/ obj]-be) 'They (du) are <u>my</u> cats.'

   b. ám+hòldà gyàt-dóp (your+dress [1sg/agt:pl/obj]-put=on/pf) 'I put on your dress.'

If the possessor is referred to by a full noun, in-cluding possessed kin terms, a compound construction of the form possessor+possessed is also used (65a-b). When the possessor noun is a name, however, it must be followed by the possessive suffix <u>-té</u> (65c-d).

(65) a. á-í:+tò:-kyà (your-son+house-at) 'at your son's house'

   b. nɔ́:-tɔ̀:+cègùn ∅-hôl-dɔ̀: (my-brother+dog [3sg]-

(65)   sick-be) 'My brother's dog is sick.'

    c. yí:sɔ̀m-<u>té</u>+tò:-kyà (Parker-<u>poss</u>+house-at) 'at

    Parker's house'

    d. Laurel-<u>té</u>+cègùn á-dɔ́: (Laurel-<u>poss</u>+dog [(2,3sg/

    agt):3sg/pat:sg/obj]-be) 'It is Laurel's dog.'

    3.18. <u>Derivational affixes.</u> Nouns are derived from
other word classes by a) the deverbal suffix <u>-gyá</u> and
b) by <u>-dé</u> 'basic' (paired with <u>-gɔ́</u> 'inverse'), which may
be suffixed to a variety of non-verbal stems.

    3.181. <u>Deverbal -gyá.</u> The suffix <u>-gyá</u> 'deverbal
nominal' is attached to verb stems to derive class IV
nouns whose basic meaning is 'the act of verb-ing'. Al-
though this derivational process is productive, many such
derived nouns are likely old and often denote the product
of the activity. Several stems to which <u>-gyá</u> is affixed
are not independent inflected verbs, e.g., 'work' and
'sing, drum', but occur incorporated with an inflected
auxiliary (see 3.317).

(66) tǫ́:-gyà   'talking'   (tǫ́:- 'speak, talk')

    sɔ́:té-gyà   'work'   (sɔ́:té- 'work')

    ɔ́:-gyà   'game'   (ɔ́: 'gamble, play games')

    hę̂:tè-gyà   'story'   (hę̂:tèl 'tell stories')

    dɔ́:-gyà   'music, song' (dɔ́:- 'sing, drum')

    dólbé-gyà   'ornament' (dólbé 'be vain')

    t^hɔ́:-gyá   'saddle'   (t^hɔ́:- 'sit/seat')

(66) kʰɔ̰́:-gyà   'name'   (kʰɔ̰́:   'be named, called')

pḭ́:-gyá   'food'   (pḭ́:-   'eating')

    3.182.   <u>Derivational -dé/-gɔ́</u>.   The pair of nominal suffixes <u>-dé/-gɔ́</u> (basic/inverse)[23] may be affixed to any non-verbal stem to derive a noun.   This pair of suffixes differs from deverbal <u>-gyá</u> (3.181 above) in deriving individualized nouns (see 3.12 for more discussion).   Two types of stems and one clausal construction are most commonly derived with <u>-dé/-gɔ́</u>: a) interrogative/indefinite hɔ́n-, b) locative words or phrases, and c) relative clauses.

    The suffixing of nominal <u>-dé/-gɔ́</u> to the interrogative/indefinite root <u>hɔ́n-</u> (see also 3.41) results in the pronouns listed in (67).   The choice of suffix depends on the number and class of the antecedent noun.   When the number of the antecedent is unknown, as it might be in a question, the basic form <u>-dé</u> is used.

(67) a.   <u>Indefinite</u>

      hɔ́n-dé   'someone, something, some kind of'

      hɔ́n-gɔ́   (inverse)

   b.   <u>Interrogative</u>

      hɔ̂n-dé   'who?, what?, what kind of?'

      hɔ̂n-gɔ́   (inverse)

    Several locative roots and phrases have been recorded with nominal <u>-dé/-gɔ́</u> (68).

(68) a. tʰáy-dè/tʰáy-gòp 'lid, cover' (<tʰáy 'atop')

    b. tôy-dè 'household goods, furniture (<tô-y 'in the house')

    c. gûy-tè/gûy-kɔ̀ 'other(s), different one(s), outsider(s)' (<gú-y 'outside')

gûytè 'other, outsider' is illustrated in (69) in basic (a) and inverse (b) forms.

(69) a. gûy-tè Ø-t'ɔ́: (other-bas [3sg]-stay) 'There is someone else (an outsider) here.'

    b. pį́:gyá cégùn égî̱:-ɔ̀: nɔ̀ gûy-kɔ̀ égî̱:-hɔ̀:gyà (food dog [1pl/agt:(1,3sg/pat):pl/obj]-give/pf and/diff other-inv [3inv/agt:(1,3sg/pat):pl/obj]-get/pf) 'We gave food to the dog and some others (i.e., other dogs) took it away from him.'

As syntactic affixes -dé and -gɔ́ occur suffixed to the last word of a relative clause (usually the verb) and agree with the number (basic vs. inverse) of the head noun. See 4.31 for more discussion.

(70) a. óy-gɔ̀ k'yá̱:hî̱: Ø-dé:-dè k'yátáy-k'ì: Ø-dɔ́: (there-adv man [3sg]-stand-nom/bas chief-male [3sg]-be) 'The man (who is) standing there is a chief.'

    b. óy-gɔ̀ k'yá̱:hyóp è-dé:-gɔ̀ k'yátây è-dɔ́: (there-adv man/inv [3inv]-stand-nom/inv chief/inv [3inv]-be)

(70)   'The men (who are) standing there are chiefs.'

3.2. Pronominal prefixes.

3.20. Introduction. The pronominal prefixes,

obligatory first element in the verb complex (see 3.3),

are the key to understanding the semantics of the Kiowa

predication. Whereas pronominal prefixes in many lan-

guages show agreement with nominals labeled subject and

object, reflecting thus both syntactic and semantic cate-

gories, the pronominal prefixes in Kiowa represent strict-

ly semantic categories.

Merrifield (1959a:168) captured the essence of the

system when he described the prefixes as "complex, tightly

knit clusters of a limited number of morphemes which com-

bine in a very intricate but systematic way." The cate-

gories of role, person, and number are interwoven in such

a way that it is impossible to state simple correlations

between any one category and the constituent morphemes.

Although Merrifield offered many insights into the organi-

zation of the prefix system, in addition to providing a

careful accounting of the data (no small task in itself),

the limitations of the tagmemic model and some misinter-

pretations of number categories resulted in an analysis

that left many matters obscure.

The analysis presented here is basically a genera-

tive approach (a relatively non-abstract one) and should

be considered close to an internal reconstruction of the

prefix system. Synchronically, the prefixes function as units, but as Merrifield first pointed out, they can be analyzed as a fairly small set of distinct morphemes.

3.21. <u>Roles and referents.</u> The pronominal prefixes make explicit certain features of the nominals associated with the verb: a) the semantic <u>role</u>, agent or patient, of the primary animate participant; b) the <u>person</u> of the participant filling that role; and c) the <u>number</u> of that person. Finally, if there is a third person object, then information about it is also included: d) the number of the object.

The two morphologically significant animate roles in Kiowa are agent and patient. In a given prefix, only one of these roles, either agent or patient, is explicitly signaled and will be referred to as the <u>primary</u> participant. To generalize: if the only animate participant is an agent, then the agent is explicitly signaled; if there is both an agent and a patient, then the patient is primary and thus explicitly signaled, except when the patient is first or third singular and the agent is non-singular, in which case the agent is explicit.

Although the underlying structure and phonological rules that derive the surface forms are the same for all prefixes, distributional variants of some of the morphemes are best described with reference to four distinct paradigms: 1) <u>intransitive</u>, involving a single participant,

either animate or inanimate, e.g., à-bánmà ([1sg]-go/impf)
'I'm going'; 2) agent:object, involving two participants,
an agent, which is obligatorily animate, and an object,
e.g., gyà-t^{h}ɔ́n ([1sg/agt:sg/obj]-find/pf) 'I found it';
3) patient:object, involving a minimum of two explicit
participants, one non-agentive (the patient), a third per-
son object, and an implied agent, e.g., nén-ɔ̜́: ([(1sg/agt):
2sg/pat:du/obj]-give/pf) 'I gave them (du) to you'; and
4) mixed:object, involving an explicit non-singular agent,
an implied singular patient (either first or third), and
an object, e.g., bágî:-ɔ̜̀: ([2pl/agt:(1,3sg/pat):pl/obj]-
give/pf) 'you (pl) gave them (pl) to me/him'.

3.211. Agent. Fillmore's (1968:24) characteriza-
tion of an agent as "the typically animate perceived in-
stigator of the action identified by the verb" is appro-
priate for Kiowa with the restriction that an agent be
animate. Whereas it is possible in English and other lan-
guages to use a transitive expression with an inanimate
agent, e.g., 'the ice broke it' or 'the wind broke it',
such constructions are not possible in Kiowa and must be
rendered instead by coordinate clauses, as in (71a), or
by incorporation in the verb of the inanimate cause, as in
(71b).

(71) a. té̜:gyà ∅-p^{h}í: nɔ̀ ɔ́yhɔ̀dè è-t^{h}ém-gyá   (ice [3sg]-
        heavy and/diff that [3inv]-break-detr/pf) 'The

(71)   ice is/was heavy and that's why it broke.'

     But not *tẹ́:gyà é-t^{h}êm (ice [3sg/agt:inv/obj]-

     break/pf) 'the ice broke it'

  b. è-góm-t^{h}ém-gyá ([3inv]-wind-break-detr/pf) 'It

     wind-broke/it got broken by the wind.'

     But not *gómgyà é-t^{h}êm (wind [3sg/agt:inv/obj]-

     break/pf) 'the wind broke it'

An agent must also control the activity described by a transitive verb. If a transitive event occurs accidentally or involuntarily, the participant who would normally control the event (i.e., the agent) must be specified as a patient with accompanying detransitive morphology on the verb. The category of control is discussed more fully in 3.27.

3.212. <u>Patient.</u> The patient category encompasses several non-agentive animate roles: dative, beneficiary, possessor, and experiencer. As described above and in 3.27, the patient category is also used for a non-controling agent.

3.213. <u>Animate categories.</u> The person and number categories that are morphologically distinguished in the prefixes are summarized in Table 10.

Table 10: Person/number categories

1sg	2sg	3sg
	2du	3du
1du/pl	2pl	3pl (human)
		3inv

When the agent is primary (i.e., explicitly sig-
naled), the first person dual/plural (exclusive) prefixes
are identical to the third inverse prefixes. Since these
prefixes are morphologically third inverse, it appears
that the first person non-singular agent category has col-
lapsed with third inverse. However, when the patient is
primary, first non-singular and third inverse are morpho-
logically distinct.

First non-singular inclusive is distinguished from
exclusive for agents only and is indicated by the second
plural prefixes.

The category third plural (3pl) is restricted to hu-
mans and contrasts with plural inanimate (pl) (see
Table 11). Because nouns referring to humans belong to
class I where plural is categorized as inverse (see 3.122),
3pl overlaps in reference with 3inv. A speaker has the
choice of selecting either set of prefixes to refer to a
human plural agent. The general tendency is to reserve
3pl for reference to adult members of one's own tribe.
See 3.122 for examples. Third plural (human) patient

prefixes, on the other hand, are identical to agent:object prefixes;[24] in other words, there are no distinct 3pl patient prefixes.

3.214. Object. The object category is strictly third person. Objects are specified for number only: singular (sg), dual (du), (inanimate) plural (pl), and inverse (inv).

If a predication includes a third person animate patient, an agent, but no object, the third person patient is encoded by the object morphemes rather than by the patient morphemes, as in (72a-b). (72c-d) illustrate the encoding of a non-third patient by an explicit patient prefix.

(72) a. nèn-há:dɔ́ ([1sg/agt:du/obj]-shout/pf) 'I shouted
        to/for them (du).

    b. hɔ́ à-tét (Q [2sg/agt:sg/obj]-tell/pf) 'Did you
        tell him?'

    c. hɔ́ gɔ́-tét (Q [(x/agt):2sg/pat:∅/obj]-tell/pf)
        'Did he tell you?'

    d. ę̌-têl ([(2,3sg/agt):1sg/pat:∅/obj]-tell/imp)
        'Tell me.'

3.22. Prefix notation. The following abbreviatory conventions have been used to represent the information encoded in the prefixes. The glosses list participants in the order agent:patient:object.

a) The entire prefix gloss is enclosed in brackets [   ].

b) The participants are separated by a colon, e.g.,
[agent:object].

c) A slash separates the person number designation from
its role, e.g., [1sg/agt:du/obj].

d) Parentheses enclose the implied animate participant,
e.g., the agent in the patient:object prefixes,
[(x/agt):2sg/pat:sg/obj].

e) A comma separates persons signaled by the same pre-
fix, e.g., 2,3sg. Whenever two persons are so
merged, one of them is 3sg.

An example of each prefix type is listed in (73) to
illustrate the conventions. Note that when the low tone
indicating agent as primary participant falls on the verb
rather than on the prefix (see 3.235 for discussion), it
is written immediately after the prefix.

(73) a. <u>intransitive</u>   [2du]   mà

  b. <u>agent:object</u>   [2du/agt:pl/obj]   mán`

  c. <u>patient:object</u>   [(x/agt):2du/pat:pl/obj]   mán

  d. <u>mixed:object</u>   [2du/agt:(1,3sg/pat):pl/obj]   mánî:

The prefixes are listed by paradigms in Tables 11
through 14 (below).

Table 11: Intransitive prefixes

Person / Number	1	2	3
sg	à	èm	∅
du		mà	ę̀
pl	è	bà	á (human) gyà (inan)
inv			è

Table 12: Agent:object prefixes

Agent / Object number	1sg	2sg	2du	2pl	3sg	3du	3pl	3inv
sg	gyà	à	má˅	bá˅	∅	ę́˅	á˅	é˅
du	nèn	mèn	mén	bèt	ę̀	én	èt	èt
pl	gyàt	bàt	mán˅	bát˅	gyà	én˅	gyá˅	ét˅
inv	dé	bé	mén˅	bét	é	én	èt	ét
3pl or reflex.	dè	bè	mé	bé	èm	én	ém	ét

Note: 1du/pl agent = 3inv agent (Tables 12 and 14)

Table 13: Patient:object prefixes

Patient	1sg	2,3sg	3sg	1pl	2sg	2du	2pl	3du	3inv
(implied agent)	2,3sg	1sg	2,3sg	x	x	x	x	x	x
Object number									
∅	ę́	èm	(a)	dɔ́	gɔ̀	mɔ́	bɔ́	(b)	(c)
sg	ę́	gyá	á	dɔ́	gɔ́	mɔ́	bɔ́	mé	bé
du	né	nén	én	dét	dét	mén	bét	mén	bét
pl	yą́	yán	án	gyát	gyát	mán	bát	mén	bét
inv	nɔ́	gɔ́	ɔ́	dɔ́t	gɔ́t	mɔ́n	bɔ́t	mén	bét

Note: (a) = agent:sg/obj; (b) = agent:du/obj; (c) = agent: inv/obj

Table 14: Mixed:object prefixes

Agent	2du	2pl	3du	3inv	3pl
(implied patient)	1,3sg				
Object number sg	mâ:	bâ:	ę̂:	ê:	â:
du	ménê:	bédê:	ę́nê:	édê:	dê:
pl	mánî:	bágî:	ę́nî:	égî:	gyâ:
inv	mɔ́nɔ̂:	bɔ́dɔ̂:	ę́nɔ̂:	édɔ̂:	dɔ̂:

3.23. Underline: Prefix structure. The underlying structure of the prefixes consists of four positions. They are filled by morphemes encoding, from left to right, 1) person, 2) person number, 3) object, and 4) object number. In fact, positions three and four are both reserved for morphemes that indicate object number, since object is a third person category. Because the morphemes filling each position are of the same segmental type, i.e., consonant or vowel, the underlying prefix structure can be schematized as shown in (74). Animate role is specified by tone: high when the primary participant is a patient and low (usually) when it is an agent (see 3.235).

(74) Underlying prefix structure

1		2		3		4
Person	-	Person number	-	Object	-	Object number
C		V		V		C

3.231. Underline: Person. Morphemes indicating the person of the primary animate participant occur in first prefix position. The patient morphemes exhibit number distinctions lacking in the agent morphemes.

Table 15: Underlying person morphemes

		Agent	Patient
Person	1	d-	d-

Table 15 (cont.)

		Agent	Patient	
Person	2	b-	g- b-	(sg) (non-sg)
	3	∅	b- ∅	(non-sg) (sg)

3.232. <u>Person number.</u> Morphemes occurring in second prefix position indicate the number of the agent or patient. Because Vowel Truncation (see 2.72) deletes the first of two adjacent vowels, these underlying person number morphemes (other than <u>e</u> 'dual/inverse', which is the one morphological exception to Vowel Truncation) appear in the surface forms of prefixes only when there is a third singular (<u>∅</u>) object or no object at all (i.e., intransitives). 'Dual' nasality (<u>N</u>, indicated in underlying forms with a nasal hook) is realized as nasalization of the entire prefix (see 2.75). The justification for underlying <u>ia</u> is discussed in 2.4.

Table 16: Underlying person number morphemes

	Agent		Patient	
'dual'	N		N	'dual'
'3 du/inv' 'reflexive'	e		e	'3 du/inv'
'3 sg'	∅		ia	'sg (sg agt implied)'
(all others)	ia		ɔ	(all others)

The combined person and person number morphemes are listed in Table 17 for convenient reference. The agent combinations occur in the intransitive and mixed:object paradigms as well as the agent:object paradigm. Whether these bimorphemic units ever existed independently is open to speculation.

Table 17: Underlying person - person number

	Agent	Patient	
1sg	d-ia	d-ia	
2sg	b-ia	g-ia	(sg agt implied)
3sg	∅-∅	∅-ia	
2sg	- - -	g-ɔ	
2du	b-ia̧	b-ɔ̧	
3du	∅-ȩ	b-ȩ	
1pl	- - -	d-ɔ	(x agt implied)
2pl	b-ia	b-ɔ	
3pl	∅-ia	- - -	
3inv	∅-e	b-ɔ	

In part, the patient number morpheme is determined by the number of the implied agent: _ia_ when patient and implied agent are both singular, _e_ or _ɔ_ when the implied agent is unspecified (for number or person). The sentences in (75) illustrate what is meant by an 'implied' agent; in (a) an agent is semantically present in addition to the explicitly signaled 1sg patient (underlying d-iá-ia

→yá), whereas in (b) there is no agent.

(75) a. kût yá̰-ɔ̰̂: (book [(2,3sg/agt):1sg/pat:pl/obj]-
give/pf) 'You/he gave me some books.'

b. hóldà yá̰-sá:-dɔ̀: (dress [(2,3sg/agt):1sg/pat:pl/
obj]-tear-be) 'My dress is torn.'

Although not explicitly signaled, the person of the
implied singular agent can be predicted from the person of
the patient, which is unambiguously indicated by the ini-
tial morpheme. For example, a first person singular pa-
tient prefix always implies a second or third singular
agent, as indicated by the gloss in (75a) above. The sin-
gular patient/implied singular agent combinations are
shown in (76).

(76) | Person-number | Sg patient | Implied sg agent |
| --- | --- | --- |
| d-ia | 1 | 2 or 3 |
| g-ia | 2 or 3 | 1 |
| ∅-ia | 3 | 2 or 3 |

The remaining patient number morphemes imply an un-
specified agent (indicated by 'x' in the glosses), i.e.,
any number combination other than reflexive/reciprocal.
Thus, in (77a) the prefix is ambiguous as to the identity
of the agent; in (77b), as in (75b), there is no agent.

(77) a. cḛ̂: bɔ́-ɔ̰̂: (horse [(x/agt):2pl/pat:sg/obj]-give/pf)
'I/we/he/they gave you (pl) a horse.'

(77) b. cȩ̂: bɔ́-dɔ́: (horse [(x/agt):2pl/pat:sg/obj]-be)
'The horse is yours (pl).'

Of the patient person/number categories, only 2sg
has both an implied singular agent form (g-ia) and an im-
plied unspecified agent form (g-ɔ), illustrated in (78a-
78b). If a predication involves a 1sg or 3sg patient and
a non-singular agent, the mixed:object prefixes (c) are
used.

(78) a. cȩ̂: gyá-ɔ̧́: (horse [(1sg/agt):2,3sg/pat:sg/obj]-
give/pf) 'I gave you/him a horse.'
   b. cȩ̂: gɔ́-ɔ̧́: (horse [(x/agt):2sg/pat:sg/obj]-give/
   pf) 'We/he/they gave you a horse.'
   c. cȩ̂: ȩ̂:-ɔ̧̀: (horse [3du/agt:(1,3sg/pat):sg/obj]-
   give/pf) 'They (du) gave me/him a horse.'

3.233. Object. The number of a third person ob-
ject, which is encoded in the third prefix position, is
indicated by the morphemes shown in Table 18.

Table 18: Underlying object morphemes

∅   'singular'

ȩ   'dual'

ia   'plural'

e   ⎰'inverse (agent:object)
ɔ   ⎱'inverse (patient:object, mixed:
            object)

It is the object morpheme that normally occurs in
the surface form of the prefixes, the person number morpheme having been deleted by Vowel Truncation ($V_1 V_2 \rightarrow V_2$).
Recall, however, that e 'dual/inverse' is the exception
and surfaces whenever it occurs in the underlying form.
In the derivations shown in (79), ia 'plural object' surfaces in (a) but not in (b) because of the presence of e.

(79) a. '(x/agt):2sg/pat:pl/obj'   b. '3du/agt:pl/obj'

g-ɔ́-ia-d	(underlying)	∅-ę́-ia-d`
giád	(V truncation)	ę́d`
gyád	(Glide formation)	---
---	(Nasalization)	ę́n`
gyát	(Final devoicing)	---
gyát	(surface)	én`

The nasal component of ę 'dual object' does not surface when the primary participant is plural or inverse.
For instance, in (80a), with a singular agent, the surface
form is nasalized; in (80b) the plural agent cancels the
nasal feature.

(80) a. '2sg/agt:du/obj'   b. '2pl/agt:du/obj'

b-ià-ę-d	(underlying)	b-ià-ę-d
bę̀d	(V truncation)	bèd
mę̀n	(Nasalization)	---
---	(Final devoicing)	bèt
mę̀n	(surface)	bèt

This blocking of object nasality is in contrast to
the surface occurrence of the nasal morpheme for person num-
ber even if the person number vowel has been truncated, as
in (81).

(81)   '2du/agt:inv/obj'

    b-iá-e-d`   (underlying)
      ę̀

    bę́d`   (V truncation)
     ę̀

    mę́n`   (Nasalization)
     ę̀

    <u>mén`</u>   (surface)

    3.234. <u>Object number</u>. The fourth prefix position
is filled by a single morpheme, <u>-d</u> 'non-singular object',
which occurs only with dual, plural, and inverse objects.
However, it is lacking in the following prefixes, where
it would be predicted to occur on the basis of object
number:

    a) singular agent:inverse object

    b) implied singular agent:inverse object

    c) third singular agent:dual object

    d) first singular patient:all objects.

    Several prefixes involving a third person intransi-
tive or agentive participant (i.e., in the intransitive,
agent:object, and mixed:object paradigms) and a plural ob-
ject appear to lack <u>-d</u> 'non-singular object' while exhib-
iting the unexpected initial stops /d/ or /g/. These pre-

fixes can be regarded as having the underlying morphemes outlined in the preceding sections, i.e., ∅ 'third person agent', ia 'plural object', and -d 'non-singular object'. As illustrated in (82), they have apparently metathesized the VC sequence that results from Vowel Truncation to CV.

(82) a. '3sg/agt:pl/obj'   b. '3pl/agt:pl/obj'

    ∅-∅̀-ia-d   (underlying)   ∅-iá-ia-dˋ

    ià d   (V truncation)   iá dˋ

    dià   (Metathesis)   diáˋ

    già   (D-V switch)   giáˋ

    gyà   (Glide formation)   gyáˋ

    gyà   (surface)   gyáˋ

    3.235. Role. As presented briefly in 3.23, tone is the most salient realization of primary animate role. Low tone (L) indicates an agent, which includes the intransitive and mixed:object prefixes as well as the agent:object prefixes, and high tone (H) indicates a patient.

    The patient:object paradigm is most regular in the occurrence of H on the prefix.

    The intransitive paradigm has L on all but 3pl á-, which may have H to avoid homophony with 1sg à-. The question of homophony is more fully discussed in 3.24.

    In the agent:object paradigm, the L indicating a primary agent may fall either on the prefix or on the following verb. When the object is singular or plural, the L

falls on the prefix if the agent is singular but on the
verb if the agent is non-singular. For example, the L
falls on the prefix in (83a) but on the verb in (83b).

(83) a. hɔ́ bàt-hɔ́:gyà (Q [2sg/agt:pl/obj]-get/pf) 'Did
       you (sg) get them?'

   b. hɔ́ bát-hɔ̀:gyà (Q [2pl/agt:pl/obj]-get/pf) 'Did
      you (pl) get them?'

When the object is dual, L falls on the prefix re-
gardless of the number of the agent. Second and third du-
al agent prefixes are exceptions in having H. When the
object is inverse, the tone is an unexplained H, except
for mén̩ '2du:inv' and èt '3pl:inv'.

Tone on the reflexive prefixes, a subclass of the
agent:object paradigm (see Table 12 and 3.2622), is dis-
tributed with respect to agent number, i.e., L if the
agent is singular but H if the agent is non-singular.

3.236. <u>Non-dual nasalization.</u> The category 'dual',
as we have seen, is signaled by nasalization. However,
not all nasalized prefixes indicate a dual participant.
There appears to be no synchronic explanation for this
non-dual nasalization, but it is worth noting that cases
(c)-(e) are irregular in having final /m/:[25]

   a) 1sg/pat:(all objects)

   b) 2sg and 3sg/pat:pl/obj

   c) 1sg/agt:2sg/pat, èm

d) 2sg intransitive, èm

e) 3sg and 3pl reflexive, èm and ém,

    3.237. <u>Mixed:object prefixes.</u> The mixed:object
prefixes (Table 14 in 3.22) combine features of both the
agent:object and patient:object paradigms. Person and
person number morphemes are those of the agent series (see
3.231-2) while object morphemes are those of the patient
series (see 3.233-4). The striking feature of this para-
digm is the copying of the object morpheme after final
<u>-d</u> 'non-singular object' and falling tone on the final
vowel. The example in (84) illustrates agent morphemes
for person and person number (<u>∅-e</u>) but a patient object
morpheme (<u>ɔ</u>).

(84) '3inv/agt:(1,3sg/pat):inv/obj'

    ∅-é-ɔ-d-ɔ̂:   (underlying)

    édɔ̂:   (V truncation)

    <u>édɔ̂:</u>   (surface)

    Tone on the mixed:object prefixes is likewise a com-
bination of agent and patient features. Both H and L oc-
cur on the prefix, L as a component of the very salient
falling tone (F) of this paradigm.

    The vowel which carries the F is long. Although
vowel length is distinctive in Kiowa, long vowels are ab-
sent from the prefix system except when accompanied by F.

One might propose that the object morpheme copied in final
position is also lengthened as a marker of this particular
paradigm, but a more likely explanation is that vowel
lengthening in these prefixes is a non-distinctive adjust-
ment to maintain the syllable structure required for fall-
ing tone, i.e., a long vowel or vowel plus resonant (see
2.6 for discussion). The latter alternative is supported
by the singular object forms, e.g., bâ: (2pl/agt); they
have a long vowel but it is the person number morpheme,
not the (zero) object morpheme.

The metathesis rule, discussed in 3.234, and Vowel
Truncation explain the unexpected initial /d/ and /g/ for
a 3pl agent (underlying ∅-ia but *at never occurring), as
illustrated in the derivations in (85). Interestingly,
the dual object prefix (dê:) has also undergone metathesis,
although the sequence et is not prohibited.

(85) a.'3pl/agt:(pat):pl/obj'   b. '3pl/agt:(pat):inv/obj'

∅-iá-ia-d-iâ:	(underlying)	∅-iá-ɔ-d-ɔ̂:
iádiâ:	(V truncation)	iádɔ̂:
diáiâ:	(Metathesis)	diáɔ̂:
diâ:	(V truncation)	dɔ̂:
giâ:	(D-V switch)	---
gyâ:	(Glide form.)	---
gyâ:	(surface)	dɔ̂:

3.238. <u>Phonological derivation.</u> The phonological
rules affecting the pronominal prefixes, discussed in de-
tail in section 2.7, are listed here for convenience.

a) Vowel truncation (2.72)

b) Dental-velar switch (2.73)

c) Glide formation/Monophthongization (2.74)

d) Glide deletion (2.74)

e) Nasalization (2.75)

f) Final devoicing (2.771)

Several morphological exceptions have also been dis-
cussed: metathesis (3.234 and 3.237), the dominance of <u>e</u>
'3du/inv' in Vowel Truncation (3.232-3), and the blocking
of dual object nasality when the primary participant is
plural or inverse (3.233).

One additional minor rule appears to apply only
within the prefix system, the raising of <u>ia</u> to /e/ when
nasal, either preceding /b/ or in final position.

$$(86) \quad \text{ia} \quad \rightarrow \quad \text{e} \ / \begin{bmatrix} \underline{} \\ \text{- long} \\ \text{+ nasal} \end{bmatrix}(\text{b})$$

It affects only two prefixes: ę̂ (<<u>(d)-iá-∅</u>) '(2,3sg/
agt):1sg/pat:sg/obj' and èm (<<u>ià-b</u>) '2sg intransitive'.
These two prefixes are exceptional for other reasons, so
the vowel-raising rule may in fact not represent any sort
of general phonological process.[26]

3.24. <u>Homophony.</u> The reader familiar with Harring-
ton's list of prefixes at the end of the <u>Vocabulary</u> (1928:
237-251)[27] has no doubt remarked on the overwhelming num-
ber of apparently homophonous prefixes. Harrington's
arrangement of the prefixes and his presumably incomplete
analysis of their structure leads to a false impression of
the number of identical prefixes. Nevertheless, the de-
gree of homophony in the prefix system, as in much of the
morphology of Kiowa, is rather high.

In Table 19 (following section 2.35), prefixes that
are not unique are marked with an asterisk. Several of
the homophonous pairs are identical as a result of phono-
logical derivation, as illustrated in (87) and (88).

(87) '(x/agt):2sg/pat:pl/obj' '(x/agt):1pl/pat:pl/obj'

g-ɔ́-ia-d	(underlying)	d-ɔ́-ia-d
giád	(V truncation)	diád
---	(D-V switch)	giád
gyád	(Glide formation)	gyád
gyát	(Final devoicing)	gyát
<u>gyát</u>	(surface)	<u>gyát</u>

(88) '1sg/agt:sg/obj'   '3sg/agt:pl/obj'

d-ià-ø	(underlying	ø-ø̀-ia-d
---	(Metathesis	dià
già	(D-V switch)	già
gyà	(Glide formation)	gyà
<u>gyà</u>	(surface)	<u>gyà</u>

Most other cases of homophony result from the dominance of e '3 du/inv' in the operation of Vowel Truncation, which eliminates the object morphemes from the surface form of the prefix. For example, 3du and 3inv
patients each have identical forms for dual, plural, and
inverse object, mén and bét respectively.

One might expect that the effects of homophony would
be mitigated across paradigms where different verb classes
would permit only one of several interpretations for the
prefix. Homophony within the same paradigm might be expected to prove more troublesome. In fact, homophonous
prefixes in the same paradigm tend to cluster in the nonsingular third person categories, which in general exhibit
fewer distinctions than first or second person.

Interestingly, homophony that would be predicted to
arise on the basis of underlying morphemes for first singular patient has in fact not arisen, apparently due to
several exceptional strategies, among them nasalization of
the prefix in the absence of dual (see 3.236) and the lack
of -d 'non-singular object' for dual and plural objects.

3.25. History. The historical development of verb
agreement prefixes has been traced from independent pronouns or demonstratives in several language families. The
analysis presented here, in which fused prefixes have been
decomposed into role, person, and number morphemes, is
suggestive of a similar development, although there is no

clear evidence that such elements existed independently in Kiowa, or in the Tanoan languages for that matter. The Tanoan verbal prefixes appear to be fused in just the way that the Kiowa prefixes are. We merely note the obvious resemblances between the independent pronouns nɔ́: 'first person' and ám 'second person' (see 3.16 for discussion) and certain of the prefixes.

There is, however, one interesting correlation between number marking in nouns and object morphemes in the verbal prefixes. A nominal absolutive suffix **-gV́ can be reconstructed internally in which one of three vowels indicates the number of the noun stem (see 3.134): **e 'dual', **ia 'plural', and **ɔ 'inverse'. These same vowels comprise the set of object morphemes occurring in third prefix position (see 3.233).

A second point of some historical and typological interest is the morphological relationship between the intransitive and agent:object prefixes. In contrast to the patient:object paradigm, they share the following features:

a) low tone

b) person and person number morphemes

c) the collapse of 1pl with 3inv.

The relationship is most obvious when the intransitive prefixes are compared with the agent:sg/obj (sg/obj= ∅) prefixes.

(89)   Intransitive   Agent:sg/obj

    1sg   à   gyà

    1pl   (= 3inv)   (= 3inv)

    2sg   èm   à

    2du   mà   máˋ

    2pl   bà   báˋ

    3sg   ∅   ∅

    3du   è̜   é̜ˋ

    3pl   á   áˋ

    3inv   è   éˋ

It is difficult to say whether Kiowa is a more erga-
tive or more accusative language on the basis of the usual
tests, e.g., nominal case marking, because such overt mor-
phology is lacking. That the intransitive and agentive
prefixes share several features, however, suggests very
strongly that Kiowa is an accusative language, which
treats actors/subjects of intransitives and agents/sub-
jects of transitives (S and A respectively in Dixon's
(1979) terminology) in the same way.

A complete list of the prefixes, organized by person
and giving both underlying and surface forms, can be found
immediately following this section in Table 19. Prefixes
preceded by the symbol # are lacking some constituent in
the surface form that would be predicted from the meaning
of the prefix. Such morphemes are enclosed in parentheses.

Table 19: Pronominal prefixes

		Underlying	Surface	
Intransitive	1sg	# (d)-ià	à	*
Agent:object				
1sg:sg		d-ià-∅	gyà	*
1sg:du		d-ià-ę-d	nèn	
1sg:pl		d-ià-ia-d	gyàt	
1sg:inv		# d-iá-e-(d)	dé	
1sg:3pl (=1sg/reflex)		d-ià-e	dè	
Patient:object (agent implied)				
(2,3sg):1sg:∅		# (d)-iá̧	ę́	
(2,3sg):1sg:sg		# (d)-iá̧-∅	ę́	
(2,3sg):1sg:du		# d-iá̧-ę̧-(d)	né	
(2,3sg):1sg:pl		# d-iá̧-ia-(d)	yá̧	
(2,3sg):1sg:inv		# d-iá̧-ɔ-(d)	nɔ́	
Intransitive	2sg	b-ià̧	èm	*
Agent:object				
2sg:sg		# (b)-ià-∅	à	*
2sg:du		b-ià-ę̧-d	mèn	
2sg:pl		b-ià-ia-d	bàt	
2sg:inv		# b-iá-e-(d)	bé	*
2sg:3pl (=2sg/reflex)		b-ià-e	bè	

(Note: * indicates a non-unique prefix)

Table 19 (cont.)

		Underlying	Surface	
Patient:object (agent implied)				
(1sg):2sg:∅		b-ià̧	èm	*
(1sg):2sg,3sg:sg		g-iá-∅	gyá	
(1sg):2sg,3sg:du		g-iá-ȩ-d	nén	
(1sg):2sg,3sg:pl		g-i̧á-ia-d	yán	
(1sg):2sg,3sg:inv	#	g-iá-ɔ-(d)	gɔ́	*
(x):2sg:∅		g-ɔ̀	gɔ̀	
(x):2sg:sg		g-ɔ́-∅	gɔ́	*
(x):2sg:du	#	g-ɔ́-ȩ-d	dét	*
(x):2sg:pl		g-ɔ́-ia-d	gyát	*
(x):2sg:inv		g-ɔ́-ɔ-d	gɔ́t	
Intransitive 3sg		∅-∅	∅	*
Agent:object				
3sg:sg		∅-∅-∅	∅	*
3sg:du	#	∅-∅̀-ȩ-(d)	ȩ̀	*
3sg:pl		∅-∅̀-ia-d	gyà	*
3sg:inv	#	∅-∅̂-e-(d)	é	
3sg:3pl (=3sg reflex)		∅-∅̀-ȩ-b	èm	*
Patient:object (agent implied)				
(any agent):3sg:∅ = agent:sg/obj				
(2,3sg):3sg:sg		∅-iá-∅	á	*
(2,3sg):3sg:du		∅-iá-ȩ-d	én	*
(2,3sg):3sg:pl		∅-i̧á-ia-d	án	
(2,3sg):3sg:inv	#	∅-iá-ɔ-(d)	ɔ́	

Table 19 (cont.)

		Underlying	Surface	
Intransitive	2du	b-ià̧	mà	
Agent:object				
2du:sg		b-iá̧-∅`	má`	
2du:du		b-iá̧-ȩ-d	mén	*
2du:pl		b-iá̧-ia-d`	mán`	
2du:inv		b-iá̧-e-d`	mén`	
2du:3pl (=2du reflex)		b-iá̧-e	mé	*
Mixed:object (patient implied)				
2du:(1,3sg):sg,∅		b-iá̧-∅̂	mâ:	
2du:(1,3sg):du		b-iá̧-ȩ-d-ȩ̂	ménê:	
2du:(1,3sg):pl		b-iá̧-ia-d-iâ	mánî:	
2du:(1,3sg):inv		b-iá̧-ɔ-d-ɔ̂	mɔ́nɔ̂:	
Patient:object (agent implied)				
(x):2du:sg,∅		b-ɔ̧́-∅	mɔ́	
(x):2du:du		b-ɔ̧́-e-d	mén	*
(x):2du:pl		b-ɔ̧́-ia-d	mán	
(x):2du:inv		b-ɔ̧́-ɔ-d	mɔ́n	
Intransitive	3du	∅-ȩ̀	ȩ̀	
Agent:object				
3du:sg		∅-ȩ́-∅`	ȩ́`	
3du:du		∅-ȩ́-ȩ-d	én	*
3du:pl		∅-ȩ́-ia-d`	én`	
3du:inv		∅-ȩ́-e-d	én	*
3du:3pl (= 3du reflex)		∅-ȩ́-e-d	én	*

Table 19 (cont.)

	Underlying	Surface
Mixed:object (patient implied)		
3du:(1,3sg):sg,∅	∅-ę́-ə̂	ę̂:
3du:(1,3sg):du	∅-ę́-ę-d-ę̂	ę́nê:
3du:(1,3sg):pl	∅-ę́-ia-d-iâ	ę́nî:
3du:(1,3sg):inv	∅-ę́-ɔ-d-ɔ̂	ę́nɔ̂:
Patient:object (agent implied)		
(any agent):3du:∅ = agent:du/obj		
(x):3du:sg	b-ę́-∅	mé *
(x):3du:du	b-ę́-ę-d	mén *
(x):3du:pl	b-ę́-ia-d	mén *
(x):3du:inv	b-ę́-ɔ-d	mén *

Intransitive	1pl	(= 3inv intransitive)
Agent:object		(= 3inv agent:obj)
Mixed:object		(= 3inv mixed:object)

Patient:object (agent implied)			
(x):1pl:sg,∅		d-ɔ́-∅	dɔ́
(x):1pl:du	#	d-ɔ́-ę-d	dét *
(x):1pl:pl		d-ɔ́-ia-d	gyát *
(x):1pl:inv		d-ɔ́-ɔ-d	dɔ́t

Intransitive	2pl		b-ià	bà
Agent:object				
2pl:sg			b-iá-∅`	bá`
2pl:du		#	b-ià-ę-d	bèt

Table 19 (cont.)

	Underlying	Surface
Agent:object		
2pl:pl	b-iá-ia-dˋ	bátˋ
2pl:inv	b-iá-e-d	bét *
2pl:3pl (= 2du reflex)	b-iá-e	bé *
Mixed:object (patient implied)		
2pl:(1,3sg):sg,∅	b-iá-∅̂	bâ:
2pl:(1,3sg):du #	b-iá-ę-d-ê	bédê:
2pl:(1,3sg):pl	b-iá-ia-d-iâ	bágî:
2pl:(1,3sg):inv	b-iá-ɔ-d-ɔ̂	bɔ́dɔ̂:
Patient:object		
(x):2pl:sg,∅	b-ɔ́	bɔ́
(x):2pl:du #	b-ɔ́-ę-d	bét *
(x):2pl:pl	b-ɔ́-ia-d	bát
(x):2pl:inv	b-ɔ́-ɔ-d	bɔ́t
Intransitive 3pl	∅-iá	á *
Agent:object		
3pl:sg	∅-iá-∅ˋ	áˋ
3pl:du #	∅-ià-ę-d	èt *
3pl:pl	∅-iá-ia-dˋ	gyáˋ
3pl:inv	∅-ià-e-d	èt *
3pl:3pl (= 3pl reflex)	∅-iá-e-b	ém
Mixed:object (patient implied)		
3pl:(1,3sg):sg,∅	∅-iá-∅̂	â:
3pl:(1,3sg):du #	∅-iá-ę-d-ę̂	dê:

Table 19 (cont.)

	Underlying	Surface
Mixed:object (patient implied)		
<u>3pl</u>:(1,3sg):pl	∅-iá-ia-d-iâ	gyâ:
<u>3pl</u>:(1,3sg):inv	∅-iá-ɔ-d-ɔ̂	dɔ̂:
Patient:object (= agent:object)		
Intransitive <u>3inv</u>	∅-è	è
Agent:object		
<u>3inv</u>:sg	∅-é-∅`	é`
<u>3inv</u>:du #	∅-è-ȩ-d	èt *
<u>3inv</u>:pl	∅-é-ia-d`	ét`
<u>3inv</u>:inv	∅-é-e-d	ét *
<u>3inv</u>:3pl (= 3inv reflex)	∅-é-e-d	ét *
Mixed:object (patient implied)		
<u>3inv</u>:(1,3sg):sg,∅	∅-é-∅̂	ê:
<u>3inv</u>:(1,3sg):du #	∅-é-ȩ-d-ȩ̂	édê:
<u>3inv</u>:(1,3sg):pl	∅-é-ia-d-iâ	égî:
<u>3inv</u>:(1,3sg):inv	∅-é-ɔ-d-ɔ̂	édɔ̂:
Patient:object (agent implied)		
(any agent):<u>3inv</u>:∅ = agent:inv/obj		
(x):<u>3inv</u>:sg	b-é-∅	bé *
(x):<u>3inv</u>:du #	b-é-ȩ-d	bét *
(x):<u>3inv</u>:pl	b-é-ia-d	bét *
(x):<u>3inv</u>:inv	b-é-ɔ-d	bét *
Intransitive <u>pl</u> (inanimate) ià-d		gyà` *

3.26. <u>Verb classes.</u> The derivational and inflec-
tional morphology of the two major verb classes, transi-
tives and intransitives, is presented in 3.312. Correla-
tions between those classes and the verbal prefixes,
summarized in (90), will be discussed in the following
sections.

(90)　　　<u>Verb class</u>　　　　<u>Verbal prefix</u>

intransitive　　　$\begin{cases} \text{intransitive} \\ \text{patient:object} \end{cases}$

transitive　　　$\begin{cases} \text{agent:object} \\ \text{patient:object} \\ \text{mixed:object} \end{cases}$

3.261. <u>Intransitive verbs.</u> Intransitive verbs fall
into two subclasses with respect to the verbal prefixes:
a) simple intransitives which normally take the intransi-
tive prefixes and b) a semantically mixed group of intran-
sitives which require the patient:object prefixes.

3.2611. Simple intransitive verbs, some of which
are listed below, take the intransitive prefixes when a
single participant is involved.

(91) a. verbs of position and location

ą́:gyà　'be sitting sg/du'　t'ɔ́:　'be staying'

dé:　'be standing'　kî1　'dwell, camp'

k'ɔ́:　'be lying sg/du'　pʰɔ́ǫ:　'stand, stop'

(91) b. verbs of motion (focus on movement or end point)

ą̂:	'come'	kʰį̂:	'exit'
bá:	'go'	hé:bà	'enter'
cán	'arrive'	bɔ́:dà	'appear, emerge'
sô:	'descend'	yí:	'disappear'
híl	'ascend'	tʰó:yà	'move about'

c. other active intransitives

hį̂:[28]	'die'	t'ɔ́y	'behave, act'
tʰą́:[28]	'feel'	tǫ́y	'say something'
ɔ́:lyà	'cry'	ą̂:	'dream'
ɔ́n	'think (plus a complement clause)'		

d. derived intransitives

tʰémgyá	'get broken, break'
ɔ́mgyá	'happen, become'
hɔ́n	'get finished, exhausted'
dámgyá	'get tired'
há:pá	'rise, get picked up'

e. stative verbs

dɔ́:[29]	'be, exist'	zélbé	'terrible'
kót	'strong, hard'	hó:tê:	'dark' (ambient)
ét	'big sg'	sál	'hot' (ambient)
bî̃	'big du/pl'	t'ó:	'cold' (ambient)
tón	'fat'	sǫ́:mí:	'interesting, strange'
cą́ymé	'hurried'		

Examples of simple intransitives in clauses are given in (92). Note that ambient verbs[30] take the plural

inanimate gyà-, as in (92e).

(92) a. hɔ́ Carnegie-kù èm-bánmà (Q Carnegie-to [2sg]-go/
impf) 'Are you going to Carnegie?'

   b. sân ∅-kʰɔ́p-dɔ́: (child [3sg]-hurt-be) 'The child
is sick.'

   c. á:dɔ̀ è-tʰém-gyá (stick/inv [3inv]-break-detr/pf)
'The stick broke.'

   d. hɔ́ldà gyà-sá:-dɔ̀: (dress [pl]-tear-be) 'The
dress is torn.'

   e. kʰí:dêl gyà-sál (yesterday [pl]-hot) 'It was hot
yesterday.'

Simple intransitive verbs also permit the patient: object prefixes if a non-agentive participant is involved, most typically as possessor. In examples (93a-c), the possessor is treated as a patient. Note that the patient prefixes used to indicate a 2sg possessor are those with implied singular agent, nén in (93b), rather than those with implied unspecified ('x') agent.

(93) a. mɔ́:gí ę̀-cán (grandson [(2,3sg/agt):1sg/pat:sg/
obj]-arrive/pf) 'My grandson came home.'

   b. hɔ́ tá:dè nén-kʰɔ́p (Q eye [(1sg/agt):2sg/pat:du/
obj]-hurt) 'Do your eyes hurt?'

   c. hɔ́ldà án-sá:-dɔ̀: (dress [(2,3sg/agt):3sg/pat:
pl/obj]-tear-be) 'Her dress is torn.'

3.2612. The fairly large class of intransitive verbs that requires the patient:object prefixes constitutes a semantically mixed group, describing a variety of events involving non-agentive participants. While many can be called experiential, some refer to bodily emanations (e.g., sound and smell), and others have to do with inability or failure to accomplish some task. Examples are listed in (94).

(94)

háygyá	'learn, know'	yây	'be busy with'
ǫ́:dép	'like'	sę́:	'smell (emit odor)'
gú:	'be clever'	pǫ́y	'sound'
tʰéndɔ̀:	'want'	tây	'awake'
kó:yì:	'get bored with'	mɔ́:gɔ́	'be proficient at'
t'ɔ́:dèp	'be kind'	ɔ́:dèp	'be unable'
cą́ydép	'get alarmed'	ɔ́ttép	'fail to find'
ó:bép	'develop a desire for'	yɔ́ttèp	'blunder, go off the wrong way'

Few of these verbs imply a tangible object. If such an object is implied, the appropriate object number is signaled in the prefix, as in (95a). Most of these verbs, however, occur with plural object prefixes, the normal object number for an unspecified or indeterminate object ('things'), as in (95b-d). Some verbs whose meanings do not seem to imply any kind of object, e.g., (95f-g), also take the plural object prefixes.

(95) a. hábé gyá-kó:yî:-t'ɔ̂: (sometime [(1sg/agt):<u>2sg/</u>
<u>pat:sg/obj</u>]-get=bored=with/ipf-fut) 'You might
get bored with <u>her</u> some time.'

b. yą́-yây ([(2,3sg/agt):<u>1sg/pat</u>:pl/obj]-busy '<u>I</u>'m
busy/occupied with things.'

c. yą́-p'ɔ́ygyá ([(2,3sg/agt):<u>1sg/pat</u>:pl/obj]-forget/
pf) '<u>I</u> forgot (it, something).'

d. yą́-tây ([(2,3sg/agt):<u>1sg/pat</u>:pl/obj]-awake/pf)
'<u>I</u> awoke/something woke <u>me</u>.'

e. án-gú: ([(2,3sg/agt):<u>3sg/pat</u>:pl/obj]-clever)
'<u>He</u>'s clever/wise to things.'

f. án-t'ɔ́:dèp ([(2,3sg/agt):<u>3sg/pat</u>:pl/obj]-kind)
'<u>She</u>'s kind.'

g. án-ɔ̨́:dèp ([(2,3sg/agt):<u>3sg/pat</u>:pl/obj]-mean)
'<u>She</u>'s mean.'

3.262. <u>Transitive verbs.</u>

3.2621. Simple transitive events involving an agent
and an object take the agent:object prefixes. A sample
list of transitive verbs in Kiowa (96) is followed by sen-
tence examples with agent:object prefixes below (97).

(96) hɔ́:   'get, obtain'   sɔ́:   'sew'

pɔ́:   'eat'   ɔ́m   'do, make'

gúl   'write'   tʰɔ̨́:   'find'

tʰêm   'break'   bɔ̨́:   'look at'

zón   'pull out'   bɔ́:   'bring'

(96)   hâ:pɔ̀   'pick up'   t'á:dɔ́ 'block, stop up'

(97) <u>Agent:object prefixes</u>

    a. zébɔ̀t dé-zón-tɔ́: (arrow/inv [1sg/<u>agt</u>:inv/obj]-

       pull=out-fut) '<u>I</u> will pull out the arrow.'

    b. kút gyà-kɔ̂n (book [<u>3sg/agt</u>:pl/obj]-bring/pf)

       '<u>He</u> brought the book(s).'

    c. á:dɔ̀ èt-t^hêm (stick/inv [3pl/<u>agt</u>:inv/obj]-break/

       pf) '<u>They</u> broke the stick.'

Note that plural object prefixes are used for an un-
specified object, e.g., 'eat something' in (98a) and
'write something' in (98b), where English deletes the re-
coverable object.

(98) a. èm-ą̀: gɔ̀ bàt-pɔ́: nɔ́:-ę̀: ([2sg]-come/imp and/same

      [2sg/<u>agt</u>:<u>pl/obj</u>]-eat/imp me-at) 'Come and eat

      (<u>something</u>) at my house.'

    b. gyàt-gúttɔ̀ ([<u>1sg/agt</u>:<u>pl/obj</u>]-write/impf) '<u>I</u> am/

      was writing (<u>something</u>).'

If a second animate participant (in addition to
the agent) is involved in a transitive event, then the pa-
tient is treated as primary. Compare the agent:object
examples in (97) above with the patient:object examples
below in (99). The agents and objects are identical, but
in (99) the presence of a patient requires the use of the
patient:object prefixes.

(99) a. zébɔ̀t gɔ́-zón-tɔ́: (arrow/inv [(1sg/agt):2sg/pat:
inv/obj]-pull=out-fut) 'I will pull out the arrow
for you.'

b. kút yá̧-kɔ̂n (book [(2,3sg/agt):1sg/pat:pl/obj]-
bring/pf) 'He brought me the book(s).'

c. á:dɔ̀ bɔ́t-tʰêm (stick/inv [(x/agt):2pl/pat:inv/
obj]-break/pf) 'They broke your (pl) stick/They
broke the stick for you.'

Certain combinations of agent and patient are lack-
ing in the patient:object paradigm, namely non-singular
agents with first or third singular patients. The mixed:
object prefixes refer to just these combinations and are
used in the same kinds of transitive constructions as the
patient:object prefixes. Compare first the simple transi-
tive with an agent:object prefix in (100a) with the mixed:
object prefix indicating a 1sg beneficiary in (100b).

(100) a. cȩ̂: má-tȩ̀: (horse [2du/agt:sg/obj]-catch/imp)
'(You/du) catch the horse.'

b. cȩ̂: mâ:-tȩ̀: (horse [2du/agt:(1,3sg/pat):sg/obj]-
catch/imp) '(You/du) catch the horse for me.'

A very small number of trivalent verbs, built on the
root ɔ́: 'give', always require either the patient:object
prefixes (101a) or the mixed:object prefixes (101b).

(101) a. kút yá̧-pó̧:-ɔ̧́: (book [(2,3sg/agt):<u>1sg/pat</u>:p1/
obj]-look-give/imp) '(You/sg) show <u>me</u> the book.'

b. kút bágî:-pò̧:-ɔ̧̀: (book [<u>2p1/agt</u>:(1,3sg/pat):
p1/obj]-look-give/imp) '<u>(You/p1)</u> show me the
book.'

The important point to be gleaned from these ex-
amples is that the speaker has no option within the formal
limitations of the prefix system of presenting a transi-
tive event as either agent-oriented or patient-oriented.

3.2622. <u>Reflexives.</u> A subclass of transitive verbs
requires the reflexive prefixes (see Table 12). These re-
flexive verbs describe for the most part actions directed
at the body or performed by parts of the body. They in-
clude verbs of motion that focus on the initiation of
movement, change of position verbs (morphologically dis-
tinct from stative verbs of position), and a variety of
verbs with fused incorporated body parts.

(102) só:gyá: 'sit down'   ɔ̀:zón   'start off'

 hâ: 'arise'   mɔ̀dô:tɔ̀   'roll over'

mɔ̂:   'lie down'   kûy   'turn back'

kʰî:pɔ̀   'rush/fly off'   bô:tɔ̀   'bend over'

hî:tɔ̀   'vomit'   k'ɔ̂n   'grimace'

bɔ̂:pɔ̀   'swarm about'   ɔ̧́:né: 'strain in-
                                          ternally'

hɔ́:   'catch on, recall'

                                có: 'think so'

(102) z�envhá̱:té: 'chew (<u>tooth</u>+ ?)'

    h̜́:zòn   'breathe (<u>breath</u>+pull=out)'

    mɔ̀:hín   'scratch (<u>hand</u>+dig)'

    óbàk^hyày   'swallow (<u>throat</u>+against+stretch)'

    ɔ̀ngû: 'kick (<u>foot</u>+hit)'

Other transitive verbs permit either an ordinary
transitive interpretation or a reflexive interpretation
when preceded by the reflexive prefixes. Compare the or-
dinary transitive use of <u>k'ɔ̂:</u> 'cut' with agent:object pre-
fixes in (103a) with the reflexive use in (103b).

(103) a. (tr) kí: gyà-k'ɔ̂:   (meat [<u>1sg/agt</u>:sg/obj]-cut/pf)
        'I cut into the meat.'

    b. (refl) dè-k'ɔ̂:   ([<u>1sg/refl</u>]-cut/pf) 'I cut myself;
        I got cut.'[31]

A similar pair of interpretations exists for <u>ól</u>
'take/get down'.

(104) a. (tr) gyà-ót ([<u>1sg/agt</u>:sg/obj]-take=down/pf) 'I
        took it down (e.g., from the shelf).'

    b. (refl) dè-ót ([<u>1sg/refl</u>]-take=down/pf) 'I got
        down/off.'

A few transitive verbs have developed specialized
meanings when used reflexively. Compare <u>gún</u> 'throw away'
as an ordinary transitive in (105a) with its reflexive

version 'dance' in (105b).

(105) a. (tr) gyà-gún ([1sg/agt:sg/obj]-throw=away/pf)

'I threw it away.'

b. (refl) dè-gún ([1sg/refl]-throw=away/pf) 'I

jumped in; I danced.'

Other transitive verbs require the incorporation of a body part term for a reflexive interpretation. Compare the ordinary transitive yál 'untie' in (106a) and the re-flexive version with incorporated ót- 'hair' in (106b).

(106) a. (tr) yáypó bàt-yál (rope [2sg/agt:pl/obj]-untie/

imp) 'Untie the rope.'

b. (refl) bè-ót-yál ([2sg/refl]-hair-untie/imp)

'Untie your hair.'

The reflexive prefixes are also used for reciprocal actions, as illustrated in (107).

(107) t'ò:pʰó: én-p'âygò (buck [3du/refl]-fight/pf) 'The

(two) bucks fought each other.'

3.27. Control. The preceding sections have illus-trated that the agentive vs. non-agentive role distinction and the transitive vs. intransitive verb distinction are crucial ones in Kiowa. However, these distinctions seem to break down in a number of interesting cases. Transi-tive events, understood cognitively to involve an agent/

initiator acting on some object, are treated as intransi-
tive with patient:object rather than agent:object pre-
fixes. These unusual constructions fall into two general
types.

The first type of intransitive construction describ-
ing a transitive event involves accidental or involuntary
actions. The transitive examples (a) in (108)-(110) imply
a deliberate or intentional action while the intransitive
examples (b) imply accidental or involuntary action. In
each of the (b) examples, the person who does something
accidentally is a patient.

(108) a. (tr) k'ɔ́áttɔ̀ é-ót (dish/inv [3sg/agt:inv/obj]-
          drop/pf) 'He dropped the dish (deliberately,
          in a fit of anger).'

     b. (itr) k'ɔ́áttɔ̀ ɔ́-ót-kyá (dish/inv [(2,3sg/agt):
          3sg/pat:inv/obj]-drop-detr/pf) 'He dropped
          the dish (accidentally).'

(109) a. (tr) hɔ́ bàt-ɔ̀tʰɔ̀n (Q [2sg/agt:pl/obj]-use=up/pf)
          'Did you use/finish it up (intentionally)?'

     b. (itr) hɔ́ yán-ɔ̀tʰɔ̀n (Q [(1sg/agt):2sg/pat:pl/obj]-
          use=up/detr/pf) 'Did you run out of it (un-
          intentionally)?'

(110) a. (tr) tʰó̧: gyà-t'ɔ́:dɔ́ (water [1sg/agt:sg/obj]-
          burst/pf) 'I turned on the water/faucet.'

(110) b. (itr) nɔ́-t'ɔ́:gyáy ([(2,3sg/agt):1sg/pat:inv/
obj]-burst/detr/pf) 'I burst it (e.g., a
balloon)/it burst on me (accidentally, from
blowing it up too far).'

Intransitive verbs with patient:object prefixes can
also imply that some effort or difficulty was involved in
achieving one's goal. The English gloss 'manage to' con-
veys the notion of trouble or effort (with eventual suc-
cess), as for example (111b), where the speaker is respond-
ing to a question about a hand injury which made it im-
possible for him to write. Instead of using the ordinary
transitive gyàt-gúttɔ̀ ([1sg/agt:pl/obj]-write/impf) 'I'm
writing', he casts himself as patient to indicate the
difficulty he has had regaining the ability to write.
Like the examples in (108)-(110), each of the verbs in
(111) is derived from an ordinary transitive root that
does not imply any particular effort or trouble.

(111) a. hɔ́ hègɔ́ gɔ́-tʰét-kyá (Q now [(1sg/agt):2sg/pat:
inv/obj]-cut=open-detr/pf) 'Did you manage to
get it cut open?'

b. hègɔ́ yą́-gú:lyà (now [(2,3sg/agt):1sg/pat:pl/
obj]-write/detr/impf) 'I am managing to write
now.'

c. yą́-á:-t'ɔ̀y-pʰìl-dɔ̀: ([(2,3sg/agt):1sg/pat:pl/
obj]-wood-clear-wipe-be) 'I've managed to get

(111)   it all cleared off of trees (land for farming).'

     Laurence Thompson (1979) describes similar cases in Salish. He points out that what is common to accidental or involuntary actions and events involving some effort or difficulty is the lack of <u>control</u> on the part of the agent. It is this possibly universal category of control that is crucial to the understanding of the Kiowa constructions in (108)-(111) above. For an animate participant to be treated as an agent in the pronominal prefixes, he must actually be the controlling force. If control is lost, that person no longer qualifies as an agent and must be treated as a patient.

     The same restriction on agentive status, i.e., being the controlling participant, holds for events not yet realized. In (112a), the speaker anticipates that he will be able to complete the task of clearing away the trash, thus the transitive verb with agent:object prefix. In (112b), the intransitive verb and patient:object prefix imply that completing the job by departure time will be difficult.

(112) a. (tr) mɔ̀p'ál gyàt-hę́:dé-tɔ̀: nègɔ́ bà-bá: (trash
           [1sg/<u>agt</u>:pl/obj]-remove-fut and=then/diff
           [2pl]-go/imp) 'When <u>I</u> get the trash cleared
           away, let's go.'

   b. (itr) hágyá yą́-hę́:dáy-t'ɔ̀: nègɔ́ bà-bá: (sometime

(112)   [(2,3sg/agt):1sg/pat:pl/obj]-remove/detr-
          fut and=then/diff [2pl]-go/imp) 'If I can
          get things cleared away, let's go.'

Interestingly, Kiowa has a number of intransitive
verbs which refer explicitly to an agent's lack of con-
trol. A few are independent roots (t^hą́:, kyân) but the
majority are thematic stems for which no transitive coun-
terparts exist.[32]

(113) t^hą́:   'lose (a contest)'
       kyân   'fail to hit, fail to convince'
       ɔ́:dèp   'be unable'
       ɔ́ttép   'fail to find (what one wants)'
       yɔ́ttèp   'blunder, go off in the wrong direction'
       bó:dĕp   'lose out on, be denied by circumstances'

Example (114) illustrates the explicitly [- control]
intransitive bó:dép 'be denied' in the first clause and a
derived intransitive with [- control] force, tę́:gyáy 'man-
age to grab', in the second clause.

(114) yą́-k'í:-bò:dèp -- há:òy ę́-tę́:gyáy ([[(2,3sg/agt):
      1sg/pat:pl/obj]-husband-be=denied/impf -- much=later
      [(2,3sg/agt):1sg/pat:sg/obj]-grab/detr/pf) 'I was
      denied a husband -- much later I finally managed to
      grab one.'

3.28. <u>Dual object prefixes</u>. In 3.2612 and 3.2621, plural object prefixes were described as being the prefix form for an indeterminate object as well as actual (or classificatory) plural objects. Dual object prefixes are normally used only for actual dual objects, but there are a few verbs, listed below, for which dual object prefixes are required even though no dual object can be identified.

(115) <u>Verbs requiring dual object prefixes</u>

t'ɔ́:hál	'listen to'
mɔ́nyáygɔ́	'wave to'
án	'wake'
dótkyày	'be becoming on, look nice'

Of the four verbs, two have etymologies that support a dual marking based on actual number. <u>t'ɔ́:hál</u> 'listen to' is an old compound: <u>t'ɔ́:</u> 'ear' + <u>hál</u> 'bore into'. <u>mɔ́nyáygɔ́</u> 'wave to' is also an old compound whose first root is <u>mɔ́n-</u> 'hand'; the verbal root is unidentified. In these two verbs the dual object prefixes apparently derive from the normal human complement of ears and hands.

(116) a. nén-t'ɔ́:hát   ([(1sg/agt):<u>2,3sg/pat</u>:<u>du/obj</u>]-lis-
       ten=to/pf) 'I listened to <u>you/him</u>.'

   b. hɔ́ á-k'í: àn dét-mɔ́nyáygóp gyà-hó:-ày-cè̞:   (Q
       your-husband hab [(x/agt):2sg/pat:<u>du/obj</u>]-wave=
       to/impf [3sg/agt:pl/obj]-drive-start=off/pf-

(116)   when/same) 'Does your husband wave to <u>you</u> when

he drives off?'

The verbs <u>án</u> 'wake'(a) and <u>dótkyày</u> 'look nice' (b)
neither incorporate body part terms nor reveal any other
etymological basis for a dual object reference. Despite
the lack of an overt dual object, however, we might specu-
late that these verbs involve an underlying semantic com-
ponent 'eyes/dual', e.g., <u>án</u> 'wake' (<'cause someone's
eyes/du to open').

(117) a. hâòp né-ą̣:né: (when/Q [(2,3sg/agt):<u>1sg/pat</u>:du/
            obj]-wake/pf) 'At what time did you wake <u>me</u>?'
      b. hɔ́ né-dótkyày (Q [(2,3sg/agt):<u>1sg/pat</u>:du/obj]-
            look=nice/pf) 'Do <u>I</u> look nice?'

A second type of construction in which dual object
prefixes are used without reference to an actual dual ob-
ject involves the patient:object paradigm with a third
animate plural object, e.g., 'women' in (118a) and 'them
(a crowd of people)' in (118b). The problem confronting
the speaker is how to refer to a 3pl human object in a
paradigm which only allows for inanimate plural. Third
inverse could be used because it is ambiguous with respect
to animacy, but it has a slightly disrespectful connota-
tion when applied to adults. The choice of object, then,
is dual.[33]

(118) a. mà:yóp nén-háygyá-dò: nò gyà-sém-mó:gó (woman/
inv [(1sg/agt):2sg/pat:du/obj]-learn-be and/diff
[(x/agt):3pl/pat:pl/obj]-clever-be=proficient)
'You know women and how clever they are.'

  b. mó né-k^hyándè-t'ò: (nearly/about [(2,3sg/agt):
1sg/pat:du/obj]-scatter/detr-fut) 'I'll scatter
them/get them to scatter (by shooting into the
crowd).'[34]

3.3. Verbs.

3.30. Introduction. Verbs are formally distin-
guished from other word classes in Kiowa by three crite-
ria: a) their inflection for aspect, mood, and tense,
b) their cooccurrence with pronominal (verb agreement)
prefixes, and c) their incorporation of a variety of
verbs, nouns, and adverbs. Morphologically the verb is
the most complex word class in Kiowa and can itself con-
stitute an independent clause. The schematic diagram in
(119) illustrates its linear organization.

(119)   Ppfx-(Adv)-(N)-(V)-Stem-$\left\{\begin{array}{l}\text{Inflect}\\\text{Modal}\end{array}\right\}$-(Synt)

The obligatory elements are the stem, a pronominal
prefix (see 3.2), and an inflectional or modal suffix.
Preceding the stem but following the pronominal prefix are
optional incorporated adverbs, nouns, and verbs (see 4.2
on incorporation). Syntactic affixes in final position

indicate clausal relationships, among them relative clause suffixes, subordinating conjunctions, and the paired sets of switch-reference markers (see 4.3).

Verbs in Kiowa fall into two major semantic classes, transitives and intransitives. Transitive verbs describe events that involve a controlling agent and cooccur with the agent:object and mixed:object prefixes. Intransitives do not permit prefixes with an explicit agent. The function of these classes and their correlation with the four prefix paradigms is discussed in 3.26. This section will be concerned with verb derivation and inflection, both of which reflect the transitive/intransitive distinction.

3.31. <u>Stem formation.</u> Stems to which inflectional morphemes are affixed are of several types. In addition to roots and derived simple stems, this section describes incorporated, number-differentiated, thematic, and imperfective stems and concludes with the derivational auxiliaries.

3.311. <u>Roots.</u> Many verb roots constitute stems to which inflectional morphemes are directly suffixed. The surface canonical shape of these monosyllabic roots, as of noun roots, is $(C)V\begin{Bmatrix} C \\ : \end{Bmatrix}$. For active roots the final consonant is restricted to the subset of syllable-final consonants /m,n,l,y/; stative roots also permit final /t/.[35] All active roots have an underlying long vowel, i.e., $(C)V:(C)$, which is shortened in syllable-final position

(see 2.51). Examples in this section will show the long vowel only in open syllables. Because the vowels of consonant-final stative roots never occur in alternating environments, it is impossible to say if they are underlying long vowels. Active roots are illustrated in (120) and stative roots in (121).

(120) <u>Active roots</u>

-V:	hâ:	'arise'	-V:	tȩ̂:	'grab'
	só:	'sew'		pʰɔ̧́:	'stop, stand'
-Vm	kɔ̂m	'point, indicate'			
	ɔ́m	'do, make'	-Vl	î̧l	'warn'
				tél	'tell'
-Vn	hân	'eat up'			
	pén	'butcher'	-Vy	tây	'awaken'
				ây	'start off'

(121) <u>Stative roots</u>

-V:	cé:	'short'	-V:	ó̧:	'good'
	t'ó:	'cold (weather)'	-Vl	sál	'hot'
-Vm	k'yám	'lazy'		tʰɔ́l	'skinny'
-Vn	tón	'fat'			
	bîn	'big du/pl'	-Vt	kót	'hard'
				ét	'big sg'
-Vy	zó̧y	'deep, dangerous'			

3.312. <u>Derived simple stems.</u> Derivation is primarily detransitive and deactive, although there are a few transitivizing suffixes.

3.3121. <u>Derived transitives.</u> Transitivizing mor-

phemes are uncommon and no longer productive. -y, illus-
trated in (122), has a simple causative sense in 'tie' (a)
and 'stand' (b) but in 'seat' (c) it also implies an ani-
mate object.

(122) a. pʰą̂-y   'tie'   pʰą́:   'be tied'

     b. pʰɔ́-y   'stand'   pʰɔ́:   'stop, be standing'

     c. sɔ́-y   'seat someone' sɔ́:   'set sg/du'

Transitive -y is also identified in a pair of num-
ber-differentiated verbs (123) for which the transitive
stem (*c'ɔ́y, *k'úy) does not exist independently. pʰɔ́ygyá
'stand, get stood, manage to stand' (see (122b) above) is
shown for comparison.

(123) a. c'ɔ́:-y-gyá   (lay/sg/du-tr-detr)

       c'ɔ́ygyá   'land, alight, fall against sg/du'

     b. k'ú:-y-gyá   (lay/pl-tr-detr)

       k'úygyá   'land, alight, fall against pl'

     c. pʰɔ́:-y-gyá   (stand-tr-detr)

       pʰɔ́ygyá   'stand, get stood, manage to stand'

Transitive -m has been identified in one stem, kʰɔ̂m
'read, name, call' from stative kʰɔ́: 'be named, called'.

    3.3122. Derived intransitives. The productive de-
transitive suffix (underlying) -gé is affixed freely to
consonant-final transitive roots. The examples in (124)
illustrate -gé followed by -iá 'intransitive perfective'

(reduced by Vowel Truncation and Glide Formation to -gyá).
The result is the normal citation form for the verbs.
Note also that -gé may be suffixed to a derived transi-
tive stem, as in (123) above.

(124) <u>Transitive root</u>   <u>Detransitive stem</u>

ól	ót-kyá	'drop, take down'
gúl	gút-kyá	'write'
ɔ́m	ɔ́m-gyá	'do, make'
dâm	dám-gyá	'tire'
bôn	bón-gyá	'bend'
hín	hín-gyá	'dig'
kʰyáy	kʰyáy-gyá	'stretch'
yây	yáy-gyá	'trap, snare'

There are also a very few vowel-final roots which
take detransitive -gyá (<-gé-iá), shown in (125). The
source of the /t/ in 'shatter' and 'sever' is not clear.[36]

(125) sá: 'shatter'   sát-kyá   'get shattered'
       tʰá: 'sever pl'   tʰát-kyá 'get severed pl'

A second detransitive process raises the falling
tone on a transitive root to high on the derived intransi-
tive stem. There are, in fact, very few intransitive
roots with falling tone.[37] This tonal modification may
cooccur with other detransitive morphology, as in 'get
broken'.

(126)   Transitive   Intransitive

    hɔ̂n   'defeat'   hɔ́n   'get exhausted'

    tʰêm   'break'   tʰém-gyá   'get broken'

    gû: 'hit'   gú:pá   'get hit, hit the mark'

    hâ: 'arise'   há:pá   'rise, get picked up'

3.3123. __Derived statives.__ A small number of stative verbs is morphologically complex, but the roots that can be isolated are in large part synchronically non-occurring forms. The stative suffix has several phonologically conditioned allomorphs (see also 2.75), __-bé__ after oral resonants, __-mé__ after nasal or nasalized resonants, and __-dé__ elsewhere (127). Given the distribution of dentals and velars (see 2.73), it is likely that __t'á:gyà__ 'nice' (127b) is similarly derived (<__t'á:-dé__) although the __a__ (<__ia__) is unexplained.

(127) a. p'ɔ́y-bé   'hard to solve'

      zél-bé   'terrible'

      ɔ́y̦-mé   'lovable, cute'

      hén-mé   'beautiful'

      k'ɔ̦́:-dè   'bad'

      sɔ̂ɔ̦:-dè   'angry'

   b. t'á:-gyà   'nice, good, pretty'

A second minor derivational suffix is the __-l__ occurring on stative verbs of position (128). It is probably

not coincidence that the transitive verbs from which they are derived have imperfective stems with 1 (see 3.316). It should be noted that this stative -1 only occurs in the absence of inflectional suffixes, e.g., in cél (a) but not in cé:-dê: 'be sitting-hsy' or cé:-t'ɔ̀: 'be sitting-fut'.

(128)   Transitive   Stative

a. cé: 'set sg/du'   cé-1   'be sitting sg/du/
                                    inan'

b. sɔ́:   'set pl'   sɔ́-1   'be sitting pl/inan'

c. k'ú: 'lay pl'   k'ú-1   'be lying pl'

3.313. Compound derivation. Incorporation of a verb stem with inflected dɔ́: 'be, exist' and ɔ́m 'do, make' derives statives and causatives, respectively.

3.3131. Statives. The one productive means of deriving statives is the compounding of dɔ́: 'be, exist' with transitive and intransitive stems.[38] Not all stems permit stative derivation, however, and the conditions that determine which stems can be so derived are not yet well understood.

Some verbs permit derivation on only the transitive root, as in (129a). Others permit it on only the derived intransitive stem, as in (129b). The distinction appears to involve whether the state is envisioned as having come about without the direct participation of an agent. In other words, because things do not just break spontaneously, the stative is derived on the transitive root, indi-

cating the result of someone having done something. On
the other hand, one gets tired for a variety of reasons
without any particular involvement of an agent, hence the
detransitive stative indicating the result of having got-
ten tired.

(129) a. t^hêm 'break/tr' ⟶ t^hêm-dɔ̀: 'be broken'

   t^hém-gyá 'break-detr' —/→ *t^hém-gyá-dɔ̀:

   b. dâm 'tire/tr' —/→ *dâm-dɔ̀:

   dám-gyá 'tire-detr' ⟶ dám-gyá-dɔ̀: 'be tired'

Still other verbs exhibit two derived statives, one
constructed with the transitive root, e.g., k^hûl-dɔ̀: 'be
pulled off/jerked out' (<k^hûl), and the other constructed
with the detransitive stem. In the latter case, the de-
transitive stem lacks detransitive -gyá (<-gé-iá); instead
-dá immediately follows the root, e.g., k^húl-dá-dɔ̀:. Se-
mantically the transitive stative indicates the result of
a single event whereas the detransitive with -dá indicates
a state resulting from repeated or continuing events.
Sentences in (130a) and (130b) illustrate the distinction.

(130) a. hègɔ́ è-k^hûl-dɔ̀: (now [3inv]-pull=off-be) 'It
   has been pulled off (once).'

   b. mɔ́n hábá yán-k^hóp k'ɔ̀t émdéòp hạ̀:gyà yán-k^húl-dá-
   dɔ̀: (probably somewhere [(1sg/agt):2sg/pat:pl/
   obj]-hurt and=yet/same at=intervals groan [(1sg/

(130) agt):2sg/pat:pl/obj]-pull=off-detr-be) 'You prob-
       ably hurt some place and so you are letting out
       groans at frequent intervals.'

3.3132. <u>Causatives.</u> The transitive verb ɔ́m 'do,
make' can incorporate both active and stative roots to
derive overt causatives. Several such compounds have be-
come lexical units, as in (131a-c), but the process is
productive, as illustrated in (132).

(131) a. pí̤:-ɔ́m   'cook (food/eating-make)'
      b. tá:-ɔ̀m   'cook (ripe/cooked-make)'
      c. tʰá̤:-ɔ̀m   'help (? -make)'

(132) a. hóldà gyàt-kyó̤y-ɔ̤̀:mɔ̀ (dress [1sg/agt:pl/obj]-
         long-make/impf) 'I'm going to lengthen the
         dress.'
      b. bè-tʰáp-ɔ̂m ([2sg/refl]-dry-make/imp) 'Dry it
         (your hair).'
      c. bé-kʰó-ày-ɔ̀m ([2sg/agt:inv/obj]-now-start=off-
         make/imp) 'Go ahead and run it (the tape-record-
         er).'

Derived inchoatives are similarly constructed with
the derived intransitive ɔ́m-gyá 'become, happen'.

(133) a. ∅-hôl-ɔ̀m-gyà ([3sg]-sick-make-detr/pf) 'He got
         sick.'

(133) b. gyà-kò:dó-sàl-ɔ̀m-gyà   ([pl]-very-hot-make-detr/

pf) 'It got very hot.'

3.314. Number-differentiated stems. Verbs of posi-
tion, both transitive/active and intransitive/stative,
occur in pairs differentiated by number. For transitives,
number refers to the object; for intransitives it refers
to the participant in position. Note that the number
pairing is singular/dual vs. plural. Stative verbs are
listed in (134a); active verbs, including two non-posi-
tional ones, in (134b).

(134)   Sg/Du   Pl

   a. Stative

      ą̀:gyà   k'úl   'be sitting'

      k'ɔ́: (∿có:-)   k'úl (∿kóp∿kú:-) 'be lying'[39]

      cél   sɔ́l   'be sitting/
                                             inan'

   b. Active

      cé: sɔ́:   'set, put in'

      c'ó: k'ú: 'lay'

      c'óygyá   k'úygyá   'land, fall against'

      ól   p'él   'drop, fall'

      t'ál   tʰá: 'sever'

Stative adjectivals, a second group of number-dif-
ferentiated verbs, are distinguished from the preceding
set in collapsing dual with plural rather than with sin-

gular. Interestingly, this number pairing matches that of
class II nouns (see 3.123) in which dual/plural is basic
and singular is inverse. The reader has perhaps noticed
that morphologically sy$\acute{ɔ}$n 'small sg' with ɔ and ky$\acute{ǫ}$y
'tall, long sg' with oy are reminiscent of inverse allo-
morphs.

(135) | Sg | Du/Pl | |
|-----|-------|---|
| ét | bîn | 'big, important' |
| sy$\acute{ɔ}$n | syân | 'small, young' |
| ky$\acute{ǫ}$y | k$\acute{ḭ}$:n$\acute{ɪ}$: | 'tall, long' |
| cé: | cá:dó: | 'short' |

3.315. <u>Thematic stems.</u> A large number of verb
stems is derived with the thematic suffixes <u>-bé</u>, <u>-dé</u>, <u>-gé</u>.
A very few of these thematic stems are built on synchroni-
cally occurring roots, as in (136). Note that the initial
stop of the suffix is devoiced following falling tone (see
2.71). Derived intransitive thematic stems lose the fall-
ing tone but retain the devoiced stop.

(136) | Root | | Thematic stem | |
|------|---|---------------|---|
| hâ: | 'arise' | hâ:-pè | 'raise, pick up' |
| | | há:-pé | 'rise, get picked up' |
| gû: | 'hit' | gú:-pé | 'get hit, hit the mark' |
| k^{h}î: | 'take out' | k^{h}î:-pè | 'fly off' |
| h$\acute{ḛ}$: | 'away, gone' | h$\acute{ḛ}$:-dé | 'remove' |
| pâ:- | 'sharp' | pâ:-tè | 'sharpen' |

(136) <u>Root</u>   <u>Thematic stem</u>

    híl   'climb'   hî:-tè   'vomit (bring up)'

    hó:- 'travel'   t^{h}ó:-dé   'leave behind'[40]

Most thematic stems, however, are based on bound roots unique to these forms. Although the occurrence of -bé or -dé with a given root is not predictable, -gé occurs nearly exclusively on consonant-final roots. má:-gè 'feed' is a notable exception.

(137) <u>Transitive</u>   <u>Intransitive</u>

    hé:-bé   'carry/go in'   hé:-bè[41]

    há:-bè   'smoke'   - - -

    hɔ́:-dé   'strip off'   hɔ́:-dé

    t'á:-dé   'block'   t'á:-dé

    dɔ̂y-gè   'rip'   dɔ̂y-gè

    k'ɔ́t-kè   'crush'   k'ɔ́t-kè

3.316. <u>Imperfective stems.</u> The majority of verbs has an imperfective stem form that serves as the base for imperfective inflectional suffixes (see 3.322). The imperfective stem increment is of three forms, shown in (138): a) <u>-n</u>, b) <u>-l</u>, and c) falling tone on the root vowel. <u>-n</u> and <u>-l</u> are restricted to vowel-final roots[42] whereas falling tone also occurs on resonant-final roots and thematic stems.

(138)   <u>Root/Stem</u> <u>Impf stem</u> <u>Ipf/hsy(-ê:)</u>

    a. bǫ́:   bǫ́:-n-   bǫ́:nê: 'look at, see'

       ą́:   ą́:-n-   ą́:nê: 'come'

       bá: bá:-n-   bá:nê: 'go'

       bɔ́:   bɔ́:-n-   bɔ́:nê: 'bring'

    b. cé: cé:-1-   cé:1ê: 'set sg/du'

       sɔ́:   sɔ́:-1-   sɔ́:1ê: 'set pl'

       sá: sá:-1-   sá:1ê: 'shatter, tear'

       álpí: álpí:-1-   álpí:1ê: 'disagree'

    c. ǫ̂:m   ǫ̂:m-   ǫ̂:mè: 'do, make'

       cą́·n   cą̂:n-   cą̂:nè: 'arrive'

       pʰɔ́:1   pʰɔ̂:1-   pʰɔ̂:1è: 'blow'

       zá:y   zâ:y-   zâ:yì: 'roll'

       só: sô:-   sô:yì: 'sew'

       p'ó:dé-   p'ô:dè-   p'ô:dè: 'save, conserve'

       hê:bé-   hê:bè-   hê:bè: 'carry in'

3.317. <u>Derivational auxiliaries.</u> The active verbs
<u>tɔ́:</u> 'behave, act' and <u>p'âygɔ̀</u> 'fight, act' function as
auxiliaries with incorporated non-verbal and bound verbal
roots. Although both verbs have complete imperfective and
perfective paradigms (see 3.32 for discussion), in their
auxiliary function, <u>tɔ́:</u> derives the imperfective paradigm
of verbs and <u>p'âygɔ̀</u> the perfective paradigm, as illustrat-
ed in (139).

(139) a. dè-sém-dɔ́-tɔ́: ([1sg/refl]-secret-sing-act/aux/
impf) 'I'm whistling.'

   b. bè-sém-dɔ́-p'âydè ([2sg/refl]-secret-sing-act/
aux/imp) 'Whistle!'

A sample of these derived verbs is listed in (140).
Although the auxiliaries do not contribute additional
lexical content to most of the items, they occasionally
imply a slightly different behavior than that denoted by
the verb root.

(140) dɔ́:-tɔ́:   'sing' (<dɔ́:- 'sing, drum')

   sém-tɔ́:   'steal' (<sém- 'secret')

   tɔ́:bá-tɔ̀: 'watch over, look after' (<tɔ́:bá
                'watch')

   ǫ́:pá-tɔ̀: 'act superior, pretend affluence' (<ǫ́:
                'good, rich')

   k'yátáy-tɔ̀: 'act pretentious' (<k'yátáy- 'chief')

3.32. Inflection.

3.320. Introduction. The inflection of active
verbs in Kiowa is characterized by distinct aspectual
paradigms, one indicating completed or perfective (pf)
events and the other indicating non-completed or imper-
fective (impf) events. Within each aspectual paradigm,
the following categories are distinguished: basic, impera-
tive, future, and hearsay. In other words, an active
verb has eight paired inflected forms: (basic) perfective
and (basic) imperfective, imperative (imp) and imperfec-

tive imperative (ipf/imp), future (fut) and imperfective future (ipf/fut), hearsay (hsy) and imperfective hearsay (ipf/hsy). The remaining inflectional category, negative (neg), is not distinguished for aspect. Stative verbs have a single stative paradigm: (basic) stative, negative, future, and hearsay.

Transitive active b**ǫ́:** 'see, look at' illustrates the paradigms (141). Verbs with imperfective stems (b**ǫ́:-n-**) exhibit that stem throughout the imperfective paradigm. Note that the negative is formally perfective, i.e., it is never suffixed to the imperfective stem. Suffixes which may cooccur are negative, future, and hearsay, in that order (see 3.329 for examples).

(141) | | Perfective | Imperfective | |
|---|---|---|---|
| (basic) | bǫ́: | bǫ́:-n-mɔ̀ | 'look at' |
| imperative | bǫ́: | bǫ́:-n-î: | |
| future | bǫ́:-tɔ́: | bǫ́:-n-î:-tɔ̀: | |
| hearsay | bǫ́:-hêl | bǫ́:-n-ê: | |
| negative | bǫ́:-mɔ̂: | | |

Perfective forms indicate a single completed event; thus, basic perfective is most often interpreted as referring to a past event, as in (142).

(142) k^hí:dêl yán-gút (yesterday [(1sg/agt):2sg/pat:pl/ obj]-write/pf) 'I wrote to you yesterday.'

The imperfective covers a variety of non-completed
events, past or present: general statements (143), habit-
ual or repeated activities (144), and events in progress
(145).

(143) k'ɔ́nkʰɪ̧́-pʰàtkɔ̀t ét-tɔ́n-mɔ̀-cȩ̀: àn ét-pʰɪ́:-ɔ́:tʰép-
sɔ̀ttɔ̀ (turtle-soft/inv [3pl/agt:inv/obj]-cook-
impf-when/same hab [3pl/agt:inv/obj]-fire-coal-put=
in/pl/impf) 'When cooking soft-shelled turtles, one
buries them in coals.'

(144) a. àn Ø-gú:l-ɔ̧̂:m-è: ɔ̀t háyá àn Ø-yî:-yì: (hab [3sg/
agt:sg/obj]-paint-make-ipf/hsy yet/diff somewhere
hab [3sg]-disappear-ipf/hsy) 'He would paint her
(every morning) and yet she would disappear some-
where.'

b. émdéòp dè-kʰî:pòp (at=intervals [1sg/refl]-jump=
up/impf) 'I jump up every now and then.'

c. té-tè:hɪ̧̀: páy àn Ø-yî:-yà (every-evening sun
hab [3sg]-disappear-impf) 'The sun sets every
evening.'

(145) a. k'ɔ́nkʰɪ̧́:-gɔ̀ tʰọ̧́:-kyà è-yî:-yà (turtle-inv water-
in [3inv]-disappear-impf) 'The turtles are dis-
appearing into the water.'

b. étté tʰọ̧́:cép hágyá á-kɔ̀:l-è: gɔ̀ pá: á-ọ̧̀bà-hɪ̧́:-hèl
(many flood once [3pl/agt:sg/obj]-cross-ipf/hsy
and/same some [3pl]-submerge-die-hsy) 'Many were

(145)   once crossing a flood and some drowned.'

Except in the case of non-punctual verbs of motion,
the imperfective also indicates a near future event, as in
(146). In this sense, the verb is often preceded by mîn
'about to' (147), which focuses on the imminence of the
event.

(146) kʰyá̧hí̧:gɔ́: ɔ́lḩò:-kyà gyà-híttɔ̀ ɔ́lḩ:gyà (tomorrow
      bank-at [1sg/agt:sg/obj]-take/impf money) 'I'm
      going to take money to the bank tomorrow.'

(147) a. á:kʰḭ:gyà hègɔ́ mîn gyá-kʰî̧:-mà (flowers now
         about=to [pl]-bloom-impf) 'The flowers are about
         to bloom.'
      b. mîn à-tʰó̧:-hḙ:mà (about=to [1sg]-water/drink-
         die/impf) 'I am very thirsty.'

A few motion verbs are inherently non-punctual: á̧:
'come', bá: 'go', and bɔ́: 'bring/take'. Imperfective
forms of these verbs indicate only habitual or near future
events, never an event in progress. Instead, the perfec-
tive refers to an on-going event as well as to a completed
one. The examples in (148) illustrate these aspectual
differences with bá: 'go', imperfective in (a) but perfec-
tive in (b-c).

(148) a. ∅-bá:n-ê: ([3sg]-go-ipf/hsy) 'He went (often,
         regularly).'

(148) b. Ø-bá:-hêl ([3sg]-go-<u>hsy</u>) 'He was on the way
(home)/He went (home).'

c. kʰyá̰hḭ́:gɔ́: mà-bá:-t'ɔ́:-cḛ̀: dá á-kʰɔ̰:gí-ḛ̀: mà-cán
(tomorrow [2du]-go-fut-when/same must your-grand-
father-at [2du]-arrive/pf) 'While you are on
your way tomorrow, you must stop at your grand-
father's.'

Other verbs are inherently punctual, referring to
the point of completion of the event. cán 'arrive' re-
fers specifically to the end point of both á̱: 'come' and
bá: 'go', while kɔ̂n 'convey/carry' refers to the end
point of bɔ́: 'bring/take'. These verbs function like or-
dinary non-motion verbs with respect to the perfective/
imperfective distinction in that imperfective forms indi-
cate events in progress.

In the following sections, the terms perfective and
imperfective refer to the basic forms. Perfective impera-
tive, perfective future, and perfective hearsay will be
referred to simply as imperative, future, and hearsay.

3.321. <u>Perfective.</u> The perfective exhibits more
morphological complexity than any of the other categories.
The most regular of the allomorphs are summarized in
(149); a few perfective forms involve vocalic ablaut and
suppletion.

(149) Root/Stem   Perfective allomorph

    a. m, n, y, V: ∅

    b.   l   ~t   or -é:

    c. -bé, -dé, -gé   -ɔ́ (tr)

                      -iá(y) (itr)

    d.   V: -C (m, n, y, p)

Many roots ending in a nasal, glide, or vowel have a zero perfective suffix. Closed-syllable shortening accounts for the surface form.

(150) Root   Perfective

    tʰê̪:m   tʰêm   'break'

    hâ̪:n   hân   'eat up'

    cá̪:n   cán   'arrive'

    â:y   ây   'start off'

    zɔ̪̂:y   zɔ̪̂y   'knead, mash'

    hâ: hâ: 'arise (refl)'

    tê̪:   tê̪:   'grab, catch'

    bá: bá: 'go'

    á̪:   á̪:   'come'

Roots ending in l have a zero suffix but show t (<d <l via Lateral Obstruentization (see 2.76 and fn. 32, Chapter Two) and Final Devoicing (2.771)).

(151) <u>Root</u>   <u>Perfective</u>

     p^{h}í:l   p^{h}ít   'wipe'

     gú:l   gút   'write'

     k^{h}û:l   k^{h}út   'pull off'

     yá:l   yát   'untie'

     té:l   tét   'tell'

Stems ending in -bé, -dé, or -gé may have one of two allomorphs depending upon the transitivity of the stem: -ɔ́ (transitive) and -iá(y)[43] (intransitive). Thematic verbs (3.315) typically have both transitive and intransitive stems, as in (152). Detransitive stems with -gé (3.3122), of course, occur only with -iá(y) (152b). Both sets of suffixes are reduced by Vowel Truncation (2.72), e.g., -gé-iá>-giá>-gyá.

(152) a. <u>Stem</u>   <u>Perfective</u>

     hâ:pè-   hâ:pɔ̀   'raise, pick up/tr'

     há:pé-   há:pá   'rise, get picked up/itr'

     hé:bé-   hé:bɔ́   'bring in/tr'

     hé:bè-   hé:bà   'enter/itr'

     bɔ́:dé-   bɔ́:dɔ́   'cause to emerge/tr'

     bɔ́:dè-   bɔ́:dà   'emerge, appear/itr'

     tô:tè-   tô:tɔ̀   'gather, harvest/tr'

     tó:té-   tó:kyáy   'get gathered/itr'

     dɔ̂ygè-   dɔ̂ygɔ̀   'rip/tr'

     dɔ́ygé-   dɔ́ygyá   'get ripped/itr'

(152) b.

Root/tr	Perfective/detr	
kʰû:1	kʰútkyá	'get pulled off'
ɔ̢́:m	ɔ́mgyá	'become, happen'
hí̢:n	hí̢ngyá	'get dug'
kʰyá:y	kʰyáygyá	'get stretched'

A few verbs belonging to each of the preceding classes (i.e., (149a-c)), all of them transitive, have the perfective suffix -é:.

(153)

Root/Stem	Perfective	
ɔ̢́:m	ɔ̢́:mé:	'do, make'
kɔ̢́:m	kɔ̢́:mé:	'indicate, determine'
tá̢:m	tá̢:mé:	'daub'
á̢:n	á̢:né:	'wake someone'
ɔ̢́:n	ɔ̢́:né:	'strain internally'
k'yá:1	k'yá:1é:	'invite, call'
k'ɔ́:1	k'ɔ́:1é:	'bite'
á:1	á:1é:	'chase, push'
dɔ́:pé	dɔ́:pé:	'request'
k'ɔ́:té	k'ɔ́:té:	'meet'

A number of roots with final vowels have perfective forms with a final consonant. The particular consonant (m, n, y, p) is not predictable and appears to be a relic of Proto-Kiowa-Tanoan.[44]

(154) Root   Perfective

     tʰǫ́:   tʰóm̲   'drink'

     tʰǫ́:   tʰɔ́n̲   'find'

     tǫ́:   tɔ́y̲   'roast'

     tǫ́:   tǫ́y̲   'speak, say'

     pǫ́:   pǫ́y̲   'sound, make a noise'

     tʰó: tʰóp̲   'insult'

     hɔ́:   hɔ́p̲   'recall, be aware of'

     dó: dóp̲   'put on'

     ó: óp̲   'pour, dish out'

Another small set of roots has perfective -p and, in addition, exhibits one of two vowel alternations, o∿e or u∿o. The root vowel (o, u) occurs in all forms but the perfective; the ablauted vowel (e, o) occurs only in the perfective form preceding -p (or -m following a nasal vowel). Whether the -p in these ablauting verbs is the result of some historical process related to the vowels or is merely excrescent is not yet clear.[45]

(155) Root   Perfective

  a. só: sép   'sew'

      sô: sép   'descend'

      zó: zép   'flow'

      có: cép   'have an opinion of'

      c'ó: c'ép   'lay sg/du'

  b. k'ú: k'óp   'lay pl'

      gû: góp   'hit'

(155) b. <u>Root</u>   <u>Perfective</u>

      -gṳ̂:   -gǫ̂m   'active distributive'

Four very common vowel-final roots have perfective forms that are particularly irregular, and historically interesting,[46] in that the suffix <u>-gyá(:)</u> is normally associated with intransitive verbs.

(156)   <u>Root</u>   <u>Perfective</u>

     pɔ́:   pɔ́:gyà: 'eat'

     sɔ́:   sɔ́:gyá: 'sit down'

     hɔ́:   hɔ́:gyà   'get, obtain'

     k'í: k'í:gyà   'throw'

Finally, there are a few unique cases, listed in (157). The <u>yí:∿yây</u> alternation is a reflex of reconstructed **<u>ia</u>, discussed in 2.4. <u>hḭ̂:∿hêm</u> 'die' is exceptional among exceptions in the occurrence of <u>hḙ̂:m-</u> in both negative (hḙ̂:mɔ̂:) and imperfective (hḙ̂:mä̀) as well as perfective.

(157)   <u>Root</u>   <u>Perfective</u>

    a.   yí: yây   'disappear'

    b.   hḭ̂:   hêm   'die'

    c.   hí: hɔ́:   'carry off'

    d.   kʰḭ̂:   tʰép   'exit/carry out'

    e.   kḭ́:   tém   'pull'

3.322. <u>Imperfective.</u> The allomorphs of the imperfective suffix are conditioned by phonological class and transitivity. Transitive allomorphs are -Cɔ̀ and -gù; the intransitive allomorph is -(m)ià. Thematic stems have the suffix -p regardless of transitivity.

Transitive roots and imperfective stems ending in a nasal resonant or vowel have the suffix -mɔ̀ (158a). Stems ending in 1 have the suffix -tɔ̀ (<dɔ̀, which is devoiced following obstruentization and devoicing of stem-final 1), shown in (158b).

(158)   Root/Stem   Imperfective

a.   ɔ̂ɪ̣:m   ɔ̂ɪ̣:mɔ̀   'do, make'

       tʰệ:m   tʰệ:mɔ̀   'break'

       kʰị̂:n   kʰị̂nmɔ̀   'cough'

       bɔ́ɪ̣:-n   bɔ́nmɔ̀   'look at'

       pɔ̂ɪ̣:   pɔ̂ɪ̣:mɔ̀   'extinguish'

       ɔ̂ɪ̣:   ɔ̂ɪ̣:mɔ̀   'give'

       pʰậ:y   pʰậymɔ̀   'tie'

b.   ó:1   óttɔ̀   'drop/fall'

       kʰû:1   kʰúttɔ̀   'pull off'

       sɔ́:-1   sɔ́ttɔ̀   'set du/pl'

       gú:1   gúttɔ̀   'write'

Transitive roots ending in an oral vowel or y have the allomorph -gù.

(159)   Root/Stem   Imperfective

   a.   sô: sô:gù   'sew'

       k'ɔ̂:   k'ɔ̂:gù   'cut, slash'

       hâ: hâ:gù   'arise'

       kʰî: kʰî:gù   'take out'

       zây   zâygù   'roll'

Intransitive stems ending in a nasal (160a) have the imperfective suffix -mà (<-mià via Glide Formation and Deletion), paralleling the transitive allomorph -mɔ̂. Intransitive stems ending in an oral vowel or resonant (160b) lack the m; -ià is reduced to -yà following consonants and the y deleted following a stem-final y. Note especially that intransitive imperfective -ià is suffixed directly to the root of derived intransitives; i.e., detransitive -gé is lacking in verbs like 'pop off' (<kʰûl 'pull off') or 'get bent' (<bôn 'bend'), shown in (160c).

(160)   Root/Stem   Imperfective

   a.   câ̧:n   cânmà   'arrive'

       bá:-n   bánmà   'go'

       zȩ́:m   zȩ́:mà   'move about pl'

       tʰá̧:   tʰá̧:mà   'feel'

   b.   sô: sô:yà   'descend'

       tá: tá:yà   'get cooked, ripen'

       há:y   há:yà   'learn'

       p'ɔ́:y   p'ɔ́:yà   'lose'

(160) Root/Stem Imperfective

    c.   gú:1   gú:1yà   'get written'

       kʰú:1   kʰú:1yà   'pop off'

       hį́:n   hį́:nyà   'get dug'

       bǫ́:n   bǫ́:nyà   'get bent'

It is possible that historically distinct suffixes fused to produce the modern imperfective allomorphs -dɔ̀/-mɔ̀, -mà: **-CV-V. The -CV suffix is the source of d and m, its vowel deleted by Vowel Truncation. The distribution of morphemes in the second suffix, -ɔ̀ 'imperfective transitive' and -ià 'imperfective intransitive', obviously parallels that of the perfective suffixes -ɔ́ (transitive) and -iá (intransitive).

Thematic stems have the imperfective suffix -p, which is attached directly to the perfective suffix. Transitive perfective -ɔ́ and intransitive -iá are raised to o and e preceding the -p (see fn. 26). Note that -iá(y) 'intransitive perfective' provides the environment for changing d to g via Dental-Velar Switch in 'get spilled'.

(161) Stem   Perfective   Imperfective

    hâ:pè   hâ:pɔ̀   hâ:pòp   'raise, pick up'

    há:pé   há:pá   há:pép   'rise, get picked up'

    dé:dé   dé:dɔ́   dê:dòp   'spill'

    dé:dè   dé:gyày   dê:dèp   'get spilled'

Interestingly, intransitives derived with -gé can also form the imperfective with -p suffixed to the perfective. Thus, underlying -gé-iá-p becomes -giáp via Vowel Truncation, -gép via Glide Deletion and Vowel Raising, and -dép via Dental-Velar Switch. Because these same intransitive stems also form the imperfective by suffixing -ià directly to the root (as in (160c) above), there exist imperfective doublets, as in (162).

(162)

Root	Impf (-ià)	Perfective	Impf (-p)	
ó:l	ó:lyà	ótkyá	óttép	'drop, fall'
kʰú:l	kʰú:lyà	kʰútkyá	kʰúttép	'pop off'
ǫ̨:m	ǫ̨:mà	ómgyà	ómdèp	'happen'
há:y	há:yà	háygyá	háydép	'learn'

Whatever semantic distinction (incipient or fading) might exist between the two imperfective forms is difficult to determine. Speakers report that both forms can be used in the same context, as in (163).

(163) á-k'yàm-kót-cę̀: hǫ́ndé gyà-há:yà//gyà-háydép ([3pl]-persevere-strong-when/same something [(x/agt):3pl/pat:pl/obj]-learn/impf) 'Knowledge is gained by being persevering/When one perseveres, one learns (things).'

3.323. Imperative. The imperative has two allomorphs: falling tone and ∅. Falling tone occurs on two

classes of roots, a) those ending in m̲, n̲, or 1̲, and
b) those ending in a vowel (oral or nasal) which do not
possess an imperfective stem.

(164)　　　Root　　　Imperative

　　a.　ɔ́ɛ̣:m　　　ɔ̂m　　　　'do, make'

　　　　kɔ́ɛ̣:m　　　kɔ̂m　　　'indicate'

　　　　cá̧:n　　　　cân　　　　'arrive'

　　　　dó̧:n　　　　dôn　　　　'seek'

　　　　t'á:1　　　　t'âl　　　　'sever sg'

　　　　k'ó:1　　　　k'ôl　　　　'burn incense'

　　b.　ɔ́ɛ̣:　　　　ɔ̂ɛ̣:　　　　'give'

　　　　dó:　　　　dô:　　　　'put on'

　　　　ɔ́:　　　　　ɔ̂:　　　　　'gamble'

Of course, roots with falling tone remain unchanged
in the imperative.

(165)　Root　　　Imperative

　　hâ̧:n　　　hân　　　　'eat up'

　　mɔ̂:　　　mɔ̂:　　　'lie down'

For all other verbs, the imperative is zero. Note
that thematic -gé becomes -dé via Dental-Velar Switch.

(166)　Root/Stem　　Imperative

　　á̧:　　　　　á̧:　　　　'come'

　　tʰó̧:　　　　tʰó̧:　　　'drink'

(166) | Root/Stem | Imperative | |
|-----------|------------|--|
| bá: | bá: | 'go' |
| k'ú: | k'ú: | 'lay pl' |
| k'í: | k'í: | 'throw' |
| hí: | hí: | 'carry off' |
| zá:y | záy | 'roll' |
| kú:y | kúy | 'turn back/inside out' |
| gó:bè | gó:bè | 'capture, miss' |
| hâ:pè | hâ:pè | 'pick up' |
| sǫ́:dé | sǫ́:dé | 'lower' |
| kʰyɔ̂:tè | kʰyɔ̂:tè | 'loosen' |
| mɔ́nyáygé | mɔ́nyáydé | 'wave at' |
| mɔ́ndétké | mɔ́ndétté | 'clutch at' |

The imperative is used for affirmative commands when the event is envisioned to be a single completed action, as illustrated in (167).

(167) a. èm-ą́: ([2sg]-come/imp) 'Come here.'

b. bè-sɔ́: ([2sg/refl]-sit/imp) 'Sit down.'

c. hóldé yą́-gûl (soon [(2,3sg/agt):1sg/pat:pl/obj]-write/imp) 'Write me soon.'

d. ɔ̀:kɔ̀sɔ́m-gùp bé-k'í: (window-out [2sg/agt:inv/obj]-throw/imp) 'Throw it out the window.'

3.324. **Imperfective imperative.** -î: 'imperfective imperative' is suffixed to the imperfective stem if one exists or to the root or thematic stem otherwise (see 2.6

for tone rules).

(168) <u>Root/Stem</u>   <u>Ipf/imp</u>

  ɔ̂:m   ɔ̂:mì: 'do, make'

  kʰî̧:n   kʰî̧:nì: 'cough'

  gṹ:n   gṹ:nî: 'discard, dance'

  sê:1   sê:lì: 'pick off'

  té:1   té:lî: 'tell'

  bá:n   bá:nî: 'go'

  sɔ́:1   sɔ́:lî: 'set pl'

  â:y   â:yì: 'start off'

  k'ɔ̂:   k'ɔ̂:yì:[47]   'cut'

  ɔ̂:   ɔ̂:yì:[47]   'gamble'

  bɔ̂:pè   bɔ̂:pì: 'swarm about'

  hɔ̂:dè   hɔ̂:gì: 'strip off'

  má:gè   má:gî: 'feed'

However, thematic stems whose roots end in resonants
lack the thematic suffix in the imperfective imperative
and thus resemble ordinary resonant-final stems.

(169) <u>Stem</u>   <u>Ipf/imp</u>

  yɔ̧̂:m-gé   yɔ̧̂:mî: 'tremble' (not *yɔ́mgî:)

  bî̧:n-gè   bî̧:nì: 'rape, go after'

  mɔ́n-yá:y-gé   mɔ́nyâ:yì: 'wave at'

The imperfective imperative is used for affirmative
commands when the event is envisioned as repeated, habit-

ual, or of some duration.

(170) a. hóldà bàt-ǫ̂:m-ì: (dress [2sg/agt:pl/obj]-make-
ipf/imp) 'Keep on making the dress.'

b. hópkɔ̀ á-kʰǫ̀:gí-ę̀: mà-cą̂:n-ì: (often your-grand=
father-at [2du]-arrive-ipf/imp) 'Stop by often
at your grandfather's.'

3.325. Future. The future has two allomorphs, -tɔ́:
(transitive) and -t'ɔ́: (intransitive),[48] which are suf-
fixed to the root or derived stem of all verbs. Tone on
the suffix is lowered by a preceding tone-lowering (TL)
morpheme (see 2.653) or by a preceding falling tone
(2.651).

(171)   Root/Stem   Future

a. dǫ́:n   dón-tɔ́:   'seek'

k'ɔ́:1   k'ɔ́1-tɔ́:   'bite'

bǫ́:   bǫ́:-tɔ́:   'look at'

pę́:n   pén-tɔ̀:   'butcher'

ó:1   ó1-tɔ̀:   'drop, fall'

k'ú: k'ú:-tɔ̀:   'lay pl'

kʰû:1   kʰû1-tɔ̀:   'pull off'

hé:bé   hé:bé-tɔ̀:   'carry in'

há:bè   há:bè-tɔ̀:   'smoke'

dé:dé   dé:dé-tɔ̀:   'spill'

c'ándé   c'ándé-tɔ̀:   'race'

(171) b.
Root/Stem	Future	
bá:	bá:-t'ɔ́:	'go'
dɔ́:	dɔ́:-t'ɔ́:	'be, exist'
pʰ$\underset{\textstyle\centerdot}{\acute{ɔ}}$:	pʰ$\underset{\textstyle\centerdot}{\acute{ɔ}}$:-t'ɔ̀:	'stop, stand'
hé:bè	hé:bè-t'ɔ̀:	'enter'
bɔ́:dè	bɔ́:dè-t'ɔ̀:	'emerge, appear'
gú:pé	gú:pé-t'ɔ̀:	'get hit'
tʰémgé-	tʰémdé-t'ɔ̀:	'get broken'
ótké-	ótté-t'ɔ̀:	'get dropped'

However, if the perfective of an intransitive thematic verb has final y (-iá(y) 'intransitive perfective'), the future suffix is attached to the perfective rather than to the stem.

(172)
Stem	Perfective	Future	
tó:té	tó:kyáy	tó:kyáy-t'ɔ̀:	'get gathered'
tʰ$\underset{\textstyle\centerdot}{\acute{a}}$:dé	tʰ$\underset{\textstyle\centerdot}{\acute{a}}$:dáy	tʰ$\underset{\textstyle\centerdot}{\acute{a}}$:dáy-t'ɔ̀:	'get wet'

The future suffix has both temporal and modal uses, sometimes in the same clause. As a temporal marker, the future may indicate an expected future event or one that is merely potential (173c). Note that the verb of the subordinate clause in (173b), 'when you come', is also future.

(173) a. hègɔ́ hábé nɔ́: bɔ́-k'yál-<u>tɔ́:</u> (now sometime I ([x/
  agt):2pl/pat:∅/obj]-invite-<u>fut</u>) 'I will ask you-

(173)   all to come some time.'

    b. èm-cán-<u>t'ɔ̀</u>:-nɔ̀ hègɔ́ yá̧-mɔ́:kʰɔ́l-dɔ̀:-<u>t'ɔ̀</u>: ([2sg]-
arrive-<u>fut</u>-and/diff now/then [(2,3sg/agt):1sg/
pat:pl/obj]-ready-be-<u>fut</u>) 'I'll have them (words)
ready for you when you come.'

    c. hàgyà à-bá:-<u>t'ɔ́</u>: (perhaps [1sg]-go-<u>fut</u>) 'Maybe
I will go.'

The modal uses of the future include the promissory
sense of (173a) above as well as obligation (174b) and
possibility (174c). A modal particle may, but need not,
occur in the clause, e.g., <u>hàgyà</u> 'perhaps' in (174c).

(174) a. hâ:gyá à-pʰɔ̧́:-<u>t'ɔ̀</u>: (where/Q [1sg]-stand-<u>fut</u>)
'Where should I stand?'

    b. k'yákômdà ∅-mâ:-ȩ̀:-dò kyǫ́ydé á-tʰày-dò:-<u>tɔ̀</u>:
(life [3sg]-indeed-good-because long=time [3pl/
agt:sg/obj]-with-hold-<u>fut</u>) 'Because life is so
enjoyable, we (people) ought to hang on as long
as possible.'

    c. hét hàgyà ȩ́-hɔ́:-<u>tɔ̀</u>: (exhortative perhaps [(2,
3sg/agt):1sg/pat:sg/obj]-get-<u>fut</u>) 'See if you
can take it away from me!'

In conditional sentences, the future is the obliga-
tory marker of the antecedent clause.

(175) a. à-tʰɔ̰́:-t<u>ɔ́</u>: gɔ̀ à-tôl ([2sg/agt:sg/obj]-find-<u>fut</u>

and/same [2sg/agt:sg/obj]-send/imp) 'If you find

him, send him here.'

b. ɔ̰́gɔ̀l èm-gún-t<u>ɔ̀</u>: gɔ̀ gyà-hɔ̂n-t<u>ɔ̀</u>: (counterfactual

[3sg/refl]-dance-<u>fut</u> and/same [3sg/agt:sg/obj]-

win-<u>fut</u>) 'If he had danced, he would have won

(a prize).'

Finally, the future is used for negative commands;

the prohibitive particle <u>pòy</u> introduces such clauses.

(176) a. pòy té: mèn-tél-t<u>ɔ̀</u>: (proh all [2sg/agt:du/obj]-

tell-<u>fut</u>) 'Don't tell them (du) everything.'

b. pòy tʰàlí: tɔ̰́:bɔ́t bɔ́dɔ̂:-ɔ̰̀:-t<u>ɔ̀</u>: (proh boy horn

[2pl/agt:(1,3sg/pat):inv/obj]-give-<u>fut</u>) 'Don't

give the horn to the boy.'

3.326. <u>Imperfective future.</u> All verbs form the

imperfective future by suffixing the future allomorphs

<u>-tɔ́</u>: (transitive) and <u>-t'ɔ́</u>: (intransitive) to the imper-

fective imperative stem.

(177) <u>Ipf/imp</u>   <u>Ipf/fut</u>

       hæ̰̂:nì: hæ̰̂:nì:-tɔ̀:   'eat up'

       zɔ̰́:nî: zɔ̰́:nî:-tɔ̀:   'take off'

       yɔ́tkî: yɔ́tkî:-t'ɔ̀:   'blunder'

       sɔ̀:hó:gî: sɔ̀:hó:gî:-t'ɔ̀:   'get into trouble'

The imperfective future differs from the future only in its focus on habitual, repeated, or continuing events.

(178) a. té-kʰì: à-bǫ́:n-î:tɔ̀: gɔ̀ dɔ́-têl (every-day [2sg/ agt:sg/obj]-see-ipf/fut and/same [(x/agt):1pl/ pat:∅/obj]-tell/imp) 'If you are going to be seeing him every day, tell us.'

b. pá:tʰ a̰:-tʰɔ̀p ∅-tʰó:gyáy-t'ɔ̀:-ȩ̀: à-ca̰:n-ì:t'ɔ̀: (eleven-beyond [3sg]-pass-fut-when/diff [1sg]- arrive-ipf/fut) 'I'll be coming (regularly) af- ter eleven.'

c. hábé gyá-kó:-yî:t'ɔ̀: (sometimes [(1sg/agt):2sg/ pat:sg/obj]-get=bored-ipf/fut) 'Sometimes you might get bored with her.'

However, the (perfective) future is used if repeated events are viewed as discrete, as in (179).

(179) yí:kʰ ḭ́:-dò èm-cán-t'ɔ̀:-ȩ̀: sɔ́t gyát-ɔ́mdé-t'ɔ̀: (twen- ty-times [2sg]-arrive-fut-when/diff just [(x/agt): 1pl/pat:pl/obj]-get=done-fut) 'You will have come twenty times by the time we finish.'

3.327. Hearsay. -hêl 'hearsay' behaves phonologi- cally like the future; it is suffixed to the root or de- rived stem, except in the case of perfective -iáy, and its falling tone is lowered by preceding TL morphemes or a

preceding falling tone.

(180) Root/Stem   Hearsay

bǫ́:   bǫ́:-hêl   'look at'

ą́:   ą́:-hêl   'come'

té:l   tél-hèl   'tell'

cą́:n   cán-hèl   'arrive'

hậ:n   hân-hèl   'eat up'

kʰû:l   kʰûl-hèl   'pull off'

hâ:pè   hâ:pè-hèl   'raise, pick up'

ɔ́mgé   ɔ́mdé-hèl   'happen, become'

k'í:gé   k'í:gyáy-hèl   'get stuck'

A speaker uses the hearsay suffix to indicate that
the information he is giving was not personally exper-
ienced. Most often the information has been reported to
him by another, but the particular channel (written or
spoken) is not important. Hearsay forms are required in
telling traditional stories and myths; a few particles,
e.g., béthɔ̀: 'unknowing', also require the hearsay. Note
that one can refer to oneself using the hearsay if the
information came from another source, as in (181b).

(181) a. béthɔ̀: èm-kò:dó-ɔ̀ltʰǫ̀-kʰɔ̀p-ɔ̀mdè-hèl (unknowing
          [2sg]-very-head-hurt-become-hsy) '(I) didn't
          know you had gotten a bad headache.'

   b. t'ǫ́:dè ę́-k'ǫ́:dè-hèl; cɔ̂: dɔ́ttè: nɔ́:-ì: ę́-tél-hèl
          (gallbladder [(2,3sg/agt):1sg/pat:sg/obj]-bad-hsy;

(181)   thus doctor my-son [3sg/agt:du/obj]-tell-<u>hsy</u>)

'The doctor told my sons (du) that my gallblad-

der isn't good/My gallbladder reportedly isn't

good; that's what the doctor told my sons (du).'

3.328. <u>Imperfective hearsay.</u> Imperfective hearsay

has two allomorphs, <u>-dê:</u> suffixed to statives and the fu-

ture suffix and <u>-ê:</u> otherwise. It is attached to the im-

perfective stem, or lacking one, to the root or derived

stem. Following <u>y</u>, the suffix becomes <u>-î:</u>,[49] as in 'wake

up' and 'tie'.

(182)   <u>Root/Stem</u>   <u>Ipf/hsy</u>

bǫ́:n   bǫ́:n-ê: 'look at'

hậ:n   hậ:n-è: 'eat up'

té:l   té:l-ê: 'tell'

kʰû:l   kʰû:l-è: 'pull off'

hâ:pè   hâ:p-è: 'raise, pick up'

há:pé   há:p-ê: 'rise, get picked up'

tâ:y   tâ:y-î: 'wake up'

pʰậ:y   pʰậ:y-î: 'tie'

Like the imperfective imperative, verbs derived with

<u>-gé</u> whose roots have final resonants lack the derivational

suffix in the imperfective hearsay.

(183)   <u>Stem</u>   <u>Ipf/hsy</u>

ɔ́:m-gé   ɔ́:m-ê:[50]   'happen, become'

(183)   Stem   Ipf/hsy

   zʌ́ɪ:y-gé   zʌ́ɪ:y-î: 'get mashed, mushy'

   The imperfective hearsay is used to report a con-
tinuous, repeated, or habitual but non-experienced event.
In (184c), for example, the speaker is reminding the ad-
dressee of instructions received not directly from the
doctor but through the addressee.

(184) a. béthɔ̀: ám èm-dʌ́ɪ:m-ê: (unknowing you [2sg]-be-
          ipf/hsy) 'I had no idea it was you!'

      b. hɔ́tôm té-kʰyàhɪ̀: nɔ́:-tò:-kyà èm-câɪ:n-è: (Q/hsy
          every-morning my-house-at [2sg]-arrive-ipf/hsy)
          'Is it so you had been coming to my house every
          morning?'

      c. dɔ́ttè: gyát-kɔ́m-hêl déòp èm-câɪ:n-ì:t'ɔ́:-dè:
          (doctor [[(x/agt):2sg/pat:pl/obj]-indicate-hsy
          at=times [2sg]-arrive-ipf/fut-hsy) 'You are to
          be coming at times the doctor indicated to you.'

   3.329. Negative. Negative is the only category
not exhibiting paired perfective and imperfective forms.
Allomorphs are -(C)ɔ̂: and -gû:. Following all resonant-
final active roots and thematic stems, the suffix is -ɔ̂:,
illustrated in (185). Roots with final l show d via
Lateral Obstruentization. Note that the falling tone of
the negative raises a preceding falling tone to high (see

2.652).

(185)   <u>Root/Stem</u>   <u>Negative</u>

        tʰȩ́:m   tʰȩ́:mɔ̂:   'break'

        dó̧:n   dó̧:nɔ̂:   'seek'

        î:l   í:dɔ̂:   'warn'

        â:y   á:yɔ̂:   'start off'

        hé:bé   hé:bɔ̂:   'carry in'

        hé:bè   hé:bɔ̂:   'enter'

        pâ:tè   pá:tɔ̂:   'sharpen'

        yɔ́mgé-   yɔ́mgɔ̂:   'tremble'

        háygé   háygɔ̂:   'learn'

Active roots with final nasal vowels have the negative allomorph <u>-mɔ̂:</u>, as do a few verbs which do not have nasal vowels synchronically but which were likely nasal historically, e.g., 'go' and 'be'.

(186)   <u>Root</u>   <u>Negative</u>

        mɔ̂:   mɔ́:mɔ̂:   'lie down'

        tȩ́:   tȩ́:mɔ̂:   'grab, catch'

        á̧:   á̧:mɔ̂:   'come'

        bá:[51]   bá:mɔ̂:   'go'

        dɔ́:[51]   dɔ̧́:mɔ̂:   'be, exist'

Roots with final oral vowels have negative allomorphs determined by transitivity and stativity: <u>-gû:</u> (transitive active), <u>-yɔ̂:</u> (intransitive active),[52] and

-gŝ: (intransitive stative), illustrated in (187). Note
that several roots cooccur with more than one of the allo-
morphs, e.g., k^hî: 'go/carry out', sô: 'go/carry down',
and dó: 'have/put on'.

(187) a. -gû: (transitive active)

Root	Negative	
k^hî:	k^hí:gû:	'carry out'
hâ:	há:gû:	'arise'
gû:	gú:gû:	'hit'
dó:	dó:gû:	'put on'
sô:	só:gû:	'carry down'
k'ú:	k'ú:gû:	'lay pl'
c'ó:	c'ó:gû:	'lay sg/du'

b. -yŝ: (intransitive active)

Root	Negative	
á:	á:yŝ:	'grow'
dó:	dó:yŝ:	'protrude'
k^hî:	k^hí:yŝ:	'exit'
t'ɔ́:	t'ɔ́:yŝ:	'hear'
sô:	só:yŝ:	'descend'

c. -gŝ: (intransitive stative)

dé:	dé:gŝ:	'be standing'
t'ɔ́:	t'ɔ́:gŝ:	'stay, remain'
dó:	dó:gŝ:	'have on, be holding'
k'ú-1	kópkŝ:[53]	'be lying pl'
k'ɔ́:	có:gŝ:[53]	'be lying sg/du'

Examples of the negative are given in (188). Note
that the negative particle hɔ́n is an obligatory marker of
a negative clause.

(188) a. hɔ́n àn ∅-mɔ́:tó:bɔ̂: (neg hab [3sg]-calm/neg) 'He
is never at ease.'

   b. hɔ́n ám-t'ɔ̂:dè ę̀-bîn-gɔ̀:[54] (neg your-ear [3du]-
   big/du/pl-neg) 'Your ears are not large.'

   c. kʰí:dêl ę́:hɔ̀: èm-t'ɔ́:-dê: né hɔ́n èm-bǫ́:-mɔ̂:
   (yesterday here [2sg]-stay-ipf/hsy but neg [1sg/
   agt:2sg/pat]-see-neg) '(I heard) you were here
   yesterday but I didn't see you.'

Negative may combine with future (189a), with hear-
say (189b), or with both (189c), in the order negative-
future-hearsay.

(189) a. á-k'í: hɔ́n hóldé ∅-cą́:n-ɔ̂:-t'ɔ̀: tó:-kyà (your-
husband neg soon [3sg]-arrive-neg-fut house-at)
'Your husband won't be coming home soon.'

   b. h̀ègɔ́ kɔ́y-dɔ̀m-gyà hɔ́n mà-cą́:n-ɔ̂:-hèl háòtè-sày
   (now Kiowa-land-at neg [2du]-arrive-neg-hsy sev-
   eral-year) 'You (du) reportedly haven't been in
   Kiowa country for several years.'

   c. k'yą́:hį̂: ∅-tǫ́:n-ê: hɔ́n è-cángɔ̂:-t'ɔ̀:-dè: ɔ́:hɔ̀:
   (man [3sg]-say-ipf/hsy neg [3du]-reach/neg-fut-
   hsy there) 'The man said that they (du) won't be

(189)   getting there/they (du) won't manage to get

there.'

3.33. Inflectional auxiliaries.

3.331. Aspect-directional auxiliaries. The inde-
pendent roots a̧: 'come (move toward speaker)' and hí:
(ᴧhɔ́:) 'convey away from speaker' can be suffixed to main
verbs to indicate both imperfective aspect and direction-
al movement associated with the event. As auxiliaries,
the verbs exhibit defective paradigms, having only per-
fective forms despite their imperfective function.

Although both the aspectual and directional func-
tions of these auxiliaries are potentially present, usu-
ally only one of them is prominent in a given situation.
However, even if the aspectual sense is central, the
speaker must still decide whether the event is taking
place as it moves toward him or away from him (or some
point of reference), as illustrated in (190a) -a̧: 'coming'
and (190b) -hɔ̀: 'going'.

(190) a. ɔ̀:pàl sép Ø-cándé-a̧: nɔ̀ pàhi̧: bà-tʰa̧:dáy (nearer
       rain [3sg]-reach-coming and/diff clearly [2pl]-
       get=wet/pf) 'The rain is getting closer and it is
       clear we will get wet.'
    b. bósèn ɔ̀:mày Ø-ɔ́mdé-hɔ̀: (buzzard farther=up [3sg]-
       become-going/pf) 'The buzzard is circling ever
       upward.'

When the event is neither approaching nor moving
away from the speaker, there is a choice; -ą́: 'coming'
appears to be preferred for general motion.

(191) à-kʰóppé-dɔ́:-ą́:   ([1sg]-run-move-coming) 'I went
       jogging.'

The spatial directionality indicated by these verbs
is also extended to temporal directionality with the same
implication of imperfective and usually durative or itera-
tive aspect.   Speakers tend to use -ą́: -coming' for past
events continuing up to the present, often translated by
the present perfect (192), and -hɔ́: 'going' for events con-
tinuing into the future (193).   There is an implication
of greater duration with these forms as opposed to the
ordinary imperfective.

(192) a. èm-pʰólátté-à: ([3sg/refl]-lie-coming) 'He has
          been lying all along.'
      b. ó:dé à-tʰǫ́:-ą́:-hêl (there=from [2sg/agt:sg/obj]-
          drink-coming-hsy) 'You have (reportedly) been
          drinking since way back.'

(193) a. hègɔ́ yą́-kɔ́y-tǫ̀-mɔ̀:gɔ̀-ɔ̀mdè-hɔ̀:   (now [(2,3sg/agt):
          1sg/pat:pl/obj]-Kiowa-speak-adept-become-going)
          'I'm getting better at speaking Kiowa.'
      b. ɔ̀:tʰɔ̀p kût-dòm à-yí:-hɔ̀:   (farther mark-within
          [1sg]-disappear-going) 'I am going more and more
          into debt.'

An explicit future suffix attached to -hɔ́: strongly suggests iteration, as in (194).

(194) a. háòp gyàt-sɔ́:-hí:-tɔ̀: (where/Q [1sg/agt:pl/obj]-put=in/pl-going-fut) 'Where (at what intervals) should I put them in?'

b. ę̀-ɔ́lhɔ̨́-ɔ̀y-ɔ̀mdè-hì:-t'ɔ̀:-dècò ɔ́lhɔ̨́tò: gyà-hɔ́:-hì:-tɔ̀: ([(2,3sg/agt):1sg/pat:sg/obj]-money-much-become-going-fut-as bank [1sg/agt:sg/obj]-buy-going-fut) 'As I get richer and richer, I'll buy banks (one after the other).'

c. è-tʰémdé-hì:-t'ɔ̀: ([3inv]-break/detr-going-fut) 'It (my car) will continue to break down (again and again).'

3.332. Active distributive. -gǘ: (∼gôm) 'active distributive' (see 3.231) is suffixed to active roots or stems to indicate that the event is distributed in time or space. It is inflected like an independent root, as in (195a-c), but the allomorphs of future are determined by the transitivity of the main verb, as in (195d-e).

(195) a. ɔ́:kɔ́ ∅-tʰɔ́n-dɔ́:-dé-èm à-cán-gòm (well [3sg]-dig-be-nom-where [1sg]-arrive-distr/pf) 'I got around to places where wells had been dug.'

b. hɔ́n è-hòt-gǘ:-mɔ̀: (neg [3inv]-travel-distr-neg) 'They (dogs) aren't out running around.'

(195) c. béthɔ̀: kɔ̂:gɔ̀-àl k'ǫ́:bɔ́ cɔ̂: àn á-hòt-gǔ̧:-yì:

(unknowing others-too old/inv thus hab [3pl]-
travel-distr-ipf/hsy) 'I didn't realize other old
folks ran around like that too.'

   d. hòt-gǔ̧:-t'ɔ̀: (travel-distr-fut/itr) 'run about'

   e. pɔ́l-gǔ̧:-tɔ̀: (eat-distr-fut/tr) 'eat around'

3.333. -hó:. The auxiliary -hó: 'go and ...' is
suffixed to active roots.

(196) a. à-bǫ́:-hô: ([2sg/agt:sg/obj]-see-go/imp) 'Go and
see him.'

   b. tôy bè-mɔ̂:-hò: (house/in [2sg/refl]-lie=down-
go/imp) 'Go inside and lie down.'

   c. dè-ɔ́l-tʰá:-hò:-tɔ̀: ([1sg/refl]-hair-cut/pl-go-
fut) 'I will go and get a haircut.'

While -hó:, like -gǔ̧:, never occurs as an indepen-
dent verb, it is certainly related to the bound root hó:-
'travel by vehicle, drive'.

(197) a. è-hó:-càn ([1pl]-drive-arrive/pf) 'We came by
car.'

   b. gyà-hó:-ày ([3sg/agt:pl/obj]-drive-start=off/pf)
'He drove off.'

3.34. Invariant suffixes.

3.341. Stative distributive. -yɔ́ 'stative distrib-
utive' indicates that the state described by the verb is

manifested in several locations at once. It may cooccur
with the future but seems not to be permitted with any
other inflectional suffixes. See also 3.332 for discus-
sion of the active distributive auxiliary.

(198) a. kɔ́ygú á:-dòm á-kî:-y<u>ɔ́</u> (Kiowa/inv woods-within
          [3pl]-camp-distr) 'Kiowas are camped about in the
          woods.'

      b. kɔ́ygú á-pį́:-kú:-y<u>ɔ́</u> (Kiowa/inv [3pl]-eat-sit/pl-
          distr) 'Kiowas are sitting scattered about eat-
          ing.'

3.342. <u>-kyá.</u> The suffix <u>-kyá</u> requires a pragmatic
judgment by the speaker as to whether the addressee knows
the answer to his question or comment. It indicates that
the speaker does not know nor does he expect the addressee
to know. For example, in (199a), the speaker expects no
answer or at most an 'I don't know'; in (199b), without
<u>-kyá</u>, he expects an informative response.

(199) a. hɔ̂ndé Ø-dó:-<u>kyà</u> (what/Q [3sg/agt:sg/obj]-hold-
          <u>wondering</u>) '(I wonder) what is he holding?'

      b. hɔ̂ndé Ø-dó: (what/Q [3sg/agt:sg/obj]-hold) 'What
          is he holding?'

<u>-kyá</u> can occur in declarative as well as interroga-
tive clauses (200a) and the fact that the speaker does not
know the answer himself can be made explicit (200b).

(200) a. hɔ́ndó ∅-dé:-<u>kyà</u> cát-kyà (why/indef [3sg]-stand-
        <u>wondering</u> door-at) '(I) wonder why he's standing
        at the doorway.'

   b. há:gyây gyà-ɔ́m-<u>kyá</u>-dè hɔ́n yą́-háygɔ̂: (which=one/
        indef [3sg/agt:sg/obj]-make-<u>wondering</u>-nom neg
        [(2,3sg.agt):1sg/pat:pl/obj]-learn/neg) 'I don't
        know which one he made.'

3.343. <u>-hɔ́p.</u> The suffix <u>-hɔ́p</u> is a modal-like ele-
ment but its meaning is not clear. It has a hortative
function when the verb has a third person prefix, as in
(201).

(201) a. ∅-kún-ą̀:-<u>hòp</u> ([3sg]-dance-come-<u>hortative</u>) 'He
        should come/Tell him to come and dance.'

   b. ∅-gû:-<u>hòp</u> ([3sg/agt:sg/obj]-hit-<u>hortative</u>) 'He
        should hit him.'

When it cooccurs with incorporated <u>háy-</u>, the exact
meaning of which is also unidentified, persons other than
third may be involved. In this context, the sense is fu-
ture uncertainty. Note that <u>-hɔ́p</u> is suffixed to the verb
root <u>hân</u>; there is no future suffix.

(202) hɔ́ndé ę́:hɔ̀dèk^hì: gyà-<u>háy</u>-hàn-hòp (something today
        [1sg/agt:sg/obj]-<u>hay</u>-eat=up-<u>hop</u>) 'I wonder what I
        will eat today.'

3.40. <u>Derivation.</u> This section describes the derivation of the remaining morphologically complex word classes: indefinite/interrogatives and adverbials.

3.41. <u>Indefinite/interrogatives.</u> Indefinite and interrogative words consist of one of two roots, hɔ́n- or há(:)-, followed by a variety of nominal and locative or adverbial suffixes, most of which occur fairly freely with other roots. In general, the interrogative form is distinguished from the indefinite by falling tone, e.g., hɔ̂n-dé 'what?' but hɔ́n-dé 'something', but there are several forms which are not distinguished, e.g., há:-cò 'how?, in some manner'.

hɔ́n- cooccurs with three suffixes, -dé 'basic', -gɔ́ 'inverse', and the syntactic suffix -dó 'because (of)'.

(203)   <u>Indefinite</u>   <u>Interrogative</u>

          hɔ́n-dé   'what-bas'   hɔ̂n-dé

          hɔ́n-gɔ́   'what-inv'   hɔ̂n-gɔ́

          hɔ́n-dó   'why'   hɔ̂n-dó

há:- cooccurs with nearly all the locative/directional suffixes, e.g., -gyá 'at (a point)', -bá 'on/against', -bé 'on/along', but not with -gú 'toward'. Several of the há:- interrogative/indefinites are complex, but the roots are not all identified, e.g., the <u>o</u> in há-ò-tè 'how many?, several' or há-ò-p 'when (exactly)', nor are vowel length alternations explained. Words listed in

(204a) are distinguished by falling tone on the interrogative form; words in (204b) are invariant.

(204) a. <u>Indefinite</u>   <u>Interrogative</u>

    há-gyá   'where/at'   hâ-gyá

    há-bá   'where/against'   hâ-bá

    há-bé   'where/along'   hâ-bé

    há-yá   'where/to'   hâ-yá

    há-gyâ-y   'which (one)'   hâ-gyâ-y

    há-bê: 'which (ones)'   hâ-bê:

    há-yâ-y   'which'   hâ-yâ-y

    há:-tê-l   'who'   hâ:-tê-l

  b. há:-cò   'how?, in some manner'

    há:-cò-tè   'which kind?, some kind'

    há-ò-tè   'how many?, several'

    há-ò-p   'when (exactly)'

    há-ò-y   'when (generally), later'

Finally, there are two interrogative particles marking yes-no questions: <u>hó</u> 'Q' and <u>hótôm</u> 'Q/hearsay'.[55]

3.42. <u>Adverbials.</u>

3.421. <u>Deverbal.</u> Deverbal adverbials fall roughly into two classes: a) those derived with <u>-l</u> or <u>-y</u> from stative verbs that assert a quality (e.g., 'bad', 'terrible') and b) those derived with <u>-de</u> from stative verbs of quantity (e.g., 'big', 'long').

The choice of <u>-l</u> vs. <u>-y</u> appears to be phonologically

conditioned, -1 following e and -y elsewhere, as illus-
trated in (205a). However, tʰ $\grave{\varrho}$-g $\grave{\mathfrak{o}}$: (?old-adv) 'old
(style)' and ob $\acute{\mathfrak{o}}$: 'real, true' are not independent sta-
tives, so -y and -1 may represent distinct derivational
processes. -dé, in (205b), is -té following a voiceless
segment (see 2.772).[56]

(205) a. c $\acute{\underset{\textstyle\varrho}{a}}$ymé-1   'hurriedly'

     k' $\acute{\underset{\textstyle\varrho}{\mathfrak{o}}}$:dè-1   'badly'

     zélbé-1   'terribly'

     s $\acute{\mathfrak{o}}$ybé-1   'slowly'

     kʰí:dê-1   'yesterday (<kʰí:dá 'day')'

     t'á:gyà-y   'nicely, carefully'

     tʰ $\grave{\underset{\textstyle\varrho}{\varrho}}$g $\hat{\mathfrak{o}}$-y   'old-time, old-fashioned'

     ób $\grave{\mathfrak{o}}$-y   'really, truly'

   b. ky $\acute{\underset{\textstyle\varrho}{\varrho}}$y-dé   'a long time'

     bîn-dè   'a lot, much (<bîn 'big du/pl)'

     cé:-dè   'a short time'

     sy $\acute{\mathfrak{o}}$n-dè   'a little'

     ét-té   'a lot (<ét 'big sg')'

A sentential adverbial suffix -té can be attached to
derived adverbials with -1 (206) as well as to a few sta-
tive verbs, e.g., s $\acute{\underset{\textstyle\varrho}{\mathfrak{o}}}$:mí: 'strange, interesting' in (207).

(206) zélbél-tè   'in a terrifying manner'

     kólbél-tè   'in a bold manner'

     kʰó:bél-tè   'unfortunately'

(207) a. kʰóːbéltè hón cólhòː gyàt-ǿːmôː (unfortunately
neg thus [1sg/agt:pl/obj]-do/neg) 'Unfortunately
I didn't do it that way.'

b. sǿːmíːté gyà-ây hón ∅-pǫ́ːcǫ́ːnôː (strangely
[3sg/agt:pl/obj]-start=off/pf neg [3sg]-see-
arrive/neg) 'It's strange that/Strangely he left
without seeing you.'

A third tentatively deverbal suffix is difficult to
characterize semantically. -ó-bà seems to derive manner
adverbials; in only one case is a verb root identified
with synchronic material: tóː(-bè) 'calm, quiet'.

(208) tó-ò-bà   'quiet, silent'
     c'ó-ó-bà   'firmly'
     hǫ́ː-ò-bà   'quickly, in a short time'
     tâm-ò-bà   'a reasonable degree'
     kú-ò-bà   'quiet, submissive'

A few of these manner adverbials function as paired
clausal connectors, as in (209).

(209) háòbà ∅-cǫ́ː-dóː déòbà gyà-ây-hèl (however [3sg]-
crawl-move thusever [3sg/agt:pl/obj]-start*off-hsy)
'As fast as he could travel he ran off.'

3.422. <u>Other.</u> Two classes of roots, locative and
deictic, constitute the non-verbal sources for derived

adverbials. Both classes cooccur with locative/direction-
al suffixes but the locative roots exhibit a greater va-
riety of combinations.

The four locative roots gú: 'out', tʰɔ́: 'beyond,
far', dǫ́:- 'under, down', and má: 'above, up' are illus-
trated in (210) in the most commonly occurring forms.
Note that -p becomes -m following a nasal; -p is likely a
reduction of -bá 'against' or -bé 'along'.

(210) a. -y 'at (general)'   b. -p 'at (exact)'

    gú-y   gú-p   'outside'

    tʰɔ́-y   tʰɔ́-p   'beyond'

    má-y   mâ-m   'up'

    dǫ́-y   dǫ̂-m   'down'

The deictic/demonstrative roots (see also 3.14) ę́:
'near', ó: 'distant', ɔ́: 'indeterminate' typically cooccur
with a limited set of the locative suffixes, most fre-
quently -y and -p. Further suffixation is usually with
the adverbial suffixes -gɔ̀ and -hɔ̀:, whose semantic con-
tribution is difficult to determine. In fact, the analy-
sis of this complex and subtle area of Kiowa grammar re-
quires a great deal more work. A few examples must
suffice.

(211) a. ó-p-hį̀: (distant-exact/loc-real)

    óphį̀: ę̀-bánmà (far=off [3du]-go/impf) 'They are
    going far off.'

(211) b. ɔ́-y-hɔ̀: (indeterminate-general/loc-adv)

yán-kʰɔ̰́:dè <u>ɔ́yhɔ̀:</u> ([(1sg/agt):2sg/pat:pl/obj]-

night=pass/imp <u>there</u>) 'Spend the night there.'

c. ó-p-cɔ̀ (distant-exact/loc-contrast)

<u>ópcɔ̀</u> bà-bá: (<u>there=instead</u> [2pl]-go/imp) 'Let's

go that way instead.'

d. ó-y-gɔ̀ (distant-general/loc-adv)

<u>óygɔ̀</u> yɔ́kɔ́y Ø-dé:dè yátmà: Ø-dɔ́: (<u>there</u> young=

woman [3sg]-stand-nom daughter=in=law [3sg]-be)

'The young woman standing there is Daughter-in-

Law.'

Notes

1. Comparative evidence reveals 'six' to be an old compound consisting of mɔ́-, one form of the root mɔ́:∿mɔ́n 'hand', and sɔ́, tentatively identified as an old root for 'one'. 'Six' is cognate in the Tanoan languages (Taos mą̓łi, Tewa sí (second half), Jemez mi̧:tʸi) but the root for 'one', which appears to be cognate with Proto-Uto-Aztecan **se 'one', has not been identified with synchronic material in any of the languages.

2. Normally a verb root or imperfective stem with F retains the tone in a nominal compound, as in zòntʰâ:pé 'squirrel' (<hâ:pè) and tʰǫ́:t'ɔ̂:dé 'faucet (<t'ɔ̂:dè).

3. Harrington (1928:14) identified roughly the same classes by the same criteria. His classes correspond to the classes listed here in the following way. Harrington's Animate I (major) and Animate II (minor) are subsumed under class I. Inanimate II[a] is class IIa and his Inanimate II is class IIb and III. Inanimate I[a] is class IVa, Inanimate I is class IVb, and Inanimate III is class IVc.

4. Intransitive prefixes have been used in the tables for simplicity, but any of the prefix sets operates in the same way, reflecting object number according to the class of the noun.

5. The variant -gú comes suspiciously close to being conditioned semantically, but it is also restricted to roots ending in y. See fn. 7 for more discussion of y-final roots.

6. Both -bɔ́ and -gɔ́ have subvariants -bɔ́t and -gɔ́t when paired with basic -bá and -gyá, e.g., tǫ́:bá/tǫ́:bɔ́t 'flute, reed pipe'.

7. Many instances of the falling tone allomorph occur on stems ending in y which must take the masculine (-k'ì:) or feminine (-mà:) suffixes when basic, e.g., k'yátáy- 'chief', k'yátáyk'ì: (sg/du) and k'yátây (inv); others are tʰɔ̀gúy-/tʰɔ̀gûy 'Kiowa-Apache', ɔ́lkʰɔ́y-/ɔ́lkʰɔ̂y 'crazy person', t'ɔ́kʰɔ́y-/t'ɔ́kʰɔ̂y 'White', and the free stem t'ɔ̀p-kʰɔ́y/t'ɔ̀pkʰɔ̂y 'buckskin' (<kʰɔ́y 'hide'). Other stems ending in y take the inverse allomorph -gú instead, a few of which are also bound and require the masculine or feminine suffixes when basic: kɔ́y-/kɔ́ygú 'Kiowa', kyây-/kyâygù 'Comanche', kûy/kûygù 'coyote', páy/páygú 'clock', yɔ́kɔ́y/yɔ́-kɔ́ygú 'young woman', kʰɔ́y/kʰɔ́ygú 'hide', k'ókɔ́y/k'ókɔ́ygú 'elk', and t'ɔ́kʰɔ́y/t'ɔ́kʰɔ́ygú 'mule'.

8. The occurrence of -y is neither predictable nor explainable. The only other instance is ɔ̀:zá:/ɔ̀:zây 'udder' (II).

9. Bloomfield's (1946:94) listing of such Algonquian animates as raspberry, horn, kettle, snowshoe, and large trees is well-known. Robert Rankin has also pointed out

(personal communication) that self-powered vehicles,
tools, streams, and common foods are typically classed as
animates in languages that make such a distinction.

10.   This difference in prefixes is the reason behind
Harrington's (1928:14) positing of two animate classes.
His animate major class consists of nouns requiring 3pl
á-, i.e., people, most especially of one's own tribe.
Animals are all animate minor, requiring 3inv è-.

11.   It is on the basis of the prefixes that Harrington
did not distinguish class IIb nouns from class III nouns.
One can argue for separating them, however, on the dis-
tribution of the inverse suffix. It is possible that
class III evolved out of IIb not very long ago. Kiowa
class III has no analog in the Tanoan languages, whereas
I, II, and IV can be found, if sometimes only as relics,
in the three subgroups of Tanoan.

12.   Speirs (1972) has analyzed number and noun classifi-
cation in Rio Grande Tewa as based on a distinction be-
tween unaffixed "entities" and affixed "sets". The paral-
lels with Kiowa are obvious.

13.   See Watkins (1978c) for a discussion of noun classi-
fication in Kiowa-Tanoan.

14.   Whether 'g-string' should be included in this group
is not certain. Harrington (1928:160) lists tɔ:ʔ 'groin'
as a possible root. If correct, the dual interpretation
is at least possible, but the basic and inverse forms are

suspiciously like derived nominals (see 3.182): t̂ɔ̂-y-dè
(groin-at-nom) 'at the groin thing'.

15. The second root of the compound ì:+p'ɔ́:gyà 'baby'
(child+fresh, new) is likely cognate with Tanoan **p'a (?)
'corn, green corn' and is thus originally plant material,
inherently plural. The etymology of bélkítkyà 'screech
owl' is unknown but the related bélkítkɔ́ 'make a hooting
noise/pf' suggests some complication with verbal morpholo-
gy. See fn. 16 for a similar case.

16. t^há:bá is fairly certainly the ablaut form of há:bè
'smoke/tr' and as such, -b is a thematic stem consonant.
It is possible that nouns with verbal sources form the
inverse by analogy with non-derived nominals of the same
class.

17. óy- is also pronounced úy- by some speakers of Kiowa.
These same speakers also pronounce the inverse suffixes
listed as -óy and -óp with the high back vowel (-úy, -úp).

18. It appears that -dé, reconstructed internally as a
dual marker (3.134), and -gɔ́, one of the inverse allo-
morphs, have generalized as nominalizing suffixes.

19. Both the compounding adjectival and verbal forms of
'small' vary between /sân/ and /syân/, but /syân/ is heard
far more frequently as the verbal form and /sân/ as the
adjectival form. The variation also exists for the noun
/sân/ 'child' but /syân/ in this case is quite rare.

20. Note that the compounded form is -êl 'big/sg' where-

as the stative verbal form is ét. See fn. 32 (Chapter Two) for other instances of the l∿d alternation.

21. A patient is one affected in some way by the event or state described by the verb. Body parts are just that, parts of the whole, and what affects or afflicts a part of the body affects the body/individual as a whole.

22. kóm 'friend' is originally a kin term referring to men married to sisters. As a proper kin term, kóm (ref) is câ: (voc) and câ:tè (name). In its extended meaning 'friend, pal, comrade' it has no vocative or naming forms but is treated by the possessive affixes as a kin term.

23. See fn. 18.

24. The agent:object paradigm always permits an interpretation involving a 3pl patient, e.g., gyà-hɔ́:gyà ([1sg/agt: sg/obj]-get/pf) 'I got/bought it' or 'I got/bought it for them'. Nevertheless, it is misleading to consider this 3pl patient a component of the agent:object prefixes; it is not marked in the prefixes in any way, either directly, as is the agent, or indirectly, as is an implied agent (see 3.232).

25. The /m/ in èm '2sg/intransitive' and èm '1sg/agt:2sg/ pat' is clearly derived from b 'second person' and is strange only in its position.

26. Vowel raising (low to mid a>e, ɔ>o) also occurs preceding the final p 'imperfective' of thematic verbs (see 3.322).

27. Harrington's pronoun tables correspond to the paradigms presented here in the following way. 1) I "subjective series" is the intransitive paradigm (see fn. 3 for Harrington's noun class terminology). 2) III "reflexive series" corresponds to reflexive (agent:object). 3) IV "subject-referential series" consists of the patient:object prefixes excluding 2sg/pat with unspecified object, i.e., just those prefixes used when no agent exists, as in possession. 4) II "transitive series" is a combination of agent:object and patient:object prefixes, the latter with zero object.

28. Both hî̧: 'die' and tʰá̧: 'feel' serve as bases for a large number of compounds, some idiomatic: ó̧:+tʰá̧: (good+ feel) 'be happy', tʰó̧:+hȩ̂:mà (drink+die/impf) 'be thirsty', dȩ̂:+hȩ̂:mà (sleep+die/impf) 'be sleepy'. The compounds also take the intransitive prefixes.

29. -dó: 'be, exist' as a stative suffix does not change the prefix requirements of the stem to which it is attached. For instance, háygyá 'learn' takes the patient: object prefixes, as does the derived stative háygyá-dɔ̀: 'know'.

30. According to Chafe (1970:102) an ambient verb "involves an all-encompassing event which is without reference to some particular 'thing' within the environment."

31. The use of reflexive prefixes for an accidental event relating to the body is not common (see 3.27 on control).

The only other instance discovered so far is sé:bɔ̀ 'stick, prick': dè-sé:bɔ̀ ([1sg/refl]-stick/pf) 'I stuck myself' or 'I got stuck'. A related kind of reflexive construction has been found with one verb, where the agent causes someone else to do something to him: dè-k'ɔ́-pʰ ì l-tɔ̀: ([1sg/refl]-cut-wipe-fut) 'I'll get a haircut', not *I'll cut my own hair'.

32. Two intransitive verbs that describe apparently transitive events, gú:pá 'hit the mark/pf' and tʰópkyày 'pierce through/pf', can also be understood as natural developments based on the category of control. gú:pá 'hit the mark' is derived from transitive gû: 'hit, punch' and can be seen as a prototypical [- control] act of hitting, i.e., hitting a target at some distance with a missile. Similarly, tʰópkyày 'pierce through', the transitive source for which is unidentified, represents a [- control] act of piercing, i.e., the presumably more difficult task of running a spear or arrow completely through the body of one's prey.

33. Mr. McKenzie considers this "elegant" usage. I do not know whether this means merely the absence of derogatory connotation or that dual:object prefixes in such constructions were typical of myths and narratives as opposed to everyday conversation.

34. This example is another case of a derived intransitive verb with patient:object prefix used in a [- control]

sense; the speaker expects to cause the crowd to disperse only indirectly.

35. See fn. 32, Chapter Two, for a brief discussion of the l∿d∿t alternation.

36. One possible source for the t is an imperfective stem -1 (sá:l- and $t^há$:l-) but it is unmotivated since negative is formally perfective. Analogy may have played a role in the development of these excrescent stops.

37. They are hị̂:(<hêm) 'die', tây 'wake up', p'ɔ̂y 'fail to find', k^hị̂: 'bloom', bî̠n 'be large du/pl', syân 'be small du/pl', and two roots which may take either transi- or intransitive allomorphs, k^hî: 'go/carry out' and sô: 'go/carry down'.

38. Seen from a syntactic perspective, both stative and causative derivation are cases of incorporation.

39. The underlying alternations in 'be lying' are highly irregular. More importantly they are likely reflexes of a glottalized-plain stop ablaut in Kiowa-Tanoan and of palatalization, which promises to explain a number of other odd correspondences.

40. While the ablaut pair h∿t^h (hó:∿t^hó:) is a common one, the alternation is not normally found under these conditions (see 2.82). However, the existence of related verbs, e.g., t^hó:yà 'move about/impf' and t^hôygù 'handle about/impf' lend support to considering these forms cog- nate.

41. Tone on the derivational suffix is not predictable phonologically, except when there is a falling tone on the root. The assumption is that, like many other morphemes, those roots followed by a low tone are TL morphemes (see 2.653) although there is no independent proof for most thematic stems.

42. Given the complementary distribution of l and n with respect to nasality, it is likely that these imperfective stem consonants can be reconstructed as a single resonant. See fn. 51 on the historical nasals in bá: 'go' and bɔ́: 'bring'.

43. It appears to be impossible to predict which verbs occur with -y and which do not. Only roots ending in y never cooccur with perfective -y. In fact, there is some disagreement among Kiowa speakers whether a given verb has -y in the perfective or not.

44. Compare, e.g., Tewa su̧wa 'drink' and Kiowa t^{h}óm 'drink/pf'.

45. Three nouns complete the list of morphemes exhibiting the o∿e ablaut: zǫ́:∿zém 'tooth', c'ó:∿c'ép 'rock, stone', and t^{h}ǫ́:∿t^{h}ém 'bone'. With the exception of 'bone', this alternation is restricted to an environment following coronal continuants. For a possible explanation of the history of this alternation, see Watkins (1978a). While -p may be a reduced suffix, speakers today have a tendency to attach a final [p] in rapid speech if the preceding

vowel is round.

46. It is particularly interesting that, despite there being very little obviously similar morphological material in the Tanoan languages, só:gyá: 'sit down/pf' and hó:gyà 'get/pf' have cognates in Tewa soge, hoge.

47. The y appears to be epenthetic in these vowel-final roots.

48. It is interesting to note that a possible historical source for this suffix, Taos t'oᵛto 'dance, do', exhibits the glottalized-plain stop ablaut that is common to the Tanoan languages but is virtually unattested in Kiowa (see also fn. 39). Arizona Tewa also has a 'future intentional' suffix -t'o.

49. This follows the general phonotactic prohibition of e following velars or y.

50. Because of the interaction of tone rules with inherent and imperfective stem tones, there are many pairs like transitive $\hat{ɔ}$:m-è: 'do, make-ipf/hsy' and detransitive $\hat{ɔ}$:m-ê: 'happen-ipf/hsy'.

51. bá: 'go' and dɔ́: 'be' have cognates in the Tanoan languages with initial m and n: Taos me̜ 'go', Tewa ná: 'be located'.

52. See fn. 47.

53. See fn. 39.

54. This is the only instance of an inherent falling tone maintained adjacent to the negative with lowering of the

falling tone on the negative (see 2.6521). A possible ex-
planation is speaker avoidance of the potentially homoph-
onous bíngô: 'rape/neg'. Such avoidance of terms with
obscene connotations is common among the Kiowa.

55. The second syllable of the hearsay interrogative
hótôm obviously resembles the root tǫ: 'speak', i.e., 'is
it said that...?'.

56. -dé looks suspiciously like nominal -dé 'basic'.
These examples may in fact be derived nominals with ad-
verbial syntactic function, e.g., kyǫ́ydé dè-dónmò (long=
time [1sg/agt:3pl/obj]-seek/impf) 'I was looking for them
for a long time'.

CHAPTER FOUR

Syntax

4.0. _Introduction_. The description of sentence
structure is presented here in three sections: (4.1) the
structure of simple sentences, i.e., those consisting of
a single clause, (4.2) incorporation in the verb, some
cases of which can be viewed as a kind of embedding, and
(4.3) complex sentences.

Although clause-level structure has been analyzed
from a standard transformational perspective, the grammar
of Kiowa as a whole is better served by a semantically
based model (e.g., along the lines suggested by Chafe
(1970)). Lacking a sufficiently elaborated alternative
which would suit the needs of this descriptive grammar,
the following chapter is intended to illustrate the major
features of surface clause-level structure in a non-formal
way.

4.1. _Simple sentence structure_.

4.11. _Order of major constituents_. The major con-
stituents of the Kiowa clause are the verb and its asso-
ciated nominals, of which only the verb is obligatory.

The nominals reflect the three possible semantic roles in the clause, that of agent (A),[1] patient (P), or third person object (O). Semantic role is unmarked on fully specified nouns, as illustrated in (1), where k'yá̜:hî̜: 'man' is the intransitive participant in (1a), the agent in (1b), and the patient in (1c).

(1) a. k'yá̜:hî̜: ∅-cán (man [3sg]-arrive/pf) 'The man came.'

 b. k'yá̜:hî̜: tʰàlí: è̜-góp (man boy [3sg/agt:du/obj]-hit/pf) 'The man hit the boys (du).'

 c. k'yá̜:hî̜: kút yán-ó̜: (man book [(1sg/agt):2,3sg/pat:pl/obj]-give/pf) 'I gave the man a book.'

However, role is signaled in the pronominal prefixes associated with the verb (see 3.2). Thus, a nominal associated with the verb is clearly identified as to its role status, whether or not it is present in the surface structure of the sentence. Moreover, it is not identified for any other function, i.e., as a syntactic subject or object, terms which are at best meaningless and at worst misleading with respect to Kiowa.

The basic or neutral[2] order of major constituents in the clause is APOV (agent-patient-object-verb). Kiowa is thus a verb-final language typologically but not strictly so. It is rare to find all three nominals present in a clause in ordinary discourse. Typically, a participant

is identified by a full noun at the beginning of a stretch
of discourse. Thereafter, it is signaled only in the
verbal prefixes, at least until such time as the speaker
feels that the participant should be reidentified for his
listeners. The example in (2), from a narrative about the
Kiowa way of raising children told by Mrs. Kayitah, is a
good illustration. The text begins with the word ì:p'ɔ́:-
gyà 'baby'; after five clauses, in which the only indica-
tion of participants lies in the pronominal prefixes, the
child (sân) is again referred to by an overt noun.

(2) ì:p'ɔ́:gyà ∅-syɔ́n-t'ɔ̀: nɔ̀ á-cɔ̀:-dè ∅-hɔ́:-tɔ̀: gɔ̀ ∅-pʰæ̨̀y-
tɔ̀:, pʰǽ̨:kʰɔ̀-tɔ̀ ∅-pʰæ̨̀y-tɔ̀: gìgɔ́ ∅-tǫ́:tʰá:-tɔ̀: t'ǽ::gyà
gɔ̀ àn ∅-kɔ́m-hí:-tɔ̀: ę́:gɔ̀ k'yákômdà gyà-dɔ́:. hɔ́n sân
án-háygɔ̂:-t'ɔ̀:-àl... (baby [3sg]-small/sg-fut and/
diff its-mother-poss [3sg/agt:sg/obj]-take-fut and/
same [3sg/agt:sg/obj]-wrap-fut, cradle=blanket-with
[3sg/agt:sg/obj]-wrap-fut and=then/same [3sg/agt:sg/
obj]-talk=to-fut very=nicely and/same hab [3sg/agt:
sg/obj]-indicate-going-fut this/here life [pl]-be.
neg child [(2,3sg/agt):3sg/pat:pl/obj]-learn/neg-fut-
although ...) 'When a baby is small, its mother will
take it and wrap it, will wrap it in a cradle blanket
and will talk to it very nicely and tell it about what
this life is. Even though the child doesn't under-
stand ...'

Even in elicited sentences, when the speaker may be asked to provide full nouns, it is rare for agent, patient, and object to occur preceding the verb. In general, old or non-contrastive information can be dislocated to the right of the clause.[3] For example, the neutral order, shown in (3a), is patient-object-verb, with the first person agent signaled only in the verbal prefix. In (3b), the focus is on the patient/source (indicated in the English gloss by an acute accent over 'Bill') and cê̱: 'horse' is shifted to the right. In (3c), the same participants are constituents of a relative clause whose head 'horse' is the object of the verb 'buy'. In this case, 'horse' remains to the left and 'Bill' is shifted to the right of the embedded verb hɔ́:gyà 'get, buy'.

(3) a. P   O   V
     Bill cê̱: gyá-hɔ́:-gyà (Bill horse [(1sg/agt):2,3sg/pat:sg/obj]-get-pf) 'I bought the horse from Bill.'

   b. P   V   O
     Bill gyá-hɔ́:-gyà cê̱: (Bill [(1sg/agt):2,3sg/pat:sg/obj]-get-pf horse) 'I bought the horse from Bíll.'

   c.   O   V   P
     {ɔ́gɔ̀ ám cê̱: gyá-hɔ́:-gyà Bill-dè} Ø-k'ɔ̱́:dè ({sub anph horse [(1sg/agt):2,3sg/pat:sg/obj]-get-pf Bill-nom} [3sg]-bad) 'The horse that I bought from Bill is no good.'

A final example (4) illustrates the post-verbal position of a noun that was added as a kind of after-thought, a reminder to the listeners of the topic of the discourse. The first clause of a narrative about the drying and storing of corn by Mrs. Saumty introduces the noun in preverbal position (é:tʰâlà:hį̀: 'Indian corn'). Some six clauses later, all connected by switch-reference markers (see 4.32), the corn is again referred to by an overt noun, this time following the verb.

(4) kʰǫ̀:tè gɔ̀ tʰą́:tè é:tʰâl+à:+hį̀: ę́-ɔ̀:m-ɔ̀ gìgɔ́ ... ę́-kʰɔ̀y+pʰìt é:tʰâl... (MoFa/name and MoMo/name corn+plant+real [3du/agt:sg/obj]-make-impf and=then/same ... [3du/agt:sg/obj]-husk+wipe/pf corn...) 'Grand-father and Grandmother would do the Indian corn... they husked it, the corn...'

Occasionally a noun may be dislocated to the right in order to avoid a sequence of identical or nearly iden-tical words. Sentence (5a), where the ablaut form of the verb zón 'pull out' is the second root of the compound kʰúy+còn 'drawer', was rejected by Mrs. Kayitah as stylis-tically poor. Mr. McKenzie judged the order of constit-uents in (5b) with the object 'money' following the verb to be preferable to the neutral order, in which the object noun preceding the verb would result in the sequence ɔ́lhɔ́tò:kyà ɔ́lhɔ́:gyà. In this case, the choice of constit-

uent to shift ('money' rather than 'at/to the bank') is
a consequence of the minimal contribution 'money' makes
to the message, ranking among the more predictable things
one might take to a bank.

(5) a. *kʰúy+còn gyà-zón (drag+pull=out [1sg/agt:sg/obj]-
pull=out/pf) 'I pulled out the drawer.'

                                         V   O

    b. kʰyą́hį́:gɔ́: ɔ́lhɔ̨̀tò:-kyà gyà-híttɔ̀ ɔ́lhɔ̨́:gyà (tomor-
row bank-at [1sg/agt:sg/obj]-convey/impf money)
'I am going to take money to the bank tomorrow.'

In sum, the considerable variation in word order is
explained by such discourse features as old vs. new infor-
mation and focus of contrast.[4]

    4.12. <u>Noun phrases.</u> A noun phrase consists of
a) a simple noun, compound noun, or pronoun,
b) a sequence of demonstrative or quantifier plus noun,
c) a demonstrative or quantifier alone, or
d) a nominalized (i.e., relativized) clause.
Adjectival modification of nouns is accomplished by com-
pounding (3.15) or by relativization (4.31) and possession
is indicated by affixation (3.17).

    Demonstratives (3.14) and quantifiers (adverbials
(3.421) and numerals[5]) are adjuncts that typically precede
the noun. They may also occur as the single constituent
of the noun phrase, as illustrated in the (b) sentences of
(6)-(8).

(6) a. óy-dè sân ∅-kʰóp+dɔ́: (that-bas child [3sg]-hurt+
be) 'That child is sick.'

b. óy-dè ∅-kʰóp+dɔ́: .(that-bas [3sg]-hurt+be) 'That
one/He/She is sick.'

(7) a. yí: sôl nèn-hɔ́:-gyà (two onion [1sg/agt:du/obj]-
get-pf) 'I bought two onions.'

b. yí: nèn-hɔ́:-gyà (two [1sg/agt:du/obj]-get-pf) 'I
bought two.'

c. yí:tʰa̰: k'yá̰:hyóp ém-k'yá:1-é: (twelve men [3pl/
agt:3pl/obj]-invite-pf) 'They invited twelve men.'

(8) a. éttè sa̰:dɔ̀ è-kút+k'ù1 (many child/inv [3inv]-
school+be=sitting/pl) 'Many children are attending
school.'

b. éttè è-kút+k'ù1 (many [3inv]-school+be=sitting/pl)
'Many are attending school.'

When both adjunct and noun occur, word order may
vary according to focus and/or old vs. new information as
it does for major constituents. In (9), yí: 'two', which
would normally precede 'flyswatters' has been moved to the
right of the noun.

(9) pól+tʰo̰: yí: né-dɔ́: nɔ̀ kɔ̂:-gɔ̀ hâ:yá bɔ́dɔ̂:-ɔ̰:m-è:
(bug+club two [(2,3sg/agt):1sg/pat:du/obj]-be and/diff
other-inv where/Q [2pl/agt:(1,3sg/pat):inv/obj]-do-pf)
'I had two flyswatters -- what did you (pl) do with my
other one?'

4.13. <u>Adverbials.</u> Adverbials fall into two syntactic classes, adverbs and noun-locative expressions. As is generally the case with word order in Kiowa, statements about adverbials reflect tendencies in ordering rather than strict ordering.

4.131. <u>Adverbs.</u> The derivation of adverbs was described in 3.42. Adverbs of all semantic types (e.g., place, time, manner) occur most commonly in initial position in the clause, as illustrated in (10), and slightly less frequently in final position (11a-c). If more than one adverbial occurs in a clause, one of them is likely to be shifted to the right of the verb (11d).

(10) a. g$\underset{\sim}{í}$:gɔ́: àn dè-kʰî:pòp (<u>early/morning</u> hab [1sg/ refl]-fly=up/impf) 'I pop up early in the morning.'

b. hɔ́pkɔ̀ mɔ́n àn èm-k'y$\underset{\sim}{ɔ́}$:+$\underset{\sim}{â}$:dèp (<u>frequently</u> probably hab [2sg]-romance+dream/impf) 'You probably dream frequently about romance.'

c. gúp à-kʰî:-yà (<u>outside</u> [1sg]-exit-impf) 'I'm going outside.'

d. ky$\underset{\sim}{ó}$ydé kɔ́ygú dé-dón-mɔ̀ (<u>long=time</u> Kiowas [1sg/ agt:inv/obj]-search-impf) 'I was searching for the Kiowas for a long time.'

e. $\underset{\sim}{é}$:hɔ̀dè+kʰ$\underset{\sim}{ì}$: gyà-kò:dó+sàl (<u>this+day</u> [pl]-very+ hot) 'It is/was very hot today.'

f. $\underset{\sim}{é}$:gɔ̀ à-t'ɔ́: (<u>here</u> [1sg]-stay) 'I'm (in) here.'

(10) g. kʰòdê:dè ∅-sɔ́ɔ̰:dè (suddenly [3sg]-angry/pf)

'Suddenly he got angry.'

(11) a. hɔ́n gyà-bɔ̰́:-mɔ̂: háòtè+kʰɪ̀: (neg [1sg/agt:sg/obj]-

see-neg several+day) 'I haven't seen him in sev-

eral days.'

b. yɪ́:dè óydè mátʰɔ̀n dɔ́-k'ɔ́:t-é: kʰɪ́:dêl (both that

girl [(x/agt):1pl/pat:∅/obj]-meet-pf yesterday)

'Both those girls met us yesterday.'

c. éttè kyâygù è-kɔ́y+kùn+sɔ̀m+t'ɔ̀:-dè: gɪ̰́:gyà (many

Comanches [3inv]-Kiowa+dance+observe+stay-hsy at=

night) 'Many Comanches were present last night to

watch Kiowa dancing.'

d. kʰɪ́:dêl páy ∅-yây mɔ́sɔ́-yɔ̀: (yesterday sun [3sg]-

disappear/pf six-at) 'The sun set at six yester-

day.'

4.132. _Noun-locatives._ A second type of adverbial

construction is that of nouns with locative/directional or

instrumental suffixes, which in neutral position typically

follow an overt noun (12a) or clause-initial adverb (12b).

Occasionally two such adverbials occur initially (12c).

(12) a. tʰàlyóp cát-kyà ét-mɔ́bɔ́ttɔ̀ (boy/inv door-at

[3inv/refl]-crowd/impf) 'The boys were crowding

at the door.'

b. t'á:gyày mɔ́n-tò gyà-pʰáttɔ̀ (carefully hand-with

[1sg/agt:sg/obj]-smooth/impf) 'I was carefully

smoothing it with my hands.'

(12) c. pʰá̰y-tò tá:-gyà à-gú:pép   (dirt-with eye-in [1sg]-
get=hit/impf) 'I'm getting hit in the eye with
dirt.'

Word order of these adverbials is also flexible de-
pending upon the presentation of the message. In (13a),
the new information is the number of hairs; the old infor-
mation, their location in the soup, is shifted to the
right of the verb. (13b) illustrates the noun-instrumen-
tal adverbial in clause-initial position, where the focus
of contrast is the instrument 'fork' rather than the ob-
ject 'tomato'.

(13) a. ḛ́:gɔ̀ yí: ɔ́l ḛ̀-cél kí:còy-kyà   (here two hair [3du]-
be=in/sg/du soup-in) 'There are two pieces of hair
in the soup.'

   b. pí̤:có̤:-tò k'ɔ̰̂:dɔ̀ dé-sá: (fork-with tomato/inv
[1sg/agt:inv/obj]-shatter/pf) 'I burst the tomato
with a fork.'

A passage from the opening line of a letter illus-
trates a sequence of clause-initial adverbials permitted
in a more formal style.[6]

(14) kʰí:dêl ám-tʰà:ɔ̀n-kyà kʰòdê:dè è-hó:+càn...   (yester-
day your-town-at suddenly [1pl]-drive+arrive/pf) 'We
unexpectedly drove by your town yesterday...'

4.14. Questions. Questions are introduced by a clause-initial particle or interrogative word (3.41).

4.141. Yes-no questions. The interrogative particle hɔ́ occurs in initial position in a questioned clause, preceding nominals, adverbials, and other particles, as illustrated in (15).

(15) a. hɔ́ á-k'í: àn dét-mɔ́nyáygóp...? (Q your-husband
        hab [(x/agt):2sg/pat:du/obj]-wave/impf...) 'Does
        your husband wave to you...?'

     b. hɔ́ áál yán-dó:yà (Q glands [(1sg/agt):2sg/pat:
        pl/obj]-protrude/impf) 'Are your glands swollen?'

     c. hɔ́ hɔ́n k'yá̧:hí̧: à-bó̧:-mɔ̂: (Q neg man [2sg/agt:sg/
        obj]-see-neg) 'Didn't you see the man?'

     d. hɔ́ dɔ́:kʰí-tʰɔ́p èm-ɔ̂y+à̧:-t'ɔ̂: (Q Sunday-beyond
        [2sg]-again+come-fut) 'Will you come again next
        week?'

     e. hɔ́ mén-gút (Q [(x/agt):3du/pat:pl/obj]-write/pf)
        'Did you write to them (du)?'

The hearsay interrogative particle hɔ́tôm also occurs clause-initially.

(16) hɔ́tôm nɔ́:-tò:-kyà kʰí:dêl èm-pí̧:+t'ɔ́:-dê: (Q/hsy
     my-house-at yesterday [2sg]-eat+stay-hsy) 'Is it so
     that you were at my house to eat yesterday?'

However, movement of constituents can result in a clause-internal position for h$\acute{\circ}$, e.g., when a participant is singled out for contrastive focus (ám 'you' in (17a)) and is shifted to the left of h$\acute{\circ}$. Similarly, if a noun in a questioned clause is relativized, the entire relative clause is moved to the left of h$\acute{\circ}$, as in (17b). The non-relativized version of (17b) is given in (17c) for comparison.

(17) a. gyát-háy-gyá+d$\grave{\circ}$:...n$\grave{\circ}$ ám h$\acute{\circ}$ yán-háy-gyá+d$\grave{\circ}$:
        ([[(x/agt):1pl/pat:pl/obj]-learn-detr+be...and/
        diff you Q [(1sg/agt):2sg/pat:pl/obj]-learn-detr+
        be) 'We know...do yóu know?'
    b. {$\acute{\circ}$g$\grave{\circ}$ k'yá:hî: $\emptyset$-p$\acute{\circ}$:+cán-dè} h$\acute{\circ}$ Lawton-gù $\emptyset$-bá:
        ({sub man [3sg]-see+arrive/pf-nom} Q Lawton-to
        [3sg]-go/pf) 'Did the man who came to see you go
        to Lawton?'
    c. h$\acute{\circ}$ k'yá:hî: Lawton-gù $\emptyset$-bá: (Q man Lawton-to
        [3sg]-go/pf) 'Did the man go to Lawton?'

Finally, there is an invariant tag h$\hat{\circ}$:, which occurs primarily on declarative sentences but may also occur with interrogative word questions. A few examples are given in (18). The English gloss for this tag should be read [h$\tilde{\Lambda}$].

(18) a. m$\acute{\circ}$n $\acute{\circ}$yh$\grave{\circ}$: èm-t'$\acute{\circ}$:, h$\hat{\circ}$: (probably there [2sg]-
        stay, huh) 'You probably were there, huh?

(18) b. hègɔ́ mɔ́n ę́-pá:bí+gùn, hɔ̂: (now probably [(2,3sg/
   agt):1sg/pat:∅/obj]-brother+discard/pf, huh) 'So
   you probably want to disown me as a brother, huh?'

   c. há:cò bàt-pél+dò:, hɔ̂: (how/Q [2sg/agt:pl/obj]-
   thought+hold, huh) 'What do you think of that,
   huh?'

   4.142. Interrogative word questions. Interrogative
words, whose internal structure is described in 3.412,
occur in clause-initial position. In transformational
terms, these interrogative words have been fronted as the
focus of the question and therefore do not vary in sur-
face position.

   Some examples of interrogative word questions are
given in (19). Note that two of the interrogative words
have suffixes, in (19b) the instrumental -tò and in (19f)
the contrastive -cò.

(19) a. há:têl à-bǫ́: (who/Q [2sg/agt:sg/obj]-see/pf)
   'Who did you see?'

   b. hɔ̂ndé-ttò à-gɔ́p (what/Q-with [2sg/agt:sg/obj]-
   hit/pf) 'What did you hit him with?'

   c. hɔ̂ndɔ́ hɔ́n kʰí:dêl èm-cą́:n-ɔ̂: (why/Q neg yesterday
   [2sg]-arrive-neg) 'Why didn't you come yesterday?'

   d. há:gyây gyá-tʰén+dɔ̂: (which=one/Q [(1sg/agt):2sg/
   pat:sg/obj]-heart+be) 'Which one do you want?'

(19) e. hâ:gyá èm-t'ɔ́: (where=at/Q [2sg]-stay) 'Where
are you staying?'

f. hâ:bé-cò Ø-cán (where=along/Q-contrastive [3sg]-
arrive/pf) 'Where did he come from?'

g. háòtè są̀:dɔ̀ gɔ́t-dɔ́: (how=many/Q child/inv [(x/
agt):2sg/pat:inv/obj]-be) 'How many children do
you have?'

h. hâ:cò èm-kʰɔ̨́: (how/Q [2sg]-be=called) 'What is
your name?'

i. hâ:yá á-k'í: Ø-bá: (where=to/Q your-husband
[3sg]-go/pf) 'Where is your husband/Where did your
husband go?'

4.15. Negation. Negation is marked morphologically
on the verb (3.329). In the clause it is marked by the
negative particle hɔ́n. Negative imperatives, however, are
introduced by the prohibitive particle pòy, and the verb
exhibits the future rather than the negative suffix (see
3.325). The existential negative hę́: occurs in clauses
that are otherwise not marked for negation.

The position of hɔ́n 'negative' is normally clause-
initial preceded only by interrogatives, the clause intro-
ducer hègɔ́ 'now, then', and hétɔ́ 'still'. Examples of
this neutral order are shown in (20). Examples (20d-e)
illustrate the cooccurrence of the negative particle hɔ́n
with particles and adverbials.

(20) a. hɔ́n mátʰɔ̀n ∅-cá̧:n-ɔ̂: kʰí:dêl-gɔ̀: (neg girl [3sg]-
arrive-neg yesterday-since) 'The girl hasn't come
since yesterday.'

b. hɔ́ hɔ́n k'yá̧:hî̧: à-bó̧:-mɔ̂: (Q neg [2sg/agt:sg/obj]-
see-neg) 'Didn't you see the man?'

c. hétɔ́ hɔ́n gyà-tʰáp+ɔ́m-gɔ̂: (still neg [pl]-dry+
become-neg) 'It still hasn't dried.'

d. hɔ́n àn cóy gyà-tʰó̧:-mɔ̂: (neg hab coffee [1sg/
agt:sg/obj]-drink-neg) 'I never drink coffee.'

e. hɔ́n àn ó̧:dè kɔ́lzèp gyà-tʰó̧:-mɔ̂: (neg hab much
milk [1sg/agt:sg/obj]-drink-neg) 'I rarely drink
milk.'

f. hɔ́n hɔ́ndé ∅-cá̧:n-ɔ̂: (neg someone [3sg]-arrive-
neg) 'No one came.'

Under conditions similar to those for yes-no ques-
tions, constituents can be moved to the left of hɔ́n. Such
left-dislocation typically moves a relative clause outside
the scope of the negative, as in (21a), where the head
'dress' is the object of the matrix verb 'put on'. (21b)
illustrates the neutral non-relativized version. In (22),
the relative clause 'that I might have written' has been
moved to the left of the negated clause 'I don't know
everything'.

(21) a. {ɔ́gɔ̀ hóldà gyà-gúl+dɔ́:-dè} hɔ́n gyàt-dó:-gû:
({sub dress [pl]-red+be} neg [1sg/agt:pl/obj]-
put=on-neg) 'I didn't put on the red dress.'

(21) b. hɔ́n hóldà gyàt-dó:-gû: (neg dress [1sg/agt:pl/
obj]-put=on-neg) 'I didn't put on the dress.'

(22) à-k'ún+dɔ̀: gɔ̀ {háyá gyàt-gúl-kyà-dè} hègɔ́ hɔ́n té:
yą́-háy-gɔ̂: ę̀:hɔ̀: ([1sg]-hurry+be and/same {might
[1sg/agt:pl/obj]-write-wondering-nom} now neg all
[(2,3sg/agt):1sg/pat:pl/obj]-know-neg now) 'I was in
a hurry and now don't know everything that I might
have written.'

Similarly, a noun or locative expression receiving
contrastive focus (23a-b) or introducing new information
(23c) may be preposed in the negated clause.

(23) a. pá: hɔ́n àn hóldé á-gú:-yɔ̂: á-hôl+ɔ̀mgyà-cę̀:
(some neg hab soon [3pl]-get=well-neg [3pl]-sick+
become/pf-when/same) 'Some (people) don't get well
quickly when they become ill.'

b. hègɔ́ kɔ́y+dɔ̀m-gyà hɔ́n mà-cą́:n-ɔ̂:-hèl háôtè+sày (no
(now Kiowa+land-at neg [2du]-arrive-neg-hsy sev-
eral+year) 'So (I hear) you haven't been in Kiowa
country for several years.'

c. mà:yí gɔ̀ k'yą́:hį̂: hɔ́n é-càt+hę̀:d-ɔ̀: (woman and
man neg [3du/agt:sg/obj]-door+remove-neg) 'Neither
the man nor the woman opened the door.'

The existential negative hę́: is compounded with
nominal or verbal stems to indicate the non-existence of

the entity or event. As an independent particle, hé̱:
'away, gone' implies only temporary absence, as in (24).

(24) a. p'ɔ́: hé̱: gyà-dɔ́: (moon <u>gone</u> [pl]-be) 'There's no
         moon (it having disappeared behind the clouds).'

  b. hé̱: ∅-dɔ́: (<u>gone</u> [3sg]-be) 'He's not here.'

When compounded, however, hé̱: indicates a more or
less permanent non-existence. The example in (25a) is
from the beginning of a story about how the sun got into
the sky; (25b) illustrates the typical means of expressing
the lack of a particular kinsman.

(25) a. kɔ́ygú hágyá á-t'ɔ́:-dê: nɔ̀ pày+hé̱: gyà-dɔ̂:-mê:
         (Kiowa/inv somewhere [3pl]-stay-hsy and/diff sun+
         <u>without</u> [pl]-be-hsy) 'The Kiowas were living some-
         where and there was no sun.'

  b. p'í:+hè̱: à-dɔ́: (female's=sister+<u>without</u> [1sg]-
     be) 'I have no sisters.'

  c. hɔ̈́:còn+hè̱: ∅-k'ɔ́: (breath+<u>without</u> [3sg]-be=ly-
     ing/sg/du) 'He is lying there not breathing.'

  d. k'yá:gòp+hè̱: è̱-dɔ́: (brain+<u>without</u> [3du]-be)'They
     (du) have no brains/no common sense.'

  e. á:+hé̱: gyà-dɔ́: (smoke+<u>without</u> [pl]-be) 'There
     is/was no smoke (from the fire).'

  4.16. <u>Particles.</u> Kiowa has a rich variety of un-
inflected particles. Two semantic classes can be roughly

distinguished, tense/aspect and modal particles. Others
are less easily classified. Syntactically, all particles
are restricted to pre-verbal position but are relatively
freely placed with respect to non-verbal constituents pre-
ceding the verb.

4.161. <u>Tense/aspect particles.</u> The inflection of
the verb in Kiowa reflects a basic distinction of perfec-
tive vs. imperfective aspect; in other words, it is pri-
marily not a temporal contrast (see 3.3). The tense/as-
pect particles, grouped together here on the basis of
their semantic function, specify a time reference or as-
pectual distinction in addition to that indicated inflec-
tionally in the verb.

There is a trio of tense particles indicating imme-
diate time, illustrated in sentences (26)-(28): <u>sɔ́t</u> 'imme-
diate/recent past', <u>yát</u> 'immediate present', and <u>mî̃n</u> 'im-
mediate/near future'. <u>mí:</u> 'almost', a fourth tense par-
ticle likely related morphologically to <u>mî̃n</u>, indicates
from a past time perspective an unachieved near future
event (29). Note that <u>mî̃n</u> and <u>yát</u> occur with imperfective
verbs, <u>sɔ́t</u> and <u>mí:</u> with perfective verbs.

(26) a. <u>sɔ́t</u> kʰí:dêl ɔ̨́:gɔ́-tò:-kyà à-cán (<u>just</u> yesterday
        own-house-at [1sg]-arrive/pf) 'I just arrived home
        yesterday.'

    b. hɔ́ kɔ̂l <u>sɔ́t</u> kút yán-gút (Q some <u>just</u> letter [(1sg/
        agt):2sg/pat:pl/obj]-write/pf) 'Did I recently

write you a letter?'

(27) a. hègɔ́ yát dè-kò:dó+pè:tòp (now right=now [1sg/
refl]-very+try/impf) 'I'm really trying right
now.'

b. hègɔ́ yát kóttè dè-pʰóttɔ̀ (now right=now hard
[1sg/refl]-blow/impf) 'I am really blowing hard.'

(28) a. hègɔ́ páy mîn Ø-yî:-yà (now sun about=to [3sg]-
disappear-impf) 'The sun is about to set.'

b. hègɔ́ mîn Ø-hę̀:m-à (now about=to [3sg]-die-impf)
'He's about to die.'

(29) a. kʰòdê:dè mí: à-dę̀:+hêm (suddenly almost [1sg]-
sleep+die/pf) 'I almost fell asleep suddenly.'

b. mí: nén-p'.ɔ́y+c'èp (almost [(2,3sg/agt):1sg/pat:
du/obj]-lose+lay/sg/du/pf) 'I almost lost them.'

The habitual particle àn further limits imperfec-
tive aspect to habitual and repeated events or general
truths.

(30) a. yátsę̨́:-yɔ̀: gį̨́:gɔ́: àn à-sɔ́:té+bànmà (eight-at
early/morning hab [1sg]-work+go/impf) 'I go to
work at eight in the morning.'

b. ę̨́: àn Ø-k'ɔ́: (here hab [3sg]-be=lying/sg/du)
'It's usually here/It's supposed to be here.'

c. àn ǫ̨́:gɔ́pį̨́:-gɔ̀ gyà-kɔ́n pá:gyá (hab buffalo-inv
[pl]-be=numerous prairie/on) 'There used to be

a lot of buffaloes on the prairie.'

d. gyà-kò:dó+t'ò+ɔ̀mgyà ę́:hɔ̀:-ę̀: àn t'ól Ø-sô:-yà

([pl]-very+cold+become/pf here-when/diff hab

snow [3sg]-descend-impf) 'When it gets really

cold here, it snows.'

Two additional particles, hétɔ́ 'still' and hègɔ́
'now, then', may cooccur with the five preceding ones.
hétɔ́ 'still', illustrated in (31), indicates the continua-
tion of a state or event that the speaker expects not to
continue for much longer.

(31) a. hétɔ́ mɔ́n ę́:hɔ̀: ɔ́yhɔ̀: èm-t'ɔ́: (still probably now

there [2sg]-stay) 'You are probably still there

now.'

b. hétɔ́ mɔ́:kʰɔ́l+hę̀: án-dɔ́: (still prepared+without

[(2,3sg/agt):3sg/pat:pl/obj]-be) 'He is still un-

prepared/He's not ready yet.'

c. hétɔ́ hɔ́n gyà-tʰáp+ɔ́mgɔ̂: (still neg [pl]-dry+

become/pf) 'It isn't dry yet.'

The placement of the second particle, hègɔ́ 'now,
then', is slightly more flexible but it regularly precedes
the other tense/aspect particles. When not contracted
with switch-reference markers (see 4.33), hègɔ́ indicates
the continuation of an event from the past to the present
and in this sense is frequently translated by the present
perfect in English (32a-b).[7]

(32) a. mátʰɔ̀n hègɔ́ kyǫ́ydé kút gyà-kʰǫ̂:m-ɔ̀ (girl now

long=time book [3sg/agt:pl/obj]-read-impf) 'The

girl has been reading the book for a long time.'

b. hègɔ́ háòtè+kʰì: gyà-kʰîn-mɔ̀ (now several+day

[1sg/agt:sg/obj]-cough-impf) 'I have been cough-

ing for several days.'

c. hègɔ́ mɔ́n yán-kó:yì: (now probably [(1sg/agt):

2sg/pat:pl/obj]-get=bored/impf) 'You are probably

getting bored by now.'

4.162. Modal particles. The modal particles con-

stitute a large group of words whose exact meanings and

distributions are sometimes difficult to determine. They

may cooccur with the tense/aspect particles but are mu-

tually exclusive with respect to each other. Many of them

require that the verb be inflected for a particular cate-

gory, e.g., perfective with pàhį́: 'clearly', indicating

a prediction about which the speaker is quite certain.

The meanings of several of these modal particles

cluster around the notion of probability. The six that

vary most clearly on a scale of certainty/possibility are

briefly described and illustrated in (33)-(38).

(33) pàhį́: 'clearly' implies certainty on the part of the

speaker, apparently based on obvious, often visible

evidence, and requires a perfective verb.

a. ɔ̀:pàl sép ∅-cándé-ą̀: nɔ̀ pàhį́: bà-tʰą́:dáy (closer

rain [3sg]-arrive-coming and/diff <u>clearly</u> [2pl]-get=wet/pf) 'The rain is getting closer and it is obvious we'll get wet.'

b. gyà-tét né <u>pàhį̀:</u> į̂:nyà-cò gyà-į̨́:m-é: ([1sg/agt: sg/obj]-tell/pf but <u>clearly</u> differently-contrastive [3sg/agt:pl/obj]-do-pf) 'I told him but it's clear he's going to do it in a different way instead.'

(34) <u>bè̀t-hên-dè</u>[8] 'never, unlikely' predicts that an event is extremely unlikely and requires a future verb.

a. ę̀-cą́:+t'ɔ́:-dê: né <u>bè̀thêndè</u> mén-cą́:+ɔ́mdé-t'ɔ̀: ([3du]-go+want-hsy but <u>unlikely</u> [(x/agt):3du/pat: pl/obj]-go+happen-fut) 'They want to go but it is unlikely that they will get to.'

b. <u>bè̀thêndè</u> à-tʰą́:+ɔ̀m+càn-t'ɔ̀: (<u>unlikely</u> [1sg]-help+ do+arrive-fut) 'I can't come and help (because I don't want to).'

(35) <u>mɔ́n</u> 'probably, must (have)' indicates the speaker's inference based on various sorts of evidence, sometimes pure conjecture.

a. <u>mɔ́n</u> mîn gɔ́-áttɔ̀ (<u>probably</u> about=to [(x/agt):2sg/ pat:∅/obj]-chase/impf) 'It (a bull) is probably about to chase you.'

b. t'ɔ́:-dǫ́:-gyà yą́-kʰóp; <u>mɔ́n</u> hɔ́ndé ę̀-cél (ear-down-in [(2,3sg/agt):1sg/pat:pl/obj]-hurt; <u>probably</u>

something [(2,3sg/agt):1sg/pat:sg/obj]-be=in/sg/
du) 'I've got a pain in my ear; I must have some-
thing in there.'

(36) háyáttò 'maybe, might' indicates some degree of pos-
sibility and usually occurs with a future verb.

a. à-ɔ̃:dèp háyáttò à-bá:-t'ɔ́: Anadarko-ku ([1sg]-
think/impf maybe [1sg]-go-fut Anadarko-to) 'I'm
thinking maybe I'll go to Anadarko.'

b. háyáttò hɔ́n yán-cą̃:+ɔ́mdé-t'ɔ́: (maybe neg [(1sg/
agt):2,3sg/pat:pl/obj]-go+become-fut) 'You might
not be able to get there.'

(37) hàgyà 'maybe, might' also indicates some degree of
possibility; the difference between hàgyà and háyáttò
is not clear at this stage, although it appears that
only hàgyà can occur with non-future verbs.

a. hàgyà à-bá:-t'ɔ́: (maybe [1sg]-go-fut) 'Maybe I'll
go.'

b. tʰàlí: á-dɔ́n-mɔ̀ gɔ̀ hàgyà à-tʰɔ́n (boy [3pl/agt:sg/
obj]-search=for-impf and/same maybe [3pl/agt:sg/
obj]-find/pf) 'They were searching for the boy and
might have found him.'

(38) mágyá 'maybe, might' implies that the event did in
fact not take place and requires a future verb.

a. mágyá à-bá:-t'ɔ́: (maybe/not [1sg]-go-fut) '(I
thought) I might go (but didn't).'

b. à-ɔ́n mágyá èm-kʰóydé-t'ɔ̀:... ([1sg]-think <u>maybe/
not</u> [2sg]-turn=back-fut...) 'I thought that you
might turn back (but you didn't)...'

The remaining modal particles are of different types;
they will be described and illustrated in (39)-(42).

(39) <u>dá</u> 'must' indicates emphatic obligation and requires
the imperative; its force is often softened by the
suffix <u>-àl</u> 'also'.

a. <u>dá-àl</u> ám yí:dè kɔ̂l pɪ̨́:gyá gyát-bɔ́: (<u>must-also</u>
you both some food [(x/agt):1pl/pat:pl/obj]-bring/
imp) 'You (du) must also bring some food for us.'

b. <u>dá</u> èm-ą̨́: gɔ̀ dɔ́-tʰáy+dò:-dè (<u>must</u> [2sg]-come/imp
and/same [(x/agt):1pl/pat:∅/obj]-with+hold-imp)
'You must come and stay with us.'

(40) <u>yàl</u> 'hope' is an optative particle requiring a per-
fective verb.

a. <u>yàl</u> hɔ́n ę̀-ɔ̂y+kʰìn+ɔ̀mgɔ̀: (<u>hope</u> neg [(2,3sg/agt):
1sg/pat:sg/obj]-again+cold+happen/neg) 'Hope I
don't catch another cold.'

b. <u>yàl</u> hóldé èm-ɔ̂y+càn (<u>hope</u> soon [2sg]-again+ar-
rive/pf) 'Hope you'll come again soon.'

(41) <u>hét</u> 'let's, let me' is a mildly exhortative particle
requiring either an imperative or future verb.

a. <u>hét</u> bát-ɔ̀y+bǫ̀: (<u>let's</u> [2pl/agt:pl/obj]-again+

look/imp) 'Let's look at it again.'

b. hét hàgyà ę́:dè kút yán-háydé-t'ɔ̀: (let's maybe
this letter [(1sg/agt):2,3sg/pat:pl/obj]-learn-
fut) 'Let's see if maybe you can understand this
letter.'

(42) bét-hɔ̀: 'unknowing' indicates the speaker's realiza-
tion that he was ignorant of some fact and requires
a hearsay verb.

a. béthɔ̀: yáypɔ́ gyà-kʰúy+bɔ̀:-hèl (unknowing rope
[1sg/agt:sg/obj]-drag+bring-hsy) 'I didn't realize
I was dragging a rope behind me.'

b. béthɔ̀: ám èm-dǫ́:-mê: (unknowing you [2sg]-be-hsy)
'I didn't know it was you (standing behind the
door).'

4.163. _Adverbial particles._ There are a few other
adverbial particles occurring in simple sentences, among
them mɔ́: 'like, kind of', pòy 'again', and cɔ̂: 'thus, in
such a way'. The reader is directed to the texts in Chap-
ter Five for examples of their use.

4.2. _Incorporation._ The verb in Kiowa quite freely
incorporates noun and verb stems as well as a limited
group of adverbial stems. The schematic representation of
internal verb structure (3.3) is reproduced in part here
to illustrate the order of incorporated elements preceding
the verb stem.

(43)   Ppfx (Adv) (N) (V) Stem$_{vb}$

Incorporation has long interested students of North American languages (see, e.g., Merlan (1976) and Woodbury (1975) for recent discussions). In Kiowa, two processes can be distinguished: incorporation of stems from within the same clause (simple incorporation) and incorporation of material from a subordinate clause (raising incorporation). Incorporation is an old feature of Kiowa (and of Kiowa-Tanoan) so there are, in addition, many cases of lexicalized incorporation, i.e., compounds.

4.21. <u>Simple incorporation.</u> Stems that undergo incorporation in the verb from within the same clause fall into three classes: verbs, adverbs, and nouns. The verb stems and adverbs are bound, occurring only in compounds. The adverbs consist of a small class of intensifiers, modals, and tense/aspect stems. Examples are listed in (44) and illustrated in sentences (45)-(46).

(44) a. bound verb stems

dè̖:-	'sleep'	sɔ́m-	'observe'
tʰɔ̀:-	'sit, seat!'	sɔ́:té-	'work'
tʰá̖:-	'help'	kɔ́:tɔ̀-	'trade, buy'
hó:-	'travel, drive'	kʰúy-	'drag'
c'à:-	'dance'	é̖:-	'hunt, spy'
có̖:-	'crawl'	sɔ́n-	'boil'
kɔ́:-	'swim'	dɔ́:-	'sing, drum'
k'ún-	'hurry'	pí̖:-	'eat'

(44) b. adverbs

     kò:dó-   'very'

     bô:-   'often, always'

     ôy-   'again, back'

     k^hó-   'immediately, now'

     ó:-   'temporarily'

     k^hɔlé:-   'together'

     óbɔ̀:-   'surely'

     t'ɔm-   'first'

     hón-   'last'

     sém-   'secretly'

     kɔ̀ét-   'fearfully'

     kón-   'permissive'

     hên-   'dubitative'

     mónyîn-   'meanwhile, simultaneously'

(45) bound verb stems

    a. à-dè̤:+hê̤:m-à ([1sg]-sleep+die-impf) 'I'm sleepy.'

    b. à-c'à̤:+t^hó:-yà ([1sg]-dance+move=about-impf)

       'I'm dancing.'

    c. ∅-é̤:+bà: ([3sg]-hunt+go/pf) 'He went hunting.'

(46) adverbs

    a. bà-k^hó+bà: ([2pl]-now+go/imp) 'Let's go right

       now.'

    b. èm-t'ɔm+cán ([2sg]-first+arrive/pf) 'You came

       first.'

(46) c. há:têl mɔ́: Ø-hên+à̰: (someone like [3sg]-<u>dubita-
tive</u>+come/pf) '(I think/I'm not sure) someone is
coming.'

d. yá̰-mɔ́nyîn+gùt ([[(2,3sg/agt):1sg/pat:pl/obj]-<u>mean-
while</u>+write/pf) 'You wrote me (in the midst of
other work).'

e. Ø-kɔ́n+hè:bà ([3sg]-<u>let</u>+enter/pf) 'Let him come
in.'

Incorporation of nouns is limited to non-agents,
i.e., to animate patients (rare), third person objects,
and the single participant associated with an intransitive
stative verb. Body parts and kinship terms are the most
commonly incorporated nouns, examples of which are shown
in (47) and (48). Many such cases are lexicalized and can
be conveyed in no other way, e.g., <u>mɔ́nyáygɔ́</u> 'wave at/pf'
(<<u>mɔ́n</u> 'hand') and <u>ɔ̀n+gṵ̂:</u> 'kick (<foot+hit)'.

(47) body parts

a. à-ɔ́lt^hɔ̰́+k^hɔ̀p+dɔ̀: ([1sg]-<u>head</u>+hurt+be) 'I have a
headache.'

b. cégùn èm-ɔ̀n+k'ɔ̂: (dog [3sg/refl]-<u>foot</u>+cut/pf)
'The dog got cut on his foot.'

c. yá̰-hɔ̰́:+k^hùt-kyà ([[(2,3sg/agt):1sg/pat:pl/obj]-
<u>breath</u>+pop=out-detr/pf) 'I breathed a sigh of re-
lief.'

d. bè-mɔ́n+p^hḭ̂l ([2sg/refl]-<u>hand</u>+wipe/imp) 'Wash your

hands.'

(48) kinship terms

    a. ę́-<u>kóm</u>+k'ɔ́:   ([(2,3sg/agt):1sg/pat:sg/obj]-<u>friend</u>+
       be=lying/sg/du) 'He/she is my friend.'

    b. hɔ́n ę́-<u>tɔ́:</u>+có:-gɔ̂: (neg [(2,3sg/agt):1sg/pat:sg/
       obj]-<u>male's=sister</u>+be=lying/sg/du-neg) 'She's not

       my sister.'

Incorporation of other nouns most commonly involves
third person objects and manner and locative expressions,
as in (49). (49d-e) illustrate incorporation of two stems.

(49) a. yę́-<u>kɔ́y</u>+tǫ́zánmà ([(2,3sg/agt):1sg/pat:pl/obj]-
      <u>Kiowa</u>+speak/impf) 'I'm speaking Kiowa.'

    b. bé-<u>cát</u>+hę̀:dè ([2sg/agt:inv/obj]-<u>door</u>+remove/imp)
      'Open the door.'

    c. ę́-<u>álɔ̀:</u>+dɔ̀:p-è: ([(2,3sg/agt):1sg/pat:sg/obj]-
      <u>apple</u>+request-pf) 'He asked me for an apple.'

    d. è-<u>t'áp</u>+ę̀:+bà: ([1pl]-<u>deer</u>+hunt+go/pf) 'We went
      deer-hunting.'

    e. è-kʰɔ̀lé:+<u>tʰà:ɔ̀n</u>+bà:-t'ɔ́: ([1pl]-together+<u>town</u>+go-
      fut) 'We will go to town together.'

Nouns compounded with the copula dɔ́: 'be, exist'
provide an interesting contrast to predicate nominal con-
structions, in which the complement noun is not incorpo-
rated. The predicate nominal examples in (50) merely

identify the individual, i.e., establish its class member-
ship.

(50) a. té: kɔ́ygú bà-dɔ́: (all Kiowa/inv [2pl]-be) 'We're
     all Kiowas.'

   b. kɔ́y+tǫ̀+mɔ̀tʰèm+k'ì: à-dɔ́: (Kiowa+language+teacher+
     male [1sg]-be) 'I am your Kiowa teacher.'

   c. k'yą́:hį̂: Ø-dɔ́: (man [3sg]-be) 'He's/It's a man.'

Incorporation, however, asserts a quality or condi-
tion rather than the identity of the participant. Sen-
tence (51) is thus distinguished from (50c) above in indi-
cating a man-like quality.

(51) ɔ́:hɔ̀ cɔ́lhɔ̀-kɔ̀ -- kú:tò-gɔ̀-àl -- á-k'yą́:hį̂:+dǫ̀:-mè:-
     dé-ę̀: (then thus-like -- bird-inv-too -- [3pl]-man+
     be-hsy-nom-when) 'at that time when those like him --
     birds too -- were man-like'

Similarly, in a passage from the tale 'Star Girls'
(the origin of the Pleiades constellation), one of the
sisters is finally turned into the likeness of a bear af-
ter several gradual transformations. The incorporation of
'bear' with dɔ́: 'be' reflects the view that she is bear-
like but has not in fact become a bear.

(52) èm-yí:kyá+tʰɔ̀n+kʰùl-hèl gìgɔ́ Ø-ɔ̀nhá:dè+dǫ̀:-mè:
     ([3sg/refl]-four+attack+rush=out-hsy and=then/same
   [3sg]-bear+be-hsy) 'She rushed out the fourth time

and had become a bear/was in the likeness of a bear.'

The difference in meaning associated with incorporated nouns appears to exist for some ordinary noun compounds as well, suggesting that compounding/incorporation is semantically motivated. In (53), hón-gó 'something/someone-inv' followed by gûy-kɔ̀ 'outsider/other-inv' implies 'some kind of' outsider when compounded (53b) but merely 'some' indefinite others when not compounded (53a).

(53) a. hón-gó gûy-kɔ̀ (some-inv other-inv) 'some other people'

     b. hón-gó+gûy-kɔ̀ (some-inv+other-inv) 'some other kind of people (e.g., belonging to a different tribe)'

4.22. <u>Raising incorporation</u>. An extremely common type of incorporation is that of a subordinate verb or verb plus its object noun. Identity of participants in a pair of main and subordinate clauses results in the raising of the lower verb into the verb of the upper clause, as shown schematically in (54). If the lower clause has an overt noun object, it too is raised, as in (54b). Note that the pronominal prefix signals only the participants of the upper clause (55).

(54) a.

(54) b.
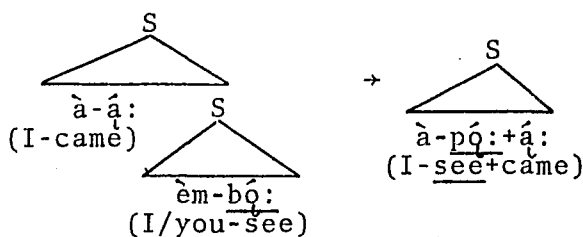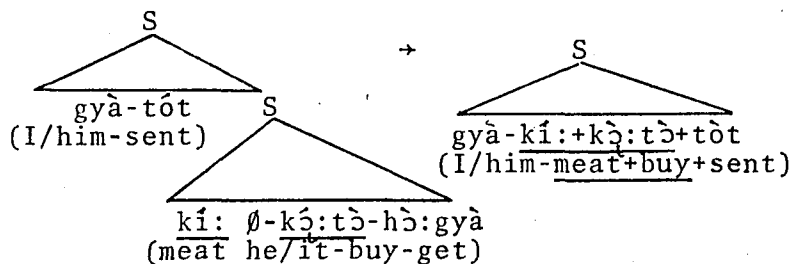
(55) a. à-pó̰:+á̰: ([1sg]-see+come/pf) 'I came to see you.'

   b. gyà-kí:+kɔ̀:tɔ̀+tòt ([1sg/agt:sg/obj]-meat+buy+
   send/pf) 'I sent him to buy meat.'

   Raising incorporation occurs if the agent of the
lower clause is coreferential with either the agent or
the patient of the upper clause. When the matrix verb is
intransitive, identity of the lower agent is with the only
participant of the upper clause. When the matrix verb is
transitive, identity is with the patient of the upper
clause. Semantic roles are indicated in the examples be-
low (56).

(56) a. A
   I go] A   O
        I dress buy]

   à-hóldà+kɔ̀:tɔ̀+bà: ([1sg]-dress+buy+go/pf) 'I
   went to buy a dress.'

```
         A  P
(56) b.  I him sent]  A     O
                      he meat buy]
```

gyà-kí:+kɔ̰:tɔ̀+tòt   ([1sg/agt:sg/obj]-meat+buy+

send/pf) 'I sent him to buy meat.'

```
         A  P
     c.  I you teach]  A
                       you sew]
```

yán-sép+kɔ̀m-tɔ̀:   ([(1sg/agt):2sg/pat:pl/obj]-sew+

show-fut) 'I'll teach you/show you how to sew.'

```
         P
     d.  you learn]  A     O
                     you shawls make]
```

yán-kʰɔ́:+ɔ́m+háydé-t'ɔ̀:   ([(1sg/agt):2sg/pat:pl/

obj]-shawl+make+learn-fut) 'You'll learn (how) to

make shawls.'

4.3.   Complex sentences.

4.31.   Relative clauses.   Relativization in Kiowa

involves the obligatory nominalization of a clause by suf-

fixing nominal -dè 'basic' or -gɔ̀ 'inverse', depending

upon the class and number of the head noun (see 3.41), to

the final word of the clause.   The clause thus marked need

show no other sign of its relativized status; there are no

relative pronouns, no verbal inflection indicating embed-

ding, and no special ordering constraints except in copu-

lar sentences.   Examples illustrating the nominalizing

suffixes are shown in (57).   The relativized clause is en-

closed in braces, e.g., {S-de}.

(57) a. {k'î: k'ɔ́dá:l-ɔ̂: Ø-òl+sɔ́l-de̲} gyà-p'étt ̀ ({wood

wagon-on [3sg]-load+be=in-nom/bas} [lsg/agt:sg/

obj]-take=down-impf) 'I am unloading wood that

was loaded in the wagon.'

b. {hɔ́ndé gyà-mɔ̀kų̀ymè-de̲} bàt-ɔ̂m ({something/bas

[pl]-useful-nom/bas} [2sg/agt:pl/obj]-do/imp)

'Do something (that is) useful.'

c. {pį̀:á:dɔ́ è-ét-gɔ̲̀} dé-hɔ́:-gyà ({table/inv [3inv]-

big/sg-nom/inv} [lsg/agt:inv/obj]-get-pf) 'I

bought a big table/table that is big.'

d. {á:hyɔ̀y è-pé:+dɔ́:-gɔ̲̀} ({cottonwood/inv [3inv]-

dead+be-nom/inv}) 'a dead cottonwood/a cottonwood

that is dead'

A relative clause may also be introduced by the op-
tional subordinating particle ɔ́gɔ̲̀, usually for clarity
(58).

(58) a. {ɔ́gɔ̲̀ sôl bàt-tá:+ɔ̲̀:m-è:-de̲} gyà-ból+dɔ̀: ({<u>sub</u>

onion [2sg/agt:pl/obj]-cook+do-pf-<u>nom/bas</u>} [pl]-

rotten+be) 'The onions that you cooked are rotten.'

b. {ɔ́gɔ̲̀ k'yą́:hį̂: èm-dɔ́cáttɔ̀-de̲} k'yátáy-k'ì: Ø-dɔ́:

({<u>sub</u> man [3sg/refl]-pray-impf-<u>nom/bas</u>} chief-male

[3sg]-be) 'The man who is praying is the chief.'

c. {ɔ́gɔ́ k'ɔ́átt ̀ è-sá:+k'ɔ̂: dɔ́m-gyá-gɔ̲̀} hɔ́n nɔ́: dé-

sá:-gû: ({<u>sub</u> dish/inv [3inv]-shatter+be=lying/

sg/du ground-on-<u>nom/inv</u>} neg I [lsg/agt:inv/obj]-

shatter-neg) 'I didn't break the dish that's ly-
ing broken on the floor.'

Finally, the (relative) anaphoric particle ám (not
to be confused with the independent pronoun ám 'you') is
present if the relativized noun refers to an individual
or thing that the speaker has previously mentioned or as-
sumes his addressee to have in mind. ám typically pre-
cedes the nominals in the clause, but note that in the
presentational copular sentence in (59b) the relative
clause is to the right of the head noun. The English
gloss 'that' is an attempt to capture the sense of ám.

(59) a. {ɔ́gɔ̀ ám kút bàt-hɔ́:-gyà-dè} yá̧-ɔ̧́: ({sub anph

   book [2sg/agt:pl/obj]-get-pf-nom/bas} [(2,3sg/agt):
   1sg/pat:pl/obj]-give/imp) 'Give me that book that
   you bought.'

   b. ę̧́:dè k'yá̧:hį̂: {ám gyá-tǫ́:+kʰɔ̧̂:m-ɔ̀-dè} ∅-dɔ́:
   (this man {anph [(1sg/agt):2,3sg/pat:sg/obj]-
   speak+name-impf-nom/bas} [3sg]-be) 'This is that
   man I was telling you about.'

Relative clauses in Kiowa, as in a number of other
typologically similar North American languages, are most
simply analyzed as having internal heads. Schematically,
an internal head analysis can be represented as in (60a),
in contrast to the standard transformational treatment in
(60b).

(60)   a.   NP   b.   NP
                  | ╱ ╲
                  S   NP$_i$ S
                ╱‾‾╲   ╱‾‾╲
              ╱..NP..╲   ╱..NP$_i$..╲
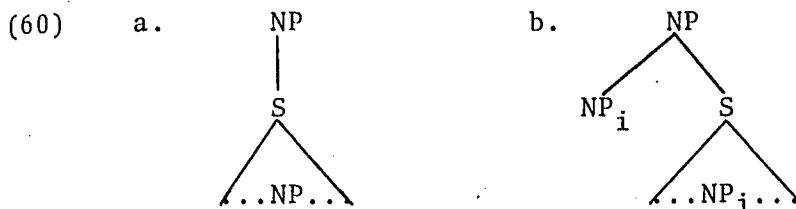
   Briefly, there is little evidence in Kiowa for the standard model of relativization, in which the lower of two coreferential noun phrases is replaced by a pro-form (or deleted). Nouns in the Kiowa clause are merely adjuncts, not obligatory constituents, and only in the verbal prefixes are the underlying (semantic) participants obligatorily signaled. A relative clause may exhibit no overt noun whatsoever, but the restrictive reference is nonetheless unambiguous. (61) illustrates such a case, where 'their exact character' refers to a list of examples Mr. McKenzie had compiled.

(61) kólbél bàt-dǫ̀:n-î: gɔ̀ hègɔ́ ɔ́yhɔ̀: {ɔ́gɔ̀ gyà-kʰɔ̀háy+
     dɔ̀:-dè} bàt-tʰɔ̌:-tɔ́: (strongly [2sg/agt:pl/obj]-
     search-ipf/imp and/same then there {sub [pl]-exact+
     be-nom/bas} [2sg/agt:pl/obj]-find-fut) 'Diligently
     search through them and perhaps in that way you will
     find their exact character/that which they are
     exactly.'

   There is considerable variety in the surface order of sentences containing relative clauses. The basic or neutral order is one in which the relative clause assumes

whatever position its head would ordinarily take, as in
(59a), reproduced here, where kút 'book' and the clause
of which it is the head are in the normal preverbal posi-
tion for object nouns.

(59) a. {ɔ́gɔ̀ ám k<u>út</u> bàt-hɔ́:-gyà-dè} yá̧-ɔ̧́: ({sub anph <u>book</u>
    [2sg/agt:pl/obj]-get-pf-nom/bas} [(2,3sg/agt):1sg/
    pat:pl/obj]-give/imp) 'Give me that book that you
    bought.'

Two other patterns are common and both can be under-
stood as deriving from features that affect the order of
major constituents in simple sentences, namely focus of
contrast and old vs. new information. One alternative or-
der foregrounds the head noun by preposing it (62).

(62) a. t^hàlí: {ɔ́gɔ̀ ám cégùn á-p'ɔ̀y-dè} ȩ́-tò̧:+tɔ̀: (<u>boy</u>
    {sub anph dog [(2,3sg/agt):3sg/pat:sg/obj]-lose-
    nom/bas} [3du/agt:sg/obj]-talk=to+aux/impf) 'They
    (du) are talking to the boy who lost his dog.'

   b. mà:yí gɔ̀ k'yá̧:hî̧: {ɔ́gɔ̀ ám én-gún-mɔ̀-dè} nɔ́:-tò:-
    kyà ȩ̀-cán (<u>woman and man</u> {sub anph [3du/refl]-
    dance-impf-nom/bas} my-house-at [3du]-arrive/pf)
    'That man and woman who were dancing came to my
    house.'

More frequently, the entire relative clause is
shifted to the right of the verb, as an ordinary noun

may be. The head may be retained within the clause (63a) or shifted to the left of it (63b). A head noun that has been shifted to the left of the clause (as focus of contrast or new information) may even be left behind in its normal position in the sentence (63c). This last possibility *seems to be preferred if the relative clause is particularly long or if the head is oblique*, as it is in (63c) with the instrumental suffix -tò.

(63) a. yá̧-p'ɔ́y-gyá {hɔ́ndé èm-tél-tɔ̀:-dè}   ([(2,3sg/agt):
     1sg/pat:pl/obj]-forget-pf {something/bas [1sg/agt:
     2sg/pat]-tell-fut-nom/bas}) 'I forgot what/the
     thing that I wanted to tell you.'

  b. Gene ∅-tó̧:-tɔ́: tógúl {ɔ́gɔ̀ cégùn á-p'ɔ́y-dè}   (Gene
     [3sg/agt:sg/obj]-talk=to-aux/impf boy {sub dog
     [(2,3sg/agt):3sg/pat:sg/obj]-lose/pf-nom/bas})
     'Gene is talking to the boy who lost his dog.'

  c. k'ɔ́: ȩ́-p'ɔ́y {ám àn kí: gyàt-tʰâ:-gù-dè}-tò (knife
     [(2,3sg/agt):1sg/pat:sg/obj]-lose/pf {anph hab
     meat [1sg/agt:pl/obj]-cut-impf-nom/bas}-with) 'I
     lost that knife that I used to cut meat with.'

Predicate nominal constructions in which the complement is relativized have the relative clause obligatorily extraposed to the right of the copula dɔ́:, as in (64).

(64) a. kɔ́ygú mɔ́n á-dɔ́: {ɔ́gɔ̀ á-kí:-dê:-gɔ̀} (Kiowa/inv
     probably [3pl]-be {sub [3pl]-dwell-ipf/hsy-nom/

inv) 'It was probably Kiowas who were living
there.'

b. hɔ́n ɔ́yhɔ̀-dè k'yą́:hį̂: Ø-dɔ̂:-mê: {ám dɔ́-tǫ́:tʰáy-dè}
(neg that-bas man [3sg]-be-hsy {anph [(x/agt):
1pl/pat:Ø/obj]-talk=to/pf-nom/bas}) 'That's not
the man who spoke to us.'

As nominalized sentences, relative clauses can occur
with various locative/directional suffixes. A few of
these locative and temporal clauses are illustrated in
(65), the suffixes in question underscored.

(65) a. {ɔ́:kɔ́ Ø-tʰón+dɔ́:-dè}-èm à-cán-gòm ({well [3sg]-
dig+be-nom/bas}-at/exactly [1sg]-arrive-distr/pf)
'I was getting around to places where wells had
been dug.'

b. {hègɔ́ mɔ́n mîn ę́-p'ɔ́ydép-dé}-òy yán-gút ({now
probably about=to [(2,3sg/agt):1sg/pat:Ø/obj]-
forget/impf-nom/bas}-at/generally [(1sg/agt):
2sg/pat:pl/obj]-write/pf) 'You probably were about
to forget me around the time I wrote you.'

c. dé-mɔ̀:kyą́+pʰɔ̂y {ɔ́gɔ̀ àn èm-ą́:gyà-dé}-ę̀: ([1sg/agt:
inv/obj]-readying+stand/pf {sub hab [2sg]-be=sit-
ting-nom/bas}-at) 'I placed it (a folding table)
in readiness where you usually sit.'

d. étté yą́-p'ɔ́y+kùt {ám kʰí:dêl kút yán-tʰó:+ɔ̀:-dé}-
èm (many [(2,3sg/agt):1sg/pat:pl/obj]-mistake+

be=written {anph yesterday letter [(1sg/agt):
2,3sg/pat:pl/obj]-send-give/pf-nom/bas}-<u>at/exact-</u>
<u>ly</u>) 'I had many mistakes in that letter I sent
you yesterday.'

4.32. <u>Complement clauses.</u> Complements of verbs of
thought and communication are simply juxtaposed to the
main clause. Examples are given in (66).

(66) a. hɔ́n à-t'ɔ́:-yɔ̂: <u>há:cò ∅-tɔ́:-gyà:</u> (neg [1sg]-hear-
       neg how/indef [3sg]-speak/say-impf) 'I didn't hear
       <u>what he said/how he spoke.</u>'
     b. nɔ́:-p'ì: ę́-tét á-k'ì:-dè Carnegie-kù ∅-bá:n-ê:
       (my-sister [(2,3sg/agt):1sg/pat:∅/obj]-tell/pf
       her-husband-poss Carnegie-to [3sg]-go-ipf/hsy)
       'My sister told me <u>that her husband was going to</u>
       <u>Carnegie.</u>'
     c. à-ɔ́n <u>mágyá èm-kʰóydé-t'ɔ̀:</u> ([1sg]-think=that
       maybe [2sg]-turn=back-fut) 'I thought that <u>you</u>
       <u>might turn back.</u>'
     d. yę́-kɔ̂m <u>há:gyá gyà-k'úl</u> ([[(2,3sg/agt):1sg/pat:pl/
       obj]-indicate/imp where=at/indef [pl]-be=lying/pl)
       'Show me <u>where they are.</u>'

With verbs of communication, a more common con-
struction is a direct quote, as in (67).

(67) nèn-bô:+tọ̀:-tɔ̀: "mà-ą́:," bà-tɔ́:[9] ([1sg/agt:du/obj]-

long=time+talk=to-aux/impf "[2du]-come/imp," [2pl]-

act) 'I talked to them a long time and "Come," I

said./I convinced them to come.'

4.33. <u>Switch-reference</u>.[10] The most common markers
of coordinate and subordinate clauses in Kiowa are three
pairs of syntactic suffixes (or clitics) which identify a
pair of clauses as having the same or different partici-
pants. Switch-reference has been described for a variety
of North American languages and is usually treated as a
question of subject identity. However, we have seen
throughout this grammar that the category 'subject' is not
a particularly revealing one for Kiowa. If we examine
which participants a speaker judges to be the same or
different, a hierarchy of semantic roles emerges that is
identical to that proposed by Fillmore (1968) for subject
selection in English, i.e., agent>patient>object. Same-
ness, then, is judged according to the highest ranking
participant in the clause; if both an agent and patient
are present, the agent is the basis for a same/different
judgment.

The three pairs of switch-reference markers are
listed in (68) with approximate glosses.

(68) <u>Same</u>   <u>Different</u>

    gɔ̀   nɔ̀   'and, if' (neutral/sequential/
                                    conditional)

    cę̀:   ę̀:   'when, while' (simultaneous)

    k'ɔ̀t   ɔ̀t   'yet, anyway' (contrastive)

gɔ̀ 'same' and nɔ̀ 'different' are the most semanti-
cally neutral of the three pairs and mark clauses indi-
cating temporal sequence, cause, and purpose, as well as
conditional and counterfactual clauses. The examples in
(69) illustrate the referential function of the forms;
(70)-(73) illustrate the various types of sentences in
which they occur. Participants judged for identity are
underscored in the morpheme glosses of (69).

(69) a. tʰàlí: á-dŏn-mɔ̀ <u>gɔ̀</u> hàgyà á-tʰɔ̀n (boy [3pl/agt:
       sg/obj]-search-impf <u>and/same</u> perhaps [<u>3pl</u>/agt:
       sg/obj]-find/pf) 'They were searching for the boy
       and might have found him.'

   b. báò: né-dɔ́: <u>gɔ̀</u> mí: né-p'ɔ̂y (cat [(2,3sg/agt):<u>1sg/</u>
       <u>pat</u>:du/obj]-be <u>and/same</u> almost [(2,3sg/agt):<u>1sg/</u>
       <u>pat</u>:du/obj]-lose/pf) 'They are my cats and I al-
       most lost them.'

   c. nɔ́: mán-pį́:+ɔ́m-tɔ́: <u>nɔ̀</u> dáàl mán-pɔ̀: (I [<u>(x/agt)</u>:
       2du/pat:pl/obj]-food+make-fut <u>and/diff</u> must [<u>2du/</u>
       <u>agt</u>:pl/ob]-eat/imp) 'I will cook for you/If I cook
       for you, you must eat.'

(69) d. ę́:dè nɔ́:-kùt yą́-dɔ́: <u>nɔ̀</u> ę́:dè ám-kùt yán-dɔ́: (this

my-book [(2,3sg/agt):<u>1sg/pat</u>:pl/obj]-be <u>and/diff</u>

this your-book [(1sg/agt):<u>2sg/pat</u>:pl/obj]-be)

'These books are mine and those books are yours.'

(70) John ∅-cán <u>gɔ̀</u> hɔ́ndé gyát-kɔ̂n (John [3sg]-arrive/pf

<u>and/same</u> something [(x/agt):1pl/pat:pl/obj]-bring/

pf) 'John came and brought us gifts.'

(71) à-tʰ$_{ȥ}$́:-tɔ́: <u>gɔ̀</u> à-tôl ([2sg/agt:sg/obj]-find-fut <u>and/</u>

<u>same</u> [2sg/agt:sg/obj]-send/imp) 'If you find him,

send him (here).'

(72) à-pǫ́:+cán èm-kʰɔ́p+dȥ̃́:-mê:-<u>nɔ̀</u> ([1sg]-sęe+arrive/pf

[2sg]-hurt+be-hsy-<u>and/diff</u>) 'I came to see you be-

cause (I heard) you were sick.'

(73) èm-sɔ́:-gyà: mɔ́n èm-tò:+dô:-gù-<u>gɔ̀</u> ([3sg/refl]-sit-

pf probably [3sg/refl]-shoe-put=on-impf-<u>and/same</u>)

'He sat down probably in order to put on his shoes.'

The ranking of participants on a hierarchy of role
selection (A>P>O) is illustrated in (74). Although the
patient of the first clause in (74a) is identical to the
intransitive participant of the second clause, judgment of
identity is based on the agent of the first clause. Simi-
larly, it is the agent of the second clause in (74b) that
is judged to be different, even though the agent is
neither explicitly signaled in the prefix nor represented

by an overt noun. Thus, switch-reference has to do not
with morphologically explicit categories but with the un-
derlying semantic features of a clause.

(74) a. pʰît+tʰò̧: êl+k'ì: ȩ̂:-ɔ̧̀: <u>nɔ̀</u> Ø-é:+ɔ́m-gyá (foam+

  water old+man [3du/agt:(1,3sg/pat):sg/obj]-give/

  pf <u>and/diff</u> [3sg]-drunk+become-pf) 'They (du)

  gave the old man beer and he got drunk.'

  b. hɔ́ mà-cándé-hɔ̀: tó:-kyà-<u>ȩ̀:</u> mɔ́-pʰɔ̧́:+ɔ̧̀:m-è: (Q

  [2du]-reach-going house-at-<u>when/diff</u> [(x/agt):

  2du/pat:Ø/obj]-stop+make-pf) 'Were you(du) about

  to reach home when he stopped you?'

The switch-reference markers appear to be indeter-
minate with respect to coordination vs. subordination,[11]
linking clauses in sentences of both types. It is only
in multiple-clause constructions that subordination can
sometimes be identified, namely when the linear order of
clauses does not enable one to predict the correct switch-
reference clitic. Example (75) is one such instance. The
ranking participants in linear order are first person
agent, third person, and a coreferential third person,
from which one would predict <u>-gɔ̀</u> 'same' between the two
rightmost clauses; it is, instead, <u>-nɔ̀</u> 'different'. The
schematic diagram in (75b) illustrates the subordination
of the middle clause to the initial clause and the parti-
cipants judged for sameness. A second example of this

type is shown in (76).

(75) a. gyà-cáy-tɔ̂:-<u>nɔ̀</u> hɔ́n Ø-bá:-mɔ̂:-t'ɔ́: <u>nègɔ́</u> Ø-t'ɔ́:-
t'ɔ́: ([<u>1sg/agt</u>:sg/obj]-ask-fut-<u>and/diff</u> neg [<u>3sg</u>]-
go-neg-fut <u>and=then/diff</u> [<u>3sg</u>]-stay-fut) 'If I ask
him not to go, he'll stay.'

b.
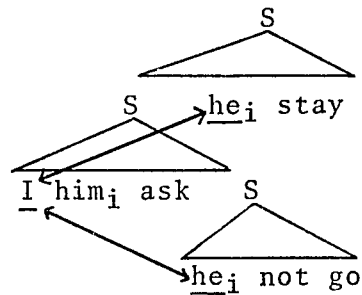
(76) a. gyà-bô:+tɔ̣̀:-tɔ̂:-<u>nɔ̀</u> ę́-álɔ́mgyà <u>nègɔ́</u> Ø-ą́: ([<u>1sg/agt</u>:
sg/obj]-łong=time-talk=to-aux/impf-<u>and/diff</u> [(2,
3sg/agt):1sg/pat:Ø/obj]-agree/pf <u>and=then/diff</u>
[<u>3sg</u>]-come/pf) 'I talked to him a long time and he
agreed with me and came/I persuaded him to come.'

b.
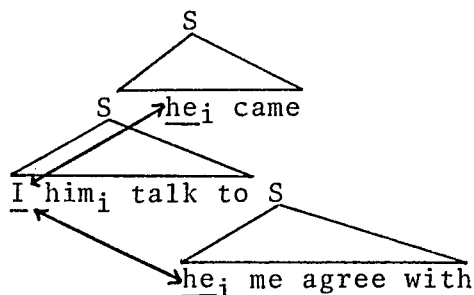
The remaining pairs of switch-reference markers make
more obvious semantic contributions to the complex sen-
tence. cę̀: 'when/same' and ę̀: 'when/diff' generally indi-

cate simultaneous events or states, as in (77).

(77) a. hɔ̂ndó hɔ́n ę́-há:dɔ̂: ę́-bǫ́:-cę̀: (why/Q neg [(2,3sg/
    agt):1sg/pat:∅/obj]-call=to/neg [(2,3sg/agt):1sg/
    pat:∅/obj]-see/pf-when/same) 'Why didn't you call
    to me when you saw me?'

   b. cènbô: á-pę̀:n-è:-cę̀: t'ɔ́:dé á-zǫ̀:n-è: (cow [3pl/
    agt:sg/obj]-butcher-ipf/hsy-when/same gallbladder
    [3pl/agt:sg/obj]-remove-ipf/hsy) 'While they
    were butchering the cow, they removed its gall-
    bladder.'

   c. háɔ̀p ∅-k'ɔ́:-ę̀: mà:yí ∅-cán (where/exactly/Q [3sg]-
    be=lying/sg-when/diff woman [3sg]-arrive/pf) 'What
    time was it (where did the sun lie) when the woman
    came?'

   d. hàgyà à-dę̀:+k'ɔ́:-ę̀: ∅-sép (perhaps [1sg]-sleep+
    be=lying/sg-when/diff [3sg]-rain) 'I probably was
    sleeping when it rained.'

   k'ɔ̀t 'yet/same' and ɔ̀t 'yet/diff', which I have la-
beled 'contrastive', are less easily characterized. They
generally imply that the event in the main clause (un-
marked for switch-reference) is a mildly surprising, un-
expected, or unfavorable alternative among a limited set
of possibilities. Of course, what is expected in a given
situation depends upon a variety of non-linguistic fac-
tors, some contextually defined and many culturally deter-

mined, which is why it is difficult to state exactly what the 'contrast' is in all cases. Some examples should illustrate the range of situations for which this pair of markers is appropriate.

In a few cases, the motivation for k'ɔt/ɔt is apparent from the sentence itself, as in (78a). In other cases, one needs to know the appropriate social response, as in (78b); following a discussion about what I should do if I came to Mr. McKenzie's house to work and found him asleep, I agreed that contrary to the dictates of politeness, I was to wake him, rather than just leave without bothering him.

(78) a. cȩ̂: hègɔ́ gyá-hágyá+tòn k'ɔt dôy+bìndè à-má:gòp

   (horse now [(1sg/agt):2,3sg/pat:sg/obj]-already+

   fat yet/same too+much [2sg/agt:sg/obj]-feed/

   impf) 'You already have the horse fat and yet you

   feed it too much.'

   b. hégɔ́ à-cán-t'ɔ̀: k'ɔt hègɔ́ nén-ậ:n-ì:t'ɔ̀: (just

   [1sg]-arrive-fut yet/same now/then [(1sg/agt):

   2sg/pat:du/obj]-wake-ipf/fut) 'Just as I get here,

   I'll wake you up anyway.'

The following example, from Harrington's (1947) recording of 'Seyndey and Coyote', explains that prairie dogs, in contrast to their former habit of sunning themselves around their holes (k'ɔt), now dive out of sight in

fear, having been roasted in coals and eaten by Sende.

(79) ...ę́:hɔ̀:-àl hétɔ́ k'yą́:hî̧:-èm è-sę́:tʰám+dɔ́: k'ɔ̀t ɔ́ygɔ́:
tʰâl-gù ét-kɔ̀ét+gùn-mɔ̀ mɔ́: hɔ̂ygɔ̀ hágyá è-kíl-dé-ȩ̀:
á-ɔ́m-gyá-ȩ̀: (...today-too still man-near [3inv]-sus-
picious+be yet/same there hole-into [3inv/refl]-fear+
jump-impf like near somewhere [3inv]-dwell-nom-at
[3pl]-become-pf-when/diff) '...even today/now they
still feel suspicious toward men, and (unlike before)
jump into their holes whenever someone gets anywhere
near where they live.'

Finally, ɔ̀t 'yet/diff' is illustrated in (80). The
passage is an excerpt from a letter in which the writer
has been describing his mother's increasing debilitation
in old age and comments on the inevitability of it all.
Death, 'moving along that way', is clearly the unfavorable
alternative implied by ɔ̀t.

(80) cɔ̂: dɔ̀:k'í: án-k'í:kɔ́m+dɔ́: ɔ̀t té: ɔ́phɔ̀: bà-cą́:dé:
(thus God [(2,3sg/agt):3sg/pat:pl/obj]-determine+be
yet/diff all along/there [2pl]-move/impf) 'God has
things decided thus and we all move along that way
anyway.'

The traditional hospitality of the Plains (and the
Kiowas) is the expected behavior implied by the use of ɔ̀t
in (81), from a tale of how the sun got into the sky.

Contrary to expectation, those who had the sun did not share it with visitors.

(81) hɔ́ngɔ́+gùykɔ̀ á-cán-hèl ɔ̀t páy àn ém-ɔ́:gyá+tɔ̀:yì:
(some+other/outsider [3pl]-arrive-hsy yet/diff sun hab [3pl/refl]-selfish+act/ipf/hsy) 'Outsiders came and yet they continued to keep the sun to themselves.'

4.34. _Other._ There remain a few syntactic markers that are more clearly subordinating than the switch-reference pairs and of far less frequent occurrence. They are listed here with illustrations.

(82) -àl 'although, even though'
   a. à-dè̗:+k'ɔ́:-àl hɔ́n àn à-dè̗:+hé̗:m-ɔ̂: ([1sg]-sleep+
      be=lying/sg-although neg hab [1sg]-sleep+die-neg)
      'Although I lie down, I can't fall asleep.'
   b. bîndè gyàt-pɔ́:l-î:tɔ̀:-àl bòthêndè à-tón+â:-yì:t'ɔ̀:
      (much [1sg/agt:pl/obj]-eat-ipf/fut-although un-
      likely [1sg]-fat+grow-ipf/fut) 'Even if I should
      eat a lot, I can't/don't get fat.'

(83) né 'but'
   a. gyà-kʰɔ̀m né hɔ́n ∅-cá̗:n-ɔ̂: ([1sg/agt:sg/obj]-call/
      pf but neg [3sg]-arrive-neg) 'I called but he
      didn't come.'
   b. gyà-tét né pàhí̗: ɔ̗̂:nyà-cò gyà-ɔ̗́:m-é: ([1sg/agt:
      sg/obj]-tell/pf but clearly differently-contrast
      [3sg/agt:pl/obj]-do-pf) 'I told him but it's

clear he's going to do it differently instead.'

(84) -dò 'because' is often accompanied by a clause-initial particle bót.

a. kʰɔ́: tʰáy yán-mɔ́bóttɔ̀ bót èm-k'ɔ́:+dɔ̀:-dò (blanket atop [(1sg/agt):2sg/pat:pl/obj]-pile=up/impf because [2sg]-cold+be-because) 'I'm piling covers on you because you are cold.'

b. gyà-cé:-hèl-dò mà-bá:-hêl ([pl]-short/near-hsy-because [2du]-go-hsy) '(I hear) it was not very far so you went.'

In narratives, one occasionally encounters adverbial connectors that have a decidedly elegant flavor, as in (85).

(85) háòbà ∅-cǫ́:+dɔ́: déòbà gyà-ây-hèl (however [3sg]-four=legged+move thusever [3sg/agt:pl/obj]-start=off-hsy) 'As fast as he could travel, he ran off.'

A great deal remains to be discovered about Kiowa syntax and semantics. This chapter has been an introduction to the main features of simple and complex sentences. The reader is encouraged to examine the texts in Chapter Five for more extensive examples in context.

Notes

1. The single participant in an intransitive event is, at least morphologically, related to an agent. See 3.25 for discussion.

2. Neutral order is that used, e.g., at the beginning of a discourse when there is no single bit of new information nor contrastive focus.

3. Even in elicited paradigms, one encounters this shift to the right of old information, artificially induced but present nonetheless. In the following examples (a-c), the feature under investigation was the verb; once established in (a), nɔ́:-p'ì: 'my-sister' is shifted to the right in (b-c).

   a) nɔ́:-p'ì: gyà-tɔ́:-tɔ̀: (my-sister [1sg/agt:sg/obj]-talk=to-aux/impf) 'I am/was talking to my sister.'

   b) kʰí:dêl gyà-tɔ́:tʰày nɔ́:-p'ì: (yesterday [1sg/agt:sg/obj]-talk=to/pf my-sister) 'Yesterday I talked to my sister.'

   c) àn gyà-bô:+tɔ̀:-tɔ̀: nɔ́:-p'ì: (hab [1sg/agt:sg/obj]-often+talk=to-aux/impf my-sister) 'I often talk to my sister.'

4. In light of current theoretical interest in passives, particularly from the perspective of relational grammar, it is worth noting that Kiowa shows no evidence of a pas-

sive construction. Kiowa speakers sometimes give English translations with passives, but the passive translations clearly represent an attempt to capture the focus on a participant that is signaled explicitly in the pronominal prefixes. As described in section 3.2, certain participants are obligatorily explicit, e.g., patients with certain combinations of agents. Such a formal restriction on possibilities likely accounts for the so-called restrictions on passivization in the Tanoan languages when an agent is third person and patient is first or second person (see, e.g., Kroskrity (1977)).

5. Numerals from one to ten are:

1.	pá: (-gɔ̀)	6.	mɔ́sɔ́
2.	yí:	7.	pʰânsę̂:
3.	pʰą́:ò:	8.	yátsę̂:
4.	yí:kyá	9.	kɔ́tsę̂:
5.	ɔ́nt'ɔ̀:	10.	kɔ́:kʰį̀:

Teens are indicated by the suffix -tʰą̀:, e.g., yátkyá-tʰą̀: 'fourteen', and tens by -kʰį̀:, e.g., yí:-kʰį̀: 'twenty'. kɔ́:-dò-kʰį̀: 'hundred' appears to be 'ten times ten'.

6. These letters represent, I think, the same sort of opportunity for the writer to display his linguistic virtuosity as was available for the story-teller in the past.

7. There is another particle differing in tone, hégɔ́, which seems to mean 'just at this/that very moment'.

8. The modal is also pronounced as bòthêndè 'unlikely'.

It is apparently based on the dubitative hên-.

9. This is a special use of bà- '2pl/intransitive' with intransitive verbs of saying. Second plural prefixes are typically used for first plural inclusive, but here the participant is first singular 'I'.

10. Earlier versions of this section appeared in Watkins (1976, 1978b).

11. Mr. McKenzie has commented that he finds it difficult to decide whether to write the switch-reference markers as part of the preceding word or as independent particles. My general impression is that he tends to write them as suffixes when the clause is more clearly subordinate semantically, but we have not yet looked into this very carefully.

CHAPTER FIVE

Texts

5.0. Introduction. Two short texts are presented
in this chapter for the purpose of illustrating many of
the grammatical points discussed in the preceding pages
and in order to give the reader a feel for connected
speech in Kiowa. The texts, by different speakers, are
of different genres: the first is a well-known humorous
story and the second a personal narrative.

5.1. Punning story. The first story was recorded
in October 1978 by Parker McKenzie, whose role in the pro-
duction of this grammar was elaborated in Chapter One.
Mr. McKenzie checked both the transcription and my tenta-
tive and inelegant translation and later revised the
opening of the story slightly (see grammatical note 4).
He also corrected a few omissions of hearsay suffixes,
indicated in the notes, and provided a revised translation
which follows the story (5.12). Section 5.13 is a mor-
pheme-by-morpheme analysis and section 5.14 grammatical
notes for the story.

The story, entitled Yáytǫhę̀:tègyà 'A Punning Story
for Laughter' by Mr. McKenzie, is an appropriate sample

text for reasons other than length. The Kiowas are fond
of telling jokes and enjoy the company of others with a
good sense of humor; they also have considerable interest
in their language and the ways in which it can be used.
Puns are thus a favorite type of joke.

The humor of this story lies in two puns, the "punch
lines" of which revolve around two sets of homophones,
óbɔ́y-, a bound form meaning a) 'really, truly' and b) 'by
chance, just happened to', and má:dé (má: 'up, above',
-dé 'from/along') meaning a) 'from above' and b) 'from up-
stream, from the west'. Although the history of óbɔ́y- is
unknown, gloss (b) for má:dé, 'from upstream, from the
west', is metaphorically related to the central meaning
'from above'. In a tepee, the favored side opposite the
entrance is 'up' or to the west. The corresponding 'down'
side, p'í:- 'down, below, downstream', is the entrance,
which opens to the east.

The conversation between the priest and the sup-
posedly dead man is a particularly nice illustration of
what happens when speakers assume that they share the same
background information (i.e., pragmatic presuppositions)
but in fact do not.

The paragraph organization and punctuation are Mr.
McKenzie's. Both are preserved in the glossed version to
make it easier to follow; the numbers in parentheses are
also intended to guide the reader through the translation

and interlinear gloss.

5.11. Text.

(1) kɔ́ysè̞:p̀ìgɔ̀ sé̞:tòy á-kɔ́ptê: gɔ̀ hétɔ́ hɔ́n hɔ́ndé
gyà-há:pɔ̂:hèl nɔ̀ há:têl hɔ́nhè:bèhèl gɔ̀ tɔ̞́:nê:, kʰɔ̞̀:mè:
k'yá̞:hĩ̞:dè hĩ̞:hèl, "sɔ́t yá̞-háygyá," tɔ̞́:nê:. (2) kɔ̂:gɔ̀
á-sɔ̂mtʰà̞:hèl.

(3) "hɔ̀:, hɔ́ndé gyà-kʰɔ́:bénɔ̀," bá-tɔ̞́:nê: dèkɔ̀:gɔ̀
ɔ́:dê: hɔ́ndé án-hɔ̞́:k'òlpʰà̞pò̞:à̞:hèl. (4) cɔ̂: àn ɔ̂ybàtɔ̀:-
dò̞:mè: -- t'èlbò̞:pè àn hábé hɔ̞́:k'òlpʰà̞syàn á-pʰá̞:dê:dè
gyà-háygyádò̞:mè: -- gìgɔ́ ɔ́yhɔ̀dè dɔ́:dò gyá-háydéhèl.

(5) "ɔ́:dê: án-pɔ̞́:á̞:; bá-pè:kò̞:mɔ̀nɔ́," tɔ̞́:nê: hágyây
k'yá̞:hĩ̞: dèkɔ̀:gɔ̀ hègɔ́ ɔ́:gɔ̀ hé:bèhèl. (6) tɔ́òbà gyà-ɔ́mdé-
hèl.

(7) há:òy tɔ́lk'ì: tɔ̞́:nê:, "bè-sɔ́: ɔ́:hɔ̀: hábé,"
tɔ̞́:nê:, nègɔ́ èm-sɔ́:hèl. (8) mɔ́: gyà-dò̞:mê: nègɔ́ tɔ́lk'ì:
cáyhèl gɔ̀ tɔ̞́:nê:, "hɔ̀:, hɔ́ èm-ɔ́bɔ́ycàn?" tɔ̞́:nê:, nɔ̀ kɔ̂:dè
tɔ̞́:nê:. "hɔ̀:, à-ɔ́bɔ́ycàn."

(9) "hɔ̀:, ...nɔ̀ hâ:bécɔ̀ èm-cán?" tɔ̞́:nê: tɔ́lk'ì:.

(10) "nɔ̀ má:dé," tɔ̞́:nê:.

5.12. Translation.

(1) Kiowa peyote adherents were seated in a peyote
tepee before anything had started when someone belatedly
entered and said, naming a man who had died, "I just
learned about it," he stated. (2) The others were sur-
prised.

(3) "Alas, how unfortunate!" they said, just as

something with jingling bells was heard coming thither.
(4) It was known he customarily dressed in that manner --
with tiny bells strung about his knees -- so his identity
was thereby evident.

(5) "You said he was dead, but here he comes
a-sounding," said one of the men, just as he entered with-
in. (6) Silence ensued.

(7) At length, the priest said, "Sit down there
somewhere," he said, and he sat down. (8) In a while, the
priest asked him, and saying, "Now, are you really here?"
said the priest, and the other answered, "Yes, I just
happened to be here."

(9) "Well, ...and whence did you come?" said the
priest.

(10) "From upstream, of course!" he said.

5.13. Interlinear gloss.

$$\text{yáy+tǫ̀+hę̀:+tè-gyà}$$

(play+word+story+tell-nom)

(1) kɔ́y[1]+sę̀:+pį̀-gɔ̀   sę́:+tò-y

    Kiowa+peyote+eat-inv   peyote+tepee-in

á-kóp[2]-tὲ:[3]   gɔ̀[4]   hétɔ́   hɔ́n

[3pl]-be=sitting/pl-ipf/hsy   and/same still   neg

hɔ́n-dé   gyà-há:p-ɔ̂:+hὲl[5]   nɔ̀   há:têl

some-bas [3pl/agt:sg/obj]-raise-neg+hsy   and/diff someone

Ø-hón[1]+hè:bè+hèl   gɔ̀   Ø-tǫ́:n-ê:,[6]
[3sg]-last+enter+hsy and/same [3sg]-say-ipf/hsy

Ø-kʰǫ̂:m-è: k'yą́:+hį̂:-dè[7]
[3sg/agt:sg/obj]-name-ipf/hsy male+real-rel/bas

Ø-hį̂:+hèl,   "sɔ́t yą́-háy-gyá,"
[3sg]-die+hsy, "just [(2,3sg/agt):1sg/pat:pl/obj]-learn-
    detr/pf,"

Ø-tǫ́:n-ê:.   (2) kɔ̂:-gɔ̀   á-sɔ̂m+tʰą̀:+hèl.[8]
[3sg]-say-ipf/hsy.   (2) other-inv [3pl]-curious+feel+hsy.

    (3) hɔ̀:,[9]   hón-dé   gyà[10]-kʰó:bé-nɔ̀,"
    (3) yes/well, some-bas [pl]-unfortunate-diff,"

bá-tǫ́:n-ê: dèkɔ̀:gɔ̀[11] ó:-dê: hón-dé
[3pl]-say-ipf/hsy just=as   there-from/along some-bas

án-hǫ́:[5]+k'òl+pʰą̀[12]+pǫ̀:+ą̀:[13]+hèl.
[(2,3sg/agt):3sg/pat:pl/obj]-metal+neck+tied+sound+come+
    hsy.

(4) cɔ̂:   àn   Ø-ɔ̂ybà+tɔ̀:+dǫ̂:-mè: -- t'èlbǫ̂:-pè
    thus hab [3sg]-dress=up+aux+be-ipf/hsy -- knee-along

àn   há-bé   hǫ́:+k'òl+pʰą̀+syàn
hab indef-along metal+neck+tied+small

á-pʰą́:-dê:-dè
[(2,3sg/agt):3sg/pat:sg/obj]-be=tied-ipf/hsy-rel/bas

gyà[14]-háy-gyá+dɔ̧̀:-mè: gìgɔ́[15]

[3sg/agt:sg/obj]-learn-detr/pf+be-ipf/hsy and=then/same

ɔ́y-hɔ̀-dè   ∅-dɔ́:-dɔ̀   gyà[14]-háy-dé+hèl.

that-adv-bas [3sg]-be-because [3sg/agt:sg/obj]-learn-detr/

   pf+hsy.

   (5) "ɔ́:-dê: án-pɔ̧́:+ą̧́: ;

   (5) "there-from/along [(2,3sg/agt):3sg/pat:pl/obj]-

   sound+come;

bá[16]-pè:+kɔ̧̀:m-ɔ̀-nɔ̀,"

[2pl/agt:sg/obj]-dead+indicate-impf-diff,"

∅-tɔ̧́:n-ê: hágyây   k'yą́:hį̂: dèkɔ̀:gɔ̀ hègɔ́

[3sg]-say-ipf/hsy indef/which man   just=as   then

ɔ́:-gɔ̀   ∅-hé:bè+hèl.   (6) tɔ́=ɔ̀=bà gyà-ɔ́m-dé+hèl.

there-adv [3sg]-enter+hsy. (6) quiet [pl]-make-detr+hsy.

   (7) há:-ɔ̀-y   tɔ́l+k'ì:[17] ∅-tɔ̧́:n-ê:

   (7) indef-adv-at father+male [3sg]-say-ipf/hsy

"bè-sɔ́:   ɔ́:-hɔ̀:[18] há-bé,"

"[2sg/refl]-sit/imp there-adv indef-along,"

∅-tɔ̧́:n-ê: nègɔ́[19]   èm-sɔ́:+hèl.

[3sg]-say-ipf/hsy and=then/diff [3sg/refl]-sit+hsy.

(8) mɔ́: gyà-dɔ̧́:-mê: nègɔ́   tɔ́lk'ì:

(8) like [pl]-be-ipf/hsy and=then/diff priest

ø-cáy+hèl[20]   gɔ̀   ø-tǫ́:n-ê:,

[3sg/agt:sg/obj]-ask+hsy and/same [3sg]-say-ipf/hsy,

"hɔ̀:,   hɔ́ èm-óbɔ́y[21]+càn?"   ø-tǫ́:n-ê:,

"yes/well, Q [2sg]-really+arrive/pf?" [3sg]-say-ipf/hsy,

nɔ̀   kɔ̂:-dè   ø-tǫ́:n-ê:,

and/diff other-bas [3sg]-say-ipf/hsy,

"hɔ̀:, à-óbɔ́y[22]+càn."

"yes, [1sg]-by=chance+arrive/pf."

(9) "hɔ̀:, ... nɔ̀   hâ:-bé-cɔ̀[23]

(9) "well, ... and/diff Q-along-contrast

èm-cán?"   ø-tǫ́:n-ê: tɔ́lk'ì:.

[2sg]-arrive/pf?" [3sg]-say-ipf/hsy priest.

(10) "nɔ̀   má:-dé,"[24] ø-tǫ́:n-ê:.

(10) "and/diff above/upstream-from/along," [3sg]-

say-ipf/hsy.

5.14. Grammatical notes.

1. Tone-lowering (TL) morphemes are easily identified in
the rather long compounds that occur in this text, e.g.,
kɔ́y̱ 'Kiowa', hóṉ 'last, at the end', and hǫ̱:̱ 'metal'.
2. k'úl∿kóp- 'be lying/pl' is also used for 'be sitting/
pl'. See 3.314 for number-differentiated verbs.
3. Mr. McKenzie provided this comment on his translation:

"Since English lacks verb inflections in the Kiowa 'hear-say' mood, the following translation of the above is written in the indicative past tense -- to avoid the use of auxiliaries such as 'reported' or 'reportedly', 'it was said', 'rumored' etc." (letter dated 16 November 1979)

4. In the recorded version, the story began: á-sɛ́:+pɪ̀:+ kòp-tè: gɔ̀... ([3pl]-peyote+eat+be=lying/pl-ipf/hsy and/same...) 'They were sitting in a peyote meeting and...' Because we had talked about the story before recording it, the participants and setting were already established and thus omitted at the opening of the recorded version. In his revision, Mr. McKenzie merely reset the stage.

5. One also 'raises' or starts up a song in Kiowa.

6. Verbs of saying that mark direct quotes in narratives are imperfective rather than perfective even though they may refer to a single completed utterance.

7. This is not the normal position for the relative mark-er. It would usually occur suffixed to the final word of the clause, i.e., k'yá:hɪ̂: ∅-hɪ̂:hèl-dè (man [3sg]-die/hsy-rel/bas) 'the man who had died', but this is apparently an acceptable variant.

8. -hêl 'hearsay' was lacking in the recorded version.

9. hɔ̀: is 'yes' in answer to a question and 'well, now' as a conversational opener. Audiences are also expected to interject hɔ̀: during the telling of a story to indi-cate their interest. In fact, the narrator is not sup-

posed to continue unless he hears hɔ̀:.

10. In the recorded version, hónde̋ gya̋- is phonetically [hónde̋t]. See 2.9 for a discussion of contractions.

11. This form is no doubt morphemically complex but its analysis is unclear. By its tones (all L), it would appear to be a suffix or enclitic.

12. The first three roots constitute a nominal compound that is incorporated in the verb: hɔ̰́:k'ɔ̀lpʰà̰ 'bell'.

13. In this verb complex, pɔ̰́: 'sound' is the main verb and á̰: 'come' the aspect-directional auxiliary (see 3.331) indicating that the person making the noise was moving toward the point of reference, in this case the tepee.

14. A [3pl/patient] prefix with no agent is indicated by the [3sg/agt:object] prefixes.

15. gìgɔ́ is a contraction of gɔ̀ hège̋ 'and/same then'.

16. The prefix ba̋- lowers the tone of the entire verb complex.

17. tɔ́lk'ì: is the term for the leader or 'priest' at a peyote meeting.

18. The profusion of locative-adverbial expressions is still poorly understood. In the original version, ɔ́yhɔ̀: was used. Although -y 'general location' usually con-trasts with -p 'exact location', the significance of presence vs. absence of -y is not clear.

19. nègɔ́ is a contraction of nɔ̀ hège̋ 'and/diff then'.

20. · In the recorded version this was imperfective hearsay cá:1ê:.

21. óbɔ́y- 'really, truly' is glossed here as intended by the priest.

22. óbɔ́y- as used by the supposedly dead man has the interpretation 'just happened to, by chance'. He, of course, does not know that people think he is dead.

23. -cò is a contrastive suffix usually translated 'instead', e.g., ę̀:cò bè-sɔ́: (here-instead [2sg/refl]-sit/imp) 'Sit here instead'. Perhaps a better translation would be 'just where did you come from?', the implication being that he could not have come from an ordinary place.

24. The man's response is a perfectly innocent 'from upstream', but is of course interpreted by the audience according to the presupposition of the priest that the man is dead, thus 'from above, heaven'.

5.2. <u>Grandmother telling stories.</u> The second text was recorded by Florence Saumty in March 1976. It was transcribed from tape, translated, and both text and translation were later checked with Mrs. Saumty's sister, Belle Kayitah. Punctuation is supplied where both clause structure and pauses indicate definite breaks. Direct quotes are enclosed in quotation marks. The sentences are numbered for ease in comparing the original text (5.21) with the translation (5.22) and interlinear gloss (5.23). Grammatical notes follow (5.24).

In this informal narrative, Mrs. Saumty fondly re-
calls how her old blind grandmother would tell stories to
the grandchildren all gathered around ready for bed. In
contrast to the first text, there are no hearsay forms
because Mrs. Saumty is recounting an event in which she
participated. Other stylistic differences include the
more frequent use of switch-reference markers (see 4.33)
to connect clauses and fewer multiply incorporated verbs.

5.21. Text.

(1) tʰà:lyôy ∅-kʰópdɔ́: gɔ̀ dɔ́mgyá àn ∅-ą́:gyà.
(2) pálc'è: án-k'úldéę̀: àn ∅-ą́:gyà nègɔ́ ɔ́yhɔ̀: è-cân.
(3) gìgɔ́ ét-dę̀:mɔ̂:mɔ̀ nègɔ́ té: ámɔ̀:gyòp è-t'ɔ́: gìgɔ́,
"tʰà:lî:, dɔ́-tʰǫ̀gɔ̂yhę̀:tèl," è-tɔ́:. (4) nègɔ́ "háòdè
bà-dɔ́:?" ∅-tǫ̂:gyà: nègɔ́ mɔ́n gyà-k'ɔ̂:bòp háòdè è-dɔ́:.
(5) nègɔ́ dɔ́-hę̀:tèt gìgɔ́ té: pál ét-hɔ̀:gyà gɔ̀ étté ɔ́:k'óbé
ét-dę̀:mɔ̂:. (6) hègɔ́ è-k'úl. (7) hègɔ́ mɔ́n è-dę̀:hêm nɔ̀
hą́::òy yą́-tây nɔ̀ hétɔ́gų́: án-hę̀:tèpǫ̀:gyà: gɔ̀ háyáàl
èm-t'ɔ̂:mɔ̀. (8) gyà-yí:dɔ́ gɔ̀ bà-tɔ́:, "tʰà:lî:, bè-kʰódę̀:-
mɔ̀:, hègɔ́ ∅-kʰyápʰɔ́ygyá," bà-tɔ́: né hétɔ́ án-hę̀:tèpǫ̀:gyà:.

5.22. Translation.

(1) Grandmother was sick and would sit on the
ground. (2) She would sit on a thick mattress that was
lying there for her and that's where we came. (3) So
we would go to bed and all her grandchildren were there
and "Grandmother, tell us an old story," we said.

(4) And then, "How many are you?" she said and I folded
over her fingers how many we were. (5) And she told us an
old story and we all got our quilts and lay down to sleep
in a circle. (6) Now we were lying there. (7) We must
have fallen asleep and a long time later I woke up and
she could still be heard telling stories and she was mak-
ing signs every which way. (8) I touched her and said,
"Grandmother, go to sleep now, it's almost daylight," I
said, but she could still be heard telling stories.

5.23. <u>Interlinear gloss.</u>

(1) tʰà:1y-ôy[1] ∅-kʰóp+dɔ́: gɔ̀ dɔ́m-gyá àn
(1) MoMo-name [3sg]-hurt+be and/same ground-on hab

∅-ą́:gyà. (2) pál+c'ę̀:
[3sg]-be=sitting/sg. (2) quilt+thick

án-k'úl-dé-ę̀:
[(2,3sg/agt):3sg/pat:pl/obj]-be=lying/pl-rel/bas-loc

àn ∅-ą́:gyà nègɔ́[2] ɔ́-y-hɔ̀: è-cán.
hab [3sg]-sitting and=then/diff there-at-adv [1pl]-arrive/
  pf.

(3) gìgɔ́[2] ét-dę̀:+mɔ̂:-mɔ̀
(3) and=then/same [1pl/refl]-sleep+lie=down-impf

nègɔ́[3] té: á-mɔ̀:gy-òp è-t'ɔ́:
and=then/diff all her-grandchild-inv [1pl]-remain

gìgɔ́   "tʰà:l-î:, dɔ́-tʰ̥ɔ̀gɔ̂-y+hɛ̀:+tèl,"

and=then/same "MoMo-voc, [(x/agt):1pl/pat:∅/obj]-old-adv+

   story+tell/imp,"

è-tɔ́:.[4]   (4) nègɔ́   "há-ò-dè[5]   bà-dɔ́:?"

[1pl]-act. (4) and=then/diff "Q-adv-nom/bas [2pl]-be?"

∅-tɔ̣́:-gyà:[6]   nègɔ́   mɔ́n   gyà-k'ɔ̂:b-òp

[3sg]-say-impf and=then/diff finger [1sg/agt:sg/obj]-

   push=over-impf

há-ò-dè   è-dɔ́:

indef-adv-nom/bas [1pl]-be.

(5) nègɔ́   dɔ́-hɛ̣́:+tèt

(5) and=then/diff [(x/agt):1pl/pat:∅/obj]-story+tell/pf

gìgɔ́[7]   té: pál ét-hɔ̀:-gyà   gɔ̀

and=then/same all quilt [1pl/agt:pl/obj]-get-pf and/same

ét-té   ɔ́:=k'ó-bé   ét-dɛ̣̀:+mɔ̂:.

many-bas circle-in/along [1pl/refl]-sleep+lie=down/pf.

(6) hègɔ́   è-k'úl.   (7) hègɔ́   mɔ́n

(6) now/then [1pl]-be=lying. (7) now/then probably

è-dɛ̣̀:+hêm   nɔ̀   há̄::[8]-ò-y

[1pl]-sleep+die/pf and/diff indef-adv-at

yá̰-tây   nɔ̀   hétɔ́+gṵ́:

[(2,3sg/agt):1sg/pat:pl/obj]-awake/pf and/diff still

án-hḛ̂:+tè+pò̰:-gyà:[9]

[(2,3sg/agt):3sg/pat:pl/obj]-story+tell+sound-impf

gɔ̀   há-yá-àl   èm-t'ɔ̰̂:m-ɔ̀.[10]

and/same indef-toward-also [3sg/refl]-sign=make-impf.

(8) gyà-yí:d-ɔ́   gɔ̀   bà-tɔ́:,

(8) [1sg/agt:sg/obj]-touch-pf and/same [3pl]-act,

"tʰà:l-î:, bè-kʰó+dḛ̀:+mɔ̀:,

"MoMo-voc, [2sg/refl]-immediately+sleep+lie=down/imp,

hègɔ́ ∅-kʰyá+pʰɔ̰́-y-gyá,"[11]   bà-tɔ́: né hétɔ́

now   [3sg]-day+stand-tr-detr/pf," [3pl]-act but still

án[12]-hḛ̂:+tè+pò̰:-gyà:.

[(2,3sg/agt):3sg/pat:pl/obj]-story+tell+sound-impf.

5.24. Grammatical notes.

1. Mrs. Saumty pronounces the vowel of these suffixes as a <u>high</u> back vowel [u], as do her sister and, according to Mr. McKenzie, some male speakers as well.

2. Contraction of the switch-reference markers gɔ̀ 'and/same' and nɔ̀ 'and/diff' with hègɔ́ 'now, then' is normal in connected speech.

3. The explanation for this unexpected use of nègɔ́ (<nɔ̀ hègɔ́ 'and/diff then') to join clauses whose participants are identical appears to lie in a momentary shift in perspective of the narrator. In telling the story, she is

one of the grandchildren ('we'), but in using the pos-
sessed noun á-mɔ̀:gyɔ̀p 'her-grandchildren' she seems to
step out of the scene, thus the 'different' conjunctive
nɔ̀. The identity of first plural and third inverse agen-
tive prefixes provides a pivot by which the narrator can
resume her place within the scene: 'all her grandchildren
they/we were there'.

4. This use of the verb tɔ́: 'act, behave' as a substitute
for verbs of saying in informal narratives seems to be
something like the use in casual English of 'he goes' or
'he went' for 'he said'.

5. Speakers vary in their pronunciation of the final
syllable as [tè] or [dè]. Mr. McKenzie reports that [tè]
was used in his family.

6. See grammatical note 6 in section 5.14.

7. The unexpected use of gìgɔ́ (<gɔ̀ hègɔ́ 'and/same then')
here where the agents of the preceding and following
clauses are different suggests no explanation similar to
that discussed in grammatical note 3.

8. The first syllable of the interrogative/indefinite
háòy 'when?, some time' is pronounced with extra-high
pitch and extra length, both stylistic devices for em-
phasis, here indicating 'much later, a long time later'.

9. As illustrated in the preceding text, verbal compounds
with pɔ́: 'sound' as main verb are commonly used for unin-
tentionally perceived sounds or noises, rather than the

verbs t'ɔ́: 'hear' or t'ɔ́:hál 'listen to'.

10. The verb appears to be a fused compound, t'V́- (uniden-tified) + ɔ́m 'do, make', and refers to Plains sign lan-guage, which typically accompanies the telling of a story.

11. kʰyápʰɔ̗ygyá is also a fused compound, the first root of which is kʰí(:)ᴧkʰyá 'day, daylight'.

12. hétɔ́ án- was (and is normally) contracted to [hétą́n].

	p'	t'	c'	k'	pʰ	tʰ	kʰ	p	t	c	k	b	d	g	s	z	h	ʔ	m	n	l	y	i	e	a	u	o	ɔ
consonantal	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	−	−	+	+	+	−	−	−	−	−	−	−
sonorant	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+	+	+	+	+	+	+	+	+	+
syllabic	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+	+	+	+	+	+
continuant	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+	+	+	−	−	−	+	+	+	+	+	+	+	+
voice	−	−	−	−	−	−	−	−	−	−	−	+	+	+	−	+	−	−	+	+	+	+	+	+	+	+	+	+
aspirate	−	−	−	−	+	+	+	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−
ejective	+	+	+	+	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−
nasal	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+	+	−	−	−	−	−	−	−	−
anterior	+	+	−	−	+	+	−	+	+	−	−	+	+	−	+	+	−	−	+	+	+	−	−	−	−	−	−	−
coronal	−	+	+	−	−	+	−	−	+	+	−	−	+	−	+	+	−	−	−	+	+	−	−	−	−	−	−	−
lateral	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+	−	−	−	−	−	−	−
high	−	−	−	+	−	−	+	−	−	−	+	−	−	+	−	−	−	−	−	−	−	+	+	−	−	+	−	−
low	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+	−	−	+
back	−	−	−	+	−	−	+	−	−	−	+	−	−	+	−	−	−	−	−	−	−	−	−	−	−	+	+	+

Tone: [± high] Length: [± long]

APPENDIX 2:   ORTHOGRAPHIES

Key:

JPH - Harrington, <u>Vocabulary</u> <u>of</u> <u>the</u> <u>Kiowa</u> <u>Language</u>
      (1928)

PM - Parker McKenzie

SIL - Summer Institute of Linguistics, developed dur-
      ing summer field courses in Norman, Oklahoma

	Phonemic	PM	JPH	SIL
Consonants				
	p	f	p	p
	t	j	t	t
	k	c	k	k
	p'	v	p'	p'
	t'	th	t'	t'
	k'	q	k'	k'
	p^h	p	pʻ	ph
	t^h	t	tʻ	th
	k^h	k	kʻ	kh
	b	b	b	b
	d	d	d	d
	g	g	g	g
	c	ch	ts	ts
	c'	x	ts'	ts'
	m	m	m	m
	n	n	n	n

	Phonemic	PM	JPH	SIL
	s	s	s	s
	z	z	z	z
	h	h	h	h
	(ʔ)	--	ʔ	ʔ
	l	l	dl	l
	y	y	y	y

Vowels

	Phonemic	PM	JPH	SIL
	i	i	iн	ee
	e	e	ei	ay
	a	a	н	ah
	u	u	uα	oo
	o	o	ou	ow
	ɔ	au	α	aw
	ay	ai	нe	ahy
	uy	ui	ue	ooy
	oy	oi	oue	owy
	ɔy	aui	αe	awy

Suprasegmentals

	Phonemic	PM	JPH	SIL
Length	V:	$\overline{V}$	$\overline{V}$	--
Nasali- zation	V̨	$\underline{V}$	V̨	$\underline{V}$
Tone	V́,V̀,V̂	V́,V̀,V̂	V́,V̀	V́,V,V̂

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AA   American Anthropologist

BAEAR   Bureau of American Ethnology Annual Report

BAEB   Bureau of American Ethnology Bulletin

IJAL   International Journal of American Linguistics

Lg.   Language

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          Structures of Native America, ed. Harry Hoi-
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