Yowlumne in the Twentieth Century

by

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Abstract

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This dissertation consists of four studies of Yowlumne, also known as Yawelmani Yokuts, a highly endangered language of the Yokuts family spoken mostly on the Tule River Reservation, located in the southwestern foothills of the Sierra Nevada mountain range.

An introductory chapter offers a quick snapshot of the language in terms of genetic affiliation, typological profile, and primary sources used. It also gives biographical information about the native-speaker consultants who worked with the author and provides a very brief grammatical sketch.

Little attention has ever been paid to other aspects of Yowlumne grammar other than morphophonology. The next two chapters attempt at least to partially correct this situation, by offering studies of grammatical relations and reference tracking.

Chapter 2 relies on the typological distinction between direct object languages and primary object languages. Yowlumne is clearly a primary object language, but has some features that do not fit the current primary object prototype. In particular, the chapter demonstrates that object alignment in Yowlumne has a straightforward semantic motivation, contrary to the usual characterization of primary objectivity.

Chapter 3 deals with Yowlumne reference tracking system, viz., the syntactic

mechanisms that define coreferential links between clauses and create narrative continuity and cohesion. There are two categories of such mechanisms: those operating between subordinate and superordinate clauses (the switch reference system), and another operating between coordinated clauses. The former follows fairly simple and inviolable rules, while the later is also subject to pragmatic controls. Among the interesting phenomena noted in this chapter is an object-pronoun fronting construction that seems to be on its way to becoming an inverse form.

Chapter 4 is a diachronic study of Yowlumne during the period 1930-2000. It attempts to provide a fairly comprehensive structural comparison of the language as documented around 1930 with the speech of the two modern-day consultant speakers, with special attention to effects of language obsolescence.

Chapter 5 deals with the methodology of linguistics. Yowlumne has played a major role in the development of modern generative phonology. However, most of the Yowlumne data in the generative literature is not from attested sources, but has been constructed by its authors based on rules adduced in Newman 1944, the leading reference grammar of Yowlumne. The chapter examines the reasons for this practice and the problems that can arise when it is indiscriminately followed, and also makes some recommendations. The chapter closes with some observations about Newman's grammar and its place in the history of modern linguistics.

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for

Jane Flippo

(1935-2004)

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The digitized photograph of Ross Ellis and son is reproduced by permission of the Bancroft Library, University of California, Berkeley. The photograph of Jane Flippo and her great-nephew Joseph Jaquez was provided courtesy of Christina Martinez Jaquez.

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language with me and managed to make that process fun as well as illuminating. Her passing last year was a great loss to her many friends and relatives. This work is dedicated to her memory.

Jane Flippo with her great-nephew Joseph Jaquez, 2003

Ross Ellis (one of Stanley Newman's two Yowlumne consultants) and his son, with Tule River in the background, 1932.

Chapter 1

Introduction

1.1 INTRODUCTION. This work might best be viewed as a partial 'biography' of the Yowlumne language (and, occasionally, some closely related languages) over roughly the last century. In part, it fills in some of the blanks in grammatical description left by linguists who studied the language early in the twentieth century. In addition, it examines how the language changed during that century, with special attention to issues of language obsolescence. And finally, it steps back from business of linguistic description of Yowlumne to look at the way theoretical linguistics has made use of those descriptions.

1.2 THE YOKUTS FAMILY. Yowlumne is a member of the Yokuts language family, which originally comprised about 40 closely related languages (Silverstein 1978) spoken in the San Joaquin Valley of California and in the adjacent western foothills of the Sierra Nevada mountains. Most of these language are now extinct: perhaps as few as five of them still have a handful of elderly speakers each. Extinction is likely for all of them with the next generation or two, although several vigorous language maintenance and revitalization efforts are underway.

In addition to 'Yokuts' (< Yowlumne 'person'), the term 'Yokutsan' is also found, but the original ethnographic designation 'Mariposan' fell out of use over a

century ago.[1]

Yokuts is classified as a branch of the Penutian stock, although the composition, and indeed the very existence of Penutian is controversial (see, e.g., Campbell and Mithun 1979). However, most scholars (*pace* Kramer 1995) would at least accept the legitimacy of California Penutian, consisting of Yokuts, Maidun, Wintun, Miwok, and Costanoan. Figure 1.1 shows the relevant part of the Yokuts family tree (based on several diagrams in Whistler and Golla 1986, excluding branches and languages not discussed here). The term 'Nim Yokuts' refers to the subgroup of the family defined by the shared innovation of the first

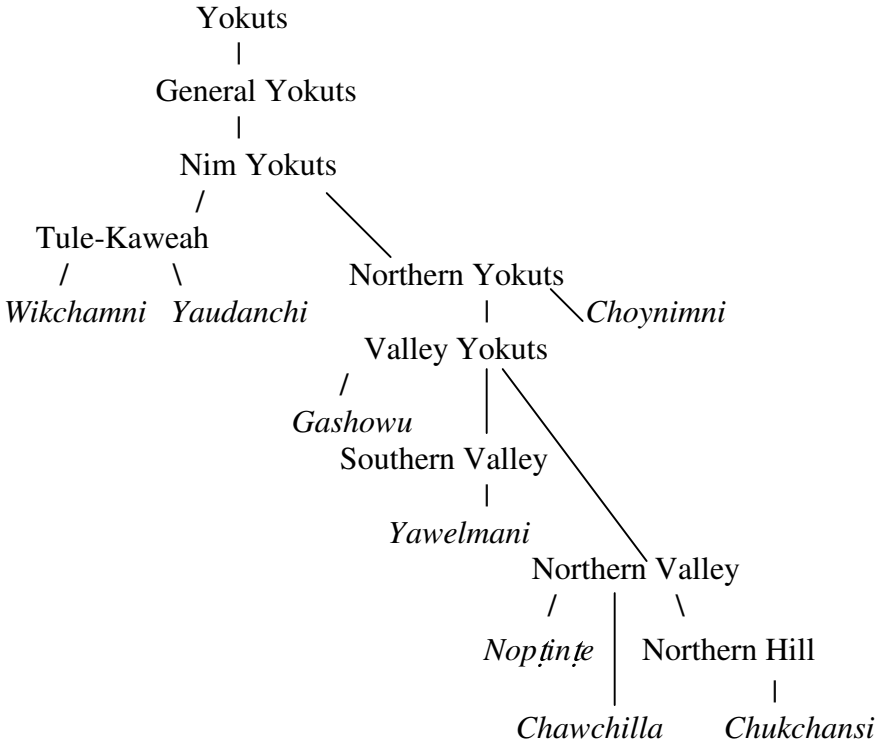

Figure 1.1 The Nim Yokuts languages (after Whistler and Golla 1986)

[1] There is little point in asking whether what I have called 'languages' are instead merely dialects. Terminologically , however, it appears that 'Yokutsan' can refer only to the language family, while 'Yokuts' can refer either to the family or to the coextensive 'Yokuts language'.

singular genitive pronoun *nim* 'my'. It may also be treated as a mnemonic for 'Newman-Yokuts', since it corresponds exactly to the genetic breadth encompassed by the six languages described in Newman 1944.

1.3 THE YOWLUMNE PEOPLE AND LANGUAGE. Most Yowlumne speakers live in or near the Tule River Reservation, about 12 miles east of Porterville, California. The Yowlumne do not themselves constitute a federally-recognized Indian tribe; rather, they are part of the recognized multi-ethnic Tule River Tribe, which includes other Yokuts as well as non-Yokuts peoples.

1.3.1 TYPOLOGICAL-GRAMMATICAL OVERVIEW. In general, aspects of Yowlumne grammar will be discussed as they become relevant. The following is meant only to provide the barest bones:

1.3.1.1 PHONOLOGICAL INVENTORY. There are three stop series (plain, aspirated, and ejective) as well as five glottalized sonorants, which are always preceded by a vowel. The five vowels (*a, e, i, o, u*) may be either long or short. (The entire inventory is listed in Chapter 4, section 4.4, below.)

1.3.1.2 PHONOLOGY. The maximal syllable is usually CVX (i.e., CVV or CVC, with obligatory onsets), but CVVC syllables occur in certain special cases. Perhaps the best-known feature of the language is its system of stem ablaut in which different morphologically-conditioned stem allomorphs conform to one of a set of prosodic templates. E.g., *hiweet-* 'walk' appears as *hiweeten* (future), *hew'taxoohin* (durative preterite), *hiw'tin'ay* (contemporaneous gerundial), etc.

1.3.1.2 MORPHOLOGY. Morphology is entirely suffixal, except for reduplication, which is common with verbs. Nouns inflect for six cases and

number (nominative, primary objective, secondary objective, genitive, locative, and ablative; verbs for tense, aspect, mood, valence (passive, causative, goal- and comitative- applicatives), and switch reference. There is no subject-verb concord, but nouns do agree in case and number with determiners and attributive adjectives.

1.3.1.3 MORPHOSYNTAX AND SYNTAX. Argument alignment is accusative (rather than ergative) and primary objective (rather than direct objective); subjects (and sometimes other arguments) are readily omitted.

1.3.2 'YOWLUMNE' AND 'YAWELMANI'. Yowlumne is better known to most linguists as 'Yawelmani', or 'Yawelmani Yokuts', probably because that was the name used in Newman 1944, the leading reference grammar. According to my consultants, however, tribe members have long been aware that academics employed a misnomer, while tribe members have always called themselves 'Yowlumne', which is simply a rendering of *Yawlam'ni* according to English spelling conventions. Frank Latta offers the following anecdotal explanation:

> 'At this point in the account of the Yowlumne Indians it is necessary to make some explanation concerning their name. It appears in other printed literature as *Yauelmani.* I used this pronunciation until I had interviewed Wahumchah [a/k/a Henry Lawrence] over a period of more than twenty years. One afternoon, when we were returning from a program before the Standard School in Oildale, he had the following to say: "You know, Mr. Latta, you make one bad mistake when you talk about my people. You call their tribe Yauelmani. That is wrong. The correct name is

> Yowlumne. Yauelmani means a little group of Yowlumne. I think sometime some old-timer white man met a few of my people. He asked them who they were and they said, 'Yauelmani'. That was right. But that was not their tribe name. I know that from all of my old people."'
>
> (Latta 1949:49)

This passage suggests that 'Yawelmani' is a paucal form. In fact, it is clearly a plural form, which, in light of the highly marked and narrow scope of usage of the Yokuts plural, can have paucal or partitive, but not generic meaning (Silverstein 1978:447; Newman 1944:213).[2]

1.3.3 'YOWLUMNE 1930' AND 'YOWLUMNE 2000'. It will often be convenient to distinguish these two stages of the language. 'Yowlumne 2000' will refer to material elicited by me (and occasionally others) from native speaker consultants during the period 1996-2004. 'Yowlumne 1930' includes published and unpublished material collected roughly between roughly 1900 and 1931 (and mostly toward the end of that period) by Alfred Kroeber, J.P. Harrington, and Stanley Newman (including Newman's word list, which is included here as Appendix A).[3] No significant field research on Yowlumne occurred between 1931 and 1996, but some reference is made to research done on other Yokuts languages during that period.

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[2] There is no evidence that the pre-contact Yowlumne had a distinct name for their language. Modern speakers simply call it *inyana* 'Indian' or, when more specificity is required, *yaw'lamnin ṭeexil* 'speech of the Yowlumne'.

[3] Note that publication dates of some of these works are often much later that the dates of data collection.

1.4 ORTHOGRAPHY. For Yowlumne sources, regardless of the orthography used in the original, I employ orthography of Newman 1944,[4] with the following modifications:

- Long vowels are indicated by doubling rather than by the raised dot <·>;
- Apostrophes marking glottalization come after rather than on top of character they apply to;
- Glottal stop is symbolized by <ʔ> rather than by an apostrophe <'>;
- The vowel symbol <ɔ> is represented as <o> (Newman's *ɔ/o* distinction is archiphonemic rather than phonemic, with <o> indicating those *o's* that alternate with *u*.)

1.5 DATA SOURCES. Limitations, pecularities, etc., of the various sources of data used will be discussed as they become relevant in the body of the dissertation. The following is merely meant to provide an overview:

1.5.1 SOURCES OF YOWLUMNE 1930 DATA. The best description of the phonology and morphology of Yowlumne 1930 is Newman 1944 (based on 1930-31 field work), which also covers Wikchamni, Gashowu, Choynimni, Chawchila, and Chukchansi. Kroeber 1907 (based on 1900-06 field work) provides little additional information of value on Yowlumne, but includes a lengthy grammatical sketch of the Yaudanchi. The main Yowlumne lexical resource is Stanley

[4] The most significant difference between sources is in the representation of stops. There are plain (voiceless), aspirated, and ejective stops, for which Newman 1944 uses *b,d,g/p,t,k/p',t',k'*

Newman's slip file, a listing of about 1200 words, which have been included here in Appendix A. Kroeber 1963 (based on 1900-06 fieldwork) is a list of 308 sets of words in 21 Yokuts languages, plus what are labeled as two additional varieties of Yowlumne. (Often the Yowlumne variants are clearly morphological or orthographic alternative forms or near synonyms rather than subdialectal variants.) The Kroeber materials are pre-phonemic and (by the author's admission) probably unreliable as a source of phonetic detail. Both the Newman list and Kroeber 1963 usually only give a single-word gloss, and virtually never include any grammatical information.

Extensive use has been made of the materials collected by Gamble, ed. 1994, which include Yowlumne texts elicited by Newman and J.P. Harrington as well as texts in seven other Yokuts languages. Gamble 1978, Collord 1968, and Beeler 1971 provide grammatical descriptions of Wikchamni, Chukchansi, and Nopṭinṭe, respectively. I have also made occasional use of J. P. Harrington's field notes, microfilm copies of which are located in the Survey of California and Other Indian Language of the Department of Linguistics, at U.C. Berkeley. I also consulted the Yokuts texts included in Kendall's (1980) collection of Coyote stories, but none of that material is used here.

1.5.2 YOWLUMNE 2000. Almost all the Yowlumne 2000 data considered here were elicited from either Jane Flippo (JF) or her aunt Agnes Vera (AV). Until Jane's recent death, she and Agnes both lived as next-door neighbors on the Tule River Reservation. The data consist of (1) texts (mostly of a personal nature), (2)

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respectively.

individually elicited words, phrases, and sentences; and (3) grammaticality judgments concerning words, phrases, or sentences either of my own creation or taken from the Yowlumne 1930 literature. A few items were taken from a recorded conversation between JF and her older sister Ruby Bayes, who lived in nearby Porterville, California, at the time. I have also made use of some material, such as Hansson 1997 and Wertheim 1997, generated by students in Leanne Hinton's U. C. Berkeley field methods class during the 1997-98 academic year. Unless another source is indicated, all Yowlumne 2000 examples are from my own field notes.

1.5.3 YOWLUMNE 2000 CONSULTANTS' HISTORIES.

1.5.3.1 JANE FLIPPO. JF was born at Table Mountain (in Fresno County) in 1935. She grew up speaking Yowlumne with her mother, grandmother, older brother and sister, and other relatives. (Her mother was English-Yowlume bilingual, and her grandmother spoke Spanish as well, but JF never learned Spanish.) After attending boarding school in Nevada she continued living in Central California, and often visited the Tule River Reservation, but never actually lived there until the late 1980s. When visiting the reservation, she mainly heard English and Yowlumne spoken, and only occasionally other Yokuts languages (usually Wikchamni) or non-Yokuts Indian languages, such as Paiute. She spoke the language mostly with her immediate family and with her aunt AV. Jane Flippo died on March 8, 2004.

1.5.3.2 AGNES VERA. AV's personal linguistic history is recounted in Hinton and Vera 1997: She was born on the Tule River Reservation in 1926. Her

father died when she was six months old, and at age three she moved with her mother to a small rancheria at Table Mountain. She spoke only Yowlumne until she was sent away to boarding school, where speaking anything but English was prohibited. After school Agnes resisted using the language, and only spoke it with her mother, who died in 1972. In 1978, motivated by her late son Matt's interest in Indian culture, she began using the language again and teaching it in public school classes and child care centers. She also taught Yowlumne to Matt and to her granddaughter under the Master-Apprentice Language Learning Program. She is one of the key figures in Yowlumne language and culture preservation.

1.6 WHAT FOLLOWS. Chapter 2 will examine the implications of Yowlumne primary objectivity, Chapter 3 will look at clausal coreference and reference tracking generally, and Chapter 4 will take a synchronic look at Yowlumne between 1930 and 2000, focusing on the distinction between normal and obsolescence-related language change. Chapter 5 will critique the practice, common in the phonology literature, of contriving Yowlumne data based rules given in Newman 1944. And finally, Chapter 6 will offer a very brief Afterword.

Chapter 2

Grammatical Relations[5]

2.1.0 INTRODUCTION. This chapter will examine a set of closely related topics in morphosyntax (morphosyntactic and syntactic issues with implications above the level of the clause will be dealt with in the following chapter). Its primary emphasis will be the Yowlumne (and other Yokuts) system of grammatical relations as it relates to the treatment of nonsubject argument and adjuncts. Most of the data are from Yowlumne 1930 or other sources from early in the twentieth century. In addition, there have been several significant innovations in the area of morphosyntax in the latter part of the last century. These will be treated in Chapter 4.

2.1.1 PRIOR LITERATURE. The treatment of grammatical relations in Newman 1944 is limited to an inventory of the nomimal cases and valence-changing morphemes, with examples in the various languages and some rather sketchy and often unilluminating comments. Collord 1968 and Gamble 1978 provide additional examples in Chukchansi and Wikchamni, respectively, but like Newman, offer little in the way of analysis. Syntax proper is not treated systematically at all. Fortunately, theoretical developments in recent decades have greatly enriched our descriptive apparatus in this area. It is hoped that this will allow for clearer and more thorough account of several important issues.

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5 Some of the material in this chapter was presented at the 2000 Hokan-Penutian workshop in Berkeley and the 2001 Linguistic Society of America meeting in Washington D.C. Special thanks are due to David A. Peterson, Richard Rhodes, and Esther J. Wood for helpful advice.

2.2 YOKUTS NOMINAL INFLECTION

2.2.1 TERMINOLOGY. The names for nominal cases that have been used in the Yokuts literature are often inconsistent from one work to another and in some instances are misleading. The terminlogy adopted here is in accord with modern usage. Table 1.1 lists the equivalent terms in the major prior works.

Term used here	**Newman 1944**	**Collord 1968**	**Gamble 1978**
Nominative	Subjective	Subjective	Nominative
Primary Objective	Objective	Objective	Accusative
Secondary Objective	Indirect Objective	Instrumental	Dative
Genitive	Possessive	Possessive	Genitive
Locative	Locative	Locative	Locative
Ablative	Ablative	Ablative	Ablative

Table 2.1: Yokuts Nominal Case Terminology

Collord 1968:63-64 identifies two additional cases in Chukchansi, the POSSESSED and the ASSOCIATIVE. Based on the limited data he provides, however, it is clear that these are not cases as ordinarily understood, but rather some form of derivational morphology. This conclusion is reinforced by examples of what appear to be the same two morphemes in Newman 1944:217-18. E.g.:

Possessed forms:

(1) *hat*mam' 'singer' (Collord 1968:63; possessed) < *hatim* 'song'

?anaasam 'Basket-Woman' (legendary character) < *?anaas* 'basket'

(Newman 1944: 217; Yowlumne)

Associative forms:'

wikwikmen 'wormy thing' (Collord 1968:64) < *wikwik* 'worm'

mokyimin 'married man' < mokiy 'wife' (Newman 1944:218;

Chukchansi)

2.2.2 CASE AND NUMBER. In addition to the six cases, Yokuts pronouns and demonstratives also inflect for dual and plural number. Nouns, however, never have a dual form, and plural noun forms, even when they exist, are seldom used—many nouns appear to have no separate plural form. Grammatical gender distinctions are also completely absent in Yowlumne 1930, although it is arguable that animacy as a nominal category is emerging in Yowlumne 2000 (see Chapter 4).

2.2.3 CONCORD. Since the Yokuts verb lacks person and number inflection,[6] issues of subject-verb or object-verb agreement do not arise. Case and number concord is limited to nouns phrases consisting of an demonstrative adjective plus noun (case and number concord) and adjective or numeral plus noun (case concord):

[6]The optional number particles *wik'* (dual) and *wil* (plural) that sometimes accompany imperative verbs are not strictly speaking inflectional and do not invoke concord relations. These particles are discussed in Chapter 4 in connection with some recent innovations in their use.

(2) ṭan k'osithin ʔamin ṭani capteeni

it.PO hit.APPL.AOR his that.SO gambling-tray.SO .

'(He) hit it with his gambling tray'

(Yowlumne; Gamble 1994:88 [Newman])

(3) ʔipiṭ'ay bonyo pič'a

lose.NARR-AOR two.PO hundred.PO

'(He) lost two hundred'

(Chawchilla; Newman 1944:198)

2.3 THE YOKUTS CASE SYSTEM. Since most of our discussion of case will focus on the direct objective (DO) and secondary objective (SO) cases, it will be helpful to begin by putting this aspect of Yokuts grammar in typological perspective.

2.3.1 PRIMARY VS. DIRECT OBJECT LANGUAGES. Newman's explanations of grammatical relations are often far from perspicuous, but it is clear from his examples that Yowlumne 1930 is a PRIMARY OBJECT, rather than a DIRECT OBJECT language, in the sense of Dryer 1986. Direct object languages (such as Latin, Turkish, etc.) have a direct object (ACCUSATIVE) case that usually marks monotransitive objects, and the theme[7] argument of ditransitives. The more goal-

[7] Although treated as synonymous by many linguists (which is no doubt appropriate for many languages), the terms PATIENT and THEME will be distinguished here by whether they occur with

like (and often prototypically more animate) argument of ditransitives (beneficiary, recipient, destination, location, etc.) is marked by another case (the DATIVE) that does not typically occur in monotransitive clauses. In primary object languages, however, the primary objective case marks monotransitive objects, as well as the more goal-like argument of ditransitives. The ditransitive theme is marked by the secondary object case, which, according to Dryer, never occurs on monotransitive objects.[8] This typological split may be represented as follows.

	Monotransitive Object	Ditransitive Goal	Ditransitive Theme
primary object (Yowlumne 1930)	primary objective	primary objective	<u>secondary objective</u>[9]
direct object (Latin, Turkish)	accusative	<u>dative</u>	accusative

monotransitive clauses (patient) or ditransitive (theme). The rationale for this distinction will be discussed below.

8 But note that (13), below, and other Ojibwa data from Rhodes 1990 (as well as some of the instrumental examples from this chapter) indicate that secondary objects can occur in the absence of primary objects.

9 The underscored cases may be considered more marked, in the sense that they usually only occur when the other case is present. Perhaps it is this structural similarity between dative and secondary object cases that has led some linguists (e.g, Gamble 1978) to label the latter 'dative' as well—an unfortunate choice, in that recipients or beneficiaries are always encoded by *primary objective* case rather than secondary objective..

These two patterns of case syncretism can be graphically represented as follows:

(T = distransitive theme; P = monotransitive patient; R = ditransitive recipient; diagram adapted from Michaelis and Haspelmath, in press.)

The following is a pair of simple Yowlumne examples. Note that *xat* 'food' is the patient argument in both the (4) and (5), but is marked primary objective in (4) and secondary objective in (5):

(4) xatk'a xata

eat.IMPER food.DO

'Eat the food!

(5) wank'a nan xataani

give.IMPER me.DO food.SO

'Give me the food!'

2.3.2 OBJECTS AND INSTRUMENTS. Collord's 1968 designation of primary objective case as 'instrumental' (see Table 2.1, above) may well strike the reader as bizarre. However, while I consider his treatment of this issue misguided, his mistake is highly revealing and will lead us to what is perhaps the most remarkable aspect of grammatical relations in Yokuts.

2.3.2.1 INSTRUMENT ENCODING. Entities (either arguments or adjuncts)

that are semantically instruments are encoded in two quite different ways, one analytic and the other synthetic.

2.3.2.1.1 THE PSEUDO-SERIAL INSTRUMENTAL. The former is reminiscent of serial verb constructions found in many languages,[10] although it is apparently not a grammaticalized construction and does not employ any distinctive syntax.[11] I will call this type of expression the PSEUDO-SERIAL instrumental:

(6)	ṭan	maxhin	t'alap	ʔamin	ṭanit	ʔamaʔ
	that.PO	took.AOR	bow.PO	his	thence	and
	ʔamaaminwa	t'uyhun	ʔamaaminwa	soxhin		
	they.PO	shoot.AOR	they.PO	exterminate.AOR		

'He took his bow from there...and shot them, exterminated them'

(Yowlumne: Gamble 1994:85

[Newman]

2.3.2.1.2 THE MORPHOLOGICAL INSTRUMENTAL. Perhaps more common than the pseudo-serial instrumental is the MORPHOLOGICAL INSTRUMENTAL, in

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[10] For example, Mandarin (Li and Thompson 1989:367) and Kobon (Davies 1989:37). The Kobon serial instrumental is probably fairly typical:

nipe	ur	ud-öm	kay	pak-öp
3.SG	stick	take.SAME-SUBJ.3SG	pig	hit.PERF.3SG

'He hit the pig with the stick'

[11] That is, there do not appear to be any distinctive constraints on the structural relationship between the 'took' clause and the main verb clause. For example, the two are separated by several coordinated clauses in (6), as indicated by the ellipsis.

which the instrument is marked with what appears to be the secondary object case marker:[12]

(7) nopoopin ʔamin t'alapni yow ʔamin t'uyosnu hoy'lexo
father.GEN his bow.SO and his arrow.SO hunt.DUR
'(He) hunted with his father's bow and arrow'
(Yowlumne: Gamble 1994:99 [Harrington])

2.3.3 SECONDARY OBJECT/INSTRUMENTAL SYNCRETISM. In a sense, the dual role of the *ni/nu* morph should not surprise us. Crosslinguistically, the encoding of instruments appears unsystematic, or at least there are a number of possibilities for case syncretism.[13] The obvious question at this point is then, what is the relationship between the *ni/nu* of the morphological instrumental and *ni/nu* of the secondary objective case? At least three possibilities suggest themselves:

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12 Usually *ni/nu* [depending on vowel harmony] in Yowlumne and other Yokuts dialects except for Wikchamni *ŋi/ŋu.*

13 A few examples of roles that are marked the same as instruments in various languages: agent of passive verbs (Russian: Borras and Christian 1959:38-40); comitative (English); recipient/beneficiary (Classical Greek: Smyth 1956:346); ergative (Limbu: van Driem 1987:41); the only straightforward case of secondary object/instrument syncretism of which I am aware is

- The two forms are merely homophonous, perhaps the result of the historical (nonsemantically motivated) merger of two distinct cases;
- The morphological instrumental is a semantically motivated extension of secondary object case (or perhaps vice versa); or
- The two forms are really one case in the relevant sense, i.e., both are associated with a single thematic role (or other semantic representation).

Newman is of little help here: 'The [secondary objective] is an inclusive case which covers those indirective relations not expressed by the ablative or the locative' (Newman 1944:201). Gamble 1978 is no more informative. A potentially fruitful (albeit indirect) starting point for our analysis is the peculiar way in which Collord and Newman gloss certain sentences containing the instrumental/secondary object case suffix:

(8) lowton[14] na? wanhanit

husband.SO I.NOM give.PASS.PAST

'I was given a husband'

(Chukchansi: Collord 1968:61)

Collord states that this sentence should be read literally as, 'husband-by-means-of I was supplied'.

Chamorro (see below).

(9) k'oʔit gaatuʔun šeleelan

throw.AOR cat.PO rock.SO

'He hit the cat with a rock'

(Chukchansi: Collord 1968:61)

Newman occasionally offers one version in his provisional interlinear gloss and a second in his free translation. [15] (The second line is my interlinear, the third is Newman's interlinear, and the fourth is from his free translation):

(10) miʔin naʔ mam waanen' luyaani

soon I you.PO give.FUT food.SO

soon I you will-present with food

'Soon I will give you food'

(Chawchilla: Gamble 1994:11[Newman])

These readings appear especially strained when we consider the usual meanings of the verbs in question: *waan* is the basic 'give' verb; *k'oʔo* is, in most other contexts, translated as 'throw' rather than 'hit'. Without trying to read these

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[14] The secondary objective allomorph *-n* occurs in Chukchansi with certain vowel-final stems.

[15] This and similar examples from Newman's work come from texts that had not yet been worked up for publication. Such uncertainties about translation (and the possible analyses that they

linguists minds (or those of their consultants), we can note the rather striking (albeit incomplete) parallel of their uncertainty with a class of alternations (sometimes called LOCATIVE ALTERNATION) that occur in English and other languages with the so-called *spray/load* verbs (e.g., Farrell 1994, Dowty 1991):

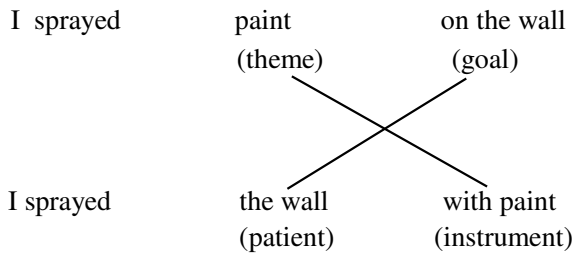
(11a) I sprayed paint on the wall

(11b) I sprayed the wall with paint

(12a) We loaded hay onto the truck

(12b) We loaded the truck with hay

The uncertainties about the translation of (8)-(10), as well as the above *spray/load* examples, involve alternations in which the patient and goal in one alternative correspond. respectively, to the instrument and theme in the other alternative. For example, the relationship between (11a) and (11b) may be represented graphically as follows:



Before examining the implications of this parallel for Yokuts argument structure,

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suggest) do not occur in Newman 1944.

however, let us see how primary object systems has been characterized generally.

2.4 PRIMARY OBJECTIVITY AND ANIMACY. The prevailing view seems to be that the difference between the two types of object alignment is one of ontology versus semantics: primary objects are mainly distinguished from secondary objects by animacy (and hence discourse salience, etc.) while direct objects and indirect objects differ from each other most importantly in their semantic relationship to the predicate:

> 'The DO/IO [direct object/indirect object] distinction follows semantic roles more closely: the DO of either a monotransitive or a ditransitive clause is prototypically a patient/theme, while the IO is a recipient/beneficiary. The PO/SO distinction, in contrast, is more closely tied to discourse/pragmatic function. In ditransitive clauses, the IO tends to be more 'topical' than the DO, since the IO is generally human and definite, and is often 1st or 2nd person...'
>
> (Dryer 1986)

> '[primary object systems] demonstrate that, in the case of assignment of objects and obliques, causal structure can sometimes be overridden by animacy...'
>
> (Croft 1991)

In a similar vein is Alsina 2001:356: ("the distinction between primary and secondary objects...is not a semantic distinction").

2.5 THE DECOMPOSITION OF YOKUTS OBJECT SEMANTICS. There is no denying that primary objects are prototypically animate and that this fact plays a role in these systems. Indeed, recent innovations in Yowlumne (see Chapter 4) demonstrate that a primary objective system of casemarking can be reanalyzed as one of animacy marking in two or three generations. However, the obvious connection with animacy may have cause other aspects of these systems to be overlooked.

Dryer's characterization of direct objects as closely following roles assumes that patients and themes naturally lump together, in contrast to other thematic roles such as recipients. Such an assumption only makes sense if we have a way of looking at the content of roles, i.e., what they entail about the entities to which they are applied. A straightforward and intuitive way to doing this is the system of agent and patient proto-role entailments of Dowty 1991, which is further elaborated in Ackerman and Moore 2001. Dowty's scheme is mainly designed to account for when an participant will link to subject as opposed to object, but is also readily applicable to different kinds of arguments and adjuncts.[16]

2.5.1 THEMATIC PROTO-ROLES. Dowty posits ten properties, five each for each the two proto-roles, Agent and Patient. In its simplest application, an argument with a preponderence of either agent or patient properties will be

[16] Dowty's scheme (as well as its competitors) reflect the generally held view that thematic roles are not semantic primitive, but are constructed as a convenience out of more basic components of event structure.

assigned to the subject or object grammatical relation accordingly. The properties are:

'Contributing properties for the Agent Proto-Role:

1. volitional involvement in the event or state
2. sentience (and/or perception)
3. causing an event or change of state in another participant
4. movement (relative to the position of another participant)
5. exists independently of the event named by the verb

Contributing properties of the Patient Proto-Role:

6. undergoes change of state
7. incremental theme
8. causally affected by another participant
9. stationary relative to movement of another participant
10. does not exist independently of the event named by the verb'

(Dowty 1991 [original numbering altered])

2.5.2 PATIENTS AND THEMES. Now let us consider how this system would treat the distinctions between the relevant thematic roles, beginning with the monotransitive patient and the ditransitive theme. Both have been causally affected by another participant (8), but only the patient typically undergoes a change in state (6), while typically only the theme is in movement (real or metaphorical) relative to another participant (4). Thus we may say that some

participant (the agent) acts on patients by causing a change in state, but on themes by setting them in motion.

2.5.3 THEMES AND INSTRUMENTS. Since secondary objects are typically themes, it will now be instructive to compare these two roles in Dowty's scheme. Both are causally affected by another participant (8), thus are both in movement (6), and neither typically undergoes a change of state (6). The decisive difference between the two is that the instrument, unlike the theme, causes an event or change of state in another participant (3). (They also differ in that instrument cannot, while themes can be incremental themes[17] (7)).

Table 2.2 combines what we have said so far about patients, themes, and instruments under Dowty's scheme. In addition, it shows how Yokuts *ni/nu* forms would fit into the picture:

Proto-role Entailment	Mono-transitive patient	Di-transitive themes	**Instru-ments**	**Yokuts *ni/nu* forms**
3. Causing an event or change of state in another participant	**No**	**No**	**Yes**	∅
4. Movement (relative to the position of another participant)	**No**	**Yes**	**Yes**	**Yes**
6. Undergoes change of state	**Yes**	**No**	**No**	**No**

[17] I.e., roughly, if the degree of affectedness of patient or theme is an index of the degree of completedness of the action, the patient/theme is said to be INCREMENTAL (Dowty 1991:569). Most often the participant in question is a patient (as the term is used here), but incremental theme status is part of the semantic distinction underlying theme/instrument alternations in the *spray/load* cases.

7. Incremental theme	∅	∅	**No**	∅
8. Causally affected by another participant	**Yes**	**Yes**	**Yes**	**Yes**
9. Stationary relative to movement of another participant	**Yes**	**No**	**No**	**No**

Table 2.2: Entailments of Yokuts secondary objects

From this comparison it can be said that the Yokuts *ni/nu* case is underspecified as to those thematic properties with respect to which themes and instruments differ. By itself, of course, this is not saying much: the same is probably true of most cases of case syncretism. We need to look elsewhere to see its significance.

It is at this point that we can see how the uncertainty of translation exhibited by Newman and Collord (and/or their consultants) is relevant. The ambiguity reflected by (8)-(10) above may merely reflect difficulty in finding the nearest English equivalent. However, in (9), the context required reading *k'oʔo* as 'hit' rather than the more common 'throw'. This seems to be possible because neither the lexical properties of *k'oʔo* nor the configuration of a primary and a secondary object determines whether the ultimate endpoint of the action (the cat) will be affected by the thing that has been put in motion toward it (the rock).

If these properties of *k'oʔo* are generalizable, then we are forced to a rather startling conclusion: the property of causing a change in other participants (Dowty's #3) plays a very diminished role in Yokuts grammar and semantics. In

fact, there is substantial lexical evidence that this is true.

2.5.4 YOKUTS VERBS UNDERSPECIFIED AS TO AFFECTEDNESS. There are a number of verbs which seem to be ambiguous with respect to the affectedness of the primary object. (My judgment is based on either inconsistent treatment in texts, or multiple definitions in Newman's wordlists.)

- *k'oʔo* 'throw, hit'
- *sodox* 'throw, hit'
- *t'uguy* 'throw dart at, or catch with spear'
- *žugul* 'twist (stick) in ear, clean ear (with stick)' (Chawchilla)
- *waana* 'give, present to, provision with'
- *k'eeli* 'paint, smear, dab'

2.5.5 PROCESS/RESULT POLYSEMOUS VERBS. In a similar vein, a number of verbs may be translated as referring either merely to a process or as also encoding a result:

- *ʔileemaa* 'act mean toward, be feared'
- *ṣiʔin* 'lie in wait, ambush'
- *gaayal* 'await, meet'
- *ʔipiṭ* 'throw away, lose' (Chawchilla)

Although the import of these data is not entirely unequivocal,[18] it seems to reinforce the view that Dowty's property #3 plays a limited role in Yokuts semantics.

2.6 THE NATURE OF YOKUTS SECONDARY OBJECTS. In light of the foregoing, it becomes reasonable to assert that all typical uses of Yokuts secondary objects are linked to a single thematic role. That role, which represents whatever is common between themes and instruments, does not currently have a name. We might suggest MISSILE, since its most salient characteristic is that it has been set in motion by one participant toward another.[19]

2.7 THE NATURE OF YOKUTS PRIMARY OBJECTS. It follows from the underspecified nature of Yokuts secondary objects that we should expect the participant they are in motion toward (the primary object) to be likewise unspecified as to its affectedness. This is in fact what we find. Thus in sentences like (9) the primary and secondary objects can be interpreted either as goal and theme or as patient and instrument. The fact that primary objects can encode either patients or goals, depending on the syntactic environment, has been taken as a sign that primary object systems are not inherently semantic. We see now, however, that the Yokuts primary object has consistent semantics, which simply do not correspond to any established thematic role: they express the commonality between goals (including recipients) and patients, i.e., they are the endpoint of the

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18 For example, one might expect (contrary to my argument) that if object affectedness is not encoded in the system of thematic roles, then it ought to be somewhere else, e.g., in the lexicon. (I should add that my attempts to find aspectual expression of this category have not yielded consistent results.)

19 Theme is sometimes defined as 'the thing which moves' (Dowty 1991:588), although I doubt

action, irrespective of whether they are affected by it. Thus we could speak of primary and secondary objects in Yokuts linking to the roles ENDPOINT and MISSILE respectively.

2.8 OTHER LANGUAGES. It remains to be seen whether the observations of this chapter are merely peculiarities of Yokuts or instead have typological implications. Although a survey of primary object languages on this topic is beyond the scope of this work, there are some suggestion the phenomena in question may not be unique to Yokuts. In Ojibwa (Ottawa dialect) secondary objects can serve as notional instruments:

(13) wgii-gwin waabooyhaan aw kwe

o	gii	agwi	n	waabooyaan	aw	akwew
3SUBJ	PAST	cover	INAN	blanket	that.ANIM.SG	womam

'The woman had a blanket over her' (lit. 'covered by a blanket')

(Rhodes 1990)

Probably more significant is Chamorro, in which the secondary object morpheme (coincidentally *ni*) also serves as an instrumental marker.

(14)

si	maria	ha	liʔeʔ	i	dankolo	na	lahi
THE	Maria	she	see	PO	big	LINK	man

'Maria saw the big man'

---

that instruments would be brought under this definition.

(14) ha sangani yoʔ ni estoria

he told I.PO SO story

'He told the story to me'

(15) ha chachak i kannai- ña ni dankolo na

seʔseʔ

he cut PO hand-his SO big LINK

knife

'He cut his hand with a big knife'

(Topping 1973:204-5)

Of course, we do not yet know what secondary object/instrument conflation signifies in these two languages. It remains for another day to discover whether the Yokuts system of primary objectivity represents a typological category that includes Ojibwa, Chamorro, and perhaps other languages.

Chapter 3

Reference Tracking and Related Topics

3.1.0 INTRODUCTION. This chapter will examine the syntactic relationships between clauses in Yokuts languages, particularly the system of reference tracking,[20] i.e., the mechanism by means of which co-reference (or disjoint reference) is established between argument positions in separate clauses. My goal is essentially to provide an adequate description, but I will also try to place the data in typological perspective when appropriate.

3.1.1 PRIOR LITERATURE. There is no significant treatment of reference tracking in any Yokuts language. Newman 1944 gives a cursory description of the usage of the 'gerundials', i.e., subordinating non-finite verb forms. Otherwise, the only relevant works involve the Yokuts language Wikchamni: Gamble 1978 remarks in passing on the relationship between coordinated clauses in Wikchamni, and Gamble 1998 briefly discusses switch-reference morphology in that language.

3.1.2 LIMITATIONS OF THE DATA. Most of what follows is based on textual material dating from 1925-31, published in Gamble 1994. Obviously, certain relevant information, such as intonation patterns, cannot be reconstructed from these texts. Moreover, there are additional special problems peculiar to these data. Neither Newman nor Harrington (the original collectors of the material) prepared

[20]The term 'reference' is firmly established in this sense and will be used here, although perhaps a terms such as 'indexation' would be more appropriate, since the systems in question also involve non-referring expressions such as quantified or non-specific NPs.

the texts for publication, and they are assembled in Gamble 1994 with fairly minimal editing. Word glosses are often incomplete and sometimes absent altogether or obviously inaccurate, and the free translations are often mere synopses, omitting entire sentences in some cases. Where noted, I have made editorial corrections (obviously a hazardous process).

There is an additional concern that is unavoidable in dealing with texts from this period. It appears that Newman, at least, did not use a recording device for his Yokuts field work. Thus it was unlikely that he was able to transcribe a single, uninterrupted narrative. In most areas of grammatical analysis (i.e., involving grammar within the clause) this is probably not much of a problem. The regular interruption and repetition necessary to text elicitation in the absence of recording technology seems much more likely, on the other hand, to disrupt the normal processes for creating narrative continuity. I know of no way around this problem. I must simply assume that, since a fairly consistent system of organizing the flow of information is discernible, the texts are relatively natural in this respect.

3.2. REFERENCE TRACKING GENERALLY. We will begin with some examples from English and elsewhere, to demarcate the subject matter and establish basic terminology. In (1a), the uninstantiated subject position, or if one prefers, the deleted subject (marked by 'Ø') in the second conjoined clause must be interpreted as co-referential with the subject of the first clause, and not, as in (1b) with the first clause object or some other entity. Thus, following the

terminology of Foley and Van Valin 1985, we will say that 'Kim_i' is the (referential) CONTROLLER, while the position marked by 'Ø' is the (referential) TARGET, since the former controls the reference of the latter.

(1a) Kim_i kissed Pat_j and $Ø_i$ [i.e., Kim] ran away.

(1b) *Kim_i kissed Pat_j and $Ø_{j/k}$ [i.e., Pat or some third person] ran away.

From (2) and (3) it becomes clear that it is the syntactic status (i.e., subjecthood) of the controller and target, and not, for example, their thematic roles, that are crucial to the relationship of reference tracking:

(2a) Kim_i kissed Pat_j and $Ø_i$ [i.e., Kim] was slapped by Dana.

(2b) *Kim_i kissed Pat_j and $Ø_{j/k}$ [i.e., Pat or some third person] was slapped by Dana.

(3a) Kim_i was kissed by Pat_j and $Ø_i$ slapped Dana.

(3b) *Kim_i was kissed by Pat_j and $Ø_{i/j}$ [i.e., Pat or some other person] slapped Dana.

Similarly, the principle in English of subject control by subjects apparently cannot

be overridden by extra-syntactic factors, such as hearer expectations:

(4a) Kim_i fatally wounded Pat_j and $Ø_i$ [i.e., Kim] died a few minutes later.

(4b) *Kim_i fatally wounded Pat_j and $Ø_j$ [i.e., Pat] died a few minutes later.

The above examples involve tracking between coordinated finite clauses. The subject argument positions of non-finite predicates may also be controlled by main clause subjects (or in some cases, objects), as in the case of certain verbs exhibiting so-called exceptional case marking (Radford 1997):

(5) $Jane_i$ expects $Ø_i$/her_j/*her_i to arrive soon.

In English, it is a particular grammatical function (usually subject) that controls reference of another (usually subject) position. One typological variation on this theme is found in syntactically ergative languages like Dyirbal (Dixon 1972), where the controller and the target are both absolutive NPs. Of special interest to our inquiry, however, are languages such as Mandarin, in which the discourse relation of topic is a grammaticalized category. In 'topicless' Mandarin sentences such (6), subject control operates much as in English:

(6)	zhangsan	shǐ	zài	jiazhou	niàn	de	dàxué
	Zhangsan	be	at	California	study	NOMINALIZ	college

zhuanxiu yǔyánxué

major linguistics

'Zhangsan went to college in California. (He) majored in linguistics.

However, when a clause has both a topic and a subject, the topic supersedes the subject and becomes the controller:

(7) nèi ke shù yèzi dà; (suǒyǐ) wǒ bu xǐhuan

that CL tree leaf big so I not like

'That tree$_i$, the leaves$_j$ are big; (so) I don't like (it$_{i/*j}$)'

(I.e., 'As for that tree, its leaves are big, so I don't like it [the tree]')

(Li and Thompson 1981:102-103)

It is also noteworthy in (7) that the controller-topic can target an object position in the following clause.

I will use the term schema *X-Y* CONTROL to refer to the situation where a constituent of category *X* controls a target position of type *Y*.[21] Thus the English examples (1)-(4) and Mandarin example (6) are all instances of subject-subject

[21] I am not aware of a satisfactory descriptive term in general use that refers to this relationship. The term PIVOT has some currency (Foley and Van Valin 1985; Palmer 1994) but is sometimes used to refer to either controller or target, and only somewhat ambiguously to their relationship. The term EQUI (for EQUIVALENT NP DELETION) from the early generative tradition is sometimes used, but is often restricted to relationships holding within the finite clause.

control,[22] since it is subject status in each case that compels coreferentiality, while Mandarin sentence (7) exemplifies topic-object control. About (2) we may say that English, being a SUBJECT-SUBJECT CONTROL language, establishes subject-theme (REFERENTIAL) LINKAGE by means of the passive voice.

The generative syntax literature has had a good bit to say about tracking relationships in various syntactic environments. For our purposes, it will suffice initially to distinguish cases of hypotactic or SUBORDINATE tracking like (5), where the clause containing the controller *dominates* the clause with the target position, from cases of paratactic or COORDINATE tracking like (1)-(4), where the controller clause merely *precedes* and is coordinated with the target clause.[23] We will begin with the former, which is by far the easier to describe.

3.3 YOWLUMNE SUBORDINATE TRACKING: Yowlumne 1930 has several non-finite verbal forms, i.e., forms that are unmarked for tense and cannot take a nominative subject. What I will call subordinate tracking, and indeed what are ordinarily considered to be subordinate clauses, always involves such non-finite forms in Yowlumne. Newman 1944 divides morphemes in question into the categories of nominalizing suffixes and gerundial suffixes.

3.3.1 NOMINALIZED FORMS.The nominalizing suffixes essentially create verbal nouns or adjectives that play a fairly marginal role in reference tracking.

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[22]Note that X and Y will usually be (morpho-)syntactic categories such as 'subject' or 'absolutive', or discourse categories like 'topic', as in the Mandarin example. However, there appear to be cases where the control relationshiop must make reference to thematic role as well (McLendon 1978; Palmer 1994.)

[23]Structures that are problematic for a simple coordinate/subordinate distinction, such as clause-

Most typically these forms function like a participial or relative clause modifier of an overt or understood NP, as in the following use of the agentive nominalizer:

(8)[24] ṣilaaʔan ʔamak' ṭan moxlooʔin ʔay'ak'c'i

are seeing 3d.DU that.PO old.PO lance-throw.AGT.PO

'they (dual) are seeing that old one throwing the lance'

(Newman 1944:153)

Although technically there is an issue (albeit a trivial one) of co-reference between *moxlooʔin*'old one' and the notional subject of *ʔay'ak'c'i* 'the one throwing the lance', the relationship is straightforward and certainly has no consequences for interclausal co-reference.

Similarly, the various verbal noun forms documented in Newman 1944:141-53 often function like verbal complements in other languages:

(9) ṣil'hin naʔ ʔamin xata

saw.AOR I his eating.PO

'I saw him eat'

(Newman 1944:143)

Both the form and the meaning of these verbal nouns is somewhat unpredictable

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chaining, do not occur in Yokuts languages.

[24]The orthography used here is that of Newman 1944, with the exception that long vowels are indicated by doubling.

and lexically specific (see examples in Newman 1944:142-167). Despite the superficial resemblence of (9) to English sentence like (5), above, verbal nouns such as *xata* should probably be considered noun phrases syntactically rather than clauses.

3.3.2 GERUNDIAL FORMS: SWITCH REFERENCE GENERALLY. Newman labelled the eight gerundial morphemes occurring in Yokuts languages as: the consequent, contemporaneous, resultative, precative, predicated, multiplicative, passive, and non-directive.[25] He did not further subclassify the gerundials, but more detailed classification may be made based on referential relationships, as noted in Table 3.1.

[25]According to Newman, not all the six Yokuts languages he treats have all eight gerundials. Thus he lists Choynimni as having only the consequent and the predicated, while Yowlumne scores highest with seven, lacking only the predicated gerundial. However, this may in part be a reflection of the fact that he elicited far more material in Yowlumne than in any other language. In any case, it is clear from texts and other sources that, for example, Wikchamni has well attested non-directive forms that are not documented in Newman 1944.

Same subject (SS)		Different subject (DS)
'Active'	**'Passive'**	
consequent	passive[26]	non-directive
contemporaneous		
multiplicative		
predicated		
resultative		
precative[27]		

Table 3.1: Yokuts Switch-Reference Categories

As their names suggests, the six active same subject forms differ from one another primarily in aspect and modality. These differing meanings are well documented by the examples in Newman 1944: 134-43. Their common characteristic is that their notional subject (or agent) is controlled by the superordinate clause subject. The passive gerundial form differs from this in that its *theme* is controlled by the

[26]Newman insists that the passive gerundial is correctly analyzed as passive, but I find the situation somewhat more complicated. Differing analyses are possible because the *agent* of Yowlumne finite passives (when overtly present) appears in the genitive case, as does the *subject* of non-finite active forms (in cases where it can appear overtly.) Thus the genitive-encoded agent could arguably be either the subject of an active form or the obliquely-encoded agent argument of a passive form. The passive analysis would be analogous to the English situation in example (2), above. The problem with this approach is that Yokuts finite passives usually omit the agent argument, whereas that argument is usually instantiated with the passive gerundial (at least as often as would be expected in this strongly pro-drop language.) For our purposes, the Yowlumne passive gerundial has the appropriate property of passive voice (viz., subject control of theme), but it deserves notice that it may not be prototypically passive in other respects.

[27]The precative gerundial has the force of a jussive or third-person imperative. Newman classifies it with the other gerundials because it takes a genitive rather than nominative subject, but it is not a subordinating form and appears not to actually be a part of the switch reference system.

superordinate clause subject.[28] The non-directive form, on the other hand, has a notional subject that is distinct from the matrix clause arguments. I will refer to these forms as 'active', 'passive' and 'different subject (DS)'.[29] Examples of the first two types follow. The different subject morpheme will be treated in more detail in the next section:

Consequent gerundial (CG) (active) suffix *-mi/-mu*

(10) ʔamaʔ maʔ wiymi doosen hiyooʔuk maʔ hiwethin

and you do.CG tell.FUT where you journeyed.AOR

'then, after doing so, you will tell where you journeyed'

(Gamble 1994:71)

The passive gerundial (PG)suffix *tin/tun:*

(11) ʔutuytun naʔ baṭ'inhin

push.PG I fall-down.AOR

'Having been pushed, I fell down'

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[28]The terms 'agent' and 'theme' will be used here in a somewhat extended sense, to refer to the thematic categories typical of the subjects and objects of transitive verbs, respectively. Thus, e.g., what is said here about'agents' will also apply to experiencers (which are encoded as a nominative-marked subject in Yowlumne). Terms such as 'underlying subject' or 'external argument' are sometimes used, but I know of no theory-neutral term.

[29]This type of system is usually referred to as one of 'switch reference', defined as 'an inflectional category of the verb, which indicates whether or not its subject is identical with the subject of some other verb' (Haiman and Munro 1983a.ix.) This term entered linguistic parlance with Jacobsen 1967, which is also credited with introducing this concept into general linguistics (Woodbury 1983), although as Haiman 1983 notes, different subject morphology functions syntactically very much like the familiar absolute constructions of early Indo-European languages (e.g., Smyth 1956:§§2070 ff.) In fact, Newman 1944:139 speculates that the Yowlumne non-direction

(Newman 1944:138)

3.3.2.1 DIFFERENT SUBJECT. The DS morpheme indicates that the subject of its verb is distinct from that of the matrix clause verb. E.g:

(12)	ʔamaʔ	yeeṭ'aw	ṭa	xot'oy	yuuxwiyhin	ṭeexaltaw	ʔamin
	and	all	that	land	melt.AOR	speak.DS	3s.GEN

'and all the land melted away when he spoke'

(Gamble 1994:64)

3.3.2.2 LINEAR ORDER AND SURFACE STRUCTURE. Typically the genitive-marked pronoun or NP follows the DS verb, and the entire clause may either precede or follow the matrix (although the matrix clause seems to come last somewhat more frequently):

Subordinate clause	Superordinate clause
VERB-DS [SUBJECT-Gen]	**VERB, etc.**

or

Superordinate clause	Subordinate clause
VERB, etc.	**[SUBJECT-Gen] VERB-DS**

as well as others. It is also possible for the subordinate DS clause to be embedded within the matrix (the DS clause is underscored):

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morpheme *-taw* may have originated from an old subordinating suffix *-t* plus the (still productive) locative suffix *-w* (but he does not draw the parallel with the Sanskrit locative absolute.)

(13) ʔamaʔ dab kay'iw ʔiliktaw haatimhin

and but Coyote sing.DS danced

'But when (they) sang, Coyote danced'

(Yowlumne; Newman 1944:138)

or even for the two clauses to be scrambled or interwoven (the DS clause is underscored):

(14) t^{h}axinšiw naʔ min hiʔ tuyoona

come.DS I.NOM you.GEN FUT eat

'when you come, I'll eat'

(Wikchamni; Gamble1978:66)

Linear order does not seem to have clear-cut semantic implications, but some possibilities are noted below under TYPICAL USES.

There are a few cases where the matrix clause is omitted altogether, although its content is easily reconstructible from the context:

(15) ṭaw ʔamaamaw panaataw dalomčaw ʔan'uxtaʔ yumxunk'u

there at that place arrive.DS bridge.LOC don't be afraid!

'When they got to that place at the bridge, (she said to him) "don't be afraid"'

(Chawchilla; Gamble, ed. 1994:10)

3.3.2.3 TYPICAL USES.

3.3.2.3.1 TEMPORAL RELATIONSHIP. In the commonest cluster of meanings, the DS clause resembles the English absolute construction 'X having VERBed, Y VERBed', as demonstrated by the above examples. Also:

(16) yeeṭ'aw ṭa xoṭ'oy yuuxwiihin ṭeexaltaw ʔamin

all that land melted away speak.DS his

'all the land melted away when he spoke'

(Wikchamni; Gamble, ed. 1994:64)

but the two clauses can also be interpreted as temporally coextensive:

(17) ṭʰum'kun hiʔ ṭʰom'akin hiʔ tʰoyon'ow čič'eekʰašiw p'aʔan'in

warm FUT warming FUT night-LOC be.cold-DS earth-

GEN

'it will stay warm at night, when the earth is cold'

(Wikchamni; Gamble, ed. 1994:49)

3.3.2.3.2 LOCATIVE RELATIONSHIP. In a few cases the DS morpheme is glossed with a locative meaning.

(18)	heetam	ʔoheemaataw ʔamin	mokyin	taaw'tˌaaʔan
	right there	disappear.DS his	wife.GEN	dead.GEN

taw	ʔamaʔ	heetam	wooʔuyxoʔ
there	he	right there	slept.

'he went to sleep right there where his dead wife had disappeared.

(Chawchilla; Gamble 1994:9)

Such uses (if correctly glossed) may well be traceable to the likely historical connection between the DS morpheme and the locative case marker *-w*.[30]

3.3.2.3.3 VERBAL COMPLEMENT. In some cases the DS clause functions as the complement of a matrix experiencer verb. Note that in (9), above, the verbal noun has a similar function. Although the available evidence is sparse, the choice

[30]Newman 1944 does not offer an explanation of this. The evolution of topic-marking from locative morphology is well documented, and in such cases the intermediate state is some sort of contrastive scene-setting, which should be readily reanalyzable as different subject marking. Something similar seems to have occurred in the development of the ' ho de...ho de' contrastive

between verbal noun and DS-marked verb appears to be a lexically specific property of the matrix verb.

(19) hiyt'iwlaxo tawiṭtaw t'eenin
she was glad.DUR die.DS grizzly.GEN
'she was glad that grizzly died'
(Yowlumne; Gamble, ed. 1994:88)

(20) ʔan'uxtaʔ yumxunk'u holittaw humunlun ʔan'uxtaʔ yumxunk'u
don't be afraid! fly.DS quail.GEN don't be afraid!
'Don't be afraid of the quail flying.'
(Chawchilla; Gamble, ed. 1994:10)

It must be noted, however, that both these sentences have equally acceptable non-complement glosses (viz., *She was glad when the grizzly died* and *Don't be afraid if the quails fly*), suggesting that these are not true complements.[31]

3.3.2.3.4 IMPERSONAL ZERO-VALENCE VERBS. Inchoative verbs indicating the arrival of dawn, dusk, darkness, light, etc., are almost always DS-marked, and

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subject construction in Attic Greek (Radetzky 2002),

[31] I.e., that they do not satisfy a matrix verb subcategorization requirement for a clausal constituent.

never have an overt subject:

(21) hiyam ṣimaaxwiytaw hilalʔan
already become dawn.DS is visible
'when twilight comes (she) is visible'
(Yowlumne; Gamble, ed. 1994:69)

As will be noted below, the SCENE-SETTING function of the DS morpheme is especially apparent in contexts such as the above. Not surprisingly, the scene-setting DS verb nearly always precedes the matrix clause.

3.3.2.3.5 NON-THIRD PERSON USES. Since Yokuts languages lack agreement morphology and routinely omit subject pronouns (a tendency that seems especially common in Yowlumne) the function of DS in these contexts is not necessarily redundant referentially (*pace* Haiman and Munro 1993a:xi):

(22) ʔamaʔ dap haayan dossithaw
and though laughed tell.APPLIC.DS
'but (she) laughed when (I) told (it) to (her)'
(Yowlumne; WFW field notes)

3.3.2.3.6 COMPLEMENTATION: (19) and (20) above are atypical. Complements are usually encoded by verbal nouns, and disjoint subject reference

is marked by the presence of the genitive-marked complement clause subject

(23) ṣil'hin naʔ ʔamin xata
saw.AOR I his eating.PO
'I saw him eat'

(Yowlumne; Newman 1944:143)

3.3.2.4 NATURE OF DISJOINT REFERENCE:

3.3.2.4.1 DS AND MATRIX OBJECTS. In the course of describing the 'non-directive gerundial', Newman offers the following example and gloss:

(24) piṣiwtaw nim cawhin
catch.DS my shout.AOR
'At my catching (him), (he, another) shouted'

(Newman 1944:139)

Taken in context, this sentence seems to be intended to demonstrate that the notional DS object (as well as subject) must be different from the matrix subject. I am not aware of any textual evidence that would support this restriction, and such evidence would likely be ambiguous in any case.[32]

The converse of Newman's generalization, however, seems not to hold. In (22), above, the subject of *haayan* 'laugh' is identical to the object of

[32]For example, the English sentence *When I caught him, he shouted* permits but does not require a

dossittaw 'tell to'. This could represent an historical change, since (22) was taken from a story told in 1997, although there is no independent reason to believe that the two stages of the language differed in this respect.

3.3.2.4.2 OVERLAPPING SETS. There is little evidence on this issue, but (15) above suggests that the DS verb's subject may refer to a superset of the matrix verb's subject. (i.e., in (15), they = he and she). (Cf. Austin 1981, Langdon and Munro 1979.) But perhaps Newman should have glossed this as 'when he got to the bridge…'

3.3.2.5 SOME REMAINING ANOMALIES. Zero-valence verbs (see above) occur in at least two unexpected contexts:

(25) ʔamaʔ taawinʔay ʔamaʔ
and became daylight.NARRAOR and
'and then it became daylight and then…'

(Chawchilla; Gamble, ed. 1994:17)

Here the verb *taawinʔay* 'became daylight' is embedded in a sequence of other verbs in the narrative aorist tense, and it is flanked on both sides by the conjunction *ʔamaʔ,* which typically has an event-delimiting function (see 4.2.2 THE ROLE OF CONJUNCTIONS, below). The finite, coordinated form here may signal inclusion of the dawn as a stage in the sequence of events, rather than mere background.

More problematic is the following, from a story elicited by Stanley

disjoint interpretation of *him* and *he*.

Newman in 1930:

(26) ʔamaʔ tawinmi hiyam ʔamak' ṭaw tanhin...
and then become dawn.SS already they.DUAL there went…
'and then after dawn they two went there to…'
(Yowlumne; Gamble, ed. 1994:70)

The same-subject consequent gerundial suffix *-mi* on *tawinmi* 'become dawn' should indicate a common subject with *tanhin* 'went', which is absurd. Whatever may be the explanation for this anomaly, it is almost certainly not an elicitation artefact: The same form occurs at essentially the same point in the narrative in a different version of the same story elicited from a different speaker by J.P. Harrington in 1927 (Gamble, ed. 1994:78).[33]

3.3.3 A TWICE-TOLD TALE. Before considering coordinated or paratactic reference tracking, we will take a brief look at the role of the DS morpheme in two contrasting texts. Stanley Newman collected two complete versions (in Chawchilla and Yowlumne) of the story 'Pursuit of Dead Wife' (the Yokuts 'Orpheus Myth', as he called it). This story, which will be considered in greater

[33]Stirling 1993:90 considers and analyzes some similarly anomalous cases of same-subject marking of impersonal constructions in Amele and other languages. However, it is not clear whether any of these cases is relevant to the single Yokuts example above.

detail later in this chapter, tells of a man who accidentally kills his new wife and attempts to follow her after she rises from her grave. While much of both stories consists of interaction between the two spouses, this is more true of the shorter Yowlumne version. Although they differ considerably in detail, the two versions (and the two languages) are close enough that comparison of the role of DS in them may be worthwhile.

In the Yowlumne version, DS is used solely as in (21) above, to indicate the arrival of dawn, dusk, or the like. The Chawchilla version,by contrast, reveals a variety of functions. The following schematic list includes all except the *dawn/dusk* type, which occur with roughly equal frequency in both versions. The DS clause translations are underlined. One corresponding Yowlumne clause of interest is included.

(27)

Chawchilla	**Yowlumne**
(a) while she was cleaning her ear, he hit her	
(b) when she died he went to tell his mother	
(c) when they (he and mother) had buried her, the old men went home	(she) was buried

(d) when they arrived at the bridge, (she said)

(e) 'don't be frightened of the flying quail'

(f) when he said this, six women came out

This contrast is probably not attributable to differences between the Chawchilla and Yowlumne languages, which are very similar and do not differ significantly in other aspects of switch-reference. More likely, two other factors are at work. First, the Chawchilla narrator seems in general to have more of a preference for hypotaxis over parataxis (including more use of other non-finite forms). This may well merely be an individual stylistic matter. In addition, however, the Chawchilla story is longer, with a more varied cast of characters, and the presence of the wife is less continuous. In fact, the Chawchilla story is really about the man, while the Yowlumne version is about the man *and* the woman. As a result, the wife in the Chawchilla version is more naturally relegated to structures that serve a scene-setting function, rather than as part of the main narrative.

3.3.4 SUBORDINATE STRUCTURES IN YOWLUMNE 2000. All of the gerundial forms attested in Yowlumne 1930 except the precative either occur in Yowlumne 2000 or are recognized by 2000 speakers. The DS (non-directive) forms are used essentially as in (27)(a) and (b), above, that is, to distinguish

between participants when there are exactly two potential referents available . Scene-setting functions of the sort described, e.g., in (21) are no longer attested.

3.4 COORDINATED TRACKING. Yokuts subordinate tracking operates according to reasonably well-defined principles and also functions quite independently from the much messier system of co-ordinated clause tracking, which appears to ignore subordinate clauses altogether.

3.4.1 TYPOLOGICAL CONSIDERATIONS.It will be useful to begin by reviewing some basic typological characteristics of the language. Yowlumne verbs inflect for tense, aspect, mood, and 'voice' (i.e., argument-structure altering operations such as passive, applicative, and causative), but not for person or number of the subject or object (agreement morphology is limited to case agreement between NPs and their modifiers in certain constructions). The language also lacks grammatical gender of any sort. There are proximal and distal demonstratives (*ki* and *ˌt*) inflected for number (singular, dual, and plural) and case and personal pronouns that are inflected for person, number, and case. Yowlumne also tolerates omission of core arguments, especially subjects, to an unusual degree. As if this typological ensemble did not sufficiently impoverish the available resources for argument co-indexing, there is a further apparently stylistic limitation that is typically imposed by some speakers in texts involving multiple third-person singular participants: the personal pronouns and the proximal demonstrative form *ki* seldom function as pronouns for core arguments; only the distal *ˌta* is used to refer to participants (and also doubles as a sort of proto-article

determiner).

3.4.2 PRAGMATICALLY CONTROLLED TRACKING. The *grammatically* encoded reference tracking system that will be described in a moment must be seen against the backdrop of a mechanism of pragmatic control. Consider the following sequence of clauses from the Yowlumne version of 'Pursuit of a Dead Wife' story (Gamble 1994:68). A newly married couple are playing, and the husband accidentally lets an arrow fly from his bow:

	(a)	(b)		
(28)	**huy'wushun**	**t'uyhun**	ṭan	meenit'aw
	accidentally harm.AOR	shoot.AOR	3dsg.PO	breast.LOC

	(c)		(d)	
ʔamaʔ	canum	**tawit'hin**	ʔamaʔ	**luk'lut**
and	immediately	die.AOR	and	bury.AOR-PASS

		(e)			
yow	dapṭaʔaṣ	**p'axat'an**	ʔamaʔ	heetam	ṭaw
and	continuously mourn.DUR		and	close	there

(f)				
nineehin	luk'ooluwsalaw	ʔamin	ṭaaʔin	mokyin
stay.AOR	grave.LOC	his	that.GEN	wife.GEN

(g)

bon'yil	ṭaw	nay	**lagaahin**	ʔamaʔ	ṣopeenaw
twice	there	like	spend night.AOR	and	three.LOC

(h) (i)

toy'now	**wukoyʔan**	ki	taweeṭi	ʔamaʔ	**tishin**
night.LOC	quake.DUR	this	graveyard	and	go out.AOR

ṭa	taw'ṭaʔ
that	dead one

'...he accidentally harmed her, shot her in the breast, and she immediately died and was buried; and he mourned continuously and stayed close by the grave of his wife. Twice he spent the night there and on the third night, the ground was shaking and out came the dead one'.

Let us now individually examine the referential links between the coordinated structures in (28):

(28a-b) *huy' wushun, t'uyhun ṭan meeniṭ'aw* '(he) accidentally harmed, (he) shot him/her in the breast'. The co-referentiality of the two subjects may follow from subject-subject control (see below), but

in addition, *ɬan,*the object of the second clause, must refer to the woman, because *meenit'* 'breast' is a lexeme specific to women (Newman 1996).

(28b-c) *t'uyhun ɬan meenit'aw ʔamaʔ canum tawit'hin* '(he) shot him/her in the breast and (she) immediately died.' Here the shift of subject from the man to the woman, while not overtly encoded, is pragmatically necessary.

(28c-d) *canum tawit'hin ʔamaʔ luk'lut* '(she) immediately died and (she) was buried'. Again, this can be said to follow from subject-subject control, but is also the only argument assignment that makes sense. Note that this link resembles that of the English passive example (2). However, as we will see, this is not the usual way of encoding subject-theme control across co-ordinated clauses.

(28d-e) *luk'lut yow dapɬaʔaṣ p'axat'an* '(she) was buried and (he) mourned continuously'. Here again there is no overt coding of the change of subject.

(28e-f)

dapɬaʔaṣ p'axat'an ʔamaʔ heetam ɬaw nineehin luk'ooluws alaw ʔamin ɬaaʔin mokyin '(he) mourned continuously and (he)

stayed close by the grave of his/her wife'. Like (9a-b), this can either be subject-subject control, or the only possible argument in light of 'of his/her wife'.

(28f-g)

heetam ˌtaw nineehin luk'ooluwsalaw ʔamin ˌtaaʔin mokyin bonyil ˌtaw nay lagaahin '(he) stayed close by the grave of his/her wife (and) spent two nights there'. This again seems to be subject-subject control.

(28g-h)

bon'yil ˌtaw nay lagaahin ʔamaʔ ˌsopeenaw toy'now wukoy ʔan ki taweeˌti '(he) spent two nights there and on the third night the graveyard was shaking'. Here the appearance of a previously unmentioned 'participant' (the graveyard) necessitates a full NP.

(28h-i)

ˌsopeenaw toy'now wukoyʔan ki taweeˌtiɬ ʔamaʔ tishin ˌta t aw'ˌtaʔ 'on the third night the graveyard was shaking and out came the dead one'. Here co-reference between the two subjects would be impossible.

In the above we can discern three categories of links:

- (a) In (28a-b), (28c-d), (28e-f), and (28f-g) both controller and target are subjects (with one case of a target subject-theme of a passive).
- (b) In (28a-b) and (e-f) information provided by the target clause makes it clear which of the two participants must be the subject. (Note that these are both cases of subject-subject linkage.)
- (c) In the case of (28b-c) and (28d-e), nothing in the text signals the change in subject between controller and target clauses.[34]

In cases like (b), it is pretty clear what is meant by 'pragmatic control': other information provided by the text (and thus known to both speaker and hearer) renders only one interpretation plausible. In the case of (c), that other information comes from outside the text and may be labelled 'presuppositional' in the sense of background knowledge that can be presumed to be shared and thus taken for granted (Lambrecht 1994; Stalnaker 1974). Thus we might say that, in the absence of overriding *grammatical* control of reference tracking that would compel a co-referential interpretation (as in English), Grice's Maxim of Quantity (Grice 1975) requires that the arguments of the two clauses be read as distinct.

I think this is the proper way to understand Yowlumne 'pragmatic control', with perhaps one refinement. In the case of link (28h-i), we might wonder why the uniquely identifying epithet *ˌta taw'ˌtaʔ* 'the dead one' must be used. In other words (in Gricean terms), the grave shook and someone climbed out. Who else is it

[34]The discussion of presupposition in Lambrecht 1994 suggested to me (indirectly) the possibility that apparently uncoded change of subject reference in these cases might have been marked by distinctive (perhaps contrastive?) intonation. This is certainly a possibility, but one that cannot be

going to be? (This is, after all, a supernatural tale.) One possibility is simply that the woman has not appeared as a core argument for a while (since 28(d)), hence an identifying NP is required as a sort of reminder. Given the immediately preceding context (the burial and mourning, plus explicit mention of the wife's grave in 28(f)) and 28(h)) this seems unlikely. I think that instead, we need a slightly different sense of presupposition here, one that is closer to 'stereotype' or 'stereotypical knowledge'. Stereotypically, dead people stay dead. In the context of a mythic story, hearer and speaker expectations and what they take for granted with respect to death may change, but the stereotype remains. Indeed, the juxtaposition of the mundane stereotype with the supernatural event may serve to highlight the latter. We will see the operation of other stereotypes (e.g., *Women do not use weapons*) below.

3.4.2.1 CONVENTIONALIZED PRAGMATIC CONTROL. Certain scenarios seem to be accompanied by conventions governing pragmatic control. Thus, dialogic situations involving two participants and exchanges of direct discourse, the change of agents (speakers) is conventionalized and thus not necessarily encoded. In fact, the verb of speaking may be deleted altogether, as in the following text, which falls just a few clauses after (28), above:[35]

(29)	hiyam	na?	dap	lagli?	yo?kek'	wiya?an	ṭan
	now	I	but	different	return.IMPER	say.DUR	he.PO

tested, since today's speakers use a quite different system of referential tracking.

[35]This may be compared to the practice in fiction writing of placing alternating chunks of dialogue in separate paragraphs, without any further indication of the change of speaker in each case.

ʔoywixit	maʔ	ʔohom miʔin[36]		wastoxoʔ	ṭan
pitiful one	you	not	now	able.DUR	
going.NOM					
hiyooʔuk	naʔ	tanaaʔan	tahan naʔ	mam	hi
where	I	go.	go.FUT	you.PO	FUT
abiy	hiyooʔuk	maʔ	tanaaʔan		
with	where	you	go.DUR		

'..."but now I am different. Go back!" she says, "Pitiful one, you will not be able to go where I am going." (He says) "I will go with you where you are going." '

We can probably safely assume that this conventionalized dialogic alternation was accompanied by characteristic intonation and perhaps other performance cues that are not recoverable from the written text.

3.4.3 SUBJECT-SUBJECT CONTROL IN YOKUTS? We tacitly assumed without

[36]Gamble 1994:68 has *min* 'your', which make no sense in this context. In light of Gamble's comments about Newman's apparent uncertainty regarding the position of glottal stop in this story, I interpolate *miʔin* 'now', which is also a marker of immediate futurity.

discussion above that links (28a-b), (28c-d), (28e-f), and (28f-g) are examples of subject-subject control. This assumption makes sense typologically (Palmer 1994 88 ff.) but there has actually been very little evidence for it so far. If we claim that in (28b-c) and (28d-e) disjoint reference is explained pragmatically, might not a similar explanation apply to co-reference in (28a-b), (28c-d), (28e-f), and (28f-g)? The case for the latter is at least as strong as for the former: In two instances ((28a-b) and (e-f)) co-reference is reinforced by contextual information, while in all four cases, presupposition would strongly support a co-referential reading.

3.4.3.1 PRAGMATICALLY NEUTRAL TRACKING. If grammatical subject-subject control does exist all, (28b-c) and (28d-e) clearly demonstrate that it is pragmatically defeasible. The test will come if we can identify 'neutral' control contexts where there is no rationale in terms of presupposition for either co-reference or disjoint reference. This is a tricky task, since presupposition is, at least in part, culturally specific. A related difficulty is the fact that the narratives typically contain sequences of thematically related actions by the same agent (e.g., *he buried her, mourned, held a wake by the grave,* etc). It is often difficult to tell whether the resulting subject continuity is a by-product of presuppositions, a result of conformity to subject-subject control, or attributable to some other principle.

3.4.4 SUBJECT-OBJECT CONTROL IN YOWLUMNE. We have already noted the formal similarity of 28(c-d) with the English use in (2) of passive and subject-subject control to create a subject-theme[37] referential link. More commonly,

[37]In Yowlumne, we might better speak of the 'imderlying object' rather than the 'theme', at least in the case of ditransitive verbs. This is because Yowlumne is a primary object language in the sense of Dryer 1986, thus, as in (12), the object target of a ditransitive will be the non-theme or primary object.

however, subject-theme linkage in Yowlumne is created by a typologically unusual system of what appears to be subject-object control, as exemplified by these later pairs of clauses in 'Pursuit of a Dead Wife':

(30) tanhin ṭa gaaʔina ʔamaʔ canum
go.AOR that womanand immediately

ṭan yawalhin
that.PO follow.AOR

'...the women left and immediately he followed her...'

(31) hilalʔan ʔamaʔ ṭan wiyaʔan
is visible and that.PO says
'...(she) becomes visible, and he says to her....'

In examples (30) and (31) the co-referentiality 'the woman' ('she') with the object rather than the subject of the second verb is marked by fronting of the particle *ˌtan*. No doubt *ˌtan* originated as the fronted or 'topicalized' primary objective form of the pronoun/deictic *ˌta* 'this'. A good case can be made, however, that *ˌtan* is now a grammaticalized particle indicating that the following clause has an object rather than subject (or perhaps unspecified) target. Significantly, in this role *ˌtan* must occur in first position in the clause and be in the

singular, primary objective form. Neither the proximal deictic *ki* nor the true personal pronoun is ever substituted for it. In its grammaticalized capacity, *ˌtan* may be seen as giving its verb some (but not all) of the properties associated with the passive in languages like English or the inverse in Algonkian.

The grammaticalization (or grammaticalization in progress) of *ˌtan* may help explain a peculiar variation of the object/target construction that occurs frequently in another Yowlumne text, the version of 'Mikitti' elicited by Newman (Gamble, ed. 1994:80-95):

(32)	dap	c'eetaxoohin	ṭa	mokiy	ʔamin	ʔamaʔ
	but	eating greens.AOR	that	woman	his	and

ṭan	tuyuyu	ṭan	tawṭaahin
that.PO	Tuyuyu	that.PO	kill.AOR

'...his wife was eating greens and Tuyuyu killed her...'

(32) differs in at least two respects from (28) and (29),[38] but for our purposes what is most significant is the repetition of *ˌtan*, which appears on both sides of the subject of the second clause. I assume this is a stylistic or idiolectal

[38] 'Mikitti' differs from 'Pursuit of Dead Wife' in that (at this point the story, any rate) there are more than two possible participants. Thus here the subject of the second clause, 'Tuyuyu', is not readily deletable, whereas in 'Pursuit of Dead Wife' assignment of one spouse to one argument position of a transitive verb automatically assigns the other spouse to the other arguments.

variation of the construction of (28) and (29).[39] It may well represent a stage of the language that has two completely distinct homophonous morphemes: an initial position grammatical morpheme that marks the clause as having object/target referential status, and a simple object pronoun.

3.4.5 SUBJECT CONTROL REVISITED. Earlier we had reservations about the usefulness of the notion of subject control in Yowlumne. We will now examine some data that add to these difficulties, and in the process refine out conception of control.

The following example provides some additional context (i.e., two additional following clauses) for (11), above:

(33)

(a)				
tanhin ṭa	gaaʔina	ʔamaʔ	canum	
go.AOR that	woman	and	immediately	
	(b)		(c)	
ṭan	**yawalhin**	toy'now	**tanaaʔan**	heetam
that.PO	follow.AOR	all night	go.DUR	close

[39]Gamble 1994 tells us that these Newman texts were told by the same speakers who provided the data for Newman 1944, whom Newman identifies as Ross Ellis and Frank Manuel. Without further detail, however, we cannot know whether these two texts have the same or different storytellers.

(d)

ṭan **diy'eexo**

that.PO go ahead of.DUR

'...the woman left and immediately he followed her, she went all night, ahead with him close behind'

If subject-subject control were at work here, we would expect that subject of (33b) (the man) would determine the subject of the following bare verb (33c), but it does not. Given the context--*the woman takes off, the man follows, X keeps going all night*--it is hard to imagine any presuppositional or other knowledge that would override putative subject-subject control and compel that the subject of (33c) be the woman rather than the man. Thus we must conclude that some other principle is at work here.

Similarly, near the beginning of 'Mikitti' we find:

(a) (b)

(34) ṭa non'oʔ **hoy'lexoohin** xoonow **hoy'lexoohin** ʔamaʔ

that man hunt.AOR always hunt.AOR and

(c)

ṭan **k'iwilhin** **ṭan** **t'en** **ṭaw** **ṭan**

that.PO meet.AOR that.PO grizzly there that.PO

(d)					(e)
piṭiwhin[40]	ṭan	hanhas	ṭaw	ṭan	
tawṭaahin					
catch.AOR	that.PO	hunter	there	that.PO	kill.AOR

'...that man was always hunting and hunting, and then Grizzly met him and caught him and killed that hunter...'

In (34), if there is in fact a rule of subject-object control exemplified in (30) and(31), then we would expect the subject of (34c) ('Grizzly') to be co-referential with the object of (34d), in which case the hunter would have caught Grizzly, rather than the other way around.

3.4.6 YOWLUMNE TOPIC CONTROL. The above anomalies disappear if we recharacterize the two grammatical control rules as involving topic control rather than subject control. Thus there are two tracking rules, (a) a general one of topic-subject control, and (b) a specialized one of topic-object control, which operates in conjuction with the object/target marker *ṭan*, which also functions as a flag of topic continuity.

Let us look at one final example that demonstrates the interaction of grammatical and pragmatic principles in Yowlumne reference tracking. This is the text immediate preceding the excerpt at (9) above:

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[40]Gamble has this form with the palato-alveolar affricate č, which according to Newman 1944 does not occur in Yowlumne. I have replaced this with the corresponding form from Newman 1996.

(35)

(a)				(b)
he?ca̱awisxoohin	ʔamak	ʔamaʔ	ta̱n	**nek'sitxoʔ**
play.recip.AOR	they.DU	and	that.PO	draw.APPL.DUR

				(c)
ʔamin	t'a̱lapni	ʔamaʔ	ta̱n	**huy'wushin**
his	bow.SO	and	that.PO	harm accidentally.AOR

(d)		
t'uyhun	ta̱n	meenit'a̱w
shot.AOR	that.PO	breast.LOC

'...they were playing with each other, and he drew his bow at her, and accidentally harmed her, shooting her in the breast....'

Since the first verb (15a) is reciprocal, it does not provide any cues as to the subject of (15b). Here I think a stereotype about men being the users of weapons comes into play, establishing the man as the subject of (15b). However, the fronted *ta̱n* established the woman as topic at this point. Since (15c) also has the object/target marker, making (15b-c) a topic-object link, the woman is the object of (15c). The (15c-d) link *ought* to be topic-subject, making the woman the subject of (15d), but pragmatic factors override this linkage. First, there is the

natural inference that the one accidentally harmed is the one who is shot, not the shooter. But probably more important, the gender-specific term *meenit'aw* 'in the breast' forces this reading.

3.4.2.2 THE ROLE OF CONJUNCTIONS AND EPISODIC STRUCTURE. In connection with Yokuts topic continuity, it is worth briefly discussing how coordinated clauses are conjoined. There are two Yowlumne words that roughly translate 'and': *yow* and *ʔamaʔ*. Finite clauses are also sometimes conjoined without an overt conjunction. The syntactic function of these three types of conjunction are typically as follows:

- *ʔamaʔ*: This conjuction occurs only between (main) clauses.
- Ø: Sometimes main clauses are simply concatenated, without an overt conjunction (as is always true between a subordinate form and its matrix clause).
- *yow*: This conjunction almost always appears in the context NP *yow* NP, but in very rare instances (such as (28d-e), above), it conjoins clauses much as does *ʔamaʔ*..

The difference between *ʔamaʔ* and Ø is in the size of the 'chunks' that they combine. In fact, *ʔamaʔ* would better be considered a conjoiner of episodes (or perhaps 'micro-episodes), which may in turn contain several clauses. The clauses within a micro-episode are simply concatenated. The actions described by clauses with an episode may be sequential or overlapping, but they are usually recognizable as being more tightly integrated than clauses occurring across episode boundaries. An examination of the above text excerpts reveals some interesting

correlations between episodic structure and reference tracking: Changes in topic (and thus in control) between episodes may or may not be overtly encoded, i.e., when appropriate, pragmatic considerations may compel the shift. Clauses within an episode, however, will exhibit tighter topic (hence subject) continuity unless a change of subject is overt encoded (e.g., by the *ˌtan*-prefixed construction, the passive, or by a DS-marked subordinate clause).

3.5 AFTERWORD: THE SITUATION TODAY. The following story, 'The Doctor and the Rattlesnake', was told to Monica Corston-Oliver by Agnes Vera in 1998. It represents, to my knowledge, the present-day text closest in genre to the material collected by Newman and Harrington. (The remaining speakers, although fluent by most standards, had never told a story in the language before they started working with linguists recently. Thus, perhaps not surprisingly, most of the narratives elicited from them have taken the form of personal reminiscences rather than myths and legends.)

The story involves a man who adopted a rattlesnake as a pet. (Orthography changed to that of Newman 1944; layout has been altered to reflect clause structure.)

(36)

ʔamaʔ *and*

and

(36a)

ṭa **tanhin** tewusniʔ *he went away--*

that went anyway

(36b)

guci ṭa mic *he was still little--*

little that still

ʔamaʔ *and*

and

(36c)

ṣil'an ʔamaʔ hankin wiiṣwiṣwiyan *he saw someone*

saw then what whistling-sound *whistling*

ʔamaʔ *and*

and

(36d)

ṭaw maani hakki naṭiṭ *there were many*

there many "whatsit" rattlesnake *rattlesnakes;*

(36e)

taxinin lomtot maani ʔaman *they came from the*

come mountain.ABL many them *mountains, many of them*

ʔamaʔ *and*

and

(36f)

ˌta tanhin *he went*

that went

ʔamaʔ *and*

and

(36g)

yet’ maxhin *got one.*

one got

This text looks more or less like Yowlumne 1930, but a few significant variations may be noted:

- The use of *ˌta* as subject pronoun in contexts where there would be no overt subject in Yowlumne. This suggests a move away from the extreme pro-drop characteristics of the older language.
- Use of *ˌtaw* alone to mark the presentational construction at (36d). The usual Yowlumne 1930 construction uses the copular verb *xoʔxo* (lit. ‘reside’):

(37) ţaw xoʔhoohin yokoc' maniʔ...

there reside.AOR people many

'There were many people...'

(Gamble, ed. 1994:68)

- The absence of clauses conjoined by Ø. Put differently, we can note that *ʔamaʔ* seems to be serving merely as a conjoiner of clauses, rather than a delimiter of episodes or chunk.

The above noted differences between Yowlumne 1930 and 2000 arguably could be merely stylistic. Later, however, when the story tells how the man found a basket to put the snake in, we find what must be considered a genuine change in the rules of reference tracking:

(38)

ʔamaʔ

and *and*

(38a)

maxhin yet' *he got*

got one *(basket)*

ʔamaʔ

and *and*

(38b)

ṭan	ṭaw	hayaan	*put it there*
that.PO	there	put	

The fronted pronoun at (38b) is not coreferential with preceding topic/subject (which is subject also of preceding clauses). Similarly,

(39)

(39a)

hiyam	tanan	ṣokonaasi	*recently he went to town*
soon	went	town	

ʾamạ	*and*
and	

(39b)

ṭan	doshin	*he told it.*
that.PO	told	

Which, based on Yowlumne 1930 rule of coreference, we would expect to mean, *Recently he went to town and they told him.*

Chapter 4:

Innovation and Obsolescence, 1930-2000

4.1.0 INTRODUCTION. This chapter will investigate changes that have occurred in Yowlumne language between roughly 1930 and 2000.[41] My principal goal will be to attempt to differentiate changes associated with language obsolescence from the sort of innovations (whether independent or contact-induced) characteristic of 'healthy' languages. However, some of these developments are interesting in their own right and thus will be treated in somewhat greater detail than is strictly necessary to the discussion of obsolescence.

4.1.1 Yowlumne is undoubtedly undergoing obsolescence: As a result of unsuccessful competition with the dominant language English[42] in recent generations, it has undergone a gradual, but now nearly complete contraction, both in speaking population and in function (Williams 1995; Campbell and Muntzel 1989). In certain respects, obsolescence appears to have been quite abrupt: e.g., all the known speakers have a fairly high degree of fluency, and there is no generation of semi-speakers. In any event, the chain of L1 transmission has been

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[41] See chapter I for discussion of sources. For convenience, I will refer to the two language varieties as Yowlumne 1930 and 2000.

[42] Spanish preceded English as the language of the dominant outside culture for the Yokuts Indians. Some of the many Spanish loanword will be noted here when relevant. The extent of any possible Yowlumne obsolescence during the Spanish period is probably impossible to reconstruct and will not be considered here.

broken, almost certainly beyond repair. On the other hand, several young adults have recently acquired a degree of fluency in the language under the Master-Apprentice Language Learning Program (Hinton 1997), and formal classes for children and adults are conducted several times a week on the Tule River Reservation. If these revitalization efforts are successful, however, studies of interrupted transmission (e.g., Thomason and Kaufman 1988, ch. 6) would predict that the resuscitated language will be radically different from either Yowlumne 1930 or 2000 (Hinton 1988).

4.2 THE SCOPE OF THIS CHAPTER. Most of what follows is an analysis of changes occurring in each component of the grammar, viz., the lexicon, phonology (and phonetics), morphology, and syntax The chapter will conclude with a discussion of its implications for the study of language obsolescence.

There have been numerous works in recent years that have dealt with the structural consequences of language obsolescence (see, e.g., studies in Grenoble and Whaley, eds. 1998; Seliger and Vago, eds. 1991; Dorian, ed. 1989). However, the present study is distinctive, if not actually unique, for two reasons. First, it attempts to be relatively comprehensive, i.e., instead of concentrating on a particular component of the grammar, I have tried to sort out and understand all recent Yokuts innovations that are potentially related to obsolescence. Second, the chapter deals with the language of speakers who are comparatively fluent, at least by superficial standards. They certainly display the indicia of fluency that a field worker doing a preliminary study would look for, such as the ability to translate fairly complicated sentences into the language with little or no hesitation,

consistent production of forms across elicitation sessions, etc. By contrast, most studies of structural obsolescence effects deal with languages in a more obvious and advanced state of systemic disintegration, where speakers are no longer able to perform consistently and often manifestly lack the resources necessary for effective communication in the language. (One such speaker of a closely-related Yokuts language will be discussed briefly below, by way of contrast with the Yowlumne situation.)

4.3 THE LEXICON. Changes in the Yowlumne lexicon include lexical borrowing, loss and replacement of lexemes, restructuring of semantic fields, and other systematic semantic changes. This section will consider only content words; innovative function words and bound morphemes will be dealt with later.

4.3.1 NATURE OF THE DATA. For purposes of evaluating semantic change and lexical loss and replacement, I have generally relied on Newman 1996. For dialect influence the only usable available resource is Kroeber 1963. The questionable quality of transcription in this work (see Chapter I) did not present the obstacles that I had anticipated: the negative results of my investigation of lexical dialect influence would still be valid even if we assume that Kroeber's forms are extremely crude phonetic approximations.

The Yowlumne 2000 data was obtained on several different occasions. In 1996 I went over the Kroeber 1963 list with JF. She gave me Yowlumne forms for only about one third of the items. On later occasions, many of the remaining words appeared in sentences and texts I elicited from JF. Later in 1996 and early 1997, I went through all of Newman 1996 with JF and AV. In late 1997 I went

through a different word list with both speakers and managed to fill in some more of the gaps in the Kroeber 1963 word list. I emphasize the history of these data because of my strong (but untested) suspicion that a substantial part of what appears to be lexical loss is really a consequence of the speakers' inability to recognize words when they are pronounced out of context by a non-native speaker, or to be able to produce them when prompted by an incomplete or imprecise English gloss.

The speakers often gave additional meanings, metaphorical extensions, and the like for the Yowlumne word under consideration. Since in most cases there was no way to determine which of these were innovative (in part because the typically perfunctory glosses in the Yowlumne 1930 materials), they will not be considered here unless there is additional evidence that they are new developments.

4.3.2 BORROWINGS.

4.3.2.1 ENGLISH BORROWINGS. Remarkably little lexical influence from English is discernible in Yowlumne 2000. The two speakers occasionally code-switch, but in general they consciously avoid mixing the two languages. A rare clear case of an English loanword is *klinwiyi*[43] *'clean (v.)'*. JF's sister Ruby Bayes, who is somewhat less of a purist, apparently coined the verb *hukwiyi* 'sew, hook' in the course of a conversation. (This is an innovative use of the *-wiyi* construct, which is described below.)

A puzzling possible English borrowing is *lipiṭ'* 'lip(s)'. Kroeber's #54

[43]Verbs, including the formative *-wiyi,* are cited using Newman's citation form of the stem.

LIP(S)[44] has Yowlumne *yeebiṭ',* as does Newman 1996. Conceivably *lipiṭ'* is a blend of *yeebiṭ'* with English *lips.*

4.3.2.2 SPANISH BORROWINGS. By way of contrast, Spanish borrowings (no doubt mostly predating 1930) are widespread, especially for cultural items, e.g., *gawayu?* 'horse' (Sp. *caballo*), *lamesa* 'table' (Sp. *la mesa*), *olo* 'gold' (Sp. *oro*), *galni* 'meat' (Sp. *carne*). In general, these forms are thoroughly nativized to Yowlumne phonology, except that syllables slightly more complex than the native maximal CVC are occasionally allowed, e.g., *eskwela* 'school' (Sp. *escuela*). In most cases, JF and AV are aware of the Spanish origins of these words, but do not claim to find their use objectionable (although they do not identify with Mexican or Latino culture in any noticeable way).[45]

4.3.2.3 DIALECT INFLUENCES. There are no likely candidates for lexical dialect borrowings. In a number of cases, the Yowlumne 2000 forms given by JF and AV differ substantially from the forms listed in Kroeber 1993 or Newman 1996, but in none of these instances does the new form more closely resemble the corresponding form in an attested Yokuts dialect. Initially it seemed that Yowlumne 2000 *huucoc* 'ghost' was closer to the Tachi entry *hutcouts* (*hučoc* in Newman's orthography) than to the Yowlumne entry *hit' waayu?* under #40 GHOST. However, *huucoc* is probably simply an alternative replacement form, the agentive deverbal of the root *hucu* 'frighten by acting as a ghost' (listed in

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[44] The cognate (and synonym) sets of Kroeber 1963 will be identified by their number followed by the English gloss in small capitals.

[45] Leanne Hinton (personal communication) reports that AV does not like using Spanish words when speaking Yowlumne. However, she never rexpresses this attitude in discussions of the topic with me.

Newman 1996). JF and AV know the form *hit' waayu?* with the meaning 'the Devil'.

These negative results are consistent with the pre-1930 pattern of borrowing, in which Yowlumne was the source rather than the target of diffusional influence (Whistler and Golla 1986). This trend appears to have continued past 1930, at least in the language of a Wikchamni semi-speaker whom I interviewed. This speaker's fairly limited vocabulary was for the most part readily identifiable with the Wikchamni ('Wükchamni') entries in Kreober 1963, but includes several words that appear to be borrowed from Yowlumne (or, in some cases, from one of the several dialects in Kroeber 1963 that have the same form as Yowlumne for the etymon in question.) Thus for #142 WATER, Kroeber 1963 gives *idik* as the Wikchamni form and *ilik'* as the Yowlumne, while this speaker had *ilik.*

4.3.3 CONTACT-INDUCED CHANGES IN LEXICAL SEMANTICS. In several cases it seems more or less clear that the influence of the dominant European-based culture (rather than the English language specifically) resulted in changes in lexical semantics:

#107 WOMAN'S DRESS. Kroeber 1963 has *c'onis*, but Newman 1996 has *kinip*, the form that JF and AV also know. Like Newman, they also have *c'onis* with the meaning 'apron'. AV says that *c'onis* also refers to the traditional loincloth. It is not difficult to reconstruct what might have happened here: *c'onis* was the original generic term for woman's clothing, or clothing generally. (According to Wallace 1978, the traditional Southern Yokuts attire was a breechcloth for men, and an apron with a covering of grass or fur in the back for

women.) Then *kinip* (whatever its original meaning and origin) was adapted to refer to European-styled dress. Finally, some time between 1900 and 1930, after the general abandonment of traditional attire, *kinip* became the more generic, and *c'onis* the more specialized term.

A similar pattern of semantic shift accompanying a change in the Yowlumne way of life was acted out later (after 1930) with other pairs of words:

#109 TOBACCO. Kroeber and Newman both have *soogon,* which AV (but not JF) recognizes but does not use. The Yowlumne 2000 term is the Spanish loanword *dawaxo.*[46] According to Newman's gloss, *soogon* also referred to the plant from which tobacco was taken. *soogon* is sometimes personified, e.g., in the 'Basketwoman' story (Newman 1944). This suggests that *soogon* was not necessarily (or exclusively) a variety of *Nicotiana* (no doubt the referent of *dawaxo*) but one of the variety of plants that have been called 'Indian tobacco'. Wallace 1978:456 comments that a wild variety of tobacco gathered locally was sometimes smoked in short length of cane, or eaten in a concoction, either for pleasure or to obtain supernatural powers.

#116 MEAT. Kroeber and Newman have *c'ixil,* which JF and AV recognize as a word for 'roasted meat.' (Newman also has *c'ixil,* 'to roast'.) The Yowlumne 2000 generic term is *galni* (Sp. *carne*).

#111 BEADS. Kroeber 1963 gives *k'eexa?* and *poolay* as Yowlumne

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[46]That this is a borrowing from Spanish *tabaco* rather than an English *tobacco* is clear from its phonological shape. Yowlumne plain stops typically corresponded to either voiced or voiceless Spanish stops (both of which are unaspirated), whereas English aspirated stops correspond to Yowlumne aspirated (e.g., *klinwiyan*). Also, The *w* of *dawaxo* only makes sense as the closest equivalent of the Spanish bilabial fricative *b* [β] (e.g., *gawayu?* 'horse' < Sp. caballo.) The *x* in

subdialect variants. Newman glosses *k'eexa?* 'money' and *poolay* 'small beads'. Yowlumne 2000 has only *k'eexa?* 'money'.

#310.5 SEED. Kroeber (1963:220, not part of regular lists) has *xaatac,*' Newman 1996 has *xatac',*but the Yowlumne 2000 form is *simiya,* from Spanish *semilla* 'seed [for planting]', in contrast to, e.g., *pepita* 'seed [as food or found in food such as apple or melon]'.

Although it is not possible to reconstruct the precise sequence of semantic change in each case, the general process that these doublets represent is clear: a Spanish word (or in some cases, a native word that originally had a different meaning) is adopted to stand for a new concept or cultural item, or a new variety or use of an existing thing. This must have occurred before 1930, and very probably before 1900. At first the loanword has a specialized or marked usage, hence it is unlikely to be elicited as part of a basic word list. As the Yowlumne lose their old ways and their culture begins to converge on that of the dominant society, the loanword becomes the unmarked usage, and the old word, if remembered at all, is relegated to a narrowed meaning. This is perhaps clearest in the case of *simiya* 'seed'. Spanish *semilla* must have been a new concept for the non-agricultural Yowlumne, who gathered and ate seeds, but did not plant them (Wallace 1978:450). Very likely the word was introduced as a 'package' with the agricultural or horticultural practices that it represents. A similar story probably applied to *galni* 'meat', which may originally have referred to beef or other non-

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dawaxo is hard to explain, however.

game meats, or meat obtained in a nontraditional manner.[47] My best guess about *dawaxo* is that it was originally applied only to modern commercial tobacco that was smoked in the manner of white people (i.e., in cigarettes, pipes, or cigars, and only for pleasure). (The change of *hit' waayu?* from 'ghost' to 'the Devil' [see above, DIALECT BORROWING] may be another example of the same process, but its path is harder to reconstruct.)

If my account of these lexical changes and replacements is correct, it is worth noting that the process whereby the new term becomes generic (as opposed to the process of initially acquiring the new term) is one in which the effect, but not the cause, is linguistic. Thus it is not, strictly speaking, a language-contact phenomenon. In cases of the restructuring of more complex or abstract semantic fields, it may be necessary to talk of the borrowing of conceptual or cognitive structures, but here it seems that 'cultural interference' is a sufficient motivation for this seemingly common phenomenon.[48]

4.3.3.1 KINSHIP TERMS. The traditional Yowlumne kinship terminology has not been studied systematically, but appears to be a variant of the Iroquois system (Schusky 1972). Table 4.1 lists the all of the Yowlumne 1930 kinship terms from Newman 1996, noting which terms are retained by JF and AV. (Initials in parenthesis. such as '(JF)', indicate that the speakers recognizes the

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[47] It may also be relevant that meat (i.e., game mammals and birds) played a minor role in the traditional Yowlumne diet, which relied more on fish and shellfish as sources of animal protein (Wallace 1978:450).

[48] Some examples of what I take to be the same process are cited in Weinreich 1968:54-55. Something roughly comparable seems to have occurred in my lifetime in my native central Missouri English, where *pasta* has replaced *noodles* as the generic term for spaghetti, ramen, tuna casserole, etc.

term as involving kinship but does not know its meaning.) My initial impression is this: The 'garden-variety' kinship terms (e.g., *nopop* 'father') have been retained in Yowlumne 2000, while many of the more 'exotic' ones (e.g., *hugooyus* 'same-sex sibling'; *ʔit'wop'* 'husband's sister or woman's bother's wife') have been lost. Between these extremes, certain categories foreign to the system of the dominant culture have hung on, such as the distinction between maternal and paternal collaterals (e.g., *nusus* 'paternal aunt'; *mookoy* 'maternal aunt').

ṭumyun	-	widow(er) (v.)
ʔit'wop'	-	sister-in-law (husband's sister or woman's brother's wife)
ʔonboy	-	sister-in-law (wife's sister, or man's brother's wife)
ketnit	-	maternal aunt, deceased; stepmother, deceased
niked	-	maternal aunt ; stepmother
gac'ap	(AV)	niece (man's brother's daughter or women's sister's daughter)
hugooyus	(AV)	sibling of opposite sex
ʔaḍeeyasi	AV	twins
c'ayax	AV	niece (man's sister's child), nephew (man's sister's child)
dudaʔ	AV	grandchild (woman's)
kitwinic'	AV	sister-in-law (husband's sister)
kom'ooyis	AV	stepfather; paternal uncle
mogoʔṣiʔ	AV	great-grandmother
neʔsay	AV	brother, younger
nipiy	AV	brother-in-law (spouse's brother)
pohulhay	AV	parent
napaatim	(JF), AV	son-in-law, son-in-law's brother; brother-in-law (sister's husband)

napas	(JF), AV	nephew or niece (woman's brother's children)
ʔeenas	JF, AV	grandfather; grandchild, man's
ʔonmil	JF, AV	daughter-in-law
ʔontip	JF, AV	mother-in-law (spouse's mother)
haʔheec'aw	JF, AV	grandchild, great
kamic'	JF, AV	grandmother, maternal; great aunt, maternal (mother's mother's sister)
mogoyoc'	JF, AV	great grandparents?
mok'iy	JF, AV	wife
naʔad	JF, AV	sister, older
naxaamis	JF, AV	father-in-law (spouse's father or spouse's father's brother)
neʔeṣ	JF, AV	brother, younger
nibec'	JF, AV	brother, older
noʔod	JF, AV	sister, younger
noʔom	JF, AV	mother
nopop	JF, AV	father
nusus	JF, AV	aunt (father's sister) (n.)
poolum	JF, AV	husband
wiçeb	JF, AV	child (son or daughter)
ʔaagaṣ	JF,AV	uncle, maternal (mother's brother)

Table 4.1. Retention of Yowlumne 1930 kinship terms by Yowlumne 2000 speakers.

4.3.4 CHANGE IN OR LOSS OF LEXICAL REGISTER. A possible systematic change in the lexical semantics (or perhaps better the 'lexical pragmatics') of an entire class of words, the *-wiyi* verbs, deserves comment, although it may raise more questions for our investigation than it answers.

This class of verbs consists of the verb *wiyi* 'say, do' compounded with a stem that is often partially, singly, or doubly reduplicated (and which typically lacks independent meaning). These verbs have a good deal in common with reduplicative forms cross-linguistically (see Key 1965), and often are fairly clearly imitative:

(1a)	tuhwiyi	'spit'
(1b)	ʔuṣʔuṣwiyi	'quiet or 'sush'a baby to sleep'
(1c)	t'abababwiyi	'make a fluttering sound (like a bird)'
(1d)	waawiyi	'cry "wa"'
(1e)	ʔooʔoowiyi	'crow'

The largest subgroup of *-wiyi* verbs, however, describe bodily or other motion, or manner of action:

(2a)	c'imikwiyi	'close eyes'
(2b)	bududwiyi	'turn anus towards, "moon"'
(2c)	palwiyi	'spread out'
(2d)	laywiyi	'take long strides, trot'

The remainder fall into no particular semantic class:

(3a)	nadadwiyi	'agree' (also 'be smooth')
(3b)	c'uk'wiyi	'keep quiet'
(3c)	paṭ'wiyi	'guess'

These verbs are extremely common, constituting about 10% of all the entries in Newman 1996. JF and AV know and use a large number of them, including many that are unattested in the earlier literature. According to Newman 1944,[49] they are considered 'primarily the property of children', 'a type of linguistic playfulness', and tend to occur in texts only in a comic context 'describing the antics of Coyote'

In Yowlumne 2000 this registral restriction seems to have been lost. With the exception of inherently comic or whimsical verbs like (2b), the speakers consider them perfectly ordinary words. This metalinguistic judgment is confirmed by usage: examination of a 67-line 1997 text revealed seven tokens of four different verbs, none of which fit Newman's description of the appropriate context.

That this signifies some sort of registral difference between Yowlumne 1930 and 2000 is apparent; the nature and cause of the distinction is more difficult to ascertain. My initial reaction was that it reflects differences between men's and women's speech (since all of Newman's informants were men, and my Yowlumne 2000 data come from women). This is a common enough distinction cross-linguistically, but it finds no support in Newman's characterization of the 1930

[49] A few examples of *-wiyi* verbs appear in the list of Yowlumne sentences in Kroeber 1907:299-

data. Even if we reject this idea, however, it does not follow that we are dealing with a genuine innovation here.

Metalinguistic judgments about one's own usage are notoriously unreliable. Newman's speakers said that *-wiyi* verbs are 'playful', and today's speakers say that they are not, but the real test must be usage. Here the evidence appears to partially confirm the register loss theory: Yowlumne 2000 texts reveal 'unmarked' *-wiyi* verb uses, Yowlumne 1930 texts do not, subject to certain qualifications.[50] However, the text genres in the two cases are not really comparable. Typical of the early Americanist tradition, Newman elicited myths and legends. The Yowlumne 2000 texts produced so far are either causal conversations or personal reminiscences. The only seemingly traditional items are two short admonitory stories for children. In fact, the JF and AV report that they had never told a story in Yowlumne until they began working with linguists in the 1990s (Leanne Hinton, personal communication). I will have more to say about this in a moment, under the topic of language obsolescence.

4.3.5 SEMANTIC ANOMALIES. There are some other apparent instances of shifted meaning or lexical replacement for which the available data suggest no explanation, for example:

#172 MANZANITA. Kroeber and Newman both have *ʔapṭ'uw,* 'manzanita', which Kroeber identifies as belonging to genus *Arctostaphylos,* a type of shrub. AV knows *ʔapṭ'uw* as the name of the buckeye tree, or California buckeye (genus

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307, but none are listed in Kroeber 1963.

[50]Although Newman framed this statement as categorically true of all verbs in this morphological class, the generalization appears only to apply to the subclass of sound-symbolic *-wiyi* verbs. The

Aesculus), a tree that grows to substantial height. For #171 BUCKEYE Kroeber 1963:211 n171 has *dopin,* a word that JF and AV also know with this meaning. The confusion of these two very different plants is puzzling.

4.3.6 CHANGE IN PHONOLOGICAL FORM. Some fairly systematic (although not exceptionless) sound changes have occurred between 1930 and 2000. These will be discussed below under *4.5 PHONOLOGY AND MORPHOLOGY.* In addition, there is a fairly small residue of new forms that appear related to, but differ from attested 1930 forms in unexplained ways. Thus #54 CHEEKS is *tooxiw* and *toxiw*in Kroeber and *tooxiw* in Newman, but *toxay* today. (The new form does not resemble any of the other dialect forms under #54 CHEEKS.) Given the available resources it is impossible to infer anything from these anomalous cases.

4.3.7 LEXICAL LOSS. Assessing the extent of lexical loss is far from easy, not least because it requires us to have a clear-cut standard for deciding when an item has become lost. The technique employed here was crude, and unlikely to yield reliable absolute figures, but as a means of comparing loss across lexical categories it seems to have produced meaningful results. Using the Newman 1996 wordlist, I tabulated how many words of various categories were familiar (either actively or passively) to either speaker, and how many were not. Since my principal interest in the data has to do with language contraction and obsolescence (rather than, say, rates of replacement), I counted a word as known if the speakers readily produced a synonym, even if the word listed was unfamiliar.

Weighting each category equally, the speakers knew 64% of the listed

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texts contain many occurrences of semantically unexceptional verbs such as *tawaanwiyi* 'approach morning' and *p'ac'alwiyi* 'redden'.

sample. (The percentages from each group were weighted because the sample seems to have had an unusually large number of verbs.[51]) The categories did not fare equally. The speakers knew 78% of the verbs, but only 48% of nouns for human artifacts. Words for natural phenomena were 68% known, and words for kinship relations, 66%. (Curiously, the speakers believe their vocabularies to be most deficient in the category of natural phenomena.) Without making too much of these sketchy and unscientific generalizations, some observations can be made. The different rates of lexical loss by category appear to be directly related to how culturally specific words in each category are likely to be. The category of unrecognized human artifact words includes numerous items like *c'apit*'(traditional) gambling tray' that are no longer a part of Yowlumne life (at least for these speakers). Natural phenomena terms should be somewhat more robust, but still susceptible to loss, especially by speakers who spent much of their lives in a different part of California from Newman's informants. Verbs probably tend to be comparatively more neutral and translatable interculturally. (The probable situation with the system of kinship terms is outlined above [*4.3.3.1 KINSHIP TERMS.*])

4.3.8 ASSESSMENT OF 1930-2000 LEXICAL DEVELOPMENTS.

4.3.8.1 'NORMAL' CHANGE. None of the lexical innovations can be confidently identified as normal autonomous changes. This does not mean that everything that has happened in the Yowlumne lexicon between 1930 and 2000 was caused by external factors or obsolescence. Internally-motivated

[51]By contrast, Kroeber 1963 includes only 17 verbs out of 308 forms. Not surprising, both

developments must have occurred, but we simply lack the resources to identify them. A major problem in this area is figuring out what to make of the relatively small differences that often exist between the glosses the 2000 speakers give and those listed in the 1930 sources. For example Newman 1996 glosses *labaay* as 'to gather greens' but JF and AV say that it means to gather green onions; Newman glosses *dinaaga?* 'Oat Mountain' but JA says it simply means 'oat' (Newman lists no separate word for the grain). Even if these seeming semantic innovations are real, rather than simply epiphenomena of the elicitation process, we have very little to go on in figuring out how to explain them. (I will have a brief comment on some of these words under LANGUAGE OBSOLESCENCE, below.)

4.3.8.2 LANGUAGE AND CULTURAL CONTACT. The introduction of Spanish loans like *gawayu?* and *simiya* undoubtedly predated Yowlumne 1930 (and thus is technically beyond the scope of this work.) However, the reorganization of semantic fields, resulting in, e.g., the replacement of *c'onis* by *kinip,* seems to have been an ongoing process in perhaps the first half of the twentieth century, judging by the lexical materials, with the *c'onis/kinip* shift perhaps predating 1930, and the *xatac/simiya* shift probably coming later. The relative lateness of some of these semantic restructurings is a bit puzzling, since the associated cultural changes must have occurred earlier (Wallace 1978.) This may be attributable to the linguistic conservatism of the speakers (e.g., Newman 1944: 55), or to their age (unfortunately we have no information on the age of any Yowlumne 1930

Yowlumne 2000 speakers knew all 17.

speakers).[52]

4.3.8.3 DIALECT BORROWING AND LEVELING. There seems to be no evidence of dialect borrowing *into* Yowlumne that post-dates the 1930 data. (The limited Wikchamni borrowing from Yowlumne or related dialects has been noted above.) For reasons that will be discussed below (*4.6 MORPHOSYNTAX AND ARGUMENT STRUCTURE*), establishing dialect leveling between Yowlumne 1930 and 2000 is problematic. (Whistler and Golla 1986 posit several instances of diffusional influence among Yokuts dialects, but all these predate any of the periods under discussion here.)

4.3.8.4 LANGUAGE OBSOLESCENCE. There are two areas where the lexicon may reveal symptoms of language death: the register change of the *-wiyi* verbs, and lexical loss.

4.3.8.4.1 THE *-WIYI* VERBS. I have already noted some uncertainty about exactly what happened with the *-wiyi* verbs. This uncertainty can be reduced to two related but conflicting hypotheses:

- The metalinguistic remarks of both the 1930 and the 2000 speakers are correct, thus this class of words has independently undergone a semantic/pragmatic register change from 'frivolous' to unmarked; or
- The text-based hypothesis positing the minimal change is correct, namely, the 2000 speakers no longer use or recognize the

[52]Leanne Hinton has suggested the possibility that the apparent lateness of this shift may in fact be an elicitation artifact, i.e., that the eliciting linguist (Kroeber or Newman) rejected Spanish borrowings when compiling basic word lists if the speaker could produce a native synonym.

storytelling register of the 1930 texts.

In other words, either the class of words changed meaning, or a whole register was lost. It is difficult to see how the first could have happened, but there is an explanation forthcoming for the second hypothesis, if we are willing to reject Newman's speakers' characterization of the situation. My suggestion is that the 1930 speakers, consistent with Newman's remarks about the austerity and seriousness of Yowlumne style, were referring to the kind of language inappropriate to lofty pursuits like the retelling of myths.[53] We have good reason to believe that the 2000 speakers are unfamiliar with such genres. Also, if we take the 1930 speakers remarks about *-wiyi* verbs being the 'property of children' at face value, it become difficult to understand why such a large share of the vocabulary in Newman 1996 (which presumably originated from the same two adult male informants who provided Newman's texts) consists of such immature language.

So, to what extent can we say that the 2000 speakers have lost something that the 1930 speakers had? This is probably a matter of degree. It is certainly possible that the 2000 speakers never fully acquired the typical Yowlumne 1930 speakers's registral repertoire, of which this particular distinction had been an integral part. However, a more cautious treatment of the evidence only establishes that they do not command certain styles of language that earlier speakers (or at least some of them) were conversant with. How central to Yowlumne 1930

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[53]By way of cross-linguistic comparison, we might note that the *-wiyi* verbs (at least according to the account I am arguing for) bear a striking resemble to Japanese mimetics, which have similar semantics and function (although they are syntactically adverbs) and analogous phonological form. Their use is pervasive in conversation, fiction, and everything but the most formal styles (Shibatani

linguistic competence these styles were is a different question, which probably can no longer be answered.

Nonetheless, this phenomenon bears the signature of language obsolescence. It is what I will call a STRUCTURAL CONCOMITANT OF OBSOLESCENCE, in that it is the loss of a (broadly speaking) grammatical distinction or resource that is causally related to a contraction in the roles and functions that the language performs. The contraction in this case has been called 'stylistic reduction' (or some related term) by several linguists examining language obsolescence (e.g., Campbell and Muntzel 1989; Hill 1989; Mithun 1989.)

4.3.8.4.2 LEXICAL LOSS. I already expressed my misgivings about coming up with an accurate picture, in absolute terms, of the degree of lexical loss in Yowlumne 2000, but a few comments are in order.

4.3.8.4.2.1 A CLEAR-CUT CASE OF LEXICAL ATTRITION COMPARED. No doubt we should expect a reduced lexicon to be a key symptom of language death, and this is definitely true in the later stages of obsolescence. Thus a speaker of a closely related Yokuts language whom I worked with briefly exhibited gaps in the basic vocabulary that is needed for a broad variety of purposes. For example, the speaker could not produce the equivalents for *teeth, tongue, fat, beard, tall, shoulder, sister, right/left, fight, swallow,* and *fall,* and showed considerable confusion about the order of first 10 numerals.[54]

The situation with the Yowlumne 2000 speakers is different. Since neither

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1990; Paula Radetzky, personal communication.)

[54] Other components of this speaker's grammar revealed comparable symptoms of attrition: the sequencing of complex marked segments, loss of all nominal and much pronominal case-marking, and loss of most verb inflection. See the discussion of the *wil* future at 4.5.4 below.

grew up in traditional Yowlumne territory, their relative ignorance of fauna and flora terms is hardly surprising--no more so than the comparable ignorance of many urban native English speakers. Almost all Yowlumne 2000 lexical loss that we can have any certainty about is of this general type.

The exception may be kinship terms, which must be seen against the backdrop of abandonment of the traditional kinship system and adoption of the dominant culture's kinship structure. If we assume that changes in kinship terminology are responses to this cultural shift, rather than evidence of generalized lexical attrition, two opposing hypotheses are possible: The most natural prediction is that (1) speakers would lose those terms that have no equivalent term (or, perhaps, simple paraphrase) in the dominant system; but it is also possible, perhaps at an earlier stage of cultural shift, that (2) bilingual speakers would retain *only* those terms for which there was no close equivalent in the dominant system. However, it seems that neither prediction is born out. While both speakers do exhibit some tendency to have lost the more 'exotic' terms, the overall pattern of attrition in Table 4.1 seems somewhat less systematic. As a possible explanation, Leanne Hinton (personal communication) has suggested such speakers might be expected to retain a kinship term only if they are actually acquainted with a relative who can be designated by the term. This would presumably contrast with the situation of speakers of a 'healthy' language, whom we would expect to command the entire kinship vocabulary, regardless of their individual circumstances. Such a change would be typical of the contraction of the obsolescing language into strictly private areas of discourse among intimates.

4.4 PHONETICS AND INVENTORY. The Newman 1944 gives the following inventory of consonant and vowel phonemes for Yowlumne 1930. In accordance with Newman's orthography, b,d, and g represent plain voiceless stops, p, t, and k voiceless aspirated stops:

Labial	Dental	Alveolar	Velar	Glottal
b	d	d̦?	g	ʔ
p	t	ț	k	
p'	t'	ț'	k'	
	ʒ	(ʒ̦)		
	c	(c̦)		
	c'	(c̦')		
	s	ș	x	h
m	n			
m'	n'			
	l			
	l'			
w	y			
w'	y'			

The structure of the vowel inventory is unchanged between Yowlumne 1930 and 2000 and thus will not be further discussed in this section. (Some

changes in vowel-related processes are treated below under PHONOLOGY AND MORPHONOLOGY.)

i, ii	u, uu[55]
e, ee	o, oo
a, aa	

The segments in parentheses are phonemes that were lost between 1930 and 2000. (The question mark ('ḍ?') indicates uncertainty as to whether the plain/aspirated distinction remains contrastive for the alveolar stops. Because of its uncertain status, this merger will not be discussed here.)

These lost segment types were already rare in Yowlumne 1930. In the alveolar affricate series, Newman 1996 reveals 31 occurrences of /c̣/, 5 of /z̧/, and none of /c̣'/. This total of 36 tokens contrasts with 307 for the alveolar stops, and142 for the dental affricates. The alveolar affricates merged with the corresponding dental affricates in Yowlumne 2000 in most cases, although there are several anomalous cases where the new form has a (retro-)alveolar stop or a sibilant instead.

Low frequency of occurrence is not the only thing at work here. In my first investigation of this question, I mistakenly concluded that the plain dental affricate /z̧/ had merged with its aspirated counterpart /c/ in Yowlumne 2000. For

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55 Newman's analysis gives the impression that the surface inventory is lacking long high vowels, and the secondary Yokuts literature seems to have adopted this misconception. In fact, long high vowels are well attested in his data examples and texts (see Blevins 2004, 2003:388 n8). This and

whatever reason, I was unable to hear any difference between the two sounds (other linguists present had similar difficulties), but I later tested both speakers by placing my hand about three inches in front of their mouths and discovered that the contrast was palpable, with aspiration showing up where predicted. Newman 1996 has only 15 tokens of /ʒ/.

Of the six dialects treated in Newman 1944, the alveolar affricates occurred only in Yowlumne, and, according to Whistler and Golla 1986, are a fairly recent innovation.[56]

4.4.1 THE GLOTALLIZED SONORANTS. The sonorants *n, m, l, y,* and *w* have glottalized courterparts *n', m', l', y',* and *w'*.Newman characterizes these as involving a sonorant with a glottal catch during some part of its articulation, depending in part on the location of the segment, but with some free variation. Glottal constriction is accompanied by 'rasping timbre' (by which Newman must mean creakiness, the type of phonation regularly associated with glottalization) on adjacent (especially preceding) vowels. Newman's description is completely consistent with the Yowlumne 2000 spectrographic data in Plauché et al. 1998.

4.4.2 PHONETIC CHANGE: THE PUZZLE OF THE ALVEOLAR STOP SERIES. Newman 1944:14 states, in a portion of the text devoted to describing the sound

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related problems are considered in more detail in Chapter V.

[56]Whistler and Golla 1986 also state that this series is sound symbolic, reflecting a no longer productive process of diminutive affricativization, and that only ten forms out of about two dozen occurrences of the series in Newman's slip files are 'not arguably' diminutives. Newman 1944:38 comments on the same tendency, but only gives four Yowlumne examples. The constricted release associated with affrication probably puts this in the same category with proposed universals of sound symbolism linking smallness with high front vowels (e.g., Ultan 1978.) However, my examination of Newman 2000 (presumably based on the same list) had somewhat different results: out of 36 forms, 7 to 9 seem like plausible candidates for diminutives. Moreover, the forms with alveolar fricatives are distributed throughout the list in approximately the same proportions by semantic category (e.g, plant, animal, person, verb, *-wiyi* verb) as the list as a whole.

system common to all six dialects, that the segments he labels ALVEOLAR are 'articulated with the tip of the tongue against the alveolar ridge'. This certainly suggests a sound like the English phoneme /t/, although Newman never makes this comparison.

The problem is that all the other Yowlumne 1930 and 2000 sources (and indeed the entire Yokuts literature) give a different phonetic picture of these segments:

- Kroeber 1907:180 describes the corresponding Yaudanchi series as 'post-alveolar or more probably even palatal' and quite close to tc' (i.e., the equivalent of *tš* in his orthography). He further notes the tendency to transcribe the sound *tr* in many Yokuts vocabularies.[57] His later description of Yowlumne phonetics in Kroeber 1907:280 does not discuss the matter at all.
- Beeler 1971 is essentially an annotated translation of material assembled by Father Felipe Arroyo de la Cuesta in 1819 and 1821 on Nop̣tin̤te, a Northern Yokuts language genetically fairly close to Yowlumne. Father Felipe typically transcribes the corresponding Nop̣tin̤te segments as *thr* (without distinguishing aspiration or glottalization.) It is possible, of course, that the *r* (an alveolar flap in Spanish) was simply meant to indicate that an alvealor rather than dental place of articulation was intended (since the normal Spanish articulation of *t* alone would be dental.)

[57]This is also how the sound is usually written by Yowlumne 2000 tribal language activists.

- In his unpublished Yowlumne material (elicited in the 1920s) J.P. Harrington usually transcribed the Newman's alveolar stop series as *ʦ, ʦ', etc., suggesting a retroflex affricate of some sort (see Gamble 1994:3-4).*
- Gamble 1978 (based on 1970s field work) describes the corresponding series in Wikchamni (one of the Newman 1944 dialects) as noticeably affricated.

In short, every other description of Yowlumne and related dialects, from the early 19th century to the present, appears to contradict Newman's description of the alveolar stops. While it is tempting to go with the majority, Newman's is the most complete and thoughtful treatment of the these languages, and his descriptions of subtle phonetic detail are generally reliable (e.g., the glottalized sonorants,[58] above).

A potential way to reconcile these sources was suggested to me by Leanne Hinton (personal communication), and is confirmed by Ladefoged and Maddieson 1996:25-27: It is possible to produce a type of retroflex sound using apico-alveolar articulation by hollowing out a space behind the tongue tip. (This is similar to the Hindi type of retroflex, as opposed to the sub-apical Tamil and Telugu, although the Hindi type is post-alveolar.) If this is the sound Newman was describing, at least two problems remain: (1) Newman uncharacteristically failed to mention the marked auditory quality of these segments, leaving the impression

[58]It might appear to beg the question to appeal to the agreement about the glottalized sonorants between Newman 1944 and Plauché et al. 1998 to establish *both* that these segments have not changed *and* that that Newman accurately described them. However, the alternative hypothesis, viz. that Newman got it wrong in 1930 but the language changed to conform to his description,

that they were ordinary alveolar stops; and (2) An apico-alveolar retroflex stop would still differ significantly from many of these described sounds (including Harrington's almost contemporary account of Yowlumne) in lacking affrication. Nonetheless, this may be the most plausible view of all these data collectively.

This leaves partially unresolved the question whether the Yowlumne 2000 post-alveolar (or palatal) retroflex affricates, the reflexes of these sounds, represent a phonetic change. It is possible that the sounds Harrington heard (which could be identical to those of Yowlumne 2000) were a subdialectal variant of Newman's apico-alveolar retroflex stops. (Cases of dialectical variation in the articulation of retroflexes are cited by Ladefoged and Maddieson 1996.)

4.4.3 ASSESSMENT OF CHANGES IN PHONETICS AND INVENTORY. We have seen one structural change involving the merger and loss of the alveolar affricate series, and one arguable phonetic change in the articulation of the the alveolar stop series.

4.4.3.1 'NORMAL' CHANGE. The merger and loss of the alveolar affricates eliminated a distinction that never carried a significant functional load. The putative retroflexion and affrication of the alveolars stops (assuming we adopt my reconciliation of the Yowlumne 1930 data) was a relatively minor alteration in the manner and/or place of articulation that had no structural consequences. As such, both are types of sound changes that occur routinely (and by all account spontaneously) in the world's languages. If so, taken together they are reminiscent of an incipient chain shift: the alveolar affricates disappear through merger, and their approximate position (in terms of place and manner) is taken over by the

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seems very unlikely.

former alveolar stops. Therefore, if the shift of the alveolar stops actually occurred, it might have been facilitated by the disappearance of the alveolar fricatives. Beyond this speculation, the internal dynamics of the Yowlumne 1930 sound system can tell us little about why these changes occurred. In such cases, it makes sense to examine other potential causes, such as language contact, rather than to assume that unknown internal forces are at work (Hinton 1991).

4.4.3.2 DIALECT CONTACT AND DIALECT LEVELING. The prototypical scenario for dialect leveling occurs, according to Hock 1991, when speaker of dialects that have diverged over time are brought into regular contact. This situation favors leveling of dialect differences and convergence in a manner that resembles koiné formation. The concentration of the Yowlumne with some other Yokuts-speaking peoples (mostly, Wikchamnis and Yaudanchis, but smaller numbers of others as well) in the Tule River Reservation toward the end of the 19th century created such an environment. Under these circumstances, a phonemic distinction (viz., between dental and alveolar affricates) that was not especially salient perceptually, that was of low frequency, and that, crucially, was not shared with any other dialect, ought to have been especially susceptible to leveling.[59]

4.4.3.3 LANGUAGE OBSOLESCENCE. Perhaps more striking than the minor changes described above is the overall robustness of the Yowlumne 2000 sound system. For example, the aspiration distinction for dental affricates(*ʦ* vs. *c*) is

[59]For reasons set out below (*DIALECT LEVELING*), I am generally sceptical about the possibility of Yokuts dialect influence after 1930. However, this merger and loss seems the most likely among doubtful candidates: since we know that all other dialects lacked this feature in 1930, we do not have to rely on interpretation of the post-1930 dialect materials (including inferences drawn from

barely perceptible (to nonnative speakers) and of little functional importance, but has survived intact. Significantly, unlike the dental/alveolar affricate contrast, this distinction is shared with the other dialects and thus was not a likely target for leveling.

A characteristic of language obsolescence often cited in the literature (e.g., Seliger and Vago 1991; Campbell and Muntzel 1989) is the overgeneralization of unmarked features, or the loss of marked features. For such characterizations to avoid circularity, some substance must be given to the notion of markedness. One tradition associates markedness with the degree of complexity of formal phonological representations (e.g., Chomsky and Halle 1968), but complexity alone does not serve to distinguish robust from 'fragile' sounds. Plauché et al. 1998 attempted to develop this distinction for Yowlumne (and two unrelated languages) with the idea of 'perceptual salience'. Yowlumne glottalized sonorants are probably highly marked segments by anyone's definition, but unlike certain other complex segment types, their complexity works to diminish rather than enhance perception of phonetic characteristics, especially place of articulation: For example glottalization (creakiness) creates irregularities in the characteristically smooth spectral changes by which sonorants are identified, and decreases the already low sonorant amplitude. By contrast, glottalization of stops (i.e., ejectives) actually enhances their salience through greater oral pressure and a louder burst.

All of this suggests an explanation for the relative cross-linguistic rarity of

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omissions in that literature).

glottalized sonorants (which are much rarer, for example, than ejectives).[60] The low perceptual salience of these sounds makes them more susceptible to misanalysis, especially in situations of imperfect transmission, such as language shift or obsolescence. In the case of Yowlumne, however, these segments have been preserved structurally, and appear to have essentially the same phonetic characteristics that they did in 1930, despite being the most 'marked' part of the inventory.

The resistance of these sounds to change or loss reinforces my conclusion that the Yowlumne inventory has not undergone any significant changes attributable to obsolescence.[61]

4.5 PHONOLOGY AND MORPHOLOGY.

4.5.1 OUTLINE YOWLUMNE 1930 MORPHOPHONOLOGY. To make sense of the 2000 innovations in phonology an morphology, we will need to look at some relevant aspects of Yowlumne 1930 morphophonology, especially stem ablaut (templatic morphology) and vowel harmony. Unfortunately, although Newman 1944 is much admired for its many other virtues, in this area it is 'exasperatingly difficult to follow' as Hockett 1967 observed. (To my mind, Hockett's version is only a modest improvement.) The following is therefore based on Archangeli

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[60] Rarity of a linguistic structure can sometimes be explained by the relatively unlikely sequence of historical developments necessary for the structure to evolve. However, the historical precursors of glottalized sonorants described in Plauché et al. 1988 for the three languages discussed are quite ordinary.

[61] One arguable obsolescence effect is the exaggerated articulation of the ejective stops that I observed in another Yowlumne speaker whom I interviewed briefly: the exaggeration or overgeneralization of marked or 'exotic' features has been suggested as a symptom of language moribundity (Campbell and Muntzel 1989).

1983, which I find to be the best account of this data. Although this is a theoretical work (i.e., in an early autosegmental phonology framework), I think the limited theoretical apparatus actually assists in description of the data. Some of the processes Archangeli posits have been simplified (e.g., forms given presume the prior operation of epenthesis). (It should be noted that most of the forms actually cited in Archangeli's presentation are constructed based on principles developed in Newman 1944, rather than actually attested. The implications of this questionable practice will be discussed in detail in Chapter V. A list of all the forms from this article, with attestation status marked, is included in the appendix to Chapter V.)

The 'regular' Yowlumne verbal root (the only kind to be described here) consists of either two or three consonants and a vowel, arranged in one of the following six patterns:

biconsonantal	CVC	CVVC	CVCVV
triconsonantal	CVCC	CVVCC	CVCVVC

Note that the triconsonantal stems differ from the biconsonantal only by addition of a single final consonant.

The suffixes that may be added to the root are of two types. Class I suffixes leave the root as it is, while each Class II suffix has associated with it one of the three syllable structure templates, which it imposes on the root.

Application of these templates interacts with six ordered rules. Three will be revelant to our discussion:

•VOWEL HARMONY. Of two vowels with the same value for ±high, the second will become +round if the first is (i, u = +high, a, e,o = -high.) (The effect of this rule is to change a suffix *i* to *u,* and *a* to *o.*)

•LONG VOWEL LOWERING. *ii* and *uu* lower to *ee* and *oo*.

•CLOSED SYLLABLE SHORTENING. Long vowels shorten in closed syllables.

The effects of the vowel harmony are sometimes rendered opaque by the later application of Long Vowel Lowering, resulting in the differing surface suffix vowels in the aorist passives *k'o?it* 'was thrown' and *c'oomut* 'was 'destroyed':[62]

(4)	k'o?+it	c'uum+it
Vowel Harmony	k'o?it	c'uumut
Long Vowel Lowering	k'o?it	c'oomut

The above contrast was captured in Newman 1944 with a special o/u alternating morphophoneme in *c'uum.*

The situation is aggravated by the operation of closed syllable shortening, e.g., in the case of the aorist suffix *hin:*

[62]The historical chain of events corresponding to these ordered synchronic rules is set out in Whistler and Golla 1986:349-51.

(5)		k'o? + hin	c'uum + hin
	Vowel Harmony	k'o?hin	c'uumhun
	Long Vowel Lowering	k'o?hin	c'oomhun
	Closed Syllable Shortening	k'o?hin	c'omhun

Similar opacity effects occurring with low (-high) vowels are demonstrated by the vowel alternation in the *-k'a* imperatives of *c'uum* 'eat up' and *yoloow* 'assemble' (Newman 1944: 118):

(6)		c'uum + k'a	yoloow + k'a
	Vowel Harmony	c'uumk'a	yoloowk'o
	Long Vowel Lowering	c'oomk'a	yoloowk'o
	Closed Syllable Shortening	c'omk'a	yolowk'o
		'eat (it) up!'	'assemble!'

4.5.2 YOWLUMNE 2000 VOWEL HARMONY. Hansson 1997 is an examination of the fate of the above vowel harmony rule in Yowlumne 1997. The following are some of the data that Hansson adduces to compare the 1930 and 2000 rules. The suffixes in question are *k'a* (imperative) and *hin* (aorist.):

	stem	Yowlumne 1930	Yowlumne 2000	gloss\
(7a)	tan + k'a	tank'a	tank'a	'walk!'
(7b)	c'uum+ k'a	c'omk'a	c'omk'a	'eat

up!’

(7c)	woon + k’a	**wonk’o**	**wonk’a**	‘hide (tr.)’
(8a)	tan + hin	tanhin	tanhin	‘went’
(8b)	k’unk’un + hin	k’unk’unhun	k’unk’unhun	‘got hit a lot’
(8c)	c’uum + hin	**c’omhun**	**c’omhun**	‘ate up’
(8d)	ʔuuṭ’ + hin	**ʔoṭ’hun**	**ʔoṭ’hun**	‘stole’
(8e)	woon + hin	wonhin	wonhin	‘hide (tr.)’
(8f)	k’oʔ + hin	k’oʔhin	k’oʔhin	‘threw’

(Hansson 1997: 3-4 [orthography normalized])

(The forms in boldface are those in which the operation of vowel harmony is opaque.)

Hansson’s critical observation from these data is that in Yowlumne 2000 the operation of harmony on high vowels remains robust, but that it has been lost in the case of non-high vowels. He explains this by appealing to the *asymmetry of opacity:* When trying to figure out the proper form for low-vowel suffixes, the learner will notice the *a~o* alternation, but will not see anything about the two types of *o’s* (the underlying *o’s* vs. the ones derived from *uu;* Hansson labels these

o_1 and o_2, respectively) that motivates a suffix *o* in some cases and *a* in others, except perhaps for the consistent behavior of individual lexemes with respect to various non-high suffixes. The mechanism that triggers rounding is completely opaque. In the case of high vowels, however, there are surface short *u's,* which always trigger harmony. This establishes the harmony rule, after which the learner only has to figure out that only certain *o's* trigger the rule.

I find Hansson's reasoning here interesting but not compelling. The way the argument is framed seems to presume that the language learner observes the operation of rules on underlying forms, rather than merely observing surface alternations. If we instead understand the learner's situation as one of sorting through alternations, the learnability argument can still be made, but the assymetry of high and non-high vowels is less egregious and deprives the argument of much of its force:

- *High vowel suffixes:* the learner will notice that stems with *u* always get the *u*-suffix, stems with *o* get a suffix with *i* or *u,* depending on the individual stem, and stems with other vowels always get the *i*-suffix.
- *Non-high vowel suffixes:* the learner will notice that stems with *o* will get either *a* or *o* suffixes, depending on the individual stem, while stems with any other vowel will get the *a*-suffix.

Stated in this way, I do not see that much difference in the likelihood in the two cases that the learner will figure out that there is an alternation, and what it is. Moreover, we might expect the two processes to reinforce each other in the

learners mind: stem o_1 always goes with *i* and *o* suffixes, while o_2 stems go with *u* and *a* suffixes.

I do not have a better explanation than Hansson's, and I do not discount the possibility that the asymmetry in question had some role in the loss of non-high vowel harmony. It is also possible that speakers were aware that high-vowel harmonizing stems (o_2-stems) had alternative forms with u, and that this added salience to the high-vowel alternation (Leanne Hinton, personal communication.[63])

4.5.3 LOSS OF GLOTTAL SEGMENTS. There are several cases where there has been a loss of *ʔ* and *h* in various positions. Thus Newman's *wiyaaʔan* 'say (durative present), is now *wiyan'*[64](or *wiyan* in some tokens, but such variable deglottalization of final glotallized sonorants also occurred in Newman's time.) Similarly, the 'neutral agentive' suffix (Newman 1922:152) *-ihnee* has become Yowlumne 2000 *-iini,* with compensatory lengthening of the penultimate *i.* E.g., *tauṭiini* 'killer' (from *taawaṭ* 'kill', cf. Yowlumne 1930 *tauṭihni* (Newman 1996.) These changes seem to be specific to particular grammatical morphemes: elsewhere both *h* and *ʔ* are preserved in similar phonological environments.

Another curious loss of *ʔ* occurred with some members of a class of animal terms ending in *-ic'* or *-iṭ'.* (The former suffix is identical to a productive agentive suffix [Newman 1944:152], and the latter is probably an historically related form. However, the stems are usually not identifiable verbs.) A number of these words

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[63]I.e., this was a comment written by Hinton on a circulated copy of Hansson's paper.

[64]As Plauché et al. 1998 point out, this looks like a continuation of the same historical process that

attach the suffix to a stem ending in *-ee?-.* Some, but not all of these have reduced this *-ee?i-* sequence to a single short vowel, either *i* or *e:*

	1930	2000	gloss
(9a)	bodoodiywee?it̓	bodoodiwit̓’	‘sting bug’,
(9b)	haṣkiywee?ic’	haṣkiywec’.	‘gopher’,
(9a)	?oowee?ic’	?oowec’	‘chicken, rooster’

but

(10)	bogoowee?it̓’	bogoowee?it̓’	‘hoot owl’

4.5.4 THE MYSTERIOUS MORPHEME *WIL.* On first encountering the form *wil* as what seemed to be a future marker in the speech of the semi-speaker referred to above (see *4.3.8.4.2.1 A CLEAR-CUT CASE OF LEXICAL ATTRITION COMPARED*), I assumed it was the English *will* conscripted as a substitute for a forgotten native form:

(11) helew wil tahan
when ?? go
‘When will (he/she) go?’

However, the same word (seemingly) later appeared in Yowlumne sentences

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led to the emergence of the Yokuts glottalized sonorants in the first place.

elicited from JF and AV:

(12) ʔangi wil hiweeten

(Y/N Question) ?? walk.FUT

'Will (he/she) walk?'

Although *wil* only occurs in contexts with future meaning in Yowlumne 2000, future marking here is redundant in the presence of the future suffix *-en.* It also seems unlikely that the Yowlumne speakers, with their disinclination toward any sort of English borrowing, would borrow a grammatical morpheme.

As it turns out, the *wil* morpheme does occur once Newman 1944:[65]

(13) t'uyk'a wil

shoot.IMPER ??

'Shoot, ye (pl.)'

(Newman 1944:118)

and several times in the Newman texts, e.g:

(14) lol'k'o wil nan wiyaaʔan

let-go.IMPER ?? me.PO said.DUR

'"Let go of me", he said.

(Gamble 1994:63)

[65] In addition, under the grammatical category of 'Particles', Newman 1944:235-36 lists a phonologically similar for *wil□,* which he glosses 'of course', but provides no examples of its usage.

In these cases, Newman gloss *wil* as ‘ye’. Other textual occurrences are also with the imperative, in contexts where the commandee is clearly plural.[66] The conclusion that in Yowlumne 1930, *wil* is merely a plural marker specifically for the imperative is reinforced by the following:

(15) ʔamaʔ ʔamamikwa wiyaaʔan ṭaw wik’ maamaw woʔuyk’a

then you.DU say.DUR there ?? near you sleep.IMPER

‘And he said to those two, “Sleep there”

(Gamble 1994:73)

In which case Newman glosses wik’ ‘ye-2’.

If Newman correctly glossed *wil,* it is an anomalous form. It is clearly a free morpheme, given its variable syntactic position, but it does not resemble any of the Yowlumne pronouns (which have dual and plural forms.) If instead it is a subject-verb agreement marker, it is the only such form in the language. I will have more to say about *wil* under *LANGUAGE CONTACT,* below.

4.5.5 REDUCTION OF MORPHOLOGICAL COMPLEXITY.

4.5.5.1 LIMITATIONS IN CONCATENATION OF MORPHEMES. The formal

[66]It should also be noted that all the contexts involve reported speech, suggesting that *wil* might be a quotative particle of some sort. However, in narrative texts of this sort, imperatives are quite unlikely to occur in any context other than reported speech, and I found no examples of *wil* in

morphological system of Yowlumne 1930 theoretically permits words of considerable complexity to be constructed, but as Newman 1944:66 n. 50 and 81-82 observed, words with more than one or two suffixes are extremely rare in spontaneous texts (although longer words were often recognized as correct by his informants.)

Morphological complexity is similarly rare in Yowlumne 2000. JV and AV will occasionally produce fairly complex forms like the following on direct elicitation:

(16) bukbukwiyalasitk'a nan
REDUP."puk".-*wiyi*-.CAUS.APPL.IMPER I.PO
'Make a dripping sound for me!' (i.e., make a 'puk' sound')

Elsewhere, however, both informants have difficulty constructing or recognizing complex verbs built out of morphemes that they have full command of individually (including complex example forms from Newman 1944.)

Although this evidence is highly suggestive, I am not willing to conclude unequivocally that it is indicative of an overall reduction in the Yowlumne 1930 linguistic repertoire. Elsewhere the Yowlumne 2000 speakers have exhibited difficulty in producing or recognizing forms (lexical items or grammatical morphemes) out of context that they later produced spontaneously in texts. Thus

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reported speech in the absence of imperatives.

since today (as in 1930) complex morphology is rare in texts,[67] effectively comparing the Yowlumne 2000 speakers' morphological facility with that of Newman's informants is problematic.

4.5.5.2 LOSS OF GRAMMATICAL MORPHEMES. I have similar methodological qualms about assessing the degree of loss of grammatical morphemes. In 1996 I went through many of the suffixes in Newman 1944 with JF, asking her either if she understood Yowlumne words and phrases that I pronounced, or asking her how Newman's English glosses would be translated into Yowlumne. Many of the morphological categories that she appear not to know later turn up in elicitation on different topics or in texts. Similar experiences were reported by Gunnar Hansson (personal communication) in working with JF and AV.

4.5.6 ASSESSMENT OF THE PHONOLOGICAL AND MORPHOLOGICAL CHANGES

4.5.6.1 'NORMAL CHANGE'. As is often the case, innovations characterizable as normal or autonomous in form may nonetheless fit other descriptions as well. The loss of opaque sound alternations, i.e., ones that have lost their phonological motivation, is a common enough process language internally (see, e.g., Hock 1991:266 ff.) However, this type of change has also been seen as typical of obsolescence (Campbell and Muntzel 1989; Taylor 1989.) As far as obsolescence is concern, the real issue is probably the *rate* of change by leveling. This will be discussed further below (see *CONCLUSION*.)

4.5.6.2 LANGUAGE CONTACT. Direct derivation of *wil* from the English

[67] Newman 1944:66 suggests somewhat obliquely that this may be part of a general Yokuts stylistic austerity. Along these lines, Ruby Bayes seems to employ more complex morphology than her sister JF, who is at least as fluent a speaker otherwise. This may be related to her more flamboyant personal style, which is apparent when both of them are speaking English.

future auxiliary *will* can probably be dismissed. However, the possibility that the English form influenced the development of *wil* as a future marker must be entertained. Unfortunately, my Yowlumne 2000 data relevant to this issue is somewhat ambiguous. For the semi-speaker *wil* seemed pretty clearly to mark future tense, but in Yowlumne 2000 the situation is less clear. If it is some sort of emerging future morpheme, it must be distinguished from the other future tense inflection and particles (*hi?, mi?in.*) One thing that is clear is that *wil* in Wikchamni or Yowlumne 2000 does not mark the plural number of imperative verbs, as it did in 1930.

Assuming that 2000 Yowlumne *wil* is a future marker of some sort, can a case be made for it being the descendant of *wil* in Yowlumne 1930? It probably can, in light of the obvious cognitive connection between the imperative and the future. This connection may even be reflected in this case by the free translation (probably provided by Newman's informant) of (15) above: 'And [he] says to them, "There you two will sleep."'[68] In short, the relationship between the two *wil*'s is plausible, but further speculation without data from intermediate stages (which is not available) would be idle.

4.5.6.3 DIALECT LEVELING AND OTHER DIALECT INFLUENCE. I can find no very likely candidates for reconstructible dialect influence in the area of Yowlumne 2000 phonology and morphology. If, as I have speculated, the particle *wil* has simultaneously evolved into a future tense marker in both Wikchamni and

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[68]One can imagine English-Yowlumne bilingual parents sometimes telling their children *wil wouɥoyk'a* at bedtime, and at other times (or perhaps the other parent or another relative) saying 'You will go to bed!' This would provide the bridging context (see 6 *MORPHOSYNTAX AND ARGUMENT STRUCTURE,* below) for reanalyzing *wil* as equivalent to English *will.*

Yowlumne, this certainly suggests dialect influence, but there is not enough data to say more.

4.5.6.4 LANGUAGE OBSOLESCENCE. I have found it impossible to decide whether to attribute loss of non-high vowel harmony to normal or to moribund change. The situation with morphological simplification is slightly different. If I were convinced that there had been a genuine reduction in morphological resources (either in the number of grammatical morphemes, or their ability to concatenate), I would probably attribute this to obsolescence. However, although the evidence of such reduction is highly suggestive, it is not persuasive.

One sound change that I think may bear the stamp of language death is the loss of glottal stop and vowel reduction in certain animal names (*5.3 LOSS OF GLOTTAL SEGMENTS*). By itself, this looks like a quite ordinary sound change. The problem is that it did not occur uniformly (even across the semantic category of animal terms), and did not always have the same phonological result when it did occur. I think there may be an explanation for this that goes beyond idle speculation, even if it is not conclusive.

JF and AV did not spend much of their early lives in traditional Yowlumne territory, and they are aware that this has limited their command of biological terms. Significantly, the terms they do know show a large number of small but unsystematic phonological deviations from their counterparts in Newman 1996. For example:

	1930	2000	gloss
(17a)	beemamguc’	beemamguṭ	‘hummingbird’
(17b)	t’aanawuṭ	t’aanawaṭ	‘grasshopper’
(17c)	woogaygiṭ	wagaagic’	‘butterfly’

A scenario that would account for this type of change is the following: JF and AV acquired a significant amount of their biological lexicon not at home, but on frequent visits to the reservation. There they would be exposed both to forms from other dialects, as well as Yowlumne variants. (*beemamguṭ* ‘hummingbird’ is an attested Yowlumne variant form [Kroeber 1963:206].) Among the sources of these words would have been speakers with varying degrees of fluency.[69] The words with glottal stop loss and vowel reduction, in particular, have the look of lexicalized fast-speech pronunciations.

Extreme and random variability has been cited as a marker of language obsolescence (e.g., Jürgen 1992), but I am not familiar with any other examples of what I am suggesting here, where a part of the lexicon of relatively fluent speakers is ‘corrupted’ by exposure to less fluent speakers or semi-speakers. Further investigation will be needed to determine whether this hypothesis is viable.

4.6 MORPHOSYNTAX AND ARGUMENT STRUCTURE Yowlumne 2000 displays some startling innovations in the way argument structure is encoded.

[69]My impression is that nature words are often a matter of great interest to semi-speakers and learners, and children are often curious about them. For example, Agnes Vera’s late son Matt, who did not grow up speaking the language, learned many such words from elders long before he began

4.6.1 VALENCE-INCREASING MORPHOSYNTAX. Yowlumne 1930 has three morphosyntactic valence-increasing operations that make inherently monotransitive verbs ditransitive and inherently intransitive verbs monotransitive.[70] There are the causative, the goal-applicative (the 'indirective' in Newman 1944), and the comitative-applicative (the 'comitative' in Newman 1944.)[71] Case-marking in these constructions is consistent with the basic primary/secondary object system:

4.6.1.1 THE CAUSATIVE. In morphological causatives (Newman 1944-90-94), the causee is the primary object, e.g:

(20)	xataalik'	not'on	galneeni
	eat.CAUS.IMPER	boy.PO	meat.SO
	'Feed the boy the meat!'		

With one exception noted below, his construction remains essentially unchanged (the above example is from Yowlumne 2000.)

The two applicative constructions increase valence by putting an oblique argument or adjunct (such as an accompanier, destination, beneficiary/recipient) into the primary object position, and demoting the patient (if there is one) to the status of secondary object.

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learning to speak Yowlumne (Agnes Vera and Jane Flippo, personal communication).

[70] In the case of, e.g., a monotransitive verb that has become ditransitive by virtue of one of these operations, I will speak of an *inherent* monotransitive and a *derived* ditransitive.

[71] I have renamed the latter two operations to fit with modern usage, and because 'comitative' alone usually designates a nominal case.

4.6.1.2 THE COMITATIVE-APPLICATIVE. We do not know whether the comitative-applicative could be added to inherently transitive verbs, since all of Newman's examples use inherently intransitive ones:

(21) ʔama ʔilikmixhin kay'wa
and sing.COMIT.AOR coyote.PO
'and (he) sang with coyote'
(Newman 1944:85)

This synthetic construction alternates with an analytic construction to which it appears to be essentially equivalent:

(22) tahan naʔ mam hiʔ ʔabiy
go I you.PO FUT with
'I will go with you'
(Newman 1944:239)

This is a curious construction: Like the comitative-applicative, it requires that the accompanier *mam* 'you' have primary objective case, but in the absence of examples with inherently transitive verbs, it is not possible to determine whether this case requirement should be taken as evidence that *tahan* 'go' has been made transitive, or that primary objective case is a subcategorization requirement of *ʔabiy.*[72] That the particle *ʔabiy,*which might also be glossed 'together', does not

[72]That is, with a transitive example, we would predict that (1) if *ʔabiy* is a transitivizing (i.e.,

have to be adjacent to the accompanier argument suggests the former analysis.

In Yolwumne 2000, the synthetic comitative-applicative has been lost: JF and AV do not even have passive recognition of verb forms with the bound morpheme *-mix-*. All that remains is the analytic *ʔabiy* construction:

(23) hiwethin naʔ ʔabi nim nooc'in
walk.AOR I with my friend.PO
'I walked with my friend.'

This construction can occur with inherently transitive as well as intransitive verbs, in which case both the patient or theme object of the verb and the accompanier are marked primary objective:

(24) ʔabi ṭan naʔ xathin galnen
with that.PO I eat.AOR meat.PO
'I ate the meat with him/her'

However, as in Yowlumne 1930, the particle *ʔabi* and the accompanier do not have to be adjacent:

applicative) particle, the original patient object of the verb would be marked secondary objective, but (2) if *ʔabiy* is an adposition that subcategorizes for primary objective case, then both the patient and the accompanier would be marked primary objective.

(25) ʔabi naʔ ˌtan xathin

with I that.PO eat.AOR

'I ate with him/her'

Taken together, (24) and (25) suggest something like the 'proto-adpositions' in early Indo-European languages (Beekes 1995), syntactically free-floating adverbials that are only loosely associated with their arguments.

Given the meager Yowlumne 1930 data, the only characteristic of Yowlumne 2000 comitative-applicative that we can be fairly sure is innovative is the loss of the *-mix-* synthetic form.

4.6.1.3 THE YOWLUMNE 1930 GOAL-APPLICATIVE. Note the difference between (26) (without applicative), where the destination *silliw* 'rock' is marked locative and the patient *kew* 'he (that one)' is the primary object, and (27) (with applicative) where the destination *ʔoˌsto* 'fire' is the primary object, and the patient *ˌtoxoˌtni* 'brush' is the secondary object:

(26) miʔin ˌtan sodoxdoʔ kew silliw (without applicative)

now he.PO throw.REP these.LOC rock.LOC

'Now (he) will throw him repeatedly against these rocks'

(Newman 1944:109)

(27) k'oʔsithin ʔamin ṭoxoṭni ʔoṣto (with applicative)

throw.APPL.AOR his brush.SO fire.PO

'(He) threw his brush into the fire.'

(Newman 1944:86)

With inherently intransitive verbs, the applicative object in goal-applicative constructions may be a beneficiary, recipient, location, destination, etc., depending on the semantics of the verb and object :

(28) xip'wiysitk'a nan

make-rubbing-motion.APPL.IMPER me.PO

'Make a rubbing motion for me'

(Newman 1944:86)

(29) ʔamaʔ ṭan kay'iw dap ṣilitsithin

then him.PO Coyote but jump.APPL.AOR

'But Coyote jumped on him'

(Gamble 1994:91)

(30) miʔin taxinsiten ʔamin ṭeeʔin

now come.APPL.FUT his house.PO

'Now (he) will come toward his house'

(Gamble 1994:95)

4.6.1.3.1 THE GOAL-APPLICATIVE IN YOWLUMNE 2000. The most noticeable change in the goal applicative is the requirement that the applicativized object of derived ditransitives be animate. Thus (27) above is only grammatical for 2000 speakers if the derived object *ʔoṣto* 'fire' is construed as personification with recipient status, e.g., 'He threw his brush to Fire'. This means that the derived argument must be both animate (i.e., roughly, human), and it must be a recipient or benificary, rather than a destination.

One fact about the Yowlumne 2000 derived ditransitive applicative will prove significant. As far as I have been able to surmise, from both 1930 and 2000 data, there has never been an alternative way of encoding recipients and beneficiaries. This contrasts with the use of the applicative to encode locations or destinations, which can also be marked by locative case. (This alternation is exemplied by (26) and (27), above.)

The situation with inherent intransitives is somewhat different. The derived object in these cases can be a beneficiary/recipient or an animate destination or location:

(31) xuʔxuʔsuten mam
vomit.APPL.FUT you.PO
'(He) is going to vomit on/for you'[73]

[73]In Yowlumne 2000 the semantic role of the goal-applicative primary object can be ambiguous, given the proper context. This was probably true of Yowlumne 1930 as well, but the literature is

(32) tansitxo not'on

go.APPL.DUR boy.PO

'(He) is going toward the boy'

However, if the derived object is inanimate, it must be marked with secondary objective case:

(33) tansitxo silelni

go.APPL.DUR rock.SO

'(He) is going toward the rock'

(33) is especially interesting in that it seems to contradict the generalization of Dryer 1986 that a secondary object never occurs in the absence of a (possibly uninstantiated) primary object.

4.6.2 SOME RELATED TRENDS IN CASE ASSIGNMENT. The preceding developments in the use of primary and secondary objective case marking are categorical changes in Yowlumne grammar. Elsewhere considerable variation has arisen in the use of the two objective cases, out of which some interesting trends are discernible, as the following data will show:

When asked to produce the Yowlumne for 'Feed the dog to the boy!' the 2000 speakers gave:

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silent on this question.

(34) xataalik' not'on buʔsani

eat.CAUS.IMPER boy.PO dog.SO

'Feed the dog to the boy!'

This is fully consistent with Newman 1944: the causee is marked primary object, and the ultimate patient, secondary object. However, when asked to translate 'Feed the boy to the dog!' and given an appropriate context for the sentence, the speakers responded again with (34). Only after some thought and discussion did they concede that the following (which Newman 1944 would predict) was also acceptable:

(35) xataalik' buʔsa not'ooni

eat.CAUS.IMPER dog.PO boy.SO

'Feed the boy to the dog!'

There is also a tendency with derived ditransitives to mark both the patient and the goal as primary objects if both are human. This seems nearly always to be the case if both are proper nouns, e.g:

(36) k'oʔsitk'a matyon agnesi

throw.APPL.IMPER Matt.PO Agnes.PO

'Throw Matt to Agnes!'

4.6.3 ANIMACY IN YOWLUMNE 1930 AND 2000. What these developments represent is the emergence of animacy as a grammatical category in Yowlumne 2000.

In general, Yowlumne 1930 shows no evidence of any sort of gender system[74] (e.g., the demonstratives *ki* 'this' and *ˌta* 'that' can serve as *he, she,* or *it*) nor do any of the other attested Yokuts language. Sherzer 1976 describes the absence of animacy distinctions as an areal trait of central California (including Yokuts.)

The basic animacy distinction that seems to be evolving is *human vs. nonhuman,* with primary and secondary objective cases being reanalyzed as animate objective and inanimate objective cases, respectively. However, the present situation is a bit messier and might be summarized as follows:

- The fully developed animacy case distinction is limited to the objects of goal-applicativized (inherently) intransitive verbs;
- The single object of inherent monotransitives show no animacy effects (i.e., they are unchanged from Yowlumne 1930);
- The derived object of ditransitives derived by goal-applicativization must be *both* animate *and* a beneficiary/recipient;
- There is a tendency for the arguments of other ditransitives to be case marked in accordance with animacy rather than thematic role;

[74]The Yowlumne 2000 speakers occasionally comment that a particular verb (e.g., *c'eedaa* 'eat greens') can only be used of humans (or in other cases, non-humans.) It is virtually impossible to determine whether these restrictions are innovative: Such information is never included in the Yowlumne 1930 word lists and is not recoverable from the available texts.

•There is a very strong tendency for proper noun objects of whatever sort to be marked primary object.

4.6.4 ASSESSMENT OF ARGUMENT STRUCTURE INNOVATIONS.

4.6.4.1 ORDER OF INNOVATIONS. Before we look at the possible mechanisms of change, it might prove helpful to consider the probable order in which these innovations occurred.

First, the relative order of the loss of the synthetic comitative-applicative cannot readily be established. In particular, there does not seem to be any reason to think that its loss is tied to the contraction of the ditransitive applicative construction.[75]

I also know of no airtight way to establish the order of the other innovations, but I think there are good reasons to believe that the animacy restriction on ditransitive goal-applicatives occurred first. This change occurred in all three attested post-1930 dialects, while the other animacy effects are unique to Yowlumne. (I will have more to say about this issue under *DIALECT LEVELING,* below.) It appears that this construction introduced the grammatical category of animacy, as well as its association with primary objective case, thus setting the stage for the other developments.

To clarify and reinforce this conclusion I will employ a somewhat altered and generalized version of the notion of a BRIDGING CONTEXT, which as been used to motivate semantic change (Evans and Wilkins 1998): When a structure of type

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[75]In this connection, it may be worth noting that Chukchansi, which had the synthetic comitative applicative in Newman 1944, retained it through the 1960s, but preserved only benefactive uses of the goal-applicative, according to the evidence of Collord 1968. Relevant data are not available for any other Yokuts language (i.e., Wikchamni has no attested synthetic comitative form at any

A has been reanalyzed as a structure of type B, a likely candidate for the initial or motivating stage of the change is the context(s) that is interpretable ambiguously as either type A or B, i.e., the bridging context. Here the bridging context between primary objectivity casemarking and animacy-based casemarking is the ditransitive. In monotransitives, the primary object is the only object, and thus exhibits no particular tendencies favoring animacy or inanimacy.[76] However, as Dryer 1986:841 notes, in ditransitives the primary object is prototypically more animate than the secondary object. It certainly seems also to be true that inherent ditransitives in Yowlumne 1930 and 2000 nearly always have a recipient or beneficiary (i.e., inherently animate) primary object argument.[77] Thus the bulk of ditransitive (both derived and underived) provide bridging contexts, in that the object-marking morphology can be construed either as distinguishing primary from secondary objects or animate from inanimate arguments. This 'plants the seed' for the reanalysis:

•PRIMARY OBJECT MARKER >> ANIMACY MARKER, and

•SECONDARY OBJECT MARKER >> INANIMACY MARKER

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period.)

[76]If anything, monotransitive objects are prototypically inanimate (or at least less animate than subjects); in fact, this prototype has been grammaticalized in a number of languages (see, e.g., Croft 1990:136-39.)

[77]An apparent anomaly in this regard is the verb *sodox* 'throw at' (as glossed in Newman 1996), which allows both animate and inanimate primary object goals in Yowlumne 2000:

sodoxhin	naʔ	ṭan/gawayonʔwateyan	silelni
threw-at.AOR	I	that.O1/horse.O1/basket	rock.O2

'Threw a rock at him/the horse/the basket'

Other peculiarities of this class of verbs are discussed in Chapter 2..

which is later generalized to certain monotransitive contexts.[78]

4.6.4.2 'NORMAL' CHANGE. Each of these developments in Yowlumne morphosyntax is the sort of thing that *could* have occurred autonomously.[79] The situation with the comitative-applicative can be characterized as the loss of a synthetic structure in favor of an existing analytic construction, a very common and unremarkable sort of language change (exemplified numerous times, for example, in the histories of various Indo-European languages, although usually in a more systematic form).

The above analysis of the order of changes makes it clear that there is a plausible chain of language-internal causes that can explain the animacy-related innovations. In addition it should be noted that benefactive/recipient applicatives (which necessarily involve animate arguments) are by far the commonest type of applicative cross-linguistically (Peterson 1996) and, judging by Newman's examples, they also account for most of the tokens of derived ditransitive applicatives in Yowlumne. (I will have more to say about these frequency and markedness issues under *LANGUAGE OBSOLESCENCE,* below.) At this point it would

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[78] A comparable example of a 'bridging context' operating in the context of an obsolescing languages is the fate of the Dyirbal antipassive (Schmidt 1985.) An original role of the antipassive (in the context Schmidt discusses) was to allow coreference of a transitive subject with a preceding clause intransitive subject (absolutive) by changing the transitive subject from ergative to absolutive. The prototypical use of this devise was purposive: *The policeman came in order to arrest her.* This bridging context facilitated the reanalysis of the antipassive as a purpose marker for some young speakers.

[79] Hinton 1991 argues that genuinely autonomous change or 'drift' in Sapir's sense is much rarer that is usually presumed. While I am generally sympathetic to this position, especially if it is construed as a methodological principle dictating that we should search for contact influences before attributing change to unexplained internal forces, I think it needs to be qualified when obsolescing languages are at issue. One of most commonly cited mechanisms of internal change is misanalysis, a process that is sure to be much more common in an obsolescence situation (because of the relative paucity of input) and is no doubt related to the accelerated rate of change associated with such languages.

be possible to conclude that these morphosyntactic innovations are the product of Yowlumne's internal dynamics and not pursue the matter further. However, the mere fact that a plausible internal account has been found does not exclude the possibity of external factors that might have triggered, accelerated, or otherwise facilitated the change (Thomason and Kauffman 1991:57-58, criticizing Ohala 1974 and others).

4.6.4.3 CONTACT-INDUCED CHANGE: ENGLISH AND SPANISH.

4.6.4.3.1 THE *ʔabi* COMITATIVE. 'If the source language expresses a given category syntactially and the recipient language expresses it morphologically, the recipient language is quite likely to adopt the syntactic means of expression' (Thomason and Kaufman 1991:56). This maxim supports a Spanish or English contact explanation for the existence of the *ʔabi* comitative, although not for the morpheme *ʔabi* itself. The problem is that we have no compelling reason to consider this construction a recent innovation. Newman 1944 reports a morphological comitative applicative for only four of the six dialects covered. Of the other two, textual evidence suggests that Wikchamni in the 1970s had a comparable syntactic construction using the adposition *yeetaw* 'with' (orthography normalized; cognate with Yowlumne *yeeṭ'aw* 'all'), while information on Choynimni is not available. In the context of Yowlumne 1930-2000, however, what needs to be explained is not how the analytic construction arose, but why the morphological one disappeared. Language contact might have been a factor in this loss, but I think that the principal cause was something else, which we will get to in a moment.

4.6.4.3.2 THE GOAL-APPLICATIVE. There is a superficially compelling parallel between the Yowlumne 2000 goal-applicative and the English syntactic alternation known as Dative Shift:

(37) Kim sent a book to Berkeley

(38) Kim sent Berkeley a book

The point is that in (38), but not in (37), *Berkeley* must be construed as animate (i.e., as a personal name, or an animate metonym such as 'the Berkeley office'). The resemblance of Dative Shift to applicativization has not been lost on typologists (Palmer 1994), and the role of the English recipient/object in such sentences as a primary object has also been argued for (Dryer 1986).

Does this mean, then, that the Yowlumne 2000 goal-applicative was modeled on English Dative Shift? If so, then the mechanism was obviously not one of borrowing the beneficiary/recipient uses (which predate contact), but retention of this use, along with the loss of others, under contact influence. Such effects are not impossible, but are more often associated with interference through language shift (Thomason and Kaufman 1981:58), which we know did not occur in this case.

4.6.4.4 DIALECT LEVELING. As noted above, the animacy requirement for derived (and possibly inherent) ditransitive primary objects appears to be shared innovation of all three attested post-1930 dialects (i.e., Yowlumne, Wikchamni,

Chukchansi.)[80] This suggests the possibility of dialect leveling, here taking the form of the shared loss of all but the most unmarked uses of this particular structure. However, recent dialect geography does not support this idea. The Chukchansi speakers consulted by Collord 1968 were from Ahwanee and Coarsegold (near Yosemite National Park), which are about 100 miles northwest of the Tule River Reservation. Collord does not say where the speakers grew up, but we can probably assume it was not on the reservation (neither Newman's Chukchansi informants nor the Chukchansi speakers known to me today live there.) Newman's Wikchamni informants lived at Tule River, but Gamble's did not, although he does not tell us where they grew up. (Whilster and Golla 1986 assume that Newman's Wikchamni differed from Gamble's because the latter was a non-reservation variety.)

My provisional conclusions about the role of language contact in these argument structure changes are: English may at most have been a contributing factor in the comitative- and goal-applicative innovations (Spanish is also a possibility in the case of the comitative), but that dialect leveling probably was not a factor.

4.6.4.5 LANGAUGE OBSOLESCENCE.In Weigel 1997 I argued that loss of the goal-applicative in Yowlumne 2000 was symptomatic of language obsolescence

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[80]I do not have complete confidence in the reliability of all the sources on this question. Both Gamble 1978 and Collord 1968 describe the goal-applicative as a type of benefactive, but especially in Collord's case it seems likely that the relatively rare inanimate uses might simply have been missed. Moreover, Newman treats the goal-applicative ('indirective') as the same in all dialects, but only gives inanimate goal uses for Yowlumne, Chawchila, and Gashowu. I assume this is just a coincidence, since animacy was not a question he addresses. (He also never mentions the allative uses of the goal-applicative with verbs of motion, although these occur with some frequency in his texts.)

and contraction. At that time I had overlooked the reference in Newman 1944 to the *ʔabi* syntactic comitative construction. This new information, I believe, will provide additional evidence for a more clearly and fully articulated version of my earlier understanding of these facts. If I am right in thinking that these innovations are exemplars of a very characteristic aspect of language obsolescence, then then it will be worth considering them in detail.

First, let us recall the situation in Yowlumne 1930 from a slightly different angle. Basically three types of propositions were expressed by the constructions in question:

- Comitatives, expressed either morphologically OR syntactially by two apparently unrelated constructions(*-mix-* and *ʔabi*);
- Destinations or locations (in ditransitives), expressed morphologically on the head (by the goal-applicative) OR morphologically on the dependent (by the locative case);
- Beneficiaries and recipients, expressed ONLY by the goal-applicative.

By 2000 the morphological comitative and the head-marked goal-applicative had disappeared. In other words, where there were alternatives, the alternatives were lost.

As I noted above, from one perspective this looks like ordinary morphosyntactic change. When one structure replaces another historically, we should not be surprised to find a period when both structures coexist in the speech community. But it is not very likely that in Yowlumne 1930 we are looking such a

period, witnessing a transitional stage of language change. In any event, this case differs crucially from the synthetic-to-analytic replacements of categories like person, number and tense familiar in European languages. Alternative ways of encoding argument structure may be equivalent in the narrow semantic sense (although I am not entirely certain about this in Yowlumne 1930), but they serve different discourse purposes, thus the loss of such an alternation may represent a genuine diminution of the language's functional resources.

As will be noted below (*7 SYNTAX AND DISCOURSE*), textual evidence indicates that in Yowlumne 1930, the only non-subject argument that can be left-dislocated (fronted) is the primary object. From this it appears that only subjects and primary objects can be topicalized, with the consequence that arguments such as beneficiaries, locations, accompaniers, etc., can only be topicalized if they are put into primary object position. This is where the applicative comes in. Similarly, as set forth in detail in Chapter 3, fronted primary objects also often mark syntactic 'pivots', i.e., positions that license deletion under co-reference, [81]

So it seems that what Yowlumne 2000 has lost are some devices for organizing discourse at above the sentence level. This kind of machinery can be expected to play as significant role in extended narrative, elaborate description and explanation, etc., it is less likely to be important at the conversational level, especially among intimates. Very likely these alternations fell into desuetude with contraction of the language, and thus were never transmitted.

The role of markedness in this process needs to be clarified. It has already

[81] These functions are fairly typical of applicatives cross-linguistically (Peterson 1999).

been noted that the beneficiary/recipient applicative is the most common type cross-linguistically. Yowlumne 1930 is also unremarkable typologically in having no syntactic or dependent marked alternative to the beneificiary/recipient applicative (David Peterson, personal communication), unlike the locative variant of the construction, or the comitative-applicative. This is no doubt related to the fact that beneficiary recipients are prototypically the most topicworthy non-subjects in ditransitives (Givón 1984.) However, it is in my view an oversimplification simply to say the Yowlumne 2000 lost all but the most unmarked form. Rather the unmarked form was the only non-alternating form (a fact related to its unmarked status), so it was all that was left when the alternations were lost.

As I have argued, the contracted goal-applicative provided the 'bridging context' for the emergence of animacy in Yowlumne. Thus the rise of animacy, a natural enough development inherently, was probably expedited by obsolescence. Observers have often noted the accelerated pace of otherwise normal-looking change in obsolescing languages (e.g., Voegelin and Voelgelin 1977), of which this is evidently an example.

4.7 SYNTAX AND DISCOURSE. The topic of reference tracking in Yowlumne 1930 has been covered in detail in Chapter 3. This section will elaborate on some issues raised there about the effects of obsolescence on the encoding of interclausal coreference.

When applicative forms appear in Yowlumne texts, the applicativized

primary object almost always appears at the beginning of the clause as a pronoun[82]. In fact, the only exception I have found to this general rule is the following:

(39) ʔama ʔ lihimhin tansiteeni ṭeeʔin ʔamin ṭaw
he ran.AOR go.APPL.RESULT house.PO his there

panaahin ṭew ʔamin
arrive.AOR house.LOC his

'He ran to get to his house and arrived there at his house' (my trans.)

(Gamble 1993:89; orthography normalized)

However, I suspect that this is some sort of formulaic idiom, in that is appears almost verbatim elsewhere.

On the other hand, a typical configuration occurring in what Newman's notes called the Yowlumne 'Orpheus' tale gives us some clues about object-fronting generally:

(40) wakkiy ʔinsinxoohin ʔamin ṭan mokyi
ʔama ʔ heʔṭawisxoohin
very loved. AOR his that.PO wife and play.RECIP.AOR

[82]Yowlumne 1930 word order is fairly free, at least with respect to the position of the verb.

ʔamak’ ʔama **ṭan** nek’sitxoʔ ʔamin ṭ’alapni ʔamaʔ

they.DU and her.PO drew.APPL.DUR his bow.SO and

ṭan huy’hushun t’uyhun **ṭan** meeniṭ’aw ʔamaʔ canum

her.PO hurt.AOR shoot.AOR her.PO breast.LOC and immediately

tawiṭhin ʔamaʔ luk’lut

die.AOR and bury.AOR-PASS

‘He loved his wife very much. The two of them were teasing each other when he drew his bow at her and accidently hurt, shot her in the breast. She died immediately and was buried.’

(Gamble 1993: 68; orthography normalized)

Notice first that the primary object[83] *ṭan* ‘her’ of the applicative verb *nek’sitxoʔ* ‘draw (a bow) at’ is not a beneficiary or recipient, but rather a destination (although an animate one.) Thus, since in Yowlumne 1930 this

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However, situations in which the object precedes the subject are unusual.

argument could have been a locative, we need to ask why it is not here. This is not explained by the general rule adduced in Chapter 3, since the fronted pronoun is not a referential target controlled by the topic (i.e., the wife) instantiated in a preceding clausee. The answer, I think, has to do with the fact that this is a piece of connected discourse about the fate of the husband and wife, and that salient discourse participants must be either subjects or primary objects. We might say that in Yowlumne 1930, only subjects and primary objects can be continuous and 'visible' interclausally. If we look at the information conveyed by this passage clause by clause, the clause with the applicative is the only one in which the wife occupies a role other than subject or patient. This pattern is repeated elsewhere when one of the characters that the narrative is about (which we may call the topic, or at the least a referent that is high in topicality relative to others.) occupies a semantic role that would not otherwise be marked either nominative or primary objective. In Newman's version of the 'Mikitti' story, the primary object refers to a *yokoc'* ('person', i.e., image or fetish) that Mikitti has made of his adversary. Several clauses involve Mikitti's use of the *yokoc'* to summon the adversary himself (by decapitating the image!):

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[83]I.e., the first *ín* in boldface: the *án* in the first line is functioning as a demonstrative adjective.

(41) ʔamaʔ ɬan k'osithin ʔamin ɬani capteeni

and it.PO threw.APP.AOR his that.SO gambling-tray.SO

'...and then he threw his gambling tray at it.'

(Gamble 1993:88; orthography normalized)

A later part of the same story Coyote forms the purpose to kill Rattlesnake (lest the world should always have rattlesnakes), and then attacks the mythic character:

(42) ʔamaʔ ɬan kay'iw dap ɬilit'sithin

and he.PO Coyote but jump.APPL.AOR

'...but then Coyote jumped on him.'

(Gamble 1993:91; orthography normalized)

In both contexts, the left-dislocated, applicativized primary objective pronoun *ɬan* is a continuing participant in a multi-clausal chunk of the story.

This type of structure is quite common in Yowlumne 1930, but I have found only one marginal example in Yowlumne 2000. In a first person narrative by JF, she describes telling AV of an unusual experience:

(43) ʔamaʔ nan ɑgnes binethin han'uk naʔ ɬilhin

and me.PO Agnes ask.AOR what I see.AOR

'Then Agnes asked me what I saw'

This does not really seem comparable to the 1930 examples. The referent of *nan,* JF herself, is of course the central participant of the whole story. But *nan* occurs elsewhere in the text unfronted.

I have tried to figure out whether 2000 texts have some other syntactic device that performs the (still vaguely defined) job that fronting does in Yowlumne 1930, but as I have already noted, the two groups of texts are really not comparable. The 2000 texts seldom involve multiple participants interacting or complicated sequences of events, so such devices might not be necessary. In fact, I have not yet found a way to determine with any certainty that the 2000 speakers have lost these discourse resources, but I strongly suspect they have.[84]

4.7.1 ASSESSMENT OF SYNTACTIC CHANGES. If this change is as I have suggested, then I think it is definitely a structural concomitant of obsolescence, reflecting the contracting functionality of Yowlumne 2000. However, my understanding of the data is still very preliminary.

4.8 CONCLUSION. Surveying the Yowlumne 2000 innovations that have been discussed here, some things are clear, and some others less so. I will begin with two of the former:

4.8.1 INNOVATIONS NOT DIRECTLY SYMPTOMATIC OF IMPENDING LANGUAGE DEATH.

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[84]I once tried to elicit Yowlumne texts based on a wordless picture story, but the story in question turned out not to be workable for a variety of reasons. If I can come up with more suitable material, I hope to use this technique in the future to see how the 2000 speakers handle more complex narrative tasks.

4.8.1.1 DIALECT LEVELING. Dialect leveling may have occurred, but since the well-documented dialects are not likely to have been part of the dialect pool that would have leveled, substantiating most such claims would be impossible. The only exception is the fairly good case that can be made for the loss of the alveolar fricative series, since it involves attested characteristics of *all* dialects except Yowlumne.

4.8.1.2 ENGLISH AND SPANISH CONTACT. The observed roles of English and earlier of Spanish as the languages of the dominant culture are fairly well defined and narrowly circumscribed.

4.8.2 NORMAL CHANGE VS. MORIBUND CHANGE. The language death literature (e.g., Dorian, ed. 1989) is full of case studies that are unable to find any principled difference between the 'healthy' innovation and 'obsolescence-related' change. I do not expect to solve this puzzle, but a few things can be said that may at least help us see why this question seems so intractable. I will begin with what I consider the prototypical type of obsolescence-related change:

- It is possible to identify tokens of *structural concomitants of obsolescence,* that is, structural changes that accompany a contraction in the stylistic or discourse resources of the language; however,
- Such structural changes, considered in isolation, may be formally indistinguishable from changes that occur in healthy languages; moreover,
- Healthy languages will also sometimes lose expressive resources,

but we assume (probably without any real evidence) that, on the whole, this is balanced by the innovation of new devices; therefore,

- The real signature of moribundity ought to be a reduction in the *net* resources of the language.

In other words, if we want to find out whether a language shows structural effects of obsolescence, we need to be able examine and compare the resources of languages *as a whole.* I know of no well-accepted method for doing this. Such a technique would presumably have to find all manifestly healthy languages to have roughly comparable resources.[85]

There are similar problems with other proposed metrics of moribundity, such as an accelerated rate of change (Voegelin and Voegelin 1977), which I have also alluded to elsewhere is this work. We assume as a methodological principle that normal change will affect a language at all levels (Thomason and Kaufman 1988:9) but there are plenty of examples of swift and dramatic changes in isolated components of a linguistic system (e.g., the Great English Vowel Shift.) So obviously when talking about obsolescence (and, no doubt, about other language contact phenomena) we need a way of describing and quantifying the rate at which innovation is taking place in a language as a whole.

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[85] There are obviously large and apparent differences between healthy languages with respect to particular components of the grammar. Nichols 1992 provides a quantified metric of morphological complexity (intended for different purposes than are relevant here) but does not address complexity in general. An instructive exercise in this connection is McWhorter 2001, which essentially claims that creoles constitute a synchronically identifiable language type in that they are simpler than other languages in a broad number of specifiable respects. The editors of *Linguistic Typology* devoted an entire number to McWhorter's paper and eleven critical commentaries. If any generalization can be drawn from the critical responses, it is that there is

My point is that the difference between healthy and moribund language change is, in the sense suggested above, one of quantity rather than quality. Unfortunately, suitable quantitative tools for measuring this distinction have not been developed.

In advanced stages of obsolescence there can be a transition from quantity to quality. The language of the semi-speaker described above (3.8.4.2.1 *A CLEAR-CUT CASE OF LEXICAL ATTRITION COMPARED*) is manifestly incomplete. Yowlumne 2000 has not yet reached that state.[86]

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little consensus about what constitutes grammatical simplicity and how it can be meaningfully measured.

[86] And may never reach it. As Leanne Hinton (personal communication) has pointed out, since the last generation of fluent speakers did not raise their children as speakers, Yowlumne seems headed toward an abrupt transition from relative fluency to extinction. They will, however, leave behind a small group of younger speakers who have made a conscious commitment to learn the language.

Chapter 5.

The Yokuts Canon: A Study in the Interaction of Theory and Description*

5.1.0 INTRODUCTION. This chapter represents a major shift in focus away from Yokuts languages themselves to the role that these languages have played in the evolution of theoretical linguistics over the past half century. It offers a case study of a brief fragment of recent intellectual history that will (a) raise some disturbing questions about the way in which linguistics theories are presented and argued for, (b) try to understand how the observed irregularities came into being, and (c) offer some straightforward and modest recommendations.

Every discipline has its rumors about how this or that scholar (or group of scholars, or scholarly faction) has published research based on invalid or tainted data. Most sensational are the cases where it is alleged that the data was fabricated outright to further the scholar's career or agenda, but bad data can of course also result from defective data-gathering techniques or from causes as innocent as typographical errors.

In the present case, of course, the rumored bad data is neither fraudulent nor

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the product of transmission errors[87]. Rather, it was a set of unattested forms produced in good faith by various linguists who did so in reliance on general descriptions of the language in established primary sources. Nor is the situation (as the rumors in this case might lead one to believe) a dark secret. In fact, the process of data contrivance is openly acknowledged by some leading phonologists:

(1) Examples of word forms, in particular those in verb paradigms, are not necessarily those actually attested in [Newman 1944]. Some of them have been constructed from their stems according to the descriptive rules given in [Newman 1944]. It may be that some of those forms are actually not permissible for syntactic or semantic reasons.

(Kuroda 1967:2)

(2) The paradigms in (10), and also those in (11), (39), (40), (41), (48), (52), (55), (56), (57) consist (partially or entirely) of contrived forms which are consistent with Newman (1944). All other forms in the article are attested in Newman unless marked otherwise.

(Archangeli 1983:353 n. 8)

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87 It is not even clear that the data items in question are strictly speaking incorrect, since they may well (and in most cases, no doubt do) correspond to what a native speaker would have produced if asked under appropriate circumstances. The point of this chapter is not to uncover improperly executed individual contrivances, but to evaluate the practice of data contrivance generally and to address problems that it may create.

(3) The Yokuts data in this article have, for the most part, been cited from Kenstowicz and Kisseberth (1979). *As is customary in studies of this language,* these forms were constructed on the basis of attested examples but may not themselves occur in Newman (1944).

(McCarthy 1999:355 n. 30, emphasis added)

Newman 1944 is, of course, Stanley Newman's *The Yokuts Language of California.* The Yokuts languages, especially Yowlumne (a/k/a Yawelmani Yokuts), have served as a 'testing ground' (Hockett 1973) for phonological theories for the past several decades and have thus played a key role in numerous theoretical developments. (Some of the reasons for the exalted status of this obscure and rather incompletely documented language will be discussed below.) The practice described in (1)-(3) basically consists of creating forms (often to fill in unattested gaps in paradigms) by combining morphs supplied by Newman and applying phonological and morphological processes described by Newman (such as vowel harmony, vowel lowering and shortening, glottalization, epenthesis, and stem selection from among ablaut forms).

Many, if not most linguists would probably agree that there is something unsettling about using contrived data, but in my experience the objections usually take the form of a simple exhortation to use real data and the opinion that doing

otherwise amounts to some sort of cheating. As I will try to demonstrate below, the problem is actually a good bit more complicated. There are some altogether legitimate uses for contrived forms, but the uncritical way in which they are used in much of the literature seriously undermines the validity and credibility of theoretical argumentation. But, of course, there is only a problem if the practice is more than an occasional convenience.

5.1.1 THE SCOPE OF YOKUTS DATA CONTRIVANCE. It is not clear from (1)-(3) how much contrived data is at issue here, although (2) suggests that the author contrived at least one entire paradigm. Some quantitative information, however approximate or incomplete, was therefore necessary in order to decide whether this was a problem worth investigating.[88] This required comparing the forms in selected secondary sources with those attesting in the primary literature.

5.1.2 THE SAMPLE SURVEY. In order to perform the necessary comparison of forms, I first compiled lists of the Yokuts forms from a sample of the theoretical phonology literature. My selection criteria were as follows. (a) I only looked at Yowlumne verbal data, since this appears to constitute the overwhelming majority of Yokuts material this field: treatments of other dialects or of noun morphology are quite rare; (b) except in one case[89], I only used sources that referenced Newman 1944 as their sole primary source. (c) I attempted to take a representative (if not actually 'random') sample of theoretical phonology over the

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[88] Very little has been published on this or related issues. Hockett 1973 vigorously objected to the use of contrived Yokuts data, but did not look at the implications of the practice. Other works occasionally deal with misuses of data (e.g., Miner 1979), although not specifically with contrived data.

[89] As is typical for introductory linguistics textbook exercises, no data source was given in

last four decades, however (d) I limited the sample to published works by well-known, established linguists. Applying these criteria, I simply selected the first eight acceptable works that came to my attention. Also included is a problem set from a recent linguistics textbook. The list included those works excerpted in (1)-(3), above: otherwise I had no reason to suspect that any of the forms found in these sources was contrived. The following are the pieces selected:

- Archangeli[90] 1983. The root CV-template as a property of the affix: evidence from Yawelmani. Natural Language & Linguistic Theory 1.347-384.
- Fromkin 2000. Linguistics: An introduction to linguistic theory. Oxford: Blackwell Publishers.
- Goldsmith 1993. Harmonic phonology. In Goldsmith, ed., 1993, pp. 21-60.
- Kisseberth 1969. On the abstractness of phonology: The Evidence from Yawelmani. Papers in Linguistics 1:248-282.
- Kuroda 1967. Yawelmani phonology. Research monograph 43. Cambridge: MIT Press.
- McCarthy 1999. Sympathy and phonological opacity. Phonology 3.331-399

Fromkin 2000.

90 In fairness, it should be noted that in her dissertation (Archangeli 1988), published several years after the sampled work, Archangeli was fairly fastidious about referencing forms with page numbers in Newman 1944 (or noting that they were contrivances from cited secondary works). Later, however, she seem to have returned to the earlier practice of using contrivances that are not

- Steriade 1995. Underspecification and markedness. In John A. Goldsmith, ed., Handbook of Phonological Theory pp. 114-174. Oxford: Blackwell Publishers
- Wheeler and Touretzky 1993. A connectionist implementation of cognitive phonology. In Goldsmith, ed., 1993, pp. 146-172.

Next, I compiled a list of all the verbs and nouns attested in Newman 1944. (In addition, as a safeguard, my list also included certain forms that Newman marked as stems, etc.) I compared the attested verbs in the list with the Yowlumne forms in each selected work and made lists of the unattested forms in each.[91]

It should be obvious that a project of this sort is inherently error-prone. In an attempt to minimize transmission errors, I rechecked my Newman list twice. I found about 20 missed or mistaken forms on the first recheck and 6 on the second recheck. I perform similar rechecks of the lists for the eight articles, but found very few errors. I also rechecked my comparison of the Newman list with the material in the sample articles. I can thus make no assurances that the corrected lists are error-free.[92] At first this was a cause of considerable concern to me.

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marked as such (e.g., Archangeli and Suzuki 1997).

[91] My method of comparison was as follows: each form from the sample works was suffixed with an identifying marker. E.g., all the forms from Kuroda 1967 were suffixed with the marker '-kur', Fromkin 2000 forms with '-fro'. Then all the sample work lists and the Newman list were merged into one master list, which was then automatically sorted (in Microsoft Word) in alphabetical order. The result is that tokens of an attested form from one or more of the samples should occur in a group immediately following the unsuffixed form from Newman. Unattested forms from the samples, however, occur immediately after some non-identical form. As an additional precaution, whenever I encountered an apparently unattested form in the sorted master list, I visually checked the less immediate vicinity for a match (but in each case found none).

[92] It should be noted that any remaining errors in the lists are far more likely to inflate rather than deflate the apparent number of contrived forms, i.e., it would require an unlikely coincidence for an

However, once the compilation was complete it became apparent that a small number of remaining errors would not alter the overall picture.

The lists of contrived forms are included in Appendix B. The ratio given after the citation to each sample work indicates the number contrived forms in relation to the total number of forms in that work. The (weighted) average percentage of forms which are contrived in the sample was 76.2% of the total of all forms. No article had a contrivance rate lower than 65%. I made no attempt to further process this quantitative information or to perform statistical analysis, since nothing of the sort seemed likely to provide any additional insight into the issues at hand.

These numbers by themselves are unsettling, but in some cases the nature of contrivance, combined with its frequency, is genuinely alarming. Kuroda 1967:20, table 2.5 offers the following list of comitative forms (the underscored forms are attested):

	AORIST ACTIVE	AORIST PASSIVE
(4)	xatmixhin	xatmixit
	gopmixhin	gopmixit
	giy'mixhin	giy'mixit
	muṭmuxhun	muṭmuxut
	ṣapmixhin	ṣapmixit
	gobmixhin	gobmixit

error either to have no effect on the count or to cause a contrived form to appear attested, while an error in copying a form that is in fact attested would probably make it appear unattested.

mek'mixhin	mek'mixit
ʔoṭ'muxhun	ʔoṭ'muxut
panaamixhin	panamxit
hoyoomixhin	hoyomxit
ʔileemixhin	ʔilemxit
c'uyoomuxhun	c'uyomxut
paʔiṭmixhin	paʔiṭmixit
logiwmixhin	logiwmixit
ʔilikmixhin	ʔilikmixit
hubuṣmuxhun	hubuṣmuxut
ʔaamilmixhin	ʔaamilmixit
mooxilmixhin	mooxilmixit
seeniṭmixhin	seeniṭmixit
woowulmuxhum	woowulmuxut
p'axat'mixhin	p'axaat'mixit
ʔopotmixhin	ʔopotmixit
hibeymixhin	hibeymixit
ṣudok'muxhun	ṣudok'muxut

In addition to the paucity of attested forms (2 out of 48) there are several additional problems with this set of forms:

•The comitative (actually a comitative applicative) is quite rare. Only three examples are attested in

Newman 1944. Most textual examples employ a different, analytic construction using the free comitative morpheme *abi?* (see Chapter 4).

- Of the vowel harmonic allomorphs *-mix/-mux,* only *-mix* is attested in Yowlumne (*-mux* is attested once in the Gashowu dialect, which is only very occasionally treated in the theoretical literature).
- While it may be consistent with Newman's description (though not obligatory) to consider the vowel in *-mix* epenthetic, the putative allomorph *-mx* is unattested, i.e., there is no attested example of a *-mix/-mx* surface alternation.
- All attested examples, like the two in (4), are in combination with a following (active) aorist morpheme *-hin*. The morpheme sequence comitative-aorist passive is unattested. It is not completely clear even how such forms are to be interpreted, although the order of morphemes would suggest that the passive has scope over the comitative. However,
- In all attested examples, the *-mix* comitative-applicative is added to an intransitive base. There is no way to tell whether this is a principled restriction (which would render passivization impossible) or a coincidental result

> of the small number of examples. (Modern speakers, who no longer use nor even recognize this morpheme, can be of no help here.) Kuroda's 24 verbs include a mix of transitive and intransitive bases.

This example is, admittedly, extreme, but all of the problems noted above, such as unattested sequences of grammatical morphemes, occur in the other works in the sample. In fairness, of course, we must recognize that Kuroda is not trying to deceive his readers and even warned us in the passage quoted in (1), above, that his contrived forms might be impossible for non-phonological reasons. Nonetheless, the quantity and nature of unattested data in this and other works in the sample warrant asking some questions about this practice.

5.2 WHEN AND WHY CONTRIVED FORMS ARE USED. How did the practice of contriving Yowlumne forms become 'customary in studies of this language', as McCarthy 1999 puts it in (3)? Part of the problem is Newman 1944 itself. Newman's exposition contains a few nominal and pronominal paradigms, but no verbal ones. It also lacks an index of any sort, making the collection of forms into a paradigm[93] very laborious. Such a tedious search would usually (or more likely, nearly always) be futile in any event, because the necessary forms of the same verb

[93] The concept of PARADIGM is used somewhat loosely here. Yokuts verbs are marked for tense, aspect, mood, and certain valence-changing operations. There is no agreement morphology. There appear to be ordering and co-occurrence constraints that are dealt with only incompletely, in Newman 1944. Thus it is not at all clear what a 'complete' paradigm of a Yokuts verb would look like. As used here, and in the secondary literature, what is always meant is a partial paradigm, which exemplifies the occurrence and phonological consequences of a single or small set of

simply do not occur in the grammar. All this is to be expected in a work that is based almost entirely on narrative textual data.

Primary resources like Newman 1944 present an obvious problem for the linguist trying to fashion a perspicuous and systematic account of the language's morphology. Thus, for example, if the phenomenon at issue is the effect of a several different affixes on the prosodic shape of bases of a certain class, one's point can be made much more clearly if the same base is combined with each of the affixes in turn. The problem is that some of these base-affix combinations may not be attested. The alternative approach, truer to the data, would use only attested base-affix combinations, but would be more likely to obscure the point.

This dilemma of perspicuous exposition is not unique to Yokuts. In fact, one should expect it to arise whenever one attempts to describe a morphologically complex language on the basis of a limited corpus.[94] Prime examples should be works that are usually considered 'philological', such as grammars of ancient languages which are based on a fixed, finite corpus of ancient texts. It will prove instructive to note what measures, if any, the authors of a few such grammars employ to resolve the dilemma.

5.2.1 THE TREATMENT OF CONTRIVED DATA ELSEWHERE. The conjugational paradigm of the typical ancient Greek verb contains several hundred forms. Standard reference grammars such as Smyth 1965 lay out full

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suffixes with various base types.

[94] The fact that there are still a few fluent speakers of Yowlumne and some of the other Yokuts languages is of little consequence here. As noted in Chapter 4, Yowlumne spoken today, although very similar in general to the language described by Newman 1944, differs from it in a number of the areas that have been of special interest in the secondary literature (vowel harmony, opacity of phonological processes, etc.).

paradigms for numerous classes and subclasses of Greek verbs. It is a virtual statistical certainty that these paradigms contain numerous contrived forms, although it seems that their existence is never explicitly acknowledged. In a number of respects, however, such works are not comparable to the Yokuts situation. To begin with, the grammatical structures of Latin and Greek have been serious matters of study for over two milliennia and are very well understood. Also, while the corpora of classical languages are large, there have long been full concordances (e.g., Marinone and Guala 1961), and nowadays any serious scholar of these languages of will have access to the entire corpus in electronic form, making it a trivial task to check the attestation status of a given form.

A closer analogy to the Yokuts case might be that of Biblical Aramaic, the language of parts of eleven chapters of four scattered books of the Hebrew Bible. In addition to a roughly comparable corpus size and degree of morphological complexity, extensive data is available from close relatives of the language. Of two popular grammars, one (Johns 1972) makes no mention of contrived forms, which must nonetheless exist, in light of its extensive listing of paradigms and the small corpus. The introduction to the other grammar (Rosenthal 1968) describes a complex system of marking: forms reconstructed on the basis of cognate forms in the better-documented close relative (Official Aramaic) are marked with a single asterisk, while forms created without the benefit of such cognates are marked with two asterisks. The author notes, however, that this marking scheme is not used consistently throughout the work.

The best resolution of the dilemma among the works I examined is that of Thurneysen's 1946 Old Irish grammar. Thurneysen's approach is to contrive forms as necessary in order to create a readable paradigm, but follow each contrived form with bracketed citation of an attested form that justifies the contrivance, that is of an attested form that occupies the same paradigmatic position as the contrived form and is identical in other relevant respects (such as inflection class, prosodic shape, etc.). This strategy appears to successfully address the major objections to the use of contrived data: it makes it clear what is attested and what is not and also offers a transparent justification for the contrivance, providing the reader with all the information needed to judge its whether the contrivance is legitimate. In addition, it does so with little loss in perspicuity. Perhaps most important, however, is that its use provides a check on 'runaway' contrivance: Kuroda's table 2.5 ((4), above) could not have been created in the Thurneysen format, there are simply no attested verbs that could supply the justification for any of the contrivances in the right column.

5.3 POTENTIAL PROBLEMS FOSTERED BY CONTRIVED DATA. Up to this point I have treated data contrivances as a mere expository convenience, which are harmless enough if their unattested status is made clear. Now we may consider some of the things that can go wrong from careless or otherwise ill-advised use of contrivance.

5.3.1 RELIANCE ON ERRONEOUS GENERALIZATIONS. The unattested forms in the Yokuts literature sample were created using principles or rules from Newman

1944, a procedure that assumes that Newman got it right. However, Blevins 2004 notes instances where Newman's generalizations are contradicted by his data, e.g., with respect to long high vowels that do not undergo lowering. These observations will be discussed in more detail below in a brief critique of Newman. At this point it might prove instructive to look at an analogous recent case where the link between data and descriptive generalization failed. Wetzels and Mascaró 2001 is a study of the typology of devoicing that relied heavily on a particular typological characterization of Yiddish. The paper's source of both Yiddish data and phonological principles was Birnbaum 1979, a descriptive and historical work that is generally well-regarded. However, Birnbaum's list of possible Yiddish word onsets is, for some reason, seriously defective, omitting not only numerous particular combinations that are attested elsewhere in the book, but also leaving out some entire classes of onsets, such as those consisting of two voiced obstruents. By generalizing from Birnbaum's list, Wetzels and Mascaró fashioned a false picture of Yiddish syllable structure and faulty rules of syllabification for that language. Although this case did not involve contrived data, it is pertinent here for two reasons: First, the author's mistake could easily have been avoided by brief examination of a Yiddish dictionary (since word onsets were the issue). More important, however, it demonstrates how, once mistaken data or generalizations are removed from the milieu of scholars intimately familiar with the language in question, the error is likely to remain undetected.[95]

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[95] I have discussed this issue with linguists who have served on the editorial boards of journals, and have received mixed responses on the perceived importance of assigning submissions to reviewers with expertise in the subject language(s). In some cases, at least, it is apparently simply assumed that the author will have the data and low-level generalizations right.

5.3.2 MISAPPLICATION OF GENERALIZATIONS. Newman's explanations and descriptive rules of Yokuts morphology are often not completely clear. Indeed, no less a linguist than Charles Hockett had to admit (in Hockett 1973) that he had misapplied some of Newman's rules in an earlier published piece (Hockett 1967).

5.3.3 CANONIZATION. If other linguists inadvertently adopt the contrived data[96] they can become part of the CANON, the crucial data set that is used as a litmus test for new theoretical proposals. This possibility is aggravated by the fact that even those works that acknowledge using contrived forms virtually never mark them individually. This, combined with the difficulties of use that Newman 1944 poses (lack of an index, few paradigms, etc.), mean that checking of attestation status probably will not occur. (Such inadvertent incorporation of contrive data may have occurred in some Yokuts-based works. It is usually difficult to tell whether a writer consciously contrived the form or unwittingly copied them from prior secondary works.)

5.4 IS THIS PRACTICE AS INNOCENT AS IT SEEMS? Up to this point I have entertained a 'presumption of innocence' in favor of data contrivance, assuming that it is a mere expository convenience, i.e., it makes the writer's point easier to understand (and avoids the tedium and likely failure of a search for attested forms), which is harmless if properly understood. While this is certainly true of the use of contrivance in, for example, classical grammars such as Smyth 1956, I

96 It is probably significant (albeit an unsystematic and anecdotal observation) that phonologists with whom I have discussed these issues (including some who have published analyses of Yokuts data) are generally either unaware of the existence of contrived data, or assume that it occurs only occasionally to fill in accidental gaps in Newman's data.

do not believe that this position can be seriously maintained with respect to the Yokuts-based linguistic literature.

The question I am posing can be put this way: Do the linguists in my list intend the contrived forms they present (a) to help the reader understand their theoretical positions, or (b) to provide support for those positions? Everything about these works suggests (b) rather than (a). Often such a position is explicitely stated: '[these sections] are intended to provide a thoroughly worked-out example to *secure the empirical basis* of the theory presented above.' (McCarthy 1999:354) (emphasis added). Indeed, the intended probative role attributed to the Yokuts data is referred to in the subtitles ('Evidence from Yawelmani') of both Kisseberth 1969 and Archangeli 1983. Moreover, a merely expository role for the data simply would not make sense. It is hard to imagine that works like these are intended solely to assist in clearly stating a theoretical position, while the actual *argument* for the position is presented in some earlier or later work (which is never referenced) using data from some other, unspecified language.[97]

From the foregoing, it is clear that the linguists in question simultaneously intend their analyses to be construed as empirically-based argumentation for particular conclusions and know that most of their data are not attested. Assuming (correctly, no doubt) that they are acting in good faith, how can such a position be maintained? I think the only reasonable answer is that the evidence or empirical basis they refer to is not the set of Yokuts forms offered

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[97] Kuroda 1967 may be an exception. His stated purpose is 'to restate in terms of generative

(whether attested or contrived), but the collection of descriptive rules presented in Newman 1944. If these rules and generalizations are treated as the starting point for empirical inquiry, the problem disappears: contrived (or for that matter, attested) forms become indeed mere exemplifications of a set of rules and underlying representations, which are the real matter of interest. Behind this posture may be the view that linguistic competence (in the form of internalized principles and abstracts forms) rather than concrete linguistic performance is the proper explicandum of linguistic theory. However, the question remains whether this is an appropriate way to argue for a theoretical position.

5.5 THE LOGIC OF DISCOVERY AND THE HISTORY OF SCIENCE. It will be helpful at this point to look briefly (and perhaps in 'storybook' form) at some general facts about the early evolution of science. The development of celestial mechanics and the laws motion and gravitation are traditionally described (e.g., in Butterfield 1965) as involving three stages, personified in the figures of Tyco Brahe, Johannes Kepler, and Isaac Newton:

Data gathering	Generalization	Theory
Formation		
(Brahe)	(Kepler)	(Newton)

The story is as follows: 'field-worker' Brahe spent endless nights in his observatory, making precise and systematic notes about the observed positions of

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phonology the fundamentals of Yawelmani phonology as described in [Newman 1944]'.

heavenly bodies. Examining Brahe's data, Kepler concocted a number of empirical generalizations (e.g., 'planetary orbits form ellipses with the sun as one focus', 'the radius of a planet's orbit sweeps over equal areas in equal times'). But Kepler's work, while it subsumed vast amounts of empirical data and allowed for accurate astronomical prediction, was lacking in explanatory power. The crowning explanatory achievement was Newton's formulation of the three laws of motion and gravitational attraction, for which Kepler's set of generalizations provides the foundation.

Looking at this sketch, one might be tempted to draw an analogy with the practices in theoretical linguistics that we have observed above. [98] For example, no one would expect Newton to have spent his time pouring over Brahe's tables of numbers, since this task has presumably been done, with the correct conclusions reached, by Kepler. Similarly, one might argue, there is no reason for the theoretician to look at Newman's (or other field linguists') primary data, since the relevant generalizations have already been drawn (by Newman in his capacity as generalizer).

There are two problems with the above analogy. First, as suggested above (*5.3 POTENTIAL PROBLEMS FOSTERED BY CONTRIVED DATA*), it assumes that everyone did their job correctly. Newton's reliance on Kepler, and Kepler's on Brahe, proved to be justified, but it could have been otherwise. Some possible difficulties in the Yokuts case will be treated below in the discussion of

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98 Since the point of this section is essentially negative, it will not be necessary dwell on the numerous and obvious differences between linguistics and physics in both subject-matter and methodology.

Newman's grammar. More crucially, however, the analogy misconstrues the role that the process described plays in scientific theorization. The Brahe > Kepler > Newton progression is an example of how a theory is formulated, not how it is tested.

5.5.1 THE LOGIC OF DISCOVERY AND THE LOGIC OF JUSTIFICATION. It is critical at this point to keep in mind the distinction between how theories are created (an essentially psychological question) and how they are justified (a normative question). Among modern philosophers of science (who may agree about little else) there is a consensus that a theory can never be justified by the process of generalization or induction. Rather, theories are put to the test (in the view of most thinkers) by an attempt at some sort of falsification (e.g., Popper 1959). The Brahe-Kepler-Newton story is one of induction, i.e., a process of reasoning from particular existential statements to general or universal ones. It can thus be at most a characterization of the LOGIC OF DISCOVERY in this case. The LOGIC OF JUSTIFICATION comes into play when Newton's theoretical formulation is, e.g., proven better than its competitors by being able to encompass facts that falsify the competitors.

Now let us summarize and apply these considerations to the Yokuts case. The only reasonable justification for the contrivance practice is (I believe) the view that the task of reasoning from data to empirical generalization has been taken care of by others (in this case, Newman), and the role of the theoretician is thus to reason from empirical generalizations to abstract theoretical models. However, while this process can explain how the theoretician came up with a

particular theory (and, as we noted at the outset, help the reader relive this process), it cannot offer justification for that theory, which can only be done by through the crucible of falsification. Moreover, as noted above, it is seldom if ever credible that the Yokuts works using contrived data are operating solely within the logic of discovery (e.g., simply engaging in exposition). Indeed, these works sometimes include explicit nods to the falsification process:

> '[These examples] show that raising interacts opaquely with rounding harmony, just as lowering does. This behavior is predicted by sympathy theory [the author's theory]--though obviously not by rule-based serialism [the competing theory].'
>
> (McCarthy 1999:374)

More typically, however, the role of falsification is implicitly acknowledged, as in Archangeli's 1983 discussion of the epenthesis rule:

> 'This accounts for the distribution of [epenthetic vowels] in the following:
>
> [correctly predicted forms]
>
> However, too many [epenthetic vowels] are inserted in some cases:
>
> [incorrectly predicted forms]
>
> If the rule applies iteratively from right to left, we have no problems:
>
> [correctly predicted forms]'
>
> (Archangeli 1983:363-64)

This is a familiar enough rhetorical device: in a possibly cyclic process, a hypothesis is proposed, tested against crucial test data, rejected, and then

reformulated to accommodate the test data. But of course, the device acquires its argumentative force from the fact that it incorporates, in miniature, the logic of falsification.

5.6 CONCLUSION AND QUERIES. It certainly is always be good practice to marked sources of data unambiguously. (E.g., Zoll 1998 indicates whether each data item came from Newman 1944 or secondary sources.) Even better would be to use contrived forms only when there is a strong heuristic rationale (typically this will be when presenting a paradigm), and in those cases to reference the attested form that justifies the contrived form. (Thurneyson's practice). But most crucially, use of contrived forms should be limited to heuristic or expository uses, not cases whether the validity of a theoretical proposal is at issue.

5.6.1 ROBUSTNESS: There is one final question worth asking: Is all this really a tempest in a teapot? How resistant is good theory to bad data? According to some statistical analyses, Gregor Mendel's data could not possibly have been genuine (Trocchio 1991, Edwards 1986). He nonetheless laid the foundations for modern genetics. This is probably an unanswerable question, but it does not thereby provide an excuse for faulty methodology.

5.7 POSTSCRIPT: NEWMAN'S LEGACY. The primary purpose of this chapter has been to critically examine the use of Yokuts data in theoretical phonology, asking what practices are and are not defensible. A curious question we have not considered is, Why Yokuts? Or perhaps more to the point, Why Newman's

Yokuts?, since the handful of works on these languages by other field linguists is seldom referred to. In other words, why should phonologists pay so much attention to this relatively obscure language group that actually has a quite limited primary literature?[99] One common answer is that Yokuts languages are unique, or least highly unusual. However, the most commonly referred to piece of Yokuts exotica, viz. non-concatenative or 'root-and-template' morphophonology, also exists in the Semitic languages in a far better documented form and in greater variety than in Yokuts.[100] (It remains arguable, of course, that Yokuts languages display an distinctive combination of exotic features that are of special interest to phonologists.)

Another answer is simply the quality of Newman's work. Mere months after its publication, Zellig Harris' review (Harris 1944) described Newman 1944 as a model of grammar-writing. Edward Sapir praised it as 'perhaps the most beautiful...story of an American Indian language that has ever been written' (quoted in Silverstein 1987:349). One can hardly deny the formal elegance that so impressed Harris and Sapir (and many others of later generations), but the characteristics that they lauded in the grammar are not ones that make it particularly useful as a source of primary data. In fact, as has been noted above, there are several features that make Newman's grammar unusually *difficult* to

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[99] It is perhaps worth remembering in this connection that Newman 1944 was based entirely on two summer field trips in 1930 and 1931, a remarkable achievement no doubt, but one cannot avoid the impression that a really complete treatment of six disparate dialects is simply not possible based on such a limited exposure to primary data sources. This impression is often confirmed when the details of Newman 1944 are examined, especially in light of textual material collected by Newman and others.

[100] The first reviewer of Newman 1944 was (among other things) a distinguished Semiticist, who outlined in detail the Yokuts-Semitic parallels (Harris 1944).

use (lack of paradigms, index, etc.), especially if one's primary purpose is to mine for data.

Another possibility is that while Newman 1944 may lack a systematic presentation of raw data, it does provide a well-developed set of descriptive generalizations about Yokuts. This is, after all, a major part of the grammar-writer's task, viz., to provide descriptive rules that will allow the reader to construct grammatical sentences and to distinguish grammatical from ungrammatical ones.[101] But in the respect, again, Newman does not stand out as a model of usefulness. Hockett 1967 described Newman's account of Yokuts morphology as 'exasperatingly difficult to follow', a view that will be shared by the many linguistics students who have struggled with the first few dozen pages of the book.

What, then, explains the peculiar lure of this book for phonologists? I think that part of the answer is that Newman's approach actually anticipated much of the early program of generative phonology. One has only to compare Newman's grammar with the works of his contemporaries (including other students of Sapir) to be struck by the abstractness of his presentation. An example or two should suffice.

Already in Newman we see the phonemic level of representation beginning to lose its privileged status (as later officially announced in the introduction to Chomsky and Halle 1968:7). This is not just a matter of

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[101] In fact, Newman's grammar falls far short of the goal, since (consistent with the contemporary approach to Native American languages), he dealt *systematically* with little more than morphophonology. Users of the grammar will have to glean the relevant principles of syntax (and much of morphosyntax) from his data examples.

morphophonemic or archiphonemic representation,[102] which was already current in his day. More significant is the treatment of long high vowels. Such vowels undergo lowering to [ee] or [oo], with the consequence that only *short* high vowels should be attested. However, despite Newman's statement of this rule, his grammar contains numerous examples of long high vowels, as Blevins 2004 has pointed out. Indeed, Blevins goes so far as to suggest (indirectly) that the some of the phonological rules in question are not productive, but mere fossilized alternations preserved within the core part of verbal system (a view that I largely agree with and find consonant with Hockett 1967 and 1973). However, the crucial issue for our purposes is how Newman represents exceptional forms. As Blevins notes, the orthographic sequence <iy> + consonant (and to a lesser degree <uw> + consonant) are highly suspicious in Newman 1944. It is rare in Newman's unedited notes, and (to my knowledge and Blevin's) unattested in Harrington's copious Yokuts notes, nearly always corresponding instead to long *i* or *u*. This is true both of derived verbal forms and monomorphemes such as *wakkiy* 'many'.[103] To understand what Newman is up to here, let us examine a common verb.

The verb root *wiyi-* 'say, do' appears in the aorist (active) as *wiyhin* and in the aorist passive as *wiyaa?at*, in Newman's orthography, but, as noted above, the former verb was probably phonemically *wiihin*. A more modern approach

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[102] For example, Newman's orthography distinguishes two different (but phonetically and phonemically identical) *o*'s, in order to distinguish underlying o's from those derived from the lowering of high vowels.

[103] The Newman texts collected in Gamble, ed. 1994 inconsistently employ <iy> and <uw> rather than long vowels. However, this is usually an editorial emendation, based on the orthography of

would justify the presence of the <y> in the underlying form by the fact that it occurs in at least one part of the surface paradigm, and that it explains the presence of the unlowered long high vowel in the surface form *wiihin*. Thus the <iy> serves both to (a) capture the relatedness (under one root) of surface forms [wiyaaʔat] and [wiihin], and (b) to block the application of long high vowel lowering. Newman, however, lacked the vocabulary (and perhaps also the conceptual framework) of underlying vs. surface forms, discrete levels of representation, and rule-ordering. As a consequence, his orthography is a somewhat unsystematic combination of phonemic, archiphonemic, and what would later be called underlying representations. Nonetheless, he clearly seems to have had the relevant insights.

Newman 1944 (Gamble, ed. 1994:5).

Chapter 6: Afterword

This dissertation has dealt with a variety of synchronic and diachronic issues and with various components of the grammar of Yowlumne. Its approach has been mainly descriptive, but with brief excursions into theory and methodology. Thus, not surprisingly, it has no unifying thesis or argument to be restated here. Nonetheless, there may be a moral to this story.

The fate of endangered languages has received a lot of attention recently in both the popular and scholarly press. Often this crisis is framed in terms of the immediate need for work to be done with the last few elders who still speak a dying language. Seen from one perspective, the present work was a very limited attempt at such 'salvage linguistics' (in combination with other goals). However, it is also a demonstration that, for certain purposes, it is already too late for such an attempt.

At a number of points in this dissertation, I have had to acknowledge that (in my opinion, at least) certain questions were simply unanswerable. Often these are seemingly trivial matters, such as uncertainty about the precise denotation or form of a term for fauna or flora. In other cases, however, significant issues of grammatical analysis could not be resolved with any certainty. A couple of examples will suffice:

- Chapter 2 makes some potentially controversial claims about Yokuts primary objectivity. In particular, it claims that the primary vs. secondary object distinction is essentially semantic rather than ontological or discourse-based. It also claims that the perceived secondary object-instrument syncretism (and the equation of monotransitive objects with ditransitive goals) are explained by the underspecification of thematic features (i.e., Dowty's proto-role entailments). The evidence for these claims included both the distribution of -ni/-nu forms and the patterns of polysemy exhibited by a number of distransitive verbs. The probative force of these data is somewhat weakened by the limited corpus size and the perfunctory glosses offered by Yowlumne 1930 wordlists. Yowlumne 2000, however, can provide little help: the primary objectivity system is undergoing major reanalysis in the contemporary language, and today's speakers lack the nuanced intuitions about polysemy reflected in earlier sources.

- The differences in the use of reference tracking devices exhibited in the Yowlumne and Chawchilla versions of "Land of the Dead" suggest some interesting general questions about the discourse principles discussed in Chapter 3. Are these stylistic or idiolectal variants, or core grammatical principles that differ between the two dialects? Is the preposed primary objective form of the distal demonstrative (*ṭan*) moving toward grammaticalization as a marker of inversion? The limitations of the

Yowlumne 1930 resources and the convergence of Yowlumne 2000 toward an English style system of reference tracking mean that these questions are probably now unanswerable.

It might be objected that what I am lamenting is the inevitable fact of language change, which means that our knowledge of historical stages of any language will always be limited. However, the situation with languages undergoing obsolescence is somewhat different. If there is any truth to the frequent assertions that language attrition results in the loss of marked features (however one construes that term) and convergence on the dominant language, then it is likely that obsolescence (even, as here, in its early states) will obliterate precisely those features that are likely to be of interest to linguists. My experience with Yowlumne certainly bears out this prediction, despite the fact that *overall,* Yowlumne 2000 remains remarkably similar to Yowlumne 1930.

Thus, the moral is that if we delay documentation until languages reach the condition of Yowlumne 2000, many things that are of great interest to linguistics may be lost forever. The good news is that ordinary people and linguists do not necessarily care about the same things: Yowlumne as spoken by today's elders is a perfectly adequate basis for revitalizing the ancestral language of its people.

References

ACKERMAN, FARRELL AND JOHN MOORE. 2001. Proto-properties and grammatical encoding. Stanford: CSLI.

ALSINA, ALEX. 2001. On the nonsemantic nature of argument structure. Language Sciences 23.355-389.

ARCHANGELI, DIANE. 1983 The root CV-template as a property of the affix: evidence from Yawelmani. Natural Language & Linguistic Theory 1.347-384.

ARCHANGELI, DIANE. 1988. Underspecification in Yawelmani phonology and morphology. New York: Garland Publishing, Inc.

ARCHANGELI, DIANE and KEIICHIRO SUZUKI. 1997. The Yokuts challenge, in Iggy Roca, ed., Derivations and constraints in phonology. Oxford: Oxford University Press.

AUSTIN, PETER. 1981. Switch-reference in Australia. Language 57.309-334.

BEEKES, ROBERT S.P. 1995. Comparative Indo-European linguistics: an introduction. Amsterdam: John Benjamins Publishing Company.

BEELER, MADISON S. . Nopțințe Yokuts. In Jesse Sawyer, ed. Studies in American Indian Languages (volume dedicated to Mary R. Haas.) University of California Publications in Linguistics No. 65. pp. 11-76.

BIRNBAUM, SOLOMON A. 1979. Yiddish: A survey and a grammar. Toronto: University of Toronto Press.

BLEVINS, JULIETTE. 1971. Evolutionary phonology:: the emergence of sound patterns. Cambridge: Cambridge University Press (forthcoming)

BLEVINS, JULIETTE (in press). A reconsideration of Yokuts vowels. International Journal of American Linguistics.

BORRAS, F.M. and R.F. CHRISTIAN. 1959. Russian Syntax: Aspects of modern Russian syntax and vocabulary. Oxford: Clarendon Press.

BUTTERFIELD, H.1965. The origins of modern science.

CAMPBELL, LYLE and MARIANNE MITHUN. 1979 The languages of native America: historical and comparative assessment. Austin: University of Texas Press pp. 44-45.

CAMPBELL, LYLE and MARTHA C. MUNTZEL. 1989. The structural consequences of language death. In Dorian 1989, pp. 181-196.

CHOMSKY, NOAM and MORRIS HALLE. 1968. The sound pattern of English. Cambridge: MIT Press.

COLLORD, T.L. 1968. Chukchansi grammar. Unpublished University of California Berkeley Ph.D dissertation.

COMRIE, BERNARD. 1989. Language universals and linguistic typology. 2nd ed. Chicago: University of Chicago Press

CROFT, WILLIAM. 1990. Typology and universals. Cambridge: Cambridge University Press.

CROFT, WILLIAM. 1991. Syntactic categories and grammatical relations: the cognitive organization of information. 21-63. Chicago: University of Chicago Press.

DAHL, ÖSTEN. 2004. The growth and maintenance of linguistic complexity. John Benjamins

DAVIES, JOHN. 1989. Kobon. London: Routledge.

DIXON, R.M.W. 1972. The Dyirbal Language of North Queensland. Cambridge: Cambridge University Press.

DORIAN, NANCY C., ed. 1989. Investigating obsolescence: studies in language contraction and death. Cambridge: Cambridge University Press.

DRYER, MATTHEW S. 1986. Primary objects, secondary objects, and antidative. Language 62.808-845.

EDWARDS, A.W. F. 1986. Are Mendel's results really too close? Biological Review 61.295-312.

EVANS, NICHOLAS and DAVID WILKINS. 1998. The knowing ear: Polysemy, semantic change and the mapping of perception to cognition in Australian languages. University of California Department of Linguistics Colloquium presentation, February 4, 1998.

FARRELL, PATRICK. 1994. The locative alternation and multistratism. Linguistics 32.5-45.

FOLEY, W.A. and R.D. VAN VALIN. 1985. Information packaging in the clause. In T. Shopen, Language typology and language description. Cambridge: Cambridge University Press. pp. 282-364.

FROMKIN, VICTORIA A.2000. Linguistics: An introduction to linguistic theory. Oxford: Blackwell Publishers.

GAMBLE, GEOFFREY. 1998. Switch Reference in Wikchamni. In Leanne Hinton and Pamela Munro, eds., Studies in American Indian languages. University of California Publications in Linguistics No. 131. Berkeley: University of California Press. pp. 168-172.

GAMBLE, GEOFFREY. 1978. Wikchamni grammar. University of California Publications in Linguistics vol. 89. Berkeley: University of California Press.

GAMBLE, GEOFFREY. 1994. Yokuts texts. Native American Texts Series, no. 1. Berlin: Mouton de Gruyter.

GIVÓN, TALMY. 1984. Syntax: a functional-typological introduction. Amsterdam: John Benjamins Publishing Company.

GIVÓN, TALMY. 1984. Syntax: a functional-typological introduction. Amsterdam: John Benjamins Publishing Company.

GOLDSMITH, JOHN A., ed. 1993. Harmonic phonology. In Goldsmith, ed., 1993, pp. 21-60.

GRENOBLE, LENORE A. and LINDSAY J. WHALEY. 1998. Endangered Languages: Current issues and future prospects. Cambridge: Cambridge University Press.

GRICE, H. PAUL. 1975. Logic and conversation. In Peter Cole and Jerry L. Morgan, Speech acts (Syntax and semantics 3). New York: Academic Press, pp. 41-58.

HAIMAN, JOHN and PAMELA MUNRO, eds. 1983. Switch reference and universal grammar. Typological studies in language, vol 2. Amsterdam: John Benjamins Publishing Company.

HAIMAN, JOHN. 1983. On some origins of switch-reference systems. In Haiman and Munro, eds. pp. 105128.

HANSSON, GUNNAR ÓLAFUR. 1997. Vowel harmony in Yowlumne (and Wukchumne). Unpublished ms., Department of Linguistics, University of California, Berkeley.

HARRIS, ZELLIG. 1944. Yokuts Structure and Newman's Grammar". IJAL 10:4.196-211.

HEIZER,ROBERT F., ed. 1978. California. vol. 8 of William Sturtevant, gen. ed., Handbook of North American Indians. Washington: Smithsonian Institution.

HILL, JANE H. 1989. The social functions of relativization in obsolescent and non-obsolescent languages. In Dorian, ed. pp. 149-64.

HINTON, LEANNE. 1991 Takic and Yuman: a study in phonological convergence. International Journal of American Linguistics 57.133-157.

HINTON, LEANNE. 1997. Survival of endangered languages: the California master-apprentice program. International Journal of the Sociology of Language 123.177-91.

HINTON, LEANNE. 1998. Language loss and revitalization in California: overview. International Journal of the Sociology of Linguistics 132.83.93.

HINTON, LEANNE and AGNES VERA. 1997. Agnes Vera's autobiography, as told to Leanne Hinton. News from native California 10[3].29-31.

HOCK, HANS HEINRICH. 1991. Principles of historical linguistics. 2nd ed. Berlin: Mouton de Gruyter.

HOCKETT, CHARLES F. 1967. The Yawelmani basic verb. Language 43.208-222.

HOCKETT, CHARLES F. 1973. Yokuts as testing ground for linguistic methods. International Journal of American Linguistics 39.63-79.

JACOBSEN, WILLIAM, JR. 1967. Switch-reference in Hokan-Coahuiltecan. In Dell Hymes and W. Bittle, eds., Studies in Southwestern ethnolinguistics: Meaning and History in the languages of the American Southwest. The Hague:

Mouton pp. 238-63

JOHNS, ALGER F. 1972. A short grammar of biblical Aramaic. Berrien Springs, Michigan: Andrews University Press.

JÜRGEN, HANS. 1992. Language decay and contact-induced change: similarities and differences. In Matthias Brenziger, ed. Language death: factual and theoretical explorations with special reference to East Africa. pp. 59-80.

KENDALL, MARTHA B. (ed.) 1980. Coyote stories II. International Journal of American Linguistics Native American Text Series. Chicago: University of Chicago Press.

KEY, HAROLD. 1965. Some semantic functions of reduplication in various languages. Anthropological Linguistics 7(3):88-102.

KISSEBERTH, CHARLES W. 1969. On the abstractness of phonology: The Evidence from Yawelmani. Papers in Linguistics 1:248-282.

KRAMER, MARVIN. 1995. Yokuts as a target language in a shift from Miwok. Proceedings of the twenty-first annual meeting of the Berkeley Linguistics Society. Berkeley: Berkeley Linguistics Society. pp. 438-449.

KROEBER, A.L. 1907. The Yokuts Language of South Central California. University of California Publications in American Archæology and Ethnology vol. 2, no. 5. Berkeley: University of California Press.

KROEBER, A.L. 1963. Yokuts dialect survey. Anthropological Records vol. 11, no. 3. Berkeley: University of California Press.

KURODA, S.-Y. 1967. Yawelmani phonology. Research monograph 43. Cambridge: MIT Press.

LADEFOGED, PETER and IAN MADDIESON. 1996. The sounds of the word's languages. Oxford: Blackwell.

LAMBRECHT, KNUD. 1994. Information structure and sentence form. Cambridge: Cambridge University Press.

LANGDON, MARGARET and PAMELA MUNRO. 1979. Subject and (switch-) reference in Yuman. Folia Linguistica 12.321.44.

LATTA, FRANK F. 1949. Handbook of the Yokuts Indians. Santa Cruz: Bear State Books.

LI, CHARLES N. and SANDRA A. THOMPSON. 1981. Mandarin Chinese: a functional reference grammar. Berkeley: University of California Press.

MARINONE, N. and F. GUALA. 1961. Tutti i verbi greci. Milan: Casa Editrice Giuseppe Principato.

MCCARTHY, JOHN J. 1999. Sympathy and phonological opacity. Phonology 3.331-399

MCLENDON, S. 1978. Ergativity, case and transitivity in Eastern Pomo. International Journal of American Linguistics 44.1-9

MCWHORTER, JOHN. H. 2001. The world's simplest grammars are creole grammars. Linguistic Typology 5.125-166.

MICHAELIS, SUSANNE and MARTIN HASPELMATH. 2003. Ditransitive constructions: creole languages in a cross-linguistic perspective. www.creolica.net/michaelis.pdf (to appear in Creolica).

MINER, KENNETH L. 1979. Through the years with a small language: more trouble with data in linguistic theory. IJAl 45:75-78.

MITHUN, MARIANNE. 1989. The incipient obsolescence of polysynthesis: Cayuga in Ontario and Oklahoma. In Dorian pp. 243-257.

MOSCATI, SABATINO, ANTON SPITALER, EDWARD ULLENDORF and WOLFRAM VON SODEN. 1969. An introduction to the comparative grammar of the Semitic languages. Wiesbaden: Otto Harrassowitz.

NEWMAN, STANLEY. 1944. The Yokuts Language of California. Viking Fund Publications in Anthropology, no. 2. New York: Viking Fund.

NEWMAN, STANLEY. 1996 . Yokuts word lists. Unpublished University of California ms. complied by William F. Weigel from Newman's slip files.

NICHOLS, JOHANNA. 1992. Linguistic diversity in space and time. Chicago: University of Chicago Press.

OHALA, JOHN J. 1974. Phonetic explanations in phonology. In A. Bruck et al., eds., Papers from parasession on natural phonology. Chicago: Chicago Linguistic Society.

PALMER, F.R. 1994. Grammatical roles and relations. Cambridge: Cambridge University Press.

PETERSON, DAVID A. 1999. Diachronic and typological aspects of applicative constructions. Unpublished UC Berkeley dissertation.

PLAUCHÉ, MADELAINE, ROSEMARY BEAM DE AZCONA, RUNGPAT ROENGPITYA and WILLIAM F. WEIGEL. 1988. Glottalized sonorants: a phonetic universal. Paper presented at the twenty-fourth annual meeting of the Berkeley Linguistics Society, February 14, 1998.

POPPER, KARL. 1959. The logic of scientific discovery. New York: Basic

Books.

RADETZKY, PAULA KADOSE. 2002. The functions and evolution of topic and focus markers. University of California dissertation.

RADFORD, ANDREW. 1997. Syntax: A minimalist introduction. Cambridge: Cambridge University Press.

RHODES, RICHARD A. 1990. Ojibwa secondary objects. In Grammatical relations: A cross-theoretical perspective, Katarzyna Dziwirek, Patrick Farrell, and Errapel Mej'as-Bikandi, eds. Center for the Study of Language and Information: Stanford.

ROSENTHAL, FRANZ. 1968. A grammar of biblical Aramaic. Wiesbaden: Harrassowitz.

SCHMIDT, ANNETTE. 1985. Young people's Dyirbal : an example of language death from Australia . New York: Cambridge University Press.

SCHUSKY, E.L. 1972. Manual for kinship analysis. 2nd ed. New York: Holt, Rinehart and Winston.

SELIGER, HERBERT W. and ROBERT M. VAGO 1991. The study of first langauge attrition: an overview. In Herbert W. Seliger and Robert M. Vago, eds. First language attrition. Cambridge: Cambridge University Press.

SHERZER, JOEL. 1976. An areal-typological study of American Indian languages north of Mexico. Amsterdam: North Holland Publishing Company.

SHIBATANI, MASAYOSHI. 1990. The languages of Japan. Cambridge: Cambridge University Press.

SILVERSTEIN, MICHAEL. 1987. Stanley Newman. Language 63.346-60.

SMYTH, HERBERT WEIR. 1956. Greek Grammar. Cambridge: Harvard University Press.

STALNAKER, ROBERT C. 1974. Pragmatic presuppositions. In Milton K Munitz and Peter K. Unger, eds., Semantics andphilosophy. New York: New York Universiy Press, pp. 197-214.

STERIADE, DONCA. 1995. Underspecification and markedness. In John A. Goldsmith, ed., Handbook of Phonological Theory pp. 114-174. Oxford: Blackwell Publishers

STIRLING, LESLEY. 1993. Switch-reference and discourse representation. Cambridge: Cambridge University Press.

TAYLOR, ALLAN R. 1989. Problems in obsolescence research: the Gros Ventre of Montana. In Dorian, ed. pp. 167-179.

THOMASON, SARAH GREY and TERRENCE KAUFMAN. 1988. Language contact, creolization, and genetic linguistics. Berkeley: University of California Press.

THURNEYSEN, RUDOLF. 1946. A grammar of Old Irish. Trans. by D.A. Binchy and Osborn Bergin. Dublin: Dublin Institute for Advanced Study.

TOPPING, DONALD M. 1973. Chamorro reference grammar. Honolulu: University of Hawai'i Press.

TROCCHIO, P.D. 1991. Mendel's experiments: A reinterpretation. Journal of the History of Biology 24.485-519.

ULTAN, RUSSELL. 1978. Size-sound symbolism. In Universals of human language, ed. by Joseph Greenberb, vol. 2, pp. 525-568. Stanford: Stanford University Press.

VAN DRIEM, GEORGE. 1987. A grammar of Limbu. Berlin: Mouton de Gruyter.

VOEGELIN, C.F. and F.M. VOEGELIN. 1977. Is Tübatulabal de-acquisition relevant to theories of language acquisition? International Journal of American Linguistics 43.333-338.

WALLACE, WILLIAM J. 1978. Southern Valley Yokuts. In Heizer, ed., 1978.

WEIGEL, WILLIAM F. 1997. Harbingers of language death: Yowlumne in 1930 and 1997. Paper presented at the annunal meeting of the Linguistic Society of America, New York City, January 9, 1998.

WEINREICH, URIEL. 1968. Languages in contact: findings and problems. The Hague: Mouton.

WERTHEIM, SUZANNE. 1997. Yowlumne reduplication, analogical levelling, and language death. Unpublished ms., Department of Linguistics, University of California, Berkeley.

WETZELS, W. LEO AND JOAN MASCARÓ. 2001. The typology of voicing and devoicing. Language 77.207

WHEELER, DEIDRE W. AND DAVID TOURETZKY. 1993. A connectionist implementation of cognitive phonology. In Goldsmith, ed., 1993, pp. 146-172.

WHISTLER, KENNETH W.and VICTOR GOLLA. 1986. Proto-Yokuts reconsidered. International Journal of American Linguistics 52.317-58.

WILLIAMS, ROBERT SCOTT. 1995. Language obsolescence and structural change. (Unpublished UCLA Ph.D. dissertation, reprinted by UMI Dissertation Services, Ann Arbor, Michigan)

WOODBURY, ATHONY C. 1983. Switch reference, syntactic organization, and

rhetorical structure in Central Yup'ik Eskimo. In Haiman and Munro, ed. , 1983, pp. 291-315.

ZOLL, CHERYL. 1998. Parsing below the segment in a constraint-based framework. Stanford: CSLI Publication.-244.

Appendix A
Newman's Yokuts Wordlist

The following word list was transcribed from a box identified as Stanley Newman's Yokuts slip file in the Survey of California and Other Indian Languages, Department of Linguistics, University of California, Berkeley. It is evidently actually a typed copy of Newman's original, produced by someone in the Survey in the 1950's. It is included here because a number of references are made to it in Chapter 4, but it does not exist elsewhere in published (nor even alphabetized!) form.

Despite the designation on the slip file, the list contents are almost exclusively Yowlumne. The glosses are exactly as given on the slips (subject to any typographic errors I may have introduced), including the occasional '(?)', '(sic)', etc., which were presumably added by the typist.

The list does not include all the information on the slips. Most slips had a code in the upper right corner referencing one of Newman's notebooks. Some had comments or incidental information that was clearly separated from the gloss. The electronic version of the list includes all this information.

Note that glottal stop <ʔ> precedes <a>. The orthography of the slips is that of Newman 1944, which I have followed subject to the conventions used elsewhere in this dissertation (e.g., the use of doubling instead of the raised dot to indicate vowel length.

ʔaacay: mahogany (tree or wood)

ʔaac'ec': large wild artichoke

ʔaaḍaʔ: ax

ʔaaḍan: to be excited

ʔaagaṣ: mothers brother

ʔaalat': to lick

ʔaalit: salt-grass

ʔaamal: to help

ʔaap'aa: to carry someone on your back

ʔaaxa: to stay over night

ʔaba: to pile on

ʔac': a container

ʔadaal: to make lower, to lower

ʔadil: down

ʔaḍa: to chop

ʔaḍay': to boast

ʔaḍeeyasi: twins

ʔagaay: to pull ...out (from fire, water, a deep place, a hole)

ʔahaṭ: to ask for, beg, demand

ʔak'al: to put your arms around somebodys head

ʔalaṣ: to get lost, take the wrong course

ʔalay: to rape

ʔallewas: hand-game, guessing game

ʔalum'wiyi: to grab with the mouth, put into the mouth

ʔalwuṭ': crow

ʔamac: to get close, approach

ʔanaasam: one who has a basket (anas)

ʔanas: a large basket carried onthe back

ʔanaṭwal: to dream, dream about

ʔaneedabi: name of 12 men coyote met (V,39,1)

ʔanṭuw: witch doctor

ʔan'wiyi: to lean against

ʔapṭuw: manzanita

ʔasas: to bite

ʔaṭal: to open (as house, etc.)

ʔawaaṭ: dislike, to ...

ʔaw'aṣ: chin

ʔaw'caʔ: fox

ʔaw'ṭaʔ: one who dislikes

ʔaxic': bed

ʔayab: mineral, like magnesium

ʔay'ak': to play darts (ayak)

ʔayay: to steer a boat with a pole

ʔay'ay'wiyi: to be bent back

ʔaƶʔaƶuk': mole (animal)

ʔeʔçuʔ: large Indian basket

ʔeedil: to be hungry

ʔeek'aa: to look back at

ʔeelaw: flower

ʔeeliw: to bloom, have flowers

ʔeenas: grandfather, man's grandchild

ʔeeniṭ: secret power, magic power (that comes from Jimsonweed)

ʔeepi: to swim, bathe

ʔeep'iṣ: lake-trout

ʔeeṣin': black oak

ʔeeti: to scrape together

ʔenṭum: a gummy, sandy substance found in rocks, used to induce sleep

ʔiilwiyi: to breeze, blow on

ʔikit: head of penis

ʔilee: to fan

ʔileemaa: to be feared, act mean toward

ʔilik: to sing

ʔilik': water

ʔilk'insasaʔ: a spring waters eye'

ʔimik'wiyi: to drop out of sight

ʔinmiṭk'aa: to be jealous

ʔinsis: good

ʔip'in: ground acorns

ʔipiṭ: to throw away, to lose

ʔisel: outdoors

ʔislaaluʔ: dragon-fly

ʔiṣil': horn (of animal)

ʔitʔiç: a small hawk; sparrow-hawk

ʔiṭi: to garnish, take in payment for a debt

ʔit'wop': husbands sister; woman's bro's wife

ʔiyeeyaa: to try to see the organs of a person of the opp. sex

ʔoʔçaa: to watch (as game, something pleasing, as pictures)

ʔobooʔbiṣ: oak balls

ʔoc'ʔoc': magpie

ʔogol: to come to the surface of water, earth; to dig out (self?), to pull out

ʔohyoo: to look for, seek

ʔolʔolwoo: to be bashful towards

ʔolol: ball

ʔonboy: wife's sister, man's bro's wife

ʔonmil: daughter-in-law

ʔontip: spouses mother

ʔooʔoowiyi: to crow

ʔookuc': to desire, need, depend on

ʔoosaa: to feel the opposite sex in the dark

ʔooṭ'u: to steal

ʔoowee ʔic': chicken, rooster

ʔooxiy: tree whose bark is used for making twine

ʔooyo: to move your habitation

ʔop: moon, a watch

ʔopoonoo: to get cranky, menstruate, every month

ʔopoot: to get up

ʔoṣit: fire

ʔoṣot: to burn, handle fire, keep a fire,

ʔotix: pillow

ʔoṭ'ow: head, hair

ʔowokwiyi: to raise the head

ʔowon: boat

ʔoyʔuy: road-runner, chaparral cock

ʔoyoowix: to have pity, sympathy with, mercy on

ʔoywis: to try, make an attempt

ʔoẓoy: a sign, colour

ʔoẓiʔyewas: picture

ʔoẓiy'ee: to write, take a picture, draw a picture

ʔuguggu ʔ: frog

ʔugun: to drink

ʔuhuy: mucuous, a cold

ʔuhwiyi: to cough

ʔuluṣk'uy: meadow-lark

ʔumut': clittoris (sic)

ʔunununwiyi: to shiver

ʔuplalli ʔ: dove

ʔup'up'wiyi: to become, be, round

ʔuṣʔuṣwiyi: to quiet a baby to sleep (sh-sh-sh)

ʔuṣk'un: to be worried, to take it to heart

ʔuṣuk': heart

ʔuṭu: to play music

ʔut'ut'wiyi: to be perched up on top of something

ʔutuy: to push

ʔuwas: grass

baʔoonay: wasp

baaloo: to feel, feel about in dark

baanwiyi: to run the hand over

baay'a ʔ: the right side, right hand

balaas: to creep (on hands and knees)

balak': to be well fed, sated

bal'aw: hole, cave under a rock

balaywiyi: to be slick, slippery, to slide on something slick

baluw: downhill, west

banaanaa: to lie down

bananwiyi: to lie down

ban'iṭ': intestines

baṣ: marrow

baṭan: to fall down

bay'eenaa: to learn, know how

beedik': to excrete

beeli: to swin

beemamguc': humming bird

beena?: comb

beeni: to bury food under ashes

beewin: to sew

bidik': excrement

bidinwiyi: to walk over high place

biliṣ: finish

bim'ṭan'a?: stump (of tree)

bineet: to ask

bin'in'wiyi: to look down, bend over and look down

biṣix: to take out guts, intestines

biwbiwwiyi: to ring

biyaṭ'wiyi: to be spiral, twisted

biyeeṭ': to twist

bodoodiywee?it': stink bug

bogogbil: weed species, with cactus-like stickers

bogoowee?iṭ': hoot-owl

bok: muscle, calf of leg

boko: to nudge

bol'o: to wind (string, etc.) around

bonoy: two

boodo: to circumcise

boodo?: penis

booga?: Poker (card-game)

boohuṭ': to grow up

boowon: to trap, set a trap

boy'eeṭ'aa: to be miserable

boy'oomee: to be pretty, to pretty

bu?us: dog

buc'on: mans brothers son, womans sisters son

bududwiyi: to turn the anus

buhuk': Juniper tree

buk'uk'wiyi: to bulge out

buk'wiyi: to thump (as obj. being dropped)

bumuṭ': beak

c'abboo: to suck at

c'abix: nest

c'adab: to run around

c'agas: wire-grass, used in making baskets

c'ak': blackbird

cakcak: chicken-hawk

c'ak'ooman: small lake-trout

c'ala: to hatch

c'alis: sweet smell

c'am'a: to hold tightly in the hand

c'apaa: to recede (as swellings)

capit': a gambling tray

c'ayax: mans sisters child

c'aydas: star

c'ec'wis: to be ambitious

c'eedaa: to bear clover, to eat greens

c'eelaalun: a bridge

c'ic'ew: weasel?

c'idiw: to be in a net, bag

c'idiy: live oak

c'igeey: to twist

c'igey: string

c'igey?iy: a bush whose bark is used for making twine

c'igiy: to put the bow string in place

c'iliw: to get dizzy, drunk

c'iliwxay: kidneys

c'im'c'im': bat

c'imik'wiyi: to close the eyes

c'iniw: to give shade, be shady

c'ip'i: to surround

c'iwik': poison oak

c'iwil'i?: chipmunk

c'ixil: meat

c'ixil: to eat, or to roast meat

c'iy: bone

c'iyugay: green

c'okot: to be wild, be suspicious

c'olippiy: six

c'oloowin: plains, flat open place

c'onis: apron

c'onooxis: sugar pine

c'oodu: to skin

c'ookay: green shoots of a tree

offspring, the new generation

c'oomis: cage for wild pigeons

c'oomu: to devour, make extinct

c'oopoo: to kis

coopun: to consent, agree, believe

c'owo: to grasp

c'owo: to work

cox: skunk

coy'nuk: tribal name of indians living near Visalia

coyoopwiyi: to make a short turn

ṣi?in: to lie in wait for, spy on, waylay

ṣi?in: waylaying place

ṣi?iw: cottontail

ṣimex: twilight

ṣitiik'wiyi: to slide

ṣunut: tribe living near Farmersville

c'udool: to hatch (trans. or intrans.)

c'uk'wiyi: to keep quiet

c'uluy: hide, skin

c'uluy: hide, skin

c'umun: the end

c'utus: navel

c'uyoo: to urinate

da?ak': to shine (sun)

da?al: to come to life, be saved, to be alive, etc.

daa?ak': sun

daabaa: to try again, be ones turn, to try after a failure of yoruself or another again

daam'uṭ: beard, moustache

daanay: Jimson Weed

dabak'wiyi: to bend, be bending

daban: to lose what you have, spend all

dagakwiyi: to open a pahu

dak'wiyi: to plug up, cork up

dala: to flatten, refers only to flattening down grass, brush, etc., on the ground)

dalay'wiyi: to slip, be slippery

dal'im: trout

dama: to make...suffocate

damnaa: to try, taste

danaywiyi: to saunter about; get dizzy

daṣlubun: San Amidio Mountain

daṭ'at: to track, follow tracks of

daṭ'aṭ': foot

dawak': to extinguish a fire, light

deelamni?: tribal name

deemideemi: to think, be smart

deey'aa: to haul, carry about

deeyi: to go ahead, get in the lead, lead

deeyil: to wait for, guard

di?iç: to save, hoard

di?iṣ: to make, fix

di?iṣ: to make, fix

dibi: to pull the hair, feathers

dibigniç: name of the One who guards the bridge leading to the Other World. [Anubis?]

dibin: a well

dik'een: to be behind, or ahead (?), to stay behind

dik'eeni?: one who is behind

dileen: to go along the [e]dge, border

dil'il'wiyi: to lie on ones side, to slope

dil'il'wiyi: to lie on ones side, to slope

dillal: a slope

dimaha?: quiver, for arrows

dimin: the picture drawn from copy

dimnaa: to copy, mock

dinaaga?: Oat Mountain

dindiniṭ': thick

dini: to shield

dip: liver

diwiṭ': hard, tough

diy'a?: leader

diy'ac': goal

do?o: to touch with the penis

dobol: large rabbit

doolul: to climb, grow

dooso: to report

dopin: buckeye (tree species)

doṭ'biṣin: ugly, homely

doṭ'i?: bad

doṭ'oohoy: bad ones

ḍaxa: to take a step, step over

ḍibaagu?: a type of arrow, used for cane

ḍim: condor

ḍiwigisna?: elbow

dubu: to take his hand, to lead him away

duda? : womans grandchild

dugugwiyi: to be straight, become...

dumu: to pile

duṭ'u: to dip your bread in soup

duṭ'uṭ': hoof

duwwee?iṭ': Butcher Bird

duyu: to sting

gaa?in'a: woman

gaa?ita: girl

gaadu?: cat

gaayal: to meet, await

gabaatiy: to fail, be unable to do, to be lazy

gabab: to stretch out arms, reach for. to reach out for

gac'ap: siblings daughter

gadaay: to be unable to reach it, to give out

galan: to have a miscarriage, to die at the birht of a child, be unable to give proper birth (applied to animals too)

ganaw: to tangle, wrap around (someone)

ganawwiyi: to twist around onceto ride a horse bareback

gapa: to uphold, help

gapa: to uphold, help

gaswiyi: to spread through, permanate, become stiff or solid, fill with solid

gaṭ'aṭ': to wrap legs around, hold between legs

gaṭ'la: to catch fish with hook and line

gaxon: box

gay'al: meeting place

geewi: to meet

gi?iy: enemy, opponent

gi?iy: to oppose (in game, battle)

gidiw: to encircle, circle, surround, to go in a circle

giṭ'een: to carry under the arm

giṭ'i: to hold..between two objects [as in using pincers]

giweenaa: to carry pack on back

giwil: to meet (someone)

giwiw'wiyi: to be broadside, to run the side to

giy'i: to touch

giy'i: to touch

goc'oohoç': small ones

gomod: to wrap arms around, embrace

gomod: to wrap arms around, embrace

gomwiyi: to thunder, rumble, make a loud noise

gonloo: to drop, to come down

goobo: to take in, put in

goodi?: hog, pig

googwiyi: to cluck, cackle

goolankil: king-snake

goonon: to alight

gooṭ'o: to overtake, catch up with

gopo: to take care of an infant

goṭooniṭ: gopher snake, bull snake

goyow: to gamble

goywin: the game

guçi?: tiny

gudi?: small

gugu: to tear out

gumooy: to perform services of midwife

gumumwiyi: to bend over slightly

gumun: fog, mist

gumun: fog, mist

guṭçun: name

ha?heec'aw: thing invisible great grandchild

ha?heeṭ'aw: animal

ha?ƶaa: to keep up, keep on

haatam: to dance

haay'aa: to laugh

haaywiyi: to answer what!

hac'aami?: new

haççaa: to tease, play with

hadal: to go under

hadlaw: under

hadli?: bottom, under

haḍay: to make...a glutton

hak'aawin: to ridicule, make fun, persecute, joke

halaal: to appear, be visible, come to sight

halaal: to raise

hamna?: a greedy person

ham'wiyi: to cave in, submerge

hanhas: hunter, beast of prey

hapaalis: heater, chimney

hap'ic': soft

hapoy: sweet, sugar

haṣaak'an: thirst

haṣak': thirst

haṣbay'al: lungs

haṣkiywee?ic': gopher

haway: to be able, to do

hawçin: a few

hay'al: daytime

hayal: summer-time

hay'na?: duck

heeṭ'ik': a lie

heexa?: grease, fat

heexi: to grease

heeẓi?: today

hi?ẓi?: tomorrow

hibeey: to dip water, get water

hic'eey: to tighten

hic'ya?: permanent, solid

hidbaa: to become, be, nude

hidees: to carry wood

hidsic': one who gets wood

hiit'wiyi: to inhale smoke

hik'iy: to play

hik'wey?iy: play-ground

hik'wiyi: to hiccup, pant

hilim: to slander the dead, make fun of one who is helpless

hilit: to announce

hin'i: to prop up, brace

hiṣi: to get ripe, become cooked

hiṣin: to hide

histaha?: ten cents

hit'el: ashes

hiṭ'kiy: a liar

hiṭ'waayu?: the devil

hiweet: to walk

hixna?: a fat one

hiy'awṭa?: a fighter

hiy'aw'ṭa?: to be belligerent, dangerous

hiy'tiwlaa: to be glad, happy

hiy'tiwlaa: to be glad, happy

hiyukwiy'a?: a hiyuk (hello) sayer,

a Yawlamni

hodbonoy: four

hogon: to drift, float downstream

hogoogee: to run water in a hole to drown squirrels

hohs*ee: to breathe

holic': term for characters in myths

homhomik': liberal, generous

homon: to greet, welcome

hon: egg

hono: to lay an Egg

honoṭ': testicles

hoolee: to tell a story, narrate

hoonac'honac': milkwed

hoonak'honak': inch-worm

hoopul: root

hoosee: to drive away

hoot'on: to take the scent

hooyee: to send, give orders to

hosow: to be cold, have chills

hoṣil: windpipe

hot'o: to set fire to

hot'ooneelis: fireplace

hoy'iw: tree whose bark is used for making twine

hoy'lee: to hunt

hoynil: to rally

hoyon: to fly

hoyoo: to name, read

hubuṣ: to choose, pick out

hucu: to frighten...by being a Ghost

huddulu?: night owl

hudok': to straighten

hudu: to know, recognise

hugooyus: sibling of opposite sex

huguy: mixture

huguy: to mix

huloos: to sit down

humnul: quail

hunoc'moo: to be brave

hunun: to be unable to pass, be blocked by

hup': brain

hususwiyi: to get stiff, stiffen out

huṭ'awnee: to welcome, give attention

huṭ'u: to cook bread in ashes

huwṭuwus: a game

huxus: to vomit

huy'wus: to hurt accidentally (with firearms or bow and arrow, etc.)

k'aahuṭway: water-dog (a red lizard)

k'aamaaṣaʔ: bottle fly

kaaṭ'naʔ: name of fish inhabiting river that divides thisworld fro the other world.

kaawiy: wigwam, tent

k'abad: to brand

k'abit': hot, warm

k'absay: shoulder

k'ac': obsideon

k'ak'aw: large red ant

k'alassaʔ: leg

kamic': mothers mothermothers mothers sister

k'an'a: to touch the goal with a stick

k'anal: fir-tree

k'aṣup': mosquito

k'aṣyin: a black seed

k'atal': to strike a ball (spec. game)

k'ataw: to cut off, sever, tear apart

k'aṭ'aanat': salamander

k'aṭ'wiyi: to click your teet, snap (as dog)

k'aṭ'wiyi: to click your teet, snap (as dog)

k'awoodaṣ: a large bottle gourd of yellow; name for lady-bug

k'ay'a: to urinate (applied only to animals)

k'ayeewis: to ask for mercy

kay'iw: coyote

keelaa: to measure

k'eeli: to smear, dab

keemiṭ': meanness

k'eenic': small red ant

k'eeṭaʔ: dirt formed at front of penis

keeṭ'i: to tear

keew'i: to stir

k'eexaʔ: money

kelkil: icicle

k'elṣiʔ: name of Mikixtis birthplace, i.e., Blue Mountain

kenkin: porcupine

ketnit: deceased maternal aunt, deceased stepmother

k'idet': short

k'iheey: to feel sorry, be sorry

k'iik'wiyi: to squeak

k'iley: cloud

k'il'wiy8i: to make a click, click

kim'ṭiy: a mean, scolding person

k'inim: acorn

k'inim: oak tree, valley variety, larger than toowixit

kinip: dress

kinip: to dress (for woman)

k'iṣdanaʔ: a circumcised man

k'itiy: to chop, whack off

k'iṭ'i: to cut

k'it'ṭin: stingy

kitwinic': husbands sister

k'oʔo: to throw, hurl

k'oʔo: to throw, hurl

k'oʔṭeeyaʔ: buzzard

k'ohis: rump, hip

k'ohis: rump, hip

k'olpoopoʔ: wild gourd

kom'ooyis: fathers brother, stepfather

k'onc'ooc'iʔ: a small variety of lizard

kooçeenak': be easy, easy-going!

k'oop'aʔ: perch, sun-fish

k'ooyoṭ': water duck

kos'on: to be unable to find, miss

k'ot': tule

k'owiy: thigh

koyo: to butt, hooks with the homs

koyo: to butt, hooks with the homs

k'oyoṭ': veneral disease

k'oyotwoṭ': frog

koy'oy'wiyi: to be crooked, sideways

k'oywos: bowl for pounding corn

k'ubwiyi: to strike a flat obj. on ground

k'ululwiyi: to roll (after being hit, kicked, pushed,) to make roll

k'umayhaʔ: clothes

k'umunyuṭ: hornets

k'ut'us: tail

kuyuʔ: ankle

kuyuʔ: salt

k'uyuṭ: knee

laʔas: to put feathers on an arrow

laʔlaʔ: honker, goose

laana: to hear

laanaʔ: wool

labaay: to gather greems

lagaa: to stay over night

lagan: to set a day for a feast

lagil: a different place

lagliʔ: other, a different one

lalag: to hang up

lal'wiyi: to take a long, hopping stride

lameesaʔ: table

lanat': to take a piece off of somethings side

lan't'iʔ: a side

lap'a: to whip

lap'aalip'iṭ': whipper-snake, razor-snake

lataawoo: to come down, go down, carry...

laṭaw': hillside

law'law'wiyi: to shake, to flap up and down (applied to elastic or resilient material)

lay'a: to kick

layak': to wade

lay'wiyi: to take a long stride, trot

leemondoʔ: name of Tejon chief

liʔee: to sink

lihim: to run

lilin: to be dewy

lil'naʔ: bead money, general term

limi: to file

lim'i: to have spasms

limik': prairie falcon

lim'wiyi: to cloud up

linic': to talk to, speak

liweeṣip': mountain sheep

liwic': cold

loḍog: to hurry, be quick

logow: to pound, pulverise

lol'o: to quit, let go, allow

lomit: mountain

loogoʔ: crazy

lopiṭ: fish

lowon: to attend a feast

lowooyiṭ': poor, pitiful one

low'os: war

lowoy: to take advantage of, get the best of

loxo: to pour, spill

loẓoox: to scare, frighten

luk'ul: to bury

maʔa: to look down

maan'aʔ: gnat

maawoo: to play the lute, harp

malaapin: to make a mistake, error

malad: to speak bitanisa

malapwiyi: to make a mistake, error

manal: tear

maniʔ: many

massiʔ: maize

maxa: to take

may'aahay: big ones

meek'i: to swallow

meeli: to earse, harrow

meeniṭ': to nurse, have breasts, etc.

meeyi: to cut

meeẓin: to be sure, certain, earnest

mic'wiyi: to suckle

midi: to throw (powdered material) on

mik'wiyi: to gulp

mimyaṭ: thunder

minc'ix: milk

miṭ'iw: comb of feathers on quail

miwwiyi: to whistle through the air

miyel: bee, honey

moḍok': to blacken, make black

moḍok'wiyi: to run black, be black

mogoʔçiʔ: great-grandmother

mogoowic': a dodger

mogoyoc': great grandparents?

mok'iy: wife

mokyee: to marry, have sexual intercourse

molol: to cheat

moloṭ: to gather seed

monon: to forget

mononhol: different kinds of property things, all ones different possessions

mookoy: mother's sister, stepmother

moon'ay: fly (general term)

moono: put in the mouth

mooṭ'ak': smoke

mooxol: to become old

mooy'ak': whirlwind

mooyon: to be tired

moṣ: sweat-house

motk'a: another name for limik

mowoç: to be a friend, befriend

moxeemax: Plaeides (sic)

mozok'oʔ: dark beads, larger than poolay; had highest value of any beads

muhu: to dive

muhugyal: female lake-trout, large variety

muluk: to singe hair off

mun'os: eight

mun'u: to turn around, turn the back

muṭ'k'an'aʔ: smoky

muṭu: to smear

naʔad: older sister

nadaal: a very level place

nadadwiyi: to become smooth, agree

nahaaʔiṭ': beaver

napaatim: sisters husband; son-in-law; son-in-laws brother

napas: womans brothers children

naṭiṭ: rattlesnake

naxaamis: spouses father, spouses fs brother father-in-law

naya: to shoot at a moving object

nay'waṭaʔ: dog that hs one side of his head red, the other white, like nebecipil

neʔcaa: to be sleepy

neʔeṣ: younger brother

neʔsay: younger brother

nebec'hip'il: name of dog who beats mimyat

neek'i: to draw the bow

neewi: to bend the branch of a tree

neeyoo: to shake

niʔeew: to be late

nibec': older brother

niked: mothers sister, stepmother

ninee: to be still be quiet

nipiy: spouses brother

niṭ'i: to press

noʔod: younger sister

noʔom: mother

noh?o?: bear (grizzly)

nomc'il: seven

non'o: to have sexual intercourse with (a woman)

noobo: to gather

noomiṭ': big toe

noomnoomwiyi: to pucker in and out

noot'o?: boy, youth

nooto?: east

nopop: father

now: hook

nowoc': crooked stick for gathering (nuts?)

nowoo?iy: crooked stick for gathering (nuts)

nuhuk': to kneel

nukoom': to bend, double

num'u: to hold with the anus

nusus: fathers sister

nutuunutu?: name of tribe near Armona Hanford, Kingston

p'a?aaṣi?: lake

p'a?an': the world

pa?at': to fight

p'aak'il: flea

p'aaw'uk: awl

p'aaxan: to be afraid

paayax: blood

pak'at: to remember

palaak'ak': woodpecker

p'alaṭ'wiyi: to dart out the tongue, stick out...

palin: slate-rock

palwiyi: to spread out (as water, etc., on ground)

panwix: to deliver, arrive, bring

pataṭ: body louse, bed louse

paṭ'wiyi: to guess (in guessing game)

paw'a: to fit oneself in , be enough

pawyoo: to scatter

p'axat': to mourn, weep

paxna: a coward

peena?: edge, border

peena?: edge, border

p'eep'at': summit

pees'i: to doctor with magic

pespis: chicks

piʔis: chest

picʼi: to count

piçiw: to grasp, catch, capture

pikel: sinew

pil: road

pʼimʼimʼwiyi: to be filled with water, to fill up

pʼisi: to burn

pʼislu ʔ: mouse

pispasa ʔ: hen with chicks

pitelsee: to teach, advise

pitʼiw: forehead

pʼiṭʼwiy: semen

piwiṣ: to pulverise seeds, grind

pʼohooʔiṭʼ: weasel

pohulhay: parent

pohyon: sparrow-hawk

pokʼwiyi: to pierce through

polwoy: pestle for pounding corn

polxoy: sucker-fish

ponpon: snow

poohal: squirrel

poolay: small beads

poolum: husband

poolut: body

pooṣu: to blow on

pospoloʔ: match

pʼotʼoolo ʔ: piles

potoxwiyi: to bust, break in pieces (brittle obj.) shatter

pʼow: gall-bladder

pʼoyʼoṭ: to have the mouth crooked

pʼuçʼwiyi: to spurt out, eject semen

puhukʼ: to survive

pukʼahaʔ: hat

pukʼkʼal: a hill

pulwiyi: to go through quickly, pop out, to go through (as door)

pʼumu: fill

pʼunṭʼukʼ: hand

punʼu: to fold

pusacʼ: a bone whistle

pʼuṣiṣwiyi: to turn the anus to

pusucʼ: to whistle

pʼuṭʼwiy: semen

pʼuṭʼwiyi: to eject semen

puṭʼwiyi: to fly about, whirl about

putuṣ: acorn

s*utoosul: shirt

sa?nac': a rattle

saaluw: coal, charcoal

saaluw: coal, charcoal

saamwiyi: to diminish (swelling), go down

saamwiyi: to diminish (swelling), go down

saaxal: wax, pitch

saaxal: wax, pitch

salam: willow tree

sam'a?: door, gate

sam'a?: door, gate

sama?: mouth

samaywas: belt

sanaaxwiyi: to be fainter, become slowly invisible (as sound or light)

san'an'an'wiyi: to shake, quake (not trans.)

sanliiya?: watermelon

sapsapic': mouse

sasa?: eye

saxal: to apply wax

si?eey: to make confession (tell secrets) after a feast

sidi: to get ready, brace yourself

sidi: to get ready, brace yourself

siinwiyi: to blow your nose

sik'i: to stick... in the ground

silaal: clear (as water)

silel: rock

simimimwiyi: to be drizzling

simix: black material formed on cheeks after weeping; dry tears

sinaalaa: to present with, cause to receive

sodox: to throw at

sohgoy: elk

sohow: Indian tobacco

son'lic': name given to strap used in giweena

sonoodip: wild grapes

soogon: Indian tobacco, weed from which it is derived

soonol: to pack, carry on back

soowin: wild dove

sooxun: to vanish

soponhod: nine

soxsox: fish hawk

ṣaapa: to burn

ṣaayip': rainbow

ṣalak': to be awake, wake up

ṣapapwiyi: to have ones ears cocked

ṣaxaṭ: willow tree

ṣeʔel: rain

ṣeemaʔ: that part of the head-dress made of down, holding teh 3ux.

ṣeeniṭ': to smell

ṣiʔeel: to rain

ṣidig: to pile

ṣikil': arrow

ṣil'i: to see

ṣiliṣ: hair

ṣilit': to jump

ṣin'a: consumptive, lean

ṣipṣaa: to perform with magical powers

ṣiy'iy'wiyi: to tip over slowly, lean over

ṣododwiyi: to be circular

ṣoglon'oʔ: a hole

ṣogol: hole

ṣogol: to make a hole, perforate

ṣokiw: wind

ṣokow: to be windy, blow

ṣolololwiyi: to rattle, be rattling

ṣoogu: to pull out

ṣoolo: to constipate, bloat up

ṣoomoo: to cover with the palm of the hand

ṣoopin: three

ṣop'ix: stomach, paunch

ṣopon: blanket

ṣopoṣ: to harvest, gather the wild crops

ṣoṣnuṭ: dead nusus

ṣoṭoṭ: to drag, pull

ṣoxo: to exterminate

ṣoyol: antelope

ṣuʔun: granary

ṣudook': to take off

ṣuguṭ': hole in penis

ṣunu: to plug, stuff up

ṣup'u: to put in a sack

ṣutu: to fit...on (as the head of an arrow)

ṣuxup': large hawk

ṣuynaa: to buy

suhwaa: to perform miracles

sut'u: to boil

suutataay'wiyi: to swing

suxsay: sand

taacaʔ: the left side

taana: to go

taanawuṭ: grasshopper

taawaṭ: to die

tabababwiyi: to make a fluttering sound, as birds, as spun coins coming to rest

t'acnayaʔ: a left-handed person

taççiy': a Tachi Indian

t'ala: to shove with the heel

talxaṭ: tongue

tam'ay: sandal

tanaa: to take along

tanaaʔiy: footprints, tracks

t'apapwiyi: to flatten out

t'appal: paper (flat)

t'apt'apis: flat, flat place

t'apwiyi: to slap (the hand)

t'aw'a: to strike an animate obj. to the ground

tawaanic': morning star (one whos awake)

tawan: to be dawn

tawanwiyi: to stay until daylight, to do until daylight

taxaa: to bring

t'ayak: little finger

t'aywan': Indian basket, slightly smaller than /e/ci/)

t'eebik': seal (animal)

t'eeni: to block

t'eepin: acorn mush

t'eewiç: basket (placed in a hole in a rock, used for acorns

teexit: a sore, that which hurts or pinches or burns (e.g., a hot pepper), something strong.

t'en': grizzly bear (same as noho)

teṣpan'yiṣ: sequoiya redwood

tiʔiṭ: louse

tiipwiyi: to stretch

t'imiṭ: eyebrow

t'inew: notch

t'inik': to stand in from of and hide

to stand behind and hide yourself

tinil: animal hole

tin'lin'in: a Tejon tribe

tipik': tick

tisʔaʔ: sucker fish (because they are the first fish to come out after winter)

tisi: to get out, go out

tismay'aʔ: springtime

tiw'as: strong

tiwwiyi: to bounce up (intrans.), e.g., as rocks will bounce up when struck, not referring to bouncing a ball

tixit: painful..., sick..., ill..., that which is...

toʔo: to place, put (leave behind)

toc'oohoy: unimportant

t'on'ooṭim: transvestite

toonas: digger pine tree

toowixit: oak tree, small mountain variety

tooxiw: cheek

toṭ: belly

toxil: west

toy'niʔ: the middle one

toy'noʔ: night

toyn'oʔ: night-time

toy'oon : to come late, become night

t'oy'ox: to get rusty

t'oyox: to give medicine

ṭaʔṭaʔ: partner, comrade, ally

ṭ'aay'ak': dirt, filth

ṭaay'iʔ: down (on bird)

ṭ'ababwiyi: to lie down on ones belly

ṭ'adag: to lay on top of

ṭ'ala: to break, shatter

ṭ'alap: bow

ṭanaayeṭ: fright

ṭanaayiṭ: to be afraid

ṭ'anaw: to echo

ṭ'aniṭit: fearsome

ṭ'aniw: badger

ṭan'k'aʔ: buzzard

ṭ'ap: bow used for hunting

ṭ'atatwiyi: to flutter

ṭ'at'at'wiyi: to lie on your back, to turn over onto your back

ṭaṭay: to break (as a stick in half)

ṭ'awa: to win

ṭaw'ni?: the previously mentioned number, the same kind

ṭay'a: to place eagles down (for worship)

ṭ'ay'ak': filth

ṭ'ay'ak': to be dirty

ṭ'ayṭ'ay: bluejay

ṭ'e?eṭ'in: to do Wonders, perform miracles

ṭee?aa: to be accepted (in marriage)

ṭ'eeit': conjurer

ṭeekin: to be excited (with fear)

ṭeelis: plant with yellow seed which is made into a beverage

ṭ'eesa?: bile

ṭ'eeṣi: to drown

ṭeexal: to talk (intrans.)

ṭ'eexi: to blacken with firesmoke, become sunburned

ṭeeyiy: teeth

ṭi?: house

ṭ'ibeek'il: mud

ṭ'idik: to split, crack

ṭ'idiw: to remove shell (of nuts)

ṭ'ihee: to become lean

ṭ'ik'i: to imprison, bind

ṭik'it': strong unpleasant smell

ṭ'ilil: gizzard

ṭil'il'wiyi: to open the eyes, have big eyes

ṭinik': nose

ṭiniy: to spread out (blanket)

ṭip nasa?: power

ṭipeen: to move something away from...

ṭipis: a tribe

ṭipna?: magic power

ṭipni?: a powerful one

ṭit'i: to have sexual intercourse with

ṭ'it'it': anus

ṭ'it'iw: to pinch

ṭ'iw'eex: to break

ṭ'iwi: to wet...

ṭ'iwil: to sicken a child by having irregular relations with on of its parents

ṭ'iwissa?: yellow-hammer

ṭixeeṭ: to clean off, clean

ṭ'iy'ew: ten

ṭiy'lum: snake-charmer, medicine man

ṭiy'xalaʔ: a talker

ṭ'odin: hide, strap

ṭ'odoʔ: turtle

ṭokoṭ: to have sexual intercourse with same sex

ṭ'ok'wiyi: to pop (as a cork out of a bottle)

ṭ'olow: to dig, peel (?)

ṭ'olwiyi: to be peeled off easy

ṭomo: to cover up (entirely)

ṭon'op': nose mucuous

ṭ'oodod: bark, skin of fruit

ṭook'o: to hit, kill

ṭooliṭ: a river, canyon, ravine

ṭ'oolo: to peel

ṭoopox:

ṭ'oot'oʔ: anus

ṭ'oot'wiyi: to break wind

ṭoowon': belt-skirt

ṭ'ooyoo: to get pregnant

ṭ'opnoʔ: mountain-quail

ṭopol: icicles

ṭopol: to freeze

ṭot'oy: penis

ṭ'oxil': American Bald Iggle

ṭoxoṭ: soaproot

ṭ'ubu: to get a handful (of pulverised material)

ṭ'ukṭ'wiyi: to bang

ṭ'ulook': to point at

ṭum'uk': warm, luke-warm

ṭumut: pubic hair

ṭumyun: widow, widower

ṭ'un: anal hair

ṭ'unooy: to scorch

ṭunu: to shut, close

ṭ'unul: wildcat

ṭuy'u: to weave

ṭ'uy'wiyi: to drip

t'uguy: to catch fish with spear, to throw a dart or stick at

tuhwiyi: to spit

tuk': ear

tuk'uyun: jackrabbit

tulay'is : difficult

t'ulu: to burn

tun: mountain pine

tupu: to splice

tupwas: joint of the body

tuyaṭ': an unhandy person, on who cannot do things well

t'uyos: arrow

t'uyu: to shoot

waʔ: far

waʔaṣtaa: to be more, be much

waʔaṭ': long, tall

waaʔaʔ: a long time

waaʔal: to eat breakfast

waana: to present (one with...)

waawiyi: to cry wa!once

waaxal: to cry, weep

waaxal: to cry, weep

waaxaṭ': crane

waayuʔ: yellow; buckskin

wabwis: to stretch ones arms (as in yawn)

wac'a: to bind a child to the crade

wac'as: cradle

wac'was: a stake (used in gambling)

wagṭal: orphan

wagṭil: to be an orphan

wahay'iʔ: short arrows. dabbed with poison, used on tap (bow used in hunting)

wakaç: to divide, distribute, get ones portion

wak'akwiyi: to have mouth open

wakay: gap, swale

wak'ay: to donate, give

walaal: an open, bare place

wal'al'wiyi: to open up, become open

walam'wiyi: to glare (as sun), shine brightly

walaṭ: neck ornament, necklace, necktie (an ornament worn about the neck)

walaṭ: to have around theneck

walaxwiyi: to pass someone

walliisaa: to perform a miracle on

walxoo: to pass by, pass someone

wasat: scar

wastoo: to injure, to be able

watak': pine nut

wat'im: back

waṭ'aal: to tear open, rip

waṭ'aal: to tear open, rip

waxaaṭ: to go away from, depart from, separate

wayac': to get revenge, get even

waƶam': feather ornament held in hand by doctors performing ceremony, used to brush away disease.

weeç'iyip': sapling oak

weeṣi: to straighten

weet'i: to have sexual intercourse with a virgin

weet'i: to spread...out

weeṭat': erectio penis

weeṭi: to stretch out leg

weheesit: lion, cougar

wek'wik': worm

wellaa: to get ready to go

wewcoy: wild bird

wic'et: stick

wiç': a large eagle variety

wiçeb: son or daughter

wiçibhay: children, offspring

wiç'il: stick used in playing allewas

widin: to roll, make roll

wikṭamni?: the tribe

wileeli?: long spotted lizard

wilṣin: only, but

winaat'um: a crier, messenger

wip'i : to jerk up quickly

wip'wiyi: to shake upwards (as branches of tree in a wind), to shake up and down

wiṣac': arrow-straightener

wiṣeeta?: ????

witeb: child

witibhaç': infants

wiṭwiyi: to stretch out the leg quickly, to stretch leg

wiyi: say, do

wiyi: say, do

wodoodiṣ: heel

wolooyee: to dodge

woloy: to overtake

woo?uy: to sleep

woogaygiç: butterfly

wook'oo: to hunt for dear using

decoys

wookumc̣iyna?: bird species

woono: to hide...

woosaynaa: to whistle (at)

woowoowee?iṭ': Echo Rock

woowul: to stand up, stop, get up

wooxo: fell (a tree)

wooyo: to be born

wosok': belt

wot'ot'wiyi: to stick out, project

woṭo: to strike

woṭ'od: to draw interest on, increase...

woṭ'otwiyi: to summersault, turn over

woyhaa: to miss (someone)

wuku: to cover, place...as a cover

wuk'uy: to move, quake

wuleewu?: sheep

wulwiyi: to twist about, spin around

wuṭuukwiyi: to smoke, be smoky

wut'wiyi: to wag the tail

xaalay: seed-beater, separator

xaamaṭ': rib

xaapal: feathers, wings

xal'a: to put a stick in a crack

xala?: cane (swordgrass)

xapaal: finger

xapapwiyi: to get spread out in a radiating formation

xapwiyi: to get severed, get torn off

xata: to eat

xatac': a seed

xaya: to place, put

xayxay: crested jay

xeesix: claw, fingernail

xeesix: claw, fingernail

xet't'eynaa: to drag a wacas (cradle)

xiiswiyi: to be dropping down, float downward

xili: to put something under

xinic': nape of neck

xip'i;: to take away from (by force)

xip'wiyi: to rub, as washing clothes

xisewsil: scales of fish

xiṣiṣwiyi: to bare the teeth

xiṭiw: to get angry

xo?iṭ': after-birth

xoʔloo: to take off (only wearing apparel)

xoʔoc: to stay behind

xobootwiyi: to come out (as hair feathers -- not due to baldness, but due to rottenness, scalding, etc.)

xolom: clover

xolpooyiʔ: large lizard (species)

xomooti8ʔ: south

xontol: roe, fish eggs

xoo: to inhabit, live, dwell

xo'o'laniṭ: a small weed, with fuzzy leaves and small purple blossoms, good for headaches

xoolayxolay: black ant

xoowiṭ: sleet, hail

xosim: north

xosop: to scratch

xoṣo: to rub (run?) on

xot'oʔ: rain prophet

xot'oy: ground, soil

xoy: deer

xul'aʔ: a swift one

xul'u: to go ahead

xum'naʔ: long beads made of bone; anything brittle

xumun: to crumble

xupuy: to gather seeds (one at a time)

xuṭun: to wrap up

yaawil: grass

yalyal: earthquake

yawaal: to follow, chase, go after

yaw'lamnʔ: a person of the Yawelmani tribe

yaw'lanç̣iʔ: a Yawdanchi, the Yawdanchi tribe

yawlic': wolf

yax: snake, reptile

yaxwis: to fight with ones spouse

yeebiṭ': lip

yeehaayiç̣: Fire Man

yeeṭ'aw: all

yeheesin: to rest

yet': one

yic'inil: five

yiki: to fart

yimil: to catch fish with the hand

yiy'caa: to be selfish, to do alone

yo?kee: to return

yoloow: to gather (people) together

yonk'ee: to have spasms, convulsions

yonxo?: grey squirrel

yookic'a: relatives

yoomu: to cuckold...

yoowo: to go home

yoƶo: to go back and forth

yunumwiyi: to push back into (hole, carton), to get back into

yuuxwiyi: to melt

yuxulwiyi: to flatten out (intrans.), refers to obj. either hard or soft, flattened by a hard blow.

ƶilab: swift, fast

ƶiwig:

ƶu?ban'an?: a half

ƶu?ub: to divide, break...in the middle

ƶunu: to face, turn the front toward

ƶux: quills topping the feather headdress, worn only by /antuw and dancers

Appendix B
Chapter 5 Contrived Forms

The following table lists the contrived Yowlumne forms found in each of the eight sample works considered in Chapter 5. Forms found in the sample works that are attested in Newman 1944 are not listed. The two numbers in parentheses after the citation to each work represent the number of contrived forms in relation to the total number of forms in that work.

Kuroda 1967 (152/168)

c’uynal

c’uyomxut

c’uyoohun

c’uyoomuxhun

c’uyootaw

c’uyot

c’uyunhun

giy’hin

giy’inhin

giy’it

giy’mixhin

giy’mixit

giy’nal

giy’taw

gobhin

gobmixhin

gobmixit

gobnol

gobtow

goobit

gophin

gopinhin

gopit

gopmixhin

gopmixit

gopnol

goptow

hibeeyinhin

hibeeyithibeyhin

hibeymixhin

hibeymixit

hibeynal

hibeytaw

hoyinhin

hoynol

hoyomxit

hoyoohin

hoyoomixhin

hoyootow

hubṣunal

hubṣunhun

hubṣut

hubuṣhun

hubuṣmuxhun

hubuṣmuxut

hubuṣtaw

ilikmixit

logiwmixhin

logiwmixit

logiwtaw

logwinal

logwinhin

meek’inhin

meek’it

mek’hin

mek’mixhin

mek’mixit

mek’nal

mek’taw

mooxilhin

mooxilmixhin

mooxilmixit

mooxiltaw

moxlinal

moxlinhin

moxlit

muṭhun

muṭmuxhun

muṭmuxut

muṭnal

muṭṭaw

muṭunhun

muṭut

panaamixhin

panaataw

panamxit

panat

paninhin

pannal

paʔiṭhin

paʔiṭṭaw

paʔiṭmixhin

paʔiṭmixit

paʔṭinal

paʔṭit

p’axat’hin

p’axaat’inhin

p’axaat’it

p’axaat’mixit

p’axat’nal

p’axat’taw

seeniṭmixhin

seeniṭmixit

ṣaapinhin

ṣaapit

ṣaphin

ṣapmixhin

ṣapmixit

ṣapnal

ṣaptaw

ṣeeniṭ’hin

ṣeeniṭ’taw

ṣenṭ’inal

ṣenṭ’inhin

ṣenṭ’it

ṣudok’hun

ṣudok’muxhun

ṣudok’muxut

ṣudok’nal

ṣudok’taw

ṣudook’unhun

ṣudook’ut

woowulhun

woowulmuxhum

woowulmuxut

woowultaw

wowlunal

wowlunhun

wowlut

xathinhin

xatmixhin

xatmixit

xatnal

ʔaamilhin

ʔaamilmixhin

ʔaamilmixit

ʔaamiltaw

ʔamlinal

ʔamlinhin

ʔamlit

ʔileemixhin

ʔileetaw

ʔilemxit

ʔilinhin

ʔilkinal

ʔilkinhin

ʔilkit

ʔilnal

ʔooṭ'unhun

ʔooṭ'ut

ʔopootinhin

ʔopootit

ʔopothin

ʔopotmixhin

ʔopotmixit

ʔopotnol

ʔopottow

ʔoṭ'muxhun

ʔoṭ'muxut

ʔoṭ'nal

ʔoṭ'taw

Kisseberth 1969 (25/36)

c'uyoohun

dosnit

dosol

gopʔos

gophin

gopnit

gopol

hoyoohin

hudnut

hudʔas

maxal

maxnit

maxʔas

meek'al

mek'in

mek'nit

mek'ʔas

taanal

tannit

tanʔas

xilal

xilhin

xilʔas

ʔoṭ'al

ʔoṭ'ʔas

Archangeli 1983 (66/100 tokens)

amc'it

bilịshin

bilṣit

bineetiwsel

binetneelaw

bin’teexot

bintatinhin

bok’hin

bok’it

boowinhin

bownit

caaw’aahin

cawahneelaw

cawawsel

caw’eexot

cawhatinhin

cawit

c’um’eexot

c’umhatinhin

c’umowsel

c’uyoohin

c’uyot

deeyilhin

deylaahin

diyeeliwsel

diyelneelaw

diy’leexot

diylatinhin

dobʔaahin

dubut

dubʔeexot

hatmeexot

heexit

hexhin

hixʔeexot

hoy’eexot

hoyhotinhin

hoyohneelaw

hoyoohin

hoyowsel

hudok’hun

laanit

lagaahin

lagat

lagʔeexot

lan’eexot

lowonhin

lowoonit

luk’ulhun

tawṭit

tiheehin

tihet

ʔokc’ut

ʔagaayit

ʔagyeexot

ʔamaac’iwsel

ʔamac’neelaw

ʔamc’atinhin

ʔamc’eexot

ʔamc’it

ʔogleexot

ʔoglit

ʔogloohin

ʔookuc’hun

Goldsmith 1993:38-39 (69 /80)

c’uyol

c’uyoonut

c’uyooʔas

c’uyot

dosnit

gopit

gopnit

gopol

gopʔas

hiweetal

hiweetit

hiwetnit

hiwetʔit

hoyol

hoyoonit

hoyooʔos

hudnut

hudʔas

hunut

logiwnit

logiwʔas

logwol

maxal

maxit

maxʔas

meek’al

meek’it

mek’as

mek’nit

panaanit

panaaʔas

panal

panat

sognut

sogʔas

soognut

ṣudok’nut

ṣudok’ʔas

ṣudook’al

ṣudook’ut

taanal

taanit

tannit

tanʔas

xilal

xilit

xilʔas

yawaalal

yawaalit

yawalnit

yawalʔas

ʔayiynit

ʔayiyʔas

ʔayyal

ʔayyit

ʔileenit

ʔileeʔas

ʔiliknit

ʔilikʔas

ʔilkal

ʔilkit

ʔopootit

ʔopootol

ʔopotnit

ʔopotʔos

ʔugnal

ʔugnut

ʔugunnut

ʔugunʔas

Wheeler & Touretzky 1994 (2/3)

logiwxa

ṣukok’hun

Steriade 1995 (4/4)

gophin

hubustaw

logiwtaw

ʔopottow

McCarthy 1999 (28/43)

bok’mi

bok’ol

c’oomal

c’uyok’

c’uyoohun

doosol

dubk’a

giy’al

giy’k’a

gobhin

logwol

luk’lal

luk’ulhun

maxal

mekhin

mooyinmi

moynol

panal

potk’ot

put’in

saphin

tawtin

t’oyxot

xatk’a

xatmi

xilmi

ʔamlal

ʔilkal

Fromkin, ed. (2000:594) (16/24)

hoyoohin

laanal

laanen

lank’a

paʔiṭk’a

panat

paʔtral

paʔtren

ṣaapal

ṣaapen

ṣapk’a

xatk’a

ʔaamilk’a

ʔamlal

ʔamlen