

THE UNIVERSITY OF MANITOBA

ASPECTS OF KITSAI PHONOLOGY

by

JOHN LIESSMAN VANTINE

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES  
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE  
OF MASTER OF ARTS

DEPARTMENT OF ANTHROPOLOGY

WINNIPEG, MANITOBA

April 1980

ASPECTS OF KITSAI PHONOLOGY

BY

JOHN LIESSMAN VANTINE

A thesis submitted to the Faculty of Graduate Studies of  
the University of Manitoba in partial fulfillment of the requirements  
of the degree of

MASTER OF ARTS

↓  
© 1980

Permission has been granted to the LIBRARY OF THE UNIVERSITY OF MANITOBA to lend or sell copies of this thesis, to the NATIONAL LIBRARY OF CANADA to microfilm this thesis and to lend or sell copies of the film, and UNIVERSITY MICROFILMS to publish an abstract of this thesis.

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

## ABSTRACT

An attempt is made to construct a partial synchronic phonological description of Kitsai, an extinct North American Indian language of the Caddoan family. The language is primarily attested in a corpus of narrative texts elicited by Alexander Lesser from the last native speaker in the summers of 1929 and 1930. The present study is based on philological analysis of four of these texts which were published by Douglas R. Parks in Caddoan Texts (1977) International Journal of American Linguistics, Native American Texts Series, 2(1). Chicago: The University of Chicago Press. and is undertaken within the theoretical framework of generative transformational grammar. A number of phonological rules are formulated to account for various phonological processes, most of which pertain to consonants.

Evidence is presented to argue for a monosegmental representation of the affricate; it is argued that textually-attested aspiration and palatalization represent vowel devoicing; evidence is presented in favor of positing a four-vowel system for the language, and of a vowel lowering rule; an account is given of several alternations of the resonant segments; an attempt is made to indicate the evidence for a surface structure constraint on geminate obstruent clusters which is satisfied by various deletion rules; a sketch is presented of the morphology and phonology of prefixation and suffixation in the Evidential. The present study represents the second piece of work on the Kitsai language.

## ACKNOWLEDGEMENTS

A number of people have assisted in bringing this thesis project to completion, and I want to acknowledge here their generous contributions of time and resources.

Of the members of the Graduate Committee at the University of Manitoba, I especially wish to thank the Chairman, Dr. Richard T. Carter, Jr., Dr. John Haiman, and Dr. H. Christoph Wolfart, all of the Department of Anthropology for their helpful criticism, sustained interest, and often much-needed encouragement throughout the preparation and writing of this thesis. Dr. Carter has particularly (but cheerfully) paid the price of his attentive supervision, and has shown remarkable patience with an exasperatingly drawn-out project. I am deeply indebted to both Dr. Carter and Dr. Wolfart for several years of inspired teaching in linguistics generally, and in Siouan and Algonquian in particular. I have learned from them much more than they know. I am also pleased that Dr. Haiman arrived in the Department in time to serve on the Committee, and I have learned much from him as well. In addition, I would like to thank Dr. Haraldur Bessason, of the Department of Icelandic, for serving as External Examiner.

I also wish especially to thank Dr. Douglas R. Parks, Director of the North Dakota Indian Language Project at Mary College, Bismarck, N. Dak., for sharing with Dr. Carter the responsibility for supervising this thesis, and also for serving as External Examiner. It was Dr. Parks who originally suggested that I work on Kitsai, and who made available the

Kitsai texts elicited by Alexander Lesser. Dr. Parks also served as Field Supervisor throughout the research and writing of this study, and I am deeply grateful for the many hours he devoted to my analytical problems. I owe much of my interest and knowledge of Caddoan languages to him.

I also extend my deep appreciation to Dr. Alexander Lesser of Hofstra University, New York. Dr. Lesser elicited the texts which form the basis for this study, and was therefore uniquely able to offer suggestions which clarified some aspects of textual analysis.

I have also greatly benefited from the numerous helpful suggestions and the encouragement offered by Dr. Robert C. Hollow, Jr., and Dr. A. Wesley Jones, of the State Historical Society of North Dakota, and of Mary College, Bismarck, N. Dak., respectively. In addition, Dr. John Crawford of the University of North Dakota, and Dr. Philip Greenfeld of San Diego University, California, provided useful comments and I thank them. In view of the sound advice received with respect to this thesis, it is especially necessary to claim personal responsibility for the final result, which I cheerfully do herewith.

Superintendent James E. Sperry and Curator J. Norman Paulson of the State Historical Society of North Dakota arranged a brief leave of absence in early 1978, during which time much basic analysis was accomplished. Archaeologists Nick Franke and Jan Signe Snortland-Coles, also of the State Historical Society of N. Dak., and Dr. Gordon L. Bell, of Bismarck, provided technical assistance with the final draft.

Dr. Roger Kennedy, M.D., of Bismarck, N. Dak., generously provided a typewriter for the two major drafts of this study. Mrs. Holly Ryckman of Carrington, N. Dak., whose interest in American Indian languages is surpassed only by her skill, typed the difficult final draft. My deep appreciation is extended to both.

Finally, the value of the continued moral support offered so freely by my parents, Mr. and Mrs. Jack D. Vantine, and by my wife, Denise Conlin (Vantine), is impossible to measure adequately, and this thesis is dedicated to them, in gratitude.

## TABLE OF CONTENTS

	Page
Abstract . . . . .	iii
Acknowledgements . . . . .	iv
Table of Contents . . . . .	v
List of Tables . . . . .	vi
List of Figures . . . . .	vii
List of Phonological Rules . . . . .	viii
Chapter	
1. Introduction . . . . .	1
2. Phonetic Representations . . . . .	21
3. The Affricate . . . . .	24
4. The Vowels . . . . .	29
5. Resonant Alternation (N-Formation). . . . .	40
6. H-Formation . . . . .	51
7. Segmental Devoicing . . . . .	56
8. Glide Formation: 1 . . . . .	67
9. Glide Formation: 2 . . . . .	74
10. Geminate Cluster Reduction . . . . .	83
11. The Evidential: Prefixation and Suffixation . . . . .	94
12. Conclusion . . . . .	112
References Cited	

LIST OF TABLES

	Page
Table 1. Kitsai-Pawnee-Wichita Linguistic Separations . . . . .	4
Table 2. Kitsai Systematic Phonemic Segments . . . . .	22
Table 3. Kitsai Phonemic Inventory . . . . .	23
Table 4. Reanalysis of Affricate Clusters . . . . .	28
Table 5. Kitsai Vowels: Surface Phonetic Representations . . .	30
Table 6. Kitsai Vowel Distributions . . . . .	31
Table 7. Kitsai Vowels: Underlying Phonological Representations . . . . .	33
Table 8. Resonant Alternatives . . . . .	48
Table 9. Devoiced Segments . . . . .	66
Table 10. Evidential Suffix Alternations . . . . .	70
Table 11. Geminate Obstruent Cluster Reduction . . . . .	91



LIST OF FIGURES

	Page
Figure 1. Classification of the Caddoan Languages . . . . .	2

LIST OF PHONOLOGICAL RULES AND SEQUENTIAL CONSTRAINTS:

FINAL FORMULATIONS

	Page
PR-1: VOWEL LOWERING . . . . .	37
PR-2: N-FORMATION . . . . .	50
PR-3: H-FORMATION . . . . .	54
PR-4: RESONANT DEVOICING . . . . .	59
PR-5: VOWEL DEVOICING . . . . .	66
PR-6: GLIDE FORMATION . . . . .	73
PR-7: STOP AFFRICATION . . . . .	86
PR-8: K-DELETION . . . . .	88
PR-9: S-DELETION . . . . .	89
PR-10: H-DELETION . . . . .	90
SSC-1: SURFACE STRUCTURE CONSTRAINT ON GEMINATE OBSTRUENT CLUSTERS . . . . .	90
PR-11: VOWEL GLIDING . . . . .	103
PR-12: I-DELETION . . . . .	111

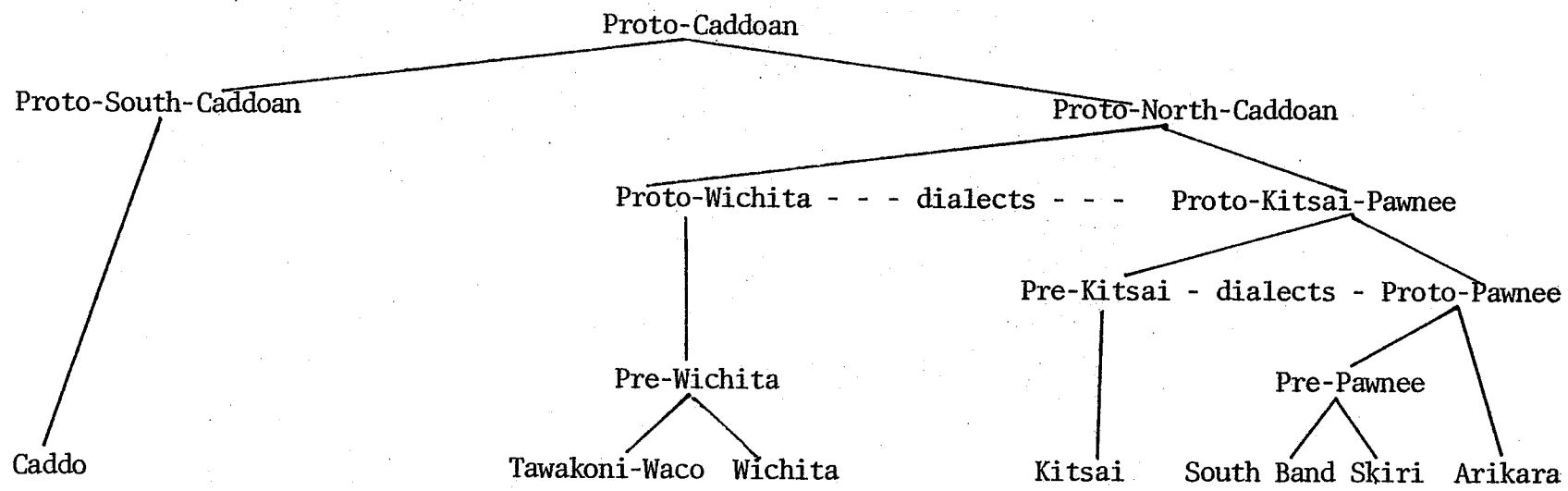
## 1. INTRODUCTION

This study is an attempt to investigate and describe selected aspects of the phonological structure of Kitsai, an extinct American Indian language of the Caddoan family, which includes: Arikara; Caddo; Skiri and South Band Pawnee; and Wichita. The purpose of such an undertaking is twofold: to make some contribution to ongoing comparative studies of the Caddoan languages by providing a partial synchronic description of the phonology of a little-studied member of that family; and to present the results of a generative phonological analysis based on data obtained through philological study of the extant texts in the language. The description which follows thus represents both a partial synchronic phonology of an extinct Caddoan language, and an exercise in philological method.

Modern linguistic descriptions of the respective cognate languages are represented by Merlan (1976), Chafe (1976), Parks (1976) for both Skiri and South Band ; and Rood (1976).<sup>1</sup> Previous work on Kitsai is represented exclusively by Bucca and Lesser (1969).

The genetic relationship of Kitsai to the other Caddoan languages is shown in Figure 1.





Kitsai is a member of the Northern Caddoan sub-group of the Caddoan family. Lesser and Weltfish regard Kitsai as occupying an intermediate position between Wichita and Pawnee, and suggest that Kitsai most clearly resembles South Band Pawnee (Lesser and Weltfish 1932:1). However, it is the "distinct impression" of Parks, a more recent investigator, that Kitsai is "at least slightly more closely related to Pawnee...", and glottochronological comparisons tend to support this view (Parks 1979:10). Parks also gives impressionistic dates for the separations of the Northern Caddoan languages, from which the following have been selected as pertinent here.

Table 1.

## Kitsai - Pawnee - Wichita Linguistic Separations\*

Kitsai - Wichita	1,200 - 1,500 years
Kitsai - Pawnee	1,000 - 1,200 years
Pawnee - Wichita	1,200 - 1,500 years

\*(See Parks, 1979, Table 1, et. al., for a concise but comprehensive overview. For additional discussion of Comparative Caddoan and diachronic topics generally, see Lesser and Weltfish (1932); Taylor (1963a) and (1963b); Chafe (1976) and (1979); and Parks and Rood (1975) ).

The Kitsai (or Kichai) are believed to have lived during pre-historic times in what is now Oklahoma. However, when first encountered by Europeans (i.e., the French) in 1701, the Kitsai were living between the upper Trinity and Red Rivers in present-day northeast Texas. Their population, estimated at 500 persons in 1690, was steadily reduced by the introduction of the new white man's diseases and by Anglo-European

struggles for control. In 1855, the United States Government assigned the Kitsai to a small reservation on the Brazos River, where they remained until they were dispersed by the Texans. Fearing extermination, the Kitsai fled north to Oklahoma in 1858, and joined the related Wichita, whose culture was similar, and with whom the Kitsai remained. By 1889, their numbers had been reduced to 63. Although the U.S. Census of 1910 reports the total Kitsai population as numbering ten persons, the Wichita apparently regarded the Kitsai as members of their own tribe. All of the last speakers of Kitsai were also Wichita-speakers, including Kai Kai, the last fluent speaker of Kitsai, who died ca. 1940 (Fletcher (1907); Powell (1891); Swanton (1952); Chafe (1976)).

Although spoken by a handful of individuals earlier in this century, Kitsai is at present an extinct language, known only from a small number of documentary sources. The first of these is the vocabulary list of several dozen words collected by Lt. Amiel Weeks Whipple, and published in Whipple, et. al., Report Upon the Indian Tribes ... (1855). The second and, according to Chafe (1976) "...the only important source..." of documentary material on Kitsai, is the extensive corpus (ca. 780 foolscap pages) of texts recorded by ethnologist Alexander Lesser, a student of Franz Boas, during the course of fieldwork near Anadarko, Oklahoma, in the summers of 1929 and 1930. Lesser elicited his material from Kai Kai, a woman then in her eighties who was bilingual in Kitsai and Wichita, but who spoke no English. Lesser's preliminary investigations disclosed that Kai Kai was the last fluent native speaker of Kitsai. Kai Kai is believed to have lived until the late 1930's or early 1940's. She was the primary informant for Lesser's

fieldwork on the language, and it is her idiolect which Lesser's texts record. As no speakers of Kitsai are known to be alive at present, the Lesser texts constitute both the only significant documentation of the Kitsai language and the record of the speech of the last native speaker.

Lesser's corpus, totaling 25 texts of various lengths and consisting mainly of traditional narratives, was elicited from Kai Kai with the help of Tom Haddon, a Wichita-speaker who also knew English. Kai Kai dictated the narratives in Kitsai, and then translated them word-for-word into Wichita. The interpreter next translated her Wichita translation into English. Lesser reported that, as he learned some elementary Kitsai, the use of the interpreter diminished, although Haddon helped Lesser rework some of the glosses, (Bucca and Lesser 1969:7); Parks (1977):iii-iv,44; and Alexander Lesser, (personal communication, 1977). Lesser transcribed the texts phonetically using the orthographic recommendations of the American Anthropological Association's "Phonetic Transcription of Indian Languages" (A.A.A., 1916) and provided an interlinear translation in English.

Typescript copies of four of the longer texts were made available to us by Dr. Douglas R. Parks, who is currently editing the Lesser materials. These texts, subsequently published in Parks (1977), constitute the primary source of data for this study. References below to "the texts" denote these published texts. It is hoped that the present study will be expanded and refined at such time as additional textual materials are edited and made available.

As there are now no living speakers of Kitsai, and as our knowledge of the language consequently must be derived from the extant texts,



the method of analysis must necessarily be philological. By philology we mean

"...that part of the discipline of linguistics that is concerned with getting from texts and other recorded attestations of languages systematic information that is not directly conveyed by such records as they stand (Goddard 1976:73)."

Philology is, therefore, pre-eminently the linguistic analysis of texts, i.e., of samples of a particular language preserved in documents. A philological analysis of a text has as its goal the description of the linguistic system represented by the language of the text. The philologist's description of that linguistic system should be in as complete a form as the text will allow. Ideally, such an analysis would describe: (1) the semantic content of the text at the level of morphemes, words, phrases and sentences; (2) the syntactic system of the text; (3) the morphological structure of the text, i.e., inflection, derivation and composition; and (4) the phonology of the text. As the goal of this study is limited to a partial delineation of the phonological structure of the texts, the concern is primarily with phonology and with morphology only insofar as morphological structure illuminates phonological structure. No attempt has been made to present a morphological description, as such.

As an aspect of linguistic analysis, philological analysis seeks to describe patterns or regularities (here phonological regularities) of the language attested in the texts. This requires that the textual material be organized in such a way as to facilitate systematic analysis. The method employed in the analysis of the texts may be described as follows.

As the first step, each Kitsai form in the texts, together with each phonetic variant of each form, was entered on a separate slip with its gloss in English, together with the text number and line number of its occurrence. Thus, a full, typed lexicon to the texts was prepared with a complete set of carbon copies. The typed set of originals was filed alphabetically by the Kitsai forms to constitute an alphabetical lexicon or concordance to the texts. The set of carbon copies was then filed according to various criteria derived from semantic features shared by the glosses - in the case of verbs, usually those associated with the stems. Independent nouns and modifiers were then filed separately as sub-files of the semantic/gloss file.

The next step was to work systematically through the organized lexical slip files in an attempt to regularize the phonetic transcriptions which exhibited various inconsistencies. At this preliminary stage, some recourse was had to traditional techniques of phonemicization in order to distinguish, for example, probably allophonic variation from suspected instances of mis-hearing on the part of the transcriber. Some minimal pairs were encountered and noted for what assistance these might offer later in connection with establishing the shape of underlying phonological segments. In general, however, techniques of phonemicization were used only as a means of regularizing observed variants in the phonetic orthography. It should be noted that the only previous treatment of Kitsai phonology, i.e., that of Bucca and Lesser (1969), which was undertaken within a taxonomic phonemic framework, considers the evidence of contrasting minimal pairs only

partially supportive of the phonemic analysis (Bucca and Lesser 1969:13). In any case, our attempt to regularize the phonetic transcriptional variations of phonological segments continued throughout the course of the linguistic analysis. Many of these were gradually eliminated as work progressed.

Having been slipped and filed, the entire corpus of Kitsai forms was next subjected to as systematic and thorough morphological analysis as could be undertaken within the limitations of the texts. Utilizing the method of recurring partials, numerous prefixes, suffixes and stems were isolated, their allomorphs noted and their underlying phonological shapes posited, however tentatively. These isolated formatives were in turn slipped and placed in a separate file of grammatical elements. This grammatical file provided the morphophonemic evidence used to motivate the phonological rules. It should be noted that, consistent with the generativist's rejection of a phonemic level between the surface phonetic representation and the underlying phonological representation, the morphological analysis proceeded immediately upon slipping and filing the Kitsai forms in the texts. No attempt was made to undertake a complete phonemic analysis as a pre-requisite to the morphological analysis.

It should also be stated that the morphological analysis is scarcely exhaustive for all attested forms. There are several reasons for the incompleteness of such an analysis. First, the narrative style in which the texts are cast has resulted in the occurrence of classes of lexical items, especially verb constructions, which are closely related semantically and, to some extent, morphologically as well.

However, these classes of forms are of infrequent occurrence in relation to the combined representation of the members within each class. Moreover, these forms often exhibit either insufficient, or too complex, morphological variation to allow the investigator more than partial morphological control over the semantic variables operative within the forms. The problems arising from these factors are in turn made more intricate by the frequent attestation of hapax legomena, which often turn out to be complex verb forms crucial to the analysis of some paradigm or string of affixes. The fact that

...it has been widely observed...that of all the members of an open class (such as nouns and verbs) occurring in a body of text, slightly less than 50 percent of them will be hapax legomena (elements occurring just once)...(Samarin 1967:66).

is rather cold comfort, in view of the additional stumbling-block to morphological analysis. All of this is to be expected to some extent, of course, given the characteristics of a narrative corpus. Finally, an additional factor which contributes to the overall complexity of the morphological analysis is found in the structural characteristics of the language itself.

The following brief sketch of the most salient characteristics of the Caddoan languages will provide some background to the phonological analysis presented below. The traits described apply more or less equally to the member languages of the family.

Three word classes are defined on the basis of morphological structure: nouns; verbs; and adverbial modifiers. (There is some evidence, although limited, that clitics form a fourth grammatical class.) All three word classes utilize derivation in word-formation, but only nouns