8501179

**Takahashi, Junichi**

CASE MARKING IN KIOWA: A STUDY OF ORGANIZATION OF MEANING

*City University of New York* PH.D. 1984

University
Microfilms
International 300 N. Zeeb Road, Ann Arbor, MI 48106

# CASE MARKING IN KIOWA: A STUDY OF ORGANIZATION OF MEANING

by

JUNICHI TAKAHASHI

A dissertation submitted to the Graduate Faculty
in Anthropology in partial fulfillment of the
requirements for the degree of Doctor of Philosophy,
The City University of New York

1984

This manuscript has been read and accepted for the Graduate Faculty in Anthropology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

9/4/84
date

Edward H. Bendix
Chairman of Examining Committee EDWARD H. BENDIX

9/6/84
date

Sydel Silverman
Executive Officer

John Beatty

Robert Fiengo

Paul Kroskrity

D. Terence Langendoen
Supervisory Committee

The City University of New York

Abstract

CASE-MARKING IN KIOWA:

A STUDY OF ORGANIZATION OF MEANING

by

Junichi Takahashi

Advisor: Professor Edward H. Bendix

This is a functional analysis of case-marking in Kiowa (a Tanoan language in the Southern Plains). Its main objective is to produce a consistent semantico-pragmatic account of the complex grammatical process of participant coding in Kiowa.

It first examines the basic indexical categories and relational (grammatical) categories which the verb prefix represents. Kiowa indexical categories can be optimally defined in terms of levels of saliency ("high-salient", "low-salient" and "diffuse"), markedness in individuation ("individuation-marked") and coupling ("coupled"), and deictic relations ("proximal" and "distal"), rather than the traditional person and number categories. The relational categories may be optimally defined in terms of two parameters -- direction of effect ("source", "goal", "intermediary" and "neutral") and focus ("focus" and "low-focus"), rather than European-based case categories.

It then proceeds to a functional analysis of three major morpho-syntactic processes (i.e., selection of the verb prefix, occurrence and ordering of NP's and selection of intersentential [conjunctive] markers) which are the most basic and important grammatical devices for coding of participants in Kiowa sentences.

Two grammatical variables appear to have a key role in coordination of the above three processes in Kiowa case-marking. Those two variables, which are referred to as "the focused participant" and "the participant with the highest semantic role", reflect different semantic aspects of the participants (i.e., the semantic content of the participant for the former, and the semantic role of the participant for the latter), and they exhibit different traits of typical "subjecthood". Thus, their behaviors provide some interesting insights into the notion of subject as a grammatical and pragmatic category in linguistic analysis.

The analysis finally confirms a functional view that participant coding in Kiowa is a complex process which involves both grammatical marking and pragmatic inferences which are inseparably integrated in actual functioning of the language.

To my parents, Kazuo and Teruko Takahashi

ACKNOWLEDGEMENTS

I am greatly indebted to Dr. Edward H. Bendix of the Graduate Center of the City University of New York, who, as my dissertation advisor, offered me many hours of his precious time for enchanting discussions and invaluable suggestions which have shaped this dissertation significantly. To whatever degree this dissertation succeeds, much of the credit is his. He is also responsible for my training in linguistic anthropology at the CUNY. I was very fortunate to have him not only as a teacher of the scientific discipline I love but also as a superb model of true and sincere scholarship.

I am also indebted to Dr. John J. Beatty of the CUNY, Brooklyn College, who is responsible for my coming to the U.S. and much of the subsequent anthropological training. It is he who first introduced anthropology and linguistics to me, and later taught American Indian ethnology and ethnography. He had a significant influence on my anthropological thinking and practical techniques of data gathering. Had I not met him in Inuyama, I would not have known this fascinating science of man called anthropology.

I wish to thank Dr. D. Terence Langendoen and Dr. Robert Fiengo of the CUNY Graduate Center, and Dr. Paul V. Kroskrity of the University of California at Los Angels, who as members of my dissertation committee spent many hours to read my dissertation drafts and provided me with useful

comments and suggestions.

I also wish to thank Dr. Edgar Gregersen, Dr. Eleanor Leacock, and Dr. Sally MacLendon of the CUNY Graduate Center who provided important parts of my graduate training.

What should not be forgotten is the moral support I have received from my friends, among whom are the late Mrs. Aileen Beatty, Mr. Yuichi Hata, Mrs. Noriko Hata, Ms. Bienvenida Fernandez and Mr. Kiyotsugu Yano. I want to thank them for their encouragement and support during the lengthy period of this self-supported Kiowa study.

Most importantly, I am indebted to many Kiowa people who offered me a great deal of Indian hospitality as well as valuable information about their language and culture. Without their kind cooperation, this study would not have been possible. Special thanks are due to Mrs. Agatha Bates and Mr. John Bates, who were not only my Kiowa teachers but also my Indian parents. I also wish to thank Mr. Phil Tingley who offered me his home to stay during my field work. He also introduced me to many Kiowas. Among them are Mrs. Ruth Tingley and Mr. Manfred Kaulaity with whom I had some of the happiest days in my life. I am also grateful to some Kiowa-Apache people, especially Mrs. Irene Poolaw, the late Mrs. Gertrude Chalepah, and their sons, Jean, Pascal, and Elton for being always helpful and fascinating.

It is a great pleasure for me to state here that what all those people gave to me has finally borne fruit. This dissertation is not only my accomplishment but also theirs.

TABLE OF CONTENTS

LIST OF TABLES

## SYMBOLS AND ABBREVIATIONS

Act: Actor

Adv: Adverbial

Asp: Aspectual

Ben: Benefactive/Beneficiary

Cjt: Conjunctive

Cnj: Conjecture

Cpl: Coupled

Ctr: Center

Dif: Diffuse

Dst: Distal

Dua: Dual

Emp: Emphatic

F: Focus

FoP: Focused Participant

HAn: High-Animate

HOD: Hierarchy of Dominance

HRP: Hierarchy of (Semanric) Role Prominence

HSa: High-Salient

Hsy: Hearsay Evidential

Ind: Individuation-Marked

Inv: Inverse

LAn: Low-Animate

Loc: Locative

LSa: Low-Salient

Mod: Modal

NAn: Non-Animate

Neg: Negative

Neu: Neutral

Nom: Nominalizer

NP: Noun Phrase (including PP)

NReq: Negaive Request

O: Originating Point of Effect

Obj: Object

PHR: Participant with the Highest Semantic Role

Plr: Plural

Pro: Proximal

Q: Question (interrogative)

Req: Request

S: Source

Sgl: Singular

T: Terminal Point of Effect

-: Morpheme Boundary

=: Lexically One in Kiowa

=>/<=: Direction of Effect (e.g., "A=>B" means A (source) affects B (goal); "A<=B" means B (source) affects A (goal))

>: Dominance: e.g., "A > B" indicates A is more dominant than B.

=S: Source-Dominant Equality

=G: Goal-Dominant Equality

## PHONEMIC INVENTORY OF KIOWA AND NOTATIONAL CONVENTIONS

1. Consonants:

| Manners | Places of Articulation | | | | |
|---|---|---|---|---|---|
| Stops: | Labial | Alveolar | Palatal | Velar | Glottal |
| Voiceless | p | t | | k | |
| Aspirated | ph | th | | kh | |
| Glottalized | p´ | t´ | | k´ | |
| Voiced | b | d | | g | |
| Affricates: | | | | | |
| Voiceless | | c | | | |
| Glottalized | | c´ | | | |
| Fricatives: | | | | | |
| Voiceless | | s | | | h |
| Voiced | | z | | | |
| Nasals: | | | | | |
| | m | n | | | |
| Lateral: | | | | | |
| | | l | | | |
| Semi-Vowel: | | | | | |
| | | y | | | |

2. Vowels:

| Position | Low Tone | High Tone | Falling Tone |
|---|---|---|---|
| High-Front | i | I | Ii |
| Mid-Front | e | E | Ee |
| Low-Front | a | A | Aa |
| Low-Back (1) | w | W | Ww |
| Mid-Back | o | O | Oo |
| High-Back | u | U | Uu |

Nasalization: /~/

Length: /:/

(Examples)

/O~/ = Nasalized mid-back vowel with high tone

/i~/ = Nasalized high-front vowel with low tone

/Aa~/ = Nasalized low-front vowel with falling tone

/u:/ = Long high-back vowel with low tone

/E:/ = Long mid-front vowel with high tone

/u~:/ = Long nasalized high-back vowel with low tone

/Ww~:/ = Long nasalized low-back vowel with falling tone

(1) Because of limitation of the available printer, I use "w", which Kiowa does not have in its phonemic inventry, for what is normally written as "open o".

# I. INTRODUCTION

## 1.1. The Kiowas

The Kiowas are Kiowa-Tanoan speaking people who currently reside in the southwestern part of Oklahoma, USA. Both ethnographic and historical evidence seem to indicate the northern origin of the tribe (Mooney 1898, Vestal & Schultes 1939, Mayhall 1962). At least until the late seventeenth century, the Kiowas were living in the Rocky Mountain region of Montana. By the end of the seventeenth century, they drifted out to the Northern Plains, where they soon made an alliance with the Crows and acquired horses and various other traits of the typical Plains culture. For a large part of the eighteenth century, the Kiowas stayed in the Black Hills region of South Dakota. However, a sudden expansion of the Siouan tribes (Secoy 1953) forced Kiowas to move further down to the Southern Plains to find a new niche.

In the Southern Plains, the Kiowas became prosperous buffalo hunters and skilled breeders, traders, and raiders of horses. They enjoyed the prosperity of the new environment for nearly a century until they were forced to settle down in a Federal reservation in southwestern Oklahoma as a result of the Medicine Lodge Treaty of 1868.

On the reservation, the Kiowas came to experience direct acculturation pressure: life had to become

sedentary, and they became, to a large degree, dependent on governmental rations for subsistence. White traders began to appear, and missionization and schooling started in the region.

The acculturation pressure was even intensified after the turn of the century when Indian reservations in western Oklahoma were opened for individual land allotment. There was a sudden flood of Anglo settlers to that area, and they soon outnumbered the Indians. In the last several decades, there has been a gradual but steady drift in the Indian population from the alloted land to the neighboring towns and cities, which eroded the Indian community to a significant degree.

Today, a great majority of the Kiowas live among Anglos and Indians of other tribes. Their major income comes from the alloted land which many older individuals still own (collectively in most cases) and lease out to Anglos for farming, ranching, and oiling. Some individuals get permanent or temporary jobs at governmental agencies such as BIA or tribal offices, and a few are employed in the private sector. However, a large number of Indians, particularly youths, are unemployed, and welfare and other social aid are very important sources of income for those people.

### 1.2. The Kiowa Speech Community

#### 1.2.1. Pre-contact

Historical assessment of the Kiowa speech community is

a difficult task to undertake because of paucity of data and complexity of the problem. During the historical period, the Kiowa language had a rather intensive contact with at least three other Indian languages: Crow, Kiowa-Apache, and Comanche.

The Crows are old allies of the Kiowas whom Kiowas respected greatly. It is said that Kiowas used to encourage their children to learn the language and customs of the Crows by sending them to the Crow country (Mooney 1898:155-56). The Kiowa-Apaches are a group of Apachean speaking people who have been associated with the Kiowas and participated in various communal activities of the Kiowas for centuries and yet maintained their identity and language. The Comanches are the Kiowas' allies in the Southern Plains. The Comanche language was once used as a trade language by the Indians of the southern plains.

Thus, it is quite probable that the Kiowa language has been influenced by one, or all, of these languages. However the extent of such influence is yet to be investigated.

1.2.2. Post Contact

Contact with English is by far the most significant factor in the change of the Kiowa speech community since the end of the last century. English has rapidly replaced the native language in the Kiowa speech community. Unlike the cases of some Southwestern languages (e.g., Spicer 1954, Dozier 1964), the Kiowa speech community did not develop a hybrid language or a steady societal

bilingualism. Instead, Kiowa and English were kept distinct, and the latter simply has taken over the former. This was probably inevitable given the fact that Kiowas have lost their communal land, and their contact with Anglos was very sudden and intensive.

Historical evidence indicates that in the first quarter of this century a large majority of the population were monolingual Kiowa speakers (aside from some possible knowledge of Comanche and other Indian languages). Children grew up speaking Kiowa as the first language, and learned English after they started attending school. Churches and governmental agencies had to depend on a few skilled Indian interpreters.

In the second quarter of the century, the situation was already quite different. Crowell (1949) summarized her observation as "oldest people are mono-lingual in Kiowa, the statistically prepondent middle aged group is bilingual in Kiowa and English, and the youngest speakers understand Kiowa but may or may not speak it at home". The number of monolingual Kiowa speakers had declined sharply by the mid-twentieth century.

Today, English is dominant in almost all aspects of Kiowan social life. Except for some ritual and ceremonial contexts and private conversations between old people, Kiowa is not generally used. The number of bilingual Kiowa speakers may be estimated somewhere between 100 and 500 depending on the criteria, and the speakers are almost

limited to the oldest generation (55 years old and older). Skills and knowledge of Kiowa among younger generations are very limited. Mixed residence and the common practice of intermarriage, particularly with Indians of other tribes, make language maintenance extremely difficult. Although there have been a few sporadic attempts to teach Kiowa to young people, none of them seems to have had a notable effect. Thus, it is quite probable that the Kiowa language will die out within a few decades.

### 1.3. The Kiowa Language

#### 1.3.1. Genetic Affiliation

The genetic relation of Kiowa to the Tanoan languages of Rio Grande Pueblos was first suggested as early as 1910 by John Harrington. In the article titled as "On phonetic and lexical resemblances between Kiowan and Tanoan", Harrington presented quite convincingly a fair number of examples which suggested a very plausible genetic link between Kiowa and Tanoan. However, neither Harrington himself nor other linguists of his time substantiated his pioneering work with a true comparative analysis.

It was as many as five decades later that the Kiowa-Tanoan hypothesis received serious attention. Miller (1959) and Trager and Trager (1959) reopened a debate for definitive confirmation of this long neglected hypothesis, and Hale (1962, 1967) was finally able to produce a reconstruction of the proto Kiowa-Tanoan phonology. Although Hale's reconstruction is not quite complete

(limited to the initial consonants), the evidence he presented was so solid that Kiowa's genetic affiliation to the Tanoan languages is widely regarded as an established fact today (Voeglin and Voeglin 1976, Campbell and Mithun 1979).

1.3.2. Descriptive Studies

Descriptively, Kiowa has been a neglected language in North America. Since Harrington's monumental "Vocabulary of the Kiowa language" of 1928 till the mid-seventies few sporadic descriptions of fragments of Kiowa grammar appeared. McKenzie and Harrington (1948) and Sivertsen (1956) were mainly concerned with phonological problems. Wonderly, Gibson and Kirk (1954), and Merrifield (1959b) discussed the noun classes, and Merrifield (1959a) the verb prefixes. Trager (1960) reviewed and organized these earlier works.

A significant advance in the descriptive study of Kiowa was made by Laurel Watkins (1976, 1978, 1979, 1980). Watkins' grammar of Kiowa (Watkins 1980) is the first attempt to present a fuller view of the Kiowa language, and this is so far the most extensive description of Kiowa grammar. Being the first such work, Watkins naturally took a structurally oriented approach. She concentrated her effort mainly on structural analysis of the grammar and did not develop the semantic and pragmatic aspects very much. Nevertheless, it is a significant accomplishment in the field of Kiowa-Tanoan linguistics.

### 1.3.3. Need for Research

There is yet a great deal to be studied in the Kiowa language. Particularly, semantic and pragmatic aspects of Kiowa need to be explicated. Therefore, it seems not only meaningful but also necessary at this point to investigate the semantics and the pragmatics of the Kiowa language and produce a semantically and pragmatically based account of Kiowa grammar which will supplement Watkins´ structurally oriented analysis, in order to achieve a more "holistic" understanding of the Kiowa language.

## II. GOAL AND METHOD OF STUDY

### 2.1. Functional Approach

In this study, I take a functional approach to the grammatical analysis of Kiowa case-marking. I use the term "case-marking" broadly as grammatical processes of participant coding in general rather than narrowly as NP affixation to indicate case roles.

Functional grammar may generally be characterized as an approach to linguistic analysis in which emphasis is placed on the communicative function of the language in addition to its structure. Since functional grammar represents a general approach (or orientation) to linguistic analysis rather than a rigidly constructed theoretical model, there can be, and in fact there actually are, many different approaches which may be called functional (e.g., Diver 1975; Silverstein 1976a, 1976b, 1977; Kuno 1975, 1980; Van Valin and Foley 1980; among others).

Functional grammar is, as Kuno (1980) emphasizes, in principle, independent of various models of grammar and hence is not exclusive of any of them. In addition, since every theory of grammar must have a place where various functional constraints on the well-formedness of sentences are stated, incorporation of functional perspectives can be quite beneficial to any model of grammar.

Functional approaches have made definite contributions

in broadening the scope of linguistic analysis, which we can see in three main areas.

Firstly, functional grammar revitalized the old thesis that a sentence represents a thought, which had been a common understanding on intuitive grounds but never had been well explicated empirically in linguistics. As Chafe (1979) points out, there are definite and consistent correspondences between structural levels of language (e.g., sentence, paragraph, and discourse) and cognitive levels (e.g., thought, story, and memory, in his use of the terminology) which accompany speech. Sentence corresponds with thought, and indeed, one could linguistically operationalize thought in such a way that it can be analytically related to the constituents and the structure of the sentence.

Case grammar (Fillmore 1968, 1977) provides probably the most practical and effective framework of analysis (for field linguistics) for (underlying) meaning, which may be considered a linguistic approximation of the thought which is expressed by the sentence. Functional grammar can add to the case grammar model an important notion that a sentence describes a scene (i.e., situation, event, or action) from a single "viewpoint".

Kuno and Kaburaki (1977), using examples from Japanese and English, demonstrate that an acceptable sentence must describe a scene from the perspective of a single participant (that is where the speaker's "empathy focus" is

placed), just as a photograph records a scene from a single viewpoint (where the camera is placed). On the basis of their observation, Kuno and Kaburaki postulate a cross-linguistically testable thesis that a single sentence cannot contain logical conflicts in empathy relationships ("ban on conflicting empathy foci" in their terminology).

DeLancey (1981b) applies Kuno and Kaburaki's model to the analysis of the syntactically more complicated split ergative case-marking. Citing examples from various Tibetan, Australian and North American languages, DeLancey quite convincingly shows that the empathy-viewpoint model has impressive cross-linguistic generality and applicability.

Van Valin and Foley (1980) conceive of a similar view in their outline of role and reference grammar. In their postulation of sentential grammar, the concept of "pragmatic peak" represents the focal point of attention, a concept similar to Kuno and Kaburaki's empathy foci.

What seems to be common among those theorists of functional grammar is an assertion that the sentence has a pragmatic structure as well as a syntactic structure, and a belief that the pragmatic structure is built around the focal point of description (which is called by various terms such as empathy focus or pragmatic peak).

Secondly, functional grammar emphasizes the importance of discourse level variables to the analysis of sentential level phenomena. We have a growing amount of evidence

showing that discourse has some systemic organization (e.g., Grimes 1976, Halliday and Hassan 1976, and van Dijk 1977), and this organization has a significant effect on the way individual sentences are formulated (choice of construction, case role assignment, NP order, pronominalization, deletion, use of deixis, and etc.). Therefore, it is not only useful but, in some cases, necessary to take discourse constraints into considereation when we analyze individual sentences in their functioning.

Some of the discourse related notions have already been incorporated into the models of sentential grammar. For examples, the notion of new and old (given) information (Chafe 1970, 1976) has been applied in many languages (e.g., Seneca, Japanese, etc.) and proved to be very useful. Traditionally, syntactically defined notions such as subject can also benefit from reexamination with a broader scope of analysis (Li 1976).

The third important contribution of the functional approach to grammatical analysis is that it has managed to show on empirical grounds how the (culturally) shared knowledge of the world affects the way language is syntactically organized and structured. Silverstein (1976a), for example, discovered a hierarchy of semantic features according to which case role assignment is determined. Existence of such hierarchical arrangements of semantic features, which are called by various terms such as "agenticity hierarchy", "animacy hierarchy" or "empathy

hierarchy", are reported, with some cross-linguistic variation, in various languages from all over the world including North America, and are considered to be important facts with which to account for some syntactic problems (e.g., Comrie 1982, Witherspoon 1980, Kroskrity 1984, etc.).

In the analysis of Kiowa case-marking which is presented in this dissertation, I will assume those basic premises of functional grammar which I briefly discussed above and attempt to produce a more explanatory account of Kiowa case-marking from a functional point of view.

2.2. Methodological Problem

Since a functional approach has a broader scope of analysis than a purely structural approach, it naturally requires a broader scope of data. Unlike the traditional structuralist's analysis of grammar, where structural data have the primary importance and semantic data only a peripheral role, functional analysis relies as much on semantic data as structural data. Hence how one treats (i.e., gathers, processes, analyzes, and organizes) semantic data becomes of great methodological importance.

Semantic data in empirical linguistics (particularly in field linguistics) is a complex mixture of various types of linguistic and meta-linguistic information which typically includes (1) substitution or paraphrasing of words, phrases, clauses, or sentences of the subject language in the same language; (2) translation or

interpretation of the native utterances in the instrumental language of research, which may be regarded as metasemantic accounts of the original utterances in a different linguistic code; and (3) metasemantic (and metapragmatic as well) accounts or paraphrasing of (2) in the same instrumental language.

Translation, or metasemantic paraphrasing in a different language, which is done by the native informant, with or without assistance of the analyst in the course of data gathering, involves some complex methodological problems. As various surveys in sociolinguistics and speech act theory have demonstrated, speech conveys many levels of "meanings", both semantic and pragmatic, and referential and inferential. Different languages have rather different ways of encoding semantic and pragmatic information, and these two kinds of information are generally conveyed integratedly by the same grammatical devices. Hence it is extremely hard, if not impossible, to make a purely referential translation eliminating all the implicit pragmatic variables which are naturally involved in human speech, from translation.

This problem could become particularly serious when the subject language and the instrumental language (i.e., the language in which research is conducted and/or presented) are vastly different in their grammatical structure and cultural background. We often find analysts caught in the semantic problems of the instrumental language (which

appear in the English glosses) instead of the problems which are inherent in the subject language itself. Kiowa is unfortunately both structurally and culturally very different from English, in which the research is conducted and the analysis is be presented. Hence we need maximum precaution in handling the semantic data in the study of Kiowa.

One of the most fundamental but very crucial tasks in handling semantic data is to determine the true input of grammatical analysis. This necessarily requires processing of the "raw data" which are the translations, interpretations, and explanations of the original utterances (in the subject language) provided by the native (bilingual) informant. Since the raw data are a complex mixture of semantic, pragmatic, and cultural factors, we can not take them at their face value (i.e., with their full semantico-pragmatic implications in the instrumental language) as the input to grammatical analysis. Therefore, it is necessary that the informant's translation (the raw data) be processed, or retranslated and restated, in terms of more clearly defined metalinguistic terms where pragmatic variables as well as (referential) semantic variables can be to some degree operationalized and controled.

Thus, in a functional analysis of grammar, where meaning is to be regarded as data as important as form, it is methodologically important to have explicitly and

operationally (if possible) defined metasemantic and metapragmatic categories and variables in terms of which meaning in the original statements (in the subject language) can be adequately represented without ethno-centric bias. This will naturally direct the analysis to be more concentrated on careful examination of language specific semantico-pragmatic variables and categories (particularly in comparison with the instrumental language) rather than making a hasty attempt to discover what appear to be cross-linguistically general traits.

### 2.3. Goal of Study

What I attempt here is an analysis of Kiowa case-marking with a functional perspective. A heavy emphasis will be placed on semantico-pragmatic aspects of that grammatical process.

The focus of study is to examine how meaning is organized in the grammatical process of case-marking in Kiowa. My goal is to produce a consistent and explanatory semantico-pragmatic account of Kiowa case-marking. This study will hopefully bring about some new perspectives on Kiowa case-marking in two important respects.

Firstly, it critically examines basic semantic and grammatical categories which are involved in Kiowa case-marking. European-based grammatical categories, which are often used as fundamental means to describe and analyze a grammar, tend to show some ethno-centric bias when applied to non-European languages. It often happens that

the analysis becomes distorted because of this lack of fit. Therefore, instead of uncritically adopting conventional grammatical categories (though they are widely used), I will try to examine and redefine basic categories of description and analysis in such a way that they will be optimal for Kiowa. Although the definitions given in this study are language specific, I will try to operationalize them as much as possible, so that they can acquire some inter-subjective and cross-linguistic generality.

Secondly, this study aims at a more explanatory account of case-marking than more traditional structurally oriented analysis. It deals not only with formal variables but also with various semantic and pragmatic variables, and integrates them as a functional whole in the process of case-marking. Needless to say, a large part of the problems which I discuss in this study overlaps with what earlier linguists (particularly Watkins 1980) described and discussed. However, my purpose here is not just to make reanalyses of those problems but to present explanatory accounts for the structural reality.

In the following chapters, the analyses will be presented from the structurally lower level to the higher level. This order of presentation is a matter of convenience and does not necessarily reflect the order of discovery. As the reader will find out quickly, the analyses of each part are really mutually dependent.

Chapter 3, Noun Classes and Underlying Semantic

Features, examines some inherent semantic features of Kiowa nouns which are associated with the noun classes. The purpose of this chapter is to capture semantic regularities in pronominal (verb prefix) indexing which turn out to be far more extensive than traditional analyses have assumed.

In Chapter 4, The Verb Prefix, the focus of analysis is shifted to the pronominal verb prefix which plays the central role in Kiowa case-marking. The main objective of this chapter is to present an alternative analysis of the indexical categories and the relational categories which will be semantically more consistent with the results presented in Chapter 3.

Chapter 5, Morphological Derivation of the Verb Prefixes, is the extension of Chapter 4. This chapter analyzes the processes of morphological derivation of the verb prefixes, which, on the basis of marking theory, will be consistent with the semantic account presented in Chapter 4.

In Chapter 6, Function of the Verb Prefix in Case-marking, the scope of analysis is extended to the full sentential level. It will provide an integrated account of verb prefix functioning in Kiowa case-marking.

Chapter 7, The Role of NP's in Case-marking, is the extension of Chapter 6. It discusses mainly the role of NP's in two important aspects of case-marking: referencing and signaling of case roles.

In Chapter 8, Case-marking and Intersentencial

Relations, the scope of analysis is further extended to the intersentential (dyadic) level. Some complex semantico-pragmatic relations between the conjoined sentences will be analyzed in relation to their morpho-syntactic realization by the conjunctive markers, case-marking prefixes and NP's.

The last chapter is a review chapter, in which all the important issues which are discussed in the previous chapters will be summarized and a concluding statement will be made.

2.4. Data

The data on which the present analysis is based were obtained from loosely structured elicitation, story telling, and some spontaneous conversations. In elicitation, I took advantage of the actual situation surrounding the informant, or tried to set up some imaginary contexts (as much as possible), and had the informant produce sentences in those contexts, so that the data gathering session becomes a simulated conversation or a narration.

These data were gathered during my field trips about Anadarko in southwestern Oklahoma which I made in the summers of 1979, 1980, and 1981. A large part of the data was obtained from a single speaker--Mrs. Agatha Bates who was born in 1915 and grew up speaking Kiowa as her first language. Her older brother Mr. Paul Padlty and younger brother Mr. Victor Padlty also contributed as important

sources of linguistic data. Over a dozen other Kiowa elders whom I met during the course of field work provided me with valuable cultural data as well as linguistic data, which helped me considerably in understanding the sociolinguistic background of Kiowa.

I must state that I owe a great deal to insightful linguistic intuition of the native Kiowa speakers, particularly Mrs. Bates, for this study of Kiowa grammar. However, what I present here is my own analysis, and not the documentation of native speaker's accounts. Hence, I am fully responsible for all the errors and misunderstandings which this thesis might contain.

# III. NOUN CLASSES AND UNDERLYING SEMANTIC FEATURES

## 3.1. Noun Classes

The Kiowa language has a semantically complicated noun class system which has attracted a considerable amount of attention from researchers. Harrington described five "genders" of Kiowa and noted their agreement with case-marking pronominal verb prefixes (Harrington 1928). Wonderly, Gibson and Kirk (WGK hereafter) later postulated four noun classes on the bases of the pattern of number marking by means of the number suffix on nouns (Wonderly, Gibson & Kirk 1954). Merrifield then synthesized Harrington's and WGK's views and presented an integrated account of the Kiowa noun classification system (Merrifield 1959b). Later researchers (e.g., Trager 1960, Watkins 1980) all accepted Merrifield's account.

According to WGK (and Merrifield and others), Kiowa nouns can be classified into four primary noun classes (to be called class I, class II, class III, and class IV following WGK and Merrifield) on the basis of the pattern of number marking.

Class I nouns are basically singular/dual (*1). In other words, they refer to either a singular or a dual referent when they are not number marked (i.e., not affixed by the number suffix). When suffixed, they have a plural referent:

| Gloss | Unmarked | Marked (suffixed) |
|---|---|---|
| Kiowa | kWy (Sgl/Dua) | kWy-gU (Plr) |
| dog | cEgun (Sgl/Dua) | cEgun-dw (Plr) |

There are a large number of allomorphic variants for the number marking suffix (i.e. -bW, -mW, -dW, -gW, -gU, -gyA, -Oy, -Op and -Om), and their distribution is largely phonologically conditioned (Watkins 1980:103-5).

Class II nouns are basically dual/plural. They refer to a dual or plural referent when they are not number marked, and a singular referent when number marked:

| Gloss | Unmarked | Marked (suffixed) |
|---|---|---|
| tree | A: (Dua/Plr) | A:-dw (Sgl) |
| shawl | khW: (Dua/Plr) | khW:-dw (Sgl) |

Class III nouns, which are quite rare, are basically dual. When they are number marked, they refer to a singular or plural referent:

| Gloss | Unmarked | Marked (suffixed) |
|---|---|---|
| apple | Alw: (Dua) | Alw:-bw (Sgl/Plr) |
| tomato | k´Wwn (Dua) | k´Ww˜:-dw (Sgl/Plr) |

As shown above, the number suffix in all cases just inverses (or logically negates) the basic number. For this reason, this number marking suffix in Kiowa is called the "inverse marker".

There are still a large number of nouns which do not take the number marker (or inverse marker) at all. The basic number of those nouns (class IV nouns) is thus indeterminate:

| Gloss | Unmarked | Marked (suffixed) |
|---|---|---|
| rock | c´O (Sgl/Dua/Plr) | none |
| meat | kI: (Sgl/Dua/Plr) | none |
| cloth | hOlda (Sgl/Dua/Plr) | none |
| book | kUt (Sgl/Dua/Plr) | none |

Cross-referencing of nouns by the pronominal verb prefix is a complex process which Merrifield assumed to show agreement in number. His basic assumption was that the cross-referencing pronominal prefix agrees with the noun in number (actual referential number I assume). When the noun is inverse-marked, the verb prefix shows agreement with the number inversion rather than the actual number. Thus, for class I, a singular verb prefix occurs to signal singularity of the referent, a dual prefix to signal referential duality, and an inverse number prefix to signal inversion of the basic number (thus referential plurality). Similarly for class III, a dual prefix occurs to signal duality of the referent, and an inverse number prefix to signal number inversion (i.e., singularity or plurality (thus ambiguous) of the referent).

However, class II nouns and class IV nouns present some complicated problems in number agreement. So Merrifield was forced to make a sub-classification for those two classes. He classified class II into two sub-classes (to be designated as class IIa and IIb following Merrifield), and class IV into three sub-classes (to be designated as class IVa, IVb, and IVc).

In class IIa, a plural referent is referenced by a plural verb prefix, a dual referent by a dual verb prefix, and a singular referent by an inverse number prefix. Observe the examples (1), (2) and (3). For the abbreviations used in the glosses, see the table of symbols and abbreviations in the front.

(1) A: gyat-hW:gya
sticks I=>Plr-got
"I got sticks."

(2) A: nen-hW:gya
sticks I=>Dua-got
"I got two sticks."

(3) A:-dw dE-hW:gya
stick-Inv I=>Inv-got
"I got a stick."

(Data from Merrifield 1959b)

As shown above, a plural referent (sticks) is cross-referenced by the verb prefix /gyat/ which signals plural object, a dual referent (two sticks) is referenced by the prefix /nen/ which signals dual object, and a singular referent (a stick) is referenced by the prefix /dE/ which signals inverse object.

On the other hand, in class IIb, a plural referent is cross-referenced by the singular prefix /gya/ (I to it) and not by the plural prefix /gyat/ (I to them).

(4) hW~: gya-hW:gya
guns I=>Sgl-got

"I got guns."

(5) hW~: nen-hW:gya

guns I=>Dua-got

"I got two guns."

(6) hW~:-gya dE-hW:gya

gun-Inv I=>Inv-got

"I got a gun."

(Data from Merrifield 1959b)

Class IV nouns are divided into three sub-classes: IVa, IVb, and IVc. In class IVa, a plural referent is referenced by a plural prefix, a dual referent by a dual prefix, and a singular referent by a singular prefix. In class IVb, a singular referent is referenced by a singular prefix, a dual referent by a dual prefix, but a plural referent is referenced by a singular prefix and not a plural prefix. Class IVc nouns are always cross-referenced by a plural prefix regardless of the actual number of the referent. Thus, in Merrifield's analysis, there are a total of seven noun classes in Kiowa.

Table 1: Kiowa Noun Classes and Their Formal Criteria in Earlier Analyses (WGK 1954 and Marrifield 1959b)

| Noun Class | Number of Referent | Inverse Marker | Prefix |
|---|---|---|---|
| Class I | one | no | Sgl |
| | two | no | Dua |
| | 3 or more | marked | Inv (*2) |
| Class IIa | one | marked | Inv |
| | two | no | Dua |

| | | | |
|---|---|---|---|
| | 3 or more | no | Plr |
| Class IIb | one | marked | Ind |
| | two | no | Dua |
| | 3 or more | no | Sgl |
| Class III | one | marked | Ind |
| | two | no | Dua |
| | 3 or more | marked | Ind |
| Class IVa | one | no | Sgl |
| | two | no | Dua |
| | 3 or more | no | Plr |
| Class IVb | one | no | Sgl |
| | two | no | Dua |
| | 3 or more | no | Sgl |
| Class IVc | one | no | Plr |
| | two | no | Plr |
| | 3 or more | no | Plr |

As shown in Table 1, Merrifield's classification is explicit and elegant. However, it has an obvious problem, which is lack of agreement between actual (referential) number and number signaled by the verb prefix in class IIb, IVb, and IVc, which contradicts his assumption that there is number agreement between the noun and the cross-referencing verb prefix, the very criterion which his noun classification is based on.

Merrifield has two ad-hoc accounts for this seemingly contradictory selection of the verb prefix in class IIb, class IVb and class IVc. In class IIb and IVb, a singular prefix is used to cross-reference a plural referent. This is, according to Merrifield, due to the fact that the plural referent in these classes is seen collectively as a single unit ("collective" plural) and hence to be signaled

singular rather than plural. In class IVc on the other hand, the singular referent is seen to consist of many parts ("distributive" plural), and hence it is to be signaled plural rather than singular (thus cross-referenced by a plural prefix.

However, these accounts of his encounter some difficult problems. For example, although Merrifield might argue that a book (/kUt/: class IVc) consists of many parts (i.e., covers and pages perhaps) and hence signaled as "plural" by the prefix, his hypothesis can not account for the fact that a sheet of legal document (e.g., marriage license) or a painting, which physically consists of a single part (a sheet of paper), is also called /kUt/ and yet signaled as "plural". Watkins (1980: 117), in regard to the fact that the noun /tO:/ behaves as a class IVc noun when it means Indian tepee(s) but IVb when it means whitemen's house(s), argues in support of Merrifield that an Indian tepee is seen as consisting of many parts such as poles and skins (thus plural), but a whiteman's house is seen as a single integrated unit (thus singular). However, although this account might explain why Indian tepees are always signaled plural regardless of actual number, it does not explain why whitemen's houses are always signaled singular no matter how many there are in the referent. In fact, the accounts proposed by Merrifield or Watkins do not seem to have generality beyond a few nouns in question, nor is there independent evidence to support the claims.

Therefore these accounts still remain ad-hoc.

Merrifield's classification is based on formal criteria, and pays little attention to the semantic aspect (i.e., inherent meaning) of the nouns. As a matter of fact, although Harrington (1928) noted animate and inanimate as being the most fundamental categories in Kiowa noun classification, researchers of the later period, including Merrifield, who were under a strong influence of neo-structuralism, did not pursue the semantic analysis of the noun classes.

In the rest of this chapter, I will investigate the semantic aspect of the Kiowa noun class system. First, an attempt will be made to identify some basic semantic features which correlate with the noun classification which has been established solely on the basis of formal criteria. Then the role of those semantic features in apparent number marking and pronominal referencing will be examined. The analysis will finally lead to the proposal of a semantico-pragmatic view which will offer a more consistent and explanatory account for Kiowa noun classification.

3.2. Semantic Correlates for Primary Classification

Primary classification has been made on the basis of the pattern of inverse number marking. Thus what is to be examined here is whether or not the "basic number" of each Kiowa noun is predictable by some inherent semantic features which it has. Language has both regularities and

irregularities which the analyst has to contend with, so he is constantly faced with the practical question "to what extent should the analysis capture regularity, and to what extent should it allow irregularity?" There is no fixed standard for answering this question. Each analysis has to seek its own optimum solution on an empirical basis. What is presented below is an attempt to reach an optimum solution in finding semantic determinants for what appears to be the basic number which conditions the pattern of inverse number marking.

In order to capture semantic determinants for the basic number, it is necessary to investigate a large body of Kiowa vocabulary and examine if there are any shared semantic features in each noun class. Ideally such an analysis should be substantiated by systematic interviews with native speakers for their "emic" accounts. However, unfortunately the opportunity for that has not been available for me yet. Hence, the analysis which I present here relies largely on my limited knowledge about Kiowa culture and thinking (which I have obtaind from the informants and various published sources) and common sense-based inference. Although common sence-based inference cannot replace true "emic" accounts, it nevertheless can serve as an attempt to reach an "etic" understanding of the problem for the time being. Although my analysis is not complemented with an emic support at this point, consistency of the analysis with the analyses in

other chapters will provide some indirect but sufficiently strong support for that.

Table 2 (shown at the end of this section) lists some typical examples for each of the seven noun classes. A quick run through the list will give a fair idea of the content of each noun class.

A large portion of the class I nouns are living beings, both human and non-human. There are a few nouns which are biologically not animate. Some of these are perhaps metaphorically animate. In fact, /hEe˜:I:/ (doll) literally means "play child", and /tA˜:/ (star) is anthropomorphized in a Kiowa legend as Watkins (1980:106-7) points out. Some other inanimate nouns represent self-moving things (e.g., /k´WdAl/ "wheel, vehicle") and things which can generate light (e.g., /tA˜:/ "star" or /w:kwsWm/ (reflector, mirror). Some tools are also included in class I, but interestingly enough, these seem to have a special status as war weaponry: e.g., /thO˜/ (axe, tomahawk) or /k´W:/ (knife) (*3). There are also some nouns for body parts in this class. Body parts are not restricted to class I. Both class II and class IV contain several nouns for body parts. However, compared to those in class II and IV, the body parts in class I (e.g., /thE˜n/ (heart), /t´Wlel/ (liver), /gOmtho˜/ (spine), /tA:de/ (eye), /thOo˜de/ (leg), etc.) appear to have more vital roles for human and animal life and daily activities, and humans and animals generally have only one (or one pair) of those as

noted by Watkins (1980:106). As is clear from the above examples, class I nouns are generally forceful (containing some internal force) and/or have a high degree of "visibility": thus, they are natural "attention grabbers". Lacking an appropriate term to designate these shared characteristics of class I nouns, I will use the term high-animate for them. Note this term is just a suggestive label, and refers to specific aspects of animacy and not totality.

The major part of class II (both IIa and IIb) includes living plants (e.g., /A:/ (trees), /A:hi~:/ (cotton wood trees), /zOna:/ (pine trees), etc.), derivatives from plants (e.g., /AydE~/ (leaves), /dO~:/ (seeds), etc.), and artifacts made from plants (e.g., /kUtA:/ (pencils), /pI~:A:/ (tables), /polhA:/ (bows), etc.). It also includes some body parts and artifacts made of metal. The body parts of class II (e.g., hands, feet, penises, feathers) tend to be either plant-like in appearance or tool-like in function. The metal artifacts of class II appear to be later functional replacements for those which were originally made of plant material. Thus, it appears that the prototype of class II is plant, and grouping of class II is based on the extended concept of plant which includes both real and metaphorical, parts and whole, and original (or natural) and derivative. Although class II nouns in general do not seem to have the same amount of internal force or the same degree of "visibility" or attraction as class I nouns,

nevertheless they do possess some of these characteristics. Hence class II will be most appropriately labled as low-animate.

Class III is a small and peculiar class of nouns which consists of few members. Its members are limited to /Wl/ (strands of hair, scalps) and a few other nouns for tree fruits such as /Alw:/ (apples, plums) and /thOt´Olw˜:/ (oranges). Class III nouns seem to share at least one common characteristics: they all represent something which grows out of the main body. Fruits grow out of the tree, and hair grows out of human body, and this is the only plausible reason I can think of for why they are grouped together. Although the nature of this shared feature is not well understood at this point, it shall be tentatively labled "fruitage". It is also to be noted that class III nouns are either plant or plant-liike. Hence, class III, like class II, are low-animate.

Class IV is a large and complex class which includes nouns that represent mass (e.g., /cE˜n/ (mud), /pha˜n/ (cloud, sky), /thO˜/ (water), etc.), artifacts made of plant, metal and animal materials (e.g., /t´wA:/ (earring), /hOlda/ (clothing), /sW:bI˜/ (quiver), etc.), and abstract entities (e.g., /kUngya/ (dance), /WlkhWygya/ (craziness), etc.), as well as some body parts. However, no actually living thing, plant or animal, is included in this class. Even the body parts which belong to this class (e.g., /kI:/ (fresh, meat), /bOt/ (belly), etc.) tend to exist in mass

rather than in a fixed definable form. Hence, despite its semantic complexity, class IV may be most generally and adequately characterized as non-animate

As shown above, the primary classification of Kiowa nouns, which is reflected in the pattern of inverse number marking, basically correlates with degrees of animacy: Class I corresponds with the highest degree of animicy (high-animate), class II and class III the next (low-animate), and class IV corresponds with the lowest degree of animacy (non-animate). Although this does not exhaust the semantic problems which are involved in the noun classification in Kiowa, it strongly suggests that there is some degree of semantic motivation underlying the Kiowa noun class system.

Table 2: Kiowa Noun Classes and Nouns

CLASS I:

k´yA:hIi˜: (man), maI˜: (woman), thalI: (boy), mAthw˜n (girl), mW˜:gIi: (grandchild), pabI: (brother), kWy (Kiowa), thwgUy (Apache), CEe˜: (horse), t´Ap (deer), bAo (cat), CEgun (dog), kUi: (wolf), kUu:tw (bird), t´A˜y (egg), gOmtho˜ (spine), dEn (tongue), tA:de (eye), t´W:dE (ear), zEp (breast), thOo˜de (leg), gU˜:dE (horn), k´Ol (neck), thE˜n (heart), t´Wlthwn (kidney), t´Wlel (liver), hEe˜:I: (play child, i.e., doll), tA˜: (star), w:kwsWm (mirror), k´WdAl (wheel, vehicle), thO˜ (tomahawk, axe), k´W:

(knife), etc.

CLASS IIa:

A: (sticks, pieces of board), AydE~ (leaves), AkhI: (flowers), dO~: (seeds), sOl (onions), sEA: (willows), SOn (weeds), pEp (bushes), pI~A: (eating board, i.e. tables), kUtA: (writing sticks, i.e., pencils), cAt (doors), dwAl (buckets), zEe:ba (arrows), bImkhwy (bags), pW~: (beads), hW~: (pieces of metal), WlhW~: (head metal, i.e., coins), hW~:el (big pieces of metal, i.e., anvils), hW~:t´a:dE (barbed wires), thO~:se: (bones), etc.

CLASS IIb:

A: (trees), sE~: (cactuses, peyotes), E:thAal (ears or stalks of corn), zOna: (pine trees), kWla: (elm trees), A:hi~: (real trees, i.e. cotton wood trees), k´Op (mountains), phwA:tE (balls), kWbot (boat), hW~: (guns), hW~:phi: (metal fire, i.e., stoves), hw~:thal (drills), hW~:k´ol (cow bells), t´A~y (canvas sheets, bed sheets), phi: (fire), k´I: (pieces of fire wood), polhA: (bows), mW~n (hands), Wnso (feet), sOp (penises), c´Oo (feathers), etc.

CLASS III:

Wl (a pair of braids of hair), Alw: (a pair of plums, apples, etc.) k´Wwn (a pair of tomatos), thOt´Olw~: (a pair of oranges), etc.?

CLASS IVa:

c´O (stone, rock), c´Oswhe (blue stone, i.e., turquoise) kI: (fresh, meat), w:zAy (udder), tO:dE (foot

wear), t´wA: (ear stick: earring), sW:bI˜ (quiver), yAypw (rope), hW˜:t´wku: (metal nail), etc.

CLASS IVb:

thO˜ (water), thO˜gUl (red water, i.e., soda), pI:thO˜ (foamy water, i.e., beer), cOy (liquid, coffee), sA:coy (urine), kI:coy (meat broth), tE˜gya (ice), sE:cO (pond), hOwn (road), sA:dA (winter), gOmgyA (winter), tO: (home, house, i.e., whitemen´s house) kU:tO: (writing house, i.e., school), etc.

CLASS IVc:

hOlda (clothing), k´Olpha˜: (necklace), khW:dE (legging), tO: (home, i.e., Indian tepee), dWy (medicine), kUt (writing drawing), cE˜n (mud), pha˜n (cloud, sky), dW:gya (song), kUngya (dance), WlkhWygya (craziness), etc.

3.3. Meaning of the Inverse Marker

The fact, which is revealed in the previous section, that the primary classes in Kiowa correlates with different degrees of animacy leads to an interesting insight about number marking in Kiowa. WGK´s statement on Kiowa noun classification can be now restated in semantic terms. High-animate nouns are basically singular/dual, and they are number marked (by the inverse prefix) when refering to a plural referent. Low-animate nouns are basically not singular, and are number marked when refering to a singular referent. Non-animate nouns are indeterminate in basic number, and never number-marked regardless of their

referential number. There is also a small set of low-animate nouns which are basically dual, and number marked when duality is lost.

Correlation between number marking and degree of animacy in general is a wide-spread tendency in human languages. It is very common that a language makes a formal distinction in number only in animate nouns or even only in personal pronouns as in Chinese (see Boas 1911, Forchheimer 1951 among others). At the lower end of the animacy scale, it is quite common that languages do not make formal distinction in number, or when they do make distinction, numerical plurality tends to be implied from other meanings rather than specificly marked. For example, in so-called collective plural (being spacially together), distributive plural (being scattered), multiple plural (being numerous), paucal plural (being few), or associative plural (often glossed as "X and others"), it is other aspects of the referent, such as togetherness, dispersion, numerousness, paucity, or diversity, that constitutes the core meaning. Thus, numerical plurality in these cases is inferred rather than overtly and specificly expressed.

The reason for such a correlation between number marking and degree of animacy may be to a large degree attributed to speaker's selective or "egocentric" (Zubin 1979) attention. Generally speaking, high-animates, such as humans and animals, have properties which tend to stand out perceptually. In other words, they are natural attention

grabbers. Consequently, high-animates are most likely to be individuated: i.e., they are most naturally perceived individually. On the other hand, Low-animates, such as plants or artifacts made of or from plants, tend not to be as distinct as high-animates and do not attract as much attention individually. Hence, low-animates are naturally less easy and less likely to be individuated. Thus, we might say that being individuated is the most natural (or unmarked) state for high-animates, and not being individuated (i.e., plural or aggregated) is less natural (thus marked). On the other hand, for low-animates, not being individuated is the unmarked state, and being individuated is the marked state.

With the above account of markedness in individuation, it is possible to reinterpret the meaning of the "inverse marker" in Kiowa. The true semantic function of the inverse marker is to signal markedness in individuation. In other words, the "inverse marker" occurs when the referent is in the marked state of individuation. Thus, class I nouns, which are high-animate and most naturally individuated, are morphologically marked by the suffix (inverse marker) when their referent is not individuated (thus plural in number), and class II nouns, which are low-animate and not individuated naturally, are morphologically marked when their referent is individuated (thus singular in number). Non-animates in general attract least amount of attention to their state of individuation, and hence they are never

marked for individuation.

Class III may be regarded as a peculiar sub-class of class II, so the same argument can be extended to this class of nouns. Class III nouns are morphologically unmarked when their referent is coupled (dual in number), but marked when their referent is not coupled (singular or plural in number). Hence, we will assume that the low-animate objects which are represented by class III nouns are semantically unmarked when they are coupled, but marked when coupling is lost. However, it is not quite clear why braids of hair and tree fruits should be seen most natural when they are coupled. Perhaps it is because hair, which is typically braided in two strands by Plains Indians, is the prototype of class III and others are semantic extensions, or perhaps double handful (of fruits) is the prototype of this class. Unfortunately, I can offer nothing more than conjecture at this point.

### 3.4. Problem of Sub-Classification

In linguistic description, it has been a common practice to use European grammar-based grammatical categories as the metalanguage of description. This practice, which is convenient and to some degree inevitable but nevertheless problematical, sometimes leads the analyst to a "lingua-centric" analysis of a language in which he imposes his theoretical framework (which is based on the grammar of his own native language) on the data. This problem may become serious when the language under

investigation is both genetically and typologically very different from the analyst's own native language or the language in which the study is conducted.

Kiowa is, in my opinion, one of those languages which have suffered the problem of lingua-centric analysis. Among some European-based grammatical categories which have been problematically imposed on Kiowa are numbers. Although numbers are basic grammatical categories in European languages, as well as many other languages, they are not to be taken as universal. But unfortunately, the Kiowa language has been analyzed and described with the assumption (without a critical examination) that it has grammatical number.

Traditionally, four number categories have been assumed in Kiowa: i.e., singular, dual, plural, and inverse. The singular number simply stands for one, the dual for two, and the plural for more than two. The inverse number, which is an ingenious concept introduced by WGK, stands for whatever is the opposite (or logical negation) of the inherent number. Hence, as discussed in 3.1, the actual number of the referent which the inverse category represents differs depending on the inherent number of each noun.

It has been also assumed that the pronominal verb prefix in Kiowa shows grammatical agreement in number (as well as person), and not other features, with the nominal arguments of the verb. This assumption leads to some

apparent contradictions in pronominal referencing, which are quite awkward semantically. As shown in Table 3 (below), in some cases (i.e., Merrifield's class IIb and IVb), a noun is signaled "singular" by the verb prefix when its referent is actually not singular. In some other cases (i.e., Merrifield's class IVc), a noun is signaled "plural" when the actual number of the referent is singular.

Table 3: Traditional Number Categories and the Actual Number of the Referent (restatement of Table 1)

| Traditional Categories | Actual Number of the Referent |
|---|---|
| Singular | one (Class I, IVa, IVb),<br>3 or more (Class IIb, IVb) |
| Plural | one (Class IVc),<br>3 or more (Class IIa, IVa, IVc),<br>two (Class IVc) |
| Inverse | one (Class IIa, IIb, III),<br>3 or more (Class I, III) |
| Dual | two (I, IIa, IIb, III, IVa, IVb) |

As illustrated in the above table, which is a restatement of Table 1 (3.1), the traditional singular category in Kiowa does not always correspond with a singular referent, but it sometimes corresponds with a non-singular referent (in the case of class IIb, and IVb). Similarly, the traditional plural category does not always correspond with a plural referent, but sometimes it corresponds with a non-plural referent (in the case of class IVc). As a matter of fact, none of the traditional number

categories in Kiowa, except for the dual, have a perfect one-to-one match with the actual number of the referent. These apparent irregularities in "number coding" by the verb prefix are unaccounted for in traditional analyses.

The alternative analysis I propose here suggests that Kiowa verb prefixes do not signal numbers but they signal degrees of saliency and markedness (in individuation and coupling (*4)) of the referent. More specifically, the four categories in question represent "high-salient (HSa)", "low-salient (LSa)", "individuation-marked (Ind)", and "coupling-marked (Cpl)" rather than traditional singular, plural, inverse, and dual respectively.

Let us examine the plausibility of such an alternative analysis. Take class IIa and class IIb. These two classes differ in that the former is signaled "plural" and the latter is signaled "singular" by the verb prefix when they are not marked (for individuation or coupling). The questions I ask here are, 1. are there any shared semantic features in class IIb and IIa by which those two classes of nouns are semantically contrasted with each other; 2. if so, can those features in any way replace the traditional number categories.

A close comparison of class IIa and class IIb will reveal a systematic semantic contrast between the two classes of nouns in different semantic domains and at various taxonomic levels.

In the domain of plant in general, those which are

larger in size (i.e., trees) tend to belong to class IIb, while those which are smaller (i.e., bushes and weeds) tend to belong to class IIa. In the domain of trees, various living trees belong to class IIb, but parts of the tree and products and derivatives of the tree tend to be in class IIa. As Watkins (1980:111-12) points out, the noun /A:/ is classed IIb when it refers to living trees, but the same word is classed IIa when it refers to sticks or pieces of board.

In the domain of artifacts, those which tend to have, by comparison, a more active role in human activities and/or more capable of generating some physical force (such as guns, bows, drums or cow bells) are included in class IIb, while those with more passive roles (such as bags, boxes, tables, or arrows) tend to be included in class IIa. A comparison of the nouns with the /hW~:/ (metal) stem in class IIb and IIa is particularly revealing. Despite the fact that they are all metal products, those of class IIb (e.g., guns, drills, or stoves) appear to be more capable of generating greater force (in various forms and kinds) than their counterparts in class IIa (e.g., pieces of metal, coins, or anvils).

To sum up the above observation, I postulate a semantic feature "potency". Potency is to be defined as being forceful or having internal enegy. Class IIb nouns are, by comparison, more potent than class IIa, because the former possess or are capable of generating greater force

(e.g., vital energy, violence, sound, or heat) than the latter. Therefore, class IIb nouns are [potent], while class IIa nouns are not [potent].

It is to be noted that class I nouns, like class IIb nouns are signaled "singular" when they are not individuation-marked or coupled. As mentioned before, class I nouns are high-animate, and hence they must be considered potent. Thus, potency correlates with the traditional singular category which is signaled by the cross-referencing verb prefix.

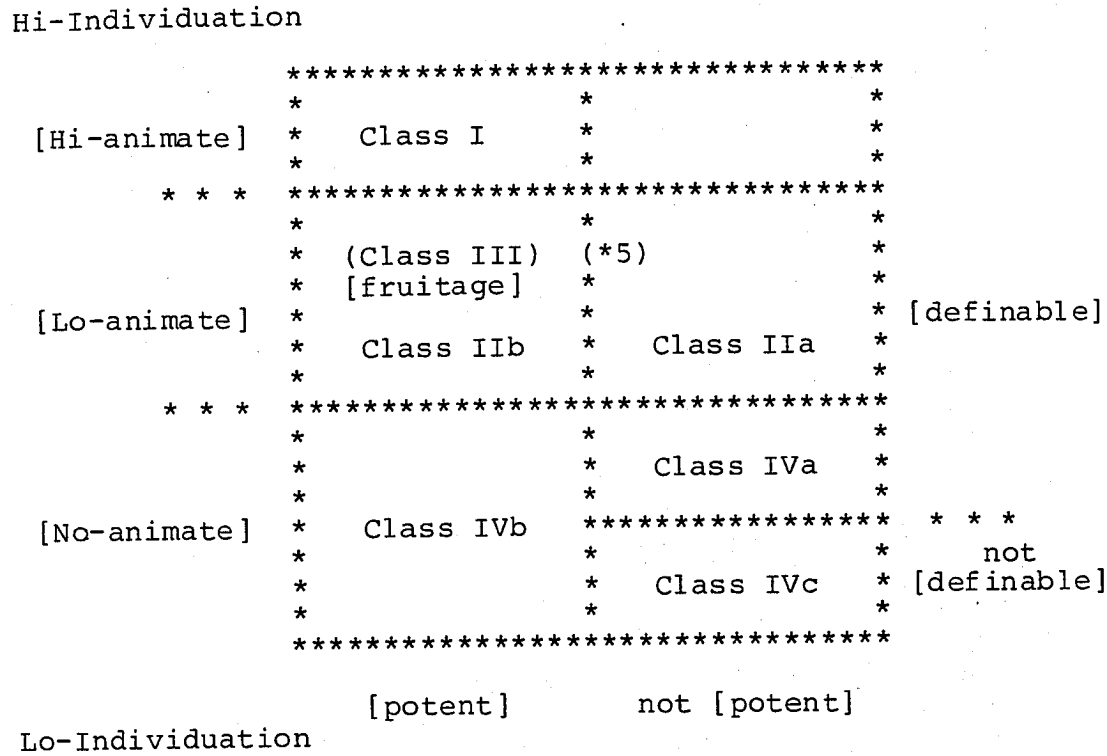
Let us examine other classes of nouns. Class IVb nouns are another example of nouns which are signaled "singular" by the verb prefix when they are not coupled. Class IVb includes a number of nouns for liquid in various kinds and forms (e.g., water, ice, coffee, or pond). Although liquid may not be living, it can be considered self-moving, and perhaps for this reason it is regarded potent. /gOmgyA/ (wind), another class IVb noun, is like water quite fluid and self-moving. Hence it is potent by the same criterion. The road and the house are not really self-moving, but they do contain some internal movement: traffic in the road and people in the house. Perhaps for this reason they can be considered potent. Note in class IVb too, potency correlates with the traditional singular category which is signaled by the cross-referencing verb prefix.

Class IVa and IVc on the other hand, lack the characteristics, such as internal force, self-driven

movement, or internal movement, which would make them potent. Hence both class IVa and IVc are not potent.

Class IVa and IVc appear to differ in at least one important aspect, namely definablility of form. Compared to class IVc nouns, class IVa nouns tend to represent things which have more rigid or tangible form: therefore "form-definable". On the other hand, class IVc nouns tend to represent things with flexible forms (e.g., /hOlda/ (clothing), /khW:dE/ (legging), /k´Olpha~:/ (necklace), etc.) or no tangible form at all (e.g., /cE~n/ (mud), /pha~n/ (cloud, sky), etc.). Nouns for abstract entity and concepts are also included in class IVc and not IVa. Thus, it seems quite adequate to characterize class IVa generally as form-definable and IVc as not form-definable. Class IVb nouns are apparently either form-definable (such as /tO:/ (whitemen´s house) or not form-definable (such as /thO~/ (water)). Table 4 (below) summarizes the inherent semantic characteristics of each noun class.

Table 4: Semantic Correlates for Noun Classes



An interesting pattern of correlation emerges from this table. Those nouns which are potent (i.e., class I, III, IIb, IVb) may be cross-referenced by the verb prefix for the (traditional) "singular" category but never by the (traditional) "plural" category, while those nouns which are not potent may be cross-referenced by the prefix for the "plural" category, but, with an exception of class IVa nouns, they are never cross-referenced by the prefix for the "singular" category. Thus, selection of the cross-referencing prefix shows more consistent a correlation with the semantic feature potency than the number of the referent. What is particularly significant is that this correlation is present throughout the entire Kiowa noun system, with the sole exception of those nouns traditionally classed as class IVa, which implies that prefix choice (traditional "singular" or "plural") is very clearly semantically conditioned (by the feature potency).

Then what do the two categories, which have been traditionally called singular and plural, really represent? I propose to introduce two pragmatic categories, "high-salient (Hsa)" and "low-salient (LSa)", to replace the traditional categories, singular and plural. Here I choose the more general pragmatic categories high-salient and low-salient rather than the more direct and specific semantic categories potent and non-potent. This is because there appear to be more semantic features (to be discussed in the following section) than just potent and non-potent

involved in judgement of saliency, though potency appears to be the most important criterion.

With the new set of pragmatic categories, it is possible to account for some apparent homonyms: i.e., /A:/: sticks or pieces of board (IIa) and trees (IIb); /hW˜:/: pieces of metal (IIa) and guns (IIb); /tO:/: whitemen´s house(s) (IVb) and tepee(s) (IVc). These need not be considered homonymous nor polysemous.

/A:/ probably has a very broad meaning which covers trees, wood, sticks, pieces of board, poles, and so on. The cross-referencing prefix signals the degree of saliency of the referent which /A:/ refers to, and not a mechanical agreement with the grammaticized noun class (or gender) of the noun. Trees are living and self-sustaining. Therefore they are potent. Hence, when /A:/ refers to trees, the cross-referencing prefix signals the referent as high-salient as in (7). On the other hand, sticks and pieces of board are not living, and hence non-potent. Therefore, /A:/ is cross-referenced by the prefix for the low-salient category when it refers to sticks or pieces of board as in (8).

(7) phAao A: #-k´Wwbay (*6)
three trees HSa-fall=down
"Three trees (HSa) fell down."

(8) A: gyat-bO˜mw
sticks I=>LSa-bending
"I am bending sticks (LSl)."

Interestingly enough, some non-living wood-made objects may be seen potent when they are self-sustaining. Thus, telegraph poles (/hW~:-kUt-A:/ "metal-writing-poles") and barbed wire fence poles (/hW~:-sW:-A:/ "metal-put=in-poles) may be signaled as high-salient by the prefix because they are in fact, like living trees, self-sustaining.

/hW~:/ means pieces of metal of any size, shape or function, and it is cross-referenced by the prefix of either high-salient or low-salient category depending on the semantic characteristics of the particular referent: high-salient when it refers to guns which are obviously potent, and low-salient when it refers to ordinary pieces of metal which are not potent.

/tO:/ also has a general meaning of dwelling or home. Indian tepee and whitemen's house may be considred different kinds of /tO:/. In fact, Kiowas often call tepees /tO:hIi~:/ "real home" (*7). It is to be noted that Indian tepees, which are portable, change in shape regularly: e.g., (1) when fully set up, (2) when the bottom is pulled up or rolled up for better air circulation, (3) when laid flat on the ground, (4) when folded for transportation. Therefore they are not form-definable. On the other hand, whitemen's houses are generally built of wood or stone, and hence they have a rigid and fixed form. Therefore they are form-definable. Since Indian tepees, like cloth(s) or necklace(s), are not form-definable, they are always

signaled low-salient by the cross-referencing prefix.

3.5. Contextually Conditioned Saliency

The nouns which belong to the traditional class IVa exhibit some unique characteristics. According to my analysis, class IVa nouns are non-animate and not potent, and hence they are normally to be judged low-salient: hence they should be cross-referenced by the verb prefix for the low-salient category, when they are not coupled. However, interestingly enough, class IVa nouns may be sometimes signaled high-salient. As Merrifield pointed out, class IVa nouns are typically signaled low-salient (traditional "plural") when they refer to a plural referent, but high-salient (traditional "singular") when they refer to a singular referent.

( 9) c´O gya-kW˜

rock I=>HSa-brought

"I brought a rock (HSa)."

(10) c´O gyat-kW˜

rock I=>LSa-brought

"I brought rocks (LSa)."

(11) c´O nen-kW˜

rock I=>Cpl-brought

"I brought two rocks (Cpl)."

(Data from Merrifield 1959b)

As mentioned before, Merrifield holds that the number of the referent conditions selection of the cross-referencing verb prefix. However, there are cases in

which referential number does not correlate with the prefix selection, which leads one to suspect that number may be just a coincidental factor and not the true determining factor of prefix selection. Consider the following examples where a contrast is shown between the generic (unspecified) and the particular (uniquely specified):

(12) kI:-swn gyat-O˜:pEeldO
meat-boiled I=>LSa-like
"I like boiled meat (LSa)."

(13) kI: gya-pWl-tw
meat I=>HSa-eat-Cnj
"I am going to eat the meat (HSa)."

(14) bAoi: #-hAn kI:
ktten it=>HSa-eat=up meat
"The kitten ate up the meat (HSa)."

(12) is a generic statement in which /kI:swn/ does not have a specific referent, but it means boiled meat in general. In this utterance, the noun /kI:-swn/ is cross-referenced by /gyat/ which signals low-salient object. On the other hand, (13) states a speaker's intention at a particular moment, in which he refers to (a) particular piece(s) of meat. In this utterance, the meat is signaled high-salient by the prefix /gya/, regardless of the number of pieces of meat which he will eat. Similarly (14), which is taken from an actual conversation, states a specific event: i.e., a kitten ate several small pieces of meat (boiled meat). In this utterance, the noun /kI:/

refers to a particular referent. Note in this utterance /kI:/ is signaled as high-salient by the prefix /#/ (which signals high-salient object) despite the fact that the kitten actually ate more than one piece of meat. In these latter two cases, what conditions the selection of the high-salient category can not be the number of the referent, but instead, it is probably the fact that the referent is uniquely specified.

A referent may be uniquely specified in more than one way. In some other cases, the referent may be uniquely specified when it becomes the focus of attention. Observe the following examples (for the glosses for the verb prefixes, see Table 8 in Chapter 4):

(15) A: hW bat-pI˜:Ww˜:mW
Q you=>LSa-cooking
"Are you cooking (something: LSa)?"

(16) B: hW:, gyat-pI˜:Ww˜:mW
yes I=>LSa-cooking
"Yes, I am cooking (something: LSa)."

(17) A: nw hWwndEe a-pI˜:Ww˜:mW
then what you=>HSa-cooking
"Then what (HSa) are you cooking?"

(18) B: te˜nEceo gya-k´Ww˜:twnmW gw pw˜:thw˜Ee˜:
gyat-Ww˜:mW
chicken I=>HSa-frying and bread I=>LSa-making
"I am frying chicken (HSa) and making bread (LSa)."

In (15), the person A is asking the person B if she is cooking (something) or not. Here, the object of cooking is not specified nor questioned. Hence, it is signaled as low-salient by the prefix /bat/. In the following utterance, B simply answers the question without overtly expressing what she is cooking. Here too the object of cooking is not specified, and hence signaled as low-salient. However, in (17), A questions what B is cooking, and suddenly the object of cooking has become the focus of attention. Here the object becomes high-salient, despite the fact that logically the object of (17) must be identical as that of (15). In the last utterance, which is B´s reply to A´s question, the objects of cooking (chicken and bread) are overtly expressed and the verb prefixes signal them in accordance with their inherent semantic features: high-salient for the chicken and low-salient for the bread.

Consider further the following examples:

(19) hWn an gyat-pI˜:Ww˜:-mW
not Emp I=>LSa-cook-Neg
"I don´t cook (anything: LSa) at all."

(20) zElbEe gya-p´Wttw
terrible she=>LSa-eating
"Terrible, she is always eating (something: LSa)."

In (19), as in (15), the speaker does not specify what the object of cooking is. Hence the object is signaled as low-salient by the prefix /gyat/ (I to LSa). In (20), which

is a statement about a girl´s habitual behavior, likewise the speaker does not specify what the object of eating is. Therefore, the object is signaled as low-salient by the prefix /gya/ (she to LSa). On the other hand, when the speaker´s attention is focused on the object, this object may be treated as high-salient even if he does not know exactly what it is. In (21), the speaker, having noticed some strange quality in the voice of his interlocutor on the phone, asks her if she is eating something. Here, the object cf eating is treated as high-salient.

(21) hW hWnde a-p´Wttw

Q something you=>HSa-eating

"Are you eating SOMETHING (HSa)?"

In the following examples with the stative verb (22) and the active verb (23), the proper noun /AnAdAakw/ (Anadarko: a city in southwestern Oklahoma which is often called "the Indian capital of the nation") is treated differently in the degree of saliency depending on the intencity of the speaker´s feeling towards it.

(22) AnAdAakw yA˜-O˜:dEp

Anadarko me<=LSa-like

"I like Anadarko (LSa)."

(23) AnAdAakw gya-O˜:pEeldO

Anadarko I=>HSa-like

"I love Anadarko (HSa)."

According to the informant, (22), which has the stative verb /O˜:dEp/, means something like "I like going

to Anadarko in general." It appears the speaker's feeling towards Anadarko is not very intense nor is it sharply focused on the city of Anadarko itself. On the other hand, (23), which has the transitive verb /O~:pEeldO/, means something like "I love Anadarko, the city itself." Here, the speaker's feeling is much stronger and more sharply focused on the city of Anadarko itself. Perhaps this is the reason why Anadarko is treated as high-salient in (23) but low-salient in (22).

As the examples shown above indicate, selection of the cross-referencing verb prefix may be conditioned by contextual factors as well as inherent semantic features of the referent. A referent which is not salient by its inherent semantic features may be contextually made high-salient when it becomes uniquely specified for some reason or when it becomes the focus of attention or question. Class IVa nouns, by the fact that they are form-definable, can be uniquely specified more easily than class IVc nouns which are not form-definable. This is probably why class IVa nouns sometimes become high-salient, but class IVc nouns do not.

### 3.6. Conclusion

In the traditional account, the Kiowa noun classes were treated as a grammaticized system which was characterized by two formal criteria: one is the pattern of the inverse number marking (WGK), and the other is the pattern of cross-referencing by the verb prefix. These criteria were

strictly formal and no semantic and/or pragmatic motivation was necessarily sought for them. Consequently, membership for each noun class was considered to be, like gender in European languages, morphologically conditioned to a large extent.

However, as I have argued in the preceding sections, there are some definite semantic and pragmatic regularities underlying the Kiowa noun class system which has been originally established on formal criteria alone. These regularities appear to be strong enough to merit a semantico-pragmatic interpretation of the phenomena.

The seven formally established noun classes in Kiowa can be semantically characterized by six general semantic features: i.e., [high-animate], [low-animate], [non-animate], [fruitage], [potent], and [form-definable]. Here, [high-animate] implies [form-definable] and [potent], and [low-animate] implies [form-definable].

As summarized in Table 4 (3.4), class I nouns can be generally characterized as [high-animate]. Class IIa nouns are characterized as [low-animate] but not [potent], class IIb nouns are [low-animate] and [potent], class III nouns are [low-animate] [fruitage], and [potent], class IVa nouns are [non-animate] and [+definable] but not [potent], class IVb nouns are [non-animate] and [potent], and finally class IVc is [non-animate] and neither [potent] nor [definable]. The degree of animacy (high, low, none) is reflected as the degree of inherent individuation (high-individuated,

low-individuated, and indeterminate).

This semantic analysis of the Kiowa noun classification strongly suggests that the pronominal categories which have been assumed, without a critical examination, to represent numbers (i.e., singular, dual, plural, and inverse) need to be reconsidered from the semantico-pragmatic point of view. It is clear that these four categories do not simply represent the numerical aspect of the referent alone. Instead, they represent broader pragmatic judgements: i.e., degrees of saliency and markedness (both in individuation and coupling) of the referent (see 4.4.3, for the definition of coupling). As I have argued, those categories do not show a simple one-to-one match with semantic features such as numbers. They are broader pragmatic categories which reflect various semantic values and pragmatic values. I think those four categories in question will be more appropriately designated as "high-salient" (instead of "singular"), "low-salient" (instead of "plural"), "individuation-marked" (instead of "inverse"), and "coupled" (instead of "dual").

Thus, a consistent, semantically-based account can be provided for what appears to be a noun classification system (or patterns of selection of cross-referencing verb prefixes) as follows:

(1) The nominal suffix which has been traditionally called "inverse marker" actually marks the marked state of individuation of the referent;

(2) The cross-referencing verb prefix signals either markedness (individuation or coupling) or degrees of saliency (high or low) of the referent and not its number;

(3) Judgement of saliency is based on both inherent semantic values and contextual values. In inherent semantic features, [high-animate] and [potent] are judged high-salient, while lack of the feature [potent] or [form-definable] are generally judged low-salient. However, some contextual factors may make a low-salient (in inherent features) referent high-salient. This elevation of the saliency level occurs typically when a referent is uniquely specified or when it becomes the focus of attention and/or question.

Thus, the present semantically-based analysis offers a more consistent and explanatory account than the traditional morphologically-based analysis.

NOTES

(*1) Read this as "singular or dual".

(*2) It is to be noted that some human nouns, particularly those for adult members of the Kiowa tribe, are often cross-referenced by the prefix for the plural category rather than the inverse category when they are inverse marked. (see 4. 4.3 for discussion of this problem).

(*3) Mishkin (1940) notes that hand-to-hand combat was consideed the highest form of bravery, and an offence (not necessarily killing) by hand weapon was counted as one of the greatest coups. Hence, it is quite conceivable that hand weapons, such as tomahawks or knives, had a special symbolic status in the traditional Kiowa value system.

(*4) For the discussion why "coupling" is more

appropriate a term than "duality", see 4.4.2.

(*5) Watkins (1980: 113-14) notes that class III nouns may be sometimes signaled as "singular" (High-salient in our system).

(*6) /#/ in this example and hereafter stands for a zero morpheme.

(*7) This seems to imply that whiteman's house has become the prototype of /tO:/ due to cultural change. Indian tepee, which must have beenthe prototype of this word in the past, is now marked by the suffixing adjectival /hI~:/ (real). An extensive study of marking reversal caused by cultural change is found in Witkowski and Brown (1983).

# IV. THE VERB PREFIX

## 4.1. The Verb Prefix: Review

The verb prefix is an obligatory component of the Kiowa verb complex, and plays, without doubt, the most important role in Kiowa case-marking. This chapter will describe the grammatical and semantic functions of the verb prefix.

There are at least seventy phonologically distinct forms in the verb prefix system in Kiowa. The exact number of functionally distinct prefixes, including homonyms, is, of course, dependent on the analysis. Indeed, the Kiowa verb prefix system is both morphologically and semantically so complicated, that the framework of analysis which one chooses makes a great deal of difference in the final result.

Harrington (1928) made the first attempt to describe and organize Kiowa verb prefixes. He set up six paradigms, based on the apparent meaning (i.e., English translation) of the prefixes, and arranged all the forms which he elicited (including a large number of homonyms) according to those paradigms. His six paradigms and the grammatical relations they represent are as follows:

1. Subjective Series: intransitive subject;
2. Transitive Series: transitive subject and object;
3. Reflexive Series: transitive subject and reflexive

object;

4. Subjective-Referential Series: intransitive subject, and oblique object;
5. Transitive-Referential Series: transitive subject, object, and oblique object;
6. Reflexive-Referential Series: transitive subject, reflexive object, and oblique object.

Harrington, being a meticulous linguist of the Boasean era, treated English glosses with as much rigor as forms. Just as the slightest difference in form counts as evidence for functional distinctiveness, the slightest difference in English gloss too is regarded as evidence for functional distinction in Harrington's analysis. However, in interpreting the English glosses, Harrington's analysis did not distinguish marked meaning (strictly semantic) from inferred meaning (pragmatic). As a result, he had to accept a huge number of homonyms. He listed as many as over 400 forms in his six paradigms, most of which are duplicates of the same forms.

Wátkins (1980) also took a paradigm approach, but reorganized the paradigms drastically. Her solution is a simpler four paradigm system:

1. Intransitive Prefixes: intransitive subject;
2. Agent-Object Prefixes: agent and object;
3. Patient-Object Prefixes: object, patient (and implied agent);
4. Mixed-Object Prefixes: agent, object (and implied

patient).

Consequently, Watkins was able to reduce a large number of homonyms. Her paradigms show only 124 functionally distinct forms: significantly fewer than Harrington's.

Merrifield (1959a) took a quite different approach. Within the framework of tagmemics, he postulated a single common structure for the entire set of verb prefixes rather than arranging them in several paradigms. According to Merrifield, Kiowa verb prefixes represent three case roles: "agent" (subject in English translation), "topic" (direct object, indirect object, or possessor in English), and "object" (direct object in English). Each verb prefix has the "focus" (undefined by Merrifield however) on either the agent or the topic. For the focused category, the referent is signaled clearly as to its person and number, but for the other (unfocused) category, the referent is unspecified, ambiguous, or even not marked at all. In fact, his analysis somewhat resembles the analysis I propose in this chapter.

Although Merrifield's analysis has many interesting insights, it is purely aimed at producing a descriptive account for the correlations between surface forms and their apparent English translations. As a result, the tagmemic rules which he postulated are extremely complicated, somewhat unnatural, and lack explanatory potential.

## 4.2. Classification of Kiowa Verb Prefixes

### 4.2.1. The Clause

Kiowa is a verb last language, in which the verb is typically the last constituent of the neutral clause. NP's, which are optional constituents of the Kiowa clause, are normally placed before the verb, although on occasion they may be placed after the verb for various pragmatic effects (see Chapter 7). Since occurrence of NP's is not syntactically obligatory, the position and order of NP's are not associated with any fixed grammatical function.

The verb, which is the only obligatory constituent of the Kiowa clause, consists of two main components: the verb proper and the prefix. The verb proper can be further analyzed into the stem and the aspectual and modal suffix(es). The verb may also incorporate various lexical elements (nouns, adverbials, or verbs) between the prefix and the stem. Thus, the structure of the Kiowa neutral clause can be schematically drawn as follows:

(NP)...(NP) Prefix-(N/Adv/V)-Verb-Asp/Mod

### 4.2.2. Classification of Verb Prefixes

The verb prefixes are in many ways the most complex part of the verb morphology in Kiowa. There are several dimensions to each prefix which need to be examined:

(a) canonical shape

(b) co-occurrence possibility with specific types of verbs

(c) relational categories and semantic roles

(d) focus

The verb prefixes fall into two major classes canonically: those with the shape (C)V(C) and those with the shape (C)(V)(C)V:.

There are two kinds of verbs in Kiowa: stative and active (*1). Stative verbs express the state (or change of the state) of the participant: e.g., /dw/ (be), /Et/ or /bIn/ (be big), /gUul/ (be red), /k´ul/ (be lying), /hEe˜m/ (die), /cAan/ (arrive), etc. Active verbs express action by the participant. These latter may be transitive (e.g., /hOol/ (kill), /hAn/ (eat up), /dO˜n/ (look for), /sAt/ (break), etc.) or intransitive (e.g., /sW/ (sit), /khyAygun/ (jump), /demWw/ (lie down), /kUn/ (dance), etc.). Intransitives, however, require a two-participant prefix, for which see 4.4.3.5 and 6.3.

On the basis of these two formal criteria, four classes of prefixes are established:

| Class | Canonical Shape (*2) | Cooccurring Verbs |
|---|---|---|
| 1 | (C)V(C) | Stative |
| 2 | (C)V(C) | Active |
| 3 | (C)V(C) | Stative, Active |
| 4 | (C)(V)(C)V: | Active |

Interestingly enough, the formal classification shown above coincides with the grammatical functions of the verb prefix, in terms of the number of participants. Class one prefixes signal only one participant. Those of class two and three signal two participants. Class four prefixes

signal three participants.

4.2.3. Semantic Roles

The Kiowa verb prefix can represent four basic semantic roles: i.e., neutral (*3), actor, object, and benefactive. These roles are referred to as core roles in this thesis. See the sentences (2) - (7) in 4.3.1 for examples. Peripheral roles, such as instrumental or locative, are not represented by the verb prefix.

The four classes of verb prefixes established above (4.2.2) on formal criteria are distinct in their grammatical functions too: each of them represents a different set of semantic roles as shown below.

(1) Kiowa Verb Prefixes and Their Semantic Roles:

| Class | Semantic Roles Represented |
|---|---|
| 1 | Neutral |
| 2 | Actor and Object |
| 3 | Actor and Object;<br>Neutral and Benefactive;<br>Object and Benefactive |
| 4 | Actor, Object and Benefactive |

As is clear from the above table, there is no simple one to one match between prefix types and semantic roles. Class three corresponds with three different sets of semantic roles. In addition, it partially overlaps with class two (in actor-object). It is hence necessary to postulate rather broadly defined categories to represent grammatical relations in order to cope with those

diversified combinations of semantic roles, especially those of class three.

4.3. Relational Categories of the Verb Prefix

I propose defining the grammatical relations which the Kiowa verb prefix represents in terms of (a) direction of effect and (b) place of focus.

4.3.1. Source, Goal, Intermediary, and Neutral

When more than one participants are involved in an action, event or a state, there is referentially a flow of effect, either direct or indirect, between the participants. I will call the starting point of the flow of effect "source", and the terminal point of it "goal". Note that both categories are defined broadly in terms of the abstract notion of flow of effect. Therefore, application of those categories is not restricted to a particular semantic role but quite general: the source category may represent actor, object, or neutral, and the goal category may represent object or benefactive, depending on the scope of predication.

I´should add that the notion of flow of effect which I employ here closely resembles DeLancey´s notion of "attention flow" (DeLancey 1981b). However, the former reflects only a semantic relation (namely "effect" relation) at the referential level, and not the speaker-hearer´s perceptual mechanism in communicating as the latter tends to do.

The actor-object relation represents a direct relation

of effect. Here, the actor is the source and the object is the goal as exemplified in (2) and (3). The relation of effect in this case is considered direct because the actor´s action is directly aimed at the object. In the examples shown below and thereafter, the arrow, "=>" or "<=", indicates direction of effect. In addition, the left side of the arrow is always the focused categoy regardless of the direction (*4)). Note also /#/ stands for a zero morpheme.

(2) nW pabI: t´Ap #-te˜: (class two prefix)
my brother deer he=>it-catch
"My brother (source: actor) caught a deer (goal: object)."

(3) Ee˜de E˜-gop (class three prefix)
this I<=he-hit
"This one (source: actor) hit me (goal: object)."

The object-benefactive relation represents an indirect relation of effect. In this case, exemplified in (4), the object is the source and the benefactive is the goal. The relation of effect here is considered indirect, because the object is not the instigator of the effect, but it simply mediates the effect. The true instigater here is the actor which is not expressed by an NP or cross-referenced by the verb prefix in this sentence.

(4) Am kUt yA˜n-w˜: (class three prefix)
you book you<=it-give
"I (not expressed) gave you (goal:

beneficiary) a book (source: object)."

The neutral-benefactive relation also represents an indirect relation of effect, in which the neutral is the source and the benefactive is the goal, as exemplified in (5). This occurs only with stative verbs.

(5) cEgun A-hEe˜m (class three prefix)
dog him<=it-dead
"The dog (source: neutral) died on him (goal: beneficiary)."

The three participant prefix (class four) requires a third category: "intermediary". This category, which represents the object which is neither the starting point nor the terminal point of the effect, is thus distinct from either source or goal.

(6) cEe˜: mAa˜:-te˜: (class four prefix)
horse you=two=>it=>me/he-catch
"You two (source: actor) catch the horse (intermediary: object) for me (goal: beneficiary)."
(Data from Watkins 1980:178)

One participant prefixes (class one) have only one relational category, which is neither source nor goal, and implies no flow of effect. Thus this category will be called "neutral" (*5).

(7) tO: #-k´Ww:bay (class one prefix)
house it-fall=down
"A house (neutral: neutral) fell down."

4.3.2. Focus

It is to be noted that in sentences with more than one core participant, the case-marking verb prefix does not treat all the relational categories equally, but treats one category as primary. This primary category occupies morphologically the first position in the prefix structure (see 5.3), and semantically specifies the referent in more detail (see 4.5). Thus, multi-participant prefixes may be said to place "focus" on one relational category. A category on which the focus is placed will be referred to as a "focus" category in this thesis, and the category which is not focused will be called "low-focus" category (*6). Note that focus here is defined purely grammatically. Its pragmatic implications will be discussed later in chapter 6.

In class two prefixes, focus is placed on the source. Hence these prefixes will be referred to as "source focused prefixes" (or S-prefixes) in this thesis. In class three prefixes, focus is placed on the goal category. Hence they will be referred to as "goal focused prefixes" (or G-prefixes).

Class four prefixes are morphologically complex in that they are derived by compounding two prefixes (an S-prefix and a G-prefix). Hence these prefixes will be referred to as "compounded prefixes" (or C-prefixes) here. In C-prefixes, focus is placed on the source (see 5.5 for morphological analysis of C-prefixes).

Class one prefixes have only one relational category:

neutral. Hence they will be referred to as "neutral prefixes" (or N-prefixes). Since there is only one category in N-prefixes, that category receives the focus.

The relational categories of the four classes of Kiowa verb prefixes are summarized in the table below, together with the semantic roles they represent.

Table 5: Kiowa Verb Prefixes, Grammatical Categories, and Their Corresponding Semantic Roles

| Prefixes | Relational Categories | Semantic Roles |
|---|---|---|
| 1. N-prefix | neutral (focus) | neutral |
| 2. S-prefix | source (focus) | actor |
| | goal (low-focus) | object |
| 3. G-prefix | source (low-focus) | actor, object, neutral |
| | goal (focus) | object, benefactive |
| 4. C-prefix | source (focus) | actor |
| | intermediary (low-f.) | object |
| | goal (low-focus) | benefactive |

### 4.4. Indexical Function of the Verb Prefix

#### 4.4.1. Problem

The other important grammatical function of the Kiowa verb prefix is to index the referent.

Traditionally, Kiowa verb prefixes have been believed to be pronominals which code the participants of the verb in their person and number. Traditional analyses have

assumed conventional person and number categories for Kiowa pronominal indexing: three persons (first person, second person, and third person) and four numbers (singular, plural, dual, and inverse). However, as already pointed out in the previous chapter, validity of those traditional number categories in Kiowa is quite dubious. Worse still, the traditional person categories, which make a three-way distinction on the basis of speech act roles, are not optimal for Kiowa either, as will become apparent later in this section. Therefore, it seems necessary to formulate a new set of indexical categories that will reflect the semantics of Kiowa pronominal indexing more accurately.

The purpose of this section is to present a set of indexical categories which are optimal for the Kiowa verb prefix system. More specifically, I will attempt to discover language specific indexical categories for participant coding in Kiowa verb prefixes and describe the indexical function of the Kiowa verb prefix in terms of those categories. This will be done primarily by a semantic method (i.e., a form of componential analysis). Morphological support for this analysis will be provided in the next chapter.

4.4.2. Semantic Categories in Participant Indexing

There are two groups of semantic categories involved in Kiowa pronominal indexing: those which occur for both focus and low-focus participants, and those which occur only for focus participants. The former represent the

semantic characteristics of the referent itself, hence, they will be referred to here as "substantive" categories. The latter represent the characteristics which the referent has at the time of utterance in relation to the speech act. These latter will be referred to as "deictic" categories. Since substantive categories occur in both focus and low-focus participants, they will be discussed first.

4.4.3. Substantive Categories

Substantive categories basically reflect semantic characteristics of the participant, regardless of its case role or deictic relation to the speaker. Some substantive categories have already been discussed in chapter three in relation to noun classification. There are five such features in the Kiowa indexical system: i.e., "high-salient", "low-salient", "individuation-marked", "coupled", and "diffuse". Each of these five substantive features will be defined and discussed below.

4.4.3.1. High-Salient (HSa)

This indexical category represents a highly salient referent. Marking of saliency levels in Kiowa reflects pragmatic judgements which are based on both inherent and contextual features of the referent (chapter 3). High-animates, such as humans, animals, and metaphorically animate and/or self-moving objects, tend to stand out perceptually, and hence highly salient (for discussions on animacy and saliency, see Silverstein 1976, Dixon 1979, Comrie 1981, among others). Consequently, these are indexed

as high-salient by the verb prefix in Kiowa.

(8) cEgun gya-donmw

dog ProCtrHSa=>HSa-looking=for

"I (ProCtrHSa) am looking for the dog (HSa)."

(9) k´Ww gya-Ww˜:mw

knife ProCtrHsa=>HSa-making

"I (ProCtrHSa) am making a knife (HSa)."

Here in (8), /cEgun/ (dog), which is the object of searching, is high-animate and hence to be considered salient by its inherent semantic features. Consequently, /cEgun/ is indexed as "high-salient goal" by the S-prefix /gya/ (ProCtrHSa=>HSa). In (9) too, /k´Ww/ (knife) is a highly visible attention grabber, and hence salient. The same prefix /gya/ is used to index it as high-salient goal. Incidentally, being a human, the source participant (speaker) of (8) and (9) is naturally high-salient too, and accordingly indexed as high-salient (source) by the same prefix (for the deictic features for the focus participant, "ProCtr", see 4.4.4).

Some low-animates and non-animates, such as living trees, guns and liquid, are potent (see 3.4): hence these too are to be judged salient. Consequently, they are indexed as high-salient by the verb prefix as in the following examples.

(10) cOy gya-thOo˜nmw

coffee ProCtrHSa=>HSa-drinking

"I (ProCtrHSa) am drinking coffee (HSa)."

(11) phAa:o A: #-k´Ww:bay

three trees ProHSa-fall=down

"Three trees (ProHSa) fell down."

In (10), the object of drinking (i.e., coffee) is potent: hence salient. Therefore, the same verb prefix (as (9)) /gya/ is used to index it as "high-salient goal". Living trees are also potent objects: hence salient. Thus, in (11), the neutral participant (three trees) is indexed as "high-salient neutral" by the N-prefix /#/.

As mentioned before (in 3.5), some non-animate and non-potent objects, can be made salient in some contexts of use. When that happens, the case-marking verb prefix indexes them as "high-salient" too as in (12).

(12) kI: gya-k´Ww:thakW, gya-sW˜n-ce

meat ProCtrHSa=>HSa-chop=up, ProCtrHSa=>HSa-boil-drop

"I (ProCtrHSa) chopped up the meat (HSa), and put it (Hsa) in boiling water."

/kI:/ (meat) is neither high-animate nor potent, and hence it is not salient by its inherent semantic features. However, in this context, the speaker refers to specific beef (which has been just butchered) which is the topic of this utterance. Hence, /kI:/ in (12) is made salient, and accordingly indexed as "high-salient goal" by the prefix /gya/ in both clauses.

4.4.3.2. Low-Salient (LSa)

This indexical category typically represents a

referent which is not salient by its inherent semantic features (i.e., non-potent, and low-animate or non-animate). Consider (13) and (14). /hOlda/ (cloth) and /k´Olpha˜:/ (necklace) are both non-animate and non-potent, and therefore, inherently not salient. Hence, they are indexed as "low-salient goal" by the S-prefix /gyA/. Although the definite article "the" in free translation might give the impression that the referent is definite, this is an inevitable semantic problem involved in translation. The article "the" in free translation in the following examples (and thereafter) does not necessarily imply that the referent is definite in Kiowa too, which has no such category.

(13) hOlda gyat-sAa:
cloth ProCtrHSa=>LSa-tear
"I (ProCtrHSa) tore the cloth (LSa)."

(14) k´Olpha˜: pI:Aa:-thAy gyat-Ww:k´Op
necklace table-Loc ProCtrHSa=>LSa-leave
"I (ProCtrHSa) put the necklace (LSa) on the table."

Abstract entity, such as thought, fact, action, or event, is always treated as low-salient as the following examples will illustrate.

(15) hWndE gya-sAl
very ProLSa-hot
"It (ProLSa) is very hot." (weather)

(16) hE˜ gya-dw

none ProLSa-be

"There is none (ProLSa)" (nonexistent object)

(17) khI:dEel e˜m-tO˜tw, hW yA˜n-p´Wygya

yesterday DstHSa<=HSa-talk, Qst DstHSa<=LSa-forget

"I (HSa) talked to you (DstHSa) yesterday. Did you (DstHSa) forget that (LSa)?" (fact)

(18) yA˜-kUu:t-hAaygyadw

ProCtrHSa<=LSa-writing-know

"I (ProCtrHSa) know how to write (Lsl)." (action)

It is also to be noted that the category "low-salient" may represent an aggregate of many different things, including humans.

(19) kWygU EtE an A-kIi:l

Kiowas many always ProLSa-be=camping

"Many Kiowas (ProLSa) were always camping."

(20) k´Olpha˜: gya-gU:ldw gw sOodop al e-gU:ldw de gyat-hW:gya

necklace ProLSa-red and bracelet also ProInd-red Nom ProCtrHSa=>LSa-get

"I (ProCtrHSa) got [a red necklace (ProLSa) and a red bracelet (ProInd)] (LSa)."

(21) Ww˜:nya tEhwndE gya-dW (*6)

different everything ProLSa-be

"Everything (ProLSa) is different."

In (19), the N-prefix /A/ refers to an aggregate of Kiowa people. In (20), the object (goal) of the action is an aggregate of two things: a red necklace (non-animate,

non-potent) and a red bracelet (low-animate, non-potent). This is indexed as low-salient by the S-prefix /gya/. In (21), the N-prefix /gya/ refers to a variety of things (everything the speaker is talking about).

Since being an aggregate entails that there are more than one member in the referent, this category, which is designated as "low-salient" in this study, has been taken as "plural" in traditional analyses. However, as the following example, as well as those cited above ((13) - (18)), clearly illustrates, being numerous is not a necessary condition for this category. Instead, numerousness is to be considered an implied meaning.

(22) Ee˜de nW hwndE yA˜-dw
this/these my thing PrpCtrHSa<=LSa-be
"This (LSa) is mine (ProCtrHSa)." or "These (LSa) are mine (ProCtrHSa)."

The true condition for an aggregative referent to be indexed as low-salient is probably its heterogeneousness, and not its numerousness. When the referent is homogeneous (i.e., its members are of the same kind), it is not indexed as low-salient, but instead, it is indexed as "individuation-marked" which will be discussed in the following section.

4.4.3.3. Individuation-Marked (Ind)

This category represents the marked state of individuation of the referent. This is used in lieu of "inverse" as discussed in 3.3. A high-animate referent is

individuation-marked when it is not individuated (pluralized) as in (23), while a low-animate referent is individuation-marked when it is individuated as in (24). Non-animates are never individuation-marked.

(23) cEe˜:-gw gW-Wy-hel
horse-Ind DstHSa<=Ind-many-Hsy
"(I heard) you (DstHSa) have many horses (Ind)."

(24) Ee˜gw A:-dw dE-t´Aa:l-tW
this trees-Ind ProCtrHSa=>Ind-cut-Cnj
"I (ProCtrHSa) will cut this tree (Ind)."

It is to be noted that a group of high-animates may be indexed either as individuation-marked or as low-salient: thus it might seem that there are two categories for "plural". However, there appears to be a significant difference in meaning between the two indexings. The high-animate referent which is indexed as individuation-marked is homogeneous: i.e., the constituent members belong to the same taxonomical class. On the other hand, the referent which is signaled low-salient is heterogeneous: i.e., the constituent members belong to more than one taxonomic classes. The former will be referred to here as "collective" referent, and the latter as "aggregative" referent in this thesis. The following example will illustrate the difference between collective (indexed as individuation-marked) and aggregative (indexed as low-salient).

(25) k´yA:hy-Oo˜m e-Wybatw:dw, tOgU:-dWy thO˜cay

bEt-sWldedw, gw gIi˜:-gya E˜m-W:hwma-gunmW

man-Ind ProInd-dressed=up, young=man-Ind tail=bustle DstInd<=Lsl-have=on, and night-Loc ProLSa=>Dif-war=dance-dancing

"Men (ProInd) were dressed up, young men (DstInd) had tail bustle (LSa) on, and they (men and young men together: ProLSa) were dancing war dances at night."

In the first clause, the referent (men) is homogeneous (or collective). Similarly in the second clause too, the referent (young men) is homogeneous. Hence, they are both indexed as individuation-marked by the N-prefix /e/ and the G-prefix /bEt/. However, when the two are put together (since both men and young men participate in war dances), the referent becomes heterogeneous (or aggregative). Therefore the referent in the last clause is indexed as low-salient by the S-prefix /E˜m/.

Harrington (1928) noted that Kiowa speakers tend to use the low-salient category (Harrington's "plural animate major") when they refer to people of their own tribe, but the individuation-marked category (Harrington's "plural animate minor") when they refer to people of other tribes (*8). This is probably due to the fact that speakers naturally tend to be more aware of diversities or individual variations of the people of their own group than those of the people who they are not well aquainted with. Thus, people of one's own group are treated as aggregative:

hence indexed as low-salient; while people of other groups are treated as collective: hence indexed as individuation-marked.

4.4.3.4. Coupled (Cpl)

This category signals "coupling" of the referent. Coupling is not exactly the same as dual number, but has a more specialized meaning. In coupling, two things or participants are involved together in an action or a state. The conditions for coupling seem to be complicated and not easily operationalized, but the following may be stated as a general rule: coupling is marked in at least two cases -- case 1: when there are two members in the referent being involved together in the same action, event, or state (as in (26) - (28)); case 2: when two or more participants are engaged in a two-sided action which has an intimate body contact (as in (29) and (30)).

(26) I: Aa: e˜-k´Ww:bay
two trees ProCpl-fall=down
"Two trees (ProCpl) fell down."

(27) nW pabI: I: thalI: E˜n-dw
my brother two boy ProHSa<=Cpl-be
"My brother (ProHSa) has two boys (Cpl)."

(28) I: k´Ww ne˜n-Ww˜:mw
two knife ProCtrHSa=>Cpl-making
"I (ProCtrHSa) am making two knives (Cpl)."

In (26), the neutral participant is two trees, and this is signaled by the N-prefix /e˜/. In (27), the neutral

participant of the stative verb /dw/ is two boys. So the G-prefix /E˜n/ indexes "coupling-marked" for the source. In (28), the object of the action is two knives. Hence the S-prefix /ne˜n/ occurs to index "coupling-marked" for the goal.

(29) cEgun nE˜-t´wpAthwkW

dog ProCtrHSa<=Cpl-bump=into

"A dog bumped into me (ProCtrHSa)."

(30) nE˜n-AntW

DstHSa<=Cpl-wake=up

"(I) woke you (DstHSa) up."

(31) nE˜-WlhWwtW

ProCtrHSa<=Cpl-slam=down

(You/he) slammed me (ProCtrHSa) down."

The condition for coupling in these sentences is rather different from that in (26), (27) and (28). Note that in none of these sentences is the actor dual, in spite of the fact that the verb prefix clearly indexes coupled source. Hence, it must be concluded that coupling is for the two participants (the actor and the beneficiary) together: i.e., the speaker and the dog in (29), the speaker and the hearer in (30), and (31). What these actions seem to have in common are two-sidedness and, perhaps, involvement of intimate body contact. Collision (in (30)), waking (a kind of shaking) someone (as in (30)), as well as throwing down a person in fighting (as in (31)) all require physical confrontation of the two parties. Therefore, it is probably

involvement of physical confrontation of the two parties in the action that is implied by coupling marking by the prefix.

Interestingly enough, both participants of such a coupling marked action must be real living animates. Consider (32) and (33):

(32) nE˜n-OtthwkW

DstHSa<=Cpl-push

"(I) pushed him (DstHSa)."

(33) gya-OtthwkW

ProCtrHSa=>HSa-push

"I (ProCtrHSa) pushed it (HSa)."

In (32), the speaker (unmarked) pushes some other person (goal). Here, the verb /OtthwkW/ is case-marked by the G-prefix /nE˜n/, which signals coupling-marked source. On the other hand, when the speaker pushes some object (a stalled car in this case), the same verb is case-marked by the S-prefix /gya/ which signals the speaker (source) and a high-salient participant (goal). Coupling is not marked in this latter case.

4.4.3.5. Diffuse (Dif)

This category means that the participant is naturally expected (from the verb semantics), but diffused or defocused. We will refer to this feature as "diffuse". This is found only for the goal of the S-prefix. Traditionally, this feature has been called reflexive. Although it is not uncommon for the reflexive pronoun to be used rather

broadly to signal diffused object (e.g., Spanish), the usage of this category in Kiowa is so broad that retaining the designation "reflexive" would be quite misleading. Therefore, the term "diffuse" is employed in this study.

The diffuse goal typically occurs for intransitive actions, reflexive actions, and reciprocal actions, as shown below.

(34) mAn de-khyAygUn
up ProCtrHSa=>Dif-jump
"I (ProCtrHSa) jumped up." (intransitive action)

(35) I: thalI: E˜n-gUnmw
two boy ProCpl=>Dif-dancing
"Two boys (ProCpl) are dancing." (intransitive action)

(36) Ww˜:gw de-p´Wy-gOp
self ProCtrHSa=>Dif-miss-hit
"I (ProCtrHSa) accidentally hit myself (Dif)." (reflexive action)

(37) tEhWy mW˜:nw E˜m-tEe˜
all hand ProLSa=>Dif-grab
"Everybody (ProLSa) shook hands with each other (Dif)." (reciprocal action)

Since Kiowa does not make a formal distinction between reflexive and reciprocal, whether a given expression is reflexive or reciprocal is often ambiguous, particularly in isolation, as shown in (38). The judgement is dependent on pragmatic inference.

(38) I: thalI: Ww˜:gw E˜n-gop

two boy self PrxCpl=>Dif-hit

"Two boys (ProCpl) hit themselves (Dif)."

(reflexive) or "Two boys (ProCpl) hit each

other (Dif)." (reciprocal)

It is also to be noted that the diffused goal need not be coreferential with the source at all. Consider (39), (40) and (41):

(39) hegW #-hOol

then ProHSa=>HSa-kill

"Then he (ProHSa) killed him (HSa)."

(40) E-hAattW

ProHSa=>Ind-tease

"He (ProHSa) teased them (Ind)."

(41) Ete e˜m-hOol

many ProHSa=>Dif-kill

"He (ProHSa) killed many (Dif)."

In both (39) and (40), the object of action is referentially specified: a specific person in (39) and a group (collective) of animals in (40). Accordingly, the S-prefix /#/ and /E/ index them as high-salient and individuation-marked. On the other hand, what is emphasized in (41) is the actor's awful action of massacre. Here, the object of action (goal) is expected from the transitive verb /hOol/ (kill) but not referentially specified (thus diffused). Therefore, the goal participant is indexed as diffuse by the S-prefix /e˜m/.

(42) and (43) present another interesting case of usage of the feature "diffuse".

(42) cAt dE-gOop

door ProCtrHSa=>Ind-strike

"I (ProCtrHSa) struck the door (Ind)."

(43) cAt-phA de-gOop

door-Loc ProCtrHSa=>Dif-strike

"I (ProCtrHSa) struck on the door."

In (42), the object of action (door) is specified and indexed as individuation-marked by the S-prefix /dE/. In describing a similar situation, the goal of action is diffused in (43). Although the object of action (door) is overtly expressed by a noun, it does not have the status of grammatical goal: evidently, the door is treated as peripheral (locative).

4.4.4. Deictic Categories

Indexing for the focus participant is considerably more complicated than the low-focus participant, because the former involves an additional semantic dimension: i.e., the deictic dimension.

Traditionally, the Kiowa pronominal indexing system has been described with conventional person (in addition to number) categories. These traditional person categories are defined in terms of speech act roles (i.e., [speaker] and [hearer]) as shown below:

1. First Person Exclusive: [+speaker, -hearer]
2. First Person Inclusive: [+speaker, +hearer]

3. Second Person: [-speaker, +hearer]

4. Third Person: [-speaker, -hearer]

However, this model is by no means optimal for Kiowa. Let us examine some problems which this speech act role based model has in describing Kiowa pronominal indexing. Consider the G-prefix /yA˜n/ (DstHSa<=LSa) in the following examples. (Note that no gloss is given for the prefix in the examples in this section since the meaning of the verb prefix is what we are questioning here.)

(44) Am kUt yA˜n-Ww˜:

you book /yA˜n/-give

"(I) gave you (goal) a book (source)."

(45) k´yA:hIi˜: kUt yA˜n-Ww˜:

man book /yA˜n/-give

"(I) gave the man (goal) a book (source)."

The goal participant of /yA˜n/ may be either the hearer (as in (44)) or a third person (as in (45)). Its referent is disambiguated by the NP and not by the prefix itself in these examples. In fact, in isolation, the goal participant of (46), which does not have an NP to express the goal participant, is ambiguous.

(46) kUt yA˜n-Ww˜:

book /yA˜n/-give

"(I) gave you (goal) a book (source)," or "(I) gave him (goal) a book (source)."

Hence, the goal component of /yA˜n/ covers both category three [-speaker, +hearer] and category four

[-speaker, -hearer].

On the other hand, the G-prefix /gw/ (DstCtrHSa<=HSa) signals that the goal participant is the hearer, and not a third person.

(47) nWw tWl hegW khya˜hIi˜:gW gw-bO˜n-tw

my father then tomorrow /gw/-see-Cnj

"My father (source) will see you (goal) tommorow."

Therefore, the goal component of /gw/ covers only category three (-speaker, +hearer).

The C-prefix /EdEe:/ (ProInd=>Cpl=>ProHSa) also presents a problem to the traditional model. As shown in the following examples, the goal participant of /EdEe:/ may be the speaker himself (as in (48)) or a third person (as in (49)).

(48) pA:o k´yA:hyOom EdEe:-WlhWw:tW

three men /EdEe:/-slam

"Three men (source) slammed me (goal)."

(49) pA:o k´yA:hyom nWw pabI: EdEe:-WlhWw:tW

three men my brother /EdEe:/-slam

"Three men (source) slammed my brother (goal) down."

Therefore, the source component of /EdEe:/ covers both category one [+speaker, -hearer] and category four [-speaker, -hearer].

On the other hand, the G-prefix /yA˜/ (ProCtrHSa=>LSa) signals that the goal participant (focused) is the speaker himself and nobody else.

(50) yA˜-hAygyadW

/yA~/-known

"I (goal) know it (source)."

Therefore, the goal component of /yA~/ covers only category one [+speaker, -hearer].

When the referent is plural, the problem is even more complicated. Consider the N-prefix /e/ (ProCpl). As the following example will illustrate, the referent (neutral participant) which is indexed by /e/ may be either "first person plural exclusive" as in (51), or "third person plural" as in (52).

(51) hWn e-bA:-mw

not /e/-go-Neg

"We (exclusive of hearer) did not go."

(52) t´Ap e-dEde

deer /e/-standing

"Deer were standing."

Therefore, the N-prefix /e/ covers both category one [+speaker, -hearer] and category four [-speaker, -hearer].

The goal component of the G-prefix /dEt/ (ProCtrLSa<=Cpl) is traditionally glossed as "first person plural". The traditional gloss is quite appropriate in this case. The goal participant of /dEt/ may be either "first person plural inclusive" as in (53), or "first person plural exclusive" as in (54).

(53) I:de dEt-pEhWwtW

two /dEt/-throw=down

"(He) threw both of us (you and me) (goal) down."

(54) tEehwy dEt-WlhWwtW

all /dEt/-slam=down=(from the head)

"(He) slammed all of us (goal) down." (This would be an answer to the question, "What happened to you?")

Thus, the goal component of this prefix covers both category one [+speaker, -hearer] and category two [+speaker, +hearer].

The behavior of the neutral prefix /ba/ (DstLSa)is considerablly more complicated. /ba/ is traditionally glossed as "second person plural". However, as shown in the examples below, the usage of /ba/ is far broader than this gloss can possibly imply. /ba/ may refer to a "second person plural (exclusive of speaker)" participant (as in (55)). It may also refer to a "first person inclusive plural or dual" participant (as in (56) and (57)).

(55) tEhwy ba-Wbwy-bA

all /ba/-really-go

"You all must go."

(56) pwy ba-bA-t´W

NReq /ba/-go-Cnj

"Let us (inclusive) not go!"

(57) hAyato al ba-kholEe-thoI-t´W

perhaps Emp /ba/-going=around-Cnj

"Perhaps we (you and I) shall live together."

(proposal for marriage).

Furthermore, /ba/ may sometimes refer to a "third person plural" participant as in (58).

(58) ce˜n-dO˜m e˜m-Ii:-t´w, ba-tOo˜:-ne

mud-Loc DstHSa-sink=Cnj, /ba/-saying-Hsy

"You (DstHSa) will sink into the mud, they said."

Therefore, the N-prefix /ba/ covers category two [+speaker, +hearer], category three [-speaker, +hearer], and category three [-speaker, -hearer].

As is clear from the above examples, the traditional model of person categories is far less than optimal for Kiowa. An attempt to define Kiowa indexical categories in terms of speech act roles leads to a solution which is complicated and awkward. For example, six different categories must be postulated and defined as below for the the seven prefixes discussed above.

| No. | Definition | Prefix |
|---|---|---|
| 1. | [-speaker] | /yA˜n/ |
| 2. | [-speaker, +hearer] | /gw/ |
| 3. | [-hearer] | /EdEe:/, /e/ |
| 4. | [+speaker, -hearer] | /yA˜/ |
| 5. | [+speaker] | /dEt/ |
| 6. | [+speaker, -hearer] | /ba/ |

An alternative model I propose here does not assume binary features of speech act roles themselves. Instead, I postulate two rather different features which are based on principally deictic relations: one is the feature [distal], and the other is the feature [center]. The former divides the participants into two deictic categories between the two focal points of the speech act (i.e., speaker and

hearer). The category for the hearer's side (i.e., [distal]) will be referred to as "the distal (Dst)", and the category for the speaker's side (unmarked) is "the proximal (Pro)". Note that the label proximal is used here for the unmarked category just to avoid notational confusion. There is no third group. Participants in the distal category may not necessarily include the hearer himself, and participants in the proximal category may not necessarily include the speaker himself either. The feature [distal] signals the side and not the focal point.

The feature [center] identifies the focal point of each deictic category (namely the speaker and the hearer). The speaker is identified as the center of the proximal category: thus [center] (unmarked as to the side). The hearer is identified as the center of the distal category: thus [distal, center].

Thus, with these two features, four relational categories are established for the Kiowa indexical system. The same seven prefixes as above are successfully characterized by these categories as shown below:

| No. | Category (Abbreviation) | Features | Prefix |
|---|---|---|---|
| 1. | Proximal-Center (ProCtr): | [center] | /yA˜/, /dEt/ |
| 2. | Proximal (Pro): | unmarked | /e/, /EdEe:/ |
| 3. | Distal-Center (DstCtr): | [distal, center] | /gw/ |
| 4. | Distal (Dst): | [distal] | /ba/, /yA˜n/ |

4.4.5. Indexical Categories

As stated before, the low-focus participant is indexed

by the verb prefix only for substantive features. Hence there are only five indexical categories for the low-focus participant: i.e., High-salient, Low-salient, Individuation-marked, Coupling-marked, and Diffuse.

On the other hand, the focus participant is indexed by the verb prefix for both substantive and deictic features. Logically, there could be as many as twenty categories (five [substantive categories] times four [deictic categories]) for the focus participant, but in reality there are only eleven categories found in the Kiowa pronominal indexing system. Those are listed in the table below. In the same table, corresponding traditional person number categories are shown for the purpose of comparison (note that deictic categories are written before substantive categories in the abbreviations).

Table 6: Indexical Categories for the Focus Participant

| No. | Categories | Corresponding Traditional Categories |
|---|---|---|
| 1. | ProCtrHSa: | 1S |
| 2. | ProCtrLSa: | 1DP |
| 3. | ProHSa: | 3S, 1S |
| 4. | ProLSa: | 3S (LAn, NAn), 3P, 3P (LAn, NAn) |
| 5. | ProInd: | 3P, 1DP (exclusive). 3S (LAn) |
| 6. | ProCpl: | 3D |
| 7. | DstCtrHSa: | 2S |
| 8. | DstHSa: | 2S, 3S |

9. DstLSa: 2P, 3P, 1DP (inclusive)

10. DstInd: 3P

11: DstCpl: 2D, 3D

4.5. Conclusion

As stated before, there are four classes of verb prefixes in Kiowa: i.e., N-prefixes, S-prefixes, G-prefixes, and C-prefixes. N-prefixes mark only one participant (neutral), S-prefixes and G-prefixes mark two (source and goal), and C-prefixes mark three participants (source, intermediary, and goal). Hence four paradigms of the verb prefix can be established.

Although a total of eleven categories are found for the focus participant, and five for the low-focus participant, none of the four paradigms have all of those categories. The paradigm of the N-prefix has nine categories (i.e., ProCtrHSa, ProHSa, two ProLSa's (*10), ProInd, ProCpl, DstHSa, DstLSa, and DstCpl). The paradigm of the S-prefix has eight categories (i.e., ProCtrHSa, ProHSa, ProLSa, PrxInd, ProCpl, DstHSa, DstLSa, and DstCpl) for the focus participant (source), and five categories (i.e., HSa, LSa, Ind, Cpl, and Dif) for the low-focus participant (goal). The paradigm of the G-prefix has nine categories (i.e., ProCtrHSa, ProCtrLSa, ProHSa, DstCtrHSa, DstHSa, DstLSa, DstInd, and two DstCpl's (*9)) for the focus participant (goal), and four categories (i.e., HSa, LSa, Ind, and Cpl) for the low-focus participant (source).

Greater elaboration is seen in the proximal categories in the N-prefix and the S-prefix, while in the G-prefix, greater elaboration is seen in the distal categories. The reason for this is not yet very clear.

The number of C-prefixes is surprisingly small, despite the large number of logical possibilities. In the paradigm of the C-prefix, there are five categories (i.e., ProLSa, ProInd, ProCpl, DstLSa, and DstCpl) for the source, four (i.e., HSa, LSa, Ind, and Cpl) for the intermediary, and only one (ProHSa) for the goal. Thus, there are only twenty (5 x 4 x 1) C-prefixes in Kiowa. The one hundred and six functionally distinctive Kiowa verb prefixes are arranged in the four paradigms below. Those paradigms are very similar to Watkins´ paradigms in structural lay out, but quite different in semantic and morphological interpretation.

Table 7: Neutral Prefixes (N-prefixes)

| NEUTRAL | Form |
|---|---|
| ProCtrHSa: | a |
| ProHSa: | # |
| ProLSa: | A |
| ProLSa: (*7) | gya |
| ProInd: | e |
| ProCpl: | e~ |
| DstHSa: | e~m |
| DstLSa: | ba |
| DstCpl: | ma~ |

Legend:

Pro = Proximal
Dst = Distal
Ctr = Center-included
HSa = High-salient
LSa = Low-salient
Ind = Individuation-marked
Cpl = Coupling-marked

Table 8: Source Focused Prefixes (S-prefixes)

| SOURCE | GOAL | | | | |
|---|---|---|---|---|---|
| | HSa | LSa | Ind | Cpl | Dif |
| ProCtrHSa | gya | gyat | dE | ne~n | de |
| ProHSa | # | gya | E | e~ | e~m |
| ProLSa | A | gyA | et | et | E~m |
| ProInd | E | Et | Et | et | Et |
| ProCpl | E~ | E~n | E~n | E~n | E~n |
| DstHSa | a | bat | bE | me~n | be |
| DstLSa | bA | bAt | bEt | bet | bE |
| DstCpl | mA~ | mA~n | mE~n | mE~n | mE~ |

Legend:

Pro = Proximal
Dst = Distal
Ctr = Center-included
HSa = High-salient
LSa = Low-salient
Ind = Individuation-marked
Cpl = Coupling-marked
Dif = Diffuse

Table 9: Goal Focused Prefixes (G-prefixes)

| GOAL | SOURCE | | | |
|---|---|---|---|---|
| | HSa | LSa | Ind | Cpl |
| ProCtrHSa | E~ | yA~ | nW~ | nE~ |
| ProCtrLSa | dW | gyAt | dWt | dEt |
| ProHSa | A | A~n | W | E~n |
| DstCtrHSa | gw/gW (1) | gyAt | gWt | dEt |
| DstHSa | e~m/gyA (2) | yA~n | gW | nE~n |
| DstLSa | bW | bAt | bWt | bEt |
| DstCpl | mW~ | mA~n | mW~n | mE~n |
| DstInd | bE | bEt | bEt | bEt |
| DstCpl | mE~ | mE~n | mE~n | mE~n |

(1) /gw/ occurs when the actor (source) and the object (goal) are referenced, and /gW/ occurs when the object (source) and the beneficiary are referenced.

(2) /e~m/ occurs when the actor (source) and the object (goal) are referenced, while /gyA/ occurs when the object and the beneficiary (goal) are referenced.

Table 10: Compounded Prefixes (C-prefixes)

| SOURCE | INTERMEDIARY | | | |
|---|---|---|---|---|
| | HSa | LSa | Ind | Cpl |
| PrxLsl | Aa: | gyAa: | dWw: | dEe: |
| PrxInd | Ee: | EgIi: | EdWw: | EdEe: |
| PrxCpl | Ee~: | E~nIi~: | E~nWw~: | E~nEe~: |
| DstLsl | bAa: | bAgIi: | bWdWw: | bEdEe: |
| DstCpl | mAa~: | mA~nIi~: | mW~nWw~: | mE~nEe~: |

ProHSa

G O A L

Legend:

Pro = Proximal
Dst = Distal
HSa = High-salient
LSa = Low-salient
Ind = Individuation-marked
Cpl = Coupling-marked

NOTES

(*1) My classification of Kiowa verbs is slightly different from Watkins'. I assume the active-stative distinction is the primary classification and it is reflected morphologically. The transitive-intransitive distinction is a secondary classification which can be made semantically on the basis of valence of the verb.

(*2) /gy/ is treated as a single unit.

(*3) This is the participant of statives. Since either animate (High-animate) and inanimate (Low-animate and Non-animate) referent can take this role, this semantic role is called "neutral" in this thesis.

(*4) For example, "A=>B" indicates that the flow of effect is from A to B, and the focus is on A: thus, A is the focused source and B is the low-focus goal. "A<=B" indicates that the flow is from B to A, and the focus is on A: thus, B is the low-focus source and A is the focused goal.

(*5) Here, I use the same term "neutral" for both grammatical category and semantic role (*2).

(*6) Although this category is not focused, it is nevertheless overtly signaled. Hence, it is "low-focused" rather then not focused at all.

(*7) There are two forms for the neutral [Proximal, Low-salient]: i.e., /A/ and /gya/. /A/ occurs when the referent is high-animate, and /gya/ occurs when the referent is not high-animate. As shown in the next chapter, these prefixes are assumed to have the same underlying form in the present analysis.

(*8) Watkins (1980: 108) cites the following examples:

(a) kWy-gU A-kU:yW
    Kiowa-Ind ProLS1-be=lying
    "Kiowas (ProLSa) are camped about."

(b) kyAay-gu e-kU:yW
    Commanche-Ind ProInd-be=lying
    "Commanches (ProInd) are camped about."

(*9) There are two categories for [DstCpl] in the G-prefix paradigm. For their derivation see 5.3.

# V. MORPHOLOGICAL DERIVATION OF THE VERB PREFIXES

## 5.1. Methodological Problem

### 5.1.1. Complexity of Problem

As shown in the previous chapter, the Kiowa verb prefix is an extremely large and complex system which involves as many as 106 functionally distinct forms. However, there is a certain degree of regularity in meaning-to-form correspondences in the four paradigms of Kiowa verb prefixes, which led some analysts to believe that these prefixes are morphologically segmentable. Attempts have been made to analyze Kiowa verb prefixes into underlying component morphemes. For example, Merrifield (1959a) attempted it with a tagmemic model, and Watkins (1978, 1980) attempted it with a more sophisticated generative model. However, due to phonological fusion, analyses tend to be very complicated. In addition to that, those earlier analyses were basically descriptive and not explanatory.

Producing a morphological analysis for a fusional or semi-fusional system like Kiowa verb prefix is always a tricky business. One has to contend with both a certain amount of regularity and a certain amount of irregularity and arbitrariness. An analysis tends to be a compromise of many factors. Thus its merit has to be evaluated carefully by weighing the amount of regularity it captures and

irregularity and arbitrariness it leaves behind.

In a semi-fusional system, phonological fusion has altered the surface forms sufficiently to make the morphological structure quite opaque, yet leaving a certain amount of regularity on the surface which appears too great to be discarded as unaccountable. In those cases, it may be effective to take a semantically-based approach to morphological analysis instead of a purely formal approach. As various analysts have demonstrated (e.g., Goodenough 1954, Conklin 1962, and Bendix 1966, among others), componential analysis is a powerful tool of semantic analysis which, in principle, does not rely on formal cues at all. Yet, interestingly enough, as Burling (1972) suggested in his examples of Palaung pronouns, such a meaning-based analysis could lead to a deeper insight into the morphoological organization of words which is not at all apparent at the surface. Hence it is a worthwhile attempt to make a meaning-guided morphological analysis in Kiowa verb prefixes.

5.1.2. Procedure of Analysis

What I present here is a semantically-based morphological analysis of the Kiowa verb prefix which is guided by the knowledge of the semantic structure of the prefixes which we already have from the discussions in the previous chapters. I believe such an analysis is quite meaningful in order to bring our insights, beyond the level of paradigmatic organization, to the deeper

semantico-morphological structure of the complex Kiowa verb prefix system. It also might provide some explanatory accounts for the organization of the paradigms which we presented in chapter 4.

This analysis takes three steps.

1: To define the relational and indexical categories (see 4.3 and 4.4) in the Kiowa verb prefix explicitly in terms of semantic features, and establish semantic feature-to-formal segment correspondence rules in such a way that they conform to the basic premise of marking theory that morphological marking corresponds with semantic marking (e.g., Schane 1970). Underlying component morphemes for the verb prefixes will be determined by these rules.

2: To derive surface forms by combining underlying component morphemes. This process, which involves phonological fusion, is basically a phonological process.

3: To derive compounded prefixes by compounding two prefixes. This is also a phonological process.

The order of analysis, from the most elementary to the most complex, is not only logical but also practical, because it is at the most elementary level where regularity in meaning-form correspondence is most certain in Kiowa verb prefixes. I deliberately avoided the term morpheme for the most elementary formal units, because what we have at this level is not unique one-to-one correspondences between a formal unit and a semantic unit. Instead, what we tend to have here are correspondences between a single formal unit

and more than one semantic unit, or a single semantic unit and more than one formal unit. So the term formal segment and semantic feature (or simply semantic value) are used in this thesis for the most elementary units of form and meaning in Kiowa verb prefix.

5.2. Determining Underlying Component Morphemes

5.2.1. Semantic Values of the Relational Categories

Relational categories in Kiowa verb prefixes are analyzable as composites of two parameters: focus and direction of effect. Focus is definable by a binary feature [focus] (F): [+focus] (+F) for the focus, and [-focus] (-F) for the low-focus. Direction of effect is definable by two features, [original] (O) and [terminal] (T): the former for the originating point of the flow of effect (source) and the latter for the terminal point (goal). It is to be noted that these two features are not redundant with each other. In the dimension of origination, [+original] is the unmarked category, and [-original] is the marked category, while in the dimension of termination, [+terminal] is the marked category, and [-terminal] unmarked. Direction of effect is not marked for the low-focus category, but it is simply inferred. Thus, all the relational categories can be explicitly defined by means of these three semantic features as shown below:

(1) Semantic Values of Kiowa Relational Categories

N-Prefix:

Neutral: [+focus, -original]

S-Prefix:

Source: [+focus]

Goal: [-focus]

G-Prefix:

Source: [-focus]

Goal: [+focus, -original, terminal]

5.2.2. Semantic Values of the Indexical Categories

Six features are necessary to define the Indexical categories in Kiowa: two for the deictic categories, and four for the substantive categories.

The four deictic categories can be explicitly defined by two features, [distal] (dst) and [center] (ctr), as shown below:

(2) Semantic Values of Deictic Categories

| | |
|---|---|
| Distal: | [distal] |
| Distal with Center: | [distal, center] |
| Proximal: | unmarked |
| Proximal with Center: | [center] |

The substantive categories can be defined by four features: [individuation-marked] (ind), [coupling] (cpl), [diffuse] (dif), and [substance-marked] (sub). The meanings for the first three features have been explained above. The last feature, [substance-marked], represents the marked category in the dimension of saliency. Since the salient referent is naturally the most noteworthy participant for mentioning, the high-salient is the unmarked category. On the other hand, the referent which is not inherently

salient, is less common or natural a candidate for mentioning, and hence, it becomes marked. The referent also becomes marked in substance for some coincidental semantic conditions (such as aggregation, individuation marking, or coupling). Thus, the five substantive categories can be explicitly defined by these four features as below:

(3) Semantic Values of Substantive Categories

| | |
|---|---|
| High-salient: | unmarked |
| Low-salient: | [sub-marked] |
| Indivi-marked: | [sub-marked, ind-marked] |
| Coupled: | [sub-marked, coupled] |
| Diffuse: | [diffuse] |

5.2.3. Meaning of Prefixes in Features

Given the nine features discussed above, it is possible to define explicitly the meaning of each prefix as a set of marked semantic features. For example, the N-prefix /ba/, which signals a distal low-salient neutral participant, has the following semantic values: /ba/ (DstLSa) = [+F, -O, dst, sub]; and the N-prefix /e/, which signals a proximal individuation-marked neutral participant, has the following semantic values: /e/ (ProInd) = [+F, -O, sub, ind].

Here are some examples of semantic values for S-prefixes and G-prefixes:

(4) Semantic Values for Some Kiowa Prefixes

| Form | Gloss | Semantic Values |
|---|---|---|
| /gya/ | ProCtrHSa=>HSa | [[+F, ctr] [-F]] |

/be/ DstHSa=>Dif [[+F, dst] [-F, dif]]

/yA~/ ProCtrHSa<=LSa [[+F, -O, T, ctr] [-F, sub]]

/mW~/ DstCpl<=HSa [[+F, -O, T, sub, cpl] [-F]]

5.3. Determining Underlying Component Morphemes

5.3.1. Morphological Marking Rules

The basic premise for establishing morphological marking rules is that morphological marking coincides with semantic marking. All the marked features in meaning are actualized in form as morphological marking. These semantic marking-to-morphological marking correspondences can be described as morphological marking rules. There are nine such rules, and application of those rules are ordered. The underlying forms of component morphemes can be determined by cumulative application of morphological marking rules. The nine morphological marking rules are described below in the order of application. The same rules are shown in feature notation in Appendix 1.

5.3.1.1. Morphological Core

This is an arbitrarily postulated formal entity which assumes no meaning. This is the base to which all the meaning associated morphological markings are applied. In other words, the "morphological core" is the starting (zero) point of derivation. It is desirable to choose the simplest and the least marked form for the morphological core, so that subsequent morphological modifications will become additive (addition of features, both formally and semantically) rather than substractive (deletion of

features). For this reason, the low-toned, low-front, short, oral vowel, /a/, is selected as the morphological core.

(MM-0) Morphological Core: a

5.3.1.2. Relational Features

Morphological manifestation of the relational features is complex, in that it is not an individual feature but a combination of features that has an actual morphological realization. There are two such rules. One marks [+focus, -original] by nasalization of the core vowel, and the other marks [+focus, terminal] by raising of the pitch.

(MM-1) [+focus, -original] : a ---> a˜

(MM-2) [+focus, terminal] : a˜ ---> A˜

5.3.1.3. Diffuse

Marking in the feature [diffuse] corresponds morphologically with a vowel change (the core vowel /a/ becomes /e/).

(MM-3) [diffuse] : a ---> e

5.3.1.4. Substance-Marked

Marking in the feature [substance-marked] is morphologically realized as suffixation of a consonant /d/ to the core vowel (when the core vowel is oral), or denasalization of the vowel (when the core vowel is nasal).

(MM-4) [sub-marked] : -d / {a, A} __

or

{a˜, A˜} ---> {a, A}

5.3.1.5. Deictic Features

There are two deictic features: [distal] and [center]. The feature [distal] is morphologically realized by prefixin of the consonant /b/ (before an oral vowel), or /g/ (before a nasal vowel). The feature [center] is realized either by prefixing of the consonant /d/ to the core vowel when there is no initial consonant, or denasalization of the core vowel when there is an initial consonant.

(MM-5) [distal] : b- / __ {a, A}

or

g- / __ {a~, A~}

(MM-6) [center] : d- / # __ {a, a~, A, A~}

or

{a~, A~} ---> {a, A} / g __

5.3.1.6. Individuation-Marked

When the referent is semantically marked for the state of individuation ([ind-marked]), it is morphologically marked by a vowel change: /a/ to /w/ in the source component of the G-prefix, and /a/ to /e/ (or /A/ to /E/) elsewhere.

(MM-7) [ind-marked] : a ---> w / Source of G-prefix

or

{a, A} ---> {e, E} / elsewhere

5.3.1.7. Coupling

Coupling of the referent is morphologically marked by one of the two processes: i.e., a vowel change (/w/ to /e/), in the source component of the G-prefix, or

nasalization of the core vowel, in other cases.

(MM-8) [coupled] : {a, A} ---> {a˜, A˜},

{e, E} ---> {e˜, E˜}

or

w ---> e

5.3.2. Underlying Component Morphemes

The form and the semantico-morphological organization of each od the 34 underlying component morphemes are shown in Table 11 (below).

Table 11: Formation of Component Morphemes

| Meaning | | Applied MM-Rules | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Rel. Cat. | Index. Category | MM0 Core | MM1 +F,-O | MM2 +F,T | MM3 dif | MM4 sub | MM5 dst | MM6 ctr | MM7 ind | MM8 cpl | Form |
| <N-Prefix> | | | | | | | | | | | |
| N-1 | ProCtrHSa | a | a˜ | - | - | - | - | da˜ | - | - | da˜ |
| N-2 | ProHSa | a | a˜ | - | - | - | - | - | - | - | a˜ |
| N-3 | ProLSa(*1) | a | a˜ | - | - | ad | - | - | - | - | ad |
| N-4 | ProLSa | a | a˜ | - | - | ad | - | - | - | - | ad |
| N-5 | ProInd | a | a˜ | - | - | a | - | - | e | - | e |
| N-6 | ProCpl | a | a˜ | - | - | a | - | - | e | e˜ | e˜ |
| N-7 | DstHSa | a | a˜ | - | - | - | ga˜ | - | - | - | ga˜ |
| N-8 | DstLSa | a | a˜ | - | - | a | ba | - | - | - | ba |
| N-9 | DstCpl | a | a˜ | - | - | a | ba | - | - | ba˜ | ba˜ |
| <S-prefix> | | | | | | | | | | | |
| S-1 | ProCtrHSa | a | - | - | - | - | - | da | - | - | da |
| S-2 | ProHSa | a | - | - | - | - | - | - | - | - | a |

| Rel. Cat. | Index. Category | MM0 Core | MM1 +F,-O | MM2 +F,T | MM3 dif | MM4 sub | MM5 dst | MM6 ctr | MM7 ind | MM8 cpl | Form |
|---|---|---|---|---|---|---|---|---|---|---|---|
| S-3 | ProLSa | a | - | - | - | ad | - | - | - | - | ad |
| S-4 | ProInd | a | - | - | - | ad | - | - | ed | - | ed |
| S-5 | ProCpl | a | - | - | - | ad | - | - | ed | e~d | e~d |
| S-6 | DstHSa | a | - | - | - | - | ba | - | - | - | ba |
| S-7 | DstLSa | a | - | - | - | ad | bad | - | - | - | bad |
| S-8 | DstCpl | a | - | - | - | ad | bad | - | - | ba~d | ba~d |
| G-1 | HSa | a | - | - | - | - | - | - | - | - | a |
| G-2 | LSa | a | - | - | - | ad | - | - | - | - | ad |
| G-3 | Ind | a | - | - | - | ad | - | - | ed | - | ed |
| G-4 | Cpl | a | - | - | - | ad | - | - | ed | e~d | e~d |
| G-5 | Dif | a | - | - | e | - | - | - | - | - | e |
| <G-prefix> | | | | | | | | | | | |
| S-1 | HSa | a | - | - | - | - | - | - | - | - | a |
| S-2 | LSa | a | - | - | - | ad | - | - | - | - | ad |
| S-3 | Ind | a | - | - | - | ad | - | - | wd | - | wd |
| S-4 | Cpl | a | - | - | - | ad | - | - | wd | ed | ed |
| G-1 | ProCtrHSa | a | a~ | A~ | - | - | - | dA~ | - | - | dA~ |
| G-2 | ProCtrLSa | a | a~ | A~ | - | A | - | dA | - | - | dA |
| G-3 | ProHSa | a | a~ | A~ | - | - | - | - | - | - | A~ |
| G-4 | DstCtrHSa | a | a~ | A~ | - | - | gA~ | gA | - | - | gA |
| G-5 | DstHSa | a | a~ | A~ | - | - | gA~ | - | - | - | gA~ |
| G-6 | DstLSa | a | a~ | A~ | - | A | bA | - | - | - | bA |
| G-7 | DstCpl | a | a~ | A~ | - | A | bA | - | - | bA~ | bA~ |
| G-8 | DstInd | a | a~ | A~ | - | A | bA | - | bE | - | bE |
| G-9 | DstCpl | a | a~ | A~ | - | A | bA | - | bE | bE~ | bE~ |

5.4. Derivation of Surface Forms

Two participant prefixes (S-prefixes and G-prefixes) consist of two component morphemes. In deriving a two participant prefix, two underlying components (one for the source and one for the goal) are combined, fused and synthesized into one. Then a series of phonological rules are applied to the output of the synthesis to produce the final surface form.

One participant prefixes do not involve the process of synthesis, because one participant prefixes consist of only one underlying component. The surface forms are derived from the underlying morphemes by means of phonological rules.

5.4.1. Synthesis

Two underlying components (a source component and a goal component, one of which being focused and the other low-focus) are fused into one by means of two synthesis rules (Sy-rules). The process of synthesis thus turns the underlying structure (2) into the surface structure (3).

(2) Underlying Structure of the Two Participant Prefix:

( C ) V1 ( C ) - V2 ( C )

(3) Surface Structure of the Two Participant Prefix:

( C ) V ( C )

What the synthesis rules do phonologically are, to truncate the terminal consonant /d/ of the first component (Sy-1), and to fuse the two vowels into one (Sy-2). The former results in a raised pitch on the preceding vowel.

(Sy-1) vd ---> V / __ # v

The vowel fusion rule is a complex rule in which two adjacent vowels fuse into one. The resulting vowel takes whatever feature (in vocalic, nasal, and tonal aspects) is most marked of the two source vowels. In the vocalic aspect, /e/ is more marked than /w/ which is more marked than /a/. In the nasal aspect, nasalization is the marked feature, and in the tonal aspect, the high tone is naturally more marked than the low tone.

(Sy-2) V1 + V2 ---> V3 (where V3 represents the most marked features of V1 and V2)

5.4.2. Phonological Rules

The verb prefixes thus synthesized undergo a series of phonological changes to become the surface (or actually observable) forms. Unlike the synthesis rules, phonological rules are not limited to the process of pronominal synthesis, but they are more or less general rules which operate in larger domains in Kiowa morphology than just the verb prefix system (for detailed discussion of Kiowa phonology, see Watkins 1980:50-84).

Six phonological rules (Ph-rules) are necessary to complete the derivation of the independent prefixes in Kiowa. Those rules are described and discussed below in the order of application (The same set of rules are described in feature notation in the appendix).

Metathesis Rule: The vowel-consonant sequence /ad/ is reversed and becomes /da/.

(Ph-1) ad ---> da / # __ #

Terminal /d/ Deletion Rule: The terminal consonant /d/ is deleted when it follows a low pitched vowel /e/ or /a/. As a result, the tone of the preceding vowel is raised. This rule does not apply to nasal vowels.

(Ph-2) ed ---> E Ø / __ #,

ad ---> A Ø / # -- #

Dental-Velar Switch rule: This is a rather unique rule which switches /d/ and /g/: /g/ becomes /d/ before /e/ of /e˜/, and /d/ becomes /g/ before /a/ or /a˜/. Watkins (1980:55) combines the two processes into one, and calls this generalized rule the "dental-velar switch" rule.

(Ph-3) d ---> g / __ {a, a˜},

g ---> d / __ {e, e˜}

The /a/ - /ya/ - /i/ Alternation Rule: A regular alternation is seen among /a/, /ya/ and /i/ throughout Kiowa morphology (see Watkins 1980:22-24). In the domain of the verb prefix, /i/ occurs with falling tone, /ya/ occurs after velars, and /a/ occurs elsewhere.

(Ph-4a) a ---> ya / g __

(Ph-4b) yAa ---> Ii

Nasalization Rule: This rule nasalizes a consonant which is adjacent to a nasal vowel. As a result of this rule, the entire prefix becomes nasalized.

(Ph-5) {b, d, g} ---> {m, n, y} / {v˜, V˜} __

Terminal /d/ Devoicing Rule: The terminal consonant /d/ is devoiced.

(Ph-6) d ---> t / __ #

5.4.3. Derivational Process

The derivational process for each of the one-participant and two participant prefixes (N-prefixes, S-prefixes, and G-prefixes) is illustrated in the following table. The column for the underlying form shows underlying component morphemes which make up the prefixes. The numbers in the columns for Sy-rules and Ph-rules indicate applied rules and their order of application. The rightmost column shows the surface form which the rules predict. Where the predicted form is different than the actual form, the actual form is indicated in the parentheses.

Table 12: Derivation of Surface Forms

| No. | Gloss | Under-F | Sy-Rules | Ph-Rules | S-Form |
|---|---|---|---|---|---|
| <N-prefix> | | | | | |
| N1 | ProCtrHSa | da~ | | 3,4a,5 (*2) | *ya~ (a) |
| N2 | ProHSa | a~ | | | *a~ (#) |
| N3 | ProLSa | ad | | 2 | A (*3) |
| N4 | ProLSa | ad | | 1,3,4a | gya |
| N5 | ProInd | e | | | e |
| N6 | ProCpl | e~ | | | e~ |
| N7 | DstHSa | ga~ | | 3,4a,5 | *ya~ (e~m) |
| N8 | DstLSa | ba | | | ba |
| N9 | DstCpl | ba~ | | 5 | ma~ |

Table 12: Derivation of Surface Forms (cont'd)

| No. | Gloss | Under-F | Sy-Rules | Ph-Rules | S-Form |
|---|---|---|---|---|---|
| <S-prefix> | | | | | |
| S11 | ProCtrHSa=>HSa | da-a | 2 | 3,4a | gya |
| S12 | ProCtrHSa=>LSa | da-ad | 2 | 3,4a,6 | gyat |
| S13 | ProCtrHSa=>Ind | da-ed | 2 | 2 | dE |
| S14 | ProCtrHSa=>Cpl | da-e~d | 2 | 5 | ne~n |
| S15 | ProCtrHSa=>Dif | da-e | 2 | | de |
| S21 | ProHSa=>HSa | a-a | 2 | | *a (#) |
| S22 | ProHSa=>LSa | a-ad | 2 | 1,3,4a | gya |
| S23 | ProHSa=>Ind | a-ed | 2 | 2 | E |
| S24 | ProHSa=>Cpl | a-e~d | 2 | 5 | *e~n (e~) |
| S25 | ProHSa=>Dif | a-e | 2 | | *e (e~m) |
| S31 | ProLSa=>HSa | ad-a | 1,2 | | A |
| S32 | ProLSa=>LSa | ad-ad | 1,2 | 1,3,4a | gyA |
| S33 | ProLSa=>Ind | ad-ed | 1,2 | 6 | *Et (et) |
| S34 | ProLSa=>Cpl | ad-e~d | 1,2 | 5 | *E~n (et) |
| S35 | ProLSa=>Dif | ad-e | 1,2 | | *E (E~m) |
| S41 | ProInd=>HSa | ed-a | 1,2 | | E |
| S42 | ProInd=>LSa | ed-ad | 1,2 | 6 | Et |
| S43 | ProInd=>Ind | ed-ed | 1,2 | 6 | Et |
| S44 | ProInd=>Cpl | ed-e~d | 1,2 | 5 | *E~n (et) |
| S45 | ProInd=>Dif | ed-e | 1,2 | | *E (Et) |
| S51 | ProCpl=>HSa | e~d-a | 1,2 | | E~ |
| S52 | ProCpl=>LSa | e~d-ad | 1,2 | 5 | E~n |

Table 12: Derivation of Surface Forms (cont'd)

| No. | Gloss | Under-F | Sy-Rule | Ph-Rule | S-Form |
|---|---|---|---|---|---|
| S53 | ProCpl=>Ind | e~d-ed | 1,2 | 5 | E~n |
| S54 | ProCpl=>Cpl | e~d-e~d | 1,2 | 5 | E~n |
| S55 | ProCpl=>Dif | e~d-e | 1,2 | | *E~ (E~n) |
| S61 | DstHSa=>HSa | ba-a | 2 | | *ba (a) |
| S62 | DstHSa=>LSa | ba-ad | 2 | 6 | bat |
| S63 | DstHSa=>Ind | ba-ed | 2 | 2 | bE |
| S64 | DstHSa=>Cpl | ba-e~d | 2 | 5 | me~n |
| S65 | DstHSa=>Dif | ba-e | 2 | | be |
| S71 | DstLSa=>HSa | bad-a | 1,2 | | bA |
| S72 | DstLSa=>LSa | bad-ad | 1,2 | 6 | bAt |
| S73 | DstLSa=>Ind | bad-ed | 1,2 | 6 | bEt |
| S74 | DstLSa=>Cpl | bad-e~d | 1,2 | 5 | *mE~n (bet) |
| S75 | DstLSa=>Dif | bad-e | 1,2 | | bE |
| S81 | DstCpl=>HSa | ba~d-a | 1,2 | 5 | mA~ |
| S82 | DstCpl=>LSa | ba~d-ad | 1,2 | 5 | mA~n |
| S83 | DstCpl=>Ind | ba~d-ed | 1,2 | 5 | mE~n |
| S84 | DstCpl=>Cpl | ba~d-e~d | 1,2 | 5 | mE~n |
| S85 | DstCpl=>Dif | ba~d-e | 1,2 | 5 | mE~ |
| <G-prefix> | | | | | |
| G11 | ProCtrHSa<=HSa | dA~-a | 2 | 3,4a,5 | *yA~ (E~) |
| G12 | ProCtrHSa<=LSa | dA~-ad | 2 | 3,4a,5 | *yA~n (yA~) |
| G13 | ProCtrHSa<=Ind | dA~-wd | 2 | 5 | *nW~n (nW~) |
| G14 | ProCtrHSa<=Cpl | dA~-ed | 2 | 5 | *nE~n (nE~) |
| G21 | ProCtrLSa<=HSa | dA-a | 2 | 3,4a | *gyA (dW) |

Table 12: Derivation of Surface Forms (cont'd)

| No. | Gloss | Under-S | Sy-Rule | Ph-Rule | S-Form |
|---|---|---|---|---|---|
| G22 | ProCtrLSa<=LSa | dA-ad | 2 | 3,4a,6 | gyAt |
| G23 | ProCtrLSa<=Ind | dA-wd | 2 | 6 | dWt |
| G24 | ProCtrLSa<=Cpl | dA-ed | 2 | 6 | dEt |
| G31 | ProHsa<=HSa | A~-a | 2 | | *A~ (A) |
| G32 | ProHSa<=LSa | A~-ad | 2 | 5 | A~n |
| G33 | ProHSa<=Ind | A~-wd | 2 | 5 | *W~n (W) |
| G34 | ProHSa<=Cpl | A~-ed | 2 | 5 | E~n |
| G41 | DstCtrHSa<=HSa | gA-a | 2 | 4a | *gyA (gW) |
| G42 | DstCtrHSa<=LSa | gA-ad | 2 | 4a,6 | gyAt |
| G43 | DstCtrHSa<=Ind | gA-wd | 2 | 6 | gWt |
| G44 | DstCtrHSa<=Cpl | gA-ed | 2 | 3,6 | dEt |
| G51 | DstHSa<=HSa | gA~-a | 2 | 4a,5 | *yA~ (gyA) |
| G52 | DstHSa<=LSa | gA~-ad | 2 | 4a,5 | yA~n |
| G53 | DstHSa<=Ind | gA~-wd | 2 | 5 | *yW~n (gW) |
| G54 | DstHSa<=Cpl | gA~-ed | 2 | 3,5 | nE~n |
| G61 | DstLSa<=HSa | bA-a | 2 | | *bA (bW) |
| G62 | DstLSa<=LSa | bA-ad | 2 | 6 | bAt |
| G63 | DstLSa<=Ind | bA-wd | 2 | 6 | bWt |
| G64 | DstLSa<=Cpl | bA-ed | 2 | 6 | bEt |
| G71 | DstCpl<=HSa | bA~-a | 2 | 5 | *mA~ (mW~) |
| G72 | DstCpl<=LSa | bA~-ad | 2 | 5 | mA~n |
| G73 | DstCpl<=Ind | bA~-wd | 2 | 5 | mW~n |
| G74 | DstCpl<=Cpl | bA~-ed | 2 | 5 | mE~n |

Table 12: Derivation of Surface Forms (cont'd)

| No. | Gloss | Under-F | Sy-Rule | Ph-Rule | S-Form |
|---|---|---|---|---|---|
| G81 | DstInd<=HSa | bE-a | 2 | | bE |
| G82 | DstInd<=LSa | bE-ad | 2 | 6 | bEt |
| G83 | DstInd<=Ind | bE-wd | 2 | 6 | bEt |
| G84 | DstInd<=Cpl | bE-ed | 2 | 6 | bEt |
| G91 | DstCpl<=HSa | bE˜-a | 2 | 5 | mE˜ |
| G92 | DstCpl<=LSa | bE˜-ad | 2 | 5 | mE˜n |
| G93 | DstCpl<=Ind | bE˜-wd | 2 | 5 | mE˜n |
| G94 | DstCpl<=Cpl | bE˜-ed | 2 | 5 | mE˜n |

As shown above, the two sets of rules (i.e., synthesis rules and phonological rules) successfully predict 60 (out of 86) forms. There are yet 26 forms which those rules cannot account for. This is perhaps, at least in part, due to the weakness of the analysis, but historical changes are also very likely causes for such irregularity.

Of the 26 forms which our rules failed to predict correctly, 8 (N1, N2, N7, S21, S25, S35, S61 and G11) must be considered suppletions under this analysis. However, for the remaining 18 forms, the deviation of the predicted forms from the actual forms is not completely random. In fact, it is possible to write some ad hoc rules to capture the patterns of deviation (see below).

(3) Patterns of Deviation of the Actual Forms from the Predicted Forms

1. Tone lowering:

| | | | |
|---|---|---|---|
| S33 | ProLSa=>Ind | *Et | (et) |

2. Denasalization:

| | | | |
|---|---|---|---|
| G31 | ProHSa<=HSa | *A~ | (A) |
| G51 | DstHSa<=HSa | *yA~ | (gyA) |

3. Denasalization and tone lowering:

| | | | |
|---|---|---|---|
| S34 | ProLSa=>Cpl | *E~n | (et) |
| S44 | ProInd=>Cpl | *E~n | (et) |
| S74 | DstLSa=>Cpl | *mE~n | (bet) |

4. Terminal /n/ deletion:

| | | | |
|---|---|---|---|
| S24 | ProHSa=>Cpl | *e~n | (e~) |
| G12 | ProCtrHSa<=LSa | *yA~n | (yA~) |
| G13 | ProCtrHSa<=Ind | *nW~n | (nW~) |
| G14 | ProCtrHSa<=Cpl | *nE~n | (nE~) |

5. Terminal /n/ deletion and denasalization

| | | | |
|---|---|---|---|
| G33 | ProHSa<=Ind | *W~n | (W) |
| G53 | ProHSa<=Ind | *yW~n | (gW) |

6. Vowel shift, /a/ to /w/:

| | | | |
|---|---|---|---|
| G21 | ProCtrLSa<=HSa | *gyA | (dW) |
| G41 | DstCtrHSa<=HSa | *gyA | (gW) |
| G61 | DstLSa<=HSa | *bA | (bW) |
| G71 | DstCpl<=HSa | *mA~ | (mW~) |

5.5. Derivation of Compounded Prefixes

5.5.1. The C-Prefix

Compounded prefixes (C-prefixes) are morphologically complex prefixes which are formed by compounding two two-participant prefixess. Phonologically, C-prefixes are characterized by the falling tone on the terminal vowel:

(4) Canonical Structure of the C-prefix: (C)(V)(C)Vv:

Grammatically, a C-prefix signals three participants (source, intermediary source, and goal), and grammatical focus is placed on the source.

5.5.2. Fusion

In prefix compounding, an S-prefix and a G-prefix, both of which are full surface forms, are combined, with the S-prefix, which contains the focused component, preceding the G-prefix in positioning. The two prefixes are then fused into one lexical unit by a set of compounding rules (Co-rules). Three such rules (Co-1, 2, 3) and four additional rules (Co-4, 5, 6, 7), which are phonological rules in nature but included in the Co-rules because they are unique to the domain of prefix compounding, are postulated. Co-rules are then followed by the phonological rules (Ph-rules) which are the same as those in prefix synthesis (see 5.4.2). The five compounding rules are shown below.

Vowel Deletion: The second one of the two sequential vowels in compounded prefixes is deleted.

(Co-1) V ---> ∅ / V __

Terminal Consonant Deletion: The terminal consonant /n/ (of the second constituent prefix) is deleted.

(Co-2) n ---> ∅ / __ #

Falling Tone: The terminal vowel aquires a falling tone. At the same time, that vowel is lengthened.

(Co-3) V ---> Vv: / __ #

Nasal Harmony: The nasal feature of the second vowel harmonizes with that of the first vowel.

(Co-4) V ---> V˜ / V˜ X __

or

V˜ ---> V / V X __

Low Pitched /e/ Deletion: A low pitched /e/ in the initial position is deleted.

(Co-5) e ---> ø / # __

Vowel Harmony: A mid front vowel /e/ becomes /w/ in harmony with a following low back vowel /w/ , at a non-initial position.

(Co-6) e ---> w / X __ X w

Voicing of /t/: /t/ is voiced before a vowel.

(Co-7) t ---> d / __ V

These rules are shown in feature notation in Appendix-3.

5.5.3. Restriction on Prefix Compounding

Interestingly enough, there are only a limited number of combinations of prefixes actually found in Kiowa prefix compounding. Those prefixes which may be actually compounded are a G-prefix with the focused component being of the ProHSa category and an S-prefix with the focused participant being of one of the following categories: ProLSa, ProInd, ProCpl, DstLSa or DstCpl. See 6.6. for a discussion about the reason for this limited occurrence of prefix compoundeding.

It is also to be noted that in prefix compounding, the

two prefixes which are to be compounded must have the same indexical category for the secondary (low-focus) participant: i.e., the goal component of the S-prefix and the source component of the G-prefix must be of the same indexical category. For example, /bA/ (S-prefix: DstLSa=>HSa) and /A/ (G-prefix: ProHSa<=HSa) can be compounded, but /bAt/ (S-prefix: DstLSa=>LSa) and a (the same as above) cannot, because in the latter case the low-focus components of the two source prefixes do not share the same indexical category. Thus, there are only 20 (5 x 4) C-prefixes.

5.5.4. Derivation of C-prefixes

The derivational processes of prefix compounding for each of the twenty C-prefixes are shown in the following table. The numbers designate the rules (both Co-rules and Ph-rules). Application of Co-rules as well as Ph-rules is ordered.

Table 13: Derivation of C-prefixes

| No. | Gloss | Under-F | Co-rule | Ph-rule | S-Form |
|---|---|---|---|---|---|
| C31 | ProLsa=>HSa=>ProHSa | A-A | 1,3 | | Aa: |
| C32 | ProLSa=>LSa=>ProHSa | gyA-A~n | 1,2,3 | | gyAa: |
| C33 | ProLSa=>Ind=>ProHSa | et-W | 3,5,7 | | dWw: |
| C34 | ProLSa=>Cpl=>ProHSa | et-E~n | 2,3,4,5,7 | | dEe: |
| C41 | ProInd=>HSa=>ProHSa | E-A | 1,3 | | Ee: |
| C42 | ProInd=>LSa=>ProHSa | Et-A~n | 2,3,4 | 3,4a,4b | EgIi: |
| C43 | ProInd=>Ind=>ProHSa | Et-W | 3,7 | | EdWw: |
| C44 | ProInd=>Cpl=>ProHSa | et-E~n | 2,3,4,5,7 | | *dEe: (EdEe:) |
| C51 | ProCpl=>HSa=>ProHSa | E~-A | 1,3 | | Ee~: |
| C52 | ProCpl=>LSa=>ProHSa | E~n-A~n | 2,3 | 3,4a,4b | E~nIi~: |
| C53 | ProCpl=>Ind=>ProHSa | E~n-W | 3,4 | | E~nWw~: |
| C54 | ProCpl=>Cpl=>ProHSa | E~n-E~n | 2,3 | | E~nEe~: |
| C71 | DstLSa=>HSa=>ProHSa | bA-A | 1,3 | | bAa: |
| C72 | DstLSa=>LSa=>ProHSa | bAt-A~n | 2,3,4,7 | 3,4a,4b | bAgIi: |
| C73 | DstLSa=>Ind=>ProHSa | bEt-W | 3,6,7 | | bWdWw: |
| C74 | DstLSa=>Cpl=>ProHSa | bet-E~n | 2,3,4,7 | | *bedEe: (bEdEe:) |
| C81 | DstCpl=>HSa=>ProHSa | mA~-A | 1,3 | | mAa~: |
| C82 | DstCpl=>LSa=>ProHSa | mA~n-A~n | 2,3 | 3,4a,4b | mA~nIi~: |
| C83 | DstCpl=>Ind=>ProHSa | mE~n-W | 3,4,6 | | mW~nWw~: |
| C84 | DstCpl=>Cpl=>ProHSa | mE~n-E~n | 2,3 | | mE~nEe~: |

NOTES

(*1) In derivation of the component Neu-3 and Neu-4 (both glossed as "ProLSa"), MM-5 (sub-marked) is applied twice: first denasalization, and then suffixation of /d/.

(*2) Since Kiowa does not have the velar nasal in its phonemic inventory, /gya/ becomes /ya~/ when it is nasalized.

(*3) In derivation of this form, Ph-1 does not apply (for a reason unknown). As a result, N3 and N4 become distinct in surface form, although they have the same underlying form.

# VI. FUNCTION OF THE VERB PREFIX IN CASE-MARKING

## 6.1. Grammatical Parameters

The verb prefix has the central role in Kiowa case-marking. Case relations in the Kiowa clause can be explicitly marked only by the verb prefix. Before we start the functional analysis of Kiowa case-marking, let us review the grammatical functions of the verb prefix.

As discussed earlier in Chapter 4, grammatical relations in Kiowa can be optimally represented by two parameters--direction of effect and place of focus.

By "direction of effect" is meant a linguistic representation of abstracted semantic (role) relations among the participants. It is assumed that, semantically speaking, all transitive actions, and some intransitive actions and statives as well, of a participant have an effect, either direct or (at least potentially) indirect, on some other participant(s). For example, in the action described by the English sentence "Tom hit Jerry.", Tom's action of hitting has an effect (direct) on Jerry. Similarly, in the situation described by the English sentence "He died for me.", the death of the person has a definite effect (although indirect) on the speaker: perhaps the speaker's life was saved due to this person's altruistic action. In any case, no matter what the nature of the effect is, one can conceive of some kind of effect

and identify its direction. It is this abstracted notion of direction of effect that is grammatically represented by the verb prefix in Kiowa. The relational categories (i.e., source, goal, intermediary and neutral) which are used in earlier chapters are defined in terms of direction of effect: source is the originating point of effect, goal is the terminal point of effect, intermediary, which is expressed only in the C-prefix, is the intermediary point between the source and the goal, and neutral is neither source nor goal (thus expressing no effect relation at all).

The Kiowa verb prefix thus grammatically represents direction of effect. In signaling grammatical relations, interestingly enough, the verb prefix does not treat the source category and the goal category equally, but treats only one of them as the focal point of case-marking. As shown in the previous chapters, the category which is chosen to be the focal point of case-marking (or focused) makes finer distinction in indexing the referent than the low-focus category. This is another important characteristic of the Kiowa verb prefix, and should not be ignored when discussing Kiowa case-marking.

Each of the four classes of the verb prefixes has distinctive grammatical functions. The source focused prefix (S-prefix) signals source and goal, and treats the source as the focal point of case-marking. The goal focused prefix (G-prefix) also signals source and goal, but treats the

goal as the focal point. The compounded prefix (C-prefix) signals source, intermediary and goal, and treats the source as the focal point. The neutral prefix (N-prefix) signals only one category which is neither source nor goal (thus neutral). Since there is only one category, it naturally becomes the focal point.

The main task to be undertaken in functional analysis of Kiowa case-marking is to find out the rules to select a verb prefix to code the participants for a given utterance. These will involve, among other things, rules for determining the direction of effect and rules for focus placement.

6.2. Case-Marking for Stative Verbs

Stative verbs express a state or a change of state (*1) of the referent (either animate or inanimate). Stative verbs are normally case-marked by N-prefixes. The N-prefix expresses no flow of effect at all (see also 4.3.1).

(1) nW kwkWy tO:-i #-t´w (*2) (N-prefix)
my mother house-Loc ProHSa-stay
"My mother (ProHSa: High-animate) is at home."

(2) Alw-bw e-dW:-me (N-prefix)
plums-Ind ProInd-be-Hsy
"There were plums (ProInd: Low-animate)."

(3) c´Oo gya-bIn (N-prefix)
rock ProLSa-big
"The rocks (ProLSa: Non-animate) are big."

The sentence (4) may appear to have two core

participants (speaker and mother's voice) and a flow of effect from one to the other, in fact, only one participant (speaker) is case-marked by the N-prefix /a/. Hence there is only one core participant in this sentence, and no flow of effect is expressed.

(4) kwkWy Ose a-t'W:dw (N-prefix)
mother voice ProCtrHSa-hear
"I (ProCtrHSa) hear mother's voice."

It is also to be noted that Kiowa stative verbs do not necessarily imply any control or lack thereof on the part of the participant over the state which the participant is in. Such a judgement is a matter of pragmatic inference and not expressed overtly by the verb. For example, in (5), the hearer is expected to have control over the change (or no change) of his state, otherwise the speaker would not make such a request to him. In (6) on the other hand, the participant is not expected to have control over the state she is in, because beauty of appearance is not normally considered controlable. (7) does not allow such an instantaneous judgement based on the intrinsic meaning of the verb alone. One may go to some place either with or without control over the situation. The judgement must be contingent on the context.

(5) pWy e~m-bA:-t'w (N-prefix)
NReq DstHSa-go-Cnj
"Please don't go!"

(6) yWkwy #-hI:te (N-prefix)

young=woman ProHSa-beautiful

"The young woman (ProHSa) is beautiful."

(7) nW pabI: thAo˜n-ku #-bAnma (N-prefix)

my brother town-Loc ProHSa-going

"My brother is going to town."

Stative verbs may sometimes have a benefactive participant, which is the recipient of the benefactive or adversative effect of the situation. In that case, the verb is case-marked by a G-prefix. The G-prefix assigns the source category to the neutral participant, and the goal category to the benefactive participant, in accordance with the flow of effect. The G-prefix automatically places the focus on the goal (beneficiary). S-prefixes can not be used to case-mark a stative verb. This is probably because S-prefixes necessarily signal an active role on the part of the source participant.

( 8) cEgun E˜-hEe˜m (G-prefix)

dog ProCtrHSa<=HSa-die

"My dog (HSa) died on me (ProCtrHSa)."

( 9) E˜de k´yA:hIi˜: nW kwm E˜-dw (G-prefix)

this man my friend ProCtrHSa<=HSa-be

"This man (HSa) is my (ProCtrHSa) friend."

(10) dWy Uy t´Wyhi˜: yA˜-k´ul (G-prefix)

medicine over=there far ProCtrHSa<=LSa-lie

"My (ProCtrHSa) medicine (LSa) is lying over there."

(11) tO: A˜n-k´ul (G-prefix)

tepee ProHSa<=LSa-lie

"His (ProHSa) tepee (LSa) is lying (i.e., not set up)."

It is to be noted that the same situation as expressed with a G-prefix as above may be expressed with an N-prefix too. For example, (8) and (9) may be paraphrased respectively as (12) and (13).

(12) nW cEgun #-hEe˜m (N-prefix)
my dog ProHSa-die
"My dog (ProHSa) died."

(13) E˜de k´yA:hIi˜: nW kwm #-dw (N-prefix)
this man my friend ProHSa-be
"This man (ProHSa) is my friend."

Both (8) and (12) express essentially the same situation, and so do (9) and (13). However, there is a significant connotative difference between the two paired expressions. In the latter pair, (9) implies speaker´s strong affection towards his friend, while (13) simply states the fact without such an implication. Similarly, in the first pair, (12) simply states the fact that the speaker´s dog has died, but (8) implies that he is emotionally affected by that fact.

Such a connotative difference is quite expectable from the selection of the case-marking prefix in those sentences. G-prefixes take the two participants (neutral and beneficiary) into the scope of case-marking, and overtly signals the flow of effect from the neutral (source) to the beneficiary (goal). N-prefixes, on the other hand, take only one participant (neutral) into the scope of

case-marking, and no flow of effect is signaled.

6.3. Case-Marking for Active Intransitive Verbs

Active intransitive verbs in Kiowa express those actions which are not directed at any other participant. Hence, active intransitive verbs lack an object. However, unlike what are here called statives, the main participant of an intransitive action is assumed to have control over his own action. Therefore, active intransitive verbs are case-marked by S-prefixes rather than N-prefixes.

The actor is assigned the focused source category by the case-marking S-prefix. What is interesting is the goal category. Since intransitive action does not involve an object, there is no participant for the S-prefix to assign the goal category to. As a result, the goal of the S-prefix for the active intransitive verb becomes diffuse (see 4.4.3.5 for a more detailed discussion of the diffuse category), as the following examples will illustrate.

(14) be-sW: (S-prefix)
DstHSa=>Dif-sit=down
"You (DstHSa) sit down!"

(15) nW i: e˜m-gUnmw (S-prefix)
my son ProHSa=>Dif-dancing
"My son (ProHSa) is dancing."

(16) thOo˜-gya de-khAygun (S-prefix)
water-Lct ProCtrHSa=>Dif-jump
"I (ProCtrHSa) jumped into the water."

(17) de-hEe˜-tel-tW (S-prefix)

ProCtrHSa=>Dif-story-talk-Cnj

"I (ProCtrHSa) will tell a story."

Although active intransitive verbs cannot have an object, they may have a beneficiary. In that case, a G-prefix, and not an S-prefix, is used to case-mark the verb. The G-prefix assigns the source category to the actor, and the goal category to the beneficiary. Focus is automatically placed on the goal (beneficiary) by the G-prefix.

(18) bW-hEe˜-tel-tW (G-prefix)

DstLSa<=HSa-story-talk-Cnj

"I (HSa) will tell a story for you all (DstLSa)."

(19) E˜-phol-tet (G-prefix)

ProCtrHsl<=HSa-lie-talk

"You/he (HSa) lied to me (ProCtrHsa)."

Needless to say, the goal (beneficiary) of (18) is the recipient of the benefactive effect of the actor´s (speaker´s) story telling. Similarly, the goal (beneficiary) of (19) is the recipient of the adversative effect of the actor´s (hearer´s) lying. Thus, in these cases too the prefix faithfully represents the direction of effect.

6.4. Case-Marking for Transitive Verbs

Transitive actions are those actions which are directed at some other participant. Transitive actions, hence, involve a minimum of two participants (actor and object). The direction of effect in a transitive action is

naturally from the actor to the object. Therefore, in case-marking a transitive verb, the actor must be assigned the source category, and the object the goal category.

As noted before, both S-prefixes and G-prefixes can take the actor and the object into the scope of case-marking, and assign the same grammatical categories (source and goal) to them. Focus is placed differently by these two prefix types. The S-prefix places focus on the actor (source), and the G-prefix places focus on the object (goal). This fact has a significant effect on the selection of case-marking prefixes for transitive verbs. Observe the following examples.

(20a) k´yA:hIi˜: gya-tWw:bA (S-prefix)
man ProCtrHSa=>HSa-look=at
"I (ProCtrHSa) look at the man (HSa)."

(20b) k´yA:hIi˜: E˜-tWw:bA (G-prefix)
man ProCtrHSa<=HSa-look=at
"The man (HSa) looked at me (ProCtrHSa)."

(21a) k´yA:hIi˜: a-hOol (S-prefix)
man DstHSa=>HSa-kill
"You (DstHSa) killed the man (HSa)."

(22b) k´yA:hIi˜: gw-hOol-tW (G-prefix)
man DstCtrHSa<=HSa-kill-Cnj
"The man (HSa) will kill you (DstCtrHSa)."

Note in both pairs of sentences it is always the same referent, regardless of its semantic role or grammatical (relational) category, that the focus is placed on. In the

first pair (20a and 20b), which involves the speaker and a third person (a man), it is always the speaker, whether he has the actor role or the object role, that the focus is placed on. Similarly, in the second pair (21a and 21b), which involves the hearer and a third person (a man), it is always the hearer that the focus is placed on. No case occurs in my data that exhibits the reverse focus placement.

Similar patterns of focus placement can be seen in any combination of two referents in transitive action. Table 14 (end of this section) shows the patterns of prefix selection (S-prefix or G-prefix) in case-marking a transitive action. In this table, "S" indicates that an S-prefix is used in a given combination of the actor (row) and the object (column), and "G" indicates selection of a G-prefix. Choice of the prefix correlates with the position of focus: the S-prefix for focusing on actor (source), and the G-prefix for focusing on object (goal).

As is evident from the table, there is a hierarchical ranking of focus placement among various referents. What is significant here is that it is the semantic characteristics of the referent itself, and not the semantic role (case role) or the grammatical category which it happens to have in a given sentence, that determines focus placement. This hierarchy in Kiowa is apparently of the same kind as those called "animacy hierarchy" or "agenticity hierarchy" which are reported in relation to subject selection or voice

determination in various languages in North America and Australia (Silverstein 1976a, Dixon 1979, Witherspoon 1980, and Jelinek & Demers 1983, among others).

As is clear from Table 14, the two core participants (actor and object) of a transitive action in Kiowa are in one of three dominance relationships: i.e., absolute dominance, source-dominant equality, and goal-dominant equality. Absolute dominance is such a relationship in which one participant is absolutely dominant over the other and hence always focused regardless of its case role. The sentences shown above (20a and 20b, and 21a and 21b) are typical examples of this type of relationship.
Source-dominant equality is a relationship in which two participants are equal in dominance, and focus is placed on whichever participant happens to have the actor role (thus source): hence case-marked by an S-prefix. In goal-dominant equality too, the two participants are equal in dominance, but focus is placed on whichever participant happens to have the object role: hence case-marked by a G-prefix.
(22a) and (22b) exemplify source-dominant equality, and (23a) and (23b) exemplify goal-dominant equality.

(22a) dE-Al-tW (S-prefix)
ProCtrHSa=>Ind-chase-Cnj
"I (ProCtrHSa) will chase them (Ind)."

(22b) E-Al-tW (S-prefix)
ProInd=>HSa-chase-Cnj
"They (ProInd) will chase me (HSa)."

(23a) e˜m-c´anhOol (G-prefix)

DstHSa<=HSa-cheat

"I (HSa) cheated you (DstHSa)."

(23b) E˜-c´anhOol (G-prefix)

ProCtrHSa<=HSa-cheat

"You (HSa) cheated me (ProCtrHSa)."

From Table 14 the following hierarchical patterns of dominance in Kiowa can be abstracted: (24) and (25). Here, ">" stands for absolute dominance, "=S" for source dominant equality, and "=G" for goal dominant equality.

(24) Hierarchy of Dominance (HOD): General Pattern

Hearer =G Speaker-Plr > High-Animate > Low-Animate =S Non-Animate

(25) Position of Speaker-Sgl in the HOD

Hearer-Plr > Hearer-Sgl =G Speaker-Sgl =S H-An-Plr > H-An-Sgl > L-An =S N-An

As shown in the above diagrams, speech act participants are more dominant than high-animate third persons, which are more dominant than low-animate or non-animate third persons. Among the speech act participants, speaker-Plr and hearer are in goal-dominant equality. Special attention needs to be paid to the dominance relationships of the speaker-Sgl. Speaker-Sgl is more dominant than low-animate and non-animate third

persons. Speaker-Sgl is also more dominant than a high-animate third person when the latter is singular, but source-dominantly equal when it is plural. Speaker-Sgl is less dominant than hearer when the latter is plural, but goal-dominantly equal when it is singular.

Then what do these grammatical facts represent? Witherspoon (1980), in discussing patterns of subject selection in Navajo constructions with transitive verbs, suggested a plausible link between apparent grammatical patterns and the speaker's view of the world. According to Witherspoon, all the things in the universe, living or not living, are intricately ranked according to the degree of "intelligence" in the Navajo view of the world: for example, adult humans are ranked highest in this hierarchy, higher than animals or any inanimate things, large animals such as horses are ranked higher than small animals or inanimates, and so on. This can be documented by ethnographic means. In Navajo transitive sentences, it is always the participant which is highest in this hierarchy that is selected as the subject.

Witherspoon's hypothesis is very attractive, and may well be applicable to Kiowa too, but the necessary ethnographic data for Kiowa are still insufficient to make an analysis of this kind feasible. Therefore, we should probably limit our scope of analysis within the realm of linguistics (rather than of ethnography) at this point, although we will definitely take a functional view of

language rather than a purely structural one.

I propose to equate the process of focus placement in Kiowa with the process of "viewpoint" placement--the approach originally introduced by Kuno (1976) and Kuno and Kaburaki (1977) and later developed by DeLancey (1981a, 1981b). This psychologically oriented view of grammar assumes that an event or a situation is linguistically described from a single viewpoint. The speaker tends to describe an event or a situation from the viewpoint of the participant that he most empathizes with. According to Kuno and Kaburaki, placement of empathy foci is determined by three semantic and pragmatic factors: 1. semantic ranking of the referent (or "speech act role hierarchy" in their terminology), 2. relative prominance in semantic role of the referent (or "case role hierarchy"), and 3. topic worthiness of the referent (or "topic hierarchy").

Languages have various grammatical devices to signal foci of speaker's empathy or attention. I think it is grammatical focus that represents speaker's attentional focus in Kiowa. This is evidenced by several grammatical facts. Firstly, the focus participant in Kiowa occupies morphologically the first position (the attention catching position) in the prefix structure. Secondly, the focus participant is semantically specified in more detail in indexical features than the low-focus participant, which suggests that more attention is called for the focus participant than the low-focus participant. It is also to be

noted that focus placement is determined in part by relative semantic dominance of the participants (which is equatable with Kuno's speech act empathy hierarchy, and in part by case roles (Kuno's case role empathy hierarchy). Therefore, it seems quite reasonable to assume that grammatical focus in Kiowa represents speaker's viewpoint of description.

With this assumption, it is now possible to give functional accounts of focus placement (or prefix selection) in simple transitive sentences in Kiowa in terms of speaker's empathy placement as follows.

1. Grammatical focus in Kiowa is placed on the participant from whose viewpoint the event is to be described.

2. The speaker takes the viewpoint of the participant that he most empathizes with.

3. Placement of speaker's empathy in describing a simple transitive event, which involves an actor and an object, is determined by the hierarchy of semantic dominance: focus of speaker's empathy is placed on the participant that is most dominant according to the hierarchy of semantic dominance.

Table 14: Case-marking Prefixes for Transitive Action

| Source (Actor) | | Goal (Object) Hearer Plr | Hearer Cpl | Hearer Sgl | Speaker Plr | Speaker Sgl | H-Anm Plr | H-Anm Cpl | H-Anm Sgl | L/N-Anm |
|---|---|---|---|---|---|---|---|---|---|---|
| Hearer | Plr | S | - | - | G | S | S | S | S | S |
| " | Cpl | - | S | - | G | S | S | S | S | S |
| " | Sgl | - | - | S | G | G | S | S | S | S |
| Speaker | Plr | G | G | G | S | - | S | S | S | S |
| " | Sgl | G | G | G | - | S | S | S | S | S |
| H-Anm | Plr | G | G | G | G | S | S | S | S | S |
| " | Cpl | G | G | G | G | S | S | S | S | S |
| " | Sgl | G | G | G | G | G | S | S | S | S |

Legend:

S = An S-prefix occurs.

G = A G-prefix occurs.

- = No case found

Plr = Plural referent

Cpl = Coupled referent

Sgl = Singular referent

H-Anm = High-animate

L/N-Anm = Low-animate and Non-animate

## 6.5. Case-Marking for Complex Transitive Actions

When a transitive action is complex (having a benefactive participant in addition to the most basic actor and object in the scope of predication), an interesting problem arises. One of the three core participants of the complex transitive action must be left out of the scope of case-marking, because both the S-prefix and the G-prefix can case-mark only two participants. An S-prefix takes the actor and the object into the scope of case-marking, but the beneficiary is left out of the scope, while a G-prefix can take the beneficiary and the object into the scope of case-marking, but the actor is thrown out of the scope. Observe the following examples:

(27a) cEe˜: gya-w˜ (S-prefix)
horse ProCtrHSa=>HSa-give
"I (ProCtrHSa) gave a horse (HSa) away."

(27b) kI: gya-thakOop (S-prefix)
meat ProHSa=>LSa-cutting
"She (ProHSa) is cutting the meat (LSa)."

Both (27a) and (27b) are case-marked by an S-prefix. Since an S-prefix takes only the actor and the object into the scope of case-marking, any beneficiary which is conceivable in any event or situation, is not case-marked. Thus, in (27a) it is not clear whom the speaker gave the horse to, and similarly in (27b), it is not clear whom the actor is cutting the meat for. Hence the beneficiary must be inferred from the context.

On the other hand, when a complex transitive event is case-marked by a G-prefix, the beneficiary, as well as the object, is taken into the scope of case-marking. However, the actor is thrown out of the scope, as exemplified in (28a) and (28b).

(28a) cEe˜: gyA-w˜ (G-prefix)
horse DstHSa<=HSa-give
"(I) gave him/you (DstHSa) a horse (HSa)."

(28b) kI: yA˜n-thattE-tW (G-prefix)
meat DstHSa<=LSa-cut-Cnj
"(I) will cut the meat (LSa) for you/him (DstHSa)."

In these utterances, the beneficiary is clearly marked by the prefix, but the actor is not case-marked. Although existence of an actor is semantically implied by the verb, who it is must be pragmatically inferred.

It is important to note that both (27a) and (28a), and (27b) and (28b) may refer to the same event. There is no syntactic reason why one type of construction must be used rather than the other. The choice between an S-prefix and a G-prefix in case-marking a complex transitive event is determined pragmatically by speaker's discourse strategy. The following examples exemplify an interesting case of prefix choice which is motivated by speaker's strategy.

(29a) hA:tEel Am pabi: #-hOol (S-prefix)
someone your brother ProHSa=>HSa-kill
"Someone (ProHSa) killed your brother (HSa)."

(29b) hA:tEel Am pabi: gW-hOol (G-prefix)

someone your brother DstCtrHSa<=HSa-kill

"Someone killed your (DstCtrHSa) brother (HSa)."

In both utterances, which refer to the same event, the actor and the beneficiary are overtly expressed by the nouns /hA:tEel/ (someone) and /Am/ (you). The difference lies only in the case-marking prefix. According to the informant, (29a), which is case-marked by an S-prefix, would be used to describe an incident which has just taken place before him. On the other hand, (29b), which is case-marked by a G-prefix, would be used if the speaker is to report the incident later, perhaps at a different place. This is probably because actor is intrinsically more prominant a role than benefactive (see 7.3), and hence it is most natural for the speaker to take the actor's viewpoint in describing an event which he has just witnessed. On the other hand, when one reports such an unhappy incident to someone who happens to be the recipient of the adversative effect, he might consider its emotional impact on that person, and describe the event from the viewpoint of the hearer (beneficiary) in sympathy with him.

The following examples will illustrate a similar point.

(30a) Am pabi: gya-hOol (S-prefix)

your brother ProCtrHSa=>HSa-kill

"I (ProCtrHSa) killed your brother (HSa)."

(30b) Am pabi: gW-hOol (G-prefix)

your brother DstCtrHSa<=HSa-kill

"Your (DstCtrHSa) brother (HSa) got killed."

If the speaker has actually killed the hearer's brother, (30a) is the normal way of describing the incident, because,first of all, actor is more prominant a role than benefactive, and the speaker must be fully aware of what he has committed. Therefore, (30b), in which the actor is not case-marked, normally implies that someone else, and not the speaker himself, has committed the murder. This expression might be also used if the speaker intends to give a wrong impression about the fact or hide the fact.

6.6. Function of the Compounded-Prefix

As shown in the previous section, a complex transitive action may be case-marked either by an S-prefix or a G-prefix with a different result in the expressed scope of case-marking. The choice is considered to be determined by speaker's strategy. A similar case of prefix choice is seen between an S-prefix and a C-prefix. Observe the following examples:

(31a) I: thalI: hOlda E˜n-sa:tW (S-prefix)

two boy cloth ProCpl=>LSa-tearing

"Two boys (ProCpl) are tearing the cloth (LSa)."

(31b) I: thalI: hOlda E˜nIi˜:-sa:tW (C-prefix)

two boy cloth ProCpl=>Lsa=>ProHSa-tearing

"Two boys (ProCpl) are tearing my (ProHSa) cloth (LSa)."

(32a) cEe˜: mA-te˜: (S-prefix)

horse DstCpl=>HSa-catch

"You two (DstCpl) catch the horse (HSa)."

(Data from Watkins 1980: 178)

(32b) cE˜: mAa˜:-te˜: (C-prefix)

horse DstCpl=>HSa=>ProHSa-catch

"You two (DstCpl) catch the horse (HSa) for me (ProHSa)."

(Data from Watkins 1980: 178)

In (31a) and (32a), where the verb is case-marked by an S-prefix to code only the actor and the object, it is not clear whom the action is taken for.. On the other hand, (31b) and (32b), which are case-marked by a C-prefix, clearly expresses that the action is for the speaker. The choice between the two types of expression depends on whether or not the speaker wants to include the beneficiary in the scope of proposition.

What is to be noted is that C-prefixes and G-prefixes are in complementary distribution in this paradigm of case-marking. Where a G-prefix is used to code the benificiary for a complex transitive action, a C-prefix cannot be used, while where a C-prefix occurs to code the beneficiary a G-prefix cannot occur. Consider the following examples:

(33a) hOlda hA:tel yA˜-sa:tW (G-prefix)

cloth someone ProCtrHSa<=LSa-tearing

"Someone is tearing my (ProCtrHSa) cloth (LSa)."

(33b) I: thalI: hOlda E˜nIi˜:-sa:tW (31b: C-prefix)

two boy cloth ProCpl=>LSa=>ProHSa-tearing

"Two boys (ProCpl) are tearing my (ProHSa) cloth (LSa)."

When the actor is a singular third person, a sentence which describes a complex transitive event that involves either the speaker or a third person as the beneficiary is case-marked by a G-prefix (as in (33a)) but not by a C-prefix. On the other hand, when the actor is not singular, a C-prefix, instead of a G-prefix, must be used to case-mark the sentence. Thus, (33b) is case-marked by the C-prefix /E˜nIi˜:/ (ProCpl=>LSa=>ProHSa) and not by the G-prefix /yA˜/ (ProCtrHSa<=LSa).

Similarly, a sentence which describes a complex transitive event can be case-marked by a G-prefix when the agent is a singular hearer, but not when it is not singular. A C-prefix instead of a G-prefix must be used in that case as illustrated in the following examples.

(34a) kUt yA˜-po˜:-w˜: (G-prefix)

book ProCtrHSa<=LSa-look-give

"(You (Sgl)) show me (ProCtrHSa) the book (LSa)."

(34b) kUt bAgIi:-po˜:-w˜: (C-prefix)

book DstLSa=>LSa=>ProHSa-look-give

"You (DstLSa) all show me (ProHSa) the book (LSa)."

(from Watkins 1980: 179)

(35a) Am yA˜-hWwn-tw (G-prefix)

you ProCtrHsa<=LSa-beat-Cnj

"You will beat me (ProCtrHSa)."

(35b) Ii:-de mA˜nIi˜:-hwn-tw (C-prefix)

two-Nom DstCpl=>LSa=>ProHSa-beat-Cnj

"You two (DstCpl) will beat me (ProHSa)."

Observe Table 15 (end of this section). This table shows permissible occurrence of prefixes (type) to case-mark for complex transitive actions with various combinations of the actor and the beneficiary. As clearly illustrated in this table, G-prefixes can not always occur. Where occurrence of G-prefixes is prohibited, C-prefixes must be used in lieu of G-prefixes. Evidently, G-prefixes and C-prefixes are in "complementary" distribution with each other in this table.

The C-prefix has an interesting characteristic: it can take all three core participants of the complex transitive action into the scope of case-marking. Unlike the G-prefix, the C-prefix does not exclude the actor from the scope of case-marking. I think this is exactly the reason why a C-prefix, instead of a G-prefix is used in some situations.

Aś shown in Table 15, C-prefixes occur when, and only when, (1) the actor is not singular and (2) the beneficiary is a singular participant of the proximal category (i.e., either the speaker or a third person, but not the hearer). Note these are the cases in which the actor is either more dominant than or source-dominantly equal with the beneficiary, according to the dominance hierarchy we postulated (6.4). Thus, the determinant of C-prefix

selection is the dominance hierarchy. When the actor is more dominant than the beneficiary, Kiowa grammar does not allow exclusion of the actor from the scope of case-marking in favor of the less dominant beneficiary. Therefore, a C-prefix must be used, to retain the actor in the scope of case-marking and, at the same time, take the beneficiary into the scope of case-marking.

Thus, it appears that prefix compounding is a structural innovation in Kiowa grammar to cope with the conflict between the force of the dominance hierarchy and pragmatic needs which arise when the speaker's strategy requires taking the beneficiary into the scope of case-marking although the beneficiary is less dominant in the dominance hierarchy than the actor. This explains why there are only a limited number of C-prefixes in Kiowa, and their distribution is "complementary" with that of the G-prefixes with respect to case-marking of complex transitive actions.

Table 15: Prefix Selection for Complex Transitive Action

| | | Beneficiary (G) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Actor (S) | | Hearer | | | Speaker | | H-Anm | | |
| | | Plr | Cpl | Sgl | Plr | Sgl | Sgl | Cpl | Plr |
| Hearer | Plr | | | | S/G | S/C | S/C | S/G | S/- |
| " | Cpl | | | | S/G | S/C | S/C | S/G | S/- |
| " | Sgl | | | | S/G | S/G | S/G | S/G | S/- |
| Speaker | Plr | S/G | S/G | S/G | | | S/C | S/G | S/- |
| " | Sgl | S/G | S/G | S/G | | | S/G | S/G | S/- |
| H-Anm | Plr | S/G | S/G | S/G | S/G | S/C | S/C | S/G | S/- |
| " | Cpl | S/G | S/G | S/G | S/G | S/C | S/C | S/G | S/- |
| " | Sgl | S/G | S/G | S/G | S/G | S/G | S/- | S/G | S/- |

Legend:

S/G = Case-marked by either an S-prefix or a G-prefix

S/C = Case-marked by either an S-prefix or a C-prefix

S/- = Case-marked only by an S-prefix (no other case found)

Plr = Plural referent

Cpl = Coupled referent

Sgl = Singular referent

H-Anm = High-animate

## 6.7. Grammatically Created Flow of Effect

In all the cases discussed above, the grammatically expressed direction of effect is a linear representation of the flow of effect which is observable at the semantic (or referential) level. The direction of effect at the level of grammatical representation (represented by the prefix) coincides with the direction of effect at the level of the referent. In fact, this is the most important rule for assigning grammatical (relational) categories to the referents.

However, there are some cases in which mapping between the grammatical categories and the referents is not so simple. Consider (36a) and (36b):

(36a) e˜m-hAnkOot´w (N-prefix)
DstHSa-patient
"You (DstHSa) are being patient."

(36b) yA˜n-hAnkOot´w (G-prefix)
DstHSa<=LSa-patient
"You (DstHSa) are patient."

(36a) is a normal stative sentence which describes a state of the hearer (i.e., being patient). The N-prefix /e˜m/ signals the focal participant (hearer: DstHSa) as the neutral. (36b) on the other hand, is case-marked by the G-prefix /yA˜n/ which assigns the goal category to the hearer (DstHSa). Note that /yA˜n/ also signals low-saliency of the source category. However, (36b) is a stative sentence which describes a state of the focal participant

(the hearer), and does not involve any other participant. Therefore, there is no referent for the source category in this sentence. The direction of effect which (36b) indicates grammatically is not a straightforward representation of the flow of effect which exists at the level of the referent. In fact, there is no flow of effect that would correspond with what (36b) represents linguistically.

Similar usage of G-prefixes in stative sentences is typically found with the verbs which express mental states like the following.

(37a) nW pabI: #-sWw˜:de-(dw) (N-prefix)
my brother ProHSa-angry-(be)
"My brother (ProHSa) is angry."

(37b) nW pabI: A˜n-sWw˜:de (G-prefix)
my brother ProHSa<=LSa-angry
"My brother (ProHSa) is impatient."

(38a) I: thalI: e˜-Oo˜-dw (N-prefix)
two boy ProCpl-happy-be
"The two boys (ProCpl) are happy."

(38b) I: thalI: mE˜n-Oo˜ (G-prefix)
two boy DstCpl<=LSa-happy
"The two boys (DstCpl) are happy (generally)."

Although the two types of expression are similar in meaning, they make a significant contrast in the implied duration of the state. In those contrasting pairs, the expression with the N-prefix implies that the state

described is temporary or at a given moment, while the expression with the G-prefix implies that the state is inherent. Thus, the former is normally taken to mean a feeling or emotion of the moment, and the latter is a characteristic of personality.

Like feelings and emotions, actions can be characteristics of personality too. We find similar usage of G-prefixes in sentences which mention a person's ability to do certain things.

(39a) mAthw˜n e˜m-gUnmW (S-prefix)
girl ProHSa=>Dif-dancing
"The girl (ProHSa) is dancing."

(39b) mAthw˜n A˜n-gUn-mw:gW (G-prefix)
girl ProHSa<=LSa-dance-skilled
"The girl (ProHSa) can dance well."

(40a) kwkWy gya-pI˜:Ww˜:mW (S-prefix)
mother ProHSa=>LSa-cooking
"Mother (ProHSa) is cooking (something (LSa))."

(40b) A˜n-pI˜:W˜m-mWw:gW (G-prefix)
ProHSa<=LSa-cook-skilled
"She (ProHSa) can cook well."

Both (39a) and (40a) describe a specific action of the focal participant. They are both case-marked by an S-prefix. (39b) and (40b) on the other hand, describe a person's ability, which is, needless to say, an important characteristic of the individual's personality. In these stative sentences, a G-prefix is used to case-mark the

verb. Note here too, the source category, which is indexed "low-salient", has no referent at all.

6.8. Conclusion

Verb prefix selection and resulting focus placement in Kiowa case-marking are predictable if the verb type (stative, active intransitive, or transitive) and the scope of case-marking are known.

In describing a stative, an N-prefix occurs when only the neutral participant is taken into the scope of case-marking. Naturally, the neutral participant receives the grammatical focus. When both the neutral and the beneficiary are taken into the scope, a G-prefix occurs. Consequently, the focus is placed on the beneficiary.

In describing an intransitive action, an S-prefix occurs when only the actor is taken into the scope of case-marking: hence the actor is grammatically focused. However, when the beneficiary, as well as the actor, is taken into the scope of case-marking, a G-prefix (and never an S-prefix) occurs to case-mark the sentence. The focus is placed on the beneficiary.

In describing a simple transitive action, which has the actor and the object in the scope of case-marking, either an S-prefix or a G-prefix may occur. The choice between the two prefix types is however, completely determined by relative semantic dominance (on the basis of the dominance hierarchy) of the two participants. An S-prefix is chosen if the actor is more dominant than the

object, and a G-prefix is chosen if the object is more dominant then the actor.

In describing a complex transitive action where the beneficiary is taken into the scope of case-marking, either a G-prefix or a C-prefix occurs to case-mark the sentence. The choice between the G-prefix and the C-prefix is again completely determined by relative dominance of the two major participants (the actor and the benefactive). A G-prefix is chosen if the beneficiary is more dominant than the actor, and a C-prefix is chosen if the actor is more dominant than the beneficiary. The table below summarizes the pattern of prefix selection in Kiowa case-marking.

Table 16: Pattern of Case-marking Prefix Selection

| Type of Event | Scope of Case-Mrkng | Focus | Prefix |
|---|---|---|---|
| Stative | Neu | Neu | N-prefix |
| | Neu, Ben | Ben | G-prefix |
| | Neu, Ben | Neu | not found |
| Intrans. Action | Act | Act | S-prefix |
| | Act, Ben | Ben | G-prefix |
| | Act, Ben | Act | not found |
| Trans. (Simple) | Act, Obj | Act | S-prefix |
| | Act, Obj | Obj | G-prefix |
| Trans. (Complex) | Act, Obj, Ben | Ben | G-prefix |
| | Act, Obj, Ben | Act | C-prefix |
| | Act, Obj, Ben | Obj | not found |

As stated before (4.2), the S-prefix can represent only the actor-object relation, while the G-prefix can represent a much broader range of semantic relations. The G-prefix can represent the neutral-benefactive relation, the actor-object relation, the actor-benefactive relation, and the object-benefactive relation. On the other hand, the range of semantic relations which the S-prefix can represent is so limited that it is not always possible to place the focus on the source participant (which may be a non-active participant as well as the actor, depending on the verb). These grammatical restrictions of the Kiowa verb prefix affect and complicate selection of prefixes (types) for case-marking.

In addition to the inherent grammatical nature of the Kiowa verb prefixes, other semantic and pragmatic factors are also involved in prefix selection.

First of all, scope of case-marking may be determined pragmatically by speaker's strategy as well as semantically by the valence of the verb. For example, the valence of a stative verb requires only one participant (neutral) to be case-marked. Whether or not a beneficiary is included in the scope of case-marking for a stative verb is up to the speaker's pragmatic strategy.

When more than one type of prefix are grammatically possible to case-mark a given utterance (which is the case in describing a simple transitive action and a complex

transitive action with the beneficiary in the scope), the case-marking prefix (type) is always chosen in such a way that the most dominant participant (on the scale of the dominance hierarchy) is focused by the prefix.

Kiowá case-marking is thus an extremely complicated linguistic process, which involves syntactic, semantic and pragmatic variables all at once in its functioning. A holistic functional view is absolutely necessary in order to understand this complex grammatical phenomenon.

NOTES

(*1) "Stative verb" is used here for a class of verbs in Kiowa. It includes both the stative and inchoative of more general usage.

(*2) As indicated in Chapter 3, "#" represents the zero verb prefix.

# VII. ROLE OF NP'S IN CASE-MARKING

As stated before, NP's are not obligatory constituents of the Kiowa clause: a clause or a sentence in Kiowa can be grammatical with or without NP's of any semantic role or grammatical (relational) category. The position and order of the NP's in the Kiowa clause are not associated with any fixed syntactic function. However that does not necessarily mean that NP's play no role at all in Kiowa case-marking. Quite the contrary, NP's often provide the sentence with supplementary information which is crucial to clarify or disambiguate referential identification and grammatical relations. This chapter will examine the role of NP's (their occurrence and order) in Kiowa case-marking.

## 7.1. Referencing

Case-marking has two aspects: one is referencing of the participants and the other is coding of their grammatical relations. NP's contribute to case-marking in both aspects. Let us first examine NP's contribution to referencing.

As noted before, the pronominal verb prefix is an obligatory constituent of the verb complex in Kiowa. Every verb in a Kiowa clause is affixed by a verb prefix, and therefore the verb prefix has the primary role for case-marking in Kiowa. NP's in Kiowa clauses provide just additional, rather than primary, information for referencing.

It must be noted that there is a significant difference between nouns and verb prefixes (which are generally considered "pronominals") in Kiowa in the way they refer to the referent. A noun refers to the referent by designating it, while a verb prefix refers to the referent by indexing it by means of indexical categories (see 4.4). Indexical categories are relatively small in number, and hence allow only a limited number of classificatory possibilities. Consequently, it regularly happens that more than one different participants in a given situation may fall into the same indexical category: thus referential ambiguity or vagueness may arise.

In many cases, such ambiguity or vagueness can be resolved by contextual information and/or pragmatic inference based on shared background knowledge. Nevertheless, there are cases in which referential uncertainty (ambiguity and vagueness) still remains. It is in those cases that NP´s play a significant role. Consider the following examples.

(1) nW pabI: Am pabI: k´Ww A-Ww˜:
my brother your brother knife ProHSa<=HSa-give
"My brother gave a knife (HSa) to your brother (ProHSa)."

(2) Am pabI: k´Ww A-Ww˜:
your brother knife ProHSa<=HSa-give
"(He) gave a knife (HSa) to your brother (ProHSa)."

(3) k´Ww A-Ww˜:

knife ProHSa<=HSa-give

"(He) gave a knife (HSa) to him (ProHSa)."

(4) A-Ww~:

ProHSa<=HSa-give

"(He) gave it (HSa) to him (ProHSa)."

All of the above four utterances are well-formed and state the same fact (that the speaker's brother gave a knife to the addressee's brother). Each utterance specifies the participants to a different degree of explicitness. (1), in which all the participants of the event are overtly expressed by NP's, is most explicit and does not depend on contextual information to identify the referents, while (4), which has no NP's at all, is heavily dependent on contextual information.

In actual discourse, the speaker must make a decision as to how much referential information needs to be provided by NP's in each utterance. If he chooses to express all the participants overtly by NP's, he may minimize referential uncertainty, but such an expression might be overly redundant and unethsetic. On the other hand, if the speaker chooses not to use any NP at all, he will have the shortest and hence most economical utterance, but without sufficient contextual information, such an expression is likely to be vague and/or ambiguous.

It may be useful to introduce a notion of discourse efficiency which I have derived from Grice's maxims of quantity (Grice 1975). Discource efficiency is to be

defined operationally as the product of two variables: (1) minimization of referential uncertainty and (2) maximization of economy in expression. The optimal point in discourse efficiency can be achieved when the expression minimizes referential uncertainty and at the same time maximizes economy. Since, the chances of referential uncertainty are affected by contextual information and shared pragmatic background (knowledge of the world and rules of speech) which are coincidental to the utterance, the optimal point must be determined in each utterance in its context.

Although a discourse must have effectiveness (both communicative and esthetic) in addition to pure efficiency as defined mechanically above, nevertheless I believe discourse efficiency is the most important principle by which occurrence of NP's in discourse can be accounted for in Kiowa. In the following section, I will attempt to examine the occurrence of NP's in Kiowa discourse in relation to discourse efficiency.

7.2. Occurrence of NP's in Discourse

In analyzing the function of NP's in identification of the participants two premises are assumed: (1) every occurrence of NP in a Kiowa discource contributes (no matter how little it may be) to reduction of the chances of referential uncertainty or ambiguity with a sacrifice in economy, and (2) the speaker, in delivering a discourse, basically seeks optimal efficiency. If these premises are

correct, then it follows that NP's occur when there is a substantial gain in reducing referential uncertainty. If a gain is null or minimal, the cost (loss in economy) will be, by comparison, too great to merit the NP's occurrence.

Generally speaking, the chances of referential uncertainty in a discourse increase when referential predictability is lost or substantially lowered. This happens typically (in any language) when the speaker refers to "new" participants. Here I define new participants following Chafe (1976) as participants that the speaker assumes he is introducing into the addressee's consciousness. Two operational criteria may be used for determining newness of the participant. One is when a participant is introduced into the discourse for the first time, and the other is when the scene changes. In the first case, there is no way of presenting a discourse-new participant other than expressing it overtly by an NP. In the second case, the change of scene adds some newness to the participants which have been introduced into the discourse previously. As a result referential predictability may decrease. In such a case, uncertainty of the referent may need to be eliminated by overtly expressing the scene-new participant by an NP.

There is also another case in which overt expression of the participant by the NP can be of significant advantage. That is when viewpoint of description (see 6.4) is switched. In Kiowa, viewpoint manifests as grammatical

focus: i.e., each sentence has a grammatical focus which corresponds with the viewpoint. When the grammatical focus is switched from one participant to another between the sentences, the speaker´s viewpoint of description is switched accordingly. In such a case, extra precaution may be needed to avoid misidentification of the referent, particularly when the two participants between which the focus is switched are identical in indexical category. Here, the gain in referential clarity will outweigh the loss in economy, and the focused participant is likely to be overtly expressed by an NP.

The following example illustrates some conditions in which occurrence of NP´s to express the participant is motivated in discource efficiency.

(5) sEndE #-A˜:-hEel, gw maI˜: #-k´Ww:te-hEl, gw maI˜: #-pO˜t´Aa:gya-hEl

Sende ProHSa-coming=along-Hsy, and woman ProHSa=>HSa-meet-Hsy, and woman ProHSa-good=looking-Hsy

"Sende (ProHSa) was coming along, and he (ProHSa) met a woman (HSa), and the woman (ProHSa) was good looking."

This is the opening part of a folk story. In the first clause, the neutral participant of the verb /A˜:-hEel/ is overtly expressed by the NP /sEndE/, because it is a discourse-new participant. In the second clause, the same participant, which is not discourse-new any more, is not

expressed by the NP, but instead, the woman, which is the new participant in this clause, is overtly expressed by the NP /maI˜:/. In the third clause, the woman is again overtly expressed by the NP even though she is not discourse-new any longer. This is because grammatical focus is shifted from Sende to the woman in this clause and there is indexical ambiguity.

If my observations about the referencing function of NP's in Kiowa discourse are valid, it should turn out that a large number of cases of occurrence of NP's in Kiowa texts are associated with one (or more) of the above three conditions. In order to examine this prediction, six Kiowa texts (five folk tales and one personal narrative) which I collected are analyzed, and conditions in which NP's occur (*1) are classified and counted. The results are shown in Table 17.

Table 17: Conditions of Occurrence of NP's in Discourse

| | Frequency of Occurrence | |
|---|---|---|
| Conditions | In Narratives | In Quotes |
| Discourse-New | 65 (36.3%) | 30 (27.5%) |
| Scene-New | 17 ( 9.5%) | 20 (18.3%) |
| Focus Shift | 65 (36.3%) | 3 ( 2.8%) |
| Contrastive | 0 ( 0%) | 23 (21.1%) |
| Vocative | 0 ( 0%) | 16 (14.7%) |
| Other | 32 (17.9%) | 17 (15.6%) |
| Total | 179 ( 100%) | 109 ( 100%) |

In Table 17, figures are given separately for narrative sentences and quoted sentences. As expected, occurrence of NP´s is very high when new participants (both discourse-new and scene-new) are introduced and when the focus is shifted. These conditions account for more than 80% of the NP´s in the narrative sentences. This clearly shows that discourse efficiency is the most important principle to determine occurrence of NP´s in Kiowa discourse.

Quoted sentences apparently represent a rather different type of discourse than narrative sentences. But in quoted sentences too a large part of the NP´s (about 46%) are associated with introduction of new participants. Quoted sentences however show a large number of cases in which NP´s are used for discourse effectiveness rather than efficiency: "effectiveness" here is a cover term for any contribution to improvement (including an esthetic one) of communication other than just referencing function (which is covered by discourse-efficiency). In the six analyzed texts of mine, a large number of NP´s which are motivated by discourse effectiveness can be characterized as contrastive (Chafe 1976). The following examples illustrate a typical case of NP´s for contrastive emphasis.

(6) be-hAa:, gw bat-bO˜hw:, hWndE #-hAydw
DstHSa=>Dif-get=up, and DstHSa=>LSa-go=look, what ProHSa-known
"Get up, and go and look what it (ProHSa) is!"

(7) hW:nEe:, Am e˜m-khIi:, mayO˜m ba-WlkWy-khIi:kot, Am e˜m-khIi:, gw Am bat-bO˜

no, you DstHSa-go=out, women DstLSa-crazy-fearless, you DstHSa-go=out, and you DstHSa=>LSa-look

"No, YOU (DstHSa) go out! Women (DstLSa) are too crazy to feel fear, so YOU (DstHSa) go out and YOU (DstHSa) look!"

These two examples are taken from the same folk story. In this story, a man and a woman are camping alone away from their fellow tribesmen. One night, someone tries to steal their baby. The woman notices it, and immediately wakes her husband up and tells him to go out of the tent and see what it is (6). However, her husband is afraid to go out, and tells her that she, instead of he, should go out and look, because women are too crazy to feel fear (7). In (6), which is uttered first by the woman, the participant of the verbs (addressee = the husband) is not expressed by the NP. In (7) on the other hand, which is uttered by the man in response to the woman´s utterance, the participant (addressee = the woman) is overtly expressed by the NP´s /Am/ (you) and /mayO˜m/ (women). Here the man is compelled to make a contrastive emphasis, because he is making a counter argument against the woman´s natural and reasonable request.

There are also some cases in which occurrence of NP´s can not be attributed to the two conditions of discourse efficiency or two functions for effectiveness (contrastive

and vocative in Table 17). However, a large majority (about 75%) of those NP's refer to low-focus participants and not focused participants. This is quite expectable given the fact that the verb prefix has less discriminating power for the low-focus participant than the focused participant in referencing: low-focus participants are coded only for substantive features, while focus participants are coded for both deictic and substantive features (4.4). Therefore, those NP's may be considered to be motivated by discourse efficiency too.

### 7.3. The Order of NP's and Semantic Roles

Since NP's are structurally optional constituents of the Kiowa clause, the position and order of NP's are not associated with any fixed syntactic function. A clause may contain one or more NP's to express any or all of its participants, or it may contain no NP at all. When a clause has one or more NP's, those NP's may be placed either before or after the verb complex, and they may also be scrambled without losing grammaticality. However, despite structural freedom there are some statistical regularities in positioning and ordering of NP's in Kiowa clauses.

#### 7.3.1. Basic NP Order

To state the conclusion first, NP's in a Kiowa clause are normally placed before the verb and ordered according to relative prominance of their semantic roles (and not the relational categories which the verb prefix assigns to them). A more prominent (in semantic role) NP is normally

placed before a less prominent one.

Core roles (i.e., actor, object, benefactive and neutral) are generally more prominent than peripheral roles (e.g., locative, instrumental, etc.). In the analyzed texts, core NP's are placed before peripheral NP's in more than 90% of the cases. Among core roles, actor and benefactive, which are strictly animate (high-animate) roles, are more prominent than object and neutral which can be either animate or inanimate (low-animate or non-animate). Between actor and benefactive, actor is naturally more prominent than benefactive. Thus, a hierarchy of semantic role prominence (HRP) can be established.

(8) Hierarchy of Semantic Role Prominance in Kiowa:

Actor > Benefactive > {Object, Neutral} > Peripheral

NP's in a Kiowa clause are normally ordered according to this hierarchy of semantic roles: an actor NP is placed first, a benefactive NP is placed after an actor NP but before any other NP's, an object NP is placed after an actor NP and/or a benefactive NP but before peripheral NP's, and a neutral NP is placed after a benefactive NP but before peripheral NP's.

In most cases, the order of NP's thus determined, does not provide any additional grammatical information for decoding of case relations, because the verb prefix provides sufficient information for that. However, there are times when the order of NP's provides a crucial piece

of information for interpretation of case-relations which the prefix fails to disambiguate. Considere the following examples.

( 9) hegW #-hOol

then ProHSa=>HSa-kill

"Then he (ProHSa) killed him (HSa)."

(10) nW pabI: #-hOol

my brother ProHSa=>HSa-kill

"My brother (ProHSa) killed him (HSa)." or "He (ProHSa) killed my brother (HSa)."

(11) nW pabI: Am pabI: #-hOol

my brother your brother ProHSa=>HSa-kill

"My brother (ProHSa) killed your brother (HSa)."

(12) Am pabI: nW pabI: #-hOol

your brother my brother ProHSa=>HSa-kill

"Your brother (ProHSa) killed my brother (HSa)."

(9) simply states that someone killed someone. Their identification is not clearly given. Hence, the hearer must rely on contextual information for identification of the referents. In describing the same event, (10) indicates that one of the participants is the speaker´s brother. However, structurally there is no clue whether he is the actor or the object, because the speaker´s brother can be indexed either as ProHsl (as source) or just Hsl (as goal). On the other hand, (11) and (12), in which both participants are overtly expressed by the NP, are not ambiguous in case relations, because the order of the NP´s

implies which is the actor and which is the object.

As mentioned before, in most cases, the case-marking verb prefix, in addition to contextual information, supplies sufficient information to disambiguate case relations. Therefore, the information which NP order provides is more or less redundant. Nevertheless, as illustrated in the examples below, an expression is judged to be most natural if the NP´s are ordered in accordance with the hierarchy of semantic role prominence (as in (13) and (14)). An expression in which the NP´s are ordered against the hierarchy of prominence (as in (15)) is not preferred under normal circumstances.

(13) Am pabI: nW pabI: E˜-hOol
your brother my brother ProCtrHSa<=HSa-kill
"Your brother (HSa) killed my (ProCtrHSa) brother."

(14) nW pabI: Am pabI: gW-hOol
my brother your brother DstCtrHSa<=HSa-kill
"My brother (HSa) killed your (DstCtrHSa) brother."

(15) ? nW pabI: Am pabI: E˜-hOol
my brother your brother ProCtrHSa<=HSa-kill
"Your brother (HSa) killed my (ProCtrHSa) brother."

7.3.2. Manipulation of NP Order

This neutral (hence unmarked) NP order may be altered for stylistic reasons, perhaps in pursuit of a better discourse effect. Here, I will show show a few cases of NP order manipulation from the same analyzed texts. Observe

the following examples.

(16) Ee˜gw A:wtkhwn-gya sEndE wnhAa:de A-tAa:-dw
here forest=edge-Loc Sende bear ProHSa<=HSa-cook-be
"Here AT THE EDGE OF THE FOREST, Sende (ProHSa) has gotten a bear (HSa) cooked."

(17) c´O Am bAt-k´u:
rock you DstLSa=>LSa-put=down
"You all (DstLSa) put the ROCKS (LSa) down!"

In (16), a locative phrase, which is peripheral, is placed before a benefactive and an object NP. In (17), an object NP is placed before an actor NP. In both cases, NP´s are ordered against the case role hierarchy. These are considered to be typical cases of semantic foregrounding. (16) is uttered to inform others (who are hungry but unaware of the available food) of the food which the speaker has acquired. Here, the location of the food is the most important piece of information. So the location is semantically foregrounded by the preposed locative phrase. (17) is an imperative sentence, in which the speaker is giving a command to his fellow tribesmen to put the rocks down in the mud. Here people have been waiting for his cue with rocks in their hand ready to put them down. In this utterance the NP /c´O/ (rock), which is placed at the beginning of the sentence, semantically foreground the object to make the speaker´s intention immediately clear.

It is also to be noted that NP´s can be placed after the verb. Watkins (1980:255) notes that an NP which

represents "old or non-contrastive information can be dislocated to the right of the clause." Post-posed NP's are not uncommon in Harrington's texts. In the texts I have collected, post-posed NP's were found in about 10% of the clauses with one or more NP's. Thus NP post-posing is not a rare phenomenon in Kiowa discourse.

Notably, in a relatively large number of cases, post-posed NP's appear to have rather crucial functions for discourse efficiency (e.g., introduction of new participants, or focus switch) and effectiveness (e.g., contrastiveness). This seems to suggest that those NP's may be speaker's attempts to repair his less than adequate utterances (from the point of view of discourse efficiency and/or effectiveness). In fact, in many case there is a pause before an NP placed in a post-posed position. This may be considered the evidence to support our claim.

However, that does not explain all the cases of NP postposing. There seem to be other pragmatic reasons. A particularly noteworthy example of NP post-posing is placing of the neutral NP of the stative verb /tO˜:-ne/ in story telling. Consider (18) and (19).

(18) nW hAoy bAt-ay #-tO˜:-nEe mw:tho˜co˜:hi˜
but how=far DstLSa=>LSa-go ProHSa-saying-Hsy coyote
"But how far shall we (DstLSa) go? said the coyote (ProHSa)."

(Data from Harrington 1946)

(19) negW sEnde #-tO˜:-ne ha˜e˜: segIdw˜:

then Sende ProHSa-saying-Hsy hey nephews

"Then Sende (ProHSa) said, Hey nephews."

(Data from Harrington 1946)

These are taken from John Harrington's texts (Harrington 1946), which, I believe, represent a rather careful mode of discourse. In (18), where the verb /tO˜:-ne/ follows a quote, the NP which represent the neutral participant is placed after the verb, while in (19), where /tO˜:-ne/ precedes a quote, the neutral NP is placed before the verb which is the normal position.

As shown in Table 18 (next page), post-posing of the neutral NP is a consistent characteristic in Harrington's texts. This is probably because the verb /tO˜:-ne/ in story telling often has the function of quotative marker. In order to signal the end of a quote clearly the neutral NP is post-posed or otherwise it might be mistaken as a part of the preceding quote. It is to be noted that a similar tendency is found in my texts too, though not as clearly as in Harrington's.

Table 18: Position of the Neutral NP for the Verb /tO˜:-ne/

| | Position of /tO˜:-ne/ | |
|---|---|---|
| Position of NP | Preceding a Quote | Following a Quote |
| Before /tO˜:-ne/ | 12 | 2 |
| After /tO˜:-ne/ | 0 | 12 |
| No NP Occurs | 1 | 10 |

## 7.4. Conclusion

Kiowa is a language in which the pronominal verb prefix performs nearly all the grammatical functions of case-marking. NP's have only a marginal role in case-marking.

Occurrence of NP's in Kiowa discourse is semantically and pragmatically motivated rather than syntactically motivated. NP's are primarily used to express the participants overtly in order to improve discourse efficiency: i.e., to minimize referential uncertainty with minimum sacrifice of economy in encoding. NP's may be also used for discource effectiveness.

The position and order of NP's are also determined by pragmatic factors rather than syntactic factors. Neither grammatical (relational) categories nor focus seems to have any direct relevance to positioning and ordering of NP's, but relative prominence of semantic roles which the NP's in a clause have has the greatest influence on determining the order of the NP's. The hierarchy of semantic role prominence is not a grammaticized system in the Kiowa language, but yet it is an important part of the broader pragmatic system which is necessary for functional communication in Kiowa.

Thus, NP's contribution to case-marking in Kiowa is a pragmatic one rather than a syntactic one. Although NP's often provide a crucial piece of information for decoding

of case relations, it is, in fact, done indirectly through pragmatic inference.

NOTE

(*1) Here I examined all the nouns in the texts which occur independently and not as an incorporated element of the verb. Noun incorporation in Kiowa appears to be best treated as a derivational process. Since incorporated nouns in Kiowa do not seem to stand for a particular referent, they are outside the scope of the analysis in this section, which primarily deals with the problem of identification of the referent.

# VIII. CASE-MARKING AND INTERSENTENTIAL RELATIONS

## 8.1. Sentence Conjunction

In the previous chapters, the scope of discussions was limited to intrasentential phenomena. In this chapter, the scope of discussion will be expanded beyond the level of sentence to the level of dyad (i.e., two conjoined sentences). The main focus of analysis here is sentence conjunctive markers. Conjunctive markers provide important clues for understanding intersentential relations, because they are overt expressions of the semantic and pragmatic relations between the two conjoined sentences.

It must be noted that some Kiowa conjunctive markers function as discourse markers (such as sentence opener or interjection) as well as grammatical (intersentential) markers. However, the scope of analysis here is limited to their function as intersentential markers. This is partly because the dyadic level (and not the discourse level) is logically the next step of analysis in the present study, and partly because I believe the grammatical function will provide the prototype for the discourse function.

Five conjunctive markers (/ɑw/, /nw/, /heqW/, /gegW/ and /negW/), are examined as to their meaning (i.e., semantic relations between the conjoined sentences) and their relevance to case-marking in the conjoined sentences. These five conjunctive markers all represent coordination:

i.e., neither of the conjoined sentences is structurally a part of the other. They constitute a functional set for the following reasons: (1) they are syntactically equivalent in that they are all straightforward sentence coordinators which conjoin two independent sentences, (2) they all involve apparent switch (or same) reference marking, and (3) they are morphologically closely related: i.e., /gegW/ is derived from /gw/ plus /hegW/, and /negW/ is derived from /nw/ plus /hegW/ (Harrington 1928:123). Unlike some other specialized coordinative conjunctive markers, such as /nE/ (counter normative: "however"), whose meaning is restricted and constant throughout different contexts of use, these general conjunctives do not have a fixed narrow meaning, but their meanings are interpreted in quite diversified ways in different contexts of use. The English glosses in the following examples with /gw/ will illustrate that.

(1) CAUSAL:

cAt W-thEe˜da-dw gw A-gOomdEp

door ProHSa<=Ind-open-be /gw/ ProHSa<=HSa-blowing

"His (ProHSa) door (Ind) is open, so (the wind (HSa)) is blowing on him (ProHSa)."

(2) CONDITIONAL:

Uyde to:-kya e˜m-bA gw nW tw:tw Ose e˜m-t´W:-t´w

that house-Loc DstHSa-go /gw/ my father voice DstHSa-hear-Cnj

"(You (DstHSa)) go to that house, and you (DstHSa)

will hear my father's voice."

(3) PURPOSE:

hOlda gyat-khAy gw gyat-sAa:

cloth ProCtrHSa=>LSa-stretch /gw/ ProCtrHSa=>LSa-tear

"I (ProCtrHSa) stretched the cloth (LSa) to tear it (LSa)."

(4) SIMPLE SEQUENCE:

cEgun gya-hOol gw gya-thAmce

dog ProCtrHSa=>HSa-kill /gw/ ProCtrHSa=>HSa-burry

"I (ProCtrHSa) killed the dog (HSa) and I (ProCtrHSa) burried it (HSa)."

(5) PARALLEL:

nW pabI: #-Eet gw nW al a-Eet

my brother ProHSa-big /gw/ I also ProCtrHSa-big

"My brother (ProHSa) is big and I (ProCtrHSa) am big too."

(6) COUNTER-NORMATIVE:

ce˜nbOo Aa-pa #-phAymW gw A˜n-mwWwdEp

cow tree-Loc ProHSa=>HSa-tie /gw/ ProHSa<=LSa-incapable

"He (ProHSa) is tying a cow (HSa) to the tree but he (ProHSa) cannot do it (LSa)."

The purpose of this chapter is to explicate the semantic and/or pragmatic conditions for selection of conjunctive markers, and examine the role of the grammatical variables of the sentential level (which have been formulated in earlier chapters) in that process.

8.2. Switch Reference

Intersentential relations in a dyad are most acutely reflected in switch reference marking. The switch reference phenomenon was first discussed in Hokan-Coahuiltecan by Jacobsen (1967) and then believed to be a rather unique family-specific grammatical trait. However, since then similar phenomena have been reported in many languages in North America (e.g., Langdon and Munro 1979) and Australia (Austin 1981). Switch reference is generally defined as the grammatical devices by which identity and/or switching of the "subject" of the two adjacent sentences (or clauses) is signaled. Since this commonly held definition of switch reference involves the notion of subject, there are often some problems and confusion in the treatment of this phenomenon.

Existence of the switch reference phenomenon in Kiowa was reported by Watkins (1976). She noted seemingly complementary distribution of the conjunctive marker /gw/ and /nw/, and attempted to account for their distribution in terms of switch reference marking functions. Observe the following examples (taken from Watkins 1976):

(7) thalI: A-donmw gw hagya A-thwn
boy ProLSa=>HSa /gw/ perhaps ProLSa=>HSa-find
"They (ProLSa) were searching for the boy (HSa), and (same subject) they (ProLSa) might have found him (HSa)."

(8) nW: mAn-pI˜:Wm-tW nw dAal mAn-pw:

I DstCpl<=LSa-cook-Cnj /nw/ must DstCpl=>LSa-eat

"I will cook for you two (DstCpl), and (different subject) you two (DstCpl) must eat it (LSa)."

According to Watkins, /nw/ signals switching of the subjects, and /gw/ signals same subjects. Although Watkins definitely captured an interesting grammatical phenomenon in Kiowa, she did not explicate the notion of subject in Kiowa at that time. Her reliance on intuitive judgement (based on English gloss) for identification of the subject left her claim unsubstantated. Watkins later rejected the notion of subject in Kiowa but retained the assumption that there is switch reference marking in Kiowa. She turned the question around and asked what is the variable of which identity and switching is marked by the presumed "switch reference markers" in Kiowa. Her conclusion is that Kiowa marks identity and switching of the "highest ranking participants". She did not show how such a hierarchy of ranking can be determined independently from the switch reference phenomenon itself, but noted that it is the same as the hierarchy of case roles for subject selection in English (i.e., agent > patient > object) proposed by Fillmore (1968).

The notion of subject has been the focus of active controversy in linguistics for over a decade. As various studies seem to indicate, subject is by no means a singularly definable universal grammatical category, but instead it must be seen as a language relative category

whose properties may differ considerably from language to language. However, since subject is one of the most important notions in the grammar of European languages which grammatical analyses of non-European languages are, to a large extent, modeled after, it is often the case that the notion of subject is imposed on grammatical analysis of non-European languages where validity or even effectiveness of such a notion is quite dubious or untested.

Keenan (1976), in his eclectic study of subjecthood, listed 30 odd typical subject properties which he found in a broad survey of a few dozen languages from all over the world. Among the properties of subjecthood which Keenan pointed out, we can find three basic types: (1) morpho-syntactic properties, (2) semantic properties which are inherent to the referent, and (3) case role related properties.

If one examines Kiowa grammar against Keenan's list, it becomes apparent that there is no single grammatical variable in Kiowa which has all or most of the subject properties. Instead, those properties appear to be divided mainly between two grammatical variables: one of them is the focus participant (FoP hereafter) and the other is the participant with the highest semantic role (PHR hereafter). FoP is the participant on which grammatical focus is placed. PHR is the participant with the highest semantic role within a given clause, which can be determined on the basis of the hierarchy of semantic roles (discussed in

7.3). Both of these variables exhibit some of the typical morpho-syntactic properties of subjecthood: FoP is associated with case-marking (or agreement) by the verb prefix, and PHR with the NP order. However, FoP is closely associated with inherent semantic properties of the referent (and to a minor degree its deictic category), while PHR is more closely associated with semantic (case) role related properties of the referent.

These two "subject-like" variables often coincide, because animacy and case-roles are generally related with each other (e.g., Fillmore 1968, Zubin 1979). However, they are in concept mutually independent variables which can be identified by independent means. The FoP can be easily identified by the verb prefix. The identification of the PHR is more complicated, because it does not have a constant morphological realization, and worse still, it may be implicit (not marked) and have to be inferred. Nevertheless, the PHR can be determined in each clause by the valence of the verb and contextual information.

It is important to note that these two subject-like variables reflect rather different semantic aspects of the referent. The FoP reflects inherent semantic characteristics of the referent itself, while the PHR reflects semantic properties of a higher order which emerge only when the referents are integrated into an event, an action, or a state: as a matter of fact, semantic roles can be assigned only relative to the predication.

The question to be raised here is whether one (or perhaps both) of these variables is directly relevant to switch reference marking. Since sentence conjunction is expected to be a phenomenon beyond the level of a single sentence (or the level of a single elementary event, action, or state from the cognitive point of view), it is interesting to observe how these two lower (sentential level) variables are integrated into an organization of higher order (i.e., the level of dyads).

8.3. Kiowa Conjunctive Markers and Switch Reference

In the six texts, which I collected and analyzed, there are 116 cases of occurrence of /gw/, 29 cases of /nw/, 57 cases of /hegW/, 59 cases of /negW/ and 31 cases of /gegW/. For all the cases of occurrence of each of the above five conjunctive markers, the two subject-like variables (FoP and PHR) in the conjoined sentences were checked, and incidences of switching and non-switching of those variables are counted. This is to substantiate the existence of switch reference marking in Kiowa, and to find out the best indicator of switch reference.

As shown in Table 19 (below), there is a clear correlation between the selection of the conjunctive markers and switching and non-switching of the two variables, and most importantly, the PHR (rather than the FoP) exhibits the clearest and most consistent pattern of correlation: thus the PHR is the best indicator of switch reference. This observation coincides with Watkins' (1978,

1980).

The figures of Table 19 indicate that /nw/ and /negW/ occur when the PHR´s are switched, and /gegW/ occurs when the PHR´s are not switched. What is somewhat surprising is the behavior of /gw/ and /hegW/. Contrary to Watkins´ observation, /gW/ in my data does not exhibits a definite correlation with sameness of the PHR´s. In as many as 31.4% of the sentences which are conjoined by /gw/, the PHR´s are switched. As the following examples will illustrate, most of those cases cannot be explained by Watkins´ rule of exception: "if the subjects are not correferential but the predicates are identical in a non-conditional construction, suffix /gw/ rather than /nw/ (Watkins 1976:433)".

( 9) gegW hWw˜:tho˜ #-hWw:-hEl gw k´yA:hIi˜: sAa˜n c´Oowba #-dOo-de

then axe ProHSa=>HSa-take-Hsy /gw/ man child tight ProHSa=>Hsa-hold-Hsy

"Then she (ProHSa) took the axe (HSa) and the man (ProHSa) held the child (HSa) tight."

(10) hWw: #-tO˜:-ne gw sE˜ndEe thAy e˜m-sWw-hEl

yes ProHSa-saying-Hsy /gw/ Sende on ProHSa=>Dif-jump=on

"He (Whiteman: ProHSa) said "Yes", so Sende (ProHSa) jumped on (the horse)."

(11) hE:tW cEe˜ e˜m-Wwgyakhw˜:-nE gw #-tO˜:-ne tOdEe me˜n-zOo˜n

still horse ProHSa=>Dif-encircling-Hsy /gw/

ProHSa-saying-Hsy shoes DstHSa=>Cpl-take=off

"The horse (ProHSa) was still encircling, and he (Sende: ProHSa) said, "Take off your shoes (Cpl)."

Thus, we must conclude that, strictly speaking, /gw/ marks neither sameness nor switching of the PHR's (hence unmarked). However, it is to be noted that although /gw/ may be semantically unmarked as to switch reference marking, it nevertheless seems to contrast with the switch reference marker /nw/ in function, because Kiowa lacks the same reference marker for strong conjunction (see 8.4) which would semantically contrast with /nw/. This is probably why /gw/ is more often used when the PHR's are identical than switched.

As pointed out before (7.2), when grammatical focus is shifted, the newly focused participant tends to be overtly expressed by an NP. Given the high degree of correlation between PHR and FoP, one can reasonably expect a significantly high occurrence of NP's which represent the PHR in the second sentence of the dyad when the PHR's are switched. Just as expected, NP's (which represent the PHR) occur significantly more frequently in the sentences conjoined by the neutral conjunctive marker /gw/ and /hegW/ when the PHR's are switched than when they are not (Table 20: below). In the sentences conjoined by /gw/, the occurrence of NP's to express the PHR (in the second sentence) is only 4.5% when the PHR's are identical, but as high as 60.6% when they are switched. Similarly in the

sentences conjoined by /hegW/, the occurrence of NP's for the PHR is 9.5% (when identical) and 56.0% (when switched).

What is notable is the infrequent occurrence of NP's in the sentences which are conjoined by /nw/. Despite the fact that the PHR's are switched, the figure for /nw/ is almost as small as that for /gegW/ (11.1%) which is a definite "same reference" marker. This is a positive support for the claim that /nw/ marks switching of the PHR's. Because /nw/ explicitly signals switching of the PHR's, the PHR of the second sentence can be easily inferred, and hence, it does not need to be overtly expressed by an NP.

Table 19: Condition of FoP and PHR (Identical or Switched) and Selection of Conjunctive Markers:

| | | FoP's | | PHR's | |
|---|---|---|---|---|---|
| Conjunctive | N | Identical | Switched | Identical | Switched |
| /gw/ | 121 | 64.5% | 35.6% | 68.6% | 31.4% |
| /nw/ | 28 | 42.9% | 57.1% | 14.3% | 85.7% |
| /hegW/ | 46 | 34.8% | 65.2% | 37.0% | 63.0% |
| /negW/ | 81 | 6.2% | 93.8% | 4.9% | 95.1% |
| /gegW/ | 35 | 80.0% | 20.0% | 91.4% | 8.6% |

Legend:

FoP = Focused Participant
PHR = Participant with the Highest (Semantic) Role
N = Number of cases found in the analyzed texts

Table 20: Occurrence of NP´s to Express the PHR Overtly

| | | NP for PHR in the 2nd clause | |
|---|---|---|---|
| Conjunctive | Condition | Occurring | Not Occurring |
| /gw/ | Total | 24 (19.8%) | 97 (80.2%) |
| | PHR switched | 20 (60.8%) | 13 (39.4%) |
| | PHR identical | 4 ( 4.5%) | 84 (95.5%) |
| /hegW/ | Total | 16 (34.8%) | 30 (65.2%) |
| | PHR switched | 14 (56.0%) | 11 (44.0%) |
| | PHR identical | 2 ( 9.5%) | 19 (90.5%) |
| /nw/ | Total | 6 (21.4%) | 22 (78.6%) |
| /negW/ | Total | 35 (43.2%) | 46 (56.8%) |
| /gegW/ | Total | 4 (11.1%) | 32 (88.9%) |

The figures indicate the number (and percentage) of the cases in which the PHR of the second sentence is overtly expressed (left column) and not expressed at all (right column). The data is taken from the same six texts.

8.4. Strength of Connection

There is another level of intersentential relations which the five Kiowa conjunctive markers can signal. Unlike the switch reference phenomenon which reflects mainly the relations between the constituent elements (i.e., participants with the highest role) of the conjoined sentences, this level of intersentential relations has to do with the semantic relations between the two predications (as a whole). This aspect of intersentential semantic relations can be most adequately operationalized as strength of semantic connection. In this section, I will examine the nature of strength of connection between the two predications which are expressed by the conjoined sentences and how it is signaled by the five conjunctive markers.

8.4.1. /gw/ and /hegW/

As discussed in the previous section, /gw/ and /hegW/ are unmarked in regard to switch reference. They signal neither identity nor switching of the HRP's. In that respect, they are quite similar. However, /gw/ and /hegW/ contrast sharply with each other in strength of semantic connection between the two sentences which they conjoin. /gw/ represents strong conjunction: i.e., the two predications are, for some reason or another, strongly connected; and /hegW/ represents weak conjunction: i.e., the two predications are connected but weakly so.

Strength of semantic connection is a very broad concept

which may include various types of semantic relations. However, whatever type of semantic relation a conjunction may represent, it is always possible to conceive of the degrees of its intensity (strong or weak). For example, in serial relation, causal relation has a stronger connection than coincidental relation. In contingency relation, in which the occurrence of one event is contingent on the occurrence of the other (but their connection is not as strong as to be called causal), proximate (in time) connection can be regarded stronger than remote connection. In non-serial relation, two events which constitute a larger event are more strongly connected than two completely separate events. Entailed assertions are stronger than independent assertions, and so on. Thus, it is possible to evaluate the strength of semantic connection in each case of sentence conjunction on the basis of, more or less, operationalized criteria.

Consider the following examples:

(12) tOde me˜n-zOo˜n gw nE˜-Www˜:
shoes DstHSa=>Cpl-take=off /gw/ ProCtrHSa<=Cpl-loan
"Take off the shoes (Cpl) and loan them (Cpl) to me (ProCtrHSa)!"

(13) cOco hWn dWt-k´Ww:-dw gw hWn dWt-pWw:-dw
in=turn not ProCtrLSa<=Ind-bite-Neg /gw/ not ProCtrLSa<=Ind-eat-Neg
"In turn they (Ind) do not bite us (ProCtrLSa) and they (Ind) do not eat us (PrxCtrInd)."

In both (12) and (13), the two actions which are described by the conjoined sentences are inseparable parts of a larger action or event. One must take his shoes off before he lends them to someone else. Hence, taking the shoes off is a necessary prerequisite for a further action of lending. In (13) similarly, carnivorous animals (indexed as "Ind") must bite humans in order to eat them. Hence biting is a necessary prerequisite for a further action of eating. Thus, the semantic connection between the two conjoined sentences in both (12) and (13) is judged to be strong, and strong connection is signaled by the strong conjunctive marker /gw/.

In some cases, swift response of the participant appears to be the condition for the choice of strong conjunctive marker /gw/. Observe (14) and (15):

(14) thAy e˜m-thw:gUun-hEl gw cEe˜: A˜n-gOmpOo˜-hEl
up ProHSa=>Dif-jump-Hsy /gw/ horse ProHSa<=LSa-wind=sounding-Hsy
"As soon as he (ProHSa) jumped on the horse, the horse (ProHSa) took off (like wind (HSa))."

(15) U:pagya gya-thAa:l-dw-me k´W:-pa gw #-tOo˜:-ne ...
there ProLSa-cave-be-Hsy cliff-Loc /gw/ ProHSa-saying-Hsy
"Over=there, there was a cave (ProLSa) against the cliff, so he (ProHSa) said..."

(14) describes a hero´s quick action of escape, in which his jumping on the horse and the horse´s taking off

(like the wind) occur virtually simultaneously. If the two sentences were conjoined by /hegW/, which signals weak connection, such a fast action as in (14) would not be implied.

The reason for the selection of /gw/ in (15) may not be immediately obvious from this sentence alone, but some contextual information will reveal strong semantic connection between the two sentences. Here, the hero and a bear are walking along looking for some fun. As they walk along, the hero, who is known as the biggest trickster, is trying to think how to trick the bear. They come upon a cliff where there is a cave, and immediately the hero thinks of a trick and starts talking to the bear (which is, in fact, the first step of his trick). The strong conjunctive /gw/ emphasizes this hero's quick (and perhaps sneaky) response. The weak conjunctive /hegW/ would not have the same effect.

A particularly revealing example of contrast in strength of causal connection which is expressed by the conjunctive markers /gw/ and /negW/ (weak conjunctive) is found in a folk story. In this story, the hero is tricked by a bird that has the magical power to make a tree to wind and rewind around a person at will. Observe (16) and (17):

(16) Aa:-dw be-mWk´Unde #-tOo˜:-ne gw Aa:-dw
Et-mw˜k´Unde-hEl
trees-Ind DstHSa=>Dif-twist=around
ProHSa-saying-Hsy /gw/ trees-Ind

ProInd=>Dif-twist=around-Hsy

"Tree, twist around! it (bird: ProHSa) said, and (strong) the tree (ProInd) twisted around."

(17) Aa:-dw be-mWk´Unde #-tOo˜:-ne negW Et-mWk´Unde-hEl

trees-Ind DstHSa=>Dif-twist=around

ProHSa-saying-Hsy /negW/ ProInd=>Dif-twist=around

"Tree, twist around! he (hero: ProHSa) said, and (weak) it (ProInd) twisted around."

(16) and (17) are near by identical except for the conjunctive marker. Here, the bird plays with the tree which winds and unwinds around the person first. He tells the tree to unwind, and the tree, under the influence of the bird´s magic, unwinds itself (16). There is a clear causal connection between the bird´s command and the tree´s response: hence the strong conjunctive /gw/ is used to indicate it. Then the hero, who is not aware of the bird´s magic at all, tries the same thing next. He tells the tree to unwind, and sure enough, the tree unwinds itself (17) because of the bird´s magic. However, there is no true causal´connection between the hero´s command and the tree´s response. Therefore, the weak conjunctive /negW/ rather than the strong /gw/ is used to conjoin the two sentences.

I have illustrated above the three types of semantic connection (entailment, proximate in time, and causal) in which strong connection is indicated by /gw/. In some cases however, it is not always easy to decide definitely which type of semantic connection there is in a given dyad as the

following example will show.

(18) maI~: #-k´Ww:te-hEl gw maI~: #-pO~t´Aa:gya-hEl

woman ProHSa=>HSa-meet-Hsy /gw/ woman

ProHSa-good=looking-Hsy

"He (ProHSa) met a woman (HSa), and the woman (HSa) was nice looking."

There are two plausible interpretations as to the semantic connection. One is as sequential events with implied quick reaction. The actor of the first sentence is a hero-trickster who is known for indiscriminate woman loving. For him almost every woman is nice looking. Hence, it is probably his quick and perhaps thoughtless judgement on the woman´s appearance that is implied by the conjunctive /gw/. The other interpretation is that the two propositions expressed are semantically integrated as one as is expressed by the English sentence "He met a woman who was nice looking." In either case, however, a strong connection is definitely present in (18), and interpretations of it being a weak connection seem to be very unlikely. Likewise, in most cases there seems to be lesser problem in judging degrees of strength of connection than types of connection, and /gw/ is regularly associated with strong connection.

When two sentences are conjoined by /hegW/, such strong semantic connections as expressed by /gw/ are not present at all. The semantic connection between the two sentences conjoined by /hegW/ tend to be less causal, less immediate,

and less integrated than /gw/. Observe the following examples:

(19) Alw-bw E-dO˜:-ne hegW pEep gya-sW:-de

berries-Ind ProHSa=>Ind-looking-for=Hsy /hegW/ bush ProLSa-growing-Hsy

"He (ProHSa) was looking for berries (Ind), and there happened to be a bush (ProLSa)."

(20) hegW #-tO˜:-ne sEnde hEt e˜m-thAa:hw:-tw hegW maI˜: #-tOo˜:-ne hW˜:ne

then ProHSa-saying-Hsy Sende Req DstHSa<=HSa-marry-Cnj /hegW/ woman ProHSa-saying-Hsy no

"Then Sende (ProHSa) said, "Will you (DstHSa) marry me (HSa)?" but the woman (ProHSa) said "No"."

In (19), there is no causal connection between the two facts which are expressed by the conjoined sentences. The hero was looking for berries, and that a bush just happens to be growing there. This is nothing but a coincidence (although a very fortunate one for the hero). So far as I can tell, no power of magic or fate is implied at all in this part of the story. Hence, strength of semantic connection in this dyad is judged to be weak.

In (20) too, there is no causal connection between the two actions, and the woman's reply need not be interpreted as quick nor premeditated either. Sende wanted to marry the woman, but it just so happened that she did not care very much for Sende. Hence, strength of semantic connection here is judged to be weak too.

When a loose chain of thoughts, which are not necessarily or causally connected, are expressed, /hegW/ rather than /gw/ is used. Observe the following chain of sentences.

(21) nE hWn bAhw: gya-O˜-gw hegW tEhwnde gya-t´WkhWy-mw˜kho:ldw ... to: An gyA-pI˜:w:me hegW hWn an dWwm-gya et-k´I:kop-kw hegW Ww˜:nya tEhwndE gya-dW hegW kWw:de Wgw tho˜gw hWnde gyA-tw:dE-gw gya-pI:khyadW

but not about ProLSa-good-Neg /hegW/ everything ProLSa-whiteman-mixed ... house Emp ProLSa=>LSa-cook /hegW/ not Emp earth-Loc ProLSa=>Ind-build=fire-Neg /hegW/ different everything ProLSa-be /hegW/ other that long=ago things ProLSa=>LSa-do-Nom ProLSa-vanished

"But they (today´s powwows: ProLSa) are just not as good, and everything (ProLSa) is mixed with whiteman´s way ... They (ProLSa) cook in the house, and they (ProLSa) do not build fire (Ind) on the ground, and everything (ProLSa) is different, and those things (LSa) which they (ProLSa) used to do are all gone."

This chain of sentences is taken from a personal narrative in which the narrator speaks about old powwows in comparison to today´s powwows. Here in the cited paragraph, the narrator just keeps adding thoughts as they come up to her mind. Although what she says are all about powwows, the

connection between them is loose, and no strong connection such as causality is implied. Thus, the weak conjunctive /hegW/, rather than the strong conjunctive /gw/ is used to connect the sentences.

As is clear from the examples cited above in this section, distribution of /gw/ and /hegW/ coincides with degrees of strength of semantic connection between the conjoined sentences. /gw/ represents strong connection, and /hegW/ represents weak connection. However, exactly what kind of semantic connection there is between the conjoined sentences may be quite diversified and needs to be pragmatically inferred.

8.4.2. /nw/ and /negW/

Semantic contrast between /nw/ and /negW/ closely parallels that between /gw/ and /hegW/. Strength of semantic connection is the main condition of the distribution of /nw/ and /negW/. /nw/ signals strong connection, and /negW/ signals weak connection. This is no surprise given the fact that /negW/ is probably derived from /nw/ plus /hegW/ (Harrington 1928: 123). Unlike /gw/ and /hegW/ however, /nw/ and /negW/ explicitly signal switching of the PHR's. Consider (22) and (23):

(22) hWnde sAn kho˜dOm-bA #-kIi˜:-I˜: nw c´Oo-ba
#-tEe˜n-hEl
someone child tent=wall-Loc ProHSa=>HSa-pulling-Hsy
/nw/ rock-like ProHSa=>HSa-catch-Hsy
"Someone (ProHSa) was pulling the child (HSa) at

the edge of the tent, so she (ProHSa) held the child (HSa) very tig$^{h}$t (like a rock)."

(23) e˜m-kIi:ya #-tO˜:-ne nw hW:ne a-k´I:k´u nE gya-sAl #-tOo˜:-ne

DstHSa-be=coward ProHSa-saying-Hsy /nw/ no ProCtrHSa-brave but ProLSa-hot ProHSa-saying-Hsy

""You (DstHSa) are a coward." said he-1 (ProHSa), so "No, I (ProCtrHSa) am brave, but just it (ProLSa) was hot." said he-2 (ProHSa)."

In (22) a woman notices that someone is pulling her baby in order to steal it, so she holds on to the baby very tightly. Here the first action (thief´s pulling of the baby) is the reason for the woman´s response (holding the baby). Hence, there is a clear causal connection between the two actions. Note also the PHR´s are switched: some unknown thief and the woman.

In (23), the hero (he-1) teases a bear (he-2) by saying that the latter is a coward (because the bear did not want to stay in a heated cave very long). So the bear as expected gets angry and tries to deny it. Here too the hero´s teasing (the first sentence) is the reason for the bear´s reaction (the second sentence): thus the causal connection is very clear. Note also the switching of the PHR´s. Thus, /nw/ is used to signal both switching of the PHR´s and strong semantic connection.

In some cases, /nw/ conjoins two sentences where one expresses the reason or explanation for the other. Observe

the following examples:

(24) nW c´an-k´yatAyk´i a-dW nw hEt E˜-c´anhOo:

I cheat-chief ProCtrHSa-be /nw/ Req

ProCtrHSa<=HSa-cheat

"I (ProCtrHSa) am the biggest cheater, so cheat me (ProCtrHSa)!"

(25) hWn E˜-hAy-gw nw k´ombW˜hWw˜:-dw nW˜-Ww:w˜

not ProCtrHSa<=HSa-know-Neg /nw/ hats-Ind

ProCtrHSa<=Ind-loan

"It (horse: HSa) does not know me (ProCtrHSa), so loan me (ProCtrHSa) the hat (Ind)!"

These are taken from a story generally called "Kiowa Sende and Whiteman Sende". In (24), Whiteman Sende is challenging Kiowa Sende to decide which is the sneakiest. He pompously claims that he is the biggest cheater and tells Kiowa Sende to try to cheat him (if he dares). Here, the first sentence gives the reason for his pompous challenge (the second sentence). Note also the PHR´s are switched: from the speaker (neutral) to the hearer (actor).

In (25), the speaker (Kiowa Sende) is sitting on the horse which he borrowed from Whiteman Sende. However, the horse does not move at all. Kiowa Sende says that the horse does not know him (and that is why it does not move), and asks Whiteman Sende to loan him the hat (so that Kiowa Sende will look like a Whiteman). Thus, the first sentence of (25) gives the reason for the second sentence (request for the hat). Here too the HRP´s are switched: from the

speaker (beneficiary) to the hearer (actor).

Like /gw/, /nw/ also conjoin two sentences which represent two events which are parts of a larger event.

(26) hAgyay ba-t´wm-hEebe nw bEt-kOdOo-k´Ii:k´u:-tw
whichever DstLSa-first-enter /nw/
DstLSa=>Ind-build=fire-Cnj
"Whichever one of us (DstLSa) goes in first, and the other one of us (DstLSa) will build a fire (Ind)."

(26) states a proposal of a competitive game: a game of endurance against heat. In this game, one enters the cave, and the other builds a fire at the entrance in order to heat the cave. So the two actions described by the two conjoined sentences are inseparable parts of a larger event--a game of endurance. Thus, the semantic connection is strong, and the strong conjunctive /nw/ is used to signal it.

Compared to /nw/, /negW/ indicates rather weak and remote semantic connection. For example, consider (27):

(27) gegW A-ba-hel negW emgW pW: #-cOode
then ProLSa-go-Hsy /negW/ there river
ProHSa-lying-Hsy
"Then they (ProLSa) went, and there happened to be a river (ProHSa)."

Here, the two events are purely coincidential. People just went, and they happened to come upon a river. There is no necessary connection, such as causality or purposeful

attempt, involved here. It just happend that way. Hence, the connection is judged to be weak.

Similarly, there is no necessary connection between the events described by the conjoined sentences in (28) and (29). The two events just happened in the described order in the natural course of events.

(28) A tha:dE #-pw:hIi:-hEl negW hAgya Ww˜:gw e˜-kIi:-de
his wife ProHSa=>HSa-take=with-Hsy /negW/
somewhere self ProCpl-camp-Hsy
"He (ProHSa) took his wife (HSa) with him, and they (ProCpl) camped alone somewhere."

(29) gIi˜:-gya e˜-de˜cOo-de negW hWnde kodEde maI˜:
A˜n-tAa:-hEl
night-Loc ProCpl-sleep-Hsy /negW/ very suddenly
woman ProHSa<=LSa-wake=up-Hsy
"They (ProCpl) went to sleep at night, and suddenly the woman (ProHSa) woke up."

In some cases, /negW/ is used specifically to emphasize lack of immediate connection. Consider (30):

(30) E-hI:lbE-hel negW khodEde Wgw A˜n-pOo˜-hel
ProHSa=>Ind set=fire-Hsy /negW/ suddenly that=one
ProHSa<=LSa-sound-Hsy
"He (ProHSa) set a fire (Ind), then suddenly that one (ProHSa) screamed."

(30) describes a scene in the competitive game of endurance (against heat). Here, the hero sets a fire and heats the cave. So finally, the bear, who is in the cave,

cannot take the heat any more and starts screaming. It is possible to see a natural causal link between the hero´s setting a fire and the bear´s scream. However, this is a competition of endurance. The bear does not scream simply because the hero sets a fire, but he at first tries hard to endure the heat. But after a while, when he reaches his limit, he finally gives up and screams. Here, the weak conjunctive /negW/ is used to imply the bear´s reluctant surrender. /nw/ would imply too strong a causal connection, and would not imply the bears resistance at all.

As shown in the above examples the sentences which are conjoined by /negW/ generally lack immediate connection, causal connection, explanatory connection, and/or premeditated purposefulness. As a result, the connection which /negW/ represents tends to be limited to simple time sequence.

Special attention needs to be paid to the usage of /nw/ to conjoin a sentence which expresses mental activity (e.g., seeing, hearing, thinking, etc.) and a sentence which expresses its semantic complement. Observe the following examples:

(31) a-t´W:dw nw cEe˜:-gw gWt-Wy-hel
ProCtrHSa-hear /nw/ horse-Ind DstCtrHSa<=Ind-many-Hsy
"I (ProCtrHSa) heard that you (DstCtrHSa) have many horses (Ind)."

(32) k´yA:hIi˜: gya-bOo˜: nw cEe˜: A-Aa˜:gya
man ProCtrHSa=>HSa-see /nw/ horse ProHSa<=HSa-

seated

"I (ProCtrHSa) saw a man (HSa and ProHSa) riding a horse (HSa)."

(33) hWn gyat-O˜:pEeldo-gU nw tOgul nW i:thA

#-bO˜:nIi:-tw-de

not ProCtrHSa=>LSa-like-Neg /nw/ young=man my daughter ProHSa=>HSa-seeing-cnj-Nom

"I (ProCtrHSa) don´t like [the young man (ProHSa) seeing my daughter (HSa)] (LSa)."

Understandablly these are cases of strong conjunction, because the first sentence and the second sentence are semantically integrated and functionally inseparable. Note also the PHR´s are switched. Therefore, /nw/, rather than /negW/ or /gw/, is used in these cases.

8.4.3. /gegW/

The semantic function of /gegW/ closely parallels that of /negW/. Like /negW/, /gegW/ indicates remote and weak semantic connection between the two sentences it conjoins. However, unlike /negW/, /gegW/ signals identity of the PHR´s: i.e., the PHR´s of the two sentences which are conjoined by /gegW/ are identical. Observe the following examples:

(34) Ee˜gw bEt-pI˜:-pAa:te-hel gegW hAya

Et-phI:hOtAy-hEl

those DstInd<=LSa-eat-finish-Hsy /gegW/ somewhere ProInd=>LSa-fly-Hsy

"They (DstInd) finished eating and they (ProInd)

flew away."

(35) e˜m-Wwl-hEl gegW hWndehe˜: A˜n-dWw:-me

ProHSa=>Dif-jump=off-Hsy /gegW/ nothing

ProHSa<=LSa-be-Hsy

"He (ProHSa) jumped off, but there was nothing (LSa) left for him (ProHSa)."

(34) describes a scene in which the birds (indexed as "ProInd") finished eating the hero's meat, and (having been completely satisfied) they flew away. Here, the connection between the two events (birds' finishing the meal and flying away) is not causal, immediate (instant), or premeditated, but they just happened in the described order. Hence semantic connection is not strong. The connection between the two sentences in (35) is even more remote. Here, the hero (having finally managed to come loose) jumped off (from the tree), but his meat had been all eaten up by the birds and there was nothing left for him. There is no neccesary connection between the two events. The two events just represent two different aspects of a scene, and they are basically independent. Hence in (35) too the semantic connection is weak. Note also the PHR's are identical in both (34) and (35).

(36) maI˜: e˜m-hAa:-hel gegW hWw˜:tho˜ #-hOo:-hEl

woman ProHSa=>Dif-stand=up-Hsy /gegW/ axe

ProHSa=>HSa-take-Hsy

"The woman (ProHSa) stood up, and she (ProHSa) took an axe (HSa)."

This describes a scene in which a woman was forced to get up and go outside at night to see who was trying to steal her baby, because her husband would not do it for her. Here, she was very reluctant and unsure of what she was to do. Her reluctance and lack of quick and perhaps well coordinated action is implied by the weak conjunctive /gegW/. Note also that here too, the PHR's are identical: the woman in both sentences. Thus, /gegW/ has two basic semantic functions. It signals identity of the PHR's in the two sentences it conjoins, and it indicates weak semantic connection between those sentences.

8.5. Conclusion

The five coordinating conjunctive markers (/gw/, /nw/, /hegW/, /negW/ and /gegW/) in Kiowa contrast with each other in two basic semantic dimensions. One is switch reference marking (or marking of identity and switching of the PHR's of the two conjoined sentences), and the other is strength of semantic connection between the conjoined sentences. In the dimension of switch reference marking, /gegW/ signals identity of the PHR's, and /nw/ and /negW/ signal switching of the PHR's. /gw/ and /hegW/ are unmarked in this respect: i.e., they signal neither identity nor switching. In the dimension of strength of connection, /gw/ and /nw/ indicate strong connection, while /hegW/, /gegW/ and /negW/ indicate weak connection. This is summarized in Table 21.

Table 21: Semantic Function of Kiowa Conjunctive Markers

| Conjunctive | Switching of PHR´s | Strength of Connection |
|---|---|---|
| /gw/ | ---- | strong |
| /nw/ | switching | strong |
| /hegW/ | ---- | weak |
| /gegW/ | identical | weak |
| /negW/ | switching | weak |

As shown in the table, /gw/ and /nw/ clearly contrast with /hegW/, /gegW/ and /negW/ in the dimension of strength of connection: the former are strong but the latter are weak. /gegW/ and /negW/ contrast with each other in the dimension of switch reference marking.

Marking of strength of connection is a rather complicated process in which the discourse as a whole, and not just a single participant, must be taken into consideration. Speaker´s discourse strategy plays a significant role in marking of the strength of connection. Consider the following example, which illustrates strategically used conjunctive markers /nw/ (strong), /gw/ (strong), and /gegW/ (weak).

(37) hWnde sAn kho˜dOo˜m-bA #-kIi˜:-I˜ nw c´Oo-ba #-tEe˜n-hEl gegW A k´i:dE E˜n-Aan-hEl gw #-tO˜:-ne
someone child tent=wall-Loc ProHSa=>HSa-pulling-Hsy /nw/ rock-like ProHSa=>HSa-catch-Hsy /gegW/ her husband ProHSa<=Cpl-wake=up-Hsy /gW/

ProHSa-saying- Hsy

"Someone (ProHSa) was pulling the child (HSa), so she (ProHSa) held the child tight, and then she woke up her husband (ProHSa) and she (ProHSa) said."

The first two sentences are causally related, and their PHR's are different: hence /nw/ is used to indicate both strong connection and PHR switching (see 8.3.2). However the other three sentences are not causally related but are just sequential. In such cases, it is the speaker's strategy that affects marking of strength of connection. Here, the speaker used the weak conjunctive /gegW/ to conjoin the second and the third sentence, and the strong conjunctive /gw/ to conjoin the third and the fourth sentence. As a result, the scene which is described here is interpreted as follows: "after having secured her baby first, the woman then woke her husband and informed him of the problem". Here, the connection between her waking of her husband (third sentence) and informing of the problem (last sentence) is shown to be immediate and strong (in fact, the second action is the reason for the first action). On the other hand, the connection between her securing of the baby (second sentence) and her waking of her husband is implied not strong (immediate). So there might have been a pause or delay between the two actions.

If the conjunctive markers were not used in this order, the entire scene would look quite different. Suppose /gegW/ and /gw/ are reversed, this scene should look

something like this: "Someone was pulling the child, so she held the child tight and woke her husband up (at once). Then she informed her husband of the problem". Here, her action of securing the baby and waking of her husband might have been quick, but her action of informing may not. The implication is that there was probably a pause or cautious hesitation before she told her husband of the problem.

Compared with marking of strength of connection, marking of switch reference (identity or switching of PHR´s) is a rather mechanical process which involves a single participant in a sentence. Here, only the most prominent participant in the sentence (according to the independently postulated hierarchy of semantic roles), and not the predication which the sentence as a whole expresses, is taken into considereation for judgement. Thus, the process of judgement (of identity or switching of the PHR´s) is relatively simple and clear. There seems to be little room for pragmatic factors to affect this judgement.

However, whether or not the speaker overtly signals identity or switching of the PHR´s is a different matter. Note that /gw/ and /hegW/ are unmarked as to switch reference, which gives the speaker the freedom of choice: overt marking or no overt marking of PHR switch (or identity). For example, when the PHR´s are switched in a strong conjunction, either /nw/ (PHR switch overtly signaled) or /gw/ (PHR switch not overtly signaled) can be

used. In a weak conjunction also, the speaker has a choice between /gegW/ and /hegW/ (when the PHR´s are identical), and /negW/ and /hegW/ (when the PHR´s are switched). Thus, speaker´s pragmatic strategy may be involved in selection of conjunctives.

One of the (possibly many) factors that affects selection of conjunctive, in regard to switch reference marking, is the degree of animacy of the PHR´s. When the PHR´s of the two sentences to be conjoined are both high-animate, the relation of the two PHR´s, whether it is identical or switched, is more likely to be overtly signaled than when one (or both) of them is low-animate or non-animate. In my texts, in more than 30% of the cases where the unmarked conjunctive /gw/ or /gegW/ are used, at least one of the PHR´s is not high-animate. On the other hand, when the explicit switch reference marking conjunctives /nw/, /gegW/ or /negW/ is used, occurrence of low-animate or non-animate PHR is considerably rarer (less than 10%).

Another probable factor which might affect selection of conjunctives in regard to switch reference marking is style of speech. In the texts which were collected by Harrington (1947), switching of the PHR´s is always overtly signaled: i.e., /nw/ is always used when the PHR´s are switched, and /gw/ is used only when the PHR´s are not switched. It is to be noted that there is probably a significant difference in the style of speech between Harrington´s texts and my texts

which is caused by the difference in the recording method. Harrington recorded his texts more than four decades ago with a classical pencil and paper method, while I recorded my stories with a tape-recorder. Therefore, Harrington's texts are likely to represent a more careful (and perhaps more consciously edited) mode of speech, while my texts are likely to represent a more casual and spontaneous mode of speech. Thus, it is probably the case that the speaker tends to be more explicit in marking of PHR switching in careful speech than in casual speech.

It is also to be noted that switching of the PHR's is overtly marked far more regularly in elicitation than in discourse. In elicitation, which tends to represent a careful mode of speech, without the support of contextual information, the speaker always prefers overt signaling of PHR switch (thus he chooses /nw/ rather than /gw/). In many cases, selection of /gw/ is even judged strange or wrong. However, I have encountered some cases in which the speaker accepted both /nw/ and /gw/, althogh one was usually more or less preferred to the other. Consider the following examples:

(38) thOo˜-kya de-khAygUn gw/nw nW pabi: al e˜m-khAygUn
water-Loc ProCtrHSa=>Dif-jump /gw/nw/ my brother also ProHSa=>Dif-jump
"I (ProCtrHSa) jumped into the water, and my brother (ProHSa) jumped too."

(39) nWw pabI: kI: #-hAan gw/nw nW al gya-hAn

my brother meat ProHSa=>HSa-eat /gw/nw/ I also ProCtrHSa=>HSa-eat

"My brother (ProHSa) ate the meat (HSa), and I (ProCtrHSa) ate it (HSa) too."

(40) cEgun E˜-hEe˜m nw/gw gya-tAmce

dog ProCtrHSa<=HSa-die /nw/gw/ ProCtrHSa=>HSa-burry

"My (ProCtrHSa) dog (HSa) died, so I (ProCtrHSa) burried it (HSa)."

(41) t´Ap e˜m-khAygun Aa:-do˜de nw/gw gya-tWwkW

deer ProHSa=>Dif-jump wood-Loc /nw/gw/ ProCtrHSa=>HSa-shoot

"A deer (HSa) jumped out of the forest, so I (ProCtrHSa) shot it (HSa)."

In (38) and (39), the predicates are identical in the conjoined sentences. In such cases, /gw/ is normally used (Watkins 1976). However, it is perfectly acceptable to use /nw/, and there seems to be no noticeable difference in meaning between the two expressions. In (40) and (41) on the other hand, /nw/ is the normal choice, but /gw/ may be used too: note that the PHR´s are switched (deer and speaker) in (41), but identical (speaker) in (40). If /gw/ is used in these cases, the implication is that the speaker, for some reason, knew that the first event (which is described by the first of the conjoined sentences) would happen: e.g., he poisoned the dog (in (40)) and his partner, working in coordination with the speaker, was chasing the deer out of the forest (in (41)). Thus, the

choice between /gw/ and /nw/ seems to have some discourse functions in addition to the rather mechanical grammatical functions which have been discussed in this chapter. However, the problem is beyond the scope of the present analysis.

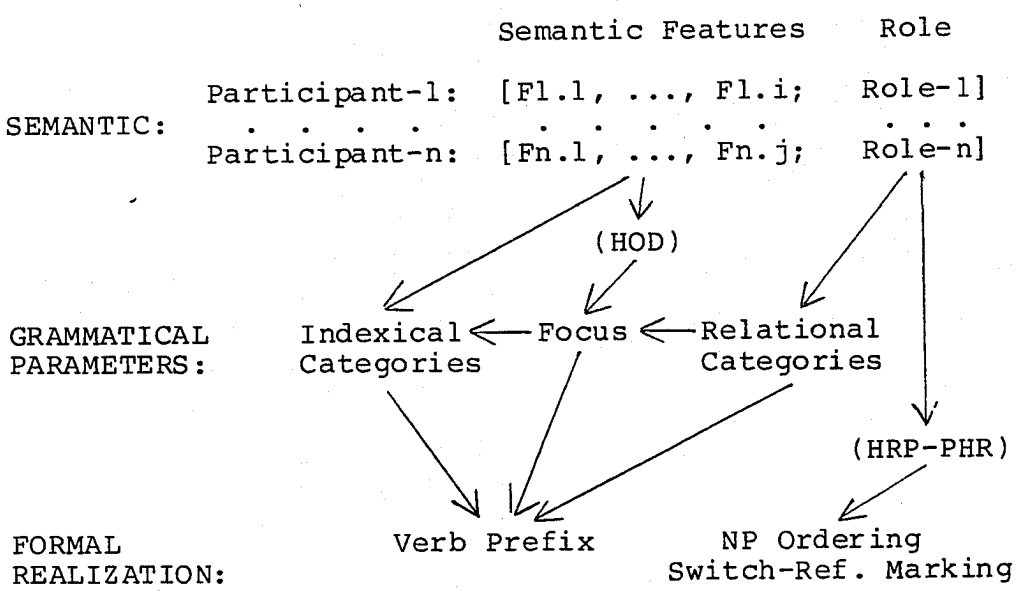
As shown above, sentence coordination in Kiowa is a semantically complex process. Yet it is conditioned, at least partially, by the same semantico-pragmatic factors (the hierarchy of semantic roles, and the animacy hierarchy in particular) as case-marking. To that extent, sentence conjunction has a close connection with sentential case-marking, and may serve as an additional source of information for decoding of case-relations in the constituent sentences.

## IX. CONCLUDING STATEMENT

I have presented above a systematic functional analysis of Kiowa case-marking and tried to show how "meaning" is organized therein. From the level of component semantic features up to the level of connected predications, Kiowa case-marking is indeed quite complex and complicated, involving intricate interactions between morpho-syntactic, semantic, and pragmatic variables at various levels of organization.

Case-marking essentially is a grammatical process in which (semantic) role relations and the semantic content of the participants of the verb are linguistically coded. This process in Kiowa may be schematically summarized as below.

Table 22: Schematic Process of Kiowa Case-marking



As illustrated above, there is no simple meaning-to-form match in Kiowa case-marking. Semantic variables must first be converted into grammatical parameters, which are then coded by formal devices such as verb prefixes, NP order, and conjunctive markers. Note that neither of those conversion processes shows a one-to-one correspondence between the variables of different levels, and pragmatic variables may be involved in either process.

The verb prefix marks three grammatical parameters (indexical categories, relational categories, and focus) from which the participants and their semantic roles can be inferred. Selection of indexical categories is determined mainly by the inherent semantic content (features) of the participant, but in part by pragmatic factors such as situational specification of the referent, and the culturally motivated inferential process reflected in the animacy hierarchy and the assumption of inherent individuation (Chapter 3 and 4). Assignment of relational categories is basically determined by the semantics of the verb (valency and direction of effect), but at the same time speaker's strategy may affect it by means of manipulation of the scope of case-marking (Chapter 4, and 6). Focus placement is primarily determined by the semantic content of the participants on the basis of the hierarchy of dominance (HOD), but in part by their assigned relational categories as well (Chapter 6).

NP order is basically conditioned by semantic role

relations of the participants on the basis of the hierarchy of semantic role prominence (HRP). However, ordering of NP's, as well as their occurrence, is also strongly motivated for discourse efficiency and effectiveness (Chapter 7).

Selection of intersentential conjunctive markers is conditioned by semantic variables of the sentential level (i.e., the most prominent participant in semantic role) and the inter-sentential (dyadic) level (i.e., semantic relations between the two conjoined sentences), as well as speaker's strategy (Chapter 8).

Thus, case-marking in Kiowa is a complex intersect of the morpho-syntactic, semantic and pragmatic variables, which could not be fully understood without taking all of those variables of different levels into account and integrating them as a functional whole.

Kiowa case-marking also presents some difficult problems for the notion of subject. Subject in a cross-linguistic scope can be most generally characterized as a cluster of certain morpho-syntactic properties with some semantic and pragmatic properties which typify "subjecthood" and is often expected to manifest as the "most prominent NP" in the sentence.

However, NP's in Kiowa sentence carry very little syntactic function, and their occurrence and ordering are pragmatically motivated and not syntactically. Hence NP's in Kiowa do not give any clue for identification of the

subject.

What makes the problem even more difficult is that typical properties of subjecthood in Kiowa tend to cluster in two different grammatical variables, rather than one. Although Kiowa is certainly not the only language in the world that exhibits "split" subjecthood (Philippine languges, for example, are said to exhibit such a split too (Schachter 1977), the lack of overt and consistent formal realization of (by NP) "subject-like" variables in Kiowa makes handling of the problem considerably more complicated and tricky.

The two variables which may be considered the functional equivalent of "subject" in Kiowa are (1) the participant with the highest semantic role (PHR), and (2) the focus participant (FoP). The latter has a consistent morphological manifestation in the verb prefix, but the former has no such manifestation at all.

Although the FoP has a salient morphological manifestation and thus is easy to identify, its functional scope is apparently not very broad. It shows no functional connection with the variables of a higher level (e.g., NP order or selection of intersentential conjunctive markers). On the other hand, the PHR, which, with its lack of overt and consistent morpho-syntactic manifestation, must be inferred on the basis of the valence of the verb and the assumed "hiererchy of semantic role prominence", apparently shows a broader functional scope. It is in fact the input

for switch reference marking by the intersentential conjunctive markers.

It seems that the fact that one of the theoretically most important grammatical variables does not have an overt and consistent formal manifestation in Kiowa is another strong indication that a holistic approach is an imperative in the study of the Kiowa language and perhaps many other languages which, like Kiowa, are not "subject-prominent" (Li and Thompson 1976).

APPENDIX 1. Morphological Marking Rules

(MM-0) Morphological core:

```
[+syll
 -back
 +low
 -nasal
 [-H, +L]] (*1)
```

(MM-1) [+focus, -origin]:

```
[+syll
 -nasal]   --->   [+nasal]
```

(MM-2) [+focus, terminal]:

```
[+syll
 [-H,+L]  --->  [[+H,-L]]
```

(MM-3) [diffuse]:

```
[+syll
 -back
 +low ]  --->   [-low]
```

(MM-4) [substance-marked]:

```
[+cons
 -son
 +ant
 -cor
 -cont          [+syll
 +voice]   /     -nasal]  ___

           or

[+syll
 +nasal]  --->   [-nasal]
```

(MM-5) [distal]:

```
[+cons
 -son
 +ant
 -cor
 -cont          [+syll
 +voice]  /  ___  -nasal]

         or

[+cons
 -son
 -ant
 -cor
 -cont          [+syll
 +voice]  /  ___  +nasal]
```

APPENDIX 1. Morphological Marking Rules (Cont'd)

(MM-6) [center]:

```
[+cons
 -son
 +ant
 +cor
 -cont
 +voice]  /  # ___ [+syll]

            or

[+syll
 +low
 -back
 +nasal]  --->  [-nasal] / # [+cons] ___
```

(MM-7) [indivi-marked]:

```
[+syll
 +low
 -back]   --->   [+back]
  (for [+focus, +goal])

        or

[+syll
 +low
 -back]   --->   [-low]
  (for other categories)
```

(MM-8) [coupl-marked]:

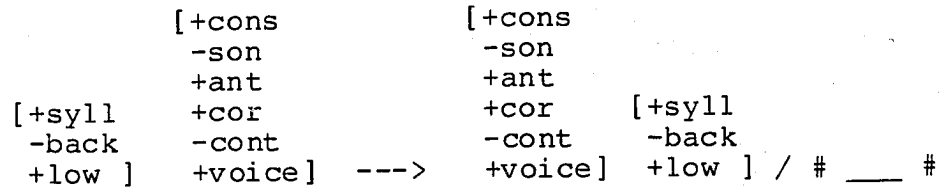
```
[+syll
 -back
 -nasal]   --->   [+nasal]

           or

[+syll
 +low              [-low
 +back]   --->      -back]
```

NOTE

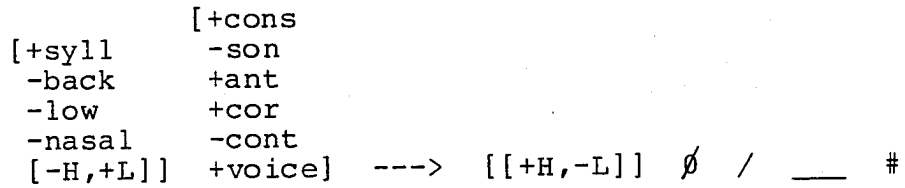
(*1) "H" and "L" indicate tonal features: [+H,-L] = high tone; [-H,+L] = low tone; [+H,+L] = falling tone.

## APPENDIX 2. Phonological Rules

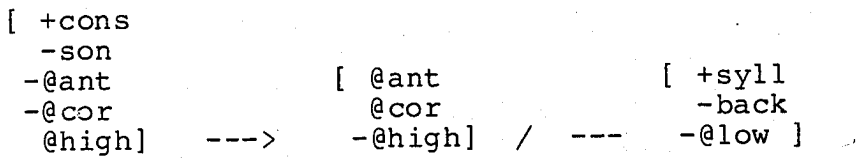
(Ph-1) Metathesis Rule:



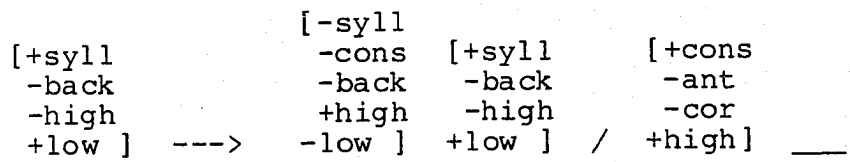

(Ph-2) Terminal /d/ Deletion Rule:



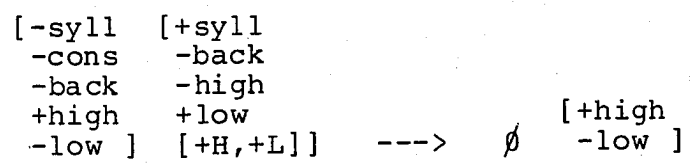

(Ph-3) Dental-Velar Switching Rule: (*2)




(Ph-4a) /a/ - /ya/ - /i/ Alteration Rule 1:




(Ph-4b) /a/ - /ya/ - /i/ Alteration Rule 2:



APPENDIX 2. Phonological Rules (Cont'd)

(Ph-5) Nasalization Rule:

$$\begin{bmatrix}+\text{cons}\\ -\text{nasal}\end{bmatrix} \longrightarrow \begin{bmatrix}+\text{nasal}\end{bmatrix} \;/\; \left\{\begin{bmatrix}+\text{syll}\\ +\text{nasal}\end{bmatrix}\_\_\_,\ \_\_\_\begin{bmatrix}+\text{syll}\\ +\text{nasal}\end{bmatrix}\right\}$$

(Ph-6) Terminal /d/ Devoicing Rule:

$$\begin{bmatrix}+\text{cons}\\ -\text{son}\\ +\text{ant}\\ +\text{cor}\\ -\text{cont}\\ +\text{voice}\end{bmatrix} \longrightarrow \begin{bmatrix}-\text{voice}\end{bmatrix} \;/\; \begin{bmatrix}+\text{syll}\\ -\text{nasal}\end{bmatrix}\_\_\_\ \#$$

NOTE
(*2) "@" equals "alpha" in alpha notation.

## APPENDIX 3. Prefix Compounding Rules

(Co-1) Vowel Deletion Rule:

$$[+syll] \quad \rightarrow \quad \emptyset \quad / \quad [+syll] \_\_\_$$

(Co-2) Terminal Consonant Deletion Rule:

$$\begin{bmatrix} +cons \\ +son \\ +ant \\ +cor \\ +nasal \end{bmatrix} \quad \rightarrow \quad \emptyset \quad / \quad \_\_\_ \quad \#$$

(Co-3) Falling Tone Rule:

$$[+syll] \quad \rightarrow \quad \begin{bmatrix} [+H,+L] \\ +long \end{bmatrix} \quad / \quad \_\_\_ \quad \#$$

(Co-4) Nasal Harmony Rule:

$$\begin{bmatrix} +syll \\ @nasal \end{bmatrix} \quad \rightarrow \quad [-@nasal] \quad / \quad \begin{bmatrix} +syll \\ -@nasal \end{bmatrix} \; X \; \_\_\_$$

(Co-5) Initial Low-pitched /e/ Deletion Rule

$$\begin{bmatrix} +syll \\ -back \\ -high \\ -low \\ [-H,+L] \end{bmatrix} \quad \rightarrow \emptyset \; / \quad \# \quad \_\_\_$$

(Co-6) Vowel Harmony Rule:

$$\begin{bmatrix} +syll \\ -back \\ -high \\ -low \end{bmatrix} \quad \rightarrow \quad \begin{bmatrix} +back \\ +low \end{bmatrix} \quad / \quad \begin{bmatrix} +syll \\ +back \\ -high \\ +low \end{bmatrix} \; X \; \_\_\_ \; X$$

(Co-7) /t/ Voicing Rule

$$\begin{bmatrix} +cons \\ -son \\ +ant \\ +cor \\ -cont \\ -voice \end{bmatrix} \quad \rightarrow \quad [+voice] \quad / \quad \_\_\_ \quad [+syll]$$

# BIBLIOGRAPHY

Abbreviations:

| | |
|---|---|
| AA | American Anthropologist |
| AESM | American Ethnological Society Monographs |
| BAEAR | Bureau of American Ethnology Annual Report |
| BAEB | Bureau of American Ethnology Bulletin |
| IJAL | International Journal of American Linguistics |
| Lg. | Language |


Austin, P. 1981. Switch-reference in Australia. Lg. 57.2: 309-54.

Bendix, E. H. 1966. Componential Analysis of General Vocabulary: The Semantic Structure of a Set of Verbs in English, Hindi, and Japanese. Bloomington: Indiana University Press.

Boas, F. 1966 (1911). Introduction to "Handbook or American Indian Languages. Lincoln: University of Nebraska Press.

Burling, R. 1970. Man's Many Voices. New York: Holt, Rinehart and Winston.

Campbell, L. and Mithun (eds.). 1979. The Languages of Native America: Historical and Comparative Assessment. Austin: University of Texas Press.

Chafe, W.L. 1970. Meaning and the Structure of Language. Chicago: University of Chicago Press.

Chafe, W. L. 1976. Givenness, Contrastiveness, Definiteness, Subjects, Topics, and Point of View. in Subject and Topic, ed. by C. N. Li, 25-56. New York: Academic Press.

Chafe, W. L. 1979. The Flow of Thought and the Flow of Language. in Syntax and Semantics Vol. 12, ed. by T. Givon. New York: Academic Press.

Comrie, B. 1981. Language Universals and Linguistic Typology. Chicago: The University of Chicago Press.

Conklin, H. 1962. Lexicographic Treatment of Folk Taxonomies. IJAL 28.2: 119-141.

Crowell, E. 1949. A Preliminary Report on Kiowa Structure. IJAL 15: 163-67.

DeLancey, S. 1981a. Parameters of Empathy. Journal of Linguistic Research 1.3: 41-49.

DeLancey, S. 1981b. An Interpretation of Split Ergativity and Related Patterns. Lg. 57.3: 626-57.

van Dijk, T. A. 1977. Text and Context: Explorationws in the the Semantics and Pragmatics of Discourse. New York: Longman.

Diver, W. 1975. Introduction. Columbia University Working Papers in Linguistics. 2: 1-26

Dixon, R. M. W. 1979. Ergativity. Lg., 55: 59-138.

Dozier, E. P. 1964. Two Examples of Linguistic Acculturation: The Yaqui of Sonora and Arizona and the Tewa of New Mexico. Language in Culture and Society, ed. by D. Hymes. New York: Harper and Row.

Fillmore, C. 1968. The Case for Case. Universals in Linguistics, eds. by E. Bach and R. Harms, 1-88. New York: Holt, Rinehart and Winston.

Fillmore, C. 1977. The Case for Case Re-opened. Syntax and Semantics 8, eds. by P. Cole and J. Sadock, 59-81. New York: Academic Press.

Forchheimer, P. 1951. The Category of Person in Language. Cambridge, Mass:

Goodenough, W. H. 1956. Componential Analysis and the Study of Meaning. Lg. 32: 195-216.

Grice, H. P. 1975. Logic and Conversation. Syntax and Semantics, vol 3, ed. by P. Cole and J. L. Morgan. New York: Academic Press.

Grimes, J. E. 1976. Thread of Discourse. The Hague: Mouton.

Hale, K. 1962. Jemez and Kiowa Correspondences in Reference to Kiowa-Tanoan. IJAL 28: 1-5.

Hale, K. 1967. Toward Reconstruction of Kiowa-Tanoan Phonology. IJAL 33: 112-120.

Halliday, M. A. K., and R. Hasan. 1976. Cohesion in English. New York: Longman.

Harrington, J. P. 1910. On Phonetic and Lexical Resemblances between Kiowan and Tanoan. AA 12: 119-23.

Harrington, J. P. 1928. Vocabulary of the Kiowa Language. BAEB 84. Washington, D.C.: Government Printing Office.

Harrington, J. P. 1947. Three Texts in Kiowa. IJAL 12: 237-42.

Jacobsen, W. H. 1967. Switch-Reference in Hokan-

Coahuiltecan. Studies in Southwestern Ethnolinguistics, ed. by D. Hymes. The Hague: Mouton.

Jelinek, E. and R. A. Demers. 1983. The Agent Hierarchy and Voice in Some Coast Salish Languages. IJAL 49.2: 167-85.

Keenan, E. L. 1976. Towards a Universal Definition of "Subject". Subject and Topic, ed. by C. Li, 303-34.

Kroskrity, P. V. 1984. A Holistic Understanding of Arizona Tewa Passives. ms.

Kuno, S. 1976. Subject, Theme, and Speaker's Empathy. Subject and Topic, ed. by C. N. Li, 417-44.

Kuno, S. 1980. Functional Syntax. Syntax and Semantics Vol. 13: Current Approaches to Syntax, ed. by Moravcsik, E. A. and J. R. Wirth. New York: Academic Press.

Kuno, S. and E. Kaburaki. 1977. Empathy and syntax. Linguistic Inquiry 8: 627-72.

Langdon, W. H., and P. Munro. 1979. Subject and (Switch-) Reference in Yuman. Folia Linguistica 13: 3-1, 321-344.

Li, C. N. 1976 (ed.). Subject and Topic. New York: Academic Press.

Li, C. N. and S. A. Thompson. 1976. Subject and Topic: A New Typology of Language. Subject and Topic, ed. by C. N. Li.

Mayhall, M. P. 1962. The Kiowas. Norman: University of Oklahoma Press.

McKenzie, P. and J. P. Harrington. 1948. Popular Account

of the Kiowa Indian Language. Santa Fe: University of New Mexico Press.

Merrifield, W. R. 1959a. The Kiowa Verb Prefix. IJAL 25: 168-76.

Merrifield, W. R. 1959b. Classification of Kiowa Nouns. IJAL 25: 269-71.

Miller, W. R. 1959. A Note on Kiowa Linguistic Affiliations. AA 61: 101-105.

Mishkin, B. 1940. Rank and Warfare among the Plains Indians. AESM 3.

Mooney, J. 1979 (1898). Calendar History of the Kiowa Indians. BAEAR 17. Washington, D.C.: Smithsonian.

Schane, S. A. 1970. Phonological and Morphological Markedness. Progress in Linguistics: A Collection of Papers, eds. by M. Birwisch and K. E. Heidolph. The Hague: Mouton.

Secoy, F. R. 1953. Changing Military Patterns of the Great Plains. AESM 21.

Schachter, P. 1977. Reference-Related and Role-Related Properties of Subjects. Grammatical Relations, ed. by P. Cole and J. M. Sadock. New York: Academic Press

Silverstein, M. 1976a. Hierarchy of Features and Ergativity. Grammatical Categories in Australian Languages, ed. by R. M. W. Dixon. Camberra: Australian Institute of Aboriginal Studies.

Silverstein, M. 1976b. Shifters, Linguistic Categories and Cultural Description. Meaning in Anthropology, ed. by

K. Basso and H. Selby, 11-56. Albuquerque: University of New Mexico Press.

Silverstein, M. 1977. Cultural Prerequisites to Grammatical Analysis. Linguistics and Anthropology, ed. by M. Saville-Troike 139-52. Washington, D.C.: Georgetown University Press.

Sivertsen, E. 1956. Pitch Problems in Kiowa. IJAL 22: 117-30.

Spicer, E. H. 1954. Spanish-Indian Acculturation in the Southwest. AA 56: 663-684.

Trager, E. C. 1960. The Kiowa Language: A Grammatical Study. Unpublished Ph.D. Disseratation. University of Pennsylvania.

Trager, G. L. and E. Trager. 1959. Kiowa and Tanoan. AA 61: 1078-83.

Van Valin, R. D. Jr. and W. A. Foley. 1980. Role and Reference Grammar. Current Approaches to Syntax, ed. by E. A. Moravcsik and J. R. Wirth. New York: Academic Press, 329-52.

Vestal, P. A. and R. E. Schultes. 1939. The Economic Botany of the Kiowa Indians as It Relates to the History of the Tribe. Cambridge: Botanical Museum.

Voeglin, C. F. and F. M. Foeglin. 1976. Southwest and Great Basin Languages. Native Languages of America 1, ed. by T. Sebeok. Plenum Press.

Watkins, L. J. 1976. The Syntax and Semantics of Switch-Reference in Kiowa. Proceedings of the 1976 Mid-America

Linguistic Conference, eds. by R. L. Brown Jr. et al. Minneapolise: University of Missouri.

Watkins, L. J. 1978. Subject, Empathy, and Switch-Reference in Kiowa. Papers of the 1978 Mid-America Linguistic Conference at Oklahoma, ed. by R. Cooley et al. Norman: University of Oklahoma.

Watkins, L. J. 1979. Pronominal Prefixes in Kiowa. Paper read at the AAA Meeting, Cincinnati.

Watkins, L. J. 1980. A Grammar of Kiowa. Unpublished Ph.D. dissertation. University of Kansas.

Witherspoon, G. 1980. Language in Culture and Culture in Language. IJAL 46: 1-13.

Witkowski, S. R. and C. H. Brown. 1983. Marking-Reversals and Cultural Importance. Lg. 59.3: 569-582.

Wonderly, W., L. F. Gibson, and P. L. Kirk. 1954. Number in Kiowa: Nouns, Demonstratives, and Adjectives. IJAL 20: 1-7.

Zubin, D. A. 1979. Discourse Function of Morphology: The Focus System of German. Discourse and Syntax, ed. by T. Givon, 469-504. New York: Academic Press.