

YAHOOOSKIN-NORTHERN PAIUTE
VERB MORPHOLOGY

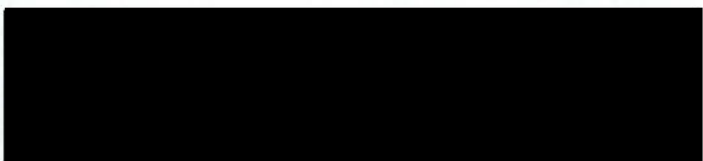
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A THESIS

Presented to the Department of Linguistics
and the Graduate School of the University of Oregon
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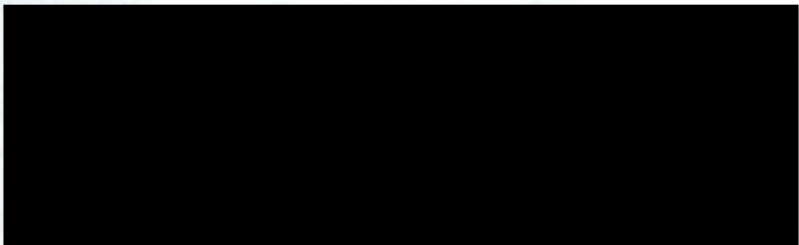
"Yahooskin-Northern Paiute Verb Morphology," a thesis prepared by Timothy Jon Thornes in partial fulfillment of the requirements for the Master of Arts degree in the Department of Linguistics. This thesis has been approved and accepted by:



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The structure of the verbal word in the Yahooskin-Northern Paiute language can be viewed as consisting of layers of functionally complicit morphology. Central to this structure is a semantic core, or STEM, which also participates in the lexical derivation of argument structure. Next is a layer of valence-altering morphology that functions systematically to manipulate argument structure at a syntactic level. This layer, constitutes the THEME portion of verbal structure. A variety of finite morphology occurs suffixally to this central, thematic portion of the Northern Paiute verb.

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DEDICATION

To Irwin Weiser

1909-1996

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INTRODUCTION

The Northern Paiute language is the northernmost member of the extensive Uto-Aztecan language family of North America. Geographically, Uto-Aztecan languages are spoken in areas extending from eastern Oregon and central Idaho in the United States, across the Great Basin region and the Southwest, through central Mexico, and even into Central America. Northern Paiute is one of several members of the Numic subfamily. Speakers of Numic languages at the time of first contact with white settlers populated the Great Basin--a vast high desert region of western North America that includes the state of Nevada and portions of California, Arizona, New Mexico, Colorado, Utah, Idaho, and Oregon. One group of Shoshone speakers moved out onto the high plains after acquiring horses, it is widely believed, about two or three hundred years ago to become the Comanche. Strong similarities across the Numic language family have led most to follow Lamb (1958) in adopting a relatively shallow time depth for the dispersion of its various members. The question of the "Numic expansion" is still the topic of intense debate among archaeologists and anthropologists, as well as linguists (see Madsen and Rhode, 1994).

Northern Paiute is currently spoken fluently by perhaps 450 people (Catherine Fowler, personal communication), although degrees of "fluency" are very difficult to gauge. Of the 450 estimate, however, perhaps 80% live on the Ft. McDermitt reservation of north central Nevada, near its border with Oregon. Although the Ft. McDermitt community has speakers of all ages, percentages of speakers and ages fall in a classic example of a language shift situation. Most other places have only a handful of elderly speakers, usually 70 years or older, who have had limited occasion in recent years to speak the language on a regular basis.

There are two major dialect divisions for Northern Paiute-- northern and southern. As Nichols (1974) defines them, the division follows

roughly along a line from between the Surprise and Honey Lake valleys in the west, through the Black Rock Desert, and south of McDermitt, Nevada and the Owyhee drainage in the east. (1974:4)

The northern and southern dialects are also referred to as Oregon Northern Paiute (after Marsden, 1923) and Nevada Northern Paiute, respectively. There are numerous subdialects and their relationships are minimally understood. I will point out any differences I have found during my fieldwork between the Yahooskin dialect and any of the other northern dialects for which there is data available.

Most of the data for this study came from one of these older speakers. Irwin Weiser, of Klamath Falls, Oregon, was born on the former Klamath Indian Reservation in Beatty, Oregon on August 16, 1909. Until age 8, he was monolingual in the Yahooskin dialect of Northern Paiute as he spent these early years under the guardianship of his grandparents, Dr. Samuel and Mahelia Watah. Dr. Sam was a well-known Paiute shaman and even contributed as an ethnographical consultant to some of Kelly's major work (1932, 1938). Mr. Weiser was an excellent speaker of the language, and with his death on July 12, 1996, perhaps the last fluent speaker of the Yahooskin dialect of south central Oregon passed away.

I have consulted various works for supporting data in Northern Paiute, although there is precious little that has been published. Among the earliest published material is that of Marsden (1923), Natches (1923), and Angulo and Freeland (1929). Sven Liljeblad has perhaps made the greatest contribution to the study of the language, but I have had only limited exposure to his extensive manuscript materials. His 'Northern Paiute Manual' (1966), compiled as part of classes he conducted on the language, has proved an indispensable resource. Nichols (1974), although mainly an historical study of the language and various developments in Numic, is one of the more significant studies of the language and has informed a great deal of my understanding of certain features of the

language, in particular the phenomenon of instrumental prefixes. The grammatical sketch of Snapp and Anderson (1982) is another source of supporting data and has alerted me to many aspects of the language I might not otherwise have noted. A grammar and dictionary compiled by Poldevaart for the Yerington Paiute Tribe (1987), although based on the southern dialect, has also proved helpful, in spite of the fact that it is written in the rather cumbersome orthography introduced by Wycliffe in the late 1950's. Other miscellaneous published data in Northern Paiute can be found in Langacker (1976), Langacker and Munro (1975), and Anderson, Anderson and Langacker (1976).

As some of the other Numic languages are better described, I have often found it helpful to consult their sources as well in order to see how similar problems to those presented in this study have been described. Among these are Charney's (1993) recent work on Comanche, Crapo (1976) on Big Smokey Valley Shoshone, Dayley (1989) on Tümpisa Shoshone, Givón (1980) on Ute, Miller (1972) on Shoshone, and Sapir's (1930) classic work on Southern Paiute.

Frequently, it proved essential to consult some of the very important ethnographic sources, especially the works of Fowler (1992), Kelly (1932, 1938), and Wheat (1967). To my fieldwork on Yahooskin, these sources on culture were invaluable.

This study begins with a discussion of the structure of the Northern Paiute verb. The following chapter focuses on the sticky problem of instrumental prefixes in Northern Paiute. The last chapter looks at the valence-altering morphology, describing it both in terms of argument structure and in terms of the various functional domains which surround transitivity. I will also present data that illustrates the interaction of verbs derived via instrumental prefixes with these morphemes.

The main thrust of this thesis is its attempt to describe verbal structure in functional terms. Its focus is on the interactions of the components of that structure, as well as a presentation of their functional distinctness. My hope is that further studies may pursue the issues raised here with increased attention to the need for a more textured description of the verb structure of languages generally.

CHAPTER I

VERBAL STRUCTURE AND MORPHOLOGICAL CLASSES

1.0 Introduction

In this chapter, we will look at the phonological and morphological structure of the Northern Paiute verb in detail and provide a brief functional analysis of some of the verb morphology. I will begin with a traditional position-class analysis, discuss its shortcomings, and then present an analysis that links together morpheme classes under a set of broader functional headings. By focusing on the functional connections holding between and among morphemes, their inner logic and semantic compatibility may be better understood.

I will reserve a detailed discussion of two morpheme classes (in the broader sense discussed below) for later chapters, namely, the instrumental prefixes and the valence-altering morphology. Instead, this chapter's focus will be on the inflectional and subordinating morphology, especially that which codes notions of direction and aspect. I begin the discussion with an overview of Northern Paiute verb structure and then move to a functional analysis of the pieces that make up that structure.

1.1 Structural Considerations

In Northern Paiute, as in many, if not most, of the languages of the world, the richest morphology occurs in the verb. The Northern Paiute verb consists of the verb root, three prefix classes plus reduplication (marking the "distributive" category--either plural or repeated action), and several suffix classes. In the languages of North America, it is commonplace to have all the information necessary to form a clause expressed by a verb root plus its morphology. 1) represents such an example in Northern Paiute. Examples 1) through 6) illustrate the general structure of the Northern Paiute verb¹:

- 1) na - ti - gu - hani - ki - wini - di
 REFL-APS-IP/ -do -APL -ASP-SUB
 heat

'(s/he) is cooking for (her/him)self' (SL:39)²

- 2) awamo?a sakwa ta ti - hwawai - gya³ - kwi
 morning MOD we.DL APS-hunt -DIR -ASP

'we oughta go hunting in the morning' (5:54)

¹See the chart of abbreviations on page 96. I will provide more specific glosses for directional, aspectual, and subordinating morphology in the sections dedicated to them.

²Indexing codes for most examples refer to my own field notes by notebook and page number. YWP refers to Weiser and Thornes (1995). Examples from other sources include an abbreviation plus a page number. These sources include Liljeblad (1966) (SL:pg), Nichols (1974) (NPHG:pg) and Snapp and Anderson (1982) (SA:pg). Unindexed examples are from early fieldnotes taken during the development of a phrase book.

³Palatalization of the velar consonant in this suffix is conditioned by a preceding high vowel.

- 3) mi nanana na - do - pakida - wini
 PL RE.men REFL-IP/- fight- ASP
 fist

'those men are boxing (each other)' (2:41)

- 4) ni kai piza o = punni i = tsa - tsopa - ki - u
 I NEG well 3=see 1=IP/-remove-APL-PNC
 grasp

'I can't see it well, pull it (a sliver) out for me' (4:16)

- 5) ti = domo - gi - na wi?i - u - ki - ?yakwi yihŋi
 4=winter-CISL-PTCP descend-PNC-DIR-ASP porcupine

'it is getting winter, and the porcupines come down'
 (SL:79)

- 6) ka pa?a - kwai na - da - winai - hu - si
 ACC high-LOC REFL-IP/-throw-PNC-SUB
 feet

'(he) jumped up high . . ' (2:73a)

A position-class analysis of the Northern Paiute verb
 found in Snapp and Anderson (1982:76) is reproduced in 7)⁴:

- 7)
 DES-RE-REFL-IP-CAUS-STEM-BEN-PNC-DIR-ASP-HAB-UNR-SUB-ADV
 (su-) /UNSPEC

From a descriptive point of view, such an analysis of the
 relative order of the verbal morphology is helpful to a limited
 extent in understanding verbal structure. There are problems
 with the above analysis as it stands, however. One problem is
 that, as shown in example 1), the cooccurrence of the reflexive

⁴The abbreviations for this set are DESiderative, REDuplication
 (distributive), REFLexive / UNSPECified object, Instrumental
 Prefix, CAUSative, BENefactive, PuNCTual, DIRectional,
 ASPECTual, HABitual, UNRealized, SUBordinating, ADVerbial

and antipassive (what Snapp and Anderson, following Langacker (1976), call the "unspecified" argument morpheme). The above positional analysis claims, however, that they are complementary (i.e. they occupy the same "slot" in the verbal word). Further, both the "desiderative" and the "causative" in the above analysis are in fact morphemes which come from the set of instrumental prefixes, and there is very little evidence I have found to necessitate assigning them to separate distributional classes.⁵

A position class analysis of verb structure is very useful for obtaining a gross outline of what may be included in that structure and is an important descriptive step. Equally important, however, is the development of a view of verbal structure that addresses both functional dependencies and functional constraints. A richer, more textured description is needed in order to more fully understand how the structures observed are motivated.

As a starting point, we need to recognize that a verb form like that in 1) above, containing a verb root plus a concatenation of six separable morphemes, is not common in the language. Also, one with seven or eight is conceivable, but certainly rare. It is important for an alternative analysis to focus on potential functional constraints holding among

⁵As we will see in the next chapter, these may indeed cooccur, but not in a predictable way that would merit assigning them different slots in a position class chart.

morphemes in order to best explain whether or not they can cooccur.

Semantic considerations may restrict the cooccurrence of certain morphemes or, as in the case of instrumental prefixes, allow for the cooccurrence of more than one morpheme of the same class. It is striking to those who have studied the language that Northern Paiute speakers often manipulate, to some degree, the morphology to fit the needs of the situation. This nonce approach to word formation needs to be taken seriously and deserves an explanation. Creative use of the components of structure at the disposal of speakers are especially important to a discussion of instrumental prefixes, the topic of the next chapter.

For these reasons, I prefer to express the structure of the Northern Paiute verb in broader, functional terms. This allows us to view the verbal word in terms of its building blocks, both lexical and grammatical, as well as to see how the current grammaticalization processes are possible. As an approximation of this structure, consider the following description of the verb:

8)

$$\left[\begin{array}{cc} \text{Valence} & \left[\text{IP}/[\text{Root}] \right] \text{Valence} \\ \text{THEME} & \text{STEM} \end{array} \right] \text{DIR/ASP} + \text{SUB/NMR}$$

In this scheme, we consider the Northern Paiute verb as consisting of a semantic core (the root plus any instrumental

prefixes, together forming the STEM). This core may then be bracketed by a variety of valence-altering morphology, serving to derive the final outcome of argument structure. This morphology, together with the semantic core, is what comprises the THEME portion of the verbal word, a term traditionally used to describe the verb sans inflections. Of course, there are verb roots which are inflected without instrumental prefixes or valence alternations. These would be seen as equivalent to the THEME, whose number and type of arguments are fully determined. It is to this central structure that the directional/aspectual elements are added, as well as the subordinating/nominalizing morphology.

Before turning to our discussion of the STEM and THEME portions of the Northern Paiute verb, I offer an overview of the verb morphology at its periphery. Following a discussion of the status of pronominal proclitics and a brief description of reduplicative processes, we will turn to the various inflectional and subordinating suffix classes.

1.2 Pronominal Proclitics

I will include the set of non-subject pronominal proclitics as part of the verbal word belonging to a category intermediate between "word" and "affix." The grounds for doing so are purely phonological and are based on three considerations: word stress, word minima, and boundary phenomena. These considerations serve to distinguish them both from fully

independent words and from actual prefixes. We will look at each in turn.

Word stress in Northern Paiute is quite regular in that, except for a few exceptions, it falls on the second mora of the word. In other words, where the first two syllables contain short vowels, primary stress falls on the second of these. However, where the first syllable contains a long vowel or a diphthong, stress occurs in the first syllable. Adjustments to primary stress are made with the addition of prefixes so that the application of stress is consistently on the second mora.

Consider:

- | | |
|-------------|--------------|
| 9) naná | b) náána |
| 'man' | 'men' |
| 10) mogóʔni | b) momógoʔni |
| 'woman' | 'women' |

Verbs similarly exhibit adjustments in primary stress with the addition of prefixes:

- | | |
|-----------------|------------------------------------|
| 11) pinúyui | b) mapínuyui |
| '(be) spinning' | 'spin with the hand/cause to spin' |

However, the presence of a pronominal proclitic does not affect the location of the primary stress:

- | | |
|--------------|-----------------|
| 12) i = gikí | b) i = digúhani |
| 1=foot | 2=cook(intr.) |
| 'my foot' | 'cook for you' |

That stress is sensitive to moras and not syllables seems also to follow from apparent constraints on word minima, as defined in Hayes (1995). According to Nichols (1974), all independent words in Northern Paiute are bi-moraic. That is, even those that consist of a single, open syllable have two morae--they are pronounced with a long vowel. So, phonetically we have [ni:] 'I' and [i:] 'you (Subj).'

The non-subject proclitics, however, consist of a short vowel, thus distinguishing them from their independent, subjective counterparts as well as from freely occurring words generally. Table 1 lists the independent subject pronouns and their non-subject pronominal counterparts.

TABLE 1. Northern Paiute Pronominal Elements

	Subject (free forms, bi-moraic)	Object (verbs) /Possessive (nouns)
1SG	ni	i
2SG	i	i
3SG	Ø/osu DEM(emph.)	o
4SG		a ⁶
1DL	ta	ta
1INCL	tammi	ti
1EXCL	nimmi	ni
2/3PL	u/imi	mi ⁷

The final argument for the status of non-subject pronominals as intermediate forms issues from boundary phenomena. There is a clear distinction between the proclitic boundary and the word boundary. All word-initial consonants are realized phonetically as fortis. Proclitics, on the other hand, soften or "lenite" this articulation. Note the following contrasts in both nouns and verbs:⁸

⁶Liljeblad (1966) lists this as 'fourth person singular possessive,' implying occurrence primarily with nouns. It does, as with the other forms, occur with verbs where the referent is unspecified or unknown, and probably fits the traditional definition of an 'obviative.'

⁷This morpheme also functions as a marker of definite plural, meaning something like 'these/those.'

⁸I have adopted the convention of representing the fortis set with the set of symbols generally reserved for voiceless

- | | |
|----------------|-----------------|
| 13) kwassi | b) i = gwassi |
| 'shirt' | 'my shirt' |
| 14) tighani | b) i = dighani |
| 'cook (intr.)' | 'cooks for you' |

Prefixes often alter or retain stem-initial consonants as fortis. Consider:

- | | |
|----------------|--------------------------------|
| 15) pinuiyui | b) ma - pinuyui |
| 'spin (intr.)' | 'spin X' |
| 16) winniki | b) tsi - kwinniki ⁹ |
| 'stand (tr.)' | 'stand with s.t.sharp' |

The term "fortis" generally refers to a manner of articulation that includes strong occlusion, and is perceived as slightly aspirated, voiceless, and not unlike moderate gemination. Lenis consonants are articulated weakly and perceived more like a corresponding fricative with slight voicing. The significance of the fortis/lenis distinction is phonological and not a simple case of intervocalic voicing. Morphophonemic direction is most often determined lexically by

consonants, p, t, k, etc. while reserving the symbols often associated with voicing for the lenis set, namely, b, d, g, etc.

⁹When a glide, either /w/ or /y/, is conditioned by a fortis feature, a velar stop is generally the result. As glides do occur word initially, we could posit a distinction as well between the conditioned, word-internal boundary and the neutralization of consonants word-initially.

what are known in the Numic literature as "final feature" phenomena.¹⁰

The details of boundary phenomena will be left to other studies. As far as it concerns our discussion of proclitics, such phenomena distinguish them crucially from both independent words and from prefixes. Prefixes, although somewhat irregularly fortis-producing, also interact strongly with word-level stress. But with proclitics, the direction of the alternation is regular and lenis. Thus, it is clear that proclitics are indeed an intermediate category.

I will adopt the convention of using an equals sign '=' to distinguish clitics from independent words and from prefixes.

1.3 Reduplication

Reduplicative processes occur in both nouns and verbs in Northern Paiute. They are not, however, fully productive across the spectrum of possible candidates for undergoing the process. In all cases, the process is realized with respect to the first syllable. For nouns, reduplicative processes irregularly mark plurality via straightforward CV reduplication, CV' reduplication (that is, CV plus a fortis feature), vowel lengthening of the first syllable, or the breaking up of a long

¹⁰See especially Sapir (1930) and Nichols (1974) for discussion. Morphophonemic direction simply refers to which stems produce which phonemic alternation.

vowel in the first syllable with a glottal stop. To illustrate each of these processes in nouns, consider the following pairs:

- | | | | |
|-----|-----------|----|----------------|
| 17) | mogoʔni | b) | mo - mogoʔni |
| | 'woman' | | 'women' |
| 18) | waʔitsi | b) | wa' - kwaʔitsi |
| | 'old man' | | 'elders' |
| 19) | nana | b) | naana |
| | 'man' | | 'men' |
| 20) | naatsi | b) | naʔatsi |
| | 'boy' | | 'boys' |

In verbs, reduplication is most commonly of the CV type. It marks what is known throughout the literature as the distributive category. One significant fact of verb reduplication is that sometimes reflects a dual subject of an intransitive verb, as in 22):

- | | | | | |
|-----|--------------------------------------|---------|-------|----------------|
| 21) | awamoa | sakwa | ni | mia - kwi |
| | morning | MOD | I | go-FUT |
| | 'I have to go in the morning' | | | |
| 22) | awamoa | sakwa | ta | mi - mia - kwi |
| | | | we.DL | RE-go-FUT |
| | 'We (two) have to go in the morning' | | | |
| 23) | mi | naʔatsi | oʔo | miʔa |
| | PL | boys | DEM | go.PL |
| | 'those boys are going out there' | | | |

As 23) illustrates, other stem-changing processes also participate in reflecting agreement with the subject.

Reduplication, however, is not limited to the stem, and may also express a repetitive action carried out by a singular subject:

- 24) su mogoʔni ka nana madatsiʔi
 NOM woman ACC man slap

'the woman slapped that man' (4:80)

- 25) su nana o = bi - pi - madatsi
 NOM man 3=RE-IP/-slap
 butt

'the man is spanking him/her' (2:60)

All of these examples fall within the distributive category in that the action is performed more than once, whether it is the same singular action performed by plural actors or a repeated action performed by a single actor.

Reduplication is not a fully productive process in verbs and so is only marginally reliable as an indicator of subject-verb agreement. There is also some suppletion in verbs, which generally follows an absolutive pattern of agreement. That is, where there is suppletion in a transitive verb like 'kill,' the verb reflects the plurality of the patient/objects, not the subject.

It is interesting to note that there are, to my knowledge, no cases of reduplication, only suppletion, to show plurality of the patient/object. Rather, reduplication is a device that appears to mark only plurality of the subject or repetitive action

by the subject. Reduplication is an important mechanism for elaborating upon the nature of the action coded by the verb.

1.4 Direction and Aspect

The class of verbal suffixes in Northern Paiute that indicates directional and aspectual notions is the most substantial, consisting of perhaps two dozen members. Liljeblad (1966) lists 27 members under the broad heading "verb inflection." Snapp and Anderson (1982) list 23 members, including 9 directionals and 14 aspectuals.

Although certain distinctions regarding the class "directional" and "aspectual" might justify keeping them separate on semantic grounds, there are ample distributional, functional, and historical grounds for discussing them within the same broad classification. I will begin by giving a general description of them, providing examples of each semantic type before addressing the problems of their distribution. Then we will show how, through metaphorical extension, there are clear cases of directional morphemes marking aspectual or temporal notions. We will discuss the functional similarities across both semantic categories and some of the current literature on the topic of "viewpoint" used to explain this similarity. Finally, we will present the case for their similar historical origins as verb stems, or what Crapo has termed "secondary verbs" in his study of directional adverbs in Uto-Aztecan (1970).

1.4.1 Semantics of Directional and Aspectual Suffixes

Of the suffix classes, those indicating direction or manner of motion and aspect are the largest. In general, directional morphemes precede aspectual ones. Directional morphemes express motion toward or away from the speaker (cislocative and translocative, respectively), random motion, movement back and forth, toward a goal, for the purpose of, etc. Consider these examples:

- 26) ti - hoawai - nimi ni
 APS-hunt-RNDM.SG I
 'I've been hunting (around)' (YWP:36)
- 27) imi bino?o ti - hoawai - mo?o
 they also APS-hunt-RNDM.SG
 'they've been hunting (around), too' (YWP:36)
- 28) kotsi - ki sa?a
 return-CISL MODAL
 'you must come back!' (SL:79)
- 29) pisaku¹¹ kotsi - gaa
 well return-TRNSL
 'go back safely!' (SL:79)
- 30) kwi?naa tammi - kuba - kwai yodzi - no?o
 golden eagle we.INCL-over-LOC fly-PURP
 'an eagle is flying over us (to a specific goal)' (4:106)

¹¹The corresponding predicate form in Yahooskin would be /pisa?yu/.

- 31) kwi?naa tammi - kuba - kwai yodzi - mina
 golden eagle we.INCL-over-LOC fly-go along
 'an eagle is flying over us (soaring back and forth)'
 (4:106)

Examples 26) and 27) illustrate suppletion in the directional suffix that reflects the number of the subject (a clue to their verbal origins). The next pair, 28) and 29), illustrates the deictic contrast of the cislocative and translocative suffixes. Examples 30) and 31) illustrate yet another contrast in the description of the event, namely, whether or not there is a purpose or a specific goal for or toward which the activity is directed.

The semantic range of aspectual morphemes includes durative, punctual, perfective, imperfective, continuative, stative, future, subjunctive, and habitual or repeated action. Consider the following examples:

- 32) su naatsi onoka pida - wini
 NOM boy DEM build fire-CONT.SG
 'the boy is building a fire there' (4:20)
- 33) mi na?atsi onoka pida - gona
 PL boys DEM build fire-CONT.PL
 'those boys are building a fire there' (4:20)
- 34) nainapa ka tipi winai - hu
 across ACC rock throw-PNC
 '(s/he) threw the rock across' (4:112)

- 35) nainapa mi tipi winai - kyakwi
 across PL rock throw-REPET
 '(s/he) keeps throwing rocks across' (4:112)
- 36) tibidi izina - o - si ta mi - mia - kwi
 first light-PNC-SEQ we.DL RE-go-FUT
 'when it's first light, we'll go' (4:73)
- 37) ii saʔa wiʔi - u - dua
 you MOD fall-PNC-SUBJ
 'you might fall off!' (5:46)

Examples 32) and 33) (like 26) and 27)) also illustrate suppletion in the aspectual suffix to reflect number. In the case of the continuous suffix, there is also a suppletive form for dual (see Table 2, section 1.4.4.3). 34) and 35) contrast the punctual morpheme (discussed further in the following section) with one coding habitual or repeated action. In the last two examples, 36) and 37) we see two separate morphemes that operate within the broad range of irrealis, one to mark future and the other, a kind of subjunctive.

1.4.2 Distribution of Directionals and Aspectuals

The position class analysis in 7) states that there are strict distributional requirements with respect to the members of the two semantic classes. However, this is not necessarily the case. Although directional suffixes usually occur before aspectual ones, as in the following:

- 38) nano ko - gotsi - gi - kwi
both RE-return-CISL-FUT

'both of them will come back (together)' (SL:4)

- 39) ni tihikya hoawai - gya - kwi
I deer hunt-TRNSL-FUT

'I'm going to hunt deer' (YWP:37)

they may follow them, as in these examples:

- 40) mi hudzi toki?i - kyai - moo
PL sagehen make drumming sound-HAB-RNDM.PL

'the sagehens go around making a drumming sound (like a turkey)' (4:114)

- 41) nimi kuba - kwai yodzi mia - hu - ga - ?a
person above-LOC fly go-PNC-TRNSL-DUR

'(it) went flying over a person' (5:27)

The distribution of one morpheme in particular, called variously punctual (Snapp and Anderson 1982), momentaneous or terminative (Liljeblad, 1966) is unique among those that fit semantically into the aspectual class.¹² For the most part, it directly follows the verb stem, or, more precisely, the THEME, and precedes any other directional or aspectual suffixes, as in 41). So, although semantically it belongs to the aspectual class, it doesn't fit into the corresponding position class category.

¹²Phonetically, it is realized as [-u], [-o], or [-hu]. The first two allomorphs are phonologically conditioned by preceding vowels. Whether there are conditioning factors involved that might predict the occurrence of an epenthetic [h] or its deletion is still inconclusive.

Semantically, the punctual suffix imposes telicity on the action of the verb. That is, the endpoint of the action is implicit, the truth value is realis, and the time factor is instantaneous. Note its function in the following pairs:

- 42) mi nimi o = watsi - ga - ?a
 PL people 3=capture-TRNSL-DUR
 'the people were about to catch up with him' (2:20)
- 43) mi nimi ka idza?a watsi - u
 PL people ACC coyote capture-PNC
 'the people caught up with the coyote' (2:20)
- 44) yaasu awamoa ta mi - mia - kwi
 now morning we.DL RE-go-FUT
 'we'll go this morning' (2:26)
- 45) imi mo?asu awamoa mi - mia - o
 they already morning RE-go-PNC
 'they already left this morning' (2:26)

The events contrast in the degree to which they are "bounded," that is, whether or not either the initial or terminal endpoint is expressed or understood (cf. Givón 1984). Like a perfective, the actions coded by the verbs with the punctual morpheme in 43) and 45) are viewed from their endpoint. The next section briefly describes the notion of viewpoint as discussed in DeLancey (1982).

In any case, the action here is viewed as completed and so the morpheme is most often used to talk about past events. However, there are clear cases where it is truly the telicity of

the action--not the realis quality of the event or a simple perfective--that is being coded:

- 46) hanno sakwa ta wii - kya
 where MODAL we.DL descend-TRNSL

'which way should we go down?' (6:97)

- 47) i saʔa wiʔi - u - dua
 you MODAL descend-PNC-IRR

'you might fall off' (5:46)

In 47), the truth value of the event is one of irrealis. In other words, the event spoken of is "hypothetical, possible, and uncertain" (Givón 1984). At the same time, however, the semantic difference between "descend" and "fall off" is in large part one of atelic versus telic (see Comrie, 1976). The latter necessarily entails its endpoint, whereas the former does not. The morpheme renders the action punctual as opposed to something which takes some time to accomplish.

1.4.3 Space as Time: the Extension of Directionals into the Domain of Aspect

There are metaphorical extensions of some directional morphemes to include temporal considerations. In particular, the cislocative and translocative morphemes appear to participate in composite forms to include the "approach" and "departure" of specific times, as "midday" or "evening." This kind of temporal deixis is expressed in the following examples:

- 48) moasu tabino - gi - na
 already noon-CISL-PTCP

'it's already getting close to noon' (2:25)

- 49) moasu yono - ga
 already evening-TRNSL

'the day is over already/it's getting late' (2:25)

In the following, both a temporal concept--winter--and a spatial one--descend--occur with the cislocative suffix to express motion in time or space toward the deictic center.

- 50) ti = domo - gi - na
 4=winter-CISL-PTCP

wi?i - u - ki - ?yakwi ¹³	yihŋi ¹⁴
descend-PNC-CISL-REPET	porcupine

'it is getting winter, and the porcupines come down'
 (SL:79)

Metaphorical extensions of spatial morphemes for temporal functions are extremely common cross-linguistically. Insofar as the blending of the categories of directional and aspectual morphemes can be understood in terms of such extensions, let us turn briefly to the broad notion of aspect. Comrie (1976) formulates aspect as having to do with the "internal temporal constituency" of an event. One can think of notions like "completeness" as being at least one portion of that constituency which distinguishes perfective from imperfective, for example.

¹³In the Yahooskin dialect, this morpheme would be /-kyakwi/.

¹⁴Mr. Weiser gives /tsakwida/ as 'porcupine.'

One can also think in terms of "relative duration" to distinguish, say, durative from punctual aspects.

Directional notions can also be said to describe this "internal constituency" in spatial terms. DeLancey (1982) describes aspect in terms of a vector that parallels and is coextensive with one for discussing motion in space. Notions like Onset and Termination parallel Source and Goal. Viewpoint, that is, from which end of the vector one is construing the event, is what is important to a semantic analysis of an event, and that explains why spatial and temporal notions are often either marked by the same morpheme or agree in their orientation regarding viewpoint.

Directional suffixes in Northern Paiute determine whether an action is carried out while approaching or departing from some deictic center, is done for a purpose or rather is construed as taking place "at random." There is, I would argue, a related "internal constituency" of events determined in a similar fashion by both directional and aspectual notions. This makes it possible to view directional and aspectual suffixes as falling within the same functional domain in Northern Paiute, rather than being separate classes on semantic grounds. This commonality may serve to explain why they are difficult to separate distributionally. As we shall see, this explanation can help us to express their historical similarities as well.

1.4.4 Grammaticalization of Directional and Aspectual Suffixes

In this section, I present evidence for the common historical origins of directional and aspectual suffixes. This evidence is informed by the assumptions of the theory of grammaticalization which claims that grammatical categories arise from lexical sources. The basic steps in the process include (Givón 1979):

- i. grammatical extension
- ii. semantic bleaching
- iii. phonological reduction

As Givón (1979, 1990) points out, it is important to understand the process of grammaticalization as occurring along a continuum, and that the three steps presented here are simply significant points along it, not discrete stages necessarily exclusive of each other. That is, a lexical morpheme becoming grammaticalized may exhibit characteristics of all three stages, while simultaneously maintaining its full lexical status. For several of the inflectional morphemes marking direction or aspect in Northern Paiute, this is indeed the case. We see clear candidates for grammaticalization participating at all three stages of the process, as well as the existence in the language of the full lexical verb from which they arise.

First, I will discuss so-called "secondary verbs", a term applied to the study of the historical development of directional

adverbs in Uto-Aztecan languages by Crapo (1970). I will compare and contrast these with serial verb constructions and their cross-linguistic tendencies, especially as they are described by Foley and Olson (1985).

Next, I describe the general use of secondary verbs in Northern Paiute and the semantic class to which they belong. Finally, I present corresponding grammaticalized forms from within the class of directional and aspectual suffixes.

1.4.4.1 Secondary versus Serial Verbs

Crapo (1970) defines secondary verbs as verbs which,

in addition to serving independently as primary verbs, may also be used almost like (optional) suffixes with other primary verbs. . . in which capacity they indicate aspectual-like or adverbial-like meanings. (1970:182)

As a verb class, secondary verbs have the following characteristics: they are intransitive verbs that express motion or position-orientation. Frequently, members of this verb class are also suppletive, having distinct forms in accord with a singular or a plural subject, and even, as with some verbs in Northern Paiute, a further distinction for dual subject.

As the following examples illustrate, secondary verbs tend to qualify the action coded by the main verb¹⁵:

¹⁵I represent main verb secondary verb complexes morphologically as verb compounds. This is because they generally fall under the same intonation contour.

- 51) su nana iwi - dapi
 NOM man sleep - lie.SG
 'that man is lying down sleeping'
- 52) mi naana o?o iwi - bokwa
 PL men DEM sleep - lie.PL
 'those men are lying over there sleeping'
- 53) su nana iwi - kati - u
 NOM man sleep - sit.SG-PNC
 'the man sat sleeping (as in a chair)'
- 54) su sona?a iwa anibi tika - kati
 NOM Bear many ants eat - sit.SG
 'Bear sat eating a lot of ants'
- 55) nimmi tika - aata?a - kwi
 we.EXCL eat - sit.PL-FUT
 'we're all going to sit down and eat'

The above examples illustrate that secondary verbs contribute semantically to the whole predicate in a predictable way, that they reflect the number of the subject, and that inflectional morphology occurs suffixed to the last in the verb series (i.e. the secondary verb). Let us make a brief comparison of these verb types to serial-verb constructions as described by Foley and Olson (1985).

Constraints on co-referentiality across the arguments associated with each verb in a serial verb construction establish their grammatical unity most convincingly. There are co-referentiality constraints of two basic types: subject-subject and object-subject. That is, where there is serialization of two

intransitive verbs, their subjects must be co-referential. On the other hand, there are instances where pronominal elements appear with the verbs. The constraint that applies here is that in transitive-intransitive serializations, co-referentiality is from object of transitive to subject of intransitive.

Note that in our examples above, co-referentiality is of the subject-subject type. The object-subject type of co-referentiality does not appear to occur in Northern Paiute. In cases where we would expect it to be possible, the only way to make the object of the transitive co-referential to the subject in a similar event frame, is by creating a relative clause, as in the following:

- 56) ni tihikya oʔo winni - di punni
I deer DEM stand.SG-NMR see

'I see a deer standing out there' (YWP:33)

- 57) i haʔa ka tihikya mia - di punni
you Q ACC deer go.SG-NMR see

'do you see that deer going?' (YWP:33)

- 58) *ni ka tihikya oʔo punni - winni

'I see the deer standing out there'

The unacceptability of 58) is due to a restriction on subject-object co-referentiality. In order for the object of 'see' to be co-referential to the subject of 'stand,' a relative clause like those in 56) and 57) must be formed. (Relative clauses are discussed more fully in 1.5.) Even though certain

characteristics link serial constructions and secondary verb types, there are important differences. The first is structural. Nominal arguments in serial constructions often come between the verbs, but this is never the case between primary and secondary verbs in Northern Paiute.

The second difference is chronological. Givón (personal communication) has pointed out that serialization usually maintains the sequence of actions coded by the verbs in the series. With secondary verbs, on the other hand, the logical sequence is not maintained. In 51), for example, the lying obviously takes place before the sleeping, even though the secondary verb 'lie' follows 'sleep' in the clause. The same is true for 52) - 55).

The third difference between verb serialization and secondary verb types comes from historical typological factors that conspire within the theoretical framework of grammaticalization (cf. Givón 1979). Givón (1979) cites the frequent tendency for serial verbs to grammaticalize as case markers, perhaps in part due to the fact that nominal arguments can intervene structurally in the series. As we see for Northern Paiute and other languages that grammaticalize basic intransitive verbs of motion or position-orientation, they develop grammatical functions that relate to verbal aspect.

1.4.4.2 Restricted Verb Types

Foley and Olson (1985) argue that there exist in cases of verb serialization distinctions between what they call core and nuclear layers that exhibit different inter-clausal characteristics. There are also, they argue, distinctions in junctures. Any nuclear juncture consists of at least two verbal slots, one open, one restricted. We need not pursue all the details here, but simply explore their claim of a universal tendency regarding the verb types that may fill a restricted verb slot. In particular,

active, intransitive verbs of motion, location, or posture, are favored [since these] introduce no new arguments into the core . . . (1985:41)

So, at some level, secondary verbs are a kind of serialization. The propensity for this kind of serialization may be due, in large part, to the fact that Northern Paiute is a strongly verb-final language. This means that where there is more than one verb in the clause, they will likely be adjacent to one another, as will the core arguments of each verb. This typological fact makes reanalysis as part of the same nuclear verb complex with shared core arguments straightforward.

I will now present the evidence for the relationship between secondary verbs and directional and aspectual suffixes. The characteristics of secondary verbs outlined above as well as the relationship to serialized constructions clearly relate to the grammaticalization process as it applies here.

1.4.4.3 From Verb to Aspectual Suffix

The characteristics outlined above make the restricted, secondary verb type conducive to grammaticalization in Northern Paiute for the following reasons:

- i. they add no new arguments to the predicate
- ii. they are already adjacent to the main, lexical verb
- iii. they tend semantically to qualify the event expressed by the main verb, much like an adverbial--a tendency which can be readily extended and further grammaticalized.

Table 2 lists the directional and aspectual morphemes for which ready candidates of formally and semantically related independent verbs can be found.

TABLE 2. Directional and Aspectual Suffixes with Clear Verbal Sources

suffix	gloss	related verb
-ki	motion toward speaker	kimma 'come' (SA) ¹⁶
-gia	motion toward goal	giaʔa 'go to' (SA)
-noo	motion for purpose	noo 'accompany' (SA)
-nimi	random motion.SG	nimi [nimmi] 'travel.SG (SA) [walk]'
-moo	random motion.DL/PL	moo 'travel.PL' (SA)
-mina	go, random focus	mia / miʔa ¹⁷ 'go'
-wini	continuous.SG	winni 'stand.SG'
-[k]wami	continuous.DL	wammi 'stand.DL'
-k/gono	continuous.PL	konno 'stand.PL'
-[k]winai	take/send away	winai 'throw'
-[k]yakwi	'habitual/repetitive'	[k]yakwi 'carry'

The identity relationship holding between independently occurring verbs and suffixes indicating motion or aspect even includes suppletive forms, as for 'travel' singular and plural and 'stand' singular, dual, and plural (recall examples 26), 27),

¹⁶(SA) indicates correlations observed by Snapp and Anderson (1982). The remainder are my own observations and those of Catherine Fowler (personal communication).

¹⁷This analysis is the most tentative. By looking elsewhere within the Uto-Aztecan family, one may find convincing evidence for a morpheme *mi or *min having to do with motion. Within Numic itself, there could be a morpheme *miN with a nasalizing final feature.

32) and 33)). The only phonological differences are in the length of the medial consonant. Further distinguishing suffix from independent verb is that the former falls under the same intonation contour as the verb to which it is attached, much like secondary verbs.

What I have tried to illustrate in this section is that the similarities of distribution, function, and history merit including directional and aspectual suffixes together in the same functional category. Inclusion in the same broad class is important for describing the structure of the Northern Paiute verb. In the next section, we turn briefly to another functional class of morphology that operates over the entire clause, and also has cross-clausal significance, namely, the subordinating and nominalizing morphology.

1.5 Subordination and Nominalization

The directional and aspectual morphemes are then followed by any subordinating or nominalizing morphology which may occur. These have two functions. The first is to relate the actions of the verbs in a clause as sequential or simultaneous. The second function is to derive substantival from verbal forms.

One suffix, /-si/, appears on verbs that denote the action that comes first in a sequence of actions, as in the following:

- 59) tisanapi i = mai - ma o = zu - mu?wa - o - si
 paint my=hand-on 3=IP/-forget-PNC-SEQ
 mind

ni i = goba - ma o = ma - dzia -hu
 I my=face-on 3=IP/-wipe-PNC
 hand

'having forgotten about the paint on my hand, I wiped it
 on my face' (2:63)

- 60) ta sakwa na - ma - hani - si mi - mia - o
 we.DL MOD REFL-IP/-prepare-SUB RE-go-PNC
 hand

'let's get ready and go' (7:16)

It is particularly common in narrative, where clauses are often strung together and the participants are generally understood from context. Marsden (1923) first identified the suffix as the "narrative preterite." Here are a couple of examples from his texts:

- 61) yaishi a - tsa - kwinai - si tsagi?i kati - pini
 then 4-IP/-throw-SEQ close sit.SG-COMPL
 grasp

'then (Coyote), having thrown (the rocks) aside, sat down nearby' (WM:180:1:16)¹⁸

- 62) yaishi osu idza?a ka tihitsa¹⁹ tsipui - ki - si
 then DEM Coyote ACC deer emerge-CISL-SEQ
 iwa ?akwi - pana kai ti - gwati
 many shoot.at-PROHIB NEG APS-shoot

'then that Coyote, the deer having come out, shot many times, but didn't get one' (WM:180:1:23)

¹⁸The index notation here stands for William Marsden (1923), page 180, text 1, line 16.

¹⁹This is the Burns dialect. Yahooskin would have /tihikya/.

Another subordinating suffix commonly used in narrative is /-na/. Complementary to the sequential function of /-si/, it usually expresses actions that occur simultaneously with other actions. Note its use in the following narrative sequence, also from one of Marsden's texts:

- 63) ya isi isu kaiba kussi timatai - na
 then this mountain dust rise-SIM
- ya isi osu pabi?i o = punni - na oka kusiba
 then DEM elder.brother 3=see-SIM DEM dust
- ya isi pisa o = supidakwatu
 then well 3=understand

'then as the dust rose from this mountain, and the elder brother (Wolf) saw that dust, (he, Wolf) understood it (i.e. what it meant).' (WM:180:1:19)

In this example, Wolf's understanding is simultaneous to his perception and interpretation of the sign of dust rising from the mountain where his brother, Coyote, has released the animals from the cave.

One suffix, /-di/, is commonly used to derive nominal forms from verbs, as in the following examples:

- 64) osu tihikya hoawai - gya - kwi
 DEM deer hunt-TRNSL-FUT

'that one is going to hunt deer'

- 65) osu tihikya hoawai - di
 DEM deer hunt-NMR

'that one is a deer-hunter'

- 66) paʔa ti - kwini - di
 high IP/-stand-NMR
 rock

'Abert Rim' (lit. high rock stander/standing)

- 67) toka kati - di
 dark sit-NMR

'Mt. Fuego' (lit. dark sitter/sitting)

The other function of /-di/ is to mark the verb in relative clauses, as the following clauses illustrate:

- 68) mi wogopi oʔo piza toikahino wa - kwami
 PL trees DEM good straight RE-stand.DL

'those (two) trees over there stand nice and straight'
 (5:109)

- 69) mi wahaʔyu wogopi oʔo wami - di
 PL two tree DEM stand.DL-NMR

toikahino wa-kwami
 straight RE-stand.DL

'the two trees standing over there stand straight' (5:110)

- 70) uka wihi oʔo na - tiki - di o - mao
 that knife DEM MM-place-NMR 3-with

ni i = matogo tuhi kwi - ga - o
 I my=thumb try IP/-cut-PNC

'the knife that was left over there, I nearly cut my thumb off with it' (2:32)

These two functions are related within the broader domain of nominalization. Some languages embed one clause in another, syntactically main clause by making the verb of the subordinate clause less finite--more noun-like. This process,

like grammaticalization, is gradient. Along the scale of nominalization, we may find differing degrees of boundedness holding between two clauses (cf. Givón 1990). The participial-like function of the morphology discussed in the previous section and the nominalizing function of /-di/ both allow one clause to be related to another in a subordinate relationship.

1.6 Conclusion

Having concluded an overview of verbal structure in Northern Paiute and a description of the morphology occurring at its periphery, we can now turn to a discussion of its core. I begin in the next chapter with a detailed assessment of the status and function of instrumental prefixes, particularly how they contribute lexically to the STEM.

Then, in the final chapter, I discuss the role of the valence-altering morphology which, although operating on the STEM, functions to manipulate argument structure at a syntactic, rather than a lexical level. As we will see, however, even at this nuclear level of verb structure, the boundary between the two can be fuzzy, with valence-altering morphology occasionally lexicalizing in idiosyncratic ways, and the instrumental prefixes operating in ways that have syntactic ramifications.

CHAPTER II

INSTRUMENTAL PREFIXES: LEXICAL MORPHOLOGY

2.0 Introduction

In this chapter, I focus on the instrumental prefix (IP) category in Northern Paiute. I provide a fuller characterization than has been done previously in the literature. One claim I make regarding IP's is that, when combined with a verb root, they serve to constitute the semantic core of the verb, what I have labelled the STEM portion of the verb structure in chapter one. This claim merits some defense. Evidence for this claim flows from the description of their distributional and functional characteristics outlined in section 2.1.

Section 2.2 explores some of the syntactic ramifications of IP-derived verb stems by studying their contribution to lexical argument structure. I also take a brief look at how IP's may interact in this transitivity function with valence-altering morphology.

Throughout the discussion of IP's it is necessary to address problems that relate to their membership in a single morphological category, their duality (or plurality) of function, and their lexical idiosyncracies. Section 2.3 looks at some of their more interesting lexicalization patterns and nonce

functions. I reserve a discussion of the non-instrumental behavior of some members of the IP category for section 2.4 and relate them briefly to noun-incorporation.

Based on our inventory and my discussion of members of the morphological class "instrumental prefix," I explore and review a possible internal classification of IP's on the basis of their productivity and functional character in section 2.5.

2.1 The Problem of Instrumental Prefixes

In his classic grammar, Sapir (1930) obviously recognized the shortcomings of the term "instrumental prefix" for this category in Southern Paiute:

Under this term are included a considerable number of elements of prevailingly instrumental significance . . . used chiefly with verb forms, but not exclusively . . . [whose] origin is largely obscure . . . (1930: 101)

The number of qualifications to Sapir's broad definition is a good indication that the category may be better defined as a morphological rather than a functional one. As I will show during the course of the ensuing description, the variety of uses of instrumental prefixes makes it difficult to assign a common function to them, although their common distribution may indeed justify the morphological category.

In spite of the fact that IP's also serve to classify nouns to a limited extent, the primary focus of this study is on their

contribution to verb stems. I will, however, discuss nominalized examples where relevant.

2.1.1 Inventory of Instrumental Prefixes

The instrumental prefix (IP) category in Northern Paiute includes phonetically simple, monosyllabic elements that frequently, classify the instrument, in the strict sense of the term, used to carry out the action of the verb. Many of them carry an optional (or obligatory) fortis ['] final feature, in Nichols' (1974) analysis, giving them a juncture similar to that of the stem-final type. This could strengthen the argument that they are a "specialized form of incorporated noun" (Sapir 1930:101), or that some are the result of compounding, a procedure which all Numic languages are prone to. For several, their etymologies are obvious, while for others the etymology is obscure. The following is a list provided by Nichols (1974) with my own modifications of his definitions:²⁰

²⁰The list follows that found in Nichols (1974). Etymological information is from Dayley (1989) and Nichols (1974). PN means 'Proto-Numic' and UA means 'Uto-Aztecan.' The single word gloss is simply a quick way to index the examples.

TABLE 3. Northern Paiute Instrumental Prefixes

IP	gloss	characterization
wi[']- ?UA *wipaa 'whip'	'long'	radial motion; force along or against the length of a long object; with the whole body (as in fall and step on)-also, natural forces
tsi[']- PN *tsi-a 'rose' ??	'sharp'	with a sharp/pointed object; action with the end of a long object;
ki '- UA *ki?i 'bite'	'bite'	with the teeth or mouth; by biting; also with LOC postpositions signifying the edge or periphery
ma[']- PN *mai UA *mo?o 'hand'	'hand'	with the hand--configured as open; gen. CAUSative; pertaining to the hand or arm; (Nichols' claim that same morpheme marks the overt INSTRUMENT suffixally)
to[']- ????	'fist'	with the hand--configured as a fist; axial motion; straight out from the body
tsa '- PN *tsa?i 'grasp'	'grasp'	with the hand and fingers--configured as grasping; pull toward the body
ta[']- PN *ta?ga 'knee' UA *tannah 'foot'	'foot'	with the feet/leg (verbal); pertaining to feet/leg (usu. nominal classifier)
ku[']- UA *kuh 'fire'	'heat'	with heat; pertaining to fire; smoke/dust
ni[']- ???ni-a 'call'	'speak'	with speech; talking/by word of mouth--ni-hani 'plan/discuss' vs. ma-hani 'do/make'
mu[']- PN, UA *mu-pi 'nose'	'nose'	having a point; pertaining to nose/beak; with the lips/mouth
pu-/pui	'eyes'	eye--pertaining to something done with the eyes
si[']- UA *sup 'cold'	'cold'	pertaining to cold; fear; shaking
pa[']- UA *paa 'water'	'water'	pertaining to water, moisture; case for noun incorporation--synchronic paa 'water'; only rarely a 'true' instrument

tso[']- UA *tsohŋi 'head'	'head'	pertaining to the head/shoulders; rarely a 'true' instrument, rather, what is acted upon, a Theme argument
pi[']- UA *pih 'back'	'butt'	buttocks/back/behind/base--again, mostly a Location, although occasionally a Theme
ti[']-, to-, ta- UA *tən 'rock'	'rock'	with or pertaining to rocks; throw something; forceful activity-- possibly related to 'fist'
ku/ko[']- PN *koba-i 'face'	'face'	Nichols defines this simply as TOP, although its semantic range includes: face, neck, above, in front
hu- ???	'back'	back; outside; behind--like ku-, its use seems restricted to defining location/position
su[']- UA *suuna 'heart' or *suuwa 'believe'	'mind'	via mental or emotional activity; these last three are more specialized, less productive, and do not alternate with the others
ta- PN *taba 'sun'	'sun'	sun/day/light; appear (as in ta-bia 'looks like/show/demonstrate')-- again, more a classifying function
no- PN *no- ??	'load'	egg/house/round (culturally equivalent, the wikyap being round and domelike); also, move/carry a load on the back

2.1.2 Distribution and General Description

The paradigm cases of IP use are with bound roots, discussed further in the next section. As relatively clear examples of their instrumental use, note the following:

73) -goba 'break'

IP	IP+Vroot	gloss
ta-	ta-goba	'break with the foot'
to-	to-goba	'break with the fist'
tša-	tša-goba	'break (e.g. a branch)'
wi-	wi-goba	'break s.t. long (by swinging)'

74) -bosa 'pierce'

IP	IP+Vroot	gloss
ki-	ki-bosa	'bite through'
tša-	tša-bosa	'hook s.t. and pull (fish)'
tsi-	tsi-bosa	'stick something/spear'
wi-	wi-bosa	'shoot/shoot with arrow'

75) -kaʔa 'cut/sever'

IP	IP+Vroot	gloss
ki-	ki-kaʔa	'bite in two'
tša-	tša-kaʔa	'sever/cut (a string by pulling apart)'
tsi-	tsi-kyaʔa ²¹	'cut/slice (with a knife)'
wi-	wi-gaʔa	'cut off/chop (by swinging an axe)'

The semantics inherent to these prefixes necessarily constrains the manner in which the action is carried out. For example, there are three prefixes which relate some aspect of the use of the hand, but each carries with it its own semantic implications. The IP /ma-/ is the most generalized of the three, and also functions as a causative. Historically, it is very old, as there is ample evidence for its existence across Uto-Aztecan.

²¹Palatalization of the initial consonant of this root is conditioned by a preceding high vowel.

state verbs do not occur independently as bare stems. Rather, they must include some IP, as is the case for 73) - 75) above. Liljeblad (unpublished ms.) includes instrumental prefixes in his "pre-base" category, and there are numerous instances of a dependency relationship holding between IP's and certain verb roots, although he doesn't directly note this relationship. Others (notably Crapo 1976, Dayley 1989, Miller 1972) have referred to these dependent roots as "instrumental verbs." The resulting stem is always transitive, although its transitivity may be altered through the use of the devices discussed in chapter 3.

The main issue is that we have two bound stem elements that alternate in a paradigmatic fashion and are mutually dependent. A similar state of affairs is described for Washo (Hokan) by Jacobsen (1980) whose term "bipartite stem" has been applied as well to Klamath (Penutian) by DeLancey (1996a, 1996b).

Although the structural phenomenon is at least superficially identical in Northern Paiute, bipartite stems as such are much more extensive in Klamath and Washo and differ in that the pattern functions to classify not just instruments and change-of-state verbs, but also themes and locative-directive stems.

As we have seen from the examples given so far, the IP contributes a great deal to the semantics of the resulting verb stem. It is for this reason that I have referred to the IP +

ROOT complex as constituting the semantic core of the verbal word in Northern Paiute. Sapir (1930:108) has pointed out for Southern Paiute that instrumental prefixes "are much more closely connected with the verb stem proper than any other elements preceding the stem." I am simply taking one step further in my claim that they can indeed be considered part of the stem itself, and that they function as an important word-formation process in that they derive new verb stems (cf. Jacobsen 1980).

This statement is somewhat indirectly supported by the work of Sherzer and Foley (1971:5) who claim that IP's "would require distinct. . . subcategorization features and selectional restrictions." Such a characteristic is not generally attributed to a strictly grammatical or inflectional category.

2.2 Syntactic Ramifications--Transitivity and Argument Structure

Argument structure, as defined by Grimshaw (1990:1) refers not only to the number of arguments required by a predicate, but also "to the lexical representation of grammatical information about a predicate." In this section we will look at the effects of instrumental prefixes on argument structure. These effects are different from those of the valence-altering morphology described in the next chapter, in that the manipulation of argument structure as it relates to syntactic

transitivity is, in part, a result of the semantics of instrumental prefixes.

2.2.1 Lexical Argument Structure

DeLancey (1991) elaborates upon what he refers to as Localist Case Grammar or Localist Theory. As he presents it, every clause in every language expresses a relationship between a Theme (TH) argument, corresponding roughly to what Talmy (1983) calls "Figure," and a Location (LOC), relating to the "Ground" element in the same work by Talmy. The Agent (AG) is viewed as a causal element that may bring about a primary TH/LOC relation.

Note this example whereby, through the addition of an instrumental prefix, the verb root meaning 'spin' is transitivized:

- 78) *ini* *pinuyui*
 INT spin/turn
 '(it's) spinning fast' (5:36)

- 79) *ni* *o = ma - pinuyui*
 I 3=IP/-spin/turn
 hand
 'I'm spinning it' (5:36)

The TH and LOC arguments are identical in both cases, although the relations between the two have been altered through the addition of an AG.

to the first example, whether or not there is volition involved is irrelevant to the lexical structure of 'move.'

In the third example, however, the addition of a causal force (an AG in Localist Theory) corresponds to the morphological addition of an IP to the verb. It should be clear, however, that IP's affect much more than argument structure. Although at a theoretical level, our understanding of IP's may link instruments to agents, they are not limited to the semantic notion of instrument.

Take the verb root /noyoi/ meaning roughly 'move' or 'slide.' The addition of the IP /to-/ does more than add an AG or causal force to derive a stem meaning 'cause to move' or 'move (trans.).' The IP also specifies the manner in which the action is carried out, that is, the movement is instigated in a certain way, given the semantic character of the IP itself, in this case, 'by pushing/by action away from the body.'

2.2.2 Interaction with Valence-Alternations

As I will explore further in chapter 3, valence-alternations interact with the argument structure derived by IP's. IP's clearly operate on a lexical level with respect to argument structure. This becomes still clearer when we see how syntactic transitivity is manipulated by the valence-altering morphology. As an illustration, note how the transitivizing suffix /-ki/ interacts with the IP in the following examples:

- 83) i haʔa ka tihikya oʔo wini - di punni
 you Q ACC deer DEM stand.SG-NMR see
 'Do you see the deer standing out there? (YPB:33)
- 84) su puusiti piza wini - na
 NOM post well stand.SG-SUB
 'the post is standing straight' (5:61)
- 85) ka puusiti oʔo anadotawaaka - kwaisu wini - ki
 ACC post DEM hole-LOC stand-APL
 'stand that post up in the hole' (5:60)
- 86) i = puusiti ni owi ma - wini - ki
 my=post I DEM IP/-stand-APPL
 hand
 I put my post in there/stand it up' (1:47)
- 87) kosso kimaba ka amatabi a = tsi - kwini - ki
 fire beside ACC ribcage 4=IP/-stand-APPL
 sharp
 'stand the ribcage up alongside the fire (with, e.g., green willow sticks)' (5:103)

In the preceding set of examples, transitivity is not derived via the instrumental prefix, but rather via the applicative suffix. The role of the IP is to express some other facet of the action, namely, the manner in which it is carried out. This could weaken the argument that IP's provide an AG slot in the argument structure. Since it is the applicative morpheme that does it in this case, appeals to argument structure to express the role of IP's tell only a part of the story. Still, it is important to note this syntactic manifestation of the semantic process.

We could view this as an example of how the applicative suffix has a transitivizing function that overlaps with a similar function we have established for IP's elsewhere. As a result of this overlap, we see examples like the above in which the manner aspect of the contribution of IP's to the verb stem is enhanced. As I will explore further below, the job of altering transitivity is shared more fluidly, thus presenting a challenge to purely syntactic notions of valence alternations.

There are also examples of IP's with independently occurring transitive roots like the following:

88) naki 'chase (trans.)'

IP	IP+Vroot	gloss of stem
tV ²³ -	ta-naki	'chase with a rock'
ki-	ki-naki	'chase to bite'
ma-	ma-naki	'chase to grab'
tša-	tša-naki	'chase to scratch'
tsi-	tsi-naki	'chase with s.t. sharp'
pa-	pa-naki	'chase with water' ?? ²⁴

The paradigm for 'chase' presents an interesting case. In it, there is clearly some sense of an instrument involved in the activity coded by the derived stem, but there is no physical change of state brought about by it. Rather, the threat causing the person to run away is featured in the IP. In this case, the

²³V represents a vowel slot which harmonizes with the first vowel of the root.

²⁴I have adopted the convention of the use of question marks following the gloss if my consultant seemed dubious about the form.

verb root is transitive and the IP's add another dimension to the activity described by the verb.

2.3 Lexicalization Patterns

Talmy's work on Atsugewi (esp. 1972, 1983, 1985) is pioneering in its detailed exploration of the subtle lexicalization patterns which occur across languages. His work informs this section in particular, where we see most clearly the interesting ways in which IP's are used in Northern Paiute, especially as it extends the semantic notions "instrument" and "manner."

2.3.1 Abstract Roots, Idiosyncratic Stems

Lexicalization patterns in Northern Paiute are such that the meanings of some roots are quite abstract without an attending IP. The independent root /hani/, for example, is an all-purpose verb meaning 'do / prepare.' It becomes highly versatile with IP's, however, which specify the action in ways that shed a great deal of light on the semantic range of individual IP's.

Compare:

- | | |
|--|--|
| 89) ma - hani
IP/-prepare
hand
'fix / work' | b) ni - hani
IP/-prepare
speak
'plan / discuss' (2:4) |
|--|--|

- 90) i . di - gu - hani
 my=APŠ-IP/-prepare
 fire

'(s/he) cooks for me'

As we see from these examples, the root meaning may be semantically broad, expressing some general verbal notion or resultant state, thus allowing for the creation of a broad range of more specified meanings we can say are derived via the IP's. Occasionally, the derived stem has lexicalized in surprising and idiosyncratic ways. Compare, for example, the following stem with examples 89)-90):

- 91) ta - hani
 IP/-prepare
 foot

'herd sheep or cattle' (6:90)

The creative power of such a system should be evident. By having a two-part system for creating verb stems, productivity is limited only by the semantic compatibility of the parts, and at the periphery of transparent compatibility lies a field ripe for culturally sensitive specialization.

2.3.2 Event Elaboration and Cooccurrence

Of considerable interest is the possibility for IP's to cooccur as part of the same verb stem. Here again is evidence that IP's represent more than some salient feature of an instrument. In instances where they cooccur we note their

descriptive contribution to the semantics of the verb. Note examples like the following:

- 92) ku - pi - suki
 IP/ -IP/-warm?
 fire back

'warm one's back at the fire' (NPHG:179)

- 93) pa - ko - ma - ma?i
 IP/ -IP/ -IP/ -wash?
 water face hand

'wash the face' (2:61)

There are problems inherent in the analysis of examples such as these, however. First is in determining the degree to which lexicalization of the IP (or IP's) closest to the verb has taken place. The simple phonological structure of the IP's coupled with the simple CV(X) syllabic inventory of the language as a whole (thus increasing the possibility of homophony) makes that determination difficult. Note that the root in example 93) could itself consist (at least historically) of an IP.

However, in neither of the above examples have I found it felicitous to isolate the root as such in order to determine its meaning. Rather, the entire stem in each case must be considered a single semantic unit. That is, I have not found evidence for independently occurring verb stems /suki/ meaning 'to warm' or /ma?i/ 'to wash.' Without clear, paradigmatic data, such a determination is impossible. The productivity of

the morphological category does, nonetheless, suggest the likelihood that IP's have become specialized with certain stem-formations, even though it is possible that in such cases they do not alternate with other members of the same morphological class.

Such root-level specializations are important in determining stem meaning. In the following series of examples, it is possible to see how descriptive of the action the addition of IP's can be. Recall that reduplication of the initial syllable of the verb can code distributive or repetitive action:

- 94) su mogoʔni ka nana ma - datsiʔi
 NOM woman ACC man IP/ -slap
 hand

'the woman slapped that man' (4:80)

- 95) o = ma - ma - datsi
 3 = RE -IP/ -slap
 hand

'(s/he) is slapping him/her around' (4:80)

- 96) su nana o = pi - pi - ma - datsi
 NOM man 3=RE -IP/ -IP/ -slap
 butt hand

'the man is spanking him/her' (2:60)

Now that we have an idea of some of the possible extensions of the notion of instrumentality, we turn now to other functional possibilities that may relate both to how IP's arose historically and to how some of them may best be classified semantically.

2.4 Relation of Instrumental Prefixes to Noun-Incorporation

Although the possibility that instrumental prefixes arose historically from "some specialized form of incorporation" (Sapir 1930:101) is a reasonable one, such an analysis simply does not reflect the synchronic facts. In the first place, IP's do not represent a productive process in the same way that most types of noun-incorporation are productive. In fully productive noun-incorporation, the incorporated arguments are an open class, with relatively few restrictions placed on what may be incorporated. IP's, on the other hand, consist of a closed set of morphological elements. New members of its comparably restricted inventory are very rarely added.²⁵

Sapir's early (1911) discussion of the problem of noun-incorporation excludes instrumental prefixes in Southern Paiute from the qualifying examples of the process for largely etymological reasons. He claims that these affixes, although they

convey a substantival idea, are not instances of noun incorporation if they are etymologically unrelated to the independent nouns or noun stems with which they seem logically connected. (1911: 251-252)

²⁵See Nichols (1974) for a possible exception in central Numic, where a potentially "newer" member of the IP class--one meaning 'with the elbow'--is briefly discussed.

Nichols (1974:158) suggests that inclusion in the category should arise from the fact that

the phonological shape of the instrumental prefix differs from that of the semantically identical stem in other grammatical classes. (1974: 158)

Sherzer and Foley (1971) make a similar claim.

As we have seen, however, there is sufficient evidence on synchronic grounds for excluding IP's as a class of noun-incorporation. Ideas that are not truly "substantival" as Sapir has described are conveyed frequently by IP's. I will present some of these in the next section.

2.4.1 Classifying Function of Instrumental Prefixes

Aside from the instrumental sense of IP's described early in this chapter, another way in which the semantics of the particular IP constrains the total action lexicalized by the resultant verb stem is more classificatory in nature. These elements do more than classify the instrument(s) used to carry out an action. They classify the action itself in a way that often excludes instruments. Note that /pa-/, a very old incorporation of /paa/ 'water' that has been little changed throughout Uto-Aztecan, is rather infrequently used to characterize water as truly an instrument, but more often as a class of action frequently having to do with water. Note:

- 97) pa - saki - na
 IP/-dry.out-SUB
 water
 'drying out' (4:16)
- 98) pa - mudzia²⁶
 IP/-spew (from mouth)
 water
 'spew (e.g. water or pine nuts) (2:16)

There are also examples in which the IP may represent a location. Indeed, it may be the case that for some members of the IP class, this is the only possibility. Recall that in 96), the location (someone's backside) toward which the action is directed is indicated, and in 98), the lexicalized IP /mu-/ 'out from the mouth' could be interpreted as a directional notion.

2.4.2 Verbal Character of Instrumental Prefixes

Let us look again at the assumption that the semantics of the instrumental prefixes themselves are necessarily substantival--that is, they represent, at some level, a nominal notion. As a set of examples, consider, as I mentioned earlier in section 2.1.2, that there are in fact three IP's that have to do with the hand: /ma-/, /to-/, and /tsa-/. These IP's in actual practice, however, include separate domains of activity typically done with the hand. The first, /ma-/, is the more general of the three, the oldest, as it is present across Uto-Aztecan (Sapir 1930), and is grammaticalizing as a causative in some cases:

²⁶There may well be a lexicalized IP /mu-/ 'nose' in this stem.

- | | |
|-------------|--|
| 99) ssi?a | b) ma - ssi?a - o
IP/-be.afraid-PNC
hand |
| 'be afraid' | 'frighten (s.o.)' |

The second, /to-/, usually defined as having to do with the fist, also has extended to include motion or activity away or out from the body. As 'act with the fist' necessitates motion with the hand away from the body, the manner in which the action is carried out is the important component, not just that the action is done 'with the fist.' Compare:

- | | |
|--|--|
| 100) to - noyo
IP/-move(gen.)
fist | b) tsa - noyo
IP/-move(gen.)
grasp |
| 'push' | 'pull' |

It is evident that the third IP having to do with the hand, /tsa-/, necessarily involves not only the hand, but the hand in a very specific configuration and involved in a more specialized manner of motion, namely, toward the body of the agent. The above examples show clearly the complementary nature of the distribution of these two IP's.

2.4.3 Themes and Noun-Incorporation

In spite of the disparity between the paradigm cases of instrumental prefixation and noun-incorporation, there are still instances of IP's for which analysis as some type of incorporation seems appropriate. Note the following:

In the first four examples, the IP's are truly coding some type of instrumentality or manner, which I have tried to tie together semantically thus far. In the fifth, however, the IP 'head' is clearly indexed to a Theme.

Liljeblad (unpublished ms.) has, interestingly enough, included both IP's and truly incorporated nouns as part of a "pre-base" category. An important avenue of exploration would be to try to discover whether there can be true noun-incorporation accompanying IP-derived verb stems. In spite of the fact that we have seen instances of IP cooccurrence in 2.3, no marked order can yet be established based on semantics. Detransitivization, a syntactic effect of noun incorporation, is brought about by another morpheme in Northern Paiute, the anti-passive prefix, as we shall see in chapter 3.

2.5 Classification and Productivity

Most of the IP's in Northern Paiute characterize a salient feature of shape or a body part used to carry out the action coded by the verb. The remainder classify either relative position, some fundamental element, or mental activity. Although there is plenty of evidence available to justify members of the last three broad semantic classes as belonging to the same morphological category, they are far less productive as fulfilling an "instrumental" role. It makes sense that this would be the case on semantic grounds, since these particular IP's

would be only rarely construed as instruments. This semantic fact cannot shed any light on the relative age of the members of the category.

I have made an attempt in the chart of IP's in table 3 section 2.1.1 to classify the IP's in terms of their productivity and functional characteristics. The first seven in the chart are by far the most productive, and establish the characteristics which are most central to the notion "instrumental prefix" as I have discussed it in section 2.1.2. The next five, although less productive overall, still display some of these central characteristics. The next six on the chart display more of the characteristics associated with noun-incorporation in that they are more transparent, etymologically, and that they index, in general, a Theme, not an Instrument argument, as I discussed in section 2.4.3. A few of these having to do with a body part have also to do with relative location in some instances which I briefly described in section 2.4.1. The final three appear only to fall within the morphological class in terms of their distribution, but do not alternate with other IP's in any productive way that I have found, nor do they index any particular argument within the semantic structure of the clause. They may unify a class of verb stems by some semantic feature, but that is about it.

2.6 Conclusion

As I have shown in this chapter, the class of morphemes included under the heading "instrumental prefix" covers a broad range of semantic and syntactic functions. It is certain that the difficulties of offering a clear synchronic description are the result of a rich and varied history. Perhaps even more puzzling than their many idiosyncracies in Northern Paiute and other Numic languages is their prevalence across western North America. Langdon (1975) has suggested that perhaps we need not be surprised by this prevalence, given certain typological factors surrounding the SOV word order of many North American languages.

Still, the potential for areal influence regarding the instrumental prefix category is great, and the issue was raised early in this century by Sapir (1916) and later by Jacobsen (1966) and Sherzer and Foley (1971). DeLancey (1996b) studies the issue in greater detail, especially insofar as it relates to other aspects of verb structure in parts of western North America, although he finds it difficult to fit Numic into the areal pattern.

The instrumental prefix category in Northern Paiute, however, represents more than the outcome of a rich and puzzling history, as I have suggested. It also, at least as significantly, represents an important mechanism for

innovation, a means for using a very old morphological phenomenon to fill the needs of the moment. Nearly everyone who has described the phenomenon for Numic, has related the ability of speakers to apply the instrumental prefix to a verb root in order to describe a new or unusual situation.

Occasionally, as we have seen from some of the examples in this chapter, the IP applies not to the use of an instrument per se, but is extended to the motion or gesture associated with its use. So the use of IP's extends well beyond its use in relating what was used to accomplish some particular task, but also in describing actions in finer detail.

I turn now to an analysis of the layer of Northern Paiute verb morphology that constitute the THEME. This layer includes three morphemes that indicate an change in the inherent transitivity of the STEM. By thus altering the valence of the verb, they apply to argument structure at a syntactic level, as opposed to the operations of instrumental prefixes at a lexical level.

CHAPTER III

VALENCE-ALTERING MORPHOLOGY

3.0 Introduction: Methodology

There are, broadly speaking, two approaches to pursuing a functionally-oriented description of linguistic phenomena. One is to focus upon a proposed functional domain, for example, passive voice, and then proceed to explore the variety of ways in which a language or languages (a typology) works to code it. Another procedure is to take specific forms (syntactic, morphological) and seek to discover the various functions it encodes. As a part of this procedure, one then seeks to explain in what ways these functions are related to one another in order to coherently describe the domain over which the particular form is sensitive. I proceed from this latter strategy to describe in this chapter a special class of verbal morphology in Northern Paiute, namely, that which alters the valence of the verb.

Although each of the morphemes I will describe in this chapter has its own unique set of functions, they all participate in the manipulation of argument structure, that is, the number and type of core arguments required by a verb, at a syntactic level. This is why I have chosen to include them under the label THEME in order to describe them within the same layer of

verbal structure. Recall the argument from the previous chapter that the instrumental prefix category also manipulates argument structure to some extent. The difference between IPs and the morphemes described in this chapter, however, is that IPs operate at a lexical level in their manipulation of argument structure, whereas these operate syntactically. Although, as we have already noted in section 2.2.2, there may be some overlap, it should become apparent that the valence-altering morpho-syntax outlined here operates over the entire verbal STEM.

3.1 Valence, Transitivity, and Voice

Valence alternations are processes that change the inherent transitivity of the verb. A verb which is syntactically intransitive carries only one core argument, all other arguments being peripheral and marked as obliques. In Northern Paiute, an intransitive clause consists of a single core argument, case-marked as nominative²⁷, whose relation to the verb may be considered that of subject.

On the other hand, a syntactically transitive verb carries two core arguments. Any other arguments will be peripheral and marked as obliques. In Northern Paiute, a transitive clause consists not only of a subject, as described above, but also of

²⁷Nominal arguments are case-marked only when they are definite and referring. /su/ is the nominative marker and /ka/ is the accusative.

an accusative-marked argument, typically the one holding the object relation to the verb.

There are also syntactically ditransitive verbs which carry three core participants. In these cases, the third participant is traditionally referred to as an indirect object, even though it often exhibits a marking pattern similar or identical to that of the object relation. This is certainly the case in Northern Paiute²⁸. One may choose to distinguish indirect objects by means of its semantic role in the clause, as it is typically either a recipient or a benefactive. Givón (1994) emphasizes the necessity of distinguishing indirect from direct objects syntactically by looking at a variety of behavior and control properties. This methodology applies to establishing grammatical relations in general.

In this study, however, we are not concerned as much with grammatical relations per se as we are with the valence-alternations that are marked by verb morphology and how they relate to transitivity and argument structure, pure and simple. How the number (not the exact type) of core arguments required by a particular verb is altered is the main concern of this study.

In the following three sections, we discuss three separate morphemes in Northern Paiute that participate directly in altering valence. These alternations are often pragmatically

²⁸Accusative case-marking, whether as a pronominal or as a definite article, tends to be found on any and all non-subject core arguments.

determined and as such are relevant to the discourse situation-- that is, they concern the speaker's construal of the events described by the clause and therefore fall into the domain of voice. I will leave off any lengthy discussion of the pragmatic operations surrounding voice in this study, however, and focus mainly on the transitivizing / detransitivizing affects of the morphemes.

The relevant morphology consists of two prefixes, /na-/ and /ti-/, which participate in detransitivization processes, and one suffix, /-ki/, which transitivizes or increases the valence of the verb. Semantic as well as syntactic transitivity is relevant to the ensuing discussion and will be addressed as necessary for an understanding of the examples that follow²⁹.

Givón (1981) presents the methodology of the functional linguist by defining the study of functional domains, specifically as regards the passive. My analysis of the prefix /na-/ and its function as a marker of passive voice in Northern Paiute is indebted to this work, in which Givón (1981) looks closely at another Numic language--Ute.

3.2 The Domain of /na-/: a Middle Marker

The verbal prefix /na-/ has a range of functions which include the reciprocal and reflexive, as well as passive voice.

²⁹See Hopper and Thompson (1979) for a discussion of important issues surrounding the semantics of transitivity.

The morpheme is pan-Numic, but its extension into the passive domain does not occur in Southern Numic.³⁰ This extension is well-attested in both Central and Western Numic, however (see esp. Dayley, 1989 for its range of uses in Tümpisa Shoshone). Similar marking patterns for reflexives and passives is common cross-linguistically. Kemmer (1993) refers to this as a one-form middle system in her work on middle voice typology.

Kemmer (1993) provides an extensive accounting of the functional domain surrounding the middle voice. In her work, middle voice is illustrated as occurring along a continuum of participant distinguishability in relation to other domains, most notably reflexives. Her work is reminiscent of, although in many ways clearer than, the work of Langacker (1976).³¹

In Langacker's work (1976), he presents the notion of non-distinct arguments to account for the patterns found in various Uto-Aztecan languages. The concept of "non-distinct argument" subsumes the more specific notions of co-reference and unspecified arguments. In his study of patterns across Uto-Aztecan, Langacker (1976) pairs reflexivity with co-reference between syntactic arguments and medio-passive (or, simply, passive) with unspecified arguments (typically an agent). There

³⁰Givón (1980, 1981) clearly establishes a verbal suffix that fulfills this role in Ute, as does Sapir (1930) in his grammar of Southern Paiute.

³¹See also Langacker and Munro (1975). Anderson, Anderson and Langacker (1976) discusses Northern Paiute within this framework.

remains only the elementary observation that some languages have a separate marker for co-reference and for unspecificity, whereas others have one marker for non-distinct arguments. The following represents the basic schema:



Kemmer (1993), however, places reflexives and middles along a continuum of participant distinguishability. At one extreme of the cline is the prototypical one participant (intransitive) event frame and at the other is the prototypical two participant (transitive) event frame. In the former, the participants are maximally indistinguishable (there is only one), whereas in the latter they are maximally distinguishable (there are two). Rather than linking reflexives only to coreference as a subpart of non-distinguishability, she gains explanatory ground by stating that reflexives have more in common with two-participant events, even though the participants are conflated into the same referent.

Middle situations are then placed along the same continuum, but nearer the one-participant extreme of the scale, since, conceptually, they are closer to intransitive events. This conceptual difference often surfaces as a difference in marking across languages. Note:



From this functional-typological strategy can be explained variable marking patterns across languages for different domains along the continuum. Where one language may employ separate marking strategies for separate points along the continuum, another may employ the same or similar marking strategies. This serves as a partial explanation for why reflexives may pattern with transitives in one language, with middles in another, or with neither, depending upon the domain marked. It also illustrates why middles may pattern in some languages with intransitives, in others with reflexives, or with neither. The crucial difference between Kemmer's (1993) work and Langacker's (1976) is in Kemmer's presentation of distinguishability as a matter of degree.

Both are attempting to account for the fact that the middle (passive) frequently patterns with the reflexive. Langacker (1976) does so by expressing non-distinction as the more general function coded by such patterns, whereas Kemmer (1993) claims that this pattern has as its domain a certain portion of the participant distinguishability continuum.

As I hope to demonstrate in the following pages, /na-/ in Northern Paiute exhibits behavior that covers a wide portion of the continuum proposed by Kemmer (1993). It is important for this discussion that this continuum appeals to the notion of

transitivity, for we may use /na-/ to determine the inherent transitivity of the verbs with which it occurs.

3.2.1 Reflexives

I begin with the function considered more highly transitive by Kemmer (1993), namely, the reflexive. The reciprocal as it relates to the reflexive will also be discussed. This domain is perhaps also historically older, since it is the only one maintained across Numic. In general, Northern Paiute doesn't make use of reflexive pronouns, unless they are necessary for disambiguation (Langacker 1976) or emphasis. I do not have examples of their use in my own field notes.

In the case of the reflexive, there is coreference between the two participants in a transitive event. The most common, and natural, use of the reflexive is with verbs of grooming--actions typically performed on oneself:

- 107) ni na - sibana - wini
I MM-shave-CONT.SG

'I am shaving' (7:30)

- 108) i = bita ni pa - kia - wini
my=arm I IP/-give-CONT.SG
 water

'I'm washing my arms' (2:61)

- 109) ni na - ba - gia - wini
I MM-IP/-give-CONT.SG
 water

'I'm washing (myself)/bathing' (lit. 'I give myself water')
(2:61)

By comparing 108) and 109), we see that coreference between the subject and object in a transitive event is marked on the verb by the /na-/ prefix.

3.2.2 Reciprocal and Distributive Action

Reciprocals are like reflexives in that there is also coreferentiality between the participants of a transitive event. There are, however, two (or more) participants acting on each other. As examples of the reciprocal use of the prefix, note the following:

- 110) imi iwa?yu tihikya koi - hu
 they many deer kill.PL-PNC

'they killed many deer'

- 111) imi - no yonasu ka issa - no na - ko?i
 they-COM now.NOM ACC wolf-COM MM-kill.PL

'now they and Wolf made war with each other' (2:71)

As these examples show, reciprocals, like the reflexives, are generally derived directly from highly transitive verbs. There are also what Kemmer (1993) calls 'naturally reciprocal' event types. Note the following pair from Northern Paiute:

- 112) tapoi - gya
 meet-TRNSL

'(we) met (for the first time in awhile)' (1:10)

- 113) onasu da Tall Jim cabin - wai
 yonder we.DL TJ's cabin-LOC

na - dapoi - gya - kwi
 MM-meet-TRNSL-FUT

'we two will go meet at Tall Jim's cabin' (1:4)

In these examples, we see that a naturally reciprocal event like 'meet' can be marked. When it is marked with /na-/, it establishes the meeting as involving true initiators, thereby involving a more semantically transitive event. Without the marker, the act of meeting is perceived as more or less accidental--more like 'run into' than 'meet (as for a purpose).'

Occasionally, we see the marker reduplicated to indicate reciprocal action:

- 114) na - na - ?akwi
 RE-MM-shoot

'shoot at each other' (2:46)

Reduplication of /na-/ further indicates that the action is distributive. An event that involves shooting generally implies a repeated action on the part of both participants.

3.2.3 Suppletion and Reciprocal Marking

There is an interesting pattern of verbal suppletion in Northern Paiute that may possibly bear on semantic transitivity as it relates to the reciprocal. Recall that there are many suppletive verbs that reflect the number of the absolutive

argument. That is, they are sensitive to the subject of intransitive verbs and the object of transitives. Note:

- 115) o?o su naatsi wini - na
DEM NOM boy stand.SG-PTC

'the boy is standing out there'

- 116) o?o waha na?atsi kono - na
DEM two boys stand.DL-PTC

'two boys are standing out there'

- 117) ni ka tihikya patsa - u
I ACC deer kill.SG-PNC

'I killed the deer'

- 118) ni iwa?yu tihikya koi - hu
I many deer kill.PL-PNC

'I killed many deer'

Recall, too, that in the case of certain aspectual markers derived from suppletive verbs (most notably the continuative (CONT) aspect discussed in 1.4 above), the suppletive pattern is maintained. So, we have, potentially, two morphemes that can reflect the plurality or singularity of the absolutive argument--the verb stem and the aspectual suffix.

Note what occurs in the following examples of the reciprocal marked with /na-/:

- 119) mi naana na - do - pakida - wini
PL men MM-IP/ -hit -CONT.SG
fist

'those men are boxing (ea.other)' (2:41)

120) mi waha?yu na?atsi na - koi - wini
 PL two.PRED boy MM-kill.PL-CONT.SG

'those two boys are fighting' (2:40)

Recall example 111), where the suppletion of the main verb indicates plural objects, since in a reciprocal situation both participants are also endpoints. In 119), however, we would expect the aspectual marking to agree with the plurality of the subject, since in a reciprocal situation both participants are also initiators. Oddly, this is not the case, however. In 120), there is actually conflict for number within the verbal word. In it, the transitive verb stem reflects plural objects / endpoints, whereas the aspect-marking reflects a singular subject / initiator.³²

If we accept that reciprocals, like reflexives, are associated more with the transitive end of the scale proposed by Kemmer (1993), and that transitivity has more to do with objects than with subjects, then perhaps an explanation for this conflict in number lies there.

Recall examples 26) and 27) in section 1.4.1 above. In those examples (as well as 32) and 33)), the aspectual marking showed suppletion for number of the subject of the main verb. The question remains: why does the aspectual suffix /-wini/

³²While we cannot definitively exclude the possibility that this form represents sporadic regularization on the part of my single, elderly consultant, this datum, as part of my corpus, merits an explanation on its own terms.

reflect singularity of the subject, since the semantics of reciprocity would indicate that both participants should also fulfill this grammatical role? Perhaps the question could be partly answered by our assessment of the reciprocal event. The examples above may illustrate that the language does not recognize the participants in a reciprocal event syntactically as subjects, even though our semantic assessment is one of co-referentiality of initiators and endpoints. Indeed, the quantifier 'two' in 120) is in an objective / predicate form, as opposed to the unmarked subjective form in 116). Without more data, however, the issue cannot be resolved and remains a problem for future study.

3.2.4 Passive Voice Domain

There are two key voice alternations that are marked morphologically on the Northern Paiute verb--the passive and the antipassive. They are, as we shall see, complementary. The passive voice domain is multi-functional (Jespersen in Givón 1990).³³ I will not, however, attempt to explore the various functions of the passive in detail here, however.

Note examples like the following of the use of the middle marker /na-/ to form passives in Northern Paiute:

³³See esp. Langacker and Munro (1975) for a detailed account of the characteristics of the passive.

- 121) osu i = buuki tsa - kibu?i - u
 that.one my=book IP/-tear -PNC
 grasp

'he's the one (who) tore my book' (5:54)

- 122) i = gwassi na - dza - kibu?i piga?yu
 my=shirt MM-IP/-tear Aux.PERF
 grasp

'my shirt has been torn' (5:54)

Although these are IP-derived verb stems, we see that the middle marking treats them as it would any other transitive stem. The underlying subject is fully unspecified and the object is topicalized.

The degree to which the underlying object takes on the case-marking reserved for subjects differs across languages. Givón (1981) refers to this as the distinction between promotional and non-promotional passive types. In general, passives in Northern Paiute are non-promotional, that is, object of active constructions retain their object case-marking as topic of passives. Note that the object is not promoted and retains its status as a non-subject proclitic in 124):

- 123) kai himma tidiha - pana
 NEG something steal-PROHIB

'don't steal anything!' (1:43)

- 124) yaisi o = na - didiha - ku
 Then 3=MM-steal-?APL?

'then they were stolen;' (WM:188:3)

Note the following, actually part of the same utterance, in which the object of 'steal' does undergo topicalization via deletion:

125) otibitsi na - didihaku
indeed MM-steal

'indeed (they) were stolen' (WM:188:3)

Zero anaphora is generally a characteristic of subjects (cf. Givón, 1994). These examples simply illustrate that promotion and topicalization are to some extent distinct processes. It appears that even though Northern Paiute has a non-promotional passive, it can still topicalize its non-promoted argument.

3.2.5 Impersonal Constructions

Occasionally, it is difficult to establish whether or not the middle marker in Northern Paiute is working as a reflexive, or as some kind of passive. This is especially true in the case of impersonal constructions, which Givón (1990) cites as contributing to the rise of certain types of passive constructions. They are intermediate between reflexives and passives.

Consider first, the following examples:

126) tinikyui
'teach'

127) na - tinikyui
MM-teach

'study / learn' (2:36)

128) mi^{fi} - pi - na na - na - tinitui [tinikyui]³⁴
say-BE-PTC RE -MM -teach

'so are the stories. .' (WM:190:37)

These examples illustrate 'learn' as being derived from 'teach' in a relationship like 'teach oneself.' However, the relationship could as easily be one whose translational equivalent might be something like 'be taught.' The last example is increasingly puzzling in that there is reduplication of the middle marker (MM) and no syntactic arguments. The expression is probably highly formulaic. 'Story' would, under normal circumstances, need to be nominalized. I interpret the example as an impersonal construction, where the subject is low in thematic content (Givón, 1990). Examples 126) - 128) provide a possible synchronic illustration of the historical extension of the reflexive into the domain of the passive.

3.3 Functional Domain of the Antipassive

In this section, we will look at another device for detransitivization, namely, the antipassive. A pragmatic function of the antipassive is to "render normal objects / endpoints pragmatically optional" (Croft, 1991:259). The

³⁴The differences here are dialectal. /tinitui/ represents the Burns dialect, whereas /tinikyui/ is Yahooskin.

antipassive, considered as a voice type, has also been widely correlated with very high topicality of the subject / initiator.³⁵

Although most often associated with ergative languages as an analog to the passive voice in nominative languages (see esp. Jacobsen, 1985), antipassive patterns occur in non-ergative languages as well. Insofar as it is important to our discussion of valence-altering morphology, the effect of anti-passivization on transitivity is that it construes transitive events as intransitive by suppressing the object / endpoint. As Croft (1991) and others have noted, this has the effect of focusing attention on the action itself, as opposed to the endpoint of that action.

3.3.1 De-transitivity

The antipassive is also relevant to nominative languages in that these languages may show patterns of detransitivization that accompany the suppression or deletion of the patient / object in a transitive event.

One of these patterns is noun-incorporation. Noun-incorporation is well-attested in the languages of the Americas (see studies ranging from Sapir 1911 to Mithun 1984). In it, the nominal generally corresponding to the object relation is 'incorporated' into the verbal word. The incorporated noun is

³⁵See Givón (1990) for examples and discussion from a variety of different languages.

most often indefinite and non-referring (Givón 1990). An example in English is the clause 'he is deer-hunting,' where the object of the verb 'hunt' is indefinite and non-referring ('deer' cannot refer to any particular deer), where the usual verb-object order of the verb phrase is reversed, and where the verb phrase has a single intonational contour (like a single word). The phrase is less transitive than 'he hunts deer.' Focus is on the action itself, as opposed to where the action is directed. Noun-incorporation, then, displays an antipassive pattern of detransitivization by incorporating the argument that makes the clause transitive.

Another type of antipassive pattern occurs when the object of a normally transitive verb is left completely unspecified, as in 'he hunts.' Again, focus is on the action, for the endpoint is thematically irrelevant. In English, such a pattern is unmarked morphologically. That is, the verb requires no special marking to distinguish it from its transitive counterpart. As we see in the following examples, transitive verbs in Northern Paiute must be morphologically marked with the prefix /ti-/ when the object is left unspecified.³⁶ Note the following pairs:

- | | | |
|---------|-------|------------------------------|
| 129) da | sakwa | tihikya - huawai - gya - kwi |
| we.DL | MOD | deer-hunt-TRNSL-FUT |

'Let's go deer-hunting!' (YWP:37)

³⁶See Langacker (1976) for a detailed discussion of this phenomenon in Uto-Aztecan. Also, Anderson, Anderson, and Langacker (1975) analyze this morpheme in Northern Paiute using Langacker's formula for non-distinct arguments.

- 130) tuʔi ti - huawai - nimi ni
try APS-hunt-RNDM.sg I

'I was hunting (unsuccessfully)' (1:43)

- 131) ni kai piza ti - gu - hani
I NEG good APS-IP/-prepare
heat

'I can't cook well' (2:49)

- 132) ni kai piza ka kidi ku - hani
I NEG good ACC groundhog IP/-prepare
heat

'I can't cook groundhog well' (2:49)

- 133) isu wihi piza ti - tsi - kya
this one knife good APS-IP/-cut
sharp

'this knife cuts well' (2:36)

In examples 129) and 130) we see a contrast between actual noun-incorporation and the use of the antipassive prefix. Where the object of the active / transitive verb is pragmatically optional, the /ti-/ marker appears. In 131) and 132) we see the pattern as it occurs with stems that have been derived via an instrumental prefix. From the point of view of the inherent transitivity of the stem, the prefix operates on a syntactic level (i.e. as part of the THEME), grammatically altering the argument structure of the verb. Finally, 133) illustrates how it is possible to have an instrumental subject with the antipassive.

Because their effect on transitivity is to delete an object relation, Croft (1991) claims that antipassives are really the functional inverse of applicatives, whose effect is often to add

an object. We will see that the applicative in Northern Paiute is not quite so straightforward, however, when we turn to a discussion them in section 3.4. First, we will look briefly at a few interesting lexical patterns involving the antipassive prefix and various verb stems.

3.3.2 Lexicalizations

The outcome of the antipassive pattern I have discussed thus far is sometimes unexpected. Most are still detransitivized versions of their transitive counterparts, but the meaning of the derived THEME is somewhat idiosyncratic. Note the following examples:

- | | | | |
|-------|--------------|----|--------------------------|
| 134a) | punni | b) | ti - punni
APS-see |
| | 'see' | | 'wake up' |
| 135a) | hani | b) | ti - hani
APS-prepare |
| | 'do/prepare' | | 'skin an animal' |

Example 135b) may be intransitive or transitive, in the latter case where the type of animal is fully specified. The semantic relationship between the transitive verb and its antipassive counterpart is opaque. In still other cases, the antipassive prefix is fully lexicalized. Note the next pair, where there appears to be a morphological alternation, but no independent root:

We will turn now to one final verbal morpheme in Northern Paiute which is used to alter valence. The applicative suffix, however, increases the valence by making a syntactic addition to the argument structure.

3.4 Functional Domain of the Applicative

In general, morphemes labelled applicative signal an increase in the valence of the verb via the addition of a syntactic argument. It is, in contrast to the morphology discussed in the rest of this chapter, a process of transitivity. The argument which is added is usually either a causal agent which brings about an intransitive event, making it syntactically transitive (similar to the syntactic effect of instrumental prefixes in some cases), or the argument may be a secondary or (traditionally) an indirect object whose semantic role is that of a dative or benefactive, taking a transitive event and making it syntactically ditransitive.

In Northern Paiute, the applicative suffix /-ki/ follows the verb stem directly, playing the role of causative in the case of intransitive stems and benefactive in the case of transitive stems. Dayley (1989) has described the same situation clearly for Tümpisa Shoshone. He does admit that there are exceptions to predicting the role of the applied argument based purely on the inherent transitivity of the verb stem, however.

In this section, we will see the range of arguments associated with the applicative. We will look at how it aligns

with the inherent transitivity of the verb, how it interacts with other valence-altering morphemes, and how its causative function differs from that of the instrumental prefix /ma-/.

3.4.1 Transitivity Effects

The applicative suffix in Northern Paiute renders intransitive verb stems transitive by adding a causal agent:

- 140) su puusiti piza wini - na
 NOM post well stand-SUB

'the post is standing straight' (5:61)

- 141) ka puusiti o?o anadotawaaka - kwaisu wini - ki
 ACC post DIST hole-LOC stand-APL

'stand that post up in the hole' (5:60)

- 142) su naatsi watsi
 NOM boy hide

'the boy is hiding'

- 143) i = dzati?a ni watsi - ki - si
 my = hat I hide-APL-SEQ

'I lost my hat . . .' (4:90)

In this sense, it behaves like a causative morpheme. When the verb stem is inherently transitive to begin with, however, the syntactic argument added by the applicative is generally a benefactive, not a causal agent. Note the following:

- 144) o = dapuku
 3=braid
 'braid it' (7:29)

- 145) i = tsopihi ii i - tapuku - ?i - ki
 my=hair you 1-braid- ?? -APL

'you braided my hair for me' (7:30)

- 146) o = mabutu?i
 3=roll.cigarette

'roll it (cigarette)' (7:31)

- 147) i = [di]mabutu?i - ki
 1=roll.cigarette-APL

'roll (it) for me' (7:33)

Examples 144) and 145) illustrate the syntactic derivation of a ditransitive verb. Note that the argument corresponding to the role of benefactive appears as proclitic on the verb.

Examples 146) and 147) illustrate how, in case of a conflict, the benefactive / object has greater accessibility to the proclitic slot next to the verb than does the patient / object.

3.4.2 Interaction with Voice Marking

The following examples establish the applicative as indicating the addition of a benefactive participant to the argument structure. The middle marker in turn indicates the detransitivized quality of the event, that the agent is unspecified.

- 148) o = dapuku
 3=braid
 'braid it' (7:29)

- 149) i = tsopihi na - dapuku - ?i
 my=hair MM-braid-??

'my hair is braided' (7:29)

- 150) i = tsopihi ii (i -) tapuku - ?i - ki
 my=hair you (1-)braid -?? -APL

'you braided my hair (for me)' (7:30)

- 151) ni sakwa i = tsopihi na - dapuku - ?i - ki - ga
 I MOD my=hair MM-braid-??-APL-TRNSL

'I oughta go get my hair braided (i.e. by someone)' (7:31)

These examples provide an illustration of how the argument structure of the Northern Paiute verb is manipulated syntactically with the valence-altering morphology. In 148), we note that 'braid' is a transitive verb stem. In 149), we note that in the passive, the semantic agent is suppressed. In 150), we see the addition of a semantic benefactive argument, optionally coded by a pronominal proclitic, thus increasing the syntactic transitivity of the stem. Finally, in 151), we see how the agent suppressing /na-/ passive works independently of the transitivizing effect of the /-ki/ applicative. That is, the syntactic effects of the morphology work together to create the THEME portion of the verbal structure, but have neatly complementary functions. They affect their own arguments.

3.4.3 Direct versus Indirect Causation

Recall that one of the instrumental prefixes in particular, the historically older and highly productive /ma-/ meaning 'with

the hand,' may also transitivize stems like a causative. Note the following:

- 152) osu siʔaʔi - kwini
 that.one scare-CONT.sg

'S/he is scared' (5:80)

- 153) o = ma - ziʔa - u
 3 = IP/-scare-PNC
 hand

'(S/he) frightened s.o.(caused X to be scared)' (5:80)

Now compare the level of causation between it and the applicative suffix in the following:

- 154) osu ti = tuaʔa ma - ka
 that.one Poss=son IP/-eat

'he's feeding his little boy' (1:19)

- 155) osu ti = tuaʔa ti - ka - ki
 that.one Poss=son APS-eat-APL

'he's making his little boy eat' (1:19)

It appears from these examples that the difference between /ma-/ and /-ki/ acting as causatives is also the difference between direct and indirect causation. In a more direct type of causation, there is little or no resistance on the part of the causee. Indirect causation, on the other hand, implies that the causee is more volitional and more capable of resistance (cf. Givón, 1984). That the applicative suffix should come to code causation of the less direct type may therefore come as no surprise. Its relation is most generally with animate,

particularly human, arguments that can be semantically benefactive. Humans are more capable of resistance to causal forces, and so the causation is more indirect. As in the case of 'feed' above, the causee is much more patient-like (likely an infant) and incapable of resistance, or the situation has nothing at all to do with resistance, thereby making it a more prototypical transitive event.

3.5 Interaction of Stem-Formation and Valence-Altering Morphology

In this final section, we will look at the interactions that take place between verb stems that are derived via instrumental prefixes (IP) and the valence-altering morphology (VAM). One purpose of this section is to see how derived stems behave as any other stem with respect to the valence-altering functions of the morphology described in this chapter. We will explore examples of complementary IP/VAM distribution versus composite IP + VAM in the construction of the THEME portion of the Northern Paiute verb.

- 156) osu siʔaʔi - kwini
 that.one scare-CONT.SG

'S/he is scared' (5:80)

- 157) o = ma - ziʔa - u
 3 = IP/-scare-PNC
 hand

'(S/he) frightened s.o.(caused X to be scared)' (5:80)

158) na - ma - ziʔa - hu
MM-IP/-scare-PNC

'(S/he) was startled' (5:80)

In 158), there is some 'frightening' agent implied, whereas 156) is simply describing a state of fear. The IP in 157) acts as a causative morpheme, and it is from this derived transitive stem that the MM suppresses the causing agent.

As one final example, consider the following (from example 1)):

159) na - ti - gu - hani - ki - wini - di
MM-APS-IP/-do-APL-CONT.SG-ASP
heat

'(he) is cooking for himself' (SL:39)

As this example illustrates, it is possible to have all the elements of the verbal STEM and THEME working together in a straightforward way. Although examples such as this are rare and seemingly complex, its derivation is fairly simple. The instrumental prefix plus the root creates a transitive STEM. The antipassive prefix suppresses the semantic patient. The applicative suffix adds a benefactive argument. Finally, the middle marker behaves like a reflexive in this example to indicate correferentiality of the semantic agent and the benefactive.

ABBREVIATIONS

1	1st person proclitic
2	2nd person proclitic
3	3rd person proclitic
4	4th person (obviative)
ACC	accusative/direct object
APL	applicative
APS	antipassive
ASP	aspectual
AUX	auxiliary
CISL	cislocative
COM	committative
COMPL	completive
CONT	continuative
DEM	demonstrative
DIR	directional
DL	dual
DUR	durative
FUT	future
HAB	habitual
INCL	inclusive
INST	instrumental
INT	intensifier
IP/	instrumental prefix
IRR	irrealis
LOC	locative
MM	middle marker
MOD	modality
NEG	negation
NMR	nominalizer
NOM	nominative/subject
PERF	perfective
PL	plural
PNC	punctual
PRED	predicative (usu. adjectival)
PROHIB	prohibitive
PTCP	participle
PURP	purposive
Q	question marker
RE	reduplication (distributive)
REFL	reflexive/ reciprocal
REPET	repetitive
RNDM	random motion
SEQ	sequential
SG	singular
SIM	simultaneous
SUB	subordinating
SUBJ	subjunctive
TRNSL	translocative
UNR	unrealized/ prohibitive

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