

Study of the Chevak Dialect of Central Yup'ik Eskimo

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DISSERTATION

Submitted in partial satisfaction of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

Linguistics

in the

GRADUATE DIVISION

OF THE

UNIVERSITY OF CALIFORNIA, BERKELEY

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DOCTORAL DEGREE CONFERRED

JUNE 13, 1981

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## ACKNOWLEDGMENTS

A great many people have made substantial general and particular contributions to many phases of the present investigation. I would like here to express my deep gratitude to them.

Data for this study were gathered during two fieldtrips to Chevak, Alaska from October 5 to December 7, 1978, and from January 29 to April 1, 1980. In Chevak, first and foremost I wish to thank Leo Moses, who served as principal informant during both of those fieldtrips. He speaks in both his own language and in English with uncommon poetic eloquence; he is able to translate quickly in both directions while maintaining accuracy both in word and in spirit; and he is a keen observer of the language around him, with a superb memory. He worked with me untiringly, always with high standards of accuracy, with great patience for my innumerable questions, and with many thoughtful comments, elaborations, and exemplifications of matters under discussion. I am grateful too for the kind hospitality that he and his family extended to me as we worked in their home. I wish to thank Mary Moses and Cecilia Martz, both of Chevak, each of whom also spent much time providing me with excellent information on their language. Finally, I thank the others in Chevak who worked with me on their language: Xavier Atcherian, Joseph Friday, Peter Imgalrea, John Moses, Gregory Teve, and Tony Umugak.

I am thankful too to those who allowed themselves to be recorded telling qulirat (legends) and qanemcit (stories): Mary Chimiralrea, Joseph Friday, Tom Imgalrea, Rose Imgalrea, Leo Moses, Thomas Moses, Jacob Nash, and Gregory Teve. Rosemary Sylvester kindly provided me with a tape recording of her late mother, Mary Kokrak, telling a most excellent quliraq. I also thank Joseph Friday and the other qaygimiut

(inhabitants of the communal men's house) for letting me record on tape the proceedings in Chevak's qaygiq (communal men's house) for two afternoons. (For a list of texts by speaker, see §0, table 0-1.)

The Imgalrea family were my kind hosts during both my stays in Chevak, and to them I am most grateful. I also thank Harold Chanirak, with whom I stayed for part of my 1978 fieldtrip. I am grateful to the Chevak City Council for their permission to conduct language research in their village, and to Frank Chayalkun, Chevak's City Administrator, for his help in making arrangements for my first fieldtrip, and for the many kindnesses he extended to me while in Chevak. Finally, I thank Joseph Friday, the head of the Chevak Traditional Council and village elder, for his kindness and hospitality.

My two fieldtrips to Chevak were possible largely through the unstinting efforts of the University of Alaska's Alaska Native Language Center (ANLC) in Fairbanks, and in particular to its coordinator Irene Reed, Michael Krauss, and Steven Jacobson. ANLC was my host in Fairbanks for one month in September, 1978, and one week in January, 1980, before each of my fieldtrips to Chevak. During that time I benefited from much consultation with ANLC's Yupik scholars Irene Reed, Michael Krauss, Jeff Leer, and especially Steven Jacobson, who was most generous in sharing with me his research materials, his manuscripts, and his time. I had the opportunity to join Jacobson during my September 1978 stay in daily work with Monica Smith, formerly of Chevak; both of them showed great patience as I got the sound of the language into my ears. While at ANLC in September, 1978, Irene Reed, who has long experience in the Central Yup'ik speaking parts of Alaska, personally made arrangements for my visit in Chevak; beyond that, she accompanied me there,

and introduced me to people in the village. I would like to thank her for that great kindness. During both visits to ANLC I was advised in many important general aspects of field research by Michael Krauss, Lawrence Kaplan, James Kari, and Ronald Scollon. In particular, Michael Krauss's strong vision of both the scholarly and the social goals of present-day Eskimo linguistic research has provided constant inspiration, and has, along with his thoughtful advice, helped me in crucial ways in formulating the directions of my research.

I would like to thank Chase Hensell and Phyllis Morrow of the Yup'ik Language Center (YLC) at Kuskokwim Community College (University of Alaska) in Bethel, Alaska, for their hospitality to me in Bethel before and after my 1980 stay in Chevak. I benefited much from discussion with them, and with Osahito Miyaoka (also of Otaru University of Commerce, Japan) and Elsie Mather at YLC.

This study owes a great intellectual debt to the group of University of Alaska scholars at what is now the Alaska Native Language Center who, from 1961 until the present, have studied, documented, and written on Central Yup'ik. Among this group are (or have been) Michael Krauss, Irene Reed, Martha Teeluk, Paschal Afcan, and Steven Jacobson, as well as their associate Osahito Miyaoka of the Otaru University of Commerce and YLC (see §0.3 for a brief survey of that work, with references). The reader may best realize the extent of this debt by comparing the basic analysis on which the present study is based with that of the two grammars (Miyaoka, 1975, Reed et al., 1977) and the dictionary (Jacobson, forthcoming) produced by members of that group. I have also gained much from earlier scholars of Central Yup'ik: Francis Barnum, John Hinz, and L. L. Hammerich. This study also owes a great deal to the pioneering work done



in Eskimo linguistics with Greenlandic, the first Eskimo language to be studied scientifically. Particularly illuminating to me has been the work of Samuel Kleinschmidt more than a century ago, L. L. Hammerich, and Knut Bergsland (see again §0.3). Finally, I owe an intellectual debt to my first teacher in Eskimo linguistics, Jerrold Sadock of the University of Chicago.

I thank my dissertation committee for their patience and guidance during the writing of this work: Mary R. Haas (Chair), John Gumperz, and James Matisoff of the University of California at Berkeley, and Michael Krauss of the University of Alaska at Fairbanks. Jerrold Sadock of the University of Chicago kindly commented on portions of the penultimate draft. I especially wish to thank Steven Jacobson for giving that draft the kind of critical reading that can only be done by someone intimately acquainted with Central Yup'ik grammar and lexicon.

During the many months of dissertation writing, Ange<sup>1</sup>a Chinn Woodbury, my wife, has been kind in countless ways, not least among them in helping to type the final draft.

I am most grateful for the generous support that my fieldwork has been given by the Melville and Elizabeth Jacobs Research Fund of the Whatcom Museum Foundation, Bellingham, Washington (1978), the Urgent Anthropology Small Grants Program, Center for the Study of Man, Smithsonian Institution (1978), the Phillips Fund of the American Philosophical Society Library (1978, 1980), and the National Science Foundation (1980).

I alone am to be held accountable for the data presented and the claims made in this study, and for all errors of fact and interpretation which may exist herein.

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## ABBREVIATIONS AND CONVENTIONS

Abbreviations

A	transitive subject
AB	absolute (as case ending)
adj	adjective (as syntactic constituent)
adj-V	NV postbase deriving verb bases from noun bases which (can) occur as an adj constituent
ap	generalized adjective/predication (as syntactic constituent)
AP0	appositional mood
C	consonant [in phonological representations]
CD0	conditional mood
CQ0	consequential mood
CS0	concessive mood
CT0	contingent mood
CY	Central Yup'ik language
C10	contemporative 1 mood
C20	contemporative 2 mood
D	demonstrative (as base class)
d	demonstrative pronoun (as syntactic constituent) [used in syntactic representations]
d	dual number [used in morpheme glosses]
DA	demonstrative adverb (as base class)
da	demonstrative adverb (as syntactic constituent)
E	extended (demonstrative base category)
e	elicited utterance [used in example citations]
EA	extended demonstrative adverb base
EQ	equalis (as case ending)

eq	equalis (as syntactic constituent)
F <sub>0</sub>	voiceless fricative
F <sub>v</sub>	voiced fricative
GcY	General Central Yup'ik dialect
HBC	Hooper Bay-Chevak dialect
IDP	independent moods
IND	indicative mood
INP	intransitive participle mood
INT	interrogative mood
IR	independent relative (as base class)
LC	localis (as case ending)
lc	localis (as syntactic constituent)
MD	modalis (as case ending)
md	modalis (as syntactic relation)
N	noun (as base class)
N <sub>0</sub>	voiceless nasal [in phonological representations]
N <sub>v</sub>	voiced nasal [in phonological representations]
n	noun (phrase) [as syntactic constituent]
NM	numeral (as base class)
NN	denominal nominalizing (of postbases)
NS	Norton Sound dialect
NUN	Nunivak Island dialect
NV	denominal verbalizing (of postbases)
n-V	NV postbase deriving verb bases from noun bases which (can) occur as n constituent
0	transitive object
0	obscured (demonstrative base category) [used in morpheme

	glosses]
OA	obscured demonstrative base
OB	oblique (as class of case endings)
ob	oblique (as class of syntactic constituents)
OBM	oblique moods
ob-V	NV postbase deriving verb bases which (can) occur as an (inflected or uninflected) ob constituent
OPT	optative mood
p	plural number
pd	predication (as syntactic constituent)
pd-V	NV postbase deriving verb bases from independent predications (esp. independent particles)
P(n)	phonological rule number 'n'
POS	possessor
POSM//O	(third person) possessum / object pronominal suffix set
POSR/S/A	possessor / subject pronominal suffix set
PRO	precessive mood
PRT	participial mood
PS	positional (as base class)
ps	positional (as syntactic constituent)
PT	particle
Q	quantifier (as base class)
R	restricted (demonstrative base category)
RA	restricted demonstrative adverb base
RL	relative (as case ending)
r1	relative (as syntactic constituent)
S	intransitive subject

S	intransitive subject
S	stop consonant [in phonological representations]
s	singular number
S/A	functional grouping of intransitive and transitive subject
S/O	functional grouping of intransitive subject and transitive object; intransitive subject / transitive object pronominal suffix set
SP	specifier (as base class)
TM	terminalis (as case ending)
tm	terminalis (as syntactic constituent)
TM1	terminalis 1 (as case ending)
TM2	terminalis 2 (as case ending)
TRP	transitive participle mood
V	vowel [in phonological representations]
∇	prime vowel
V	verb base
V <sub>i</sub>	exclusively intransitive verb base
V <sub>sa</sub>	S/A core verb base
V <sub>so</sub>	S/O core verb base
V <sub>t</sub>	exclusively transitive verb base
VL	vialis (as case ending)
vl	vialis (as syntactic constituent)
VN	deverbal nominalizing postbase
vol	volunteered utterance [used in example citations]
VV	deverbal verbalizing postbase
1	first person
1-NEU	neutral first person pronominal suffix set

2	second person
3	third person
3R	third person reflexive

### Conventions

Person and number configurations. Person + number, e.g., 3s 'third person singular'; 1d 'first person dual'; 3Rx 'third person reflexive, all numbers'; Xp 'plural, all persons'.

Noun endings. Unpossessed: case + number, e.g., Tmp 'terminalis plural', ABs 'absolute singular', VLx 'vialis, all numbers'. Possessed: case (person & number of possessor + number of possessum), e.g., RL(3s-d) 'relative case, third person singular possessor of a dual possessum'; MD(3Rp-s/p) 'modalis case, third person reflexive plural possessor of a singular or plural possessum'.

Verb endings. Intransitive: mood (person & number of S), e.g., IND(3p) 'indicative mood, third person plural S'; INP(1s) 'intransitive participle mood, first person singular S'; CSO(3Rd) 'concessive mood, third person reflexive dual S'. Transitive: mood (person & number of A + person & number of O), e.g., OPT(3s-1p) 'optative mood, third person singular A, first person plural O'; CQO(1p-2p) 'consequential mood, first person plural A, second person plural O'.

Apposition.  $X \widehat{\ } Y$  = 'X stands to the left of Y in apposition to it'.

Dependence.  $X \rightarrow Y$  = 'X is dependent on Y'.

Citation of examples. Examples are cited in the following format:

(Chapter number . example number)	Orthographic representation segmentation word level glosses [with portion glossing the base underlined] sentence gloss (source of example)
-----------------------------------	--

Illustration of format:

(5.12) qakemna       uksuryugluni  
 open:0-ABs   uksur\*#yug+Ø-APO(3Rs)  
 out there    it was the approach of winter  
 winter was approaching outside there (3:38)

This example is number 12 of §5. Qakemna uksuryugluni is the orthographic representation of the utterance. Open:0-ABs uksur\*#yug+Ø-APO(3Rs) is its morphological segmentation: note that demonstrative bases (qakem- 'open:0') and inflectional endings (+na ABs, #luni APO(3Rs)) are given with category designations (see §§2, 3, 5), while postbases (\*yug- 'the approach of N', +Ø- 'for N (time) to occur') and other bases (uksur- 'winter') are cited in morphophonemic representation. 'Out there' and 'it was the approach of winter' are word level glosses; 'winter' is underlined because it translates the base uksur- of uksuryugluni. (When the base is inflected directly, with no intervening postbases, its gloss is not underlined since it can be inferred). 'Winter was approaching outside there' is the sentence gloss for the utterance'. '3:38' (text 3, sentence 38) is the source of the example. See §0.6 for further discussion of example sources, and how they are cited.

## 0. Introduction

The purpose of this study is (1) to provide documentation and description of the Hooper Bay-Chevak dialect of Central Yup'ik Eskimo spoken in Chevak, Alaska, pointing out differences between it and other Central Yup'ik dialects, (2) to restate and in places reanalyze aspects of the phonology, morphology, and syntax of Central Yup'ik as it has been formulated for the General Central Yup'ik dialects, and (3) to present a new systematization of what may be called the internal syntax of Central Yup'ik, with implications for the analysis of other Eskimo languages. Its larger context is that of a linguistic community study of Chevak being undertaken by the author which seeks to describe grammar along with language use there.

### 0.1. Chevak, Alaska.

Chevak (Central Yup'ik: Cev'aq) is a village of 466 (1980 U.S. Census), all but around eighteen of whom are Yup'ik Eskimos. It is located at 61°16'40" N, 165°35' W on the banks of the Ningliqvak River (Nengliqvak) thirteen miles inland from its mouth at Hooper Bay (Kangirruk), which in turn opens into the Bering Sea (Imarpik) near the middle of the long stretch of Southwest Alaskan coastline between the mouths of the Yukon River (Kuigpak) to the north, and the Kuskokwim River (Kusquvak) to the south. The present village site was settled in the mid-1950's after an earlier site five miles to the south, now called Old Chevak (Cev'alleg), was inundated. Only a few years before that, Kashunuk (Qissunamiut or Nunaruluut), a winter village site of long standing ten miles south of modern Chevak near the mouth of the Kashunuk River (Qissunaq), was abandoned for the same reason. By the late 1940's,



Kashunuk had taken in the populations of a number of smaller villages abandoned in the 20's, 30's, and early 40's because it had become the focal point in the area for the activities of Roman Catholic Church officials and of school officials. These small villages, located near the mouths of the Kashunuk, Aphrewn (Aprun), Manokinak (Manuuqin(r)aq), and Azun (Ayuun) Rivers, including Ituremiut, Qangllumiut, Qiqnermiut, Uqalikcirmiut, and no doubt others. Many older Chevakers cite one of these, rather than Kashunuk, as their winter village in childhood. Less recent villages in that area from which Chevakers' ancestors are said to come are Englulluk, Englullugartalegmiut, Kapuutlermiut, and Qavinarmiut (= Nunallret). Modern Chevak's nearest neighbor is the village of Hooper Bay (Naparyarmiut), population 624, seventeen miles to the west. It is inhabited by the only other modern speakers of the Hooper Bay-Chevak dialect. Chevak's next closest neighbors are Scammon Bay (Marayaarmiut), population 251, twenty-two miles to the north on the other side of the Askinok Mountains, and Newtok (Niugtaq), population 125, fifty-two miles to the southeast. In these villages, the General Central Yup'ik dialects respectively of the Yukon and of Nelson Island are spoken, although with some unique or unexpected features in each (author's fieldnotes). Bethel (Mamterillermiut), population 3576, 145 miles southeast at the mouth of the Kuskokwim, is an important health care, commercial, and transportation center for Chevakers.

Modern Chevak has a Roman Catholic church with a Jesuit priest in residence year-round, a modern school building with a staff of around fourteen teachers and administrators which was run by the Bureau of Indian Affairs until 1980 when it came under local control, a clinic with several full-time health aides, a U.S. Post Office, a City Office

building, several stores, including a general store owned by the Chevak Company Corporation in which all villagers are shareholders, an airport receiving around ten scheduled passenger, mail and freight flights weekly, a qaygiq (semi-subterranean wood and sod communal men's house), and a community recreation hall. Although Chevak now has a predominantly cash economy, hunting, gathering, and traditional exchange customs are still of major economic significance, and are of great cultural importance as well; further, of course, they provide a crucial source of nutrition.

At this time, the principal language of Chevak is a subdialect of the Hooper Bay-Chevak dialect of Central Yup'ik Eskimo, with a variety of American English rapidly advancing as a second language. All native persons in the village speak Central Yup'ik, with the exception of several natives of predominantly English-speaking villages along the Yukon and Kuskokwim Rivers who are married to native Chevakers. The oldest fully bilingual person in Chevak is Leo Moses, born in 1933; there are few if any persons born after 1945 who do not speak English. Except among those born around 1960, Central Yup'ik is used almost exclusively between peers. The situation between members of different generations is more sociologically complex, with English occurring far more often. Impressionistically, one hears about as much Central Yup'ik as English from those born after 1960, although to be sure there are some ten-year-olds who choose to conduct nearly all of their affairs outside of school in Central Yup'ik, and some nineteen-year-olds who prefer to use English whenever possible. Due to its geographical isolation, pressures to replace the native language with English reached Chevak much later than they did much of the rest of the Central Yup'ik speaking region; this can be seen

with graphic clarity from Michael Krauss's Native Peoples and Languages of Alaska map (Krauss, 1974), where villages are indicated according to whether most, half, or a few of the children speak the native language. Fully Yup'ik-speaking villages like Chevak can make a crucial contribution to the maintenance of the Central Yup'ik language in the years to come by protecting what they have.

0.2. The position of the Chevak dialect of Central Yup'ik in the Eskimo-Aleut linguistic stock.

The following taxonomic outline of the Eskimo-Aleut linguistic stock is based on Krauss's (1979) summary of recent work on Eskimo-Aleut, building on his taxonomy of Yupik there (1979:814). I have made revisions in accordance with Jacobson 1980a, 1980c, within Central Yup'ik, and with my own findings within Hooper-Bay-Chevak, as discussed below. Square brackets enclose further geographical information. The terms 'dialect' and 'language' are used based on mutual intelligibility, following Krauss.

#### ESKIMO-ALEUT STOCK

##### I. Aleut family

###### A. Aleut language (two dialects)

[Aleutian Island chain, and west Alaska Peninsula and adjacent islands beginning at the Shumagin Islands]

##### II. Eskimo family

###### A. Yupik branch

###### 1. Alaskan Yupik branch

###### a. Pacific Gulf Yupik language (two dialect groups)

[Alaska Peninsula east of Shumagin Islands to Prince William Sound]

b. Central (Alaskan) Yup'ik

[Southwest Alaska from Egigik on Bristol Bay and inland to Lake Iliamna in the south, to Unalakleet at the base of Norton Sound in the north; villages are located along the coast and on the offshore islands, on the Yukon River to Holy Cross and the Kuskokwim to Stoney River, on some of the smaller rivers, on some of the interfluvial tundra, and in an isolated pocket at Elim and Golovin on Norton Sound's north shore.]

i. General Central Yup'ik dialects (GYC)

(a) Core dialect (Kuskokwim River below Aniak, and Bristol Bay subdialects)

(b) Peripheral dialect (Lake Iliamna, Kuskokwim River above Aniak, and Yukon River subdialects, with the possible exception of those of the Yukon Delta)

(c) Mixed core and peripheral dialect (Nelson Island and Nushagak River subdialects)

ii. Nunivak Island dialect (NUN)

iii. Hooper Bay-Chevak dialect (HBC) (Hooper Bay and Chevak subdialects)

iv. Norton Sound dialect (NS) (Kotlik, and Unaliq [Unalakleet, Golovin, and Elim] subdialects)

2. Siberian Yupik branch

a. Chaplino-Naukanski language

i. Naukanski dialect (language?) [East Cape, Siberia]

ii. Central Siberian Yupik dialect (language?)  
[New Chaplino and modern Sireniki, Siberia, and St. Lawrence Island, Alaska]

b. Sirenikski language (nearly extinct) [Old Sireniki]

B. Inuit branch (dialect chain).

[From Unalakleet north around Alaska, east across Canada to the west and east shores of Hudson Bay, and to coastal Labrador, Baffin Island, and parts of coastal Greenland] (Widely separated dialects are not always mutually intelligible; the language/dialect distinction drawn above is of course less useful in this kind of situation.)

The Eskimo-Aleut relationship was hypothesized as early as 1819 by Rasmus Rask (Thalbitzer, 1921), and was pursued by C. C. Uhlenbeck (Uhlenbeck 1905, 1907) and William Thalbitzer (Thalbitzer, 1921), who later expressed second thoughts (Thalbitzer, 1941). Knut Bergsland offered the first thorough proof of the relationship, especially convincing because it states the correspondences in detail for several distinct and clearly archaic morphological subsystems along with a statement of sound correspondences (Bergsland, 1951); in the same place, Gordon Marsh and Morris Swadesh also assembled Eskimo-Aleut sound correspondences (Marsh and Swadesh, 1951).

Within the Eskimo family, the fact of genetic relation is obvious by inspection; at issue rather is the nature of the correspondences and the internal structure of the family. Uhlenbeck (see references above) and especially L. L. Hammerich (Hammerich, 1936) are responsible for establishing the segmentation of the inflectional endings, and assembling the correct correspondences. This has been the cornerstone of comparative Eskimo.

The first classification of Yupik languages (with particular reference to Alaskan Yupik) was made by L. L. Hammerich (Hammerich, 1958), who made extensive field surveys in Alaska. The taxonomy he gives corresponds in its broad strokes to the taxonomy given above, except (i) the Sireniki language, known largely through G. A. Menovshchikov (Menovshchikov, 1964), is left off, and (ii) the entire Alaskan Yupik branch is divided into three dialects, which he named using the word for 'person' as a shibboleth: Yuk/suk (=Pacific Gulf Yupik language), Yux (=Nunivak Island dialect of Central Yup'ik), and yuk (=the remainder of Central Yup'ik). Among the problems with this classification are its unevenness with respect to mutual intelligibility (as indicated by 'dialect' vs. 'language' in the taxonomy given here), and the inadequacy of the word for 'person' as a shibboleth. For example, it is /Yuk/ in Chevak and /suk/ in some GCY speaking villages on the Yukon River, so that the entire range of initials is found in his yuk group alone, while, as Krauss (1979:817) points out, the word for 'person' in Central Siberian Yupik is /yuuk/, more similar to GCY /yuk/ than is Nunivak /Yux/.

The revisions of Hammerich's view of Alaskan Yupik internal relations presented in the taxonomy above is due to the work of the University of Alaska group now at the Alaska Native Language Center, and are reported

in Krauss 1973 and 1979, Miyaoka 1975, Reed et al. 1977, and for GCY and NS Central Yup'ik internal relations, in Jacobson 1980a and 1980c.

I divide Hooper Bay-Chevak into two subdialects on four separate grounds, as follow:



(1) Occasional lexical differences. E.g., Chevak nanir- Hooper Bay, GCY kenurqutar- 'flashlight'; Chevak taqig-, Hooper Bay, GCY ucug- 'penis'; Chevak, Core GCY igar-, Hooper Bay, Peripheral GCY alngar- 'to write'.

(2) An important lexical exception in Hooper Bay to a phonological dialect feature of HBC and Nunivak. Chevak, Nunivak cug-, Hooper Bay, GCY, NS yug- 'person' (elsewhere, the GCY and NS sequence #yVC becomes #cVC in Hooper Bay as well as Chevak and Nunivak, with the exception that all dialects have yurar- 'to Eskimo dance with #yVC).

(3) A stress difference. Chevak lacks a "retrogressive" stress on short closed syllables preceded by a stressed syllable and followed by a short open syllable, i.e., Chevak lacks a rule stressing the syllable before a syllable which loses stress by stress displacement (P31). This rule is reported for GCY.<sup>1</sup> E.g., Chevak unátartukut, GCY, Hooper Bay unátàrtukut 'we pick berries' (unátartúkut before stress displacement). The retrogressive stress is marked in Hooper

Bay with a falling intonation, but it is not clear to me how it contrasts with syllables which have undergone double vowel compression (P37). (See §1 for discussion of phonological rules.)

(4) Minor phonetic and phonological differences. E.g., the tendency for pitch to remain level or fall on the final stress of a word in Chevak, vs. the tendency for it to rise there in Hooper Bay, thus

Chevak  piqátartuq, Hooper Bay  piqátartuq 'it is about to do it'. As a second example, the reduction of unstressed a to e before =llu 'and', and in the word-final sequence Vrar\*- occurs in Chevak but not in Hooper Bay as Vrreq# (see P25a in §1), thus Chevak kan'e=ll' or kan'a=ll', Hooper Bay kan'a=ll' 'and the one down there'; and, Chevak qantacuarreq, Hooper Bay qantacuarraq 'little plate', from the base qantacuarar\*-.

In this work, I refer to the Chevak subdialect as the Chevak dialect, and reserve Hooper Bay-Chevak dialect for instances where the facts reported have been corroborated by a Hooper Bay speaker. Incidentally, GCY, Hooper Bay Yup'ik 'genuine (-pig-) person (yug-)' is Cup'ik in Chevak, since the base is cug- there. When speaking English, Chevakens use the term Cup'ik at times to refer to the Chevak dialect



of Central Yup'ik, but generally accept Yup'ik as the name for the language. When speaking Yup'ik, forms based on *cug-* or *cup'ig-* are used. (*Yup'ik/Cup'ik* is the absolutive case form of *yup'ig-/cup'ig-*, which in Yup'ik can only refer to a person; the equalis case form *Yup'igtun/Cup'igtun* 'like a Yup'ik' is used in locution such as *Cup'igtun qanertuq* 'he speaks like a Yup'ik', i.e., 'he speaks Yup'ik.' Technically, then, *Yup'ik* as a language name is an interlinguistic back formation.)

0.3. Previous work on Eskimo grammar, with special reference to Central Yup'ik.

The literature on Eskimo languages is by now very large; for a far more complete picture than can be given here, the reader is referred to Krauss' excellent bibliography and historiography of the field (Krauss 1973), an addendum to which has recently been published covering the intervening six years (Krauss 1979). I would like to discuss here that work in the field which is most significant for the present study. Further discussion of literature as it touches on more particular topics will be found at the beginnings of §§1-5, and in §6.

The Inuit dialects of West Greenland represented the first Eskimo language--and one of the first (originally) American Native languages--

to be studied. The Greenlandic tradition is especially important in Eskimo studies for the contributions it has made to the grammatical analysis of Eskimo languages. Because of the very considerable similarities among all Eskimo languages in morphology and syntax, advances in the analysis of one language are of prime significance for the others. The earliest published works on West Greenlandic were the dictionary and grammar of Paul Egede, a Danish missionary (Egede, 1750, 1760 resp.); these were followed by the grammar and dictionary of another missionary, Otho Fabricius (Fabricius, 1791, 1804 resp.). Still among the most important grammars of West Greenlandic today is that of the Moravian missionary Samuel Kleinschmidt (Kleinschmidt, 1851), who also wrote a pioneering dictionary (Kleinschmidt, 1871). Kleinschmidt grew up partly in Greenland and spoke the language from childhood (see Rosing, 1951). He sought to describe the language fully in its own terms, rather than in terms of the specific grammatical categories and distinctive phonological features of Latin or of familiar modern European languages (1851: vi-viii). To this end he developed a sophisticated morphophonemic approach to segmentation and phonology, and formulated an account of the external and internal syntax in terms of the case and mood categories of the inflectional morphology. Interestingly, he not only avoided much of the Latin model, but also avoided the interference of morphological idiosyncracies that plagued later attempts which relied too heavily on inflectional forms themselves--rather than on the categories they signalled--as the guide to "grammar in the language's own terms" (see §4). His work is appealing to modern linguists for its use of a constrained but recurrent metalanguage which is designed to reflect generalizations over higher level patterning.

Among important 20th century contributions to the grammatical analysis of Eskimo languages in the Greenlandic tradition are the works of William Thalbitzer (Thalbitzer, 1911, 1930, among others) and of his student L. L. Hammerich (Hammerich, 1936, 1951) (see discussion in §4). The most perspicacious, complete, and abundantly illustrated grammatical study of any Eskimo language, however, is Knut Bergsland's grammar of West Greenlandic (Bergsland, 1955), which, perhaps because of its terseness, does not always receive the careful reading that it deserves. While Kleinschmidt's grammar excels in its integration of a broad range of facts into an all-encompassing system, Bergsland willingly sacrifices full integration of this sort in favor of stating the largest number of generalizations about the data as can be found (the conflict which is inherent here is that integration can usually only be achieved by discarding or downplaying certain generalizations). A typical example of this thoroughness is his treatment of inflectional categories, where a vast array of subtle semantic and syntactic functions are identified and illustrated with copious examples from actual texts. Finally, as noted in later chapters, the Greenlandic tradition has continued to break ground in the grammatical analysis of Eskimo languages most recently in the work of Jørgen Rischel (Rischel, 1971, 1972, 1974), Jerrold Sadock (1980), and Michael Fortescue (1979, 1980). My own earlier work on Eskimo grammar includes a master's thesis (Woodbury, 1975) and several articles (Woodbury 1977a,b,c) on Greenlandic syntax using data from published sources. I mention it here for its influence on the present work.

The description of Central Yup'ik began much later than that of Greenlandic. The earliest grammars were those of Augustus Schultze, a

Moravian missionary working in Bethel, near the mouth of the Kuskokwim, where Core GCY is spoken (Schultze, 1889, 1894). The ethnographer E. W. Nelson collected important lexical and textual data in St. Michael and elsewhere in 1877-81, parts of which are published (Nelson, 1899), and the rest of which exist in unpublished manuscripts in the collection of the Smithsonian Institution. The greatest of the early grammars is that of Francis Barnum, a Jesuit missionary whose long and very careful study (Barnum, 1901) is based on his stay on Nelson Island where another subdialect of GCY is spoken. The transcription greatly over- and underdifferentiates, yet it is interpretable for the most part to someone familiar with the language. The morphological analysis is usable but unwieldy, because of its treatment of each derivational suffix (or postbase) as the basis for a separate inflectional mode. Nevertheless, the work is copious, glosses for utterances and for morphemes are careful and insightful, an excellent lexicon and body of texts are presented, and the ethnographic and ethnolinguistic commentary is in many ways unsurpassed. Another Moravian missionary, John Hinz, wrote a grammar nearly half a century later based on his data from Bethel which adhered very closely to Kleinschmidt's findings for Greenlandic (Hinz, 1944). Here both transcription and grammatical analysis are far more in line with modern practices, although to be sure there is underdifferentiation (e.g., nonrecognition of the phoneme /ɨ/) and some inaccuracy.

Turning now to what may be called the modern period in Central Yup'ik research, a short but remarkably good grammatical sketch arose from four days of fieldwork by Morris Swadesh in 1936 with a speaker of the Unaliq subdialect of NS Central Yup'ik who was visiting in New Haven, Connecticut (Swadesh, 1951). Although excellent for the most

part, Swadesh's phonemic transcription unaccountably merges the phoneme /ɨ/ (which he nevertheless recognizes as a morphophoneme, ɨ) with /i/ in some contexts (/itɨʒaq/ for NS itegaq (/itɨʒ.aq/) 'foot', cf. GCY it'gaq), and with ∅ or /i/ in others, such as #CeCV (txxuq and tixxuq for tegg'uq 'it is hard').<sup>2</sup> The grammatical analysis is sketchy, but follows Kleinschmidt (and especially, his own restatement of Kleinschmidt (Swadesh, 1946)). L. L. Hammerich was the first phonetically skillful and philologically informed scholar to do fieldwork in Alaska on Central Yup'ik. His fieldtrips to Nunivak Island and elsewhere in 1950 and 1953 resulted in a large set of fieldnotes (a copy of which is in the ANLC collection), and several publications (Hammerich 1953, 1958, and others).

In 1961 Michael Krauss and his students Irene Reed and Martha Tee-luk (the latter a speaker of the NS dialect) began work on Central Yup'ik that has since become the intensive program of work now carried on by the Alaska Native Language Center and associates. For a detailed account of that work, including its history, goals, and progress, see Krauss 1973 and the update in Krauss 1979. The principal figures in the grammatical aspects of this work have been Krauss, Reed, Osahito Miyaoka, and Steven Jacobson, and the main grammatical (including phonological) works are Miyaoka's grammatical sketch of GCY (Yukon sub-dialect) for the forthcoming Languages volume of the Smithsonian Institution's Handbook of American Indians (Miyaoka 1975), Reed, Miyaoka, Jacobson, Afcan, and Krauss' Yup'ik Eskimo grammar, covering both Core and Peripheral dialects of GCY, with notes on HBC (Reed et al., 1977), and Jacobson's introduction and postbase dictionary portions of his forthcoming Central Yup'ik dictionary (Jacobson 1980a, b). Miyaoka

has also published a series of papers (Miyaoaka, 1974, 1976, among others), the analyses from which have, with occasional revision, been incorporated in the longer works cited above. Jacobson has also written a preliminary analysis of the features of the two Norton Sound subdialects (Jacobson, 1980c). Among the scholarly contributions of the ANLC work on Central Yup'ik are the first fully adequate analysis of the phonemics of the language, the first description (and formalization) of the complex Central Yup'ik length, gemination, and stress rules (published first in Miyaoaka, 1970, 1971), the most comprehensive account of morphophonemic alternations associated with particular morphemes and morpheme classes, the first full set of paradigms of inflectional endings, especially for the oblique moods, a far fuller account of the syntactic and semantic functions of the inflectional categories, a full account of the semantic parameters involved in the demonstrative system, and an improved account of the enclitics and particles. In the grammars, and especially in Jacobson's postbase dictionary, the lexicology, inventory, morphophonemics and segmentation of postbases is greatly advanced (see §6.7 for discussion of work in postbase lexicology at ANLC and elsewhere). Jacobson's introduction also contains important contributions to the morphotactics of bases both synchronically and comparatively within Central Yup'ik, and summaries of the main features of each of the four Central Yup'ik dialects.

Other recent work on Central Yup'ik (mainly GCY) has come from the Yup'ik Language Center of Kuskokwim Community College (University of Alaska) in Bethel. Miyaoaka and Mather's guide to orthography (Miyaoaka and Mather, 1979) contains many new contributions to phonology and dialectology, and Chase Hensell's forthcoming teaching grammar (Hensell,

forthcoming), will contain much original material on semantics and rules of use, especially in conversation.

Also from the University of Alaska, Fairbanks (but not from ANLC) has come a teaching grammar by John H. Koo (Koo 1975). Because of its extensive misrepresentation of facts and its inconsistency, I do not feel it deserves serious consideration. This is also the opinion of Sadock (1977) and Krauss (1979:819-20, fn. 11). Above Sadock's (1977) review in the International Journal of American Linguistics is a favorable review of Koo 1975 by Robert St. Clair (St. Clair 1977), but as Krauss (1979: fn. 11) notes, it is as full of inaccuracies as Koo's grammar (e.g., "Inupik...is derived from the Greenlandic words /inuk/ 'poople' and /pik/ 'people'").

The first documentation of the Hooper Bay-Chevak dialect (beyond occasional citations) is found in unpublished notes of Jesuit priests residing at Hooper Bay and Kashunuk in the 1920's and 30's (see Landar 1976 for a catalog of the large Jesuit corpus in Central Yup'ik housed at Gonzaga University, Spokane). Published recognition of Hooper Bay-Chevak speech as a dialect of Central Yup'ik seems to begin with Krauss (1973:822), although needless to say, these dialect differences have been common knowledge among native speakers. Reed et al (1977) make occasional notes on HBC dialect variants, although these are by no means comprehensive (e.g., the inflectional paradigms are not consistently annotated). Information on HBC is presented in greater detail in Jacobson's forthcoming dictionary, where most of the main phonological and morphological features of the dialect are well represented in the dictionary entries. Thomas Payne, a student at the University of California,

Los Angeles, has written on switch-reference in Central Yup'ik using data he collected in Los Angeles from a speaker from Hooper Bay (Payne, 1979). That same speaker was the source of information for a course in field methods taught at the University of California, Los Angeles, in Spring, 1978, by Pamela Munro. Finally, in addition to this thesis, my own work on HBC, all based on fieldwork done in Chevak in 1978 and 1980, includes a short lexicon of bases specific to HBC prepared as a supplement to Jacobson (1978) (Woodbury 1979a), a forthcoming edition of texts with facing English translation in a format which transcribes prosodic and other features of what I call rhetorical structure, and resembles the format reserved in European languages for the transcription of poetry (Woodbury 1979b); a diachronic study of fricative stridency (see §1.1.8.1) in HBC, GCY, and Nunivak (Woodbury 1979c); a study of kin-base nicknaming in HBC and Nunivak hypothesizing its origin in discourse (Woodbury 1980a); and a study of Central Yup'ik rhetorical structure (Woodbury 1980b).

#### 0.4. Background and purpose.

The present work grew out of plans on my part to write a grammar plus ethnography of speaking, a kind of linguistic community study, of Chevak, Alaska (see Hymes 1974, Bauman and Sherzer 1974 on ethnography of speaking). My fieldwork was carried out with this goal in mind, but in the course of it it became quite clear that such a study, at the level of description and generalization that I envisioned, could not be accomplished in one dissertation. I therefore present this study as the first in a series of studies working toward my original goal. As such, it covers the traditional first parts of a grammatical description, pho-



nology (§1) and morphology (§§2-7), but with derivational morphology (postbases) presented in a theoretical overview (§6) followed by a technical demonstration analyzing a portion of the postbase lexicon (§7).

In presenting an analysis of the phonology and morphology of a Central Yup'ik dialect at this stage in Yupik research--and in Eskimo research in general--my purpose is different from what it would be were I presenting the first grammar of the language. Thus my purpose here is (i) to provide documentation and description of the Hooper Bay-Chevak dialect beyond what is given in extant published and unpublished sources, and to state differences between it and GCY, (ii) to restate and in places reanalyze aspects of the phonology, morphology, and syntax of Central Yup'ik as it is presented in the existing sources, and (iii) to present a new systematization of what may be called the internal syntax, i.e., the morphosyntax of sub word-level elements, intended as a contribution to Eskimo-Aleut studies generally, since the problems involved there are family-wide.

In §1, Phonology, an outline of the phonology of the Chevak dialect is presented as a set of partially ordered rules operating on underlying forms. §§2-7 are concerned with morphology. In §2, Morphological preliminaries, I outline word structure, base classes, and the system and categories of inflection. §3, Inflectional morphology, presents inflectional paradigms for the Chevak dialect, noting dialect differences between it and GCY, and gives a more complete morphological analysis of endings than has been given for Central Yup'ik. It also offers a new analysis of pronominal suffixes with enough detail to have implications for general Eskimo-Aleut comparison. §§4-7 are specifically concerned with systematization of internal syntax. Because sub word-level elements

--bases, postbases, enclitics-- have syntactic effects beyond the word-level, an analysis of external syntactic constituent structure is given in §4, The structure of noun phrases, complex noun phrases, and clauses. This provides a basis for the classification and representation of the inherent internal syntactic properties of bases in §5, Syntactic and inflectional properties of bases, and of the internal properties and functions of postbases (§§6-7). Postbases, of which there are around four hundred, are at the heart of the more general problems of internal syntax. §6, Postbases: introduction, literature, and theory, reviews approaches taken in the Eskimo literature to postbases, and sketches a systematic treatment for them within the internal syntax as a whole. §7, Denominal verbalizing postbases (NV), demonstrates the approach by analyzing an important group of postbases, with particular attention to their internal syntactic classification and lexicological description.

#### 0.5. Theoretical goals and framework.

This work is written in a linguistic genre which I call 'theoretical description', that is, it is intended both as a description of a portion of the grammar of Central Yup'ik, and as an illustration of an approach to linguistic theory. Among earlier works falling within this genre are the four grammars by Franz Boas in his Handbook of American Indian Languages (Boas 1911a), all of which illustrate the approach pointed to in his famous introduction to that work (Boas 1911b), Zellig Harris' "structural restatements" (Harris 1947) of grammatical sketches from Linguistic structures of Native America (Hoijer et al. 1946) using a strict distributionalist method later called "item and arrangement", Chomsky and Halle's (1968) study of English phonology using the theory

of generative phonology, and two recent grammars of North Queensland languages by the Australianist R. M. W. Dixon (Dixon 1972, 1977) in which first transformational models and later also non-discrete hierarchical models and Sapir-influenced methods were used. When a work in this genre uses a theory which makes very strong claims on a cross-linguistic level (e.g., item and arrangement grammar, generative phonology), then it is especially the case--assuming all grammars leak--that either descriptive adequacy or theoretical consistency must give way in some places. Thus, Chomsky and Halle (1968) and Dixon (1972), both of which use theoretical frameworks making strong claims, turn up at opposite ends of the spectrum, the former the more theoretical, and the latter the more descriptive. On the other hand, though, some theories are decidedly minimalist in regard to cross-linguistic claims, e.g., Boas (1911b) and later, Bloomfield (1926), present us with the barest essentials for the consistent grammatical description of any language. In those cases, such conflict is less centrally problematic, although it does indeed still arise.

In the present theoretical description; I use a theoretical framework whose goal is to describe a language in its own terms, while making use of the full array of techniques available to modern linguists, including those developed in the transformational-generative era, when description in a language's own terms was hardly a major theoretical aim. The theoretical purpose of this study is to inform cross-linguistic comparison and generalization.

"A language's own terms" needs careful clarification, since it is sometimes taken to represent an imagined alternative to a general theory of language or methodology for description. I use the expression here

in a rather traditional sense by equating it with a system for description whose goal is to build up as much of the grammar of the language as possible using language-internal arguments and justifications, rather than a priori principles (e.g., a priori principles stated explicitly as "constraints", and those which are consequences of the mechanics of particular descriptive models). Naturally no grammar totally avoids bringing to the description a priori notions of how language works. Because of this, Bloomfield sought to lay out beforehand a set of a priori postulates--a minimalist theory in the sense used above--the goal of which was to "state explicitly whatever we assume, to define our terms, and to decide what things may exist independently and what things are interdependent" (Bloomfield 1926:153). To leave it at that, however, is to underrepresent what one brings, a priori, to a language, since different techniques of analysis imply different analyses, and phenomena known to the analyst in one language suggest phenomena in another. An honest attempt at grammar in the language's own terms must therefore be explicit about the techniques it uses; at the same time, it can preserve its original principles by adhering as strictly as possible to principles of language-internal justification.

My a priori principles, or theory, may be described as semiotic, that is, they presuppose that correspondences will be found between linguistic form and linguistic function (i.e., grammatical, semantic, pragmatic function). Further, they dictate that these correspondences must be found by identifying the forms and seeking their functions and relations, in the manner of Saussure (1916), Boas (1911b), and Bloomfield (1933)--as well as the ANLC linguists working on Central Yup'ik--rather than by beginning with grammatical, semantic, or prag-

matic functions defined or categorized a priori, and then identifying the forms which correspond to them in the language under inquiry, as is the practice in some recent approaches (e.g., Perlmutter and Postal 1977, Comrie and Smith 1977). I also assume that phonology is distinct from the rest of grammar in that it deals with elements that function to assemble and differentiate minimal meaningful units themselves. I assume further that there are hierarchical levels of structure (morpheme, word, phrase, clause, etc.), making immediate constituent representations possible, although not indicating that all levels (or even just those levels named) exist for all sentences or for all parts of a grammar. I assume finally that the grammatical, semantic, and/or pragmatic functions of elements at each level are sometimes, and in varying degrees, susceptible to speakers' paraphrase, exegesis, interlinguistic translation, or other commentary. Doubtless, this list of assumptions is incomplete.

I use the following techniques in this study. In phonology, I follow the system of organization according to rule ordering pioneered by Bloomfield in his "Menomini morphophonemics" (Bloomfield 1939). The morphological model is constructional, what Charles Hockett has called "item and process" (Hockett 1954), and attributed to Sapir and his students, among other (see §6 for further discussion). The syntactic model makes use both of constituent structure representations and syntactic transformations (Chomsky 1957, 1965); the constituent structure representations depart from Chomsky's purely hierarchical labeled bracketings in that they allow two types of nexus between certain explicitly defined sister nodes, apposition and dependency, as these notions have been developed for Eskimo languages by L. L. Hammerich (Hammerich 1951; for further discussion, see §4). The external syntactic selectional properties of

bases are given in terms of constituent structure representations in a way parallel to the use of selectional restrictions and strict subcategorization in the lexicon in standard transformational-generative grammar (Chomsky 1965).

From the point of view of transformational-generative theories, the above approach is massively "powerful" or "unconstrained": its assumptions (or claims) are minimal while its arsenal of techniques is maximal. That is, the model itself is fit to describe more than just the class of all human languages and those alone. What is at issue between those approaches and this approach is the relation between individual grammars, and universal grammar, which is the set of generalizations that may be made about all languages. Above all, linguistic analysis is delicate, and presents many complex decisions. When constraints on the form or substance of grammars--which at best are the conclusions drawn on the bases of study of other languages--are used as guidelines for the analysis of a new language, they simply prejudice the case. On the other hand, an analysis worked out on internal grounds which carefully takes into account the descriptive generalizations, may itself provide for or against particular constraints, or suggest reanalyses non-detrimental to descriptive generalizations that are in line with particular constraints.

#### 0.6. Data and field procedure.

The data for this study were collected during two fieldtrips to Chevak, Alaska, October 5 to December 7, 1978, and January 29 to April 1, 1980. Legends (qulirat), stories (qanemcit), oratory, and informal conversation were recorded on tape, and transcribed and translated with

Table 0-1: Texts cited in this work

Central Yup'ik words used in this table are qanemciq 'story', quliraq 'legend', qaygiq 'communal men's house', and qaygimiut 'inhabitants of the communal men's house'.

<u>Text #</u>	<u>Date</u>	<u>Speaker</u>	<u>Topic<sup>a</sup></u>	<u>Length (min.)</u>
1	1978	Anon., by request	Quliraq	40
3	1977?	Mary Kokrak (d. 1977)	Quliraq: Five brothers and their younger sister (abduction legend)	30
4	10-17-78	Gregory Teve	Quliraq: Ghost story (return of mother who died in childbirth)	60
5a,b,c	10-19-78	Mary Chimiralrea	Three qulirat: Ghost stories	35
6a	10-19-78	Rose Imgalrea	Qanemciq: Account of old life ways	12
6b	10-19-78	Tom Imgalrea	Qanemciq: Ak'a piciryarallratneng (account of old life ways)	15
7a	11-8-78	Leo Moses	Quliraq: How Big Loon got his colors	25
7b	11-8-78	Leo Moses	Quliraq: Ayuqniaruciq (the power of the mind's yearning), with song	11
8a	11-9-78	Thomas Moses	Qanemciq: Nenercaq (name)	9
8b	11-9-78	Thomas Moses	Qanemciq: Angalkull'reneng (about the old shamans)	7
8c	11-9-78	Thomas Moses	Qanemciq: Kangciurluq escapes from mondage	7
8d	11-9-78	Thomas Moses	Quliraq: Muskrat takes a wife	8
9a	11-13-78	Jacob Nash	Qanemciq: Cagnimqurraq defies two shamans	6
9b	11-13-78	Jacob Nash	Qanemciq: Account of old life ways	8

(Continued)

Table 0-1, continued

<u>Text #</u>	<u>Date</u>	<u>Speaker</u>	<u>Topic<sup>a</sup></u>	<u>Length (min.)</u>
10a,b 11a,b 12a,b	11-26-78	Qaygimiut	Recording made in Chevak's qaygiq, containing conversation, stories, and songs	245
13a,b	11-28-78	Qaygimiut	Recording made in Chevak's qaygiq after firebath, containing conversation and stories	90
14b	2-15-80	Joseph Friday	Lecture to students at Chevak High School, on living correctly	6
				633

<sup>a</sup>In general, stories do not have titles. The Yup'ik designations given beyond 'quliraq' and 'qanemciq' are taken from the speaker's beginning or concluding remarks ("This is/was about..."), and are translated in parentheses. English titles are entirely of my own making and have no ethnologically significant status.



the help of native speakers. Leo Moses served as informant for most of this aspect of the work, and Mary Moses served as informant for most of the rest of it. I have designated these transcripts "texts", and a list of the texts which are cited in this study is given in Table 0-1. Copies of all text tapes and transcripts have been deposited with the Library of the American Philosophical Society and with the Alaska Native Language Center; those completed in 1978 are also in the collection of the University of Washington Libraries.

During the process of text transcription and translation, much co-elicitation was done where the textual material under consideration became the basis for further grammatical and ethnographic inquiry. Full systematic elicitation was conducted in the following areas, among others: inflectional morphology, postbase grammar and lexicology, and personal and geographic naming. In addition, much systematic testing was done to determine correct underlying forms and glosses for lexical bases. Of this work too Leo Moses had the lion's share; Cecilia Martz was particularly helpful in providing much valuable information on lexical bases, and Mary Moses provided among other things a great deal on postbases. In all, about twenty to twenty-five hours a week were spent working with informants during both field trips, with that time split about equally between text preparation and systematic elicitation. All sessions with informants are documented both in fieldnotes (deposited with the APS Library and ANLC), and in tape recordings (in my possession).

I divide the data I cite in this study into three groups, and label each citation according to which group it belongs to (but I leave one-word citations in §1 unlabeled), as follows:

(i) Citations from text: These are labeled with the text number, followed by a colon, followed by a sentence or page number (depending on the text's state of preparation); thus, 13b:159 is read, 'text thirteen b, sentence 159'.

(ii) Volunteered utterances: These are utterances volunteered by native speakers without prompting in English or in Central Yup'ik, or (over)heard in conversation. Included here too are utterances prompted via requests for paraphrases ("Is there another way of saying..."/"How would you explain what this means to a child..."). These are labeled with 'vol'.

(iii) Elicited utterances: These utterances were in some way prompted by me via requests for translations from English to Central Yup'ik ("How do you say...") or via requests for acceptability judgments ("Would it be okay to say..."/"I thought I heard someone say..."). These are labeled with 'e'.

I advise the reader to join me in ranking these three types data as descending in value from (i) to (iii), for it is easiest to recover context in text data, as against the other two. It is least likely that interference from English or over-analogy from just-cited Central Yup'ik forms would occur in texts, most likely in elicited utterances. Volunteered utterances are in between: either they occur as a part of a metalinguistic discussion in which they are cited spontaneously by a speaker (mention, rather than use, to use the philosophers' distinction, and thus reflect what the person says he says, rather than what he necessarily says), or in the case of (over)heard utterances, they are a kind of text-fragment, where the full context is not preserved by the standard method of transcription from tape.

§0-- Footnotes.

1. Miyaoka and Mather 1979:140 call it retrogressive stress, and mark it with a grave (˘) accent. The rule is not cited in Reed et al. 1977.
2. Swadesh's original fieldnotes from 1963 show that he had recorded the fourth vowel, schwa (Michael Krauss, personal communication). The problem, then, certainly was not with Swadesh's ear; rather, he apparently concluded that it could be eliminated from more abstract representations.

## 1. Phonology.

[This chapter can be skipped by the reader interested primarily in internal and external syntax. The rudiments of morphological arrangement presupposed in this chapter are outlined in §2.1 and §2.2.]

The purpose of this chapter is (i) to explain the segmentations of words cited as data in this work, (ii) to state generalizations about the phonology of the Chevak dialect of Central Yup'ik,<sup>1</sup> and (iii) to restate and/or improve on existing formulations of Central Yup'ik phonology. I will elaborate on the third of these.

Miyaoka 1975, Reed et al. 1977:Chh. 1-2, and, for representation of bases, Jacobson 1980a have set the main framework for work in Central Yup'ik phonology. Miyaoka presents an essentially generative phonological analysis with ordered rules, in form more similar to Bloomfield's presentation of Menomini morphophonemics (Bloomfield, 1939) than to Chomsky and Halle's system (Chomsky and Halle 1968), with its rule notation and use of distinctive features. Reed et al. 1977 make analytic use of ordering in a way most similar to Miyaoka's, but do not present a numbered and fully ordered set of rules. In the tradition of Sapir and his students (see Sapir and Swadesh 1939 on Nootka, and Swadesh and Voegelin 1939 on Tübatulabal), they make use of morphophonemic junctures as a kind of annotation to the morphophonemic representations of morphemes. By contrast, Miyaoka 1975 uses a more streamlined juncture inventory but resorts more often to independent annotation--in footnotes--of rules and underlying forms to indicate exceptions. Both of these alternatives are notational solutions to the problem of representing morphological information in phonological derivations; it is the problem which Chomsky and Halle notationally solve by citing particular morphemes in

the rules themselves. I follow Reed et al.'s solution because I think it has several advantages over those of Miyaoka and of Chomsky and Halle (beyond the obvious reason that I wish my work to be relatable to ANLC work on Yup'ik). First, it is more suited to Yup'ik than Chomsky's and Halle's, since Yup'ik morphological environments often involve dozens of morphemes, rather than a handful, as in English. Thus rules in Chomsky's and Halle's format would require long lists attached to them. It is also easier to work with than Miyaoka's, since it enables one to keep more explicit track of exceptions, and it makes it easier for readers lacking special expertise in Central Yup'ik to follow derivations.

On the issue of morphophonemic junctures the treatment given here differs with Reed et al. in that it eliminates those of the junctures that are predictable from the phonological shape of the morpheme to which it is attached, as for example for some of the apical-changing junctures (marked with '@', see §1.2.2.3.3), thus Reed et al.'s (1977: 306) @<sub>1</sub><sup>ʔ</sup>nait<sup>°</sup>e- and @<sub>2</sub><sup>ʔ</sup>ngaite<sup>°</sup>e- become my @\*nait<sup>°</sup>e- 'for S not to tend to make one V' and @\*ngait<sup>°</sup>e- 'S/A will V', respectively. The present treatment is on the other hand more liberal in positing morphophonemes to account for differences in surface pattern, e.g., p, t, c for Reed et al.'s wp, st, sc). At times, I simply translate their morphophonemic junctures into new morphophonemic segments. Thus where they use '°' as a juncture symbol after base-final te- as in te-° (cf. their @<sub>1</sub><sup>ʔ</sup>nait<sup>°</sup>e- and @<sub>2</sub><sup>ʔ</sup>ngaite<sup>°</sup>e-, cited above), I set up a morphophoneme t<sup>°</sup> as in t<sup>°</sup>e-; for their (ng) morphophoneme preceded by velar-dropping morphophonemic juncture (marked ':'), as in ʔ:(ng)u-, I posit a morphophoneme ng: and use a more general morphophonemic juncture, as in #ng:u- 'to be N'.

Of course, the morphophonemic segments must be assumed to be analytic fictions only, and not necessarily to correspond to the phonemic segment inventory at an internally reconstructed earlier state of the language. Nevertheless, the morphophonemic segments posited provide a convenient point of organization for cross-dialectal and cross-linguistic comparison of phonological rules and segments in the Yupik family and in Eskimo-Aleut generally, since they reflect directly the domains of application of partly idiosyncratic rules, along with the distributions of segments themselves.

As mentioned, the phonology is presented here as a set of ordered rules. These ordered rules can be subclassified as follows, with the result that each subclass has as its input and/or output something resembling phonological levels, though as will be noted below, these levels are ill-defined and are largely artifacts of the analysis chosen here:

Morphophonemic level

Rules induced by juncture (P1-P20)

Postjunctural level

Pre syllable-modification syllabic and segmental rules (P21-P26)

Syllable modification rules (P27-P36)

Post syllable-modification segmental rules (P37-P39)

Taxonomic phonemic level

Phonetic rules (P40-P46).

Thus, morphemes are represented at the underlying morphophonemic level, and are joined together by the first twenty ordered rules, P1-P20, giving fully connected words at the postjunctural level. The next three sub-

classes of rules, pre syllable-modification syllabic and segmental rules (P21-P26), syllable modification rules (P27-P36), and post syllable-modification segmental rules (P37-P39) are classificatory notions, since there is no conceivable reality which levels intermediate between them could have, in particular, since ordering is only partly crucial. Together, however, they lead to a taxonomic phonemic level in the strict sense which is riddled with near-total redundancies. Finally, the phonetic rules lead to the range of possible phonological utterances, which because of variability and other factors could not be conceived of as a consistent level in any language.

Consistent representation of forms, however, implies a consistently defined level. In this work, I have followed the standard orthography, with a few minor revisions to be noted (for the most authoritative statement of orthographic conventions, see Miyaoka and Mather 1979). According to Krauss (1973:824), one of the formulators of the orthography:

"To Krauss it seems that languages vary considerably in the extent to which their phonology presents anything resembling a consistent taxonomic phonemic level, and Central Yupik is one of those that least exhibits any such level in terms of consistent taxonomic phonological patterning. Judicious development of an orthography for Yupik therefore requires a relatively deeper understanding of the phonology through a continuum of morphophonemic levels, and then picking one's way through with a minimum of unavoidable inconsistencies and level shifts, such that the orthography is an arbitrary but optimum compromise between surface phonetic and systematic phonological representation (one per morpheme)."

Translated into the particular terms of the rule scheme to be used in this chapter, Krauss is defending a level for orthographic representa-

tion that sits somewhere below the postjunctural level, but somewhere above what I recognize as the taxonomic phonemic level. But since there exist no natural levels between those two, he proposes to create a useful level there by rearranging rule order so that some of the rules from (in my terms) P21 to P39 will apply to create the level of the orthography, i.e., they will be preorthographic, while the rest will apply to representations at the orthographic level to give the taxonomic phonemic level, i.e., they will be postorthographic. In terms of the analysis used here, rule ordering is rearranged as follows to create the level represented by the orthography:

Postjunctural level

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Preorthographic rules: P22, P24, P25, P27, P35, P36, P38

Level represented by the orthography

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Postorthographic rules: P21, P23, P26, P28, P29, P30, P31, P32, P33, P34, P37, P39.

Taxonomic phonemic level

---

Rules P22, P24, P25, P27, P35, P36, and P38 are weeded out and made pre-orthographic for one of two reasons: either they function to create the canonical syllable shape represented by the orthography (e.g., P22) or they refer to morphological environments, including morphophonemes not realized on the surface (e.g., the others). The rules that are left over are entirely automatic, phonological rules. But because they are taken out of their proper order relative to the preorthographic rules, the orthographic level needs to resort to ad hoc devices to alter their application. The Central Yup'ik orthography uses the ad hoc device of inserting apostrophes for this purpose (see §1.3, items b, d, e, f).



The orthographic level, then, achieves maximal generality over automatic phonological patterning by getting around the minor exceptions. This is of considerable theoretical interest because it corresponds, it seems to me, quite closely to what Sapir (1925, 1933) meant by "phonemes" (or "(speech) sounds" in the earlier article) in his discussions of their psychological reality. He did not work with the more usual conception of "phoneme" as a segment defined at an automatically identifiable level in a phonological derivation, and would probably not have ascribed psychological significance to such a construct.

In §1.1 I will define the orthographic symbols, and give rules leading from the phonological level represented by the orthography to the taxonomic phonemic level (i.e., the postorthographic rules, as defined above). From there, I will give some of the more important phonetic rules. In short, §1.1 is a guide to pronunciation of the orthography. In §1.2 morphophonemics is presented, beginning with morphophonemic level segments and junctures, and then taking the rules P1-P39 in order, down to the phonemic level. Here, the reordering brought about by the orthography will be ignored, and the technically correct ordering from P21 to P39 will be followed. As a result, preorthographic rules will be presented there for the first time, while postorthographic rules will be presented again. In §1.3 external sandhi is discussed. This is the same order of presentation followed by Reed et al. 1977, except that they do not reintegrate pre- and postorthographic rules in an overall phonologically correct order.

### 1.1. Orthography.

In this section, citations in the orthography will be marked with no brackets or underlining; phonological representations from the level

of the orthography to the taxonomic phonemic level will be cited between slashes (/ /); and phonetic transcriptions will be cited between square brackets ([ ]). Phonetic transcriptions are defined technically as the outputs of rules beyond P39.

### 1.1.1. Orthographic symbols and their values.

See table 1-1. In giving phonological representations at the orthographic level, the first free variant of each segment will be used, thus orthographic *ss* is assigned the value [s<sup>V</sup>], and *assirpagg* 'good!' will be represented phonologically at the orthographic level as /asiḡpax/ and not /aṣiḡpax/. Vowels and diphthongs will be represented phonologically at the orthographic level with /a, i, u, ɨ/ and combinations thereof, thus *nerua* 'I eat' is represented /nɨḡua/ and not /nɨḡob/. Finally, orthographic *c* will be represented /c/ rather than /č/ phonologically at the orthographic level.

### 1.1.2. Syntagmatic constraints at the orthographic level.

#### 1.1.2.1. Syllable shape.

The syllable is symbolized with '\$' in phonological rules. Syllable shape at the orthographic level is:

$$/ \left\{ \begin{array}{l} \#(C) \\ .C \end{array} \right\} V(V)(C). / \quad (\# = \text{word boundary; period } (.) = \text{syllable boundary})$$

Examples: /aa.ta/ *aata* 'father'; /aḡ.naq/ *arnaq* 'woman'; /na.nuaq/ *nanuaq* 'polar bear'; /tai.taa/ *taitaa* 'he brings it'. For purposes of syllabification geminate consonants count as consonant clusters, and syllabified with the raised dot symbolizing gemination phonologically treated as the second member of the cluster, thus /mit.·uq/ *mit'uq* 'he

Table 1-1: Orthographic symbols and their values<sup>2</sup> (phonetic representations indicate the realization of the unmarked alternant; multiple symbols indicate free variation in the unmarked alternant).

CONSONANTS (C):	Labial		Apical		Velar		Labialized velar	
	Dental	Palatal	Front	Back	Front	Back	Front	Back
<b>Stops (S):</b>	p [p]	t [t]	c [ç]	k [k]	q [q]			
<b>Fricatives:</b>	Voiced ( $F_v$ ): v [v]	l [l]	y [y]	g [g]	r [r]	w [x <sup>w</sup> ]	ur [x <sup>w</sup> ]	
	Voiceless ( $F_o$ ): vv [f]	ll [ʃ]	ss [s]	gg [x]	rr [x]	ww [x <sup>w</sup> ]	urr [x <sup>w</sup> ]	
<b>Nasals:</b>	Voiced ( $N_v$ ): m [m]	n [n]		ng [ŋ]				
	Voiceless ( $N_o$ ): m̄ [m̄]	n̄ [ŋ̄]		ṅ [ɲ]				
<b>Gemination:</b>	C' [C']							
<b>VOWELS (V):</b>	Single vowels (V)					Double vowels (VV)		
	i [i]	e [ɛ]	u [u]			Long vowels ( $V_i V_j$ ):	ii [ii]	uu [uu]
	a [a]						aa [aa]	
	Of these, i, u, and a represent prime vowels ( $V$ ), and e represents a non-prime or schwa vowel.					Diphthongs ( $V_i V_j$ ):	iu [iu]	ui [ui]
							ia [eə]	ua [ob]
<b>BOUNDARIES:</b>	= enclitic boundary					(Space) = boundary between minimal intonation units.		
	- boundary between independent words					(Space) and '-' simultaneously mark word boundaries.		
	in a minimal intonation unit.							

lands'. This notational convention insures distinctness from true like-consonant clusters, as in /cap.ɣit.ta.cia.ni/ caprit'taciani 'because it has such power to succeed'.

#### 1.1.2.2. Co-occurrence restrictions at the orthographic level.

Word initially, all orthographic level segments occur except voiceless nasals, /ɲ, v, ɣ, ɣ̣, ɣ̣<sup>W</sup>, f, ʈ, x, x̣, and x̣<sup>W</sup>/. Word-finally, all orthographic level segments occur except: voiceless nasals, voiced fricatives, /f, ʈ, s, x<sup>W</sup>, x̣<sup>W</sup>, and ʂ/. The following are the only impermissible consonant cluster types at the orthographic level: /N<sub>0</sub>C/ and /F<sub>0</sub>C<sub>0</sub>/, where C<sub>0</sub> = S, F<sub>0</sub>, N<sub>0</sub>. These restrictions on clusters are largely artificial, since they are an arbitrary expression of neutralization due to voice assimilation. They feed rules P21' and P23', which reconstitute them into proper surface form. The restrictions are formed preorthographically, by arbitrary convention (see §1.2.3.1 and §1.2.3.3 for the formulations of these conventions).

#### 1.1.3. Uses of apostrophe.

In the orthography, there are five uses of apostrophe, all in complementary distribution. They are:

- a. C<sub>1</sub>'C<sub>2</sub>, where C<sub>1</sub> and C<sub>2</sub> each are symbols used to represent consonants. Apostrophe resolves ambiguities where C<sub>1</sub>C<sub>2</sub> could be interpreted as a digraph or when C<sub>1</sub> = C<sub>2</sub>. E.g., tan'gurraq 'boy', where n'g represents /nɣ/ at the orthographic level, as distinct from ng, which represents /ŋ/; ner'rurlurtuq 'the poor one eats', where r'r represents /ɣ̣ɣ̣/, as distinct from rr, which represents /x/.
- b. C<sub>1</sub>'C<sub>2</sub>, where C<sub>1</sub>C<sub>2</sub> symbolizes /SF<sub>v</sub>/, /SN<sub>v</sub>/, /F<sub>0</sub>F<sub>v</sub>/, /F<sub>0</sub>N<sub>v</sub>/, or /F<sub>v</sub>S/.

Apostrophe prevents assimilation by P21' and P23'. Thus at the taxonomic phonemic level, t'r in ut'rutaa 'he went home with it' represents /tʁ/ (tr would represent /tʁ/); p'n in up'nerkaq 'Spring' represents /pn/ (pn would represent /pn/); gg'l in kegg'laagtuq 'he suddenly bites' represents /xl/ (gg'l would represent /xl/); ll'm in nall'megteggun 'by themselves' represents /ʎm/ (llm would represent /ʎm/); and l'q in al'qaq 'older sister' represents /lq/ (lq would represent /lq/). In representing the orthographic level phonologically, I keep the apostrophe, thus /ut'ʁutaa/, /up'nɛʁkaq/, /kɛx'laagtuq/, etc.

c. VC'V Apostrophe indicates geminate C. Phonologically, this is represented as /C·/. E.g., mit'uq /mit·uq/ 'it lands'.

d. CV'C. A postrophe marks stress in closed syllables which carry stress at the orthographic level (caused by P36a for Chevak). This is represented phonologically as /CVC·/. E.g., aturtu'rɫuni /aturtu·rɫuni/ 'he keeps singing'.

e. '# Apostrophe marks segment loss due to word-final abbreviation, an external sandhi process (see §1.3). E.g., anlun' /anɫun/ 'he went out' from anluni /anɫuni/ (same meaning).

## 1.1.4. On boundaries.

A minimal intonation unit is a stretch of speech surrounded by pauses and pronounced with a single intonation contour. A word is the smallest morphological unit that can function as a minimal intonation unit (it also has independent morphological definitions (see §2.2.): from this, it follows that the word is the smallest morphological unit that can be pronounced in isolation and still be judged a well-formed utterance in the language by native speakers. The words in minimal intonation units that contain more than one word are linked with the boundary '-': phonologically, that boundary is defined as the location where external sandhi processes can take place (see §1.3). In effect, then, a minimal intonation group can further be defined as a group of words within which external sandhi processes can occur (unless the minimal intonation group consists of a single word). Thus in

al'-atkullraanka-piunrirlug'-ilall'  
Oh, my old parka is being ruined, oh my goodness!

ala	'oh'
atkullraanka	'my old parka' AB(1s-p)
piunrirluki	'letting it no longer continue' (APO(3p))
ilalketa	'oh my goodness!' (PT)

the phrase is a minimum intonation unit containing more than one word; we know that these are words because they are judged as well-formed when pronounced in isolation, as in the examples cited below it, but they cannot be broken down any further and remain well-formed. Note the external sandhi changes in the phrase, as against the words in isolation.

The enclitic boundary '=' behaves in some respects as an internal boundary (see P30', P31', and in some respects as an external boundary (see P25, and §1.3). All boundaries are used in phonological representations as well as in the orthography.

### 1.1.5. Pre syllable-modification segmental rules.

All of the following rules are postorthographic, as explained in the introduction to this chapter. Because the formulation of these rules here differs at times in minor respects from their formulation in §1.2, I mark them with a following prime ('). Thus, P21' corresponds to P21, formulated in §1.2.3.1. In citations of derivations, I use the following format:

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orthographic version


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When the input to rule Pn' is at the level represented by the orthography, the form at that level is represented phonologically. At times extensions of the above format will be used; the added forms will be labeled to the right. The top line however always will be the orthographic version, and the bottom line the taxonomic phonemic representation.

#### 1.1.5.1. Voice assimilation.

P21' Progressive assimilation:  $/C_0C_V/ \Rightarrow /C_0C_0/$

(Where  $C_0 = S, F_0, N_0$ ;  $C_V = F_V, N_V$ )

P23' Regressive assimilation:  $/V_VS/ \Rightarrow /F_0S/$

P21' and P23' do not apply when apostrophe intervenes between the consonant segments at the orthographic level (see §1.1.4, item (b)). When  $/C_V/$  or  $/F_V/$  is  $/y/$ , the rule blocks because the orthography uses  $s$  to represent the voiceless palatal fricative when it occurs in clusters, that is, this process is handled preorthographically in that instance. (It would of course be more logical to write neqyagtuq and meqsugpagg below as neq'yagtuq vs. meqyugtuq, but would introduce a needless hind-

rance to general literacy among speakers of Central Yup'ik as a whole to introduce logical adjustments for each dialect.) Examples:

atra /atʂa/ /atxa/ P21' /átʂa/ his name	pivkenani /pivkɨnani/ /pifkɨnani/ P23' /pífkɨnáani/ not doing	arumaarrluk /aʂumaaxluk/ /aʂumaaʂtuk/ P21' /aʂuú máʂtuk/ pokefish
angutnguneq /angutɨnɨq/ /angutɨnɨq/ P21' /angútɨnɨq/ older brother (of ♀)	aggnaurai /axnauʂai/ /axɨauʂai/ P21' /áxɨáúʂwai/ he'd send them away	neqyagtuq /nɨqyaxtuq/ /nɨqyaxtuq/ P23' /nɨqyaxtuq/ there's lots of fish
meqsugpagg /mɨqsuxpax/ /mɨqsuxpax/ P23' /mɨqsuxpax/ I'd like something to drink		

#### 1.1.5.2. Labialization of velar fricatives.

P26' /uG/ ⇒ /uW/ (G = non-labialized (front and back) velar fricatives;  
W = labialized (front and back) velar fricatives.)

Examples:

marrlugaq /maxtuxaq/ P21' /maxtux <sup>w</sup> aq/ P26' /máx <sup>w</sup> tuxaq/ grandmother	piurtuq /piuxt <sup>w</sup> tuq/ P23' /piux <sup>w</sup> tuq/ P26' /píx <sup>w</sup> tuq/ [péx <sup>w</sup> ·toq <sup>w</sup> ] 'he continues on'
--	---

Velar stops are actually also subject to this process, but it is treated for them at the phonetic level, since it does not feed any higher level processes (compare piurtuq, which loses the conditioning environment before the taxonomic phonemic level).



## 1.1.6. Syllable modification rules.

## 1.1.6.1. Inherent stress rules.

P28' /#(C)VC.\$/  $\Rightarrow$  /#(C)V̂C.\$/

P29' / {#(C)}<sub>.C</sub> VV(C).\$/  $\Rightarrow$  / {#(C)}<sub>.C</sub> V̂V(C).\$/

Examples:

aggnaurai	arumaarrluk	pirpakluku
/axɣauɣ <sup>w</sup> ai/	/aɣumaax <sup>l</sup> uk/	/piɣpak <sup>l</sup> uku/
/áxɣáúɣ <sup>w</sup> ai/ P28', P29'	/aɣuma <sup>á</sup> x <sup>l</sup> uk/ P29'	/píɣpak <sup>l</sup> uku/ P28'
/áxɣáúɣ <sup>w</sup> ai/	/aɣúma <sup>á</sup> x <sup>l</sup> uk/	/píɣpak <sup>l</sup> uku/
he'd send them away	pokefish	he treasured it

## 1.1.6.2. Cyclic syllable modification rules.

This set of rules applies as a group; the group applies at the word level, from left to right. Breve (˘) indicates unstressed syllable.

P30' / { $\frac{\$}{\#}$ }<sub>˘</sub>\$.\$.\$. /  $\Rightarrow$  / { $\frac{\$}{\#}$ }<sub>˘</sub>\$.\$.\$. / Rhythmic stress assignment.

P31' /C.CV̂. { $\frac{\$}{\#}$ }<sub>˘</sub>\$.\$. /  $\Rightarrow$  /C.CV̂. { $\frac{\$}{\#}$ }<sub>˘</sub>\$.\$. / Stress displacement.<sup>4</sup>

Rule P31' is not found in the NS dialect (Jacobson 1980c). It does not apply if an enclitic boundary (=) intervenes in the input, see anyani =llu and anyaq=llu=gguq below.

P32a' /C<sub>1</sub>V̂.C<sub>2</sub>VV/  $\Rightarrow$  /C<sub>1</sub>V̂C<sub>2</sub>.VV/ Gemination and secondary stress.

P32b' /ĈVC.CVV/  $\Rightarrow$  /ĈVC.CVV/

P33' /ĈV./  $\Rightarrow$  /ĈV̂./ Realization of open stressed syllables.

P34' /C<sub>1</sub>̂.C<sub>2</sub>/  $\Rightarrow$  /C<sub>1</sub>̂C<sub>2</sub>. /

## Examples:

utercitevkenaku		ilutequireluni	
/utɨxcitɨfkɨnaku/		/ilutɨquɨ <sup>w</sup> ɨluni/	
/utɨxcitɨfkɨnaku/	P30', cycle 1	/ilutɨquɨ <sup>w</sup> ɨluni/	P30', P33', cy. 1
/utɨxcitɨfkɨnaku/	P30', cy. 2	/ilutɨquɨ <sup>w</sup> ɨluni/	P30', P33', cy. 2
/utɨxcitɨfkɨnaku/	P30', cy. 3	/ilutɨquɨ <sup>w</sup> ɨluni/	P30', P33', cy. 3
/utɨxcitɨfkɨnaaku/	P33', cy. 3	/ilutɨquɨ <sup>w</sup> ɨluni/	
/utɨxcitɨfkɨnaaku/			she being in sorrow
not letting him go home			

nangtequq		ikamrirluteng	
/nɑŋtɨquq/	P28'	/ikɑmɨɨlutɨŋ/	
---	P30' fails	/ikɑmɨɨlutɨŋ/	P30', cy. 1, 2
/nɑŋtɨquq/		/ikɑmɨɨlutɨŋ/	P31', cy. 2
he is sick		/ikɑmɨɨlutɨŋ/	
		they having sleds	

eqtenqegcarlukɨ=llu		angyagni=llu	
/ɨqtɨŋqɨxcɑɨlukɨ=lu/	P28'	/ɑŋyɑɨni=lu/	P28'
/ɨqtɨŋqɨxcɑɨlukɨ=lu/	P30' cy. 1,2	/ɑŋyɑɨni=lu/	P30'
/ɨqtɨŋqɨxcɑɨlukɨ=lu/	P31', cy. 2	---	P31' fails
/ɨqtɨŋqɨxcɑɨlukɨ=lu/	P33', cy. 2	/ɑŋyɑɨni=lu/	P33'
/ɨqtɨŋqɨxcɑɨlukɨ=lu/		/ɑŋyɑɨni=lu/	
and gathering them well		and in two boats	

angyaq=llu=gguq		amiik	
/ɑŋyɑq=lu=x <sup>w</sup> uq/	P28'	/amiik/	
/ɑŋyɑq=lu=x <sup>w</sup> uq/	P30'	/ɑm.iik/	P32a'
---	P31' fails	/ɑm.iik/	
/ɑŋyɑq=lu=x <sup>w</sup> uq/	P33'	entranceway	
/ɑŋyɑq=lu=x <sup>w</sup> uq/			
and the boat, it is said			

Kapuutlermiut		ivaryaagvimineng	
/kɑpuutɨɨmiut/	P29'	/ivɑɨyɑɑqfiminɨŋ/	P29'
/kɑp.uutɨɨmiut/	P32a' cy. 1	/ivɑɨyɑɑqfiminɨŋ/	P30', cy. 1
/kɑp.uutɨɨmiut/	P32b' cy. 2	---	P32b' cy. 1 pre-empted
/kɑp.uutɨɨmiut/		/ivɑɨyɑɑqfiminɨŋ/	P30', P33' cy. 2
(abandoned village)		/ivɑɨyɑɑqfiminɨŋ/	
		about where they tried to search	

akekatakɨ	
/akɨkatakɨ/	
/akɨkatakɨ/	P30', cy. 1
/akɨk.atakɨ/	P34', cy. 1
/akɨk.ataaki/	P30', P33', cy. 2
/akɨk.ataaki/	
ouch!! (ak'a more common in Chevak)	

## 1.1.7. Post syllable-modification segmental rules.

P37' /VVC./ => /VVC./

Double vowel compression

Analytically, /VV̄/ is two segments, but contains only one mora. Note that only stressed double vowels are compressed; final double vowels, which are not stressed, do not undergo compression. In the Nunivak dialect, Jacobson (1980a) reports that all double vowels in closed syllables are compressed, stressed or not. In fact, double vowels in final syllables are compressed in that dialect even when the syllable is open.

Realization of compressed double vowels (VV̄):

(a) Compressed long vowels: /V<sub>i</sub>V<sub>i</sub>/ => /V<sub>i</sub>/.

Kapuutlermiut  
/káp·úútłłĩmiut/ P32a', cy. 1  
/káp·úútłłĩmiut/ P37', cy. 1  
/káp·úútłłĩmiut/  
(abandoned village)

amiik  
/ám·iik/ P32a'  
--- P36' fails  
/ám·iik/  
entranceway

(b) Diphthongs:

$\left\{ \begin{array}{l} /i\underset{\cdot}{u}W/ \\ /a\underset{\cdot}{u}W/ \end{array} \right\} \Rightarrow \left\{ \begin{array}{l} /iW/ \\ /aW/ \end{array} \right\}$  (W is a labialized velar fricative, created by P26')

piurtuq  
/piúx<sup>W</sup>tuq/  
/piúx<sup>W</sup>tuq/ P36'  
/piúx<sup>W</sup>tuq/  
he continues on

kaugluku  
/kaúx<sup>W</sup>luku/  
/kaúx<sup>W</sup>luku/ P36'  
/kaúx<sup>W</sup>luku/  
striking him

Elsewhere the compressed diphthongs are represented at the taxonomic phonemic level as /i<sub>u</sub>/, /i<sub>a</sub>/, /u<sub>i</sub>/, /u<sub>a</sub>/, /a<sub>i</sub>/, /a<sub>u</sub>/. For phonetic realization of compressed diphthongs, see §1.1.8.

Examples:

kapiakqapiggluku		kapiakaat
/ká·iákqapixʔuku/	P32a' cy. 1	/ká·iákaat/ P32a' cy. 1
/ká·iákqapixʔuku/	P37' cy. 1	--- P37' cy. 1 fails
/ká·iákqapixʔuku/		/ká·iákaat/
really worrying about it		they worried about it
kuigtangqertuq		kuik
/kúixtanqixtuq/	P29'	/kuik/
/kúixtanqixtuq/	P37' cy. 1	--- P37' fails
/kúixtanqixtuq/		/kuik/
		river

P39' /#i. {l} V/ ⇒ /# {l} V/ Initial schwa deletion.

(Note: /l,ʔ/ are non-geminate)

elituq		ellisqelluki		ellia
/iʔiʔituq/	P33'	/iʔiʔisqixʔuuki/	P33' cy. 2	/iʔ·ia/ P32a'
/liʔituq/	P39'	/iʔisqixʔuuki/	P39'	--- P39' fails
he learns		wanting them to be put		/iʔ·ia/
				he put it

#### 1.1.8. Selected phonetic rules.

The preceding rules bring the derivation to the taxonomic phonemic level. This section takes up phonetic rules. Since this class of rules increases in size as phonetic transcription gets narrower, this presentation is selective. In citations of derivations, I give the orthographic version, the taxonomic phonemic level representation, and the phonetic

representation. The latter is enclosed in brackets ([ ]).

### 1.1.8.1. Consonantal realization.

Two strongly interrelated phenomena are the surface length of consonants, and the degree of stridency of fricatives, that is, the degree of audible airstream turbulence in fricative realizations.<sup>5</sup>

Three degrees of length, short [C], semigeminate [C<sup>v</sup>], and long [C·], are discernible. They are found as follows:

$$P40a \quad / \acute{V}VC\acute{V}V / \Rightarrow [ \acute{V}VC^vVV ]$$

$$P40b \quad / \acute{V}C \cdot \left\{ \begin{array}{l} CVV \\ CV \end{array} \right\} / \Rightarrow [ VC \cdot \left\{ \begin{array}{l} C^vVV \\ C^vV \end{array} \right\} ]$$

$$P40c \quad / \acute{V}C \cdot / \Rightarrow [ \acute{V}C \cdot ] \quad (\text{elsewhere})$$

P40b and P40c are optional if the pre consonant-cluster stress to which they refer is the last stress in the word. In that position the cluster reduces to [C<sup>v</sup>C<sup>v</sup>] or even [CC] in the case of P40b; and to [CC] in the case of P40c. The above is a simplification, since a stylistic rule, generally on the cluster following the first or last stress in the last word of a phrase, often gives [C<sup>h</sup>C·], with a raise in pitch on the inserted schwa. I will not take that up here. Examples are given below for P40a (1,2,5,7), P40b (13,14), and P40c (4,6,11,12).

Three degrees of fricative stridency can be discerned for some fricatives: [2 strident], which corresponds to true fricatives, with strongly audible airstream turbulence; [0 strident], which corresponds to true approximants, with no audible airstream turbulence; and [1 strident], which for one segment, /y/, indicates an intermediate stage with weakly audible airstream turbulence, but for the others displaying it marks merely the optional alternation between [2 strident] and [0 strident].

The following is almost, but not quite, a correct formulation for the occurrence of stridency. To work, it must be ordered after P40a-c:

P41a /F·/ ⇒ [2 strident] /F<sup>v</sup>/ ⇒ [1 strident]  
 /F/ ⇒ [0 strident]. F = /y/, and all front and  
 back velar fricatives. (/f, v, ʃ, and s/ have audible  
 airstream turbulence in all environments, while /l/ has audible  
 airstream turbulence in no environment--compare GCY, where it  
 has turbulence preconsonantly).

The rule has two problems. The first is that it only gives correct results if the optionality of P40b and P40c is ignored. That is, even when a post-stress cluster is reduced to [CC], the first consonant, if it is a fricative to which P41a applies, will become [2 strident]. The other problem is that in one environment, stridency is unrelated to length; it is accounted for as follows:

P41b F ⇒ [1 strident] / /ɨ\_\_V̄V/ (see example 7 below).

Realization of fricative stridency is as follows (relevant example(s) are noted beside each allophone):

<u>Tax. Phonemic</u>	[2 strident]	[1 strident]	[0 strident]
/y/	[ɣ] (1)	[y] (2, 7)	[y] (3)
/ɝ/	[ɣ̣] (4)	[ɣ̣~ɝ] (5)	[ɝ] (6)
/x/	[χ̣]	[χ̣~x]	[x]
/ɝ̣/	[ɝ̣]	[ɝ̣~ɝ̣]	[ɝ̣] (5)
/x̣/	[χ̣] (6)	[χ̣~x̣] (7)	[x̣] (8)
/ɝ <sup>w</sup> /	[ɣ̣ <sup>w</sup> ]	[ɣ̣ <sup>w</sup> ~ɝ <sup>w</sup> ]	[ɝ <sup>w</sup> ] (10)
/x <sup>w</sup> /	[χ̣ <sup>w</sup> ]	[χ̣ <sup>w</sup> ~x <sup>w</sup> ]	[x <sup>w</sup> ]

<u>Tax. Phonemic</u>	[2 strident]	[1 strident]	[0 strident]
/ɣ̣ <sup>w</sup> /	[ɣ̣ <sup>w</sup> ] (11)	[ɣ̣ <sup>w</sup> ̣ɣ̣ <sup>w</sup> ]	[ɣ̣ <sup>w</sup> ] (12)
/x̣ <sup>w</sup> /	[x̣ <sup>w</sup> ]	[x̣ <sup>w</sup> ̣x̣ <sup>w</sup> ]	[x̣ <sup>w</sup> ]

[ɣ̣] is an alveolo-palatal fricative with audible turbulence, farther back than [ɣ̣] in English menagerie; [y] is like y in English yellow; [ỵ] is intermediate between the two, with weakly audible turbulence. For the velars, I use the subscript [̣] to indicate audible airstream turbulence, while lack of the subscript indicates an approximant articulation, with no turbulence audible. Thus, [ɣ̣] and [ɣ̣̣] are similar, respectively, to the approximant and the fricative (or trilled) pronunciations of r in Parisian French parle 'speak(s)'; [x̣] is similar in manner of articulation to retracted h in English hostile, but is not pharyngealized; [x̣̣] is similar to ch in German acht 'eight' (for speakers who give ch a uvular articulation); [ɣ̣<sup>w</sup>] is similar to w in English wide; and [ɣ̣<sup>w</sup>̣] has a very audible velar component, and is not familiar to me from European languages.

Examples:

1	ayautaa he left with it	/áy·aútaa/	[áɣ̣̣·mót <sup>h</sup> ·aa]
2	atuyuunata we never using it	/atúuyuúnata/	[atUúỵ̣ <sup>h</sup> ·Uúnata]
3	qayaq kayak	/qayaq/	[qayaq <sup>h</sup> ]
4	agluteng	/áɣ̣lutɨŋ/	[áɣ̣̣·lUtɨŋ]
5	muragauluteng they are made of wood	/muɣ̣ <sup>w</sup> ááɣ̣áulutɨŋ/	[moɣ̣ <sup>w</sup> ááɣ̣̣ <sup>h</sup> ·mólUtɨŋ]
6	igartuq he writes	/iɣ̣áxtuq/	[Iɣ̣áɣ̣̣·toq <sup>wh</sup> ]

7	keyirraan he alone	/k̄iyi'ixaan/	[k̄iyééx'aaŋ]
8	Can'irraq (personal name)	/cán·ixaq/	[cán·exaq]
9	tawaam however	/táx <sup>w</sup> ·aam/	[táx <sup>w</sup> ·aam]
10	tawa then	/tax <sup>w</sup> a/	[táx <sup>w</sup> a]
11	waqaurluq what's up, poor one?	/x <sup>w</sup> áq·áx <sup>w</sup> luq/	[x <sup>w</sup> áq·áx <sup>w</sup> luq <sup>wh</sup> ]
12	ircaq'ura his heart	/ixcaq <sup>w</sup> u/	[éx·caq <sup>w</sup> u]
13	tangvagtuurtuq he keeps watching	/táŋvax <sup>w</sup> túx <sup>w</sup> tuq/	[táŋvax <sup>w</sup> túx <sup>w</sup> tuq <sup>wh</sup> ]
14	Kapuutlermiut (abandoned village)	/káp·út <sup>w</sup> ix <sup>w</sup> miut/	[káp·út <sup>w</sup> ix <sup>w</sup> miut <sup>h</sup> ]

Two other consonantal rules are:

P42 /S#/ => [S<sup>h</sup>#]. See examples 3, 6, 8, 11, 13, and 14 above.

P43 /velar stops/ => [labialized] after /u/. See examples 6, 11, and 13 above.

#### 1.1.8.2. Vocalic realization.

Diphthongs are realized as shown in table 1-1. When the first element is /a/, it has greater length than the second element. Otherwise, the second element has greater length. This weighting, along with the assimilation between the two elements of the diphthong, is enhanced in the realization of compressed diphthongs, which is as follows (when unaffected by uvularization, see below):

/i'ú/ => [i'ú]	/ú'i/ => [ú'i]	/á'i/ => [é'í]
/i'á/ => [i'á]	/u'á/ => [ó'p]	/a'ú/ => [ó'ú]



Several rules may be posited to further define surface vowel quality.

P44 When preceding or following back velar consonants, vowels have coarticulated uvular constriction, and have the following changes in quality:

/i, ii, u, uu, iu, ui, and ɨ/ lower to [e, ee, o, oo, eo, oe, and ə], resp. Some lowering occurs for /ia, ai, ua, and au/ as well. /a, aa/ back to [ɑ, ɑɑ].

Examples (numbers refer to the 14 examples above): /i/ (8, 12); /ii/ (7); /u/ (5, 6, 11, 12, 13); /ɨ/ (14); /a/ (3, 8, 12); /aa/ (5, 7).

P45 /aF/ ⇒ [ɔF] where F is a labialized velar, where [ɔ] is a rounded low back vowel. When F is a back velar, [ɔ] is uvularized as well (see P44; note that this rule is technically somewhat inaccurate in its formulation, since it should apply to the output of P44 there).

Examples (numbers refer to the 14 examples above): 9, 10.

P46 /CaC/ ⇒ /CæC/ if both consonants are apicals. Rule is optional, typically occurring only in fast speech. E.g., cal' /cal/ 'also' becomes [cal] or [cæ l]; arnat /aɣnat/ 'women' becomes [ɑɣ·nat] or [ɑɣ·næt].

## 1.2. Morphophonemics.

This section begins with an inventory of morphophonemic segments and junctures, and a consideration of their syntagmatic properties (§1.2.1). The remainder takes up the rules (P1-P39) leading from the morphophonemic level to the taxonomic phonemic level in their order of application, following the diagram given in the introduction to this chapter: rules induced by juncture (P1-P20) (§1.2.2); pre syllable-modification

syllabic and segmental rules (P21-P26) (§1.2.3.); syllable modification rules (P27-P36) (§1.2.4.); and post syllable-modification segmental rules (P37-P39) (§1.2.5).

### 1.2.1. Morphophonemic segments, junctures, and syntagmatic constraints.

The morphophonemic segments are given in table 1-2. They are represented phonologically using symbols taken from the orthography.

Table 1-2: Morphophonemic segments.

CONSONANTS:	Apical		Velar		Lab. vel.
	Labial	Dental	Palatal	Front	Back (Front)
S :	p, <u>p</u>	t, <u>t</u> , t°	c, <u>c</u> , c°	k, <u>k</u> , k°	q, <u>q</u>
F <sub>v</sub> :	v	l	y	g, g:	r*, r°, <u>r</u> , r: w
F <sub>0</sub> :	vv	ll	ss	gg, <u>gg</u>	rr, <u>rr</u>
N :	m	n		ng, <u>ng</u> , ng:, <u>ng</u> :	
VOWELS:	Prime vowels (V)		Schwa	Long vowels and diphthongs indicated as they are in the orthography.	
	i	u, (u)	e, (e)		

a

Compared with the orthographic level, the morphophonemic level lacks voiceless nasals (N<sub>0</sub>) and three of the four labialized velar fricatives, but has a variety of additional segments symbolized with orthographic symbols plus diacritics which are not found at the orthographic level. It will be noted that in several instances the same diacritic is used with different function: thus c° and k° form a functional class separate from t° and again from r°; underlined velars form a functional class distinct from the functional class formed by underlined non-velar stops (p, t, c); all velars followed by colon form a functional class;

and vowels surrounded by parentheses ((u), (e)) do not form a functional class.

Bases (and suffixes) are classified according to their final segment(s) as they affect the combinatory potential of the base (or suffix) with further suffixes, as shown in table 1-3:

Table A-3: Base classes.

<u>Class</u>	<u>Final segment(s)</u>	<u>Examples</u>
I	CV-	ilu- (N) 'inside', aqua- (V) 'to fetch 0'.
II	VV-	ii- (N) 'eye', alarquá- (V) 'to instruct, give commands'.
III	Ce- (C ≠ t)	tepe- (N) 'odor', kaime- (V) 'to drop scraps'.
IVa	Fte-	caliste- (N) 'worker, doer', igte- (V) 'to jump down'.
IVb	Vte-, Nte-	ciute- (N) 'ear', kite- (V) 'to sink', uyangte- 'to peer down into 0'.
IVc	Vt°e-	canimet°e- (V) 'to be near', assiit°e- (V) 'to be bad'. Appears not to occur for noun bases. <sup>6</sup>
V	Vr°-	kuiguar- (N) 'oxbow lake', quilir- (N) 'tale', uqur- (N) 'fat, oil', cálinguar- (V) 'to pretend to work; to be making little things'.
VIa	Vr*- , Vg-	kiag- (N) 'summer', assir- (V) 'to be good', aturturar- (V) 'to keep singing', nayir*- (N) 'ringed seal', pilag- (V) 'to cut up 0'.
VIb	er*- , eg-	ater- (N) 'name', kemeg- (N) 'flesh', iter- (V) 'to enter', nulég- (V) 'to chip 0, be chipped'.
VIc	Vrr-, Vgg-	tangerr- (V) 'to see', nulirr- (N) 'wife', *yungegg- 'to love to V'.

VId C- (C ≠ velar F) am- 'going:0', tamat- 'there:E', paw- 'away:E',  
 =am 'yet, again'. Consists of demonstrative  
 bases, particles, and enclitics.

Class VId will not further be discussed in this chapter (for details of demonstrative base phonology, see §5).

In citing morphophonemic forms, the morphophonemes  $r^*$  and  $r^\circ$  are both cited as  $r$ , except in several critical environments where they contrast. First, for verb bases, it is hard to tell whether a base-final  $r$  preceded by a prime vowel is actually  $r^\circ$  or  $r^*$  (we know that *calinguar-* cited above has  $r^\circ$  since it ends in the postbase @-*nguar-* 'to pretend at V-ing, which has a nominal version -*nguar-* which is easily shown to have  $r^\circ$  by rule P20, among others; we know *aturturar-* cited above has  $r^*$  because of its behavior with rule P36). Thus, I do not distinguish between the two in my ordinary citations of verb bases.

When it is the final element of noun bases of classes V and VIa, I cite  $r^*$  as  $r^*$ , but leave  $r^\circ$  unmarked, as  $r$ , because it is by far the most common of the two in those contexts. When it is the final element of verb bases of class VIa and all bases of class VIb,  $r^*$  is cited as  $r$ , because  $r^\circ$  does not occur there at all. It happens that mood signs (§3.3.1) behave as noun bases. Thus they are cited using the conventions for citing noun bases of classes V and VIa, that is,  $r^*$  is written  $r^*$ , while  $r^\circ$  is left unmarked, as  $r$ . For example, -*ngrar\**-, the consequential mood sign, ends in  $r^*$  underlyingly, while +*ar-* the indicative trans. mood sign, #*lar-*, the transitive first person subject optative mood sign, and @#*aur-*, a variant transitive first person subject optative mood sign, all end in  $r^\circ$  underlyingly.

Historically, bases ending in  $\forall r^\circ$ - probably originally ended in  $\forall$ -

(i.e., from originally class I or class II bases), where the absolutive case singular marker +r- has been reanalyzed as part of the base. This process is still going on: one can, for example, hear both tuntu and tun-tuq today as the absolutive case singular form for the class I base tuntu- 'caribou'.

In some cases the contrast  $r^*$  vs.  $r^\circ$  can be detected morpheme-internally in complex bases and postbases, e.g., ukur $^\circ$ kar- 'fuel supply, and @+'ar $^\circ$ te- 'to V and immediately return to former state'. The first of these comes from uqur- 'oil' (from earlier \*uqu+r-, where +r- is the absolutive case singular marker), plus +kar- 'future N. The second of these comes from +'ar- passive participle (from earlier \*+'a+r-) plus +te- 'to go to N'). These contrast with the far more usual occurrence of  $r^*$  morpheme-internally (where it is written r), cf. @+'ar $^\circ$ te- above, vs. +arte- 'to V quickly'. The  $r^*$  vs.  $r^\circ$  contrast in morpheme-internal position can be detected by means of rule P36.

Morphophonemic junctures are a part of the morphophonemic representation of suffixes, occurring in front of the suffix and determining how it will combine with the different classes of bases. They are given in table 1-4:

Table 1-4: Morphophonemic junctures.

<u>Juncture</u>	<u>Symbol</u>	<u>Affects base class(es)</u>
Schwa-eliding	"	III, IV
Base-stressing	'	III
Apical changing	@	IV
(Subclasses	@1-@6)	
Retaining	+	V, VI

<u>Juncture</u>	<u>Symbol</u>	<u>Affects base class(es)</u>
Deleting	-	V, VI
Half-retaining	÷	V, VI
Velar-dropping	:	V, VI
Anomalous	%	any

No symbols are used for specifying behavior with classes I-II, since that is always predictable. Retaining juncture could be done away with since it denotes simple juxtaposition, but its retention ensures that every suffix will be recognizable as such by being preceded by a juncture symbol. Because different morphophonemic junctures affect different base classes, a given suffix often has more than one. Thus ng:u- NV 'to be N' uses juxtaposition with classes I and II, e.g., *nunau-* 'to be land' with *nuna-* 'land' (ng: lost by a later process), *iingu-* 'to be an eye' from *ii-* 'eye'; it uses schwa-eliding juncture with classes II and IV, e.g., *tepngu-* 'to be an odor' from *tepe-* 'odor', *angutngu-* 'to be a man' from *angute-* 'man'; and it uses a type of deleting juncture with classes V and VI, e.g., *arnau-* 'to be a woman' from *arnar-* 'woman', *nayiu-* 'to be a ringed seal' from *nayir\*-* 'ringed seal'.

The following are some syntagmatic generalizations about morphophonemic representations:

- (a) Bases may begin with p, t, c, k, q, l, y, w, m, n, ʋ (except (u)), schwa, and (e). (e) may only occur base-initially (see P29). English loans add v, vv, and ss to the list of base-initials.
- (b) Suffixes may begin with any morphophonemic level segment except t<sup>o</sup>, w, vv, gg, r<sup>o</sup>, rr, r:, e, or (e). Only endings (not postbases) can begin with t, c, c<sup>o</sup>, k<sup>o</sup>, g, g:, or gg.
- (c) No apical changing juncture except class :5 (@5) can occur on NV

(denominal verbalizing) or NN (noun elaborating) postbases, or on noun endings. An exception to this is %@<sup>u</sup>qur- 'one like N', which has a great many phonological and morphological irregularities, and occurs only in very lexicalized formations; Jacobson's @<sub>2</sub><sup>v</sup>vag- 'big N' is a counterexample as he formulates it (Jacobson, 1980b), but I regard that postbase as having the form @+lvag- (see footnote 6).

(d) Bases and suffixes conform to the syllable canon defined in §1.1.2.1 for the orthographic level. However, suffixes can consist of a well-formed fragment of a syllable.

When a morphophonemic representation is given for a complex base or complex suffix where the internal structure is irrelevant, the internal morphophonemic junctures are not reconstructed (i.e., the interior of the complex form appears in a representation at the orthographic level, using the orthography). Thus, the complex base composed of kite- 'to sink' plus @:(u)te- VV indirective can be represented as kiy'ute- 'to sink along with O' if the internal structure afforded by the representation kite@:(u)te- is irrelevant (see numerous examples in §7.7). At times more abstract forms are necessary to predict combination correctly. For example, the complex suffix -ng:ir:ute- NV 'to use up O's N; to have N no longer', composed of -ng:ir- NV 'to deprive O of its N, to be deprived of N' and @:(u)te-. Here r: is left in the middle of the morphophonemic form in order to account for the alternation in neqairute- 'to use up O's food, etc.', composed of neqe- 'food' plus the suffix, vs. uingiate- 'to no longer have a husband', composed of ui- 'husband' plus the suffix (deletion in these examples is a result of P20).

In a similar vein, I have presented non-complex bases and suffixes

in representations to which rules that stay wholly within the morpheme have already applied (provided all of the morpheme's surface occurrences are treated the same way by the rule). For example, underlying *cena-* 'edge, shore' is represented *ciña-*, since the two rules which apply to it (P24a,b) operate within the morpheme's boundaries. Likewise, unsegmented endings are represented with word-final changes (P25), since they are never followed by suffixes. For example, underlying *+tur-IND(3s)* and *-mte-RL(1p-s/p)* are represented *+tuq*, *-mta*.

### 1.2.2. Rules induced by juncture (P1-P20).

This set of rules derives the postjunctural level from the morphophonemic level. The postjunctural level is the level at which morphophonemic junctures (see table 1-4) are no longer needed, and are deleted.

These rules form a cycle which is applied as a whole to one boundary at a time, proceeding from left to right. That is to say, the rules join suffix to base to form an expanded base (or base plus ending unit). Only after the expanded base has undergone the cycle can a further suffix be joined via the cycle. Note that the cyclicity here works from left to right boundary by boundary, while the cyclicity in §1.1.6.2 and §1.2.4.2 works from left to right syllabic group by syllabic group. These left-to-right phonological cycles provided powerful confirmation for a view of morphological structure as "left branching" (item-and-arrangement interpretation) or derivational (item-and-process interpretation), as will be discussed in §6, rather than determined according to global fixed-order principles.

Base stress is presented in §1.2.2.1, and is ordered before all



else. In §§1.2.2.2-4, rules are discussed for each base class. Ordering is often crucial within each base class, but the ordering of the subsections is arbitrary, due to complementary distribution of the environments treated. In §§1.2.2.5-6 two sets of rules are discussed which are triggered by particular morphophonemes; these two sets are in complementary distribution, but they are fed by the rules in §§1.2.2.2-4.

Derivations at this level will be represented using the standard orthography, rather than a phonological notation. Conversion to a phonological notation, however, is a simple matter, and can be done according to the rules given in §§1.1.1-3. In citations of derivations, I use the following format:

morphophonemic level representation  
input to rule P<sub>n</sub>  
output of rule P<sub>n</sub> (P<sub>n</sub>)  
representation at the orthographic level using  
the standard orthography  
English gloss (inflectional category (see §2))

#### 1.2.2.1. Base stressing.

P1a #(C)VC- => #(C)V'C-

P1b #(C)Vte- => #(C)V'te- (where V' = stressed vowel)

Examples:

cug +t	cug -pig +∅	am +u +m
cu'g +t (P1a)	cu'g -pig +∅ (P1a)	a'm +u +m (P1a)
cug'et	Cup'ik	am'um
people (p)	Eskimo (ABs)	going:0- (RLs)

mite -llini +'uq	ate @+cite +'aat
mi'te -llini +'uq (P1b)	a'te @+cite +'aat (P1b)
mit'e'lliniuq	ac'itaat
it apparently <u>landed</u>	they made him <u>put</u> it <u>on</u>
IND(3s)	IND(3p-3s)

See rule P8 for similar phenomena. Rule P27a interprets stress.

## 1.2.2.2. Rules affecting prime-vowel final bases (classes I and II).

## 1.2.2.2.1. Deletion of (u).

(u) occurs in two suffixes (and in complex postbases containing them): @:(u)te- VV indirective, VN 'device for V-ing'; and :(u)ma- 'to be in a state of V'.<sup>7</sup>

P2 V- (u) ⇒ V

patu :(u)ma- +'uq		tai @:(u)te +'aa	
patu:ma +'uq	P2	tai@:te +'aa	P2
patumauq		taitaa	
it is <u>closed</u> IND(3s)		he <u>came</u> bringing it	IND(3s-3s)

## 1.2.2.2.2. Insertion of g (class II only).

P3 VV- V ⇒ VVgV

This process may be interpreted as "protective" of the syllable canon; since it prevents three and four vowel clusters. Examples:

tai +i		alarqua +'ai		cuu +'aqe -lriit	
tai +gi	P3	alarqua+'gai	P3	cuu+'gake -lriit	P3
tiagi		alarquagai		cuugaqelriit	
come! OPT(2s)		he instructs them		they <u>lived</u> on INP(3p)	
		IND(3s-3p)			

## 1.2.2.2.3. Suffix-initial vowel deletion (class I only).

P4 CV<sub>1</sub> V<sub>2</sub>V<sub>3</sub> ⇒ CV<sub>1</sub>V<sub>3</sub>

patu +'ai		nere -llru +'ung:a	
patu+'i	P4	nerellru+'ung:a	
patui		---	P4 fails
he closed them	IND(3s-3p)	nerellruunga	
		I ate	IND(1s)

This rule, like the preceding one, preserves the syllable canon. In fact the only diphthong-initial suffixes are transitive indicative endings built on +'aa- and +'ai-, from +'ar-ng:a IND(3x-Xs) and +'ar-ng:i- IND(3x-Xp), respectively (see §§2-3 for inflectional morphology). Thus an alternative account would treat the transitive indicative mood sign

as +'ar- for classes II-VI, but as  $\emptyset$  for class I. This gives a more elegant account, and it obviates the need to join the mood sign and person ending before joining the ending and the base (compare nerellruu-nga above, where the expected left-to-right order occurs regardless of the fact that ng: is ending-internal). I reject this account, however, because it introduces a morphological anomaly into the mood sign system when phonological motivation through preservation of syllable canon seems likely.

#### 1.2.2.2.4. Juxtaposition.

In all other instances, class I and II bases combine with suffixes with no changes to either. Examples:

uita + 'uq uitauq he stays IND(3s)	aata -ng:a aata+ng:a aatang:a aatii his father AB(3s-s)	kelu -lirner- $\emptyset$ kelulirner- $\emptyset$ kelulirneq the <u>area in back</u> ABs
ui -ka uika uika my husband AB(1s-s)	nanikua @#naur +tukut nanikuanaur+tukut nanikuanaurtukut we would <u>be uneasy, apprehensive</u> IND(1p)	

#### 1.2.2.3. Rules affecting schwa-final bases (classes II and IV).

##### 1.2.2.3.1. Base-final schwa deletion.

Base-final schwa is deleted withn a (prime)-vowel-initial suffix is added:

P5 C<sub>e</sub>- V ⇒ C- V (does not apply to te- @V, see P9)

ayuqe + 'uq ayuq+ 'uq P5 ayuquq it is <u>like that</u> IND(3s)	nere +i ner+i P5 neri eat! OPT(2s)	piurte + 'arkau #luku piurt+ 'arkau #luku P5 piurtarkauluku will <u>cause him to become</u> APO(3s)
---	---	---

Base-final schwa is deleted when the suffix is marked with schwa-deleting juncture (") (X = any consonant or vowel):

P6 Ce- "X => C- X (does not apply to te- @"X)

Clusters resulting when schwa-deleting suffixes beginning with y or with l followed by a consonant are added to class IV bases undergo the following assimilations:

P7a t- y => - c

P7b t- lV => - llV

aqva +ciqe @*ni #luki	taqe #yuit°e +'uq	mumigte #luni
aqvaciqe@*ni #luki	taq+yuit°e +'uq P6	mumigt+luni P6
aqvaciq@*ni #luki P6	taqsuituq	mumig+lluni P7b
aqvaciqniluki	it never <u>finishes</u>	mumiggluni
he saying he will <u>fetch</u>	IND(3s)	he, translating APO(3Rs)
them APO(3p)		

cungcarte #ng:u +'uq	atur #yunait°e #yaaqe #luni	
cungcart-#ng:u +'uq P6	aturyunait°e#yaaqe #luni	output of cy. 1
cungcarte#ng:uq	aturyunait°+yaaqe #luni	P6, cy. 2
he is a <u>doctor</u> IND(3s)	aturyunai+caaqe #luni	P7a, cy. 2
	aturyunaicaaqe#luni	rest of cy. 2
	aturyunaicaaq+luni	P6, cy. 3
	aturyunaicaaq+luni	
	it being <u>useless</u> and in vain APO(3Rs)	

Base-final schwa is not deleted by P6 if the deletion would lead to a same-consonant cluster followed by schwa:

cucuke @*kengar -#ng:ini	cf. mallunge #ng:ami
cucuke@+kengar -#ng:ini P6 fails	mallung-#ng:ami P6
cucukek'ngaini	mallung'ngami
of all the things he <u>wished</u>	when he got beached carcasses
<u>to be like</u> LC(3s-p)	CQO(3Rs)

#### 1.2.2.3.2. Base stress juncture (') (class III only).

This rule applies to vowel-initial suffixes marked with base stress juncture ('):

P8 #(C)VC- 'V => #(C)V'C- V (elsewhere, base stress juncture disappears)

tenge +'aqe +'uq		ane +'i #luku
teng+'aqe +'uq	P6, cy. 1	an+'i #luku P6, cy. 1
te'ng+aqe +'uq	P8, cy. 1	a'n+i #luku P8, cy. 1
te'ngaqe+'uq	rest of cy. 1	an'iluku
te'ngaq+'uq	P6, cy. 2	it <u>went out</u> on him APO(3s)
te'ngaq+uq	P8, cy. 2 fails	
teng'auq		cf. ane +i
it keeps <u>flying</u> IND(3s)		an+i P6
		ani
		go out! OPT(2s)

Note that this rule is preempted among class IV, V, and VI bases by P1a and P1b. Rule P27a interprets stress.

### 1.2.2.3.3. Apical changing juncture (@) (with class IV).

There are six classes of apical changing juncture (@1, @2, @3, @4, @5, @6), and a seventh class (%@) for all anomalous apical changing suffixes. The first five are recognized (with the above numbering) in Reed et al. 1977, and morphemes with other apical changing junctures are treated by them as lexical anomalies. While they mark the anomalies with '@' and number the occurrences of regular classes in representations, I tag anomalies as indicated above, and use unnumbered '@' whenever class can be predicted from the morphophonemic shape of the base. For @1, @2, and @3 suffixes, class is always predictable from morphophonemic shape, and for @5, it is predictable except in a single case. It is not predictable for @4 and @6, nor is it, of course, for the anomalies (%@). Thus, in effect, a large majority of the apical changing suffixes are marked simply with '@' by my analysis; a handful each with @4, @6, and %@; and one with '@5'. Because it reduces the number of morphophonemic junctures used from six to five, and because it eliminates redundant marking, I regard this analysis as an improvement over that in Reed et al. 1977.

Each class has a characteristic combinatory pattern with preceding class IV bases, as shown in rule P9, which is presented in tabular form:

P9		Suffix juncture and initial					
		@1 n	@2 X	@3 :(u)	@4 C	@5 X	@6 C
Class of base	IVa Fte-	F <sub>0</sub> n	F <sub>0</sub> X	F:u	FyC	FX	FteC
	IVb V <sub>N</sub> te-	V <sub>N</sub> tn	V <sub>N</sub> yC	V <sub>N</sub> yu	V <sub>N</sub> yC	V <sub>N</sub> X	V <sub>N</sub> teC
	IVc Vt <sup>o</sup> e-	Vtn	V1X	V1u	V1C	VX	V1C

(X = any segment; for @5X, when X is p, c, it becomes p, c; the suffix initials which can occur for each base class, represented as X or C here, are taken up below.)

For @5, the suffix-initial sound is a stop (p, t, c, c, k, k, q), l, ll, or a, e.g. (selected listing):

@+pagg	my, how V!
@*tek	OPT(2d) person marker
@+cite-	to let, allow, force 0 to V-intr, to be V-tr- ed by by TM
@* <u>c</u> i-	INT, non-third person S/A mood sign
@-ksagar*-	ugly, abnormal N
@* <u>k</u> enge-	to do V to 0; to experience successful V-ing
@qaqe-	for S (p1) to V one after another (with class IVa only).
@qurar-	to keep V-ing (with class IV only)
@+'ar <sup>o</sup> te-	to V and immediately return to former state
@lvag-	big N (with class IV only; suppletive with -rpag- (same meaning) see f.n. 6).
@l1er-	the most V of possessor (with class IVc only).

In addition, @5 has one member beginning with n (not predictable, see @1 below):

@5#ner- results of V

Examples:

tekiute @#ciugg tekiuciugg P9 you arrive with it INT(2s-3s)	uterte @+'ar°te #luni uterar°te #luni P9 ut'rarrluni he suddenly <u>going</u> back <u>home</u> APO(3Rs)	angute @-ksagar* +∅ anguksagar* +∅ P9 anguksagaq ugly, abnormal <u>man</u> ABs
maligute @qurar +tuq maliguqurar +tuq P9 maliguqurrertuq he kept <u>tagging</u> <u>along</u> IND(3s)	caskit°e @ller -ng:at caskiller -ng:at P9 caskillrat the <u>weakest</u> of them AB(3p-s)	merigte @5#ner +∅ merigner +∅ P9 merigneq hem (merigte- 'to sew') ABs

@5 bases beginning with a affect #(C)V'te- (underlyingly #(C)Vte-, see P1b) bases by converting t to y:

mite @+'ararte +'uq  
mi'te @+'ararte +'uq P1b  
mi'yararte +'uq P9  
miy'artuq  
he lands suddenly IND(3s)

For @1, the suffix-initial sound is n (selected listing):

@#nari- to be time to V

@-ner- activity or process of V-ing

@#ni- to say that O does V-intr, that O is V-tr-ed by TM

Examples:

kassaurte @-ner -ng:at kassaurner -ng:at P9 kassaurnerat their becoming <u>white</u> <u>people</u> AB(3p-s)	upete @#nari +'uq upetnari +'uq P9 upetnariuq it is time to <u>pre-</u> <u>pare</u> IND(3s)	assiit°e @#ni +'ai assiitni +'ai P9 he said they <u>were</u> <u>bad</u> IND(3s-3p)
---	---	---

For @3, the suffix-initial segment is :(u). All suffixes of this class are built on @:(u)te- (selective listing):

@:(u)te- VV indirective; device for V-ing; N which POS owns

@:(u)cir- condition of V-ing

Examples:

alarte @:(u)te +'aa	kite @:(u)te +'aa
alarute +'aa P9	ki'te@:(u)te +'aa P1b
alarutaa	ki'yute +'aa P9
he <u>did</u> to him by <u>mis-</u>	kiy'utaa
<u>take</u> IND(3s-3s)	he <u>sinks</u> with it
	IND(3s-3s)
neqait°e @:(u)cir -ng:atneng	cf. tekite- @:(u)te +'aa
neqailucir -ng:atneng P9	tekiute +'aa P9
neqailuciatneng	(expect: tekiyute +'aa by P9)
their <u>lack</u> of <u>food</u>	tekiutaa
MD(3p-s)	he <u>arrives</u> with it IND(3s-3s)

tekiute- above is anomalous.

For @2, the suffix-initial segment is ng, ng, m, v, or i. While there are numerous examples with ng and ng, the examples given for m, v, and i are the only ones I am aware of:

@*ngat°e-	to seem to V
@-nguar-	to pretend to V, play at V-ing
@*mi-	to V also
@*vig-	place to V
@+i-	to become V (with classes II, IV, V, VI)

Examples:

mumigte @-nguar +'ai	tekite @*mi +'uq	caskit°e @+i +'uq
mumiggn <u>gu</u> är +'ai P9	tekiymi +'uq P9	caskili +'uq P9
mumiggn <u>gu</u> arai	tekiymi <u>uq</u>	he became <u>weak</u> IND(3s)
he is pretending to <u>turn</u>	he also <u>arrived</u>	
them <u>over</u> IND(3s-3p)		

@4 juncture occurs with endings having a front velar as initial segment (k, k, g, ng). The last two suffixes cited below are postbases, but even the first of those could be analyzed as a mood sign, since it is always followed by a restricted set of endings. The examples below are exhaustive for my corpus. The symbol '@4' is used to distinguish these velar-initial @ suffixes from those in @2 and @5:



@4#ke-	transitive participial mood sign
@4#ku-	conditional mood sign
@4#ki, @4#kek	OPT(2s-3p/d)
@4#kut, @4#kuk	OPT(2s-1p/d)
@4gu	OPT(2s-3s), with class IV.
@4ngur*-	intransitive participial mood sign (with class IVc)
@4#nga	OPT(2s-1s)
@4+k <sub>i</sub> -	future; narrative past (must be immediately followed by OPT ending)
@4#ke-	for A to consider O to have the effect V on him

## Examples:

unite @4#ke -ng:a uniske -ng:a P9 uniskii he left it behind TRP(3s-3s)	tuqute @4gu tuquygu P9 kill it! OPT(2s-3s)	ciutait°e @ngur* +∅ ciutailngur* =∅ P9 Ciutailnguq deaf one (personal name, lit. one who lacks <u>ears</u> )
pegte @4#nga pegynga P9 pegeynga let me go, put me down! OPT(2s-1s)	kamilarte @4+k <sub>i</sub> #li kamilyarki #lī P9 kamilareshkili he took off his <u>boots</u> OPT(3s)	miket°e @4#ke #luki mikelke #luki P9 mikelkelluki considering them too <u>small</u> for him APO(3p)

@6 is a small class, with one representative each of three suffix-initials, t, c, and ng. The listing given is etymologically exhaustive, but @6+ta- begins many complex postbases not listed here:

@6+ta-	to V to a certain degree, to the degree of EQ
@6+caarar-	to try to be in a state of V
@6-ngrar*-	concessive mood sign

## Examples:

cagte @6+tassiir +'anka cagtetassiir +'anka P9 cagtetassiiranka I'm checking whether they are scattered IND(1s-3p)	qacigte @6-ngrar* +mi qacigtengrar* +mi P9 qacigtengremi even though it was easy CSO(3Rs)	caprite @6+tacir -ng:ani capritetacir -ng:ani P9 caprit'taciani because it has such power to succeed LC(3s-s)
---	---	---

tekite @6-ngrar* +mi	assiit <sup>o</sup> e @6+caarar +tuq	kiircit <sup>o</sup> e @6+ta +'uq
tekitengrar* +mi P9	assiilcaarar +tuq P9	kiircilta +'uq P9
tekitengremi	assiilcaarrertuq	kiirciltauq
even though he arrived	he's trying to be bad	it is as hot (in the
CS0(3Rs)	IND(3s)	atmosphere) IND(3s)

The remainder of the apical-changing suffixes show a variety of idiosyncracies and are placed in the %@ anomalous class. The following is an exhaustive listing of these for my corpus, with a characterization of their peculiarities:

%@a-           consequential mood sign with class IV (te ⇒ c, t<sup>o</sup>e ⇒ l).

%@inaner-      contemporative I mood sign with class IV (te ⇒ c, t<sup>o</sup>e ⇒ l).

%@<sup>u</sup>qur-,  
%@-qurr-       one that is V; one like N (highly lexicalized, with various morphological irregularities).

%@car-         to try to cause 0 to be in the state or process of V-ing (with class IVa: {~~q~~te ⇒ {~~k~~q} with classes IVb,c: follows the expected @5 pattern).

%@nga-         to be in a state of having V-ed (with class IVa: follows @2 or @4 according to semi-rigid rules of thumb, with much variation; with classes IVb,c: follows @4).

%@na-         appositional mood sign with class IVc (it<sup>o</sup>e ⇒ u, elsewhere C(V<sub>1</sub>)t<sup>o</sup>e ⇒ C(V<sub>1</sub>)-).

#### 1.2.2.3.4. t + t junctures (with class IV only).

P10 t + t ⇒ ce + t

Examples:

assikute + <del>s</del> te #tek	qimugte #t +tun	cali + <del>s</del> te #ta
assikutest+tek P6	qimugtettun	calist+ta P6
assikutesce+tek P10	qimugtece+tun P10	calisce+ta P10
assikutescitek	qimugtecitun	caliscita
they like each other	like <u>dogs</u> EQp	we work INT (1p)
IND(2d)		

This rule is also significant in etymology: @+cite- 'to let, allow, force 0 to V-intr, to be V-tr-ed by TM' is composed of @+te- and \*te-, both variants of the causative +te-. An apparently idiosyncratic application of a similar process occurs between the interrogative mood sign +(s)te- with +nung, the 1d person marker, giving +(s)cinung for INT(1d (-Xx)).

#### 1.2.2.3.5. Juxtaposition.

Other junctures do not cause changes in class III and IV bases, and simple juxtaposition occurs. t° becomes t at this point. Examples:

qimugte +yag +tuq	atur @*ngait°e -nrit°e +'arput
qimugteyag +tuq	aturngaitenrit°+arput
qimugteyagtuq	aturngaitenritarput
there are lots of dogs	we will not <u>avoid/escape</u> it IND(1p-3s)
IND(3s)	

niite +ste +∅	nere -llini +uq	ene -ngqerr +tua
niiteste +∅	nerellini +'uq	enengqerr +tua
niitesta	ner'lliniuq	enengqertua
one who <u>listens/obeys</u>	he evidently <u>ate</u>	I have a <u>house</u>
ABs	IND(3s)	IND(1s)

ayuqe +ciqe +'uq
ayuqeciqe +'uq
ayuqeci q +uq P5, P8
ayuqeci quq
it will <u>be like that</u> IND(3s)

#### 1.2.2.4. Rules affecting velar-fricative final bases (classes V and VI).

##### 1.2.2.4.1. Retaining juncture (+).

For suffix-initial ss (/s/) plus apical stop:

$$P11 \quad C + \left\{ \begin{array}{c} t \\ c \end{array} \right\} \Rightarrow C + \left\{ \begin{array}{c} t \\ c \end{array} \right\}$$

Examples:

qaner +ste +∅	acivar +sciigat°e +'uq
qaner+te + ∅ P11	acivar+ciigat°e +'uq P11
qanerta	acivarcigatuq
translator (lit: <u>speaker</u> ) ABs	he cannot <u>go down</u> IND(3s)

Elsewhere with retaining juncture, base and suffix are juxtaposed, with no changes to either:

ikamrar+kar +∅	nayir* +ssur +tuq	nuteg #yaaqe +'ai
ikamrar°kar +∅	nayirssur +tuq	nutegyaaqe +'ai
ikamrarka	nayirssurtuq	nutegyaaqai
material for a <u>sled</u> ABs	nayirrsurtuq	he <u>shot</u> but missed them
	he hunts <u>ringed seal</u>	IND(3s-3p)
	IND(3s)	
pilag @#vig +∅	nulirr +kar -ng:a	
pilagvig +∅	nulirrkarr -ng:a	
pilagvik	his <u>wife</u> to-be AB(3s-s)	
place for <u>cutting up</u>		
ABs		

When r°, written r for class V bases, is followed by a consonant through juxtaposition of a retaining suffix, it is correct to represent it as r°: thus ikamrar°kar- above. This notation is essential for determining applicability of rule P37. Making this distinction is not absolutely essential for bases which do not meet the environment for rule P37, thus angyar°kar- 'material for a boat' (angyar- 'boat' (class V) plus +kar-) can be written angyarkar-.

#### 1.2.2.4.2. Deleting juncture (-).

The first subrule for deleting juncture concerns those suffixes having initial assimilating velars. These are the morphophonemes k, q, r, gg, rr, and ng, indicated by underlining. This subrule is presented in tabular form, and shows the assimilations which occur in combination with class V and VI bases:

P12a	Suffix initial				
	<u>-k</u>	<u>-q</u>	<u>-gg</u>	<u>-rr</u>	<u>-ng(:)</u>
g-	k	k	g	gg	g(:)
r <sup>o</sup> -, r*	q	q	r	rr	r(:)
rr-	rq	rq	--	--	rr

There are two morphemes beginning in k which give rk rather than rq when added to class VIc bases ending in rr-. They are @\*kenge- 'to do V to O; experience successful V-ing' and @4+ki- 'future; narrative past'. I follow Jacobson (1980b) in writing them with k preceded by the symbol for retaining juncture. The table in rule P12a is incomplete in not indicating gg- finals (class VI): this final occurs in one productive morpheme, \*yunquegg- 'to love to V', which was not systematically tested.

Examples:

angag -ke +'aa  
 angake +'aa P12a  
 angakaa  
 that is his mother's  
brother IND(3s-3s)

ayag -qar +tuq  
 ayakar +tuq P12a  
 ayakartuq  
 he just left/fled  
 IND(3s)

kuig -rugar\* +t  
 kuigugar\* +t P12a  
 kuigugaat  
 lots of lakes p

ayag -rraar #luni  
 ayaggaar #luni P12a  
 ayaggaarluni  
 he, after leaving  
 APO(3Rs)

qetunrar\* -ke +'aa  
 qetunraqe +'aa P12a  
 qetunraqaa  
 that is his son  
 IND(3s-s)

cimir -qar +'ai  
 cimiqar +'ai  
 cimiqerai  
 he just changed them  
 IND(3s-3p)

qetunrar\* -ng:i  
 qetunrar:i P12a  
 qetunrai  
 his sons AB(3s-s)

tangerr @4#kuni  
 tangerquni P12a  
 if he sees CDO(3Rs)

nulirr -ng:a  
 nulirra P12a  
 his wife AB(3s-s)

tangerr @4+ki #liu  
 tangerki #liu  
 tangerkiliu  
 he saw him OPT(3s-3s)

For postbases with deleting juncture with suffix-initial -li, the

following rule applies:

P12b C(V<sub>1</sub>)V<sub>2</sub>(C) -li ⇒ C(i)i (optional, except as noted)

In effect, this phonological environment is a morphological environment, since it is specific enough that it picks out only those suffixes which have -li- NV 'to make N' as their first etymological element. Examples:

qayar -li + 'uq	cf. qayar -li + 'uq
qayi- + 'uq P12b	--- P12b
qayiuq	qayali- 'uq P12c
he makes a kayak	qayaliuq
IND(3s)	(same)

pal'tuug -li + 'uq	cf. pal'tuug -li + 'uq
pal'tii- 'uq P12b	--- P12b
pal'tiiguq	pal'tuuli + 'uq P12c
he makes a coat	pal'tuuliuq
IND(3s)	(same)

When both V<sub>1</sub> and V<sub>2</sub> are present, the rule cannot occur if the suffix has the form -liV, thus pal'tuug -liur- always becomes pal'tuuliur- 'to attend to a coat'. The rule is obligatory for certain lexicalized versions of -li suffixes, and this is indicated by representing those suffixes with --i (though this is an informal notational technique, and the correct notation is with the underlying form, plus an indication that P12b applies obligatorily). Examples of such suffixes are --i- NV 'to spend N, be full in N', and --ir- NV 'to be provided with N; for N to occur; to set N'. These derive, respectively, from -li-, noted above, and from -lir- NV 'to be provided with N (by A)'.

Elsewhere, deleting juncture causes the final velar fricative of class V and VI bases to drop entirely:

P12c F -C ⇒ C where F is a velar

Examples:

aqeygir -kcag +∅ aqeygikcag +∅ P12c aqeygikcak an apparent <u>ptarmigan</u> ABs	kukgar* -leg +∅ kukgaleg +∅ P12c kakgalek one having a <u>harpoon</u> ABs	qimag -nge +'uq qimange +'uq P12c qimanguq he begins to <u>flee</u> IND(3s)
ayag -qerte +'uq ayaqerte +'uq P12c ayaqertuq he suddenly <u>left</u> IND(3s)	qaner -tuli +∅ qanetuli +∅ P12c qantuli +∅ one who always <u>speaks</u> ABs	tangerr -llru +'uq tangellru +'uq P12c tangellruuq he <u>saw</u> IND(3s)

#### 1.2.2.4.3. Half-retaining juncture (±).

P13a  $r^\circ \pm X \Rightarrow X$

P13b  $F \pm C \left\{ \begin{smallmatrix} C \\ \# \end{smallmatrix} \right\} \Rightarrow F \pm eC \left\{ \begin{smallmatrix} C \\ \# \end{smallmatrix} \right\}$  (F = velar fricative, except  $r^\circ$  due to P13a)

P13c  $F_V \pm X \Rightarrow F_V : X$  ( $F_V$  = voiced velar fricative, except  $r^\circ$  due to P13a; see the related rule P14, and P20 for realization).

P13d Simple juxtaposition and elimination of ± elsewhere.

Examples:

qaygir ±t qaygit P13a men's houses p	qaygir ±neng qaygineng P13a men's houses MDp	nulirr ±k nulirr ±ek P13b nulirrek his two wives AB(3s-d)
qiir* ±t qiir*±et P13b qiir:et P13c qiiret strands of grey hair p	niicug ±sqe #luki niicug±esqe #luki P13b niicug:esqe #luki P13c niicuusqelluki saying to <u>obey</u> them APO(3p)	uqumyag ±neng uqumyagneng P13d pieces of pumice MDp

An apparent counterexample to P13b is posed by inflectional endings beginning ±geCC, e.g., ±gemta RL(1p-d), LC(1s-d) ±gemni. It would be more accurate to represent these endings as ±g-CC, e.g., ±g-mni cf. -mta RL(1p-s/p), -mni LC(1s-d), where the dual ±g is idiosyncratically unaffected by deleting juncture, which in some cases would obliterate it entirely (Miyaoaka, 1975: table 6 addresses this problem by writing

+g+mta RL(1p-d) beside -mta RL(1p-s/p). Thus:

kuig +g -mta	qetunrar* +g -mneng
kuig+eg -mta P13b	qetunrar*+eg -mneng P13b
kuig:eg -mta P13c	qetunrar:eg -mneng P13c
kuigegemta	qetunraagemneng
(not *kuig'gemta)	(not *qetunrargemneng)
our two rivers	my two sons MD(1s-d)
RL(1p-d)	

The gCC cluster created by attachment of the final CC-initial suffix is broken by schwa-insertion (P22).

A counterexample to P13a is provided by +sqe- VV 'to want/ask S/O to V or be V-ed (by TM)'. It apparently follows P13c even with class V verb bases (i.e., verb bases ending in r°).

#### 1.2.2.4.4. Velar dropping juncture (:).

P14  $F_V : X \Rightarrow F_V : X$  ( $F_V$  = voiced velar fricative, including r°)

Examples:

ayag :a	uqurkar :arar* +∅	qaner @:(u)te +'aa
ayag:a P14	uqurkar:arar* +∅	qaner:ute +'aa
ayii	uqurkaarar* +∅	qanrutaa
go away! OPT(2s)	uqurkarreq	he spoke to him
	scanty <u>fuel</u> <u>supply</u> ABs	IND(3s-3s)

#### 1.2.2.5. Stop frication and palatalization.

Though not directly induced by juncture as formulated, these rules are in part ordered before some juncture-induced rules (P20, and P6-7<sup>8</sup>), and may be considered part of the cycle.

##### 1.2.2.5.1. Frication of p, t, c.

P15  $C_pC \Rightarrow C_{pe}C$

P16a  $V \begin{Bmatrix} \underline{p} \\ \underline{t} \\ \underline{c} \end{Bmatrix} \Rightarrow V \begin{Bmatrix} \underline{v} \\ \underline{y} \\ \underline{y} \end{Bmatrix}$



P16b Remaining p, t, c become p, t, c.

These rules must be ordered after rules induced by deleting (-), retaining (+), and apical changing (@) junctures, but before deletion of schwa by schwa-eliding (rule P6), as shown in the examples below:<sup>8</sup>

angyar #tek angyartek angyartek P16b your <u>boat</u> AB(2d-s)	panig +pneng panigpneng panigpeneng P15 panigpeneng P16b about your daughter MD(3s-s/p)	nuna +pni nunapni nunavni P16a in your presence LC(2s-s/p)
caqute +put caquteput caqutevut P16a our bag AB(1p-s/p)	angyar #tek angyatek angyayek P16a your boat AB(2d-s) (older speakers' variant #tek, see §3.2, item 1)	tekiute @#ciugg tekiuciugg P9 --- P16a,b tekiuciugg INT(2s-3s)

assike @#ciugg  
assike"ciugg  
assike"yiugg P16a  
assikiyugg P6  
assiksiugg  
you like it INT(2s-3s)

#### 1.2.2.5.2. Frication of c°, k°.

P17 c° ⇒ ss / {t(e)  
                  (e)t}

P18a k° ⇒ gg / e\_\_V

P18b k° ⇒ g / e\_\_(e)C

Examples:

taqe +(s)te +c°iugg taqestec°iugg taqestessiugg P17 you finish with it INT(2p-3s)	keneke +'aite +c°i kenekaitec°i kenekaitessi P17 kenkaitessi they <u>love</u> you IND(3p-2p)	ulluvag +pk°un ulluvagpek°un P15, P16b ulluvagpeggun P18a by way of your cheek VL(2s-s/p)
---	---	---

uingyug +pk°et°e %@nani  
uingyugpek°et°e %@nani P15, P16b  
uingyugpeget°e %@nani P18b  
uingyugpegnani she not wanting to get married APO(3Rs)

Chevak  $c^\circ$  corresponds to GCY c, cf. GCY @5\*ceciu, Chevak @\*(s)tessiugg INT(2p-3s); GCY +'(g)aiceci, Chevak +'aitessi IND(3p-2p); and probably GCY cacetu- Chevak castu- 'to be strong, brave' if Chevak's form is underlyingly  $\sqrt{cac^\circ e}$ - 'strength' plus +tu- 'to be endowed with N (quality)'. GCY caceskite- $^\circ$  'to lack fortitude' would then have to be composed of cace- plus an unidentified element +ss- plus +kite- $^\circ$  'to lack N (quality)', as against Chevak's cognate caskit $^\circ e$ -, which would consist of  $cac^\circ e$ - plus +kit $^\circ e$ - only.

#### 1.2.2.5.3. Palatalization.

This rule operates on a purely phonological environment, and does not depend on juncture. However, it must be included among rules induced by juncture because it is ordered before P20, which is induced by juncture and part of the cycle.

P19  $ti \Rightarrow ci$

Examples:

ate +'i #luni	ivarute -li +'uq	cf. ivarute -ng:a
a'ti #luni	ivaruti- +'uq P12b	ivaruteng:a
a'ci #luni P19	ivaruci +'uq P19	--- P19
ac'iluni	ivaruci <u>uq</u>	ivarutii P20e
he puts clothes on	he composes a <u>song</u>	his song AB(3s-s)
	IND(3s)	

#### 1.2.2.6. Velar dropping.

This rule with many subparts is included among rules induced by juncture for two reasons. First, although it is triggered, strictly speaking, by a set of morphophonemes (ng:, g:, and r:) rather than by a morphophonemic juncture, two of those morphophonemes (g: and r:) are created by rules from junctures (see P12a, P13c, and P14). Second, it applies as part of the same left to right cycle that the other rules induced by juncture do. This is illustrated by the contrasting examples

kuvviariutuq 'he is running out of coffee' vs. neqkairutuq 'he is running out of food' in §1.2.2.6.2, below. Velar dropping is concerned with the disposal of the morphophonemes ng:, g:, and r: in intervocalic position.

A general constraint on velar dropping rules is that they do not apply to ng:, g:, and r: (represented with C:) in sequences #(e)VC:V, nor in one instance of the sequence #CV'C:V, namely when it contains cug- 'person', with plural †t (even there only optionally):

(e)mer @:(u)te +∅	cug †t	cf. cug -ng:it <sup>o</sup> e +'uq
(e)mer:ute +∅ P14	cu'g:et P13b,c	cug:it <sup>o</sup> e +'uq P12a
mer'un	cuut P20b (opt)	cuit <sup>o</sup> e +'uq P20d
drinking ladle ((e)mer-	Both cuut and	cuituq
'water') ABs	cug'et acceptable	there is no one there
	people ABs	IND(3s)

GCY has yuut only, corresponding to Chevak cug'et, cuut; however in both Newtok and Scammon Bay, the two GCY speaking villages nearest to Chevak and Hooper Bay, both yuut and yug'et are found (author's field notes).

#### 1.2.2.6.1. Affecting CV<sub>1</sub>C:e.

P20a Cag:e ⇒ ii (except with †sqe- and derivatives)

P20b Elsewhere CV<sub>1</sub>C:e ⇒ V<sub>1</sub>V<sub>1</sub>

aumag †t	caviggar* †t	arillug †gneng
aumag:et P13b,c	caviggar:et P13b,c	arillug:egneng P13b,c
aumiit P20a	caviggaat P20b	arilluugneng P20b
embers p	knives p	fishskin mittens MDp
akilir †sqe †luki	ayag †squmanrit <sup>o</sup> e +'uq	
akilir:esqe †luki P13b,c	ayag:esqumanrit <sup>o</sup> e +'uq P13b,c	
akiliisqe †luki P20b	ayaasqumanrit <sup>o</sup> e +'uq P20b (P20a: fails)	
akiliisqelluki	ayaasqumanrituq	
wanting someone <u>to pay</u> them	he's not permitted <u>to go</u>	IND(3s)
APO(3p)		

1.2.2.6.2. Affecting  $CV_1C:V_2\{C\}$ .

P20c  $Ca\{g:\}_{ng:a} a\{C\}_{\#} \Rightarrow Cii\{C\}_{\#}$ .

P20d Elsewhere:  $CV_1C:V_2 \Rightarrow CV_1V_2$ .

aata -ng:a  
 aatang:a  
 aatii P20c  
 his father AB(3s-s)

qalqapag -ng:a  
 qalqapag:a P12a  
 qalqapii P20c  
 his axe AB(3s-s)

qetunrar\* -ng:a  
 qetunrar:a P12a  
 qetunraa P  
 his son AB(3s-s)

ayag @:(u)te +'aa  
 ayag:ute +'aa P14  
 ayaute +'aa P20d  
 ayautaa  
 he went off with  
 it IND(3s-3s)

kuuvviar -ng:ir:ute +'uq  
 kuuvviar:ir:ute +'uq P12a  
 kuuvviarir:ute +'uq P20d  
 fails  
 kuuvviariute +'uq P20d,  
 next cycle  
 kuuvviariutuq  
 he is running out of  
coffee IND(3s)

neqkar -ng:ir:ute +'uq  
 neqkar:ir:ute +'uq P12a  
 neqkair:ute +'uq P20d  
 neqkairute +'uq P20d fails  
 on next cycle  
 neqkairutuq  
 he is running out of food  
 IND(es)

1.2.2.6.3. Affecting eng:V  $\{C\}$ .

P20e eng:a  $\{C\}_{\#} \Rightarrow ii\{C\}_{\#}$ .

P20f eng:i  $\{C\}_{\#} \Rightarrow ai\{C\}_{\#}$ .

issrate -ng:a  
 issrateng:a  
 issratii P20e  
 her tote bag AB(3s-s)

issrate -ng:i  
 issrateng:i  
 issratai P20f  
 her tote bags AB(3s-p)

1.2.2.6.4. Affecting  $Ce\{g:r\}V$ .

In this environment, g: and r: are retained, but the distribution of schwa is affected.

P20g  $VCe\{g:r\}V \Rightarrow VC\{g:r\}V$

ater -ng:a	tuulleg +gneng	avener -ng:ir:ute +'aa
ater:a P12a	tuulleg:egneng P13b,c	avener:ir:ute +'aa P12a
atra P20g	tuullgegneng P20g	avenrir:ute +'aa P20g
his name AB(3s-s)	big loons MDP	avenriute +'aa P20d
		avenriutaa
		he drained him of his
		spirit IND(3s-3s)

It appears, however, that schwa is not deleted when it is preceded by a consonant cluster:

kassaurte @-ner -ng:atgun	kepe @5#ner +m
kassaurrner:atgun P12a	kepner:em P13b,c
kassaurrneratgun P20g fails	kepnerem P20g fails
because of their becoming	of the door cut in the side of the
<u>white people</u> VL(3p-s)	house RLs

Avener- 'spirit' in the example above these would produce the wrong results by this set of rules if represented avner- (as it is by Jacobson 1978, which presupposes the rules in Reed et al. 1977). The likely etymology, from aveg- 'to divide in half' plus @-ner- 'activity or process of V-ing', supports avener-. Still other cases show both deletion and non-deletion of schwa:

malruner -leg +n	malruner -leg +n
malruneleg:en P13b,c	malruneleg:en
malrunelgen P20g	malrunelegen P20g fails anomalously
seven (less common variant)	malrunlegen P30, P34
	seven (more common variant)
arver +m	arver +m (not *arever-, cf. Inuit arfiq)
arver:em	arver:em
arverem P20g fails	arvrem P20g applies anomalously
bowhead whale	arevrem P22b
(variant in GCY, not found in Chevak)	(variant in GCY, exclusive form in Chevak)

I do not fully understand the conditioning factors for the anomalous but more common (or exclusive) variants in Chevak. The solution offered by Reed et al. (1977) depends on representations where all schwas are inserted. The present account treats schwa as phonologically inserted only where this is justified on etymological grounds; etymological schwas are represented in underlying representation. For this reason,

I have been able to get closer to a solution to the distribution in class VIc bases (see Reed et al. 1977:314-6, where a statement of the problem and an analysis are given).

#### 1.2.2.6.5. Remaining C: morphophonemes.

P20h Elsewhere, C<sub>1</sub>: ⇒ C<sub>1</sub>

qiir* †t	ii -ng:irarte +'uq	kiag @:(u)te +'ai
qiir:et P13b,c	iing:irarte +'uq	kiag:utai P14
qiiret P20h	iingirarte +'uq P20h	kiagutai P20h
strands of grey hair	iingi'rtuq	summer came upon them
p	he was injured in	IND(3s-3p)
	the eye IND(3s)	

#### 1.2.3. Pre syllable-modification syllabic segmental rules (P21-P26).

These rules lead from the postjunctural level to the level to which syllable modification rules (P27-P36) apply. Functionally, these rules serve to compost or preserve syllables in(to) the shape defined for the syllable in §1.1.2.1, where vowel and consonant clusters may each not exceed two, and where all syllables except the initial must begin with a consonant. Further, these rules are concerned with assimilations and other segmental changes, particularly as they interact with the syllable structure rules.

These rules differ from those in §1.2.2 in that they do not apply as a complete cycle, from left to right. Rather, they apply in order where ever their conditions are met in a word. Of these rules, some are preorthographic, and others are postorthographic (see introduction to this chapter). Those which are postorthographic have already been discussed once in §1.1.5.

Because of this mix of pre- and postorthographic rules, the presentation is far clearer when derivations are represented with standard phono-

logical symbols. Derivations take the following form:

morphophonemic level representation, using orthographic symbols  
 /input to rule P<sub>n</sub>/  
 /output of rule P<sub>n</sub>/ P<sub>n</sub>  
 /pre syllable modification level, i.e., output of P26, if different/  
 (orthographic representation at orthographic level, for reference only)  
 English gloss, and inflectional category (see §2).

In translating the orthographic symbols I have used to represent the outputs of rules P1-P20 into the phonological symbols used for the inputs of P21 and following rules, consult table 1-1. Stress assigned by P1 and P8 are represented /V/ phonologically.

1.2.3.1. Progressive voice assimilation [postorthographic, see also P21']].

P21 /C<sub>0</sub>C<sub>V</sub>/ ⇒ /C<sub>0</sub>C<sub>0</sub>/ (C<sub>0</sub> = S, F<sub>0</sub>, N<sub>0</sub>; C<sub>V</sub> = F<sub>V</sub>, N<sub>V</sub>).

angute <u>ng</u> :u + 'uq	agte @# <u>naur</u> + 'ai	ater - <u>ng</u> :a
/a <u>ng</u> tu <u>u</u> q/	/ax <u>naur</u> ai/	/at <u>ng</u> a/
/a <u>ng</u> tu <u>u</u> q/ P21	/ax <u>naur</u> ai/ P21	/at <u>ng</u> a/ P21
(a <u>ng</u> tu <u>u</u> q)	/ax <u>naur</u> wai/ P26	(a <u>ng</u> a)
he is a <u>man</u> IND(3s)	he <u>sent</u> them <u>away</u>	his name AB(3s-s)
	IND(3s-3p)	

tangerr #yuit<sup>o</sup>e + 'uq  
 /tangxyuituq/  
 /tangxyuituq/ P21  
 (tangerrsuituq)  
 he never sees IND(3s)

Orthographic note: at the orthographic level, SF<sub>0</sub> clusters are written with a voiced symbol for F<sub>0</sub> even when this is etymologically incorrect. E.g., in kepraarluki 'after cutting them' from kepe- 'to sever' plus -rraar- 'after V-ing' plus #luki APO(3p), orthographic pr represents etymological /p<sub>x</sub>/ (from /p<sub>x</sub>/). This is nothing more than a technique for representing neutralization non-abstractly in the orthography.

## 1.2.3.2. Schwa insertion [preorthographic].

$$P22a /C \left\{ \begin{array}{c} t \\ q \\ k \end{array} \right\} C/ \Rightarrow /C \left\{ \begin{array}{c} t \\ q \\ k \end{array} \right\} \dot{C}/$$

$$P22b \text{ Elsewhere, } /CCC/ \Rightarrow /CC\dot{C}/$$

piste ʰng:u + 'uq /pistɲuuq/ /pistɲuuq/ P21 /pistɲuuq/ P22a  (pistɲuuq) he is a servant IND(3s)	pi :sqe #luku /pissluku/ /pissluku/ P21 /pissluku/ P22a (pissluku) wanting him to <u>do</u> it APO(3s)	aqume @ʰ(r)qe @#naur + 'ai /aqumqnauʒai/ /aqumqnauʒai/ P21 /aqumqnauʒai/ P22a (aqumqnaurai) he would make them <u>sit</u> <u>down</u> one by one IND(3s-3p)
--	--	---

miket°e @4#ke #luki /mikɪkluki/ /mikɪkluki/ P21 /mikɪkluki/ P22a /mikɪkluki/ P23 (mikɪkluki) considering them too small for him APO(3p)	kamilarte @4-ki #li /kamilaɣykili/ /kamilaɣykili/ P22b /kamilaɣiskili/ P23 (kamilaɣiskili) he <u>took off</u> his <u>boots</u> OPT(3s)	maligte @4#nga /maligɣynga/ /maligɣynga/ P22b (maligeynga) come with me! OPT(2s-1s)
--	--	---

ayme #te + 'aa /aymtaa/ /aymtaa/ P22b (aymtaa) he splits it in two IND(3s-3s)	cf. nalleke #luki /nalɪkluki/ /nalɪkluki/ P21 (nallekluki) <u>finding</u> them APO(3p)
--	--

Jacobson (1978) represents nalleke- as nalke- 'to find, to discover': this however leads to \*nalekluki by rules in Reed et al. (1977:30), since their equivalents of P22 and P23 follow the same order as is given here. Setting up schwa in nalleke- (vs. nalke-) is supported by the probable etymology nalle- 'corresponding in time or space to possessor' plus -ke- 'for A to have O as his N'. Some Central Yup'ik dialects have /nalɪkluki/ (nalkekluki) alongside /nalɪkluki/ (nallekluki). I suggest that for those the base is nalke-, having undergone rules P30 and P34 within the base at an earlier stage; alternatively, in P22a, interconsonantal k could be given as an optional conditioning factor



as it applies in those dialects.

In some cases /ɣ,χ/ are lost before /qC/; this process is associated with the morpheme @narqe- 'to tend to V, be V-able', e.g., alingnaqluni 'he is fearful' APO(3Rs), with base alinge- 'to be afraid'. However, this process is also found in some cases where an /χq/ sequence is derived, e.g., nuliqsagutaa 'he married her' from nulirr- 'wife' plus -ksagute- 'to acquire O as one's N' plus +aa IND(3s-3s), with an intermediate form /nuliχqsagutaa/. I have not isolated the conditioning factors here. A related phenomenon is the idiosyncratic deletion of r in the postbase @<sup>u</sup>(r)qe- 'for S/O (plural) to V one by one (because of A)' in those cases where it follows a consonant after the juncture-induced rules have applied (e.g., in aqumqeñaurai above).

### 1.2.3.3. Regressive voice assimilation [postorthographic, see P23'].

$$P23 \ /F_V \left\{ \begin{matrix} F_0 \\ S \end{matrix} \right\} / \Rightarrow \ /F_0 \left\{ \begin{matrix} F_0 \\ S \end{matrix} \right\} /$$

See mikelkelluki and kamilaeskili in §1.2.3.3 above, and:

qayar +lliqe əm	nere @4 <sup>u</sup> kii	tangerr +tuq
/qayaɣʈiqə̃m/	/nɪ̃ɣkii/	/taŋɪ̃χtuq/
/qayaxʈiqə̃m/ P23	/nɪ̃χkii/ P23	--- P23 fails
(qayarriqem)	(nerkii)	/taŋɪ̃χtuq/
of how bad the kayak	he eats it	(tangertuq)
is RLs	TRP(3s-3s)	he sees IND(3s)

Orthographic note: At the orthographic level, F<sub>0</sub>F<sub>0</sub> clusters are written with a voiced symbol for the second element even when this is etymologically incorrect, e.g., qayarriqem above, which (unrealistically) undergoes the orthographic rule P22' instead of P23'. Similarly, F<sub>0</sub>S clusters are written with a voiced symbol for F<sub>0</sub> even when etymologically incorrect, e.g., tangertuq above. This is nothing more than a technique for representing neutralization non-abstractly in the orthography.

1.2.3.4. /cɨC/ rules, where C = dental consonant. [Preorthographic]

P24a /cɨ $\left\{\begin{smallmatrix} n \\ l \end{smallmatrix}\right\}$ / => /cɨ $\left\{\begin{smallmatrix} \emptyset \\ t \end{smallmatrix}\right\}$ /

P24b /cɨC/ => /ciC/, where C = dental consonant

For example, see assikutescitek, qimugtecitun, and caliscita in §1.2.2.

3.4, and:

cena -ng:ani		cetama+n		cela- ∅	
/cɨniini/		/cɨtaman/		/cɨla/	
/cɨniini/	P24a	---	P24a	/cɨla/	P24a
/cɨniini/	P24b	/citaman/	P24b	/ciɨa/	P24b
(ciɨniini)		(citaman)		(cilla)	
on the shore/edge of		four		outside, weather, cosmos	
it LC(3s-s)				ABs	

The /ŋ/ created by this rule is devoiced under certain conditions, see P38. P24b is special to Chevak, cf. GCY ceɨini, cetaman, and cella, and qimugtecetun (cf. §1.2.2.3.4). Where /cɨC/ occurs word-initially, there is evidence to suggest that a yet more abstract underlying form could be set up /ciC/, hence cina-, citama+n, cila- (Miyaoaka 1975:13; has /i/ in all environments), cf. Greenlandic sini-, sisama+t, sila- (one would expect initial t if the vowel were underlyingly /ɨ/). Thus Chevak's P24b changes the vowel back to the quality of the underlying one. Where /cɨC/ occurs non word-initially, the situation is different: there, the /ɨ/ is intrinsic, e.g., for EQp, Chevak ɨcitun and GCY ɨcetun, but Greenlandic -titut, indicating underlying schwa. The following is a demonstration of the rules as they apply to the underlying representation of the EQp ending:

ɨt +tun	
ɨce+tun	P10 (modern GCY form)
ɨcitun	P24b (modern HBC form)

## 1.2.3.5. Word-final changes [preorthographic].

These rules refer to word-final as well as pre-enclitic position.

P25a /Vɣaɣ\*<sub>#</sub>/ ⇒ /Vɣɣq<sub>#</sub>/

P25b /<sub>#</sub><sub>#</sub>/ ⇒ /<sub>#</sub><sub>#</sub>/

P25c /Vtɣ<sub>#</sub>/ ⇒ /Vn<sub>#</sub>/

P25d Elsewhere, /Cɣ<sub>#</sub>/ ⇒ /Ca<sub>#</sub>/

qayakcuarar\*+∅  
/qayakcuaɣaɣ\*/  
/qayakcuaxɣq/ P25a  
(qayakcuarreq)  
little kayak ABs

Cu'pig +∅  
/cúpiɣ/  
/cupik/ P25b  
(Cup'ik)  
Eskimo ABs

caviggarr\* +∅ =gga  
/cavixaɣ<sub>#</sub>xa/  
/cavixaq=xa/ P25b  
(caviggaq=gga)  
knife here ABs

qayar +∅  
/qayaɣ/  
/qayaq/ P25b  
(qayaq)  
kayak ABs

aullutarr-  
/auɫutax/  
--- P25b  
(aullutarr)  
oh gee! PT

assirpagg-  
/asixpax/  
--- P25b  
(assirpagg)  
very good! PT

angute +∅ =llu  
/angutɣ=ɫu/  
/angun=ɫu/ P25c  
(angun=llu)  
and (the) man ABs

issrate +∅  
/isɣatɣ/  
/isɣan/ P25c  
(issran)  
tote bag ABs

agayulirte +∅ =gguq  
/aɣayulixtɣ=xuq/  
/aɣayulixta=xuq/ P25d  
(agayulirta=gguq)  
the priest, it is said ABs

tume +∅  
/tumɣ/  
/tuma/ P25d  
(tuma)  
footprint, trail ABs

akerte +∅  
/akɣxtɣ/  
/akɣxta/ P25d  
(akerta)  
(the) sun ABs

## 1.2.3.6. Labialization of velars. [Postorthographic]

P26 /uG/ ⇒ /uW/ (G = non-labialized (front or back) velar fricatives;

W = labialized (front or back) velar fricatives.

For examples, see §1.1.5.2.

#### 1.2.4. Syllable modification rules (P27-P36).

These rules are concerned largely with the assignment of gemination, vowel length, and stress, as well as prosodically controlled segmental deletion. Like the previous set of rules, this set contains preorthographic and post orthographic processes.

Derivations are presented in the following form:

morphophonemic level representation  
 /input to rule Pn/  
 /output of rule Pn/ Pn  
 /taxonomic phonemic level representation/  
 (orthographic representation at the orthographic level, for reference only)  
 English gloss, and inflectional category (see §2).

##### 1.2.4.1. Inherent stress rules.

These rules assign stress and gemination in syllables of certain shapes. They apply anywhere in a word, in their order; it is not necessary to consider them as part of a cycle.

P27a /#(C)VCV/ ⇒ /#(C)VC·V/ (cf. P1, P8) [Preorthographic]

P27b /#(i)C<sub>i</sub>CV/ ⇒ /#(i)C<sub>i</sub>C·V/

P27c /#(i)qV/ ⇒ /#i<sub>q</sub>V/ (optional)

P27d /#(i)CC/ ⇒ /#i<sub>CC</sub>/

P27e Elsewhere: /#(i)/ ⇒ /#/

cug ðt /cú <sup>w</sup> ít/ (cf. P1a) /cú <sup>w</sup> ·ít/ P27a (cug'et) people (p)	tenge + <sup>1</sup> uq /t <sub>i</sub> ŋuq/ (cf. P8) /t <sub>i</sub> ŋ·uq/ P27a (teng'uq) it flies IND(3s)	(e)mer ðm /(i)m <sub>i</sub> ð <sub>i</sub> m/ /(i)m <sub>i</sub> ð <sub>i</sub> ·ð <sub>i</sub> m/ P27b /m <sub>i</sub> ð <sub>i</sub> ·ð <sub>i</sub> m/ P27e (mer'em) of water RLs
(e)ceg -llini #luni /(i)c <sub>i</sub> l <sub>i</sub> iniluni/ /(i)c <sub>i</sub> l <sub>i</sub> ·iniluni/ P27b /c <sub>i</sub> l <sub>i</sub> ·iniluni/ P27e /c <sub>i</sub> l <sub>i</sub> ·iniluni/ (cell'iniluni)	(e)qete -l <sub>i</sub> ler #mi /(i)q <sub>i</sub> t <sub>i</sub> l <sub>i</sub> ð <sub>i</sub> mi/ /i <sub>q</sub> t <sub>i</sub> l <sub>i</sub> ð <sub>i</sub> mi/ P27c /i <sub>q</sub> t <sub>i</sub> l <sub>i</sub> ð <sub>i</sub> mi/ (eqetlermi) OR:	(e)qete -l <sub>i</sub> ler #mi /(i)q <sub>i</sub> t <sub>i</sub> l <sub>i</sub> ð <sub>i</sub> mi/ --- P27c /q <sub>i</sub> t <sub>i</sub> l <sub>i</sub> ð <sub>i</sub> mi/ P27e /q <sub>i</sub> t <sub>i</sub> l <sub>i</sub> ð <sub>i</sub> mi/ (qetlermi)
she evidently cut fish the places he was squeezing AB(3Rs-s/p) for drying APO(3Rs)		

(e)cgar +tuq	(e)ter -ngqerr +tuq
/(\acute{i})cxaxtuq/	/(\acute{i})t\acute{i}ngq\acute{i}xtuq/
/\acute{i}cxaxtuq/ P27d	/t\acute{i}ngq\acute{i}xtuq/ P27e
/\acute{i}cxaxtuq/	(tengqertuq)
(ecgartuq)	it has an <u>anus</u> IND(3s)
he awakens IND(3s)	

P28 /#(C)VC./  $\Rightarrow$  /#(C)V\acute{C}.\$/ [postorthographic]

P29 / {#(C)}<sub>.C</sub> VV(C).\$/  $\Rightarrow$  / {#(C)}<sub>.C</sub> V\acute{V}(C).\$/ . [postorthographic]

See agnaurai and arumaarrluk in §1.1.6.1, and nangtequq, eqtenqegcarluk=llu, angyagni=llu, angyaq=llu=gguq, Kapuutlermiut, and ivaryaaqvimineng in §1.1.6.2.

#### 1.2.4.2. Cyclic syllable modification rules.

These rules apply as a cycle from left to right. P30-P33 are identical to the orthographic rules P30'-P33' in their formulation: (see §1.1.6.2); and are all postorthographic:

P30 / {#} \$.\$.\$./  $\Rightarrow$  / {#} \$.\$.\$./ Rhythmic stress assignment

P31 /C.C\acute{V}{.\$.\$} /  $\Rightarrow$  /C.C\acute{V}{.\$.\$} / Stress displacement.<sup>4</sup>

P32a /C<sub>1</sub>\acute{V}.C<sub>2</sub>VV/  $\Rightarrow$  /C<sub>1</sub>\acute{V}C<sub>2</sub>.VV/ Gemination and secondary stress.

P32b /C\acute{V}C.CV\acute{V}/  $\Rightarrow$  /C\acute{V}C.CV\acute{V}/

P33 /C\acute{V}./  $\Rightarrow$  /C\acute{V}\acute{V}./

For examples of derivations involving these rules, see utercitevkenaku, ilutqureluni, nangtequq, ikamrirluteng, eqtenqegcarluk=llu, angyagni=llu, angyaq=llu=gguq, amiik, Kapuutlermiut, and ivaryaaqvimineng in §1.1.6.2.

The form of P34 departs from that of P34', since it is in part pre-orthographic in its full formulation. It is concerned with the disposal

of open stressed syllables containing schwa:

P34a /C<sub>1</sub>ɨ.C<sub>2</sub>/ ⇒ /C<sub>1</sub>ɨC<sub>2</sub>.·/ (optional) [postorthographic]

P34b Elsewhere, /C<sub>1</sub>ɨ.C<sub>2</sub>/ ⇒ /C<sub>1</sub>.C<sub>2</sub>/ [preorthographic]  
(when C<sub>1</sub>ɨ is second syllable in word, stress retracts to first syl.)

P34a is of very limited distribution. If C<sub>1</sub> = C<sub>2</sub> some speakers, especially children, optionally apply it. Otherwise, P34a does not occur. In GCY, however, P34 applies obligatorily when C<sub>1</sub> = C<sub>2</sub>, or when C<sub>1</sub> and C<sub>2</sub> are /ɣ/ and /ɣ/, /c/ and /n/, /t/ and /c/, or /c/ and /t/ (Reed et al. 1977:23, 32, 33). In NS, on the other hand, P34a is obligatory, and P34b does not occur. It is likely that in Chevak rule P34a, insofar as it exists there, has the status of a loan. Examples:

akekatak-i-		maligute -tu -llemni
/akɨkatak-i/	P30, cy. 1	/malɨɣutɨtuɨmni/ P30, cy. 2
/akɨk.atak-i/	P34a, cy. 1	/malɨɣutɨt.uɨmni/ P34a
/akɨk.ataaki/		/malɨɣutɨt.uɨmni/
(akekatak-i)		(maligutetulle-mni)
ouch!! (ak'a more common	when I always tagged along C10(1s)	
in Chevak) PT	(rarer, esp. younger person's optional variant)	

maligute -tu -llemni		cucuke @#kengar -ng:ini
/malɨɣutɨtuɨmni/	P30, cy. 2	/cucúukɨkɨŋaɨni/ P30, cy. 2
---	P34a	---
/malɨɣuttuɨmni/	P34b	/cucúukɨkɨŋaɨni/ P34b
/malɨɣuttuɨmni/	P30, 31 cy.3	/cucúukɨkɨŋaɨni/
(maligut'tulle-mni)		(cucukek'ngai-ni)
(more common variant)		of all the things he <u>wished to be like</u>
		LC(3s-p)

ner-e -llini +'uq	
/nɨɣɨlliniuq/	P30
---	P34a fails
/nɨɣɨlliniuq/	P34b, with retraction
/nɨɣɨllin.iuq/	
(ner'lliniuq)	
he evidently is <u>eating</u>	IND(3s)

Orthographic convention: when deletion of /ɨ/ by P34b creates a consonant cluster that could serve as input to orthographic rules P21' or P23', an apostrophe is placed between them (e.g., cucukek'ngaini and ner'lliniuq, above); similarly, an apostrophe is placed between same-

consonant clusters (e.g., maligut'tullemng). See §1.1.3, items a-b for further examples.

P35a /C<sub>1</sub>aC<sub>2</sub>/ ⇒ /C<sub>1</sub>ɨC<sub>2</sub>/ (C<sub>1</sub>, C<sub>2</sub> are back velar consonants)

[preorthographic]

P35b /Vɨɨx\*/ ⇒ /Vxɨx\*/

[preorthographic]

In general, P35a is optional. However, it is obligatory when /C<sub>1</sub>aC<sub>2</sub>/ represents the sequence /qaɨ/, /qax/, or /ɣaɨ\*/. Examples for P35a:

pi -gar #luni	ciutairar +aanga	qerte@+'ararte@:(u)te+'aa
/piqɨluni/	/ciútaíɨáɨ·aáŋa/	/qíɨ·aɣááxutaa/
/piqɨluni/ P35a	/ciútaíɨíɨ·aáŋa/P35a	/qíɨ·íɨááxutaa/ P35a
(piqerluni)	(ciutaireraanga)	(qer'érarutaa)
and then he...	my ears are cold	he suddenly <u>took</u> it <u>across</u>
AP0(3s)	IND(3s-1s)	IND(3s-3s)
		OR: /qíɨ·aɣááɨú·aa/ P35a fails
		(qer'ararutaa)

Younger speakers sometimes extend the application of this rule by ordering it before P30:

taite -gar -ggu	cf. taite -gar -ggu
/táitɨqaxu/	/táitɨqaxu/
/táitɨqíx̣u/ P35a	/táitɨqáx̣u/ P30, P33
/táitɨqx̣u/ P30, P34b	-- P35a
(taiteqru)	(taiteqarru)
please bring it! OPT(2s-3s)	(more standard variant in Chevak)

Here, lengthening of /a/ by P33 prevents P35a from applying. The younger speakers' optional variant is reminiscent of GCY taiteqerru 'please bring it', where P35a also precedes P30, but where the stressed schwa produced triggers gemination by P34a, rather than deletion by P34b (perhaps for purposes of P34a there, /q/ and /x/ surrounding schwa are taken as equivalent). Examples for P35b are given with those for P36.

Rule P36 is divided into three parts, and is concerned with the simplification of /RVR\*C/ (where V = /ɨ/ or /u/; R = /ɨ/, /ɨ<sup>w</sup>/, or /x/) in various phonological contexts. /RVR\*C/ actually arises from two

morphemes only: the postbase root  $\sqrt{\text{far}^*}$ -, found in numerous postbases and bases, but of uncertain meaning at this state, and the postbase  $-\text{rur}^*\text{lur}^*$ - NN 'poor, dear N; VV poor dear one does V'. P35a converts /a/ to /ɨ/ in  $\sqrt{\text{far}^*}$ - in these contexts, providing the input to P36.

P36a /RV/ deletion with stress displacement.<sup>9</sup> [Preorthographic]

$$/\check{V}_1.R\check{V}_2R^*.C/ \Rightarrow /V_1R^*.C/$$

(If the syllable of  $V_1$  is preceded by an unstressed syllable, it becomes stressed; if  $V_1R^* = /ɨ\delta^w/$ , it is written  $/ú\delta^w/$ , since the two fall together.)

P36b /ɨ<sup>(w)</sup>\*/ deletion.

$$/ \left\{ \begin{matrix} V_1V_2 \\ C \end{matrix} \right\} RV\delta^{(w)}.C_V/ \Rightarrow / \left\{ \begin{matrix} V_1V_2 \\ C \end{matrix} \right\} R\check{V}.C_V/$$

P36c /R/ deletion.

$$/C_1.R\check{x}.C_{02}/ \Rightarrow /C_1.\check{x}.C_{02}/$$

(If  $C_1$  closes a short stressed syllable, the syllable remains stressed and  $C_1$  geminates.)

Table 1-5 illustrates P36. The three significant pre-/RVR\*/ environments are listed to the left, and the two significant post-/RVR\*/ environments are listed across the top. In each cell is the portion of /RVR\*/ which is deleted, followed by a number indexing the examples relevant to that cell. Note that of the three pre-/RVR\*/ environments,  $/\check{V}./$  is referred to in P36a;  $/C./$  is referred to in P36b and P36c; and  $/V_1V_2./$ , which may represent an underlying double vowel or a vowel lengthened by P33, is referred to in P36b only.



Table 1-5: /RVR\*C/ simplification.

environment	Post-RVR* environment	
	C <sub>v</sub>	C <sub>o</sub>
V̄.	RV̄ [1]	RV̄ [2]
RVR* V <sub>1</sub> V̄ <sub>2</sub> .	ʒ <sup>(w)</sup> * [3]	∅ [4]
Pre-C.	ʒ <sup>(w)</sup> * [5]	R [6]

## Examples:

P36a /RV/ deletion with stress displacement.

- [1] atur +turar #luni  
 /atúxtu<sup>w</sup>áxluni/ elpe(=t) -rurlur\* +∅  
 /atúxtu<sup>w</sup>áxluni/ P35a /ɛɛpɛɛú<sup>w</sup>luq/ P30  
 /atúxtu<sup>w</sup>luni/ P36a /ɛɛpɛɛ<sup>w</sup>luq/ P36a  
 (aturtu'r'luni) (/ɛɛpú<sup>w</sup>luq/ cf. P36a, note  
 he keeps singing AP0(3Rs) poor you! ABs)
- [2] tugkarar\* +pci  
 /túx<sup>w</sup>káxp̄ci/ P30 tangvag +turar +tuq  
 /túx<sup>w</sup>káxp̄ci/ P35a,b /tánvaxtu<sup>w</sup>áxtuq/ P30, P31  
 /túx<sup>w</sup>káxp̄ci/ P36a /tánvaxtu<sup>w</sup>áxtuq/ P35a,b  
 (tugka'rpeci) (/tánvaxtu<sup>w</sup>tuq/ P36a  
 of your ivory RL(2p-s/p) (/vák/ is stressed, cf. P36a, note)  
 he keeps watching IND(3s)

P36b /ʒ<sup>(w)</sup>\*/ deletion.

- [3] nuna -rurlur\* =t mallu +ssuarar #luni  
 /nunaáx<sup>w</sup>lúut/ P33, cy. 1 /maɫúsúáɛɛɛluni/ P35a, cy. 2  
 /nunaáx<sup>w</sup>lúut/ P36b, cy. 2 /maɫúsúáɛɛluni/ P36b, cy. 2  
 /nunaáx<sup>w</sup>lúut/ P32a, cy. 3 /maɫúsúáɛɛlúuni/ P30, P33 cy. 3  
 (nunaruluut) (mallussuareluni)  
 dear old village p looking for beached carcasses  
 AP0(3Rs)

- [5] tekite @6-ngrar\*+megneki      nere -rurlur +tuq  
 /tɛkiitɪŋɣáɣmɪɣnɪki/      /nɪɣɣuɣ<sup>w</sup>luxtuq/ P30, cy. 2  
 /tɛkiitɪŋɣɪɣmɪɣnɪki/ P35a cy.2      /nɪɣɣuluxtuq/ P36b, cy. 2  
 /tɛkiitɪŋɣimɪɣnɪki/ P36b cy.2      /nɪɣɣulúxtuq/ P30, cy. 3  
 /tɛkiitɪŋɣimɪɣnɪki/ P30 cy.3      (ner'rulúrtuq)  
 (tekitengremegneki)      the poor one eats IND(3s)  
 even though they arrived to  
 them CS0(3Rd-3p)
- P36c /R/ deletion.
- [6] ayuqe @6-ngrar\*+peci      tunrar -rrlug -li -qatar #luteng  
 /ayuúqɪŋɣáɣpɪci/      /tunɣaxɪiqataɣlutɪŋ/  
 /ayuúqɪŋɣɪɣpɪci/ P35a      /tunɣɪɣɪiqataɣlutɪŋ/ P35a  
 /ayuúqɪŋɣɪɣpɪci/ P36c      /tún·ɪɣɪiqataɣlutɪŋ/ P36c  
 (ayuqengerpeci)      /tún·ɪɣɪiqáataɣlutɪŋ/  
 although you are similar      (tun'errliqatarluteng)  
 CS0(2p)      they were about to conjure their  
    familiar spirits APO(3Rp)
- qetunrar\* +pet      tai @6-ngrar\*+peci  
 /qɪtúnɣaxpɪt/      /táɪŋɣaxpɪci/  
 /qɪtúnɣɪɣpɪt/ P35a      /táɪŋɣɪɣpɪci/ P35a  
 /qɪtún·ɪɣpɪt/ P36c      /táɪŋɣɪɣpɪci/ P36c  
 (qetun'erpet)      (taingerpeci)  
 of your son RL(2s-s/p)      although you came CS0(2p)
- No deletion from /RVR\*C/.
- [4] tallir -ng:irarte +'aa      qangiarar\* +ci  
 /táɪ·íɪɣáɣtaa/      /qán·íáɣaxci/  
 /táɪ·íɪɣɪɣtaa/ P35a,b cy. 2      /qán·íáɣɪɣci/ P35a,b  
 --- P36a,b,c      --- P36a,b,c  
 /táɪ·íɪɣɪɣtaa/ P32b, cy. 3  
 (talliirrertaa)  
 he injured him in the arm  
 IND(3s-3s)
- ugur -ng:ir +arte +'aqameng      inglu +var +arte +'aqan  
 /úq·úíɣáɣtaqamɪŋ/      /íŋluvááɣaxtaqan/  
 /úq·úíɣɪɣtaqamɪŋ/ P35a,b cy.2      /íŋluvááɣɪɣtaqan/ P35a,b cy. 2  
 --- P36a,b,c      --- P36a,b,c  
 /úq·úíɣɪɣtaqáamɪŋ/ P30,31,33,      /íŋluvááɣɪɣtaqan/ P30, 31 cy. 3  
 (uquirrertaqameng) cy. 3      (ingluvarrertaqan)  
 when they suddenly run out      when it suddenly changes over CT0(3s)  
 of oil CT0(3Rp)

Two orthographic conventions are associated with P36a. First, the stress assigned to /V<sub>1</sub>/ is marked with apostrophe following the vowel (this is because the rule is preorthographic). Second, when the syllable

preceding the syllable of /V<sub>1</sub>/ is assigned stress by the rule, /V<sub>1</sub>/ is rendered in the orthography with a double vowel. The orthographic rules then can correctly assign stress to the preceding syllable (P32b'), and then compress the double vowel written for /V<sub>1</sub>/ to a stressed, single vowel (P37').

#### 1.2.5. Post syllable-modification segmental rules (P37-P39).

These rules convert the output of the syllable modification rules to the taxonomic phonemic level. All refer to environments created by the syllable modification rules, but they apply where ever their environments occur, and not as part of a cycle. The ordering of P37-P39 is non-crucial.

P37 is treated as a morphophonemic rule only because it causes the neutralization of long and short vowels in closed, stressed syllables. Thus it is morphophonemic only in the sense that it meets a technical requirement of taxonomic phonemic level representation, i.e., one symbol for each sound.

P37 /VVC./ ⇒ /VVC./ Double vowel compression [postorthographic]

As noted in §1.1.7, /V<sub>1</sub>/ is two segments, but contains only one mora.

Realization:

Realization of compressed double vowels (VV):

Long vowels: /V<sub>j</sub>V<sub>i</sub>/ ⇒ /V<sub>i</sub>/.

Diphthongs:

$\left\{ \begin{array}{l} /iW/ \\ /aW/ \end{array} \right\} \Rightarrow \left\{ \begin{array}{l} /iW/ \\ /aW/ \end{array} \right\}$  (Where W is a labialized velar fricative created by P26)

Elsewhere, diphthongs are represented /V<sub>j</sub>V<sub>j</sub>/.

For examples, see §1.1.7, and the discussion of P37' there.

P38 voices nasals that have been devoiced by P24a when they are non-geminate:

P38 / $\forall N_0$ /  $\Rightarrow$  / $\forall N$ / (Where  $N_0$  is non-geminate.) [Preorthographic]

cenirte + <sup>1</sup> uq	cf. cena -ng:ani
/c <sup>1</sup> nixtuq/	/c <sup>1</sup> niini/
/cipixtuq/ P24a,b	/cipiini/ P24a,b
/cinixtuq/ P38	/cip <i>.</i> iini/ P32a
(cinirtuq)	---
he visits, travels	(ci <sup>1</sup> iini)
along the edge IND(3s)	at its shore, edge, rim LC(3s-s)

P39 /# $\left\{ \begin{smallmatrix} 1 \\ \uparrow \end{smallmatrix} \right\}$  V/  $\Rightarrow$  /#  $\left\{ \begin{smallmatrix} 1 \\ \uparrow \end{smallmatrix} \right\}$  V/ (Where /1, $\uparrow$ / are non-geminate.)

[Postorthographic]

See examples in §1.1.7 under P39', the orthographic statement of this rule.

### 1.3. External sandhi.

External sandhi changes are phonological changes which occur at word or enclitic boundaries. Some of these changes are governed morphologically, and others are conditioned by the immediate phonological environment. Morphologically governed sandhi, taken up in §1.3.1, consists entirely of optional segment loss at the ends of certain morphemes when they occur word-finally. Phonologically conditioned sandhi takes place across word or enclitic boundaries falling within the same minimal intonation unit; such word boundaries are marked with '-' in the orthography (see §1.1.4.). Phonologically conditioned sandhi is taken up in §1.3.2.

## 1.3.1. Morphologically governed external sandhi.

The following one and two segment deletions occur with the morphemes listed below when they occur word-finally: The deletions are optional, but are especially likely to take place at the ends of minimum intonation units (listing is representative, not exhaustive):<sup>10</sup>

-lria	=> -lr'	INP(3s)
#luni, %@nani	=> #lun', %@nan'	APO(3Rs)
#luku, %@naku	=> #luk', %@nak'	APO(3s)
#luki, %@naki	=> #luk', %@nak'	APO(3p)
+na	=> +n'	ABs with demonstrative bases
=llu	=> =ll'	and (enclitic)
tawa	=> taw'	then (PT)
tayima	=> tayim'	elsewhere (PT)
cali	=> cal'	also (PT)
qaillun	=> qaill'	how (PT)

## Examples:

waten-ayuqelr'	anlun'
waten ayuqelria	anluni
thus EQs it was thus INP(3s)	he went out APO(3Rs)
pivkenak'	cuna=ggur-un'
pivkenaku OR pivkenaki	cuna=gguq una
don't do to it APO(3s)	and so PT this one ABs
OR don't do to them APO(3p)	
iken'-qanlliniuq	una=ll'-taw'
ikna qanlliniuq	una =llu tawa
one across ABs he evidently	this one ABs and then
spoke IND(3s)	

Note the insertion of schwa to break the final cluster in iken' (from ikna) in the second to last example above. The argument that these processes are in fact morphologically conditioned is made on the basis of

(i) the occurrence of this segment loss at the ends of minimal intonation units, e.g., the first four as well as the last example above, (ii) segment losses within minimal intonation units that do not fit the phonologically conditioned external sandhi rules there, e.g., deletion of a vowel surrounded by consonants in the last two examples above, and (iii) the occurrence of further, phonologically conditioned external sandhi changes on word-final morphemes that have already undergone the processes considered here to be morphologically conditioned, e.g., piunrirlug' below.

### 1.3.2. Phonologically governed external sandhi.

These can be divided into processes bringing about segmental change and/or deletion, and processes bringing about subphonemic phonetic changes.

#### 1.3.2.1. Segmental deletion and change.

Of the four processes described here, the first two tend to create CV.CV syllable structuring. The last is clearly an application to external sandhi of the pattern followed by P32a.

$$a. /CV\{\# \}V_2/ \Rightarrow /C\{\# \}V_2/$$

tamaan'-angullemneng  
 tamaani angullemneng  
 then LC caught thing MD(1s-s)  
 = what I experienced then

yaaqsinrilengraat'=am  
 yaaqsinrilengraata =am  
 though they weren't far then, again  
 CSO(3p)

$$b. /S_1\{\# \}S_2/ \Rightarrow /S_2/ \quad (\text{If } S_1 = S_2)$$

taq'u'=qaa?	nukalpia'-qec'ani
taq'uq           =qaa	nukalpiaq   qec'ani
it is finished is it?	great hunter when he squeezed him
IND(3s)	ABs                   CQO(3s-3Rs)

pitullernaari'-taw'  
 pitullernaarit                   tawa  
 the way they do AB(3p-p) then

c.  $/VS\{\# \} \{N\}/ \Rightarrow /VF_V\{\# \} \{N\}/^{11}$  (Where S = k, q; F<sub>v</sub> = g, r.)

imna=ggur-nukalpiaq	tallig-enkegtengnaqliniak
imna           =gguq nukalpiaq	tallik enkegtengnaqliniak
the afore- it is great hunter	arms d he evidently tried to place
mentioned said ABs	them to his advantage
one ABs	IND(3s-3d)

al'-atkullraanka-piunrirlug'-ilall'  
 ala   atkullraanka piunrirluk'                   ilalketa  
 oh PT my old parka letting it no longer oh my goodness PT  
           AB(1s-p)                   longer continue  
   APO(3p)  
 = Oh, my old parka is being ruined, oh my goodness!

d.  $/CV \# CVV/ \Rightarrow /C\acute{V} \# C\cdot VV/$

atkullraanka-piunrirlug'	(orthographic, see above)
/átkúłxánka piún̄giɣluɣ/	(before sandhi)
/átkúłxánká p·iún̄giɣluɣ/	(after sandhi) } taxonomic phonemic rep.)

tawa-taun'  
 /tax<sup>wá</sup>t·aun/ (after sandhi, taxonomic phonemic rep.)  
 tawa   tauna  
 then PT that one ABs

The forms produced by (d) could perhaps be represented in the orthography using an apostrophe, e.g., tawa-t'aun'.

### 1.3.2.2. Phonetic change.

Adequate treatment of these processes demands more detail than given here, and would have to take into account differences in context, rate, and care of speech. I shall simply point out that the three phonetic rules describing consonant effects on neighboring vowels, P44-P46, also

operate across word boundaries within minimal intonation units:

camani-Qissunami	una-wani
[ˈçamaːne qesʊˈnami]	[ʊnə wani]
camani            Qissunami	una            wani
down there LC    at Qissunaq LCs	this one ABs    here LC

tauna-cal'
[təʊnə caɪ]
tauna            cali
that one ABs    also

Note the application of P44 to the final segment of camani, of P45 to the final segment of una, and of P46 to the final segment of tauna.



§1-- Footnotes.

1. Jacobson (1980a) discusses phonological and lexical aspects of Central Yup'ik dialectology, devoting several pages to the features of the Hooper Bay-Chevak dialect. His findings are incorporated into this discussion (though sometimes with modification).

2. These segmental differences between Chevak and GCY are noted:

(a) GCY /#yVC/ corresponds to Chevak /#cVC/, e.g., GCY yuk, Chevak cuk, 'person'; GCY yaquq, Chevak caquq, 'wing'; GCY, Chevak cavun 'oar'.

Exception: GCY and Chevak have yurartuq 'he Eskimo dances'. Hooper Bay follows Chevak everywhere except with the base meaning 'person', which Hooper Bay has as yug-.

(b) GCY /#s/ /#c/ corresponds to Chevak /#c/: GCY saanik or caanik, Chevak caanik, 'kettle'. Chevak has /#s/ in loans from English, e.g., sekulartuq /sikuúlaɣtuq/ 'he studies'.

(c) GCY has a third apical continuant /z/ (orthographic s), which I have argued is a GCY innovation (Woodbury, 1979c). E.g., GCY qasgiq, Chevak qaygiq 'men's house'; GCY ikusek, Chevak ikuyek 'elbow'.

(d) GCY groups some reflexes of Proto-Central Yup'ik \*/v/ with its phoneme /ɣ<sup>w</sup>/ (the other three Central Yup'ik dialects keep them distinct), and it interprets the neutralization of /ɣ<sup>w</sup>/ and /x<sup>w</sup>/ in word-initial position in favor of the latter, while HBC, NS, and the GCY of Scammon Bay, Newtok, and part of Nelson Island do so in favor of the former. The whole picture is made complicated by the standard orthography, which was designed with the innovative dialect with respect to these sounds--GCY--in mind. The following chart gives what I consider to be the Proto-Central Yup'ik forms, followed by the GCY reflexes (in phonemic and standard orthographic transcription), and the Chevak reflexes (in

phonemic and modified standard orthographic transcription (see footnote 3):

	<u>Proto CY</u>	<u>GCY</u>	<u>GCY orth.</u>	<u>Chevak</u>	<u>Chevak orth.</u>
1	*/=uɣ/	/x <sup>w</sup> /	w	/x <sup>w</sup> /	ww
2	*/#uɣ/	/x <sup>w</sup> /	w	/ɣ <sup>w</sup> /	w
3	*/uɣ·/	/ɣ <sup>w</sup> ·/	uḡ'	/ɣ <sup>w</sup> ·/	w'
4	*/uɣ/	/ɣ <sup>w</sup> /	v ~ uḡ	/ɣ <sup>w</sup> /	w
5	*/v/	/ɣ <sup>w</sup> /	v	/v/	v
6	*/v·/	/v/	v	/v/	v

Examples:

	<u>Proto CY</u>	<u>GCY</u>	<u>GCY orth.</u>	<u>Chevak</u>	<u>Chevak orth.</u>
1	*/ata=uɣa/	/ataáx <sup>w</sup> a/	atawa	/ataáx <sup>w</sup> a/	atawwa
2	*/uɣani/	/x <sup>w</sup> ani/	wani	/ɣ <sup>w</sup> ani/	wani
3	*/ta+uɣa=am/	/táɣ <sup>w</sup> ·aam/	taḡaam	/táɣ <sup>w</sup> ·aam/	tawaam
4	*/ta+uɣani/	/taɣ <sup>w</sup> áani/	tavani/taḡani	/taɣ <sup>w</sup> áani/	tawani
5	*/avu+luku/	/aɣ <sup>w</sup> úuluku/	avuluku	/avúuluku/	avuluku
6	*/cav+un/	/cavun/	cavun	/cavun/	cavun

Glosses: 1 'blessing'; 2 'here'; 3 'however'; 4 'there'; 5 'add it, accompany it'; 6 'oar'.

Thus, GCY has /v/ in 6, while Chevak has /v/ in 5 and 6; GCY has /ɣ<sup>w</sup>/ in 3, 4, and 5, while Chevak has /ɣ<sup>w</sup>/ in 2, 3, and 4; GCY has /x<sup>w</sup>/ in 1 and 2, while Chevak has /x<sup>w</sup>/ in 1 only. The standard orthography is quite close to Proto GCY, but fails to distinguish /ɣ<sup>w</sup>/ and /v/ for 5 and 6 (and potentially also for 4).

3. The orthographic symbols *w* and *ww* are not in standard use, and were devised for this work only. For HBC, the standard orthography (Miyaoaka and Mather, 1979) uses *w* for the phonemes in context given in lines 1 and 2 in the chart in footnote 2;  $\widehat{u}g$  for the phoneme in context given in line 3; and either *v* or  $\widehat{u}g$  for the phoneme in context given in line 4.
4. GCY (Miyaoaka and Mather 1979:140) has a rule of retrogressive stress such that the closed syllable before CV. in P31' would take a stress, thus Chevak /ikámxiǰlutɨŋ/, GCY /ikámxiǰlutɨŋ/ for ikamrirluteng 'they having sleds'. Apparently Hooper Bay follows the GCY pattern.
5. I have argued elsewhere that this phonetic rule, found in different form as a phonetic rule in Nunivak (Jacobson 1980a), led to the GCY split of Proto CY \*/v,y/ into, respectively, /v/ and some occurrences of /ɣ<sup>w</sup>/ (see footnote 2 above), and /y/ and /z/. See Woodbury 1979c.
6. Steven Jacobson points out that his @<sub>2</sub><sup>ɤ</sup>vag- NN 'large N' (regular suppletive form with Vte- bases for -rpag- 'large N') regularly combines with noun bases ending Vte- and converts te to l: angulvag- 'large man' from angute- 'man', ciulvag- 'large ear' from ciute- 'ear'. He suggests setting up all Vte- noun bases as Vt<sup>o</sup>e-, e.g., angut<sup>o</sup>e-, ciut<sup>o</sup>e-. This analysis is taken one step further by Miyaoaka (1975), who also sets up Fte- noun bases as (his equivalent of) Ft<sup>o</sup>e-, e.g., qimugt<sup>o</sup>e- 'dog'. @<sub>2</sub><sup>ɤ</sup>vag- is the only postbase which can be set up as having the kind of apical juncture (see P9) which would test for t vs. t<sup>o</sup> in noun bases, and it is distinctly anomalous in that respect-- all other apical-changing suffixes that can be added to noun bases are of the @5 subclass. And, what the slim evidence from @<sub>2</sub><sup>ɤ</sup>vag- suggests about noun base finals has great etymological problems. Many Vte-

noun bases end with the postbase @:(u)te- 'device for V-ing', which is clearly cognate with the class IVb VV indirective postbase @:(u)te- (Miyaoaka sets the two up differently). Further, it would mean that positional noun bases in Vte- would have to be set up as Vt<sup>o</sup>e-, e.g., nate- 'somewhere in relation to' as nat<sup>o</sup>e-. This, however, does not square with the probable etymological relation between +te- VV transitivizer, known to contain t rather than t<sup>o</sup>, and the positional base forming postbase +te- (a transitivizer of demonstrative adverb bases, see §5.1.5.2), which would otherwise have to be set up as +t<sup>o</sup>e-. To avoid these etymological problems, I maintain t rather than t<sup>o</sup> in Vte- (and Fte-) bases, but set up their @<sub>2</sub><sup>ɤ</sup>vag- as @lvag- NN, where the apical juncture is of class 5 (deleting +te- entirely), and where +l- is a postbase root such as crops up in a number of places, e.g.,

-lngu- 'for S to suffer because of N', -lkite- 'to make noise involving N', acilqur- 'root of plant' (from aci- 'bottom', √+l-, %@<sup>u</sup>qur- 'one like N'); √+l- must go back to +(e)t<sup>o</sup>e- (the etymological basis for true t<sup>o</sup>e- final bases); it has the meaning 'state of X, being X', and can be related to the base et<sup>o</sup>e- 'to be' (see §7.3.1. for a discussion of this base in certain contexts). My analysis is neither helped nor hurt by qimulvag- 'big dog' from qimugte- 'dog'. For Jacobson (1980b) it is an anomaly, but Miyaoaka considers it as regular-- at least with regard to the apical-- since he sets up (the equivalent of) qimugt<sup>o</sup>e-. Jacobson also cites some other sporadic and lexicalized forms under @<sub>2</sub><sup>ɤ</sup>vag- which do not involve te- final bases, e.g., arenvag- 'big woman' from arnar- 'woman'; angarvag- 'powerful shaman' from angalkur- 'shaman' (but note that Chevak has angarveg- for this). Here I would say that it would be hard to establish that these involve the same +vag- as

do the regular uses of @<sub>2</sub><sup>f</sup>vag- where it is suppletive to -rpag- for Vte- final noun bases. Although there can be no doubt that the many many distinct postbases containing +pag-/vag- with augmentative meaning represent the same etymon, it does not follow that the +vag- of arenvag- 'big woman' and of angarvag- (Chevak angarveg- (!)) 'great shaman' is actually the same postbase as the version of +vag- which occurs productively with Vte- bases as a suppletive form of -rpag- 'to be large'. Because of this, it is not implausible that the latter but not the former could have picked up a piece of morphological debris to give it the form I claim for it, i.e., @lvag-. To summarize, I regard the suppletive form of -rpag- 'to be large' used with Vte- bases as morphologically complex @lvag-, and in that way am able to preserve the etymological integrity of the t vs. t° distinction in the representation of base finals.

7. This postbase is given by Reed et al. (1977:252) as : $\begin{pmatrix} u \\ i \end{pmatrix}$ ma-, with (i) occurring only with class IV. I treat the class IV variant as requiring +i- VV antipassive: +i:(u)ma- => '+ima- (cf. P2).

8. This error in rule ordering was noticed during final manuscript preparation. Obviously P6 and P7 should occur just after P15 and P16.

9. When @+'ararte- 'to V suddenly' is involved following a /#(C)VC/ sequence (where the second C is geminate), /ǰá/ is deleted with no trace of stress remaining, e.g.:

ate @+'ararte +'uq  
/áy·aǰáxtuq/  
/áy·axtuq/ P36a  
(ay'artuq; cf. GCY ay'a'rtuq)  
he suddenly puts on clothes  
IND(3s)

qipete @+'ararte #luni  
/qíp·aǰáxluni/  
/qíp·axxluni/ P36a cy. 1  
/qíp·axxluni/ P30, P31 cy. 2  
(qip'arxluni; cf. GCY qip'a'rrluni)  
he retreated APO(3Rs)

10. Final segment loss for formation of hypocoristics, and for independent particles is considerably more complicated, in part special to each lexical item, and in part following isolable patterns.

11. Word- and enclitic-final k and q become g and r in other environments too, but with not nearly the same frequency, e.g.:

pitarkar=llu-taw'	cuna=ggur-taw'
/pitáxkaxtu tax <sup>w</sup> /	/cunáxux <sup>w</sup> tax <sup>w</sup> /
pitarka <sup>q</sup> =llu tawa	cuna=ggug tawa
game animal and then	and then then
ABs	

In these instances, the fricative becomes voiceless, assimilating to the following voiceless consonant by a process parallel to P23.

## 2. Morphological preliminaries.

Morphology will be discussed in six chapters (§§2-7). This chapter covers three sets of morphological preliminaries: word structure (§2.1), base classes (§2.2), and inflectional categories and system (§2.3). The basic analysis presented here owes a great debt to the work of Reed et al (1977) and Miyaoka (1975) on the General Central Yup'ik (GCY) dialect. In the three areas taken up here, there are almost no dialect differences between GCY and the Chevak dialect. The analysis is also indebted to the work of Bergsland (1955) and Kleinschmidt (1851) on West Greenlandic, where cognate categories and structures are very similar to those of Central Yup'ik in most important respects.

### 2.1. Structure of the word.

The Central Yup'ik word has the following structure:

$$\text{base} + \text{postbases } \begin{matrix} n \\ 0 \end{matrix} + \text{ending} + \text{enclitics } \begin{matrix} m \\ 0 \end{matrix}$$

The base forms the lexical core of the word, and belongs to one of three main classes: noun bases, verb bases, and particle bases (see §2.2 for subclasses). Postbases are suffixes which can be classified according to their effect on the class of the base to which they are attached into denominal nominalizing (NN), deverbal verbalizing (VV), deverbal nominalizing (VN), and denominal verbalizing (NV) types (derivation out of and into the particle base class is treated as a subcase of denominal and nominalizing derivation, that is, particle bases are treated as subcases of noun bases there). This purely internal syntactic four-way classification is in part the basis for another important classifica-

tion of postbases into modificational and derivational subclasses. Modificational postbases modify the meaning of the underlying base while preserving its grammatical category and fundamental sense, and hence consist of some NN and some VV postbases, but no VN or NV postbases. Derivational postbases change the fundamental sense of the base and with it in many cases the base category, and hence consist of NN and VV postbases meeting that definition, as well as all VN and NV postbases.

A unit consisting of base plus postbase is called an expanded base, or simply a base when its internal structure is not relevant. A base which must take at least one postbase before it can be inflected is a root; a base which may be inflected directly is a stem if it contains within itself no simpler inflectible base. In the formula above, the maximum number of postbases  $n$  is rarely over seven, but words with as many as thirteen are reported.

The ending is a morphologically simple or complex unit carrying the obligatory inflectional information for the word. Noun bases take noun endings giving noun words, verb bases take verb endings giving predication words, and particle bases take no ending giving particle words. Enclitics, a kind of particle, signal syntactic and discourse meaning, and may attach to words from any of the three word classes. In the formula the maximum number of enclitics  $m$  is rarely over four. The following examples illustrate the formula (N = noun base, E = enclitic, V = verb base, PT = particle):

(2.1) kegglangqerr-sugnaun-ateng=llu 'and they probably had no saws'

bases	{ base	kegglar-	N	saw
	{ postbase	-ngqerr-	NV	to have N
	{ postbase	†yugnait°e-	VV	probably not to V
	ending	%@nateng		appositional (3rd pers. reflexive plural)
	enclitic	=llu	E	and



(2.2) niitelqa 'my heard thing = what I heard'

base	{	base = stem	niite-	V	to hear
	{	postbase	-11er-	VN	former V-ed thing
	{	ending	-ng:a		absolute (3rd pers. sing. possessor, sing. possessum)

(2.3) naklu'r1luq 'poor thing, dear one!'

base	{	base = stem	{	root	$\sqrt{\text{nakleg-}}$	V (VN)	} PT poor thing
			{	postbase	$\sqrt{\text{-ng-}}$		
			{	postbase	-rurlur*-	NN poor dear N	
			{	ending	(none)		

(2.1) is a predication word, (2.2) is a noun word, and (2.3) is a particle word. Those bases which are also stems are so labeled; the other bases are expanded bases. niite- in (2.2) is a stem which is not readily segmentable, while  $\sqrt{\text{nakleg-}}$ , an uninflectible root plus the postbase element  $\sqrt{\text{-ng-}}$  (technically a root extender) together form the stem naklang- 'poor thing!'. kegg1ar- in (2.1), though lexical in character, is not a stem, for it is composed of kegge- 'to bite' plus an obsolete postbase %11ar- VN. Of the postbases in the three examples, all are of the derivational group except \*yugnait°e- in (2.1), and -rurlur\*- in (2.3), which are modificational.

## 2.2. Base classes.

The following is a classification of Central Yup'ik base classes done on inflectional and syntactic criteria (for details and justification of this analysis, see §5). The terms intransitive and transitive refer, respectively, to unpossessable and possessable noun bases, and to obligatorily intransitive and transitive verb bases. Ambivalent bases can occur both intransitively and transitively:

A. Noun bases (N).

1. Ordinary noun bases (intransitive, transitive).
2. Independent pronoun bases (intransitive).
3. Demonstrative (D) bases (intransitive).
4. Adjectival noun bases.
  - a. Inflecting as ordinary noun bases (intransitive, transitive).
  - b. Independent relative (IR) bases.
  - c. Quantificational (Q) bases.
    - i. Numeral (NM) bases: cardinal (intransitive); ordinal (transitive).
    - ii. Specifier (SP) bases: cardinal (intransitive); partitive (transitive).
5. Locational bases.
  - a. Demonstrative adverb (DA) bases (intransitive).
  - b. Positional (PS) bases (transitive).
6. Temporal bases.
  - a. Temporal noun bases (intransitive, transitive).
  - b. Temporal particle bases.

**B. Verb bases (V)**

1. Exclusively intransitive ( $V_i$ )
2. Exclusively transitive ( $V_t$ )
3. Ambivalent
  - a. S/A core ( $V_{sa}$ )
  - b. S/O core ( $V_{so}$ )

**C. Particles.**

1. Independent particles.
2. Sentence particles.
3. Phrasal Particles.
4. Enclitics.

**2.3. Inflectional categories.**

This section sketches the system of inflectional categories signaled in endings. The morphology of endings is taken up in §3.

## 2.3.1. Noun inflection.

Nouns are inflected for the categories of number and case, and, if possessed, also for the person and number of the possessor.

Number inflection distinguishes singular (s), plural (p), and dual (d):

(2.4)	a. angun angute+∅ man (s)	b. angutet angute+t men (p)	c. angutek angute+k two men (d)
(2.5)	a. muragaq muragar+∅ piece of wood (s)	b. muragat muragar+t pieces of wood (p)	c. muragak muragar+k two pieces of wood (d)
(2.6)	a. *uskuraq	b. uskurat uskurar+t dog harnesses (p)	c. uskurak uskurar+k dog harness, two dog harnesses (d)
(2.7)	a. qagna qag+na the one out- side (s)	b. qagkut qag+ku+t the ones out- side (p)	c. qagkuk qag+ku+k the two outside (d)
(2.8)	a. atauciq ataucir+∅ one (s)	b. pingayun pingayu+n three (p)	c. malruk malrur+k two (d)

The singular indicates one entity, the plural more than two, and the dual two. Central Yup'ik has very few nouns defective for non-singular, as English does with wood, flour, etc. Nouns corresponding to the English singular-only class are probably best translated 'piece of N', 'unit of N', as in (2.5). Some nouns are inherently non-singular. Thus uskurar- 'dog harness' in (2.6) has no singular, and is described by speakers as referring to an inherently bipartite entity. A demonstrative pronoun and the first three numerals are illustrated in (2.7-8).

Nouns may be unpossessed, as in the cases of (2.4-8), or possessed. Those bases which must always be possessed are transitive, those which

may never be possessed are intransitive, and those for which possession is optional are ambivalent (see §2.1 for a list of subclasses with valence indications, and further discussion in §5.1). Possessed nouns are marked for number (s,p,d) and person of the possessor. There are four persons. The third person (3) refers to entities which are not necessarily a part of the speech situation; the other three designate entities in the speech situation. First (1) and second (2) person designate speaker and addressee; in the plural or dual first person is either inclusive or exclusive, and second person may or may not include non-addressees. As a possessor, third person reflexive (3R) designates an entity coreferential with the third person transitive or intransitive subject of the possessed noun phrase's (possessum's) own clause. In that way its reference too is dependent on the speech situation (examples of third person reflexive will be taken up in more detail at the end of this section; uses of third person reflexive in verb endings will be discussed in §2.3.2). As an additional specification, a noun phrase referring to the possessor may optionally be expressed as a separate word in the relative case, and except in rare instances this noun phrase immediately precedes the inflected possessum. As a matter of notation in segment identifications, noun endings are indicated in the form 'w(xy-z)', where w is the case of the noun phrase, x is the person and y is the number of the possessor, and z is the number of the possessum, e.g., AB(3Rs-d) 'absolute case, third person reflexive singular possessor, dual possessum'. The following illustrate possession (all in the absolute case, to be discussed below):

- (2.9) (enem) elatii 'the outside of the house'  
 ene+m elate-ng:a  
 RLs AB(3s-s)  
 of house its area outside
- (2.10) a. (Ing'um) nuliara tangrraat.  
 ing+u+m nuliar-ng:a tangerr+'aat  
 RLs AB(3s-s) IND(3p-3s) (verb ending)  
 of the one going his wife they saw her  
 'They<sub>i</sub> saw that guy's (ing'um<sub>j</sub>) wife.' (e)
- b. (Ing'um) nuliani tangrraat.  
 nuliar-ni  
 AB(3Rs-s)  
 'They<sub>i+j</sub> saw that guy's<sub>j</sub> wife.' (e)
- (2.11) enerlugaat  
 ene-rrlugar\*-ng:at AB(3p-s)  
 'their well-worn house' (e)
- (2.12) (elpetek) qetunratek  
 you 2d AB/RL qetunrar\*-tek AB(2d-p)  
 you (d) sons (p)  
 'your (d) sons (p)'
- (2.13) talligka  
 tallir+gka AB(1s-d)  
 'my arms (d)'
- (2.14) ayuquciqa  
 ayuqe@:(u)cir-ka AB(1s-s)  
 'my condition of (@:(u)cir-) resembling = what I am like, how  
 I am (as a person)' (e)

In (2.10) third person (a) and third person reflexive (b) are contrasted. Third person reflexive marking here signals that the subject of tangrraat is coreferential with ing'um, the possessor of nuliani, while third person marking indicates non-coreference. Note that 'coreference' does not necessarily entail absolute identity between two noun phrases, e.g., the part-to-whole coreference in (2.10b). The category of possession itself has semantic and syntactic functions. Possessors indicate the point of reference for positional bases (2.9) and for kin bases (2.10

-12), as well as permanent or temporary ownership (2.11), and the relation of part to whole (2.13). In derived constructions, semantic relationship between possessor and possessum is syntactically governed (2.14, derived with @:(u)cir- VN 'possessor's condition of V-ing').

There are seven cases in Central Yup'ik, as follows:

(2.15) CASE <sup>1</sup>	ABBREV.	ILLUSTRATION WITH IMARPIG- 'SEA'.	
absolutive	AB	imarpik	sea
relative	RL	imarpiim	of the sea
modalis	MD	imarpigmeng	from/about the sea
terminalis	TM	imarpigmun	to(ward)/into the sea
localis	LC	imarpigmi	in/at the sea
vialis	VL	imarpigkun	across/via the sea
equalis	EQ	imarpigtun	like the sea

The absolutive case is independent, since only absolutive case nouns can stand alone in non-elliptical utterances, and the others are dependent, since nouns in those cases are grammatically dependent on predications or on absolutive case nouns. The absolutive and the relative cases together are primary cases, since they alone are cross-referenced by pronominal indicators in verb endings, and the others, which are not cross-referenced, are oblique. Logically and usually morphologically as well, case has scope over the entire noun phrase, singular, plural, or dual, possessed or unpossessed:

- |           |                      |    |                                  |
|-----------|----------------------|----|----------------------------------|
| (2.16) a. | enem elatiini        | b. | ing'um enerrlugaan elatiini      |
|           | RLs LC(3s-s)         |    | ing+u+m ene-rrlugar*-ng:an       |
|           | 'at the area outside |    | RLs RL(3s-s)                     |
|           | the house'           |    | 'at the area outside that guy's  |
|           |                      |    | (ing'um) well-worn house (enerr- |
|           |                      |    | lugar-)'                         |

The whole constituent in (2.9a), which there is in the absolutive, appears in the localis in (2.16a), with the case of the possessor, *enem*, unaffected, since it is embedded within the main constituent being case-marked. In (2.16b), a multiple embedding of this kind is shown.

The absolutive case is primary and independent. It lacks positively characterizable semantic function:

- (2.17) Cilla nunanirquq.  
 cilla+∅ nunanirqe+'uq  
 ABs IND(3s)  
 the weather it is pleasant  
 'The weather is pleasant' (13a:74)
- (2.18) Uquq taun' qantallruarreq kuvnauraat  
 uqur+∅ tau+na qantar-llruarar\*+∅ kuve@#naur+'aat  
 ABs ABs ABs IND(3p-3s)  
 oil that ordinary plate they pour it
- qaingatnun. 'They pour plates of oil onto the surface  
 qai-ng:atnun of their foods = they pour plates of oil  
 TM(3p-s) on their food.' (13a:97)  
 onto their surface
- (2.19) Anuurulur- una, maurluq 'There was a grandmother, a  
 anuurulur\*-∅ u+na maurlur\*-∅ granny...' (3:52)  
 ABs ABs ABs  
 grandmother this grandmother
- (2.20) a. Iluq! b. Uyuuq!  
 ilurar-∅ u+yur+∅  
 ABs (vocative abbrev.) ABs (vocative lengthening)  
 'Hey male cross-cousin!' 'Hey this one here! = Hey you  
 (said by male) (vol.) here!' (vol.)

The absolutive case marks the subject of intransitive clauses (S) (2.17) and the object of transitive clauses (O) (2.18), and is cross-referenced in the verb ending of the clause's predication. The absolutive case also marks noun phrases functioning syntactically as adjectives when they modify absolutive case nouns, as with *uquq taun'* modifying *qantallruarreq* in (2.18) in a construction meaning 'N containing adjective'. As with the possessive construction, this construction itself can be



put into dependent cases (e.g., uqumeng taumeng qantallruaremeng 'about that plate of oil', with each constituent showing modalis case ʔmeng). Absolutive nouns can function as free-standing sentences: among these are deictic constructions such as (2.19), or vocatives such as (2.20). These constructions however cannot be put into dependent cases while retaining their function as free-standing sentences.

The relative case is syntactically dependent and primary, and encodes the syntactico-semantic roles of possessor (see examples 2.9, 10, 12, 16, 18) and actor (2.21):

- (2.21) Enaikutagaaten ik'um!  
 ene-ng:ir-kutag+'aaten ik+u+m  
 IND(3s-2s) RLs  
 he might deprive you of your place the one across there  
 'The one across there might take your place!' (11b:48)
- (2.22) a. Cayarait amlleriut imum nakacium uum.  
 ca#yarar-ng:it amlleri+i+'ut im+u+m nakaciu+m u+u+m  
 AB(3p-p) IND(3s) RLs RLs this  
 their methods they grow of that of handling  
numerous bladders  
 'Their customs were numerous at the time of the Bladder  
 Festival.' (13b:218)
- b. nakacium nallini  
 nakacug-liur+m nalle-ng:ani  
 RLs LC(3s-s)  
 of handling bladders at it's time  
 'at the time of handling bladders = at the time of the  
 Bladder Festival'
- (2.23) a. Tukuan uum : "Piyia wanikuaqu !"  
 tukur-ng:an u+u+m pi@#ci+ng:a in a while (PT)  
 RL(3s-s) RLs INT(2s-1s)  
 his host this you do to me  
 'His host (said): "Wait just a minute, not yet!"' (3:105)
- b. tukuan qanrutaa : 'his host said to him:' (e)  
 qaner@:(u)te+'aa  
 IND(3s-s)

Note that the relative case, functioning as transitive subject (A), is cross-referenced in the verb ending of the clause's predication (2.21).







(2.35) teguaruuq                    Kuigpagmiunun  
 tegu+'ar<sup>u</sup>ng:u+'uq    Kuigpag<sup>u</sup>miu<sup>u</sup>nun  
 IND(3s)                    Tmp  
 he was captured    by the Yukoners  
 He was captured by the Yukon River people.    (e)

(2.36) cugnun    kenegnarquq  
 cug<sup>u</sup>nun    keneg@<sup>u</sup>narqe +'uq  
 Tmp            IND(3s)  
                   she is lovable/pretty  
 She is considered pretty by people. (e)

The adverbial meaning of the terminalis is 'to or toward a goal', and generally occurs with predications involving (literal or figurative) motion (qaingatnun in 2.18, 2.31-33). With demonstrative adverbs (DA) the category splits into terminalis 1 (2.31) and terminalis 2 (2.32), meaning, respectively, 'advancing with the area of DA as goal', and 'in the direction of the area of DA'. Syntactically, the terminalis case marks the A of bases that are further derived by certain postbases, including certain causatives (2.34 @\*ni-), the passive (2.35 +'ar<sup>u</sup>ng:u-) and some others (2.36, for example). Thus, syntactically speaking, the terminalis case is to the relative case what the modalis case is to the absolutive case, that is, an oblique counterpart which shares many semantic functions.

The localis case is dependent and oblique, and has both adverbial and syntactic functions:

(2.37) Imgalria=qaa                    maqinrituq                    qaygimini  
 Imgalria+∅=yes/no?    maqi-nrit<sup>o</sup>e+'uq                    qaygir-mini  
 ABs                    IND(3s)                    LC(3Rs-s)  
 (name), yes/no?    he doesn't take baths in his own bathhouse  
 Doesn't I. take steambaths in his own steambath house? (10b:25)

(2.38) uani=gga                    amik  
 ua+ni=!                    amig+∅  
 LC                    ABs  
 at the front door  
 There's a door at the opening in front (6b:20)

- (2.39) a. angutni            kaviaq        cukanruuq  
 angute#ni        kaviar+∅    cuka-ner<sup>u</sup>ng:u+'uq  
 LCp                ABs            IND(3s)  
 than the men fox        it is faster  
 The fox is faster than the men (e)
- b. kaviaq, angutet        cukanrat  
 angute:t        cuka-ner-ng:at  
 (RL)p            AB(3p-s)  
 men's            their faster one  
 the fox, the one faster than the men (e)
- (2.40) anuurulurmi=lli        tayarnerpalgussi        yaa  
 anuurulur\*#mi=oh!        tayarner-rpag-lgu-ssi        yaa  
 LCs                            (derived particle)        DA  
 oh! that grandmother        having big wrists!        there!  
 What big wrists that grandmother there has! (3:61)

The localis case indicates 'at or in N', and generally occurs with predications involving (literal or figurative) stationary activity or occurrence (2.37-8). It is frequent in nominal sentences modifying an absolutive case noun phrase (2.38). Syntactically, the localis is the case of the object of unequal comparison in constructions derived from nominalizations where the object of unequal comparison is the possessor by means of the postbase <sup>u</sup>ng:u- NV 'to be N'. A second syntactic use of the localis is in marking intransitive subjects of verb bases derived with deverbal, particle-forming postbases (2.40).

The vialis case is dependent and oblique, and has primarily adverbial meaning:

- (2.41) egalerkun                    tangerr sarturraarcu  
 egaler#kun                    tangerr#yartur-rraar#ciu  
 VLs                            OPT(2p-3s)  
 through the window you first go see him  
 First go and see him through the window' (3:56)
- (2.42) tauna...kinguakun        mayuami  
 tau+na    kingu-ng:akun        mayur<sup>u</sup>ng:ami  
 ABs        VL(3s-s)                CQO(3Rs)  
 that<sub>i</sub>    behind him<sub>j</sub>        when he<sub>j</sub> climbed up  
 when he<sub>j</sub> climbed up following behind him<sub>j</sub> (3:91)



- (2.47) waken            ayakarluk'            pal'tuugilriatun  
wa+ken            ayag-gar\*luku        pal'tuug-ng:ir-lria+tun  
MD                APO(3s)                INP-EQs  
from here just starting it like one who is deprived of a coat  
Starting (to tear) it (sc. a pull-over parka) from here (speaker  
points to collar), like someone who is taking off a coat (i.e.,  
which opens down the front) (3:84)
- (2.48) Cugtun            qanerlun'  
cug+tun            qaner\*luni  
EQs                APO(3Rs)  
like an Eskimo speaking  
talking like an Eskimo = speaking in Central Yup'ik (substitu-  
tion of Yugtun for Cugtun would imply a dialect other than the  
Chevak dialect)
- (2.49) wangtun        ayuqliriciqelriaci  
wang+tun        ayuqe\*li+ri+ciqe-lriaci  
EQs                INP(2p)  
like me you will come more and more to be similar to  
You will become more and more like me (14c:7)
- (2.50) tawaten        pitaunga  
tawa+ten        pi@6\*ta+'ung:a  
like that I do the same  
I will act in that same way (14c:15)
- (2.51) kiputeciqa        malrugtun  
kipute+ciqe+'aa    malrur+gtun  
IND(3s-3s)        EQd  
he will buy it for two  
He'll buy it for two (dollars, cents, or other units, dep. on  
context) (e)

The equalis has the meaning 'in the manner of N, like N' (2.46-50). The equalis is frequently introduced by similarity predicates, in the form of a particular base, ayuqe- 'for S to be similar to eq; for A to be similar to 0 (transitive version)' (2.49), and a particular postbase, @6\*ta- 'to V to the same degree as eq' (2.50). With numeral bases, in construction with verbs of exchange, the equalis indicates the number of units of the exchange medium, leaving the units themselves unexpressed (2.51).

Reflexive third person, as indicated earlier, designates an entity coreferential with the third person transitive or intransitive subject



of the possessed noun phrase's own clause. By this definition, neither the possessor of an absolutive case intransitive subject nor the possessor of a relative case transitive subject can be cross-referenced in its possessum with the 3R inflection. Examples of 3R possessors are found in (2.27) qanmikun 'through his own mouth', (2.30) ellmineng 'by himself (lit: his own being)', and (2.37) qaygimini 'in his own bath-house'. (2.18) provides a good example of a third person possessor possessing a terminalis case noun, and the possessor (the food) is non-co-referential with the subject of the predication ("they").

### 2.3.2. Verb inflection.

Verb bases take endings to form predication words. The inflectional categories represented in verb endings are mood, transitivity, person and number of S for intransitive predications, and person and number of A and O for transitive predications. It is important to realize that while verb endings are attached to verb bases, the information they contain concerns the entire clause: its status with respect to other clauses, and its subject and object. For this reason, I will consider the categories in verb inflection as properties of whole clauses.

Mood distinguishes illocutionary status in main clauses, and syntactico-semantic clause linkage type in subordinate clauses. Transitivity (transitive vs. intransitive) is determined by the base; as with noun bases, some verb bases take transitive endings only, some take intransitive endings only, and others are ambivalent, taking either (see §5.2 for further discussion). As in noun inflection, the pronominal cross-references to S, A, and O distinguish three numbers (s, p, d) and four persons (3, 1, 2, 3R), though in some moods 3R does not occur. In

clauses, the 3R category cross-references an S, A, or O which is coreferential with the S or A of an antecedent clause. The antecedent clause is, in general, either the clause directly superordinate to the clause marking 3R, or a preceding clause in apposition to it, or a preceding noun phrase marked off as a topic (details given in discussions of moods).

There are thirteen moods falling into four major classes:

MOOD <sup>2</sup>	ABBR.	ILLUSTRATION WITH NERE-	'TO EAT'
Independent Moods	IDP		
indicative	IND	ner'ai	he eats them
interrogative	INT	ner'aki	he eats them?
optative	OPT	nerliki	may he eat them!
Appositional Mood	APO	nerluni	he eating
Participial Moods	PRT		
intransitive participle	INP	nerelria	the one eating
transitive participle	TRP	nerkai	the one he eats
Oblique Moods	OBM		
consequential	CQO	nerngamiki	when/because he ate them
contingent	CTO	ner'aqamiki	whenever he ate them
conditional	CDO	nerkuniki	if/when he eats them
concessive	CSO	nerengremiki	though he eats them
precessive	PRO	nervailegmiki	before he eats them
contemporative 1	C1O	ner'llerminiki	at the time he ate them
contemporative 2	C2O	nernginanerminiki	while he was eating them

Table 2-1 shows the functions and main characteristics of the four mood classes:

Table 2-1: Functions and characteristics of the mood classes.

INDEPENDENT	
[+main clause                    ] [-3R [predicative function]]	
APPOSITIONAL	PARTICIPIAL
[±main clause                    ] [+3R [predicative function]]	[±main clause                    ] [-3R [nominal/predicative function]]
OBLIQUE	
[-main clause                    ] [+3R [oblique function]]	

Independent moods occur in main clauses only, and have only a three-way distinction of person. Functionally, they are always predicative, in spite of the overtly noun-like structure of the indicative. The appositional mood occurs both in main clauses and in subordinate clauses, and has the full four-way person distinction. It always has predicative function. Participial moods occur in main and subordinate clauses. They have only a three-way person distinction. They are nominal or predicative in function in subordinate clauses, and predicative in main clauses. Predicative participles inflect for person of S/O as well as for A, while nominal participles inflect for case. Oblique moods never mark main clauses, and they distinguish all four persons. Functionally, they are embedded in other clauses as oblique constituents, serving as adverbial modifiers to the embedding clause in much the same way that

oblique case noun phrases do.

Semantically, the category of mood interacts with what directly precedes and follows the ending in the word. To its left, it interacts with VV postbases belonging to the subinflection, a series of postbase position classes immediately preceding the ending which are optionally filled by a restricted set of postbases (see §6.6.4). To its right, it interacts with certain enclitics (see §5.3.2.). Some of the more important of these interactions will be noted in the discussion of each mood.

In citations of examples, endings are glossed with formulas of the form MOOD(x-y) for transitive endings, and MOOD(z) for intransitive endings, where MOOD represents the abbreviation for one of the moods, x represents a value for person and number of A, y for person and number of O, and z for person and number of S. E.g., INT(3d-1s) = 'interrogative mood, third person dual A, first person singular O'; CSO(3Rp) = 'concessive mood, third person reflexive plural S'.

The indicative (IND) is an independent mood, and signals declarative illocutionary status. Intransitive examples: (2.17, 22a, 26, 29, 30, 33, 35, 36, 37, 39a, 50, 66, 68, 69, 70, 71, 75, 76); transitive examples: (2.10, 18, 21; 23b, 24b, 34b, 44, 51). With the enclitic =qaa 'yes/no?' the illocutionary status changes to that of yes/no questions (2.37). Three postbases interact with the semantic and syntactic function of the indicative:

- (2.52) 

egalerkun	tangerr sarturraarciu	
egaler+kun	tangerr+yartur-rraar@#ciu	
VLs	OPT(2p-3s)	
through window	you first go see him	
allanr yuksuaraatgen		'First go and see him
allaner <sup>u</sup> ng:u+yuke+yuar+'aatgen		through the window, otherwise they will think you
IND(3p-2s)		are a stranger.'
lest they think you are a <u>stranger</u>		(3:56)

- (2.53) eq'urtellermini      nangrallagtur=ggur-      "Anaurtukut!"  
 eq'urte-llermini      nangrallag+tuq=said      age@#naur+tukut  
 C10(3Rs)                  IND(3s)                  IND(1p)  
 when he got angry he suddenly stood up      "Let's go over!"  
 When he got angry, he suddenly stood up and said "Let's go  
 over there!" (3:82)

#yuar- 'lest V' semantically subordinates an indicative to an optative clause (2.53). Its opposite is @#niar- 'in order that V', also used on an indicative-inflected base to subordinate it to an optative. The subordination here is semantic only, and does not constitute formal subordination. The postbase @#naur- alters the illocutionary status of indicatives with non-singular first person subject, giving an optative illocutionary status 'let's V!' (2.53). This postbase occurs only before indicative endings (and what I symbolize as  $V_x-V_b$  postbases, see §6.6.4, known as "double transitive" in the literature) but it has habitual aspectual meaning with other persons (2.18, 76).

The interrogative (INT) is also an independent mood, and is used for making content questions, i.e., non-yes/no questions. It must be accompanied with an indefinite base or particle holding the syntactic place in the clause of what is being elicited in the question (see also 2.23a):

- (2.54) cameng      kiputellruyit  
 ca#meng      kipute-llru@#cit  
 MDs            INT(2s)  
 sth.            you bought?  
 What did you buy? (e)

- (2.55) Qaillun=mi=taan      ayagnera=taan      -ciin      wani=gg'  
 how!=perhaps      ayagner-ng:a=perhaps      why      wa+ni=!  
 PT                          AB(3s-s)                  PT      LC  
 how ever, I wonder      maybe its beginning      why      now!
- kausciigataqsia                          'How ever, I wonder (does the  
 kau+sciigat°e+'aqe@#cia                  song go), why can't I pull  
 INT(1s-3s)                                  the beginning of it out (of  
 I keep being unable to pull it out?      my memory) now?' (11b:64)

(2.56) Natvarcit?  
 nate+var@#cit  
 INT(2s)  
 you are going somewhere? (vol.) (nate- 'somewhere in relation to')

The indefinite bases or particles are different according to the place they hold; ca- 'something, do something' (indefinite noun or verb base) holds the place of a modalis case grammatical patient in (2.54), qaillun 'how' and ciin 'why', both indefinite particles, hold the place of adverbial particles or perhaps oblique mood clauses in (2.55), and nate- 'where; somewhere in relation to' (indefinite position base) holds the place of a position base derived with the postbase +var- 'to go to N'. Occasionally no indefinite base or particle occurs with the interrogative; in those cases, the illocutionary status becomes optative or exclamatory (see e.g., 2.23a).

When the questioned element is a semantic patient, as in (2.54), it is far more common for it to appear in the modalis case than the absolute case in a corresponding relative-absolute construction (see §2.3.1, modalis case). This is probably due to the fact that questioned items tend to be indefinite in their referential status (recall that the modalis case gives patients something like indefinite referential status). A possibly related phenomenon is that transitive interrogatives with first person subject use formally intransitive endings, though the 0 still appears in the absolute case (in 2.55, @#cia is morphologically INT(1s), but syntactically and functionally INT(1s-3s), since ayagnera is its absolute case 0). Thus there are two ways in which the interrogative favors formally intransitive structures.

Various enclitics (see §5.3.2.) modify the illocutionary status of interrogatives, such as =mi, introducing an element of surprise; =kiq



and having some of the morphological characteristics of each mood. (They are analyzed as optative for paradigmatic reasons, see §4.3.1.) The postbase -gar- 'just V', makes a polite optative in all persons, and occupies the penultimate postbase slot when it has that meaning (e.g., taiqeqilit 'please, may they come?' tai-gar@4+ki#lit cf. 2.57).

The appositional (APO) is alone in its class. It is used in narrative for chains of clauses in semantic apposition, having the same subject (S or A). Put differently, the appositional, like 3R person, indicates coreference between the subject of an antecedent clause, and an element in its own clause. Unlike 3R person, however, that element in the appositional's own clause will always be the subject of the appositional clause, so that the coreference is always subject-to-subject. The appositional also forms polite commands with second person subject (2.62). Morphologically, the appositional is unipersonal in that it formally marks only O or S. In transitive sentences, then, A is unexpected but understood (cf. also 2.27, 32, 43a, 43, 48, 52, 59, 64, 67, 72, 73, 74, 75, 77):

(2.60)	taw'=am-taw'	akuliignun	aqumluni
	then=but then	akule-ng:agnun	aqume#luni
	PT	TM(3d-s)	APO(3Rs)
	and then	to <u>between</u> them	he <u>sitting</u> down
	pilliak	tawaten	kevemrruutassiirlukek
	pi-lli+'ak	tawa+ten	keveg-mrruu@6#tassir#lukek
	IND(3s-3d)	EQ	APO(3d)
	he perhaps <u>does</u>	thus	testing to see if he could <u>lift</u>
	to them		them a little bit

And then he would sit down between them, like this,  
trying to see if he could lift them a little bit. (9a:11)





The antecedent for the appositional mood is always also the antecedent for the 3R person, as noted above already. This, along with the fact that the appositional is morphologically unipersonal, produced an interesting interaction: where the predication is intransitive, the cross-reference marking on an appositional clause is 1, 2, or 3R, but never 3. This is because the cross reference is to an S, and by definition the S of an appositional clause is coreferent with the subject (S or A) of the antecedent clause. On the other hand where the predication is transitive, the cross reference marking on an appositional clause is 3, 1, or 2, but never 3R. This is because the cross reference is to the O, which is, again by definition, never coreferent with the S or A of the antecedent clause, since instead, it is always the unexpressed A which is coreferent with the S or A of the antecedent clause. Examples of intransitives (with 3R) are (2.27, 48, 60, 61, and 73), and examples of transitives (with 3) are (2.34a, 43, 52c, 59, 60, 64, 67, 74, and 77). For first and second person, the marker is the same for intransitive (2.32, 75) or transitive (2.63), formally marking S and O, respectively.

Among postbases occurring with the appositional mood are +pk<sup>o</sup>et<sup>o</sup>e- the VV negative that is used exclusively with the appositional (2.73, elpekevkarpegnateng), @\*piir- VV 'to be going along V-ing, while going along V-ing', and @\*na- VV 'in order to V'.

The intransitive participle (INP) and the transitive participle (TRP) are the two members of the participial mood class, and, although they have different mood signs, they are similar enough in their patterning to be treated together. The intransitive participle takes only intransitive endings, and the transitive participle takes only transitive endings (cf. also 2.47, 49, 67):

(2.63) Qaillun pikiuraqelrianga tamakuneng wii=llu  
 how pi+kiur+'aqe-lrianga tama+ku#neng I =&  
 PT INP(1s) MDp (AB) 1s  
 how I handle things those and I

tamakut ilaita waten, tangerrlua  
 tama+ku+t ila-ng:ita wa+ten tangerr#lua  
 (RL)p RL(3p-p) EQ APO(1s)  
 of those some of them thus seeing me

Some of those (people) used to see me, and (knew just from that) how I conducted my daily affairs. (14c:3)

(2.64) Ug'um ua=i kangirami aqumgalriim  
 ug+u+m ua=! kangirar#mi aqumgalrii+m  
 RLs DA LCs INP-RLs  
 one there there, by in the corner one sitting  
 by the door the door

pivkaqiinga  
 pi-vkar@4#kiinga The one there by the door in the corner  
 TRP(3s-1s) sitting there was the one who caused it to  
 he caused to me happen to me. (9a:23)

(2.65) imarpiim yaaqsinrilkiini  
 imarpig+m yaaqsig-nrit°e@4#ke-ng:ani  
 RLs TRP-LC(3s-s)  
 of the ocean in its not distant area  
 not far from the sea (7b:2)

The participles have both nominal and predicative subtypes, functionally as well as morphologically. In their nominal subtypes, the mood markers behave much like VN postbases, deriving adjectival nouns: -lria-/-lrii-/@4ngur\*- intransitive participle, 'the one who does V' (obligatorily unpossessed), and @4#ke- transitive participle, 'possessor's one whom he V's' (obligatorily possessed). Examples are pal'tuugilriatun INP-EQs 'like one who is deprived of a coat' (2.47), aqumgalriim (2.64), and ayyqsinrilkiini (2.65). In predicative uses, participles cannot be marked for case, and pronominal suffixes marking 1st and 2nd person become possible (when no pronominal suffixes are present, 3rd person is implicit). Because of this, and because predicatively used participles are inflected with the same endings as the indicative, they are best treated as

full-fledged moods. (In fact, the morphology of nominal and predicative participles is the same where ever there is category overlap, so that markers of nominal inflection in the absolutive case are identical to markers of predicative inflection for third person absolutive arguments. The morphological details are presented in §3).

The predicative participles may further be classified into those occurring as main clauses, and those occurring as subordinate clauses. The former class has an exclamatory illocutionary status (2.49, 2.64 pivkaqiinga). For GCY it is reported (Reed et al. 1977:250, 297, Miyao-ka 1975:50-1) that main clause participles are generally accompanied by certain enclitics or particles. This is not the case for Chevak (see examples cited above), where unaccompanied uses are very common. The latter class (2.63) is of course elusive, since there is no real way of drawing the line between subordinate clause predicative uses and nominal uses for those inflectional configurations where there is morphological overlap. Nevertheless one senses that some are more nominal than others: (2.63), for instance, far from being nominal, shows an adverbially functioning intransitive participle subordinated by the indefinite particle qaillun 'how'.

Oblique moods mark subordination, along with temporal, aspectual, and presuppositional information. Each has its own mood sign, and person markers are based on possessed relative case endings for all but the contemporative 1 and contemporative 2, which are based on possessed localis case endings. In oblique mood clauses, the antecedent for the reflexive third person is always the subject of the clause to which the oblique clause is subordinate.

The consequential (CQO) is translated 'when (in the past)...', or

'because (in the past), as a consequence of (past occurrence)...' (see also 2.42, 2.73):

- (2.66) peg'arcani=gguq                      qanpacugtuq  
 pegte@+'ararte%@ani=said      qaner-pacug+tuq  
 CQO(3s-3Rs)                              IND(3s)  
 when he released him              he spoke loudly  
 When he<sub>j</sub> released him<sub>j</sub>, he<sub>j</sub> spoke loudly. (3:76)

In (2.73) both translations of the consequential occur: unuakuaraungan 'because it was early' and tekicameng' when they arrived'. In (2.66), the O of the consequential mood clause, cross-referenced with 3Rs, is coreferential with the S of the main clause.

The contingent (CTO) is translated 'whenever...'. and imparts habitual aspect to the clause. Analytically, its mood sign +'aqa- is probably a phonologically irregular formation from the postbase +'aqe- 'S/A always tends to V' plus the mood sign of the consequential, <sup>u</sup>ng:a- ('+aqnga- would ordinarily be expected, but does not occur):

- (2.67) ayauteqataraqamegteki      tamakut      nakacuut,      kagaciqaq  
 ayaute-qatar+'aqamegteki      tama+ku+t      nakacug+t      kagaciqar+∅  
 CTO(3Rp-3p)                              (AB)p              (AB)p              ABs  
 whenever they were about      those              bladders              ceremonial  
 to take them out    torch stake

napalria                      muragaq                      evegneng...      caquluku  
 napa-lria                      muragar+∅                      eveg+neng      caqu+luku  
 INP(3s)                      ABs                      MDp                      APO(3s)  
 one standing up      made of wood grass                      wrapping it

Whenever they were about to take the bladders out, they would wrap the standing wooden ceremonial torch stake with grass. (6b:37).

- (2.68) natriutaqata                              nanikuanaurtukut  
 nater-ng:ir:ute+'aqata                      nanikua@#naur+tukut  
 CTO(3s)    IND(1p)  
 whenever they (boots) wore      we would be fearful  
 out their bottoms  
 Whenever out boot bottoms wore out, we would be fearful.  
 (9b:2)

When the superordinate clause is in the indicative, and has a non-stative or non-durative aspect verb base, it is made habitual with postbases like +'aqe- (mentioned above), @#naur- 'S/A would regularly V' (2.68), -tu- VV 'to customarily V', #yuit°e- VV 'never to V', and a few others. When the superordinate clause is in the appositional, this kind of modification is entirely optional (2.67). Turning to coreference relations in the examples above, the A of the contingent mood clause in (2.67) is cross-referenced as 3Rp, and is coreferent with the understood A of caquluku. In (2.68), the S's of the two clauses are non-coreferential.

The conditional (CDO) is an irrealis, meaning 'whenever (in the future, or extending in the future)...', 'if (past or non-past)...', or 'if it had been the case...' (counterfactual):

(2.69) wangkugneng      tangvakuneng      aavurteciqu  
 wang+ku+gneng      tangvag@4#kuneng      aavurte+ciqe-'ut  
 MD 1d                      CDO(3Rp)                      IND(3p)  
 us two                      if they watch                      they will be amused  
 If they watch the two of us, they will be amused. (3:100)

(2.70) piqarreqkaku                      quyatuyartua                      tawa  
 pi-garaqe@4#kaku                      quya-tu#yar+tua                      then  
 CDO(3s-3s)                      IND(1s)                      PT  
 if he would once in      I would have been  
 a while ask it                      most grateful  
 If one (of you) had once in a while asked me about it, I  
 would have been grateful each time (14c:14)

The superordinate clause generally takes an irrealis postbase such as +ciqe-, future tense (2.69), #yar-, counterfactual (2.70), @#ngait°e- future negative, and others. Note that the S of the conditional clause in (2.69) is coreferential with the S of the main clause, and cross-referenced with 3Rp in its own clause. In (2.70), neither the A or the O of the conditional clause is coreferential with the main clause S.

The concessive (CSO) is translated 'although...':

- (2.71) kic'ingramku           caqam           iliini           puglerciquq  
kite+'i@6-ngramku       ca-gar+m       ila-ng:ani       puge+ler+ciqe+'uq  
CSO(1s-3s)               RLs            LC(3s-s)        IND(3s)  
even though it sinks   of just        at one of       it will suddenly  
on me                    something                            emerge  
Even though it sinks on me (i.e., sinks out of reach of my  
memory), just one of these days it will emerge. (11b:81)
- (2.72) nallung'erpeggu       -taw'   angqaqluten  
nallu@6-ngrar\*+pk°u       then   anger-garaqe@\*luten  
CSO(2s-3s)               PT     APO(2s)  
even though you don't       you say yes now and then  
know it  
Even though you don't know (what's being said), you say yes  
now and then. (10a: p. 37)

In these examples, there is no coreferentiality between clauses, and the reflexive third person therefore does not occur in them.

The precessive (PRO) is translated 'before...':

- (2.73) tawa -elpekevkarpegnateng           :unuakuaraungan  
then elpeke-vkar+pk°et°e%@nateng   unuaku :arar\*+ng:u#ng:an  
PT    APO(3Rp)                            CQO(3s)  
          they not causing themselves   because it was early morning  
          to be noticed
- pekengvailgata       tekicameng           itliniluteng  
pekenge@+pailgata   tekite%ameng       iter-llini#luteng  
PRO(3p)               CQO(3Rp)            APO(3Rp)  
before they began   when they arrived   they evidently entering  
to walk around

Well, they didn't get themselves noticed because it was early in the morning, before they (the villagers) began to walk around, when they arrived (at the village), (and) they entered (it). (3:51)

- (2.74) aumai           nipvailgata           pikna   egaleq   patuluku  
aumar-ng:i   nipe@+pailgata       pik+na   egaler+∅   patu#luku  
AB(3s-p)    PRO(3p)            ABs     ABs     APO(3s)  
its embers   before they went out   that up   window   closing it  
  there  
Before the embers went out, they closed the window above.  
(6b:24)

In chains of oblique mood clauses it is often the case that their syntactic relation to each other is loose. Thus to me it is of doubtful value





clause: compare the main clause in (2.76) with @#naur- 'S/A would regularly V', and the main clause in (2.77), which is modified by the particle piqerluni 'once, at one time'.

## Footnotes-- §2

1. The following chart shows correspondences between case terminology used here, and that used in Reed et al. 1977 and in Miyaoka 1975:

<u>This work</u>	<u>Reed et al. 1977</u>	<u>Miyaoka 1975</u>
absolute	absolute	absolute
relative	relative	relative
modalis	ablative-modalis	ablative
terminalis	terminalis	allative
localis	localis	locative
vialis	vialis	translocative
equalis	aequalis	equalitative
dependent cases	--	--
primary cases	--	syntactic cases
oblique cases	--	adverbial cases

2. The following chart shows correspondences between mood terminology used here, and that used in Reed et al. 1977 and in Miyaoka 1975:

<u>This work</u>	<u>Reed et al. 1977</u>	<u>Miyaoka 1975</u>
independent moods	independent moods	independent moods
---	dependent moods	subordinate moods
indicative	indicative	indicative
interrogative	interrogative	interrogative
optative	optative	optative
appositional	subordinative	appositional
participial moods	---	participial mood
intransitive participle	intransitive participle	participial mood, intransitive form

## 2. (cont.)

<u>This work</u>	<u>Reed et al. 1977</u>	<u>Miyaoka 1975</u>
transitive participle	transitive participle	participial mood, intransitive form
oblique moods	connective moods	relative mood
consequential	consequential	(a)
contingent	contingent	(a)
conditional	conditional	(a)
concessive	concessive	(a)
precessive	precessive	(a)
contemporative 1	contemporative 1	(a)
contemporative 2	contemporative 2	(a)

Note (a): Miyaoka calls each of these 'relative verb marked by X', where X is the mood sign used.

### 3. Inflectional morphology.

In this chapter, paradigms and analyses are presented of noun and verb endings in the Chevak dialect of Central Yup'ik. The categories signaled by these endings were described in §2, and are discussed in terms of some syntactic considerations in §4.

The first thorough analysis of inflectional paradigms in an Eskimo language was done for Greenlandic by Kleinschmidt (1851). Uhlenbeck (1907) presented a comparative study of Eskimo-Aleut inflectional endings; this was followed nearly thirty years later with L. L. Hammerich's important comparative study (Hammerich, 1936), which remains the fundamental work on Eskimo-Aleut inflection. Knut Bergsland, in his demonstration of the Eskimo-Aleut hypothesis (Bergsland, 1951) broadened and refined many reconstructions in light of newer data, and brought Hammerich's findings into line with his own investigations of Aleut (see also Bergsland, 1962, for syntactic interpretation of reconstruction). From the standpoint of Yupik languages, Hammerich's work is particularly remarkable in the use he was able to make of Barnum's (1901) Central Yup'ik data, which as noted gives very inadequate transcriptions. Bergsland made use of Barnum as well as of Hinž (1944), which provides far better transcriptions of Central Yup'ik data. It is quite fair to say that the basic comparative analysis of Central Yup'ik inflection is well established in Hammerich's and Bergsland's studies. Nevertheless, more modern data from Central Yup'ik is still crucial to general Eskimo-Aleut reconstruction for the evidence it provides for underlying schwas, junctures, and other phonetic and analytic features not turned up in earlier work. Further, of course, it is important to the as yet virtually unborn field of comparative Yupik.

In publications that are based on the current and far more adequate understanding of Central Yup'ik phonology and morphology developed by the Alaska Native Language Center group and their associates, there have been no complete analyses of inflectional morphology. Nevertheless, Miyaoka (1975) gives a list of pronominal suffixes as they occur in verb endings (1975:40), and he identifies mood signs in verb endings as part of his discussion of the moods (1975:43-51). Reed et al. (1977:139-45) too give an analysis of transitive endings in the indicative mood. They also segment possessed noun endings in an appendix (1977:~20-1), identify mood signs in verb endings, and make various incidental remarks relevant to inflectional analysis as part of their discussions of some of the paradigms they present.

For other Yupik, Jacobson (1977) gives a complete set of paradigms for the St. Lawrence Island dialect (SLI) of Siberian Yupik, as well as spot analyses of indicative and oblique mood endings. In a more theoretical vein, Vaxtin (1979) analyses the indicative, interrogative, and optative moods of the same language (Chaplino dialect), noting ergative, accusative, and mixed patterning in the inflection of intransitive vs. transitive verbs for those moods. The segmentations presented there are fairly raw, lacking in junctural detail, since his purpose was grammatical analysis, rather than morphological reconstruction.

In this chapter, my purpose is (i) to give a more complete analysis of endings in a Central Yup'ik dialect than has been given, (ii) to note the differences between the Chevak dialect and the GCY dialect as it has been described by Miyaoka (1975) and by Reed et al. (1977) for inflectional endings; and (iii) to present an analysis of pronominal suffixes with enough detail to have implications for general Eskimo-

Aleut comparison.

The items presented in the paradigms are pronominal suffixes (§3.1), entire noun endings (§3.2), verbal mood signs (§3.3.1), and verbal cross-references (§3.3.2). The latter two are subcomponents of verb endings. Although all of these items are morphologically complex, they are presented in orthographic level transcription as fused units, that is, as chunks within which preorthographic phonological rules (see §1) have applied. In analytic discussions, the internal structure of these units is given, and there, underlying representations of their subcomponents are given or referred to.

The line between internal reconstruction and synchronic morphological accounts is fine, but must be drawn. While I have attempted to present analyses here with as much historical and comparative plausibility as possible, where there were choices between that, and descriptive simplicity or adequacy, I opted for the latter, due to the basically descriptive and synchronic orientation of this study. Also, because the field of comparative Yupik is more or less unexplored, a certain amount of conservatism is advisable when considering just one language in detail.

In the discussion that follows I make use of all of the abbreviations introduced in §2. For referring to groups of paradigmatic elements, I find it convenient to use variables as place holders in abbreviatory formulae. Thus instead of writing 'AB(2s-p), AB(2p-p), and AB(2d-p)', I write AB(2x-p); instead of writing 'all indicative mood endings with second person singular transitive subject' I write either 'IND(2s-Xx)', or 'all indicative with 2s A'. For partial collapsings, instead of writing 'AB(2s-p) and AB(2p-p), but not AB(2d-p)', I write

AB(2 s/p -p)'.

Citations of GCY data are from Miyaoka (1975), Reed et al. (1977), and Jacobson (1978). These sources are in near total agreement; differences will be noted when relevant to the discussion at hand.

### 3.1. Pronominal suffixes.

As a preliminary to discussion of noun and verb endings, I will identify four functional sets of pronominal suffixes marking person (3, 1, 2, 3R) and number (s, p, d) of possessor, possessum, transitive subject (A), intransitive subject (S), and direct object (O), as they occur in endings. The sets may be called possessor/subject (POSR/S/A), (third person) possessum/object (POSM/O), intransitive subject / transitive object (S/O), and neutral first person (1-NEU). They are as follows:

POSR/S/A			S/O		
s	p	d	s	p	d
3 +∅	+t(e)-	+g-	3 -g:ugg/-k <sup>o</sup> u	-ki	-kek
1 -ka	+put	+puk	1 +ng(:)a	-kut	-kuk
2 +t /+n	+ci	+teg-	2 -k <sup>o</sup> en/+ten, +ng	+c <sup>o</sup> i	+tek
3R -ni-	+neng/	+nek/	3R -ni	+teng	+tek
	+negte-	+negne(g)-			

POSM/O			1-NEU		
s	p	d	s	p	d
3 -ng:a-	-ng:i-	-ke-	1 +ng(:)a	+te-	+(g)nung/+gne-

Notes: (a) For forms which only occur ending-finally, the surface endings are given (i.e., with P25 already applied, see §1.2.3.6). (b) +t̥ (<\*nt) indicates that a directly preceding nasal is not assimilated to a stop.

The distribution of the suffixes is expressed in the following set of charts. Each square represents a characteristic pattern of pronominal suffixes, marking person and number of S, A, and/or O for one or several moods, or marking person and number of possessor or possessum of nouns for absolute or relative case.

AB POSSESSOR  
IND/PRT A (acting on 3x 0)

	s	p	d
3	POSR/S/A		
1			
2			
3R			

RL POSSESSOR  
IND/PRT A (acting on non-3x 0)  
OBM S/A

	s	p	d
3	POSM/O + POSR/S/A		
1	1-NEU		
2	POSR/S/A		
3R			

INT/OPT S/A<sup>a</sup>

	s	p	d
3	POSR/S/A		
1	1-NEU		
2	POSR/S/A	S/O	

APO S/O<sup>b</sup>

	s	p	d
3	S/O		
1	1-NEU		
2	S/O		
3R			



IND/PRT S/O  
AB/RL POSSESSUM

	s	p	d
3	POSR/S/A <sup>c</sup>		
1	S/O		
2			

OBM/INT/OPT 0<sup>a</sup>

	s	p	d
3	S/O		
1			
2			
3R			

Notes to pronominal distribution charts:

<sup>a</sup>2s A in the INT and OPT is marked with no pronominal suffix. OPT (1x-Xx) is marked on the IND(1x-Xx) pattern, but with mood sign #lar- OPT(1s-3x/2s) follows the pattern for INT(1s-3x/2s).

<sup>b</sup>For APO, 3s is 0 only, 3Rs is S only.

<sup>c</sup>For IND/PRT 3x 0 with 3x A, as well as for AB/RL possessum of 3x possessor, the POSM/O set, -ng:a-, -ng:i-, -ke-, is used.

Further aspects of pronominal distribution are discussed in §§4.2-3.

The following is an internal reconstruction of the three sets of pronominal suffixes:

POSR/S/A

	s	p	d
3	+Ø+Ø	+Ø÷t(e)-	+Ø÷g-
1	+r/g+ng(:)e-	+pu÷t(e)-	+pu÷g-
2	+t-	+t+i-	+t÷g-
3R	-ni-	+neg÷t(e)-	+neg÷g-

S/0

	s	p	d
3	(-ke)-g:ugg	-ke+i	-ke:g-
1	+te+ng(:)e-	-ku+t(e)-	-ku:g-
2	-ke+t̄-/te+t̄-	+te+t̄+i-	+te+t̄:g-
3R	+te-ni-	+te+neg:t(e)-	+te+neg:g-

POSM/0

1-NEU

	s	p	d		s	p	d
3	<u>ng</u> :a-	<u>ng</u> :i-	-ke-	3	+te+ng(:)e-	+n+t(e)-	+nu:g-/ +n:g-

Three positions can be identified in pronominal suffix segmentations. The first is found only in the S/0 set, for 1s, 2x, 3Rx. There, -ke- (2s) or +te- (2x and 3x) precede what are otherwise the ordinary POSR/S/A endings, e.g., S/0 2p +te+t̄+i- vs. POSR/S/A 2p +t̄+i-. Bergsland (1962) argues that -ke- and +t(e)- are the remains of an independent pronominal stem cognate with Aleut t(g)i-, which suffix cognates from the POSR/S/A set to form independent pronouns of the person and number designated by the suffix. The syntactic basis for the argument is that in Aleut the independent pronouns can become enclitic, and the claim is that Eskimo has taken this process one stem further. Hammerich (1936:172) suggested Aleut tgin 'you (s)' as the basis for a reconstruction explaining the Eskimo alternation realized here as -k<sup>o</sup>en/+ten (S/0, 2s) and Bergsland (1962) extended that claim to the entire non-third person S/0 set, but noted only that the comparison "can easily be justified phonologically". However, this justification is only clear to me for 1s, 2x, and 3Rx, where the +te- combines with the suffixes just as the plural

+t(e)- on the possessum does in AB(2x/3Rx -p), see §4.2. Etymologically, the S/O 3x pronominal suffixes represent a different layer: their cognates are suffixes in Aleut too, and are considered by Bergsland to be the analog followed in Eskimo by the independent pronouns. It is most likely on comparative and syntactic grounds that the S/O and 1-NEU 1p and 1d pronominal suffixes also had their origin as independent pronouns, but I know of no internal morphological evidence to support this.

The second position is found in all sets, and contains markers for person. For 3x, POSR/S/A has +∅-, and S/O has -ke- (combined for 3s with a more archaic form -g:ugg which probably has partially similar etymological origins). For the POSM/O set, a velar element could be isolated, and though it may mark something other than person, as Hammerich (1951) has claimed, it is more likely that it is somehow related to the velar of the 3x set, which also has vocalic alternation as a marker of number. For 1x, there is a singular/non-singular split. For singular POSR/S/A, S/O, and 1-NEU all have +ng(:)e-, though for POSR/S/A it seems to have assimilated to -k in combination with final r- and g- of class V and VI bases, and then extended -k to the rest of the bases. For S/O and 1-NEU +ng(:)e-, it is the first position +te- which prevents this assimilation. In the plural and dual 1-NEU has +n~+nu-, POSR/S/A has +pu-, and S/O has -ku-. The last of these can be traced to an archaic suffix meaning 'and the other(s)', found now in the postbase +nku- NN 'N and company (in dual or plural)', where +n- itself is a form of the plural, indicating that -ku- is in essence an inflectional element; wangkuk 'we (dual)', where wang:e- is the base for 'I', hence 'I and one other'; and finally -ku-, obliga-

tory with dual and plural demonstrative pronoun inflection (see §5.1.3). 2x and 3Rx show no such variation in person marking: +t- marks 2x, -ni- marks 3Rs, and +neg- marks 3R p/d.

The third position contains markers for number. Everywhere this is +∅ for singular, +t(e)- for plural, and +g- for dual, except in POSR/S/A 2p, S/O 3p, and POSM/O 3p, where plural is marked with +i-, and, for the latter two, contrasts with another vowel in the singular (u and a, respectively). Further, one might infer that POSM/O 3d were segmented \*-ng:+g-.

The following are notes on the analysis presented, with remarks on dialect differences between GCY and Chevak, where appropriate.

1. Symbols used in segmentations. '(e)' here is a variable schwa, which occurs finally when preceded by two consonants, and medially when surrounded by consonants, but disappears word-finally after VC, and when preceding a prime vowel. Final schwa not surrounded by parentheses becomes a, by P25d (see §1). This is a non-standard use of the symbol '(e)', which in §1 is used to represent a type of word-initial schwa; the two cannot be confused, however, since '(e)' as it is used in this chapter is never word-initial. The other symbols are used in the standard ways described in §1.
2. Phonological process with +n-. A complex set of changes occurs for combinations of +n- plus +t(e)- plural or +g- dual. This occurs for RL(3p-x) and RL(3d-s) where the number markers are preceded by +n-, the relative case marker with third person possessors; it also occurs for the two non-singular first person 1-NEU pronominal suffixes. Derivation is as follows:

+n	:+t(e)-	+n	±g-	+n	±t(e)-	+nu	±g-
RL	p	RL	d	lp/d	p	lp/d	d
+nte-	a	+neg-	c	+te-	a	+nug-	c
+t̥e-	b	±g+neg-	d	+t̥e-	b	(±g)+nug-	d
+t̥a	P25d	±gneng	e	+t̥a	P25d	+(g)nung	e

a. Final (e) in ±t(e)- is converted to e following a consonant cluster.  
 b. nt becomes t̥ (see Bergsland 1951:169), where this is posited for RL (3p-x); Bergsland does not use a special symbol equivalent to t̥).

c. Schwa is inserted to break a final cluster.

d. Initial ±g- appears obligatorily with the RL plus dual, and optionally with lp/d plus dual, apparently as a secondary mark of the dual (cf. Greenlandic RL plus dual +nik, lp/d plus dual +nuk, where there is no trace of the ±g- that is added in Yup'ik; sources for Greenlandic forms: Bergsland 1955:52).

3. NVg-# ⇒ NVng. This rule occurs in HBC but not GCY, and affects only inflectional endings. The forms to which it applies are, besides the above, are the modalis case marker +neng (underlyingly +neg-, cf. GCY +nek), and the APO(2s) marker with class IVc bases, %@nang (underlyingly %@nag-, cf. GCY %@nak).

3. The POSR/S/A 2x marker +t̥-. When it occurs at the end of the pronominal suffix, +t̥- is realized ±n/±t (see POSR/S/A 2s). The ±n- variant occurs in AB(2s-s) and OPT(2s) (with class IV verbs only); ±t occurs elsewhere. When ±n/±t is non ending-final, it is deleted, e.g., RL(2s-s/p) ±pet has the form \*pe- when it is followed by other suffixes. This deletion is consistent with the absence of a pronominal marker for 2s A in the interrogative and optative moods, and perhaps ±n/±t might be considered to have been present as the 2s marker at some point in the past. For POSR/S/A 2p, +t̥+i, a rather abstract reconstruction (cf. Aleut -ci), becomes +ci by P19 or a process like it.

4. Combining forms of non-singular POSR/S/A person-number suffixes.
- a. +neng, the POSR/S/A 3Rp person-number suffix, has the combining form +negte-; gte+n becomes ggn in LC/MD/TM(3Rp-x) noun endings by rule P9.
- b. After g of the dual (other than from +g(e)- marking dual possessum with non-third person possessor, cf. §3.2.1., item 1a), a syllable ne is common when the following segment is a velar, but never occurs when the following segment is a dental (exception: OBM(3Rd-2x), see §3.3.2.5., item 8). Reed et al. (1977) treat this ne as an empty element that is inserted, sometimes optionally, and sometimes obligatorily, in the environment described above. But its etymological source can be explained if one calls +gne- the combining form for +gneng, from relative +n- plus POSR/S/A 3d +Ø+g- (see item 2 above), as well as for +(g)nung from 1-NEU 1d +nu+g- (see again item 2 above). By this analysis, when the sequence gne is followed by a dental, it simply loses its n through assimilation, just as gte of the POSR/S/A 3Rp person-number suffix loses its t through assimilation to a following dental. Based on this, it can be seen that the +n- of the relative case is present just before the suffix marking A in IND(3d-1d) (one variant), INT/OPT/OBM (3d-3x), various OBM(3d-Xx), and INT/OPT (3d-1s). Note that for S in OBM(3d) but not elsewhere this relative +n- is also present. The presence and absence of +n- is a matter of dialect variation as well as internal variability: thus for OBM(3d-Xx), it is lacking in GCY (making it possible to say that Chevak builds OBM(3d-Xx) on both RL(3d-s) -ng:agneng and AB(3d-s) -ng:ak, while GCY builds it on AB(3d-s) -ng:ak only). This ne again appears for VL(3d-x), which obviously contains relative +n-, but it must be analogical in VLd +gnegun, a variant beside +gkuñ, from +g(e)+k°un. It must

also be analogical for INT(2d-3p/d), OBM((2/3Rd-Xx), and POSR/S/A 3Rd +negne-, since there is no obvious etymological explanation for it there.

5. S/O person-number suffixes with initial -k. Initial k in S/O suffixes is preceded with deleting juncture in Chevak, but usually with retaining juncture in GCY. Miyaoka (1975:40) represents all of what are here called k-initial S/O suffixes with retaining juncture, but this does not account for GCY INT/OPT (2d-3x) endings, which are the same as Chevak's (but in the dual, Chevak is defective due to replacement, see §3.3.2). Jacobson 1978 differs from the other GCY sources in noting INT/OPT (2d-3p/d) tegki and tegkek, respectively, as optional alternatives to teki and tekek, giving evidence of +ki, +kek vs. -ki, -kek variation in GCY. Chevak's deleting juncture contrasts with GCY retaining juncture for INT(2d-1p/d), and OBM(2d-3s/p) and (2d-1p/d). In other places where GCY shows retaining juncture for k-initial S/O suffixes, Chevak has dual forms where the sequence ne, discussed above, follows the g of the dual, or it has lost the dual ending altogether through paradigm replacement (§3.3.2.).

6. S/O 3s person-number suffix variation. For S/O 3s, the alternation -g:ugg vs. -k<sup>o</sup>u can be accounted for by positing -ke-g:ugg for the latter, where -ke-appears on analogy from the corresponding 3p and 3d forms. The alternation is not phonologically fully predictable, but it has predictable aspects to it. -g:ugg keeps its final gg when it follows a prime vowel (under which circumstances it also loses its initial g: by P20), and it loses gg elsewhere. Chevak but not GCY preserves the final velar in at least this environment, cf. GCY  $\pm$ g:u throughout, but note NS  $\pm$ g:ung (based on Jacobson, 1980c) and West Greenlandic +uk, which also can occur postconsonantly (e.g., causative (3p-3s) -mmaSSuk,

Bergsland 1955:52). In Chevak, -g:u has replaced -g:ugg in the speech of all but the elderly, and the elderly also use -g:u at times. The other alternant, -k<sup>o</sup>u, occurs post prime vocally for OPT(1s-3s), OBM(3s-3s), APO(3s): as far as I can tell, this is not a predictable aspect of the alternation. In other environments, that is, after consonants or schwa, it is not possible to decide which allomorph is present, since k<sup>o</sup> spirantizes there and final gg is lost. An exception to this is OBM(2s-3s) +pk<sup>o</sup>u, where k<sup>o</sup> is necessary to account for +vku and +peggu, the postvocalic and postconsonantal allomorphs, respectively.

7. S/O 2s person-number suffix variation. Here, the variants are -k<sup>o</sup>en, +ten, and +ng. The first two have a phonologically predictable alternation: -k<sup>o</sup>en occurs after nasals (as ken) and after Ce (as ggen, by P18b, with schwa inserted by P15), all according to the usual pattern for k<sup>o</sup>; +ten occurs after fricatives and prime vowels. A dialect difference associated with these forms is for OBM(1/3R d-3s), Chevak -megten, GCY -megnegen. Chevak never uses the -k<sup>o</sup>en alternant after ÷gne- (from +n÷g- RL plus 3d and from +nu÷g 1-NEU 1d, see items 2 and 4b above), nor after velars (in which case ne is inserted by analogy, see item 4b above). In other places, however, GCY agrees with Chevak in using +ten after velars, e.g., IND/OPT(1d-2s).

The final alternant, +ng, occurs only with %@na-, the appositional mood sign with class IVc bases. As noted under item 2e, this derives from +g-, cf. GCY +g-.

8. Dialect variation in the S/O 2p person-number suffix. For this suffix Chevak has +c<sup>o</sup>i-, younger Chevak speakers have @+ci-, and GCY has +ci. Following ÷t(e)- marking a plural A, Chevak ÷t(e)+c<sup>o</sup>i becomes ÷tessi (P17), Chevak younger people ÷t(e)@+ci becomes ÷ci, GCY ÷t(e)+ci



becomes  $\neq$ ceci. This sequence can be found in most Xp-p verb endings, and in interrogatives with 2p S/A. Notice that Chevak younger people's forms, described in morphological terms, simply eliminate a preceding plural marker  $\neq$ t(e)- if there is one. Thus, younger people have, e.g., IND(3p-2p) -ng:ici, IND(3p-2d) -ng:icitek, IND(3s-2p) -ng:ici, IND(3s-2d) -ng:itek.

### 3.2. Noun endings.

Noun endings are given in the paradigms on the following three pages.

The following are general points concerning noun endings. Those which hold also for verb endings are labeled as such.

1. +p, +t, and +c initial endings. For older speakers in Chevak, +p, +t, and +c, which are common initials for both noun and verb endings, are optionally replaced with -p, -t, and -c. this is not reported for GCY. For younger speakers, +p, +t, and +c, are usually +p, +t, and +c, and this is also reported for GCY (Reed et al. 1977:105); thus angyar- 'boat' with AB(2d-s) is in Chevak angyartek or angyayek, but in GCY only angyartek; while epu- 'handle' with AB(2d-s) is in Chevak epuyek or eputek, and in GCY epusek (GCY s /z/ = HBC /y/) or eputek. When +p, +t, and +c follow t(e), either in the S/O person/number suffix series or when following the  $\neq$ t(e)- of the plural possessum in AB(Xx-p) endings, they become -p, -t, and -c, though the deleting juncture is present only to delete final velar fricatives that would have been deleted by the underlying  $\neq$ t, e.g., angyar- 'boat', angyat 'boats', angyatek 'your (d) boats (p)' AB(2d-p).

2. Paradigm replacement. Xd-p forms replace Xd-d forms in certain

ABSOLUTIVE		NUMBER OF POSSESSUM				RELATIVE				NUMBER OF POSSESSUM			
		s	p	d		s	p	d		s	p	d	
PERSON AND NUMBER OF POSSESSOR	PERSON AND NUMBER OF POSSESSOR	∅	+∅	+k	∅	+m	+t	+k	∅	+m	+t	+k	
3 s	3 s	-ng:a	-ng:i	+k	3 s	-ng:an	-ng:in	+gken	3 s	-ng:an	-ng:in	+gken	
p	p	-ng:at	-ng:it	+gket	p	-ng:ata	-ng:ita	+gketa	p	-ng:ata	-ng:ita	+gketa	
d	d	-ng:ak	-kek	+gkek	d	-ng:agneng	-kenka	+gkenka	d	-ng:agneng	-kenka	+gkenka	
1 s	1 s	-ka	+nka	+gka	1 s	-ma		+genta	1 s	-ma		+genta	
p	p	+put	-put	+gput	p	-mta		+gma	p	-mta		+gma	
d	d	+puk	-puk	+gpuk	d	-megnung/-mnung		-megnung/-mnung	d	-megnung/-mnung		-megnung/-mnung	
2 s	2 s	+n	-ten	+gten	2 s	+pet		+gpet	2 s	+pet		+gpet	
p	p	+ci	-ci	+gci	p	+pci		+gpeci	p	+pci		+gpeci	
d	d	+tek	-tek	+gtek	d	+ptek		+gpetek	d	+ptek		+gpetek	
3R s	3R s	-ni	-ni	+gni	3R s	-mi		+gmi	3R s	-mi		+gmi	
p	p	+teng	-teng	+gteng	p	-meng		+gmeng	p	-meng		+gmeng	
d	d	+tek	-tek	+gtek	d	-mek		-mek	d	-mek		-mek	

LOCATIVE, MODALIS, AND TERMINALIS<sup>a</sup>

NUMBER OF POSSESSUM

	s	p	d
∅	ʔmi	ʔni	ʔgni
3 s	-ng:ani	-ng:ini	ʔgkeni
p	-ng:atni	-ng:itni	ʔgketni
d	-ng:agni	-kegni	-kegni
1 s	-mini		ʔgemni
p	-mteñi		ʔgemteñi
d	-megni		ʔgmegni
2 s	+pni		ʔgpeni
p	+pcini		ʔgpecini
d	+ptegni		ʔgpetegni
3R s	-mini		ʔgmini
p	-meggni		ʔgmeggni
d	-megni		-megni

PERSON AND NUMBER OF POSSESSOR

Note:

<sup>a</sup>The paradigm presented here is that of the localis. For the modalis, replace final i with eng; for the terminalis, replace final i with un.

VIALIS

NUMBER OF POSSESSUM			NUMBER OF POSSESSOR			PERSON AND NUMBER OF POSSESSOR		
s	p	d	s	p	d	s	p	d
∅	+kun	+tgun	+gkun/+gnegun	∅	+tun	+citun	+gtun	
3 s	-ng:akun	-ng:ikun	+gkeggun	3 s	-ng:atun	-ng:itun	+gketun	
p	-ng:atgun	-ng:itgun	+gketgun	p	-ng:acitun	-ng:icitun	+gkecitun	
d	-ng:agnegun	-kegnegun	+gkegnegun	d	-ng:agtun	-kegtun	+gkegtun	
1 s	-mkun		+gemkun	1 s	-mtun		+gemtun	
p	-mteggun		+gemteggun	p	-micitun		+gemcitun	
d	-megnegun		+gmegnegun	d	-megtun		+gmegtun	
2 s	+pk <sup>o</sup> un		+gpeggun	2 s	+ptun		+gpetun	
p	+pciggun		+gpeciggun	p	+pcitun		+gpeciggun	
d	+ptegnegun		+gptegnegun	d	+ptegtun		+gptegtun	
3R s	-mikun		+gmi kun	3R s	-mitun		+gmitun	
p	-megteggun		+gmegteggun	p	-megcitun		+gmegcitun	
d	-megnegun		+gmegnegun	d	-megtun		+gmegtun	

EQUALIS

configurations of case, person, and number. This replacement may be optional, or obligatory. If obligatory, the etymological form Xd-d is lost entirely, and the Xd-p form is repeated in its place in the paradigms. The replacements occur for the following case-person-number configurations:

CASE-PERSON-NUMBER	OPTIONAL vs. OBLIGATORY
AB(3d- )	optional
RL(1d- )	obligatory
RL(3Rd- )	obligatory
LC/MD/TM(3d- )	obligatory
LC/MD/TM(3Rd- )	obligatory
EQ(3d- )	optional
EQ(1d- )	optional
EQ(3Rd- )	optional

This replacement also occurs optionally in GCY for AB(3d- ). For the others, it is not reported for GCY, and I assume the replacements stated above are special dialect features in Chevak.

3. Unrounded high vowels between apicals (generalization also applies to verb endings). The surface pattern is that Chevak  $C_1iC_2$  corresponds to GCY  $C_1eC_2$ , where  $C_1$  and  $C_2$  are apicals. The vowel, however, can be traced to two independent sources. The first is  $C_1(e)+C_2$ , where  $C_1$  and  $C_2$  are apicals (often  $ce+t$  arising from  $t+t$  by P10), which in Chevak but not GCY is converted by P24b to  $C_1iC_2$ , e.g., EQ(3p-p) -ng:it+tun becomes Chevak -ng:icitun, GCY -ng:icetun. The second is  $+ci+C$ , where  $C$  is  $t$  or  $n$ , and  $+ci$  is an allomorph of POSR/S/A or S/O sp +ci or  $+c^{\circ}i$ . In Chevak this remains  $+ciC$ , while in GCY it becomes  $+ceC$  with devoicing of  $C$ , e.

g, LC(2p-s/p) +pci+ni becomes Chevak +pcini, GCY +pceñi. In the first case Chevak has an extra rule; in the second case GCY has an extra rule.

4. Endings of the form +CeC# are schwa-eliding (marked with "'') in Chevak but not GCY, e.g., AB(3Rp-s/p) is \*teng in Chevak, +teng in GCY.

5. Realization of ne following g of the dual (generalization applies to verb endings also). The sequence ne following g of the dual, whether etymological or analogical, is sometimes realized as ne, and other times as en, according to the following pattern: ne following a closed, unstressed syllable tends to become en, thereby preventing rule P31, and taking stress itself, e.g., nalleke- 'place where' plus -kegnegun VL(3d-p) give náлкегэн'gun 'through the places where they two were'; ne tends to remain ne when preceded by a closed stressed syllable containing schwa, thereby preserving that schwa from deletion by P34b, e.g., ikamrar- 'sled' plus -kegnegun give ikamrekegnegun 'using the two's sleds' but rarely ?ikámrak'gén'gun (from ikámrakégen'gun, by P34b); ne tends to become en when followed by ng, e.g., ukisqir- 'to help' plus \*lignenga OPT(3d-1s) gives ukisqirlignenga 'may those two help me!', but rarely ukisqirlignenga; elsewhere it is even more variable, though there seems a tendency to prefer the en versions. For GCY, en versions are reported only for a few scattered forms, in particular, those where ne occurs before ng.

6. Kin bases taking special retaining junctures.

a. Class I kin bases (e.g., aana- 'mother', aata- 'father') optionally suffix +r- for endings with +p, +t, +c initials, e.g., aanarci 'your (p) mother' aana+r+ci AB(2p-s).

b. Two class V kin bases, anngar- 'elder brother' and al'qar- 'older sister' retain their final r with the otherwise deleting endings in

dependent (i.e., non-absolute) cases beginning -mV, that is, RL(1s-s/p) -ma, RL(3Rs-s/p) -mi, RL(3Rp-s/p) -meng, RL(3Rd-s/p) mek, and all oblique case endings built on those last three. For some speakers the versions with the retained r are specifically used for singular possessum, e.g., anngarma or anngami 'my older brother(s)', RL(1s-s/p) al'qar-megcitun or al'qamegcitun 'like their own older sister(s)', EQ(3Rp-s/p). This is reported only for RL(1s-s/p) -ma in GCY.

c. Class VIc bases retain final r or g with the otherwise deleting suffixes of the dependent cases for 3Rx-s/p, which ordinarily begin in -m. When m is followed by eC#, the retention is obligatory (as with RL(3Rp-s/p) and RL(3Rd-s/p) endings), and when m is followed by a prime vowel, or by schwa plus a non-final consonant, the retention is optional (as with all 3Rs-s/p endings, which are based on -mi, as well as with 3Rp-s/p and 3Rd-s/p oblique case endings). Thus egaler- 'window' plus RL(3Rs-s/p) gives egalermeng 'of their own window (s)'; plus MD(3Rp-s/p), egalermegging or egalemeggneng 'about their own window(s)'; plus RL(3Rs-s/p), egalermi or egalemi, 'of his own window(s)'. According to Reed et al. (1977:117), GCY may only retain r with bases in -l(er)- 'former N, one who was V-ed, former act of V-ing'. This holds there only for dependent cases with 3Rp-s/p and 3Rd-s/p configurations. According to Jacobson (1978), all dependent 3Rx-s/p endings may be half-retaining (see §1.2.2.4.3 of this work) under "as yet undetermined circumstances". I have found no half-retaining juncture in evidence for class VIa bases in Chevak, so I treat these simply as affecting class VIc in an irregular way.

### 3.2.1. Absolutive case endings: analysis.

In absolutive case endings, the first element marks the number of the noun itself, whether or not it is possessed. The second element marks person and number of the possessor. Nouns possessed by third person possessors differ from the others in the way in which they mark the number of the noun itself.

1. Number of possessum with non-third person possessor; number of the noun with no possessor. Here, the ordinary number markers are used, but with certain junctural peculiarities: s  $\emptyset$ , p  $\neq$ t-, d  $\neq$ g(e)-. Note that the plural lacks final (e), while the dual gains it, reflecting the pattern of assimilations:  $\neq$ t remains intact for AB(2s-p), becomes  $\neq$ n- for AB(1s-p), is absorbed by -ni for AB(3Rs-p), and elsewhere changes  $\neq$ p,  $\neq$ t,  $\neq$ c to -p, -t, -c.  $\neq$ g(e)- on the other hand assimilates nowhere.
2. Number of possessum with third person possessor. Here, the POSM/0 person-number suffixes s -ng:a-, p -ng:i-, d -ke- are used. However, dual possessum is marked twice for AB(3x-d), such that -ke- is preceded by  $\neq$ g(e)- on analogy with ABd and AB(1/2/3Rx-d), but note RL(3s-d), where it is intact.
3. Person and number of possessor, all persons. This is marked with pronominal suffixes, according to the chart for absolutive possessor in §3.1.
4. This analysis assumes the following restructurings when a third person possessor is involved: simplification of  $\neq$ gke- for AB(3s-d), as noted in item 2 above; reinterpretation of -kek, originally a 3d-d marker (a function it still serves see §3.2.0, item 2), now marking AB(3d-p); the prediction that the original AB(3p-d) marker was \*-ng:ik, which is supported by Siberian Yupik (SLI dialect)  $\neq$ :(ng)ik AB(3d-p)



(Jacobson, 1977:20).

### 3.2.2. Relative case endings: analysis.

Relative case endings differ from absolutive case endings in two main respects: they use 1-NEU rather than POSR/S/A pronominal suffixes to mark first person possessor (see §3.1, chart), and they contain relative case markers. Further, s and p merge for (1/2/3Rx-s/p).

1. Relative case marking with non-third person possessor, and with no possessor. Here, the relative case marker  $\text{+m-}$  is used. For unpossessed relative case nouns  $\text{+m}$  occurs only with singular number. With non-third person possessor,  $\text{+m}$  precedes marking for number of the possessum in the dual, but singular and plural number categories are merged for the possessum, and no number marker is present for either. The pronominal suffixes combine with  $\text{+m}$  of the relative as follows: with stops,  $\text{+m}$  becomes a stop, thus  $\text{+m+t}$  (or  $\text{+m+t}$ ) and  $\text{+m+c}$  become  $\text{+p(e)t}$ ,  $\text{+pc}$  (note possibility of frication of  $\text{p}$  by P16a), cf. 2s/d, 2p; with (underlying) nasal plus stop,  $\text{+m}$  is unaffected, thus  $\text{+m+t}$  becomes  $\text{+mt}$ , cf. 1p; with nasals,  $\text{+m}$  entirely assimilates the following segment, thus  $\text{+m+ng(:)}$  and  $\text{+m+n}$  become  $\text{+m}$ , cf. 1s, 3Rx. In the case of 1d  $\text{+m}$  plus  $\text{+(g)nung}$ , both  $\text{+megnung}$  and  $\text{+mnung}$  occur. According to this formulation, Bergsland's (1951:170) and Reed et al.'s (1977:321) assumption that RL(1s-s/p)  $\text{-ma}$  comes from  $\text{+m-ka}$  (RL plus POSR/S/A 1s) is not supported, since one would expect then  $\text{+pka}$ .

2. Relative case marking with third person possessor. Here the relative case marker is  $\text{+n-}$ , and it follows the POSM/O pronominal suffixes marking person and number of the 3x possessum. The relevant phonological processes are taken up in §3.1, item 2.

3. This analysis assumes the following restructuring when a third person possessor is involved. As in the absolutive, the original 3d-d marker -kenka is reinterpreted as 3d-p. The expected 3d-p marker would be \*-ng:ineng. -kenka then more directly reflects POSM/O 3d -ke- plus relative +n- plus dual possessor †g(e)- plus some other following element -ke-, perhaps a repetition of the POSM/O 3d marker -ke-.

### 3.2.3. Oblique case endings: analysis.

Oblique endings differ from relative case endings mainly in that they contain an oblique case marker that follows all else. In general they also contain the relative case markers †m- and +n- in the same distribution in which they occur for the relative case endings, making it clear that the oblique cases are built upon the relative case endings. Nevertheless, for third person possessor, +n- may in some endings be absent.

1. Localis, modalis, and terminalis cases. For these cases, the markers are, respectively, +ni, +neng (underlying +neg-, cf. GCY +nek, and §3.1, item 2e), and +nun. Initial +n may come from the relative case marker +n-. Unpossessed endings in these cases consist of RL †m- plus case ending for singular, AB/RLp †t plus case ending for plural, and AB/RLd †g(e) plus case ending for dual, giving †m, †n, †gn. All endings with 1/2/3R possessor contain the RL case marker †m-, and attach the oblique case endings to the combining forms of the pronominal suffixes marking the person and number of the possessor. Endings with third person possessor generally contain the relative case marker +n-, which assimilates to the +n of the oblique case endings for (3s-x) and (3d-s), and which leads to †te- for (3p-x) (compare the preservation of

+t̥e- in the oblique (3p-x) forms with assimilation of t to following n in the unpossessed plural, e.g., MD(3p-s) -ng:atneng, vs. MDp †neng; this proves the presence of underlying +n-). But +n- is arguably absent for oblique (3d-p/d), though it would also be possible to maintain that +n- is present there, and that resulting -kegne-, which is expected but not found for RL(3d-d), assimilates its final ne- to the +n of the oblique case marker.

2. Vialis and equalis cases. For these cases, the markers are, respectively, +k<sup>o</sup>un and +tun. When unpossessed these cases are added to the number markers found with the absolute case, s +∅, p †t, d †g(e)-, with no assimilation. As with the oblique cases marked with suffixes beginning in +n, these two cases show RL †m when possessed by non-third person possessors. But when possessed by third person possessors, RL +n- is present to a more limited degree: it is absent for VL(3p-x), thus VL(3p-p) -ng:itgun, vs. VLp †tgun; it is absent for VL(3s-x), thus VL(3s-s) -ng:akun, with no trace of +n- (\*-ng:ankun); but it is present for VL(3d-x), e.g., VL(3d-s) -ng:agnegun. Elsewhere, it is not possible to tell whether or not it is present, since assimilations would hide the indicators for it.

3. Among younger speakers in Chevak, half-retaining juncture in the unpossessed oblique endings is sometimes replaced by deleting juncture, thus uyeqnag- 'yearling spotted seal' with MDs can be uyeqnameng (-meng) or uyeqnagmeng (†meng), an'nerrar\*- 'newborn baby' with TMd can be an'nerragnun (-gnun) or an'nerraagnun (†gnun). I have no clear information on possessed forms with dual possessum among younger people. This juncture change is not reported for GCY.

4. In the vialis case, there are three forms for which Chevak and GCY

differ: VL(3s-d), Chevak  $\text{+gkenkun}$  (GCY shows evidence of RL  $\text{+n-}$ ); VL (2s-s/p) and derivatives, Chevak  $\text{+pk}^\circ\text{un}$ , GCY  $\text{+pkun}$ ; and VL(2p-s/p) and derivatives, Chevak  $\text{+pciggun}$  GCY  $\text{+pcetgun}$  or  $\text{+pciuggun}$ . Here Chevak is aberrant, since the rules given here would predict  $\text{+pcikun}$ ; GCY  $\text{+pcetgun}$  is most revealing, since it suggests that the POSR/S/A pronominal suffix  $\text{+t+i}$  (Chevak  $\text{+c}^\circ\text{i}$ , GCY  $\text{+ci}$ ) must have been repluralized with the plural  $\text{+t(e)-}$  and it motivates Chevak's  $\text{gg}$  as coming from  $\text{+t(e)+k}^\circ$ , where  $\text{t}$  is lost (see P18) but leaves behind the frication of  $\text{k}^\circ$ .

### 3.3. Verb endings.

Verb endings consist of a mood sign, followed by a cross-reference, that is, a complex consisting of a slot for the etymological equivalents of case markers, followed by slots for pronominal suffixes indicating the person and number of the predication's S (if intransitive) or its A and O (if transitive). In §3.3.1 I discuss mood signs, and in §3.3.2 cross-references.

The case marker slot in the cross-references contains either nothing, or a marker of the relative case (the localis pattern of the oblique moods is not an exception, since the localis case markers there represent a different layer of development). These relative markers,  $\text{+m-}$  with non-third person S or A and  $\text{+n-}$  with third person S or A, must have served as case markers on nominalized subordinate clauses, and carried distinctions like oblique vs. non-oblique. Synchronically (and historically within Eskimo, cf. Bergsland 1962), it is best to treat these relative markers as morphological debris bound with some pronominal suffixes marking S or A. The relative marker always selects the same pronominal suffixes in verb endings that it does in noun endings, thus  $\text{+m-}$  selects  $\text{l-NEU +\text{t}\text{a}}$

rather than POSR/S/A +put for 1p both in verb endings (see e.g., the OBM(1p(-Xx)) cross-references) and in noun endings (see e.g., RL(1p-s/p)). This does not however mean that verb endings are always composed of noun endings: thus in noun endings, +t̥a can only occur when it follows ɤm, while in verb endings, it need not follow ɤm (see e.g., the cross-references for the interrogative, optative, and appositional moods).

### 3.3.1. Mood signs.

The mood signs are given in the table in the following three pages. Below are miscellaneous etymological and dialect notes on the mood signs. In general, mood signs derive from postbases, both VV and VN.

1. +'ar-, transitive indicative mood sign with classes I-IV, derives from the passive participle postbase +'ar- VN 'one which has been V-ed'.
2. Reed et al. (1977:249) cite -lraa- as the intransitive participle mood sign for HBC: I have not heard -lraa- in Chevak, and speakers I have consulted do not recognize it. In GCY this mood sign may be -lria- or ʔlria-; in Chevak the latter only occurs with classes IVa,b bases, and then only optionally, e.g., for take- (III) 'to be long' and cinirte- (IVa) 'to go along an edge, to visit' the intransitive participles are takelria 'one that is long', cinirtelria 'one who is going along an edge', both with -lria-; compare \*takellria, but cinirtellria, with ʔlria-.
3. The interrogative mood sign for 1/2x S/A @\*ci is occasionally @ci- among younger speakers (not reported for GCY). This process corresponds to that described for noun endings beginning in +c in §3.2.0, item 1.
4. Chevak's interrogative mood sign for 1/2 p/d +(s)te- corresponds to

## MOOD SIGNS

## INDICATIVE, PARTICIPIAL MOODS

Indicative

Intransitive ((r) forms with 3s only)

Classes I-IV + 'u(r)-

Class VI + tu(r)-

Transitive + 'ar-

Participial moods

Intransitive participle

Class IVc @4ngur\*-

Other classes

With singular ((r) used in combining forms only) -lria(r)-

With non-singular -lrii-

Transitive participle @4"ke-

## INTERROGATIVE MOOD

Third person S/A

Classes I-IV + 'a-

Class VI + ta-

Non-third person S/A

For all speakers, all numbers @#ci-

For older speakers only, in non-singular number only

(this form is dominant for plural, occasionally used

for dual (except \*2d-1p,d); (s) deleted with class VI,

and with class III ending VCe-). + (s)te-

## OPTATIVE MOOD

Third person S/A

#li-

First person S/A

(MOOD SIGNS, continued)

Intransitive (mood sign is included in chart citations  
due to irregularities)

#1e-

Transitive (variant cross-references are in complemen-  
tary distribution; others are shared by the two mood  
signs)

With -ku, -ki, -kek, -ken

#1ar-

With -ka, †nka, †gka, -mken

@#naur-

Second person S/A

Classes II/III (obligatory for 2s S and 2s-3s; optional  
for 2s-3p/d, 2s-1x; optional but marginal for 2p/d S  
or A)

+i-

Elsewhere

+∅

## OBLIQUE MOODS

Consequential mood

Class IV

%@a-

Class V I b, c (optional pattern)

+nga-

Elsewhere

#ng:a-

Contingent mood

+'aqa-

Conditional mood

@4#ku-

Concessive mood

@6-ngrar\*-

Precessive mood

@+paileg-

Contemporative 1 mood

-1ler-

Contemporative 2 mood

Class IV

%@inaner-

Class V I b, c (optional pattern)

+nginaner-

Elsewhere

#ng:inaner-

## MOOD SIGNS (continued)

Notes on combination of oblique mood signs with cross-references:

Contemporatives 1 and 2 take localis pattern cross-references for person-number configurations with have them (see chart). Other moods take relative pattern cross-references only. Cross-references beginning with -ng:a- (i.e., all cross references to third person S or A) delete the vowel of the three vowel-final oblique mood signs, CQO, CTO, and CDO.

With the conditional mood, all cross-references to 3R person A or S lack relative +m-, and hence begin with +n rather than +m, e.g., CDO(3Rs) @4#kuni.

## APPOSITIONAL MOOD

Class IVc (takes +ng variant of S/O 2s pronominal suffix

for both S and O).

%@na-

Elsewhere (takes +ten variant of S/O 2s pronominal suffix

for both S and O).

#1u-

Special note: The negative imperative postbases #yaquna- and

@+piiqa-, both of which contain %@na- (see above) as their last

element, take endings for 2s S, but take markings for O with second

person A understood. Like %na- they take +ng for 2s S/O, but differ

by marking 1p and 1d O with POSR/S/A pronominals -kut and -kuk in-

stead of 1-NEU pronominals +ṭa and +nung.



GCY @+ce-, and Siberian Yupik (SLI dialect) ~<sub>sf</sub>:ste- (Jacobson 1977: 61). Note that for Chevak, +(s)te- shows further regular phonological changes in combination with S/A markers, thus 1p +(s)cita, 1d +(s)ci-nung, 2p +(s)tessi, 2d +(s)citeg-. Like the Siberian Yupik cognate, Chevak +(s)te- does not drop te from class IV bases, e.g., ciin-taw' uptestessi? 'why are you getting ready?', from upete- 'to get ready' plus INT(2p) +(s)tessi. For phonological processes involved, see P10, P24b.

5. The optative mood sign for 1x S/A #lar- probably derives from #le-, the OPT(1x) mood sign, plus +'ar-, passive participle, on analogy with the indicative.
6. The optative mood sign for 1x A @#naur- is the VV postbase meaning 'S/A would V'. It is reported only as an OPT(1s-2s) mood sign for GCY, where it also occurs as @#naar-.
7. The contingent mood sign +'aqa- probably derives from an idiosyncratic combination of +'aqe- VV 'S/A always tends to V' plus -ng:a-, consequential mood sign. The fact that +'aqnga- (which would be predicted) never occurs supports this segmentation of +'aqa-.
8. The contemporative 1 mood sign -1ler- is the VN postbase meaning 'one who was V-ed by possessor; possessor's former act of V-ing'.
9. The contemporative 2 mood sign -ng:inaner-/%@i../+ngi.. is derived from -ng:inar- VV 'just to V, to V for no purpose' plus @-ner- VN '(possessor's) act or process of V-ing'.
10. The appositional mood sign #lu- is probably derived from the enclitic =llu 'and' (the voicelessness of the enclitic-initial is due to its position at a boundary, see Miyaoka 1975:13, 62; he represents it as =lu).

### 3.3.2. Cross-references to S and to A and O.

The cross-references for each of the moods are given in the paradigms in the following eight pages.

The following are general remarks on paradigm replacement among the cross-references. There are three main types of paradigm replacement in the Chevak dialect. The first of these is the verbal version of the replacement described for noun endings in §3.2.0, item 2.

1. Xd-3p forms replace Xd-3d forms in the following mood-person-number configurations:

MOOD-PERSON-NUMBER	OPTIONAL vs. OBLIGATORY
IND/TRP/INT/OBM (3d-3 )	obligatory
IND/TRP/INT/OPT (2d-3 )	obligatory
OPT(1d-3 )	obligatory

As with noun endings, if a replacement is obligatory, the etymologically original form is lost entirely, and the replacing form is repeated in its slot in the paradigm presentation given here. Of the replacements listed here, none are reported for GCY except IND(3d-3 ), which is optional there.

2. Xx-Xp/d forms replace respective Xp-Xp/d forms optionally, and respective Xd-Xp/d forms obligatorily. Once this has been done, Xp-Xp/d forms may then optionally replace the new Xd-Xp/d forms. That is, the singular A forms may indicate an A of any number; the plural A forms may indicate a plural or a dual A; and the etymological forms have been entirely replaced, and no longer exist in Chevak. There is a condition on the optional replacement of Xp-Xp/d forms by corresponding Xs-Xp/d forms: replacement only occurs when A is expressed in the sentence as a full noun phrase or is in some other way clear from the con-

CROSS-REFERENCES: INDICATIVE, PARTICIPIAL MOODS

		PERSON AND NUMBER OF S / O								
		3s	3p	3d	1s	1p	1d	2s	2p	2d
INTR.	+∅	+t	+k	+k	+ng:a	-kut	-kuk	+ten	+ci	+tek
3 s	-ng:a	-ng:i	+k	+k	-ng:anga	-ng:akut	-ng:akuk	-ng:aten	-ng:aci	-ng:atek
p	-ng:at	-ng:ik	+gket	-ng:atnga	-ng:itkut	-ng:itkuk	-ng:atgen	-ng:atgen	-ng:itessi	-ng:icitek
d	-ng:ak	-kek	-kek	-ng:agnga/	-ng:akut	-ng:akuk	-ng:agten	-ng:agten	-ng:aci	-ng:atek
-ng:agnenga										
1 s	-ka	+nka	+gka					-mken	-mci	-mtek
p	+put	-put	+gput					-mtegen	-mtessi	-mcitek
d	+puk	-puk	+gpuk					-megten	-mci	-mtek
2 s	+n	-ten	+gken	+pnga	+pkut	+pkuk				
p	+ci	-ci	+gci	+pcia	+pcikut	+pcikuk				
d	+tek	-tek	-tek	+ptengnga	+pkut	+pkuk				

PERSON AND NUMBER OF A

CROSS-REFERENCES: INTERROGATIVE MOOD

		P E R S O N A N D N U M B E R O F O									
INTR.		3s	3p	3d	1s	1p	1d	2s	2p	2d	
3 s	+∅	-g:ugg	-ki	-kek	+nga	-kut	-kuk	+ten	+ci	+tek	
P	+t	+tgu	+tki	+tkek	+tnga	+tkut	+tkuk	+tgen	+ci	+tek	
d	+k	+gnegu	+gneki	+gneki	+ngnga/	-ku	-kuk	+gten	+ci	+tek	
					+gnenga						
1 s	+ng:a	+ng:a	+ng:a	+ng:a				-ken/	+ng:a	+ng:a	
								+ng:a			
p	#ta	#ta	#ta	#ta				#ta	#ta	#ta	
d	+nung	+nung	+nung	+nung				+nung	+nung	+nung	
2 s	+t	-g:u	-ki	-kek	+ng:a	-kut	-kuk				
p	+c°i	+c°iugg	+c°iki	+c°ikek	+c°ia	+c°ikut	+c°ikuk				
d	#tek	#tegu	#teki/	#teki/	#tegnga	#tkut	#tkuk				
			#tegneki	#tegneki							

## CROSS-REFERENCES: OPTATIVE MOOD

		P E R S O N A N D N U M B E R O F O									
INTR.		3s	3p	3d	1s	1p	1d	2s	2p	2d	
3 s	+∅	-g:ugg	-ki	-kek	+ng:a	-kut	-kuk	+ten	+ci	+tek	
s /	+t	+tgu	+t(e)ki	+t(e)kek	+tnga	+t(e)kuk	+t(e)kuk	+tgen	+ci	+tek	
O F	+k	+gnegu	+gneki	+gnekek	+gnenga	-kut	-kuk	+gten	+ci	+tek	
1 s	+l <i>i</i>	-ku/	-ki/	-kek/				-ken/	-mci	-mtek	
B F R		-ka	+nka	+gka				-mken			
N U M B E R	p	+lta/-lta	+put	+gput				-mtegg	-mtessi	-mcitek	
D	+luk	+puk	-puk	+gpuk				-megten	-mci	-mtek	
A N D	2 s	I-III +∅	} @4#ki		@4#keg	@4#nga/	@4#kut	@4#kuk			
S O N	IV	+n	} @4gu								
S O N	VI	:a	} -ggu		+ng:a						
P F R S O N	p	@#ci	@#ciugg	@#ciki	@#cika	@#cikut	@#cikut	@#cikut			
D	@#tek	@#tegu	@#teki	@#teki	@#teguna	@#kut	@#kut	@#kut			

Notes: (a) First person intransitive endings are cited with the mood sign (#1e-) due to irregularities. (b) There is variation in 2s S/A endings for intransitive and (2s-3s) according to the class of the base-plus-mood-sign complex. (c) The second (2s-1s) variant used only after the mood sign '+i-' and the optative future postbase @4+k*i*-.

CROSS-REFERENCES: OBLIQUE MOODS (Relative pattern, part one)

		P E R S O N A N D N U M B E R O F O						
INTR.		3s	3p	3d	1s	1p	1d	
3	s	-ng:an	-ng:aku	-ng:aki	-ng:akek	-ng:anga	-ng:akut	-ng:akuk
	p	-ng:ata	-ng:atgu	-ng:atki	-ng:atkek	-ng:atnga	-ng:atkut	-ng:atkuk
	d	-ng:agneng	-ng:anegnegu	-ng:anegneki	-ng:anegneki	-ng:agnnga	-ng:akut	-ng:akuk
1	s	+ma	-mku	-mki	-mkek			
	p	-mta	-mtegu	-mteki	-mtekek			
	d	-mgnung	-mgnegu	-mgneki	-mgnেকেk			
2	s	+pet	+pk <sup>o</sup> u	+pki	+pkek	+pnga	+pkut	+pkuk
	p	+pci	+pciugg	+pciki	+pcikek	+pcia	+pcikut	+pcikuk
	d	+ptek	+ptegu/	+pteki/	+ptegnekek	+ptegna/	+ptekut/	+ptekuk/
			+ptegnegu	+ptegneki		+ptegnnga	+ptegnekut	+ptegnekuk
3R	s	+mi	+miugg	+miki	+mikek	+mia	+mikut	+mikuk
	p	+meng	+megtegu	+megteki	+megtekek	+megtnga	+megtekut	+megtekuk
	d	+mek	+megnegu/	+megneki	+megnekek	+megnnga	+megnekut	+megnekuk
			+megnegnegu					

CROSS-REFERENCES: OBLIQUE MOODS (Relative pattern, part two)

	P	E	R	S	O	N	A	N	D	N	U	M	B	E	R	O	F	O
	2s	2p	3s	3Rs	3Rp	3Rd												
3 s	-ng:aten	-ng:aci	-ng:atek	-ng:ani	-ng:ateng	-ng:atek												
P	-ng:atgen	-ng:atessi	-ng:acitek	-ng:atni	-ng:aciteng	-ng:acitek												
d	-ng:agten	-ng:aci	-ng:atek	-ng:agni	-ng:ateng	-ng:atek												
1 s	-mken	-mci	-mtek	-mni	-mteng	-mtek												
P	-mteggen	-mtessi	-mcitek	-mteni	-mciteng	-mcitek												
d	-megten	-mci	-mtek	-megni	-mteng	-mtek												
2 s				+pni	+pteng	+ptek												
P				+pcini	+pciteng	+pcitek												
d				+ptegni	+pteng	+ptek												
3R s	+miten	+mici	+mitek															
P	+megtegen	+megtessi	+megcitek															
d	+megten/	+megnici	+megnitek															
	+megniten																	

Note: The relative pattern is used for the consequential, contingent, conditional, concessive, and precessive moods. It is used for the con-temporatives 1 and 2 when the localis pattern is optional or lacking.

CROSS-REFERENCES: OBLIQUE MOODS (Localis pattern, part one)

		P E R S O N A N D N U M B E R O F O						
INTR.		3s	3p	3d	1s	1p	1d	
3	s	-ng:ani (-ng:aniugg)	-ng:aniki (-ng:anikugg)	-ng:anikek (-ng:anikekugg)	-ng:ania (-ng:aniagg)	-ng:anikut (-ng:anikutugg)	-ng:anikuk (-ng:anikukugg)	
p		-ng:atni (-ng:atniugg)	-ng:anitki (-ng:anitkiugg)	-ng:anitekek (-ng:anitekekugg)	-ng:anitnga (-ng:anitngagg)	-ng:anitkut (-ng:anitkutugg)	-ng:anitkuk (-ng:anitkukugg)	
d		-ng:agni (-ng:agniugg)	-ng:anignekeki (-ng:anignekekiugg)	-ng:anignekeki (-ng:anignekekiugg)	-ng:agnia (-ng:agniaagg)	-ng:anikut (-ng:anikutugg)	-ng:anikuk (-ng:anikukugg)	
1	s	+mni (+mniugg)	---	---	---	---	---	
p		-mteñi (-mteñiugg)	(-mteñiki (-mteñikiugg))	-mteñikek (-mteñikekugg)	---	---	---	
d		-megni (-megniugg)	---	---	---	---	---	
2	s	+pni (+pniugg)	+pniki (+pnikiugg)	+pnikek (+pnikekugg)	(+pnia (+pniaagg))	+pnikut (+pnikutugg)	+pkuk (+pkukugg)	
p		+pcini (+pciniugg)	+pciniki (+pcinikiugg)	+pcinikek (+pcinikekugg)	(+pcinia (+pciniaagg))	+pcinikut (+pcinikutugg)	+pcinikuk (+pcinikukugg)	
d		+ptegni (+ptegniugg)	+ptegniki (+ptegnikiugg)	+ptegnikek (+ptegnikekugg)	(+pnitegnga (+pnitegngaagg))	+ptegnikut (+ptegnikutugg)	+ptegnukuk (+ptegnukukugg)	
+pnitegnenga								
3R	s	+mini (+miniugg)	+miniki (+minikiugg)	+minikek (+minikekugg)	+minia (+miniaagg)	(+minikut (+minikutugg))	+minikuk (+minikukugg)	
p		+meggni (+meggniugg)	+meggnitki (+meggnitkiugg)	+meggnitkek (+meggnitkekugg)	+meggniteṅga (+meggniteṅgaagg)	+meggnitkut (+meggnitkutugg)	+meggnitkuk (+meggnitkukugg)	
d		+megni (+megniugg)	+megnignekeki (+megnignekekiugg)	+megnignekeki (+megnignekekiugg)	(+megnignenga (+megnignengaagg))	+megnikut (+megnikutugg)	+megnikuk (+megnikukugg)	



CROSS-REFERENCES: OBLIQUE MOODS (Localis pattern, part two)

		P	E	R	S	O	N	A	N	D	N	U	M	B	E	R	O	F	O
		2s	2p	2d	3Rs	3Rp	3Rd												
3	s	-ng:aniten	-ng:anici	-ng:anitek	---	(-ng:aniteng	-ng:anitek )												
p		-ng:anitgen	-ng:anitessi	-ng:anicitek	---	(-ng:aniciteng	-ng:anicitek )												
d		-ng:anigtgen	-ng:anigici	-ng:anigtek	---	(-ng:anigteng	-ng:anigtek )												
1	s	---	---	---	---	---	---												
p		---	(-mteñici	-mteñicitek )	---	---	---												
d		---	---	---	---	---	---												
2	s				---	(+pniteng	+pnitek )												
p					---	(+pniciteng	+pnicitek )												
d					---	(+pniteng	+pnitek )												
3	R	s	+miniten	+minici	+minitek														
p		(+meggnitgen/	+meggnici	+meggnitek															
d		+minitgen )																	
d		+megniten	+megnigi	+megnitek															

Notes: The Localis pattern is used with contemporatives 1 and 2. '---' indicates that the relative pattern is used instead; parentheses indicate free variation between localis and relative patterns; the other forms are obligatory.

CROSS-REFERENCES: APPOSITIONAL MOOD

	PERSON/NUMBER OF O		PERSON / NUMBER OF S / O			PERSON/NUMBER OF S						
	3s	3p	3d	1s	1p	1d	2s	2p	2d	3Rs	3Rp	3Rd
INTRANSITIVE	---	---	---	+ng:a	+ta	+nung	+teng/+ng	+ci	+tek	+ni	+teng	+tek
TRANSITIVE	-ku	-ki	-kek	+ng:a	+ta	+nung	+teng/+ng	+ci	+tek	---	---	---

Notes: For the transitive, only 0 is cross-referenced, with A understood from the context.

text. That is, a singular A form is used only when a plural A form would be redundant.

The pattern just described occurs in the following mood-person configurations:

MOOD-PERSON

IND/TRP/INT/OPT/OBM	(3 -1 )
IND/TRP/OBM	(3 -2 )
IND/TRP/OPT/OBM	(1 -2 )
IND/TRP/INT/OPT	(2 -1 )
OBM	(X -3R )
INT/OPT	(3 -2 ) <sup>a</sup>
INT	(2 -3 ) <sup>b</sup>
OBM	(2 -1 ) <sup>c</sup>

Notes:

<sup>a</sup>Exception: 3s-2p/d forms obligatorily replace corresponding 3p/d-2p/d forms; this completely eliminates etymological markers of 3p A and 3d A.

<sup>b</sup>Exception: 2p-3p/d forms never replace 2d-3p/d forms.

<sup>c</sup>Exception: etymological 2d-1p/d forms are replaced only optionally.

3. INT(1x) forms replace all corresponding INT(1x-Xx) obligatorily, with the exception of INT(1s-2s), which is replaced only optionally.

4. For GCY paradigm replacement of the type described in item 3 above is also reported, but paradigm replacement of the type described in items 1 and 2 above is reported for the indicative only, and in different degrees. There, IND(3p-3d) optionally replaces IND(3d-3d), and IND(3x-Xx) forms optionally replace corresponding IND(3p/d-Xx) forms when the 0 in the first case, and the A in the second set of cases, is specified overtly as a full noun phrase in the clause (Reed et al., 1977:145), i.e.,

the grammatical conditions appear to be more strict there than in Chevak, where the identity of O or A can simply be clear from context. Reed et al. (1977:145) also report that IND(1/2 p/d-3p) forms replace IND(1/2 p/d-3s) forms under similar grammatical conditions, and Miyaoka (1975:43-4) makes the more general statement that plural and dual forms in the indicative are replaced by singular forms under those grammatical conditions. There are no references to other moods in this regard in either work. Thus, it appears both that Chevak significantly departs from GCY in its indicative replacement pattern, and that Chevak is alone in showing replacements in other moods.

5. The general principle of number replacement underlying each of the patterns in items 1 and 2 above was formulated and articulated to me by Mr. Leo Moses of Chevak, in the course of paradigmatic elicitation. While inflectional morphology is generally regarded as an unconscious aspect of language behavior, it is important not to overlook the insights of very gifted speakers such as Mr. Moses.

### 3.3.2.1. Cross-references with indicative and participial moods: analysis.

For intransitives, the cross-references for these moods consist of a marker for person and number of S; for transitives, the cross references consist of a marker for A, and a marker for O. In some instances the marker for A is complex, containing a relative case suffix plus a pronominal suffix.

1. For transitive Xx-3x and intransitive 3x forms, the markers for both A, O, and S are identical to the markers for possessor, possessum, and unpossessed noun number in absolutive case noun endings. This can be

seen from a comparison of the paradigms, as well as from the charts of pronominal suffix distribution in §3.1.

2. For transitive 1/2x-2/1x, the marker for A is identical to RL(1/2x-s/p) endings, that is, it consists of RL +m plus the appropriate pronominal suffix (see chart, §3.1). This pattern, according to Bergsland, is due to analogy from the oblique moods, rather than any intrinsic obliqueness of the indicative or participial moods (Bergsland 1962).

3. For transitive 3x-1/2x, it is somewhat harder to tell whether RL +n- is or is not present in the marker for A; the 3d-1s variant -ng:agnenga definitely contains +n-, as must probably the markers for A in the 3p-1/2x forms, which preserve +te- (though evidence from the *vialis* and *equalis*, discussed earlier, would support the preservation of +t as well in similar circumstances); and there is no definite evidence for the presence of +n- for the 3s-1/2x forms. Finally, note that POSM/O -ng:a- singular occurs when A is singular or dual, while -ng:i- plural occurs then A is plural, displaying a kind of partial number concord that is not expected from examination of the etymologically corresponding AB and RL (3x-x) endings.

4. 1/2x S and O are marked with S/O pronominal suffixes, as noted in the chart in §3.1.

### 3.3.2.2. Cross-references with the interrogative mood: analysis.

As with the indicative and participial moods, the interrogative mood consists of a marker for person and number of S for intransitives, and markers for person and number of A followed by O for transitives. The appropriate suffixes are indicated on the charts in §3.1. Note that there is no marker for O for 1x-Xx, except that for 1s-2s, O is marked

with the S/O 2s pronominal suffix  $-k^{\circ}en$ , while A is marked with nothing. Further, 2s A is also marked with nothing, instead of the expected  $\neq t/\neq n$ ; at a deeper level, however, it is likely that  $\neq t$  has simply been assimilated to the following suffix, since it is not "protected" by a following schwa. None of the markers for non-third person A show evidence of relative  $\neq m$ , but the markers for 3p and 3d A do suggest relative  $\neq n$ . The appearance of  $ne$  in 2d-3x forms is presumably due to analogy.

### 3.3.2.3. Cross-references with the optative mood: analysis.

Cross-references for the optative mood consist of a marker for person and number of S for intransitives, and markers for person and number of A followed by O for transitives (see appropriate pronominal suffixes in chart, §3.1).

1. When the first person transitive mood sign  $\neq lar-$  is used, there is no pronominal suffix marking person and number of A for 1s-3x and 1s-2s; instead, the appropriate pronominal suffix marking O is attached directly to the mood sign. Exception:  $\neq lar-$  can be used with the variant 1s-2s form  $-mken$ .
2. Elsewhere for 1x A (i.e., in other uses of  $\neq lar-$  and all uses of the mood sign  $\neq naur-$ ), the cross-references are identical with those used in the indicative. This is probably due to analogy, since it breaks pattern with the rest of the optative.
3. For 2s A, there is no overt pronominal suffix, though here, as in the interrogative, it is possible that  $\neq t$  assimilated in all contexts to the initial consonant of the pronominal suffix marking O.
4. For 2s A, the forms for S/O 3s  $-g:ugg$  are irregular with classes IV and VI. For 2s S, only  $\neq n$  with class IV bases is directly traceable

to the POSR/S/A 2s pronominal suffix, the others being irregular.

5. The junctures preceding all cross-references involving 2x S/A (except 2s S), that is, '@#', may be a remnant of a 2x S/A mood sign (this is in fact the analysis given for it by Reed et al. 1977:222).

6. The schwa which is optional in Chevak for 3p-3/1 p/d is not reported for GCY.

7. As in the interrogative cross-references, some of the optative (3p/d-Xx) forms give evidence for relative +n preceding the pronominal suffix for 3p/d A.

#### 3.3.2.4. Cross-references with the oblique moods: analysis.

1. The oblique mood cross-references exist in two sets, or patterns, the relative pattern and the localis pattern. Basically, the relative pattern is used with mood signs for the consequential, contingent, conditional, concessive, and precessive, while the localis pattern is used with mood signs for the contemporatives 1 and 2. However, the localis pattern is defective for certain transitive cross-reference configurations (indicated with '---' in the paradigm), and it is optional for certain other transitive cross-reference configurations (indicated with parentheses in the paradigm). In these cases where the localis pattern is not used, the relative pattern is used instead with contemporative 1 or 2 mood signs.

2. Intransitive cross-references. The intransitive relative pattern markers for person and number of S follow the chart in §3.1, and are identical to RL(3x-s) and RL(1/2/3R x-s/p) endings, since the relative markers +n- and +m always precede. The intransitive localis pattern is formed with LC(3x-s) and LC(1/2/3R x-s/p) endings, that is, they

have, in addition to +n-/ɛm- a following localis case marker, +ni.

3. Transitive cross-references. The transitive relative and localis patterns consist of markers of person and number of A followed by markers of person and number of O.

a. Pronominal suffixes marking O. The pronominal suffixes marking O are taken from the S/O set, see §3.1, chart. They are the same for both the relative and localis patterns.

b. Marking of A in the relative pattern. A is marked for the relative pattern according to the chart in §3.1. Relative ɛm- is present for all non-third person A; relative +n- is indicated for 3p and 3d A, subject to the same equivocation as elsewhere.

c. Marking of A in the localis pattern. In its simplest version, the localis pattern adds the localis case marker +ni to the marker for A, giving the equivalent, morphologically, of LC(3x-s) and LC(1/2/3R x-s/p). This is the case for all singular A cross-references which occur, as well as for 1d-1s, 1p-3x, 2p-3/1x, 2d-3/1 p/d, 3Rp-2p/d, 3Rd-1p/d, and 3Rd-2x (note: formulas using variable 'x' are to be applied only to cross-references for which the localis pattern is not defective). There are two other versions of the localis pattern. In the first of these, the marker for the number of A (s,p,d) is transposed from the left to the right side of +ni, the localis case marker, leaving what looks like a LC(3s-s) or LC(1/2/3R s-s/p) noun ending followed by plural ɛt(e)- or dual ɛg(e)-. This occurs for 3p/d-Xx (except 3d-1s), 2p/d-3Rp/d, 2d-3/1s, and one version of 3Rp-2s. In the second of these, the marker for plural or dual A occurs on both sides of +ni-, giving a kind of double marking. This occurs for 1p-2d, 3Rp/d-3x, 3Rp-1x, 3Rd-1s, and the other version of 3Rp-2s.



The distribution of these three versions is fairly chaotic, but it does show trends. The variation itself is not so surprising when one considers it as a pattern of interference between what look like two converging paradigms. On the one hand, there is the pattern of possessed localis endings, which provides a place for the marking of the number of A before the case marker +ni; on the other hand, there is the pattern elsewhere in OBM cross references (relative pattern), where number of A directly precedes the pronominal suffix for 0, which in the localis pattern must work out to a point just after the case marker +ni-.

Because of the rareness of transitive contemporative endings, particularly ones involving duals, it has been impossible to get textual verification for most of the localis pattern forms, and I have instead relied on elicited data from several individuals. A fuller corpus of data might reveal more regularity in the localis pattern than there now appears to be.

4. Note on juncture. The relative and localis pattern markers for S and A in the oblique mood cross-references show a juncture difference from the corresponding possessed relative and localis case possessed endings: the S/A markers have +mV where the possessed endings have -mV with 1s/d and 3Rx pronominal suffixes. This is also reported for GCY. In Chevak, however, people born before 1950 (very roughly) sometimes use deleting juncture for 1d S/A endings beginning with mV, e.g., tekite11'-megni (-megni) or tekite11ermegni (+megni) 'when we two arrived' C10(1d). Notice that this deleting juncture makes many 1d S/A forms distinct from corresponding 3Rd S/A forms, e.g., 1d -megni vs. 3Rd +megni. Since deleting juncture here is especially common among the elderly in Chevak, I take it to be a dialect feature of some standing, and represent it in

the paradigms.

5. Distribution of the localis pattern with contemporative 1 and 2.

It is not possible to say to what degree the distribution of the localis pattern in transitive cross-references is a unique feature of the Chevak dialect, since it is only noted in Reed et al. (1977:286) that "[i]n 3R subject transitive forms the two contemporative moods insert "ni" after "mi", and in some dialect areas this "ni" is inserted between the subject and object parts of other transitive endings with appropriate adjustments". It can be assumed from this, however, that the Chevak dialect departs from GCY in having forms where +ni is followed by the marker for number of A, and where +ni is surrounded by double marking for number of A.

With the contemporative moods, the localis pattern is obligatory for 3x-3/1/2x, 3Rs-Xx (except 3Rs-1p/d), and 3Rx-2x (except 3Rp-2s); the paradigm is defective for Xx-3Rs, 1s/d-Xx, and 1x-3Rx; elsewhere, the localis pattern is optional. Among the optional configurations, the localis pattern is very marginal for 3Rp/d-3Rx, and the 1p-2p/d forms are only used by young people (note for the 1p-2p form that the young people's version of the neutral case 2p pronominal suffix @+ci is used, cf. the older people's form +c°i). Part of the overall distribution has a simple explanation: the localis pattern is defective for Xx-3Rs because of some superficial constraint against the sequence nini, which would result from the combination of the localis case marker +ni and the pronominal suffix for 3Rs -ni.

6. The syllable ne between g of the dual and following velars. On the surface, the syllable ne is obligatory in Chevak for oblique mood cross-references with 3d, 1d, and 3Rd A, optional for 2d A; in GCY, it is ob-

ligatory for 3Rd A, optional for 1d A, and not cited with 3d and 2d A, though Jacobson (1978) notes that the occurrence of ne varies greatly according to dialect. By the present analysis, gne arises from +n+g- and +nu+g- for 3d and 1d A in oblique mood cross-references; ne is analogical for 2d, and synchronically intrinsic but historically analogical for 3Rd.

7. ne not preceded by g of the dual. In 3d-3s/p, and in one version of 3Rd-3s, either ne arises by analogy to ni of the localis pattern (note the lack of preceding g, and the close similarity with the corresponding localis pattern forms), or it comes from two occurrences of relative +n-, one on each side of the marker for A, as follows: -ng:aneg- (from -ng:a-singular POSM/O, plus +n- plus +g- dual) plus +n- plus +gu 3s S/O, together giving -ng:anegnegu OBM(3d-3s). If this interpretation is correct, it offers strong confirmation to the hypothesis that 3d A is marked with the relative case in the oblique moods. The other form, OBM(3Rd-3s) +megnegnegu is also interpretable in this way: +megneg- (from +m- relative plus +negne(g)- POSR/S/A 3Rd) plus +n- plus +gu 3s S/O. This analysis is less plausible since +n- elsewhere only occurs with third person S, A, or possessor. If it is correct, it offers proof that the final g is actually present in the combining form of POSR/S/A 3Rd +negne(g)-.

8. 3Rd-2p/d and one version of 3Rd-2s show ne, from the POSR/S/A 3Rd pronominal suffix +negne(g)-, unassimilated before an apical (in which position it becomes ni by P24b), thus +megnici 3Rd-2p, +megnitek 3Rd-2d, but +megnegen. This too offers evidence that the combining form of the POSR/S/A 3Rd pronominal suffix has a final element g which is optional, and the two 3Rd-2s forms in Chevak can be explained by the presence vs.

absence of that *g*.

9. For 3Rp-1s Chevak +megtēngā, cf. GCY +megtenga.

### 3.3.2.5. Cross-references with the appositional mood: analysis.

The appositional mood is unipersonal, marking person and number of S for intransitive verbs, and person and number of O for transitive verbs (where person and number of A is not marked, but is clear from the context). Person and number of S/O is marked with pronominal suffixes, according to the pattern indicated on the chart in §3.1.

### 3.4. Conclusions.

The differences between Chevak and GCY can for the most part be described systematically in terms of differences in phonology, morphophonemics, juncture, and paradigm replacement. Differences in morphological arrangement are nearly non-existent.

It is my hope that this analysis will provide some basis for investigation into inflection for the Central Yup'ik dialects of Nunivak Island and of Norton Sound, and that it will provide some hypotheses to be tested in historically oriented analysis of inflection in the other Yupik languages and in Inuit languages.

for number sequence only

#### 4. Structure of noun phrases, complex noun phrases, and clauses.

In this chapter I outline the structure of noun phrases, complex noun phrases, and clauses, and discuss the relation of patterns of inflection to external syntactic structure. Particular attention is paid to parallels between nouns and predications, and between complex noun phrases and clauses, and how these parallels are to be represented. The interpretation presented here provides a basis for the description of the syntactic properties of bases, taken up in §5, and of the syntactic effects of postbases, taken up in §§6-7.

##### 4.1. Background.

The extensive parallels which exist in Eskimo-Aleut between nouns and predications, and between complex noun phrases and clauses, have long been recognized in the literature. It is fair to say that an explanatory account for these parallels has been a centerpiece in the work of nearly every major scholar in the European tradition studying Greenlandic Eskimo. I would therefore like to describe some of the major contributions to this aspect of Eskimo grammar, and then indicate how the present work fits in. My discussion refers at times to arguments based on patterns in inflectional morphology: the background for that will be found in §3.

Because possessors and A's (transitive subjects) appear in the same case, the relative, and because markers in verb endings of A or of S (intransitive subject) for some mood-person configurations are identical to certain noun endings, many earlier scholars have treated predications (or clauses) as nouns (or noun phrases), at some level; that is to say, predications (or clauses) were considered to be a development from nouns

(or noun phrases). In the terms developed in §3 for Yup'ik, this analysis notes that predications, like nouns, are marked for case, +n-/+m- for relative, or  $\emptyset$ , interpreted as marking absolutive. Because the appearance of +n-/+m- is partially dependent on mood, certain moods (e.g., the oblique moods) were considered to be relative.

Samuel Kleinschmidt, however, did not treat predications simply as a type of noun, and mood as a type of case. Rather, he treated nominal case and verbal mood as elements of a deeper opposition between three syntactic Hauptverhältnisse: casus rectus (for nouns, A and S; for predications, independent moods, as well as others when they stand in main clauses), casus versus (for nouns, O; for predications, the transitive participle mood), and casus obliquus (for nouns, oblique cases, for predications, the oblique moods) (Kleinschmidt 1851:65-95). Note, first, that the classification is based on syntactico-semantic function, rather than on strict morphological patterning alone, and second, that the terms designate abstract syntactico-semantic relationships, and not noun functions, as the term casus might otherwise suggest. In some places Kleinschmidt's choice of categories was less than well-motivated: for example, casus versus for nouns, though relevant in certain limited contexts, is quite minor beside S/O, which is crucial in many aspects of morphological and syntactico-semantic organization. Nevertheless Kleinschmidt's overall approach, drawing out an abstract pattern expressing just the similarities between several concrete patterns is in my view sound, as I argue below. It is his overall approach which I adopt here.

William Thalbitzer (1930) reduced this three-way syntactico-semantic and morphological opposition to a two-way morphological opposition between absolutive (for nouns, absolutive case; for predications, non-

oblique moods) and relative (for nouns, dependent cases, for predications, oblique moods). Thalbitzer's orientation was strictly morphological: he sought to identify, for each morpheme, a single invariant meaning along with a singular syntactic implication. Thus, he analysed  $\neq m$  of the relative case as marking the possessor of a possessive construction, and, on observing  $\neq m$  as the apparent marker of A in a clause, he concluded that the clause was a possessive construction with its A as possessor. Thalbitzer's two-way scheme was not analytically abstract, as Kleinschmidt's was: for Thalbitzer, predications simply were nouns (though he did maintain the noun base vs. verb base distinction, at least as a practical matter). Even in their semantic function, Thalbitzer claimed that predications were actually nouns, and thus he argued that predications were properly translated as nouns (Thalbitzer 1911:1058), e.g., atorpoq 'use = one is used = he, it, is used', atorpara 'my its use = I use it' [glosses are his; actually, the second should be 'my (-ra) used one (ator+p+(g)aq-)' ---ACW]. He considered this evidence for a passive world-view on the parts of speakers.

A similar predication-as-noun approach, minus the psychological speculation, was elaborated and perfected by L. L. Hammerich (1951). Hammerich had been a student of Thalbitzer's, and had made a major study of Eskimo inflection (Hammerich 1936). He shared Thalbitzer's theoretical approach, that is, he too attempted to isolate invariant meanings and syntactic functions for each morpheme isolated. In his analysis, Hammerich divided inflected words into nominal nouns and verbal nouns (corresponding to nouns and predications, in my terminology). Cross-cutting the nominal noun vs. verbal noun distinction was a four-way case opposition: absolute (with nominal nouns, absolute case



nouns with non-third person or with no possessor; with predications, intransitives in non-oblique moods, and transitives with non-third person A in non oblique moods), superordinative (with nouns, absolutive case nouns with 3x possessor; with predications, transitives in non-oblique moods with 3x A), subordinative (with nouns, relative case nouns with non-third person or with no possessor; with predications, lacking except for non-3x S or A with oblique moods), and duplex (with nouns, relative case nouns with 3x possessor; with predications, transitives in oblique moods with 3x A). In terms of the analysis for Central Yup'ik given in §3, the invariant marks of his cases are as follows: absolutive +∅, my AB; superordinative -ng:a-, -ng:i- -ke-, my POSM/O 3x; subordinative +m-, my RL; and duplex -ng:a+n-, -ng:i+n-, -ke+n-, my POSM/O 3x plus +n-, my RL with possessed 3x and with 3x 0.

This theory, then, constructs chains of dependency which, as wholes, become noun phrases. This can be diagrammed as follows, with A → B to be read 'A is dependent on B': (diagrams not taken from Hammerich):

[absolutive]<sub>N</sub>

[subordinative → superordinative]<sub>N</sub>

[subordinative → duplex → superordinative]<sub>N</sub>

N = noun (either nominal noun or verbal noun)

Note that the noun phrases so created may either be nominal nouns or verbal nouns.

Noun phrases can stand together in apposition, as in the examples below, given with structural representations (C<sup>^</sup>D is to be read 'C stands to the left of D in apposition to it; examples and glosses are

Hammerich's (1951:20), segmentation calques are mine):

nanoq bear-ABS	una this-ABS	'this is a bear'
[absolutive] <sub>nN</sub>	[absolutive] <sub>nN</sub>	
nanoq	tikípoq arrive-IND(3s)	'the arrival is a bear, what arrives is a bear, i.e., a bear has arrived'
[absolutive] <sub>nN</sub>	[absolutive] <sub>vN</sub>	
nN = nominal noun; vN = verbal noun		

The difference, then, between the nominal clause *nanoq una* and the (full) clause *nanoq tikípoq*-- to use my own terminology-- is, for Hammerich, that the former involves the two nominal nouns in apposition, while the latter involves a nominal noun and a verbal in apposition.

Bergsland (1962) takes issue with the general methodology followed by Thalbitzer and by Hammerich. From the perspective of comparison with Aleut, he argues for an approach to the interpretation of inflectional morphology which takes syntactico-semantic patterning into account. He begins with a series of negative points. First, a syntactic perspective precludes the passive analysis of the clause advanced by Thalbitzer; the fact that the 3R person takes S or A as its antecedent shows that there is an operative notion of subject in the language, and the existence of half-transitive suffixes (see §5.2) shows that transitive sentences can be intransitivized, and hence are themselves true transitives rather than passives. Second, clauses are not composed of nouns in apposition, as suggested by Hammerich, because in many ways 0 receives different treatment from S, e.g., the S/0 3x pronominal suffixes mark 0 only, and 3x independent relatives (see §5.1.4.2) stand in apposition to 0 only, while 3Rx independent relatives stand in apposition to S or A.

Bergsland does not, however, try to account for nominal clauses like *nanoq una* 'this is a bear', above, but does mention them in passing. Third, the relative case ( $\pm m-$  and what I identify as  $+n-$ ) has no real significance in the oblique moods, since it does not mark the predication in which it occurs as itself possessing anything. Further, he notes that the S of the oblique and some other moods are cross-referenced with what look like possessive endings, and yet the full noun phrase S is marked with the absolutive, rather than the relative, which would be expected given the possessive analysis: thus in Central Yup'ik (my examples) *tengssuun tekican* (airplane-ABs arrive-CQO(3s)) 'when the airplane arrived' rather than *\*tengssuutem tekican* (airplane-RLs...), cf. *tengssuutem iluan* (airplane-RLs inside-RL(3s-s)) 'of the inside of the airplane', rather than *\*tengssuun iluan* (airplane-ABs...).

A closely related fourth negative point is that since the occurrence of relative  $\pm m-/ +n-$  is dependent on person as well as on mood (see §3, and the note on the conditional mood in the OBM cross-reference chart), the relative case marker is a morphological entity only in verb endings.

After making these four points, Bergsland compares Eskimo and Aleut on the basis of inflection and of clause structure, and concludes that the Eskimo 1-NEU 1x and S/O 1/2/3R x pronominal suffixes (to use my terminology) were once independent, as are their Aleut cognates; based on this, he hypothesizes that the relative suffixes were transferred along with the once-independent pronouns from the oblique moods to the indicative and participial moods. (for IND/PRT(Xx-1/2x)). In doing this, he demonstrates that his attention to syntax and to comparative data leads to solutions of problems which require tortured explanations with the purely morphological approach of Thalbitzer and Hammerich. The re-

remainder of the study is concerned with syntactic comparisons, and notes in passing several instances where the possessive analysis of verb endings fails to hold even for cognate constructions in the two branches, demonstrating that it lacks historical validity as well.

Jørgen Rischel's excellent and wide ranging study of Greenlandic transitive and possessive constructions (Rischel, 1971) offers a transformational theory of Greenlandic clause structure which fully recognizes (and even elaborates on) traditional theoretical concerns with noun-predication parallels in Eskimo, while avoiding most of the pitfalls pointed out by Bergsland. Thus although Rischel incorporates much of the substance of Hammerich's theory, he parts company in treating Hammerich's "nominal nouns" as nouns, "verbal nouns" as verbs, and nominal noun plus verbal noun constructions (like *nanoq tikípoq* 'the bear has arrived' above) as ordinary sentences having a nominal adjunct and a verb (= my 'predication'). He is careful to distinguish Hammerich's "'taxonomic' point of view", for which "it is definitely crucial whether one can give an immanent definition of such categories as 'noun' and 'verb'", from his own transformational, universalistic approach, which entails different definitions of categories (Rischel 1971:225). He continues: "I shall assume, quite tentatively, that these [notions of 'verb' and 'noun' in universal grammar--ACW] stand for different, abstract syntactic (semantic) functions." (1971:225). And: "No matter how noun-like it may seem in its surface appearance, a wordform like *tikippuq* [= *tikípoq* above --ACW] '(he) comes' denotes an action and is intuitively a verb just like the English word that translates it." (1971:226).

With this approach Rischel entirely avoids the problem of having to claim (or worry about) semantic identity between nouns and predications

(as Thalbitzer did). On the other hand his formalism loses the ability to capture noun-predication parallels directly in phrase structure descriptions: rules assigning inflections shared by nouns and predications would presumably have to pick out noun nodes and verb nodes separately. Rischel's overall point in the paper is to show how possessive constructions can be derived from transitive relative clauses having an empty verb node (V), where that node would have the syntactic properties of the Greenlandic postbase that is cognate with Central Yup'ik -ke- 'for A to have O as his N'. The noun-predication parallels become a tool of syntactic argumentation, a measure of transformational plausibility. Thus when a relative clause is transformed into a noun, the derived-noun constituents must correspond one-to-one with the constituents of the embedded sentence in the relative clause.

The substance of this approach to noun-predication correspondences is in my view absolutely sound: it draws noun-predication parallels in derivations. But the formalism seems to obscure rather than highlight this carefully worked out extension. Because Rischel's phrase structure rules work with irreducible notions of noun and verb, the tabulations of the noun-predication parallels that he draws must be expressed as language-specific constraints on the form of transformations with this structure and set of conditions:

$$[[\dots Z \dots]_X]_Y \Rightarrow [\dots Z \dots]_Y$$

- Conditions:
- a. If X is a sentence node, then Y is a noun node; or,
  - b. if Y is a sentence node, then X is a noun node.
  - b. Z is any subconstituent of X.

With this, the grammar must spell out noun-predication parallels separately, since they are not a part of the formalism itself.

A second problem in Rischel's approach is that possessed nouns are derived from a special type of clause, one having an empty verb node as described above. From a purely morpho-syntactic point of view, it can be objected that the inflection of noun bases is if anything even less reduceable to the inflection of verb bases than is reduction in the opposite direction. The arguments advanced by Bergsland against Thalbitzer's reductions of predications to nouns would apply here. It must be noted that Rischel is not making overt morpho-syntactic claims. However, an ideal solution ought to be reconcilable with morpho-syntactic patterning.

A third problem is that nominal clauses like *nanoq una* 'this is a bear', cited above, are difficult to represent in Rischel's framework since his phrase structure does not allow for verbless sentences. Furthermore, no provision is made for treating classificatorily nominal items like *nanoq* or *una* as verbs.

Two other recent writers take clauses or predications, rather than nouns, as basic structures. Jacob Mey (1969) claims that possessed nouns derive from underlyingly transitive sentences. The article posits a number of abstractions in doing this, which Rischel (1971) takes issue with and quite convincingly shows to be unnecessary.

The other, Ivan Kalmár, in a highly theoretical study of some voice and case constructions in North Baffin Island Inuktitut (Kalmár 1979:47-9), derives possessed nouns from underlying verbs, so that *piqati:ga* (friend-AB(1s-s)) 'my friend' is claimed actually to mean 'I friend it' (Kalmár's gloss) with an abstract segment understood meaning 'the x such that...' Although he reviews the European literature on noun-verb parallels at some length, he does not make full use of all that has been worked

out there at the basic descriptive level. First, he does not also treat unpossessed nouns as intransitive verbs, missing the obvious parallel. Rischel, incidentally, is not subject to this criticism, because the sentences from which he derives possessive constructions are, as relative clauses, embedded in noun phrases. Second, Kalmár misconstrues the parallels between complex noun phrases and clauses: "If possessums are predicators then possessive constructions are clauses. The possessor is the subject, the possessum is the verb, and the direct object is the unexpressed 'x'. I claimed above that the possessive construction had an unexpressed object while the intransitive clause did not...This claim has now been justified." (Kalmár 1979:48). What this seems to argue is that possessed nouns and transitive sentences have direct objects and are verbal, unpossessed nouns have no direct objects and are nominal, therefore intransitive verbs have no direct objects (and are possibly nominal?). Actually, though, the abstract object he speaks of for possessed nouns is quite concrete, being the other constituent in a noun plus possessed noun construction (a subtype of complex noun phrase, in my terminology). This abstract "x" too is just as real for unpossessed nouns and intransitive verbs: it is the constituent *nanoq* 'bear' in our two sentences *nanoq una* and *nanoq tikípoq*, above. Third and finally, although Kalmár cites Bergsland (1962) in criticizing Thalbitzer and Hammerich on the grounds that their solution "fails to explain certain important features of the morphology" (Kalmár 1979:41), his own solution takes the morphologically less plausible position that all nouns are underlyingly verbs; more than that, he takes verbal meaning as basic in nouns just as Thalbitzer took nominal meaning as basic in predications. This is precisely the kind of inference Bergsland claimed in that

paper to be unwarranted.

The approach taken in the present work will be presented in detail in the remaining sections of this chapter. I will discuss each of three main construction types which I recognize at the intra-clause level: noun phrase, complex noun phrase, and (full) clause. For each I will justify a phrase structure representation. These representations make use of the two juncture types, dependency and apposition, discussed in relation to Hammerich (recognition of these juncture types is found already in Kleinschmidt 1851). Semantically, a constituent dependent on another is never coreferential with it; a constituent in apposition with another is presupposed or asserted to be coreferential with it.

The recognition of these two juncture types permits a functional distinction between noun phrases (simple and complex) which function as noun phrases, versus noun phrases (simple and complex) which function as predications, as follows: if the primary constituent break in a noun phrase is between two constituents that are in apposition to each other, then the noun phrase can be used as a predication. I call these nominal clauses. An example of a nominal clause is nanoq una 'this is a bear', discussed by Hammerich. It is an aspect of the noun-predication problem which has received less attention recently.

Partial morpho-syntactic parallels hold between complex noun phrases and (full) clauses. I will follow Kleinschmidt by distilling these parallels and representing them in an abstract phrase structure scheme. The scheme is meant to capture all of what is similar and none of what is different between the two construction types (whether that ideal is fully achieved is another matter!) This is a weaker claim than the claim that nouns are predications, or predications are nouns. Nevertheless, as an



heuristic I believe it leads to a more impartial evaluation of the facts, and provides a framework in which to express them. The resulting abstract phrase structure scheme will be of great use in representing the effects on complex noun phrases and on clauses of postbases which convert noun bases to verb bases, and verb bases to noun bases (NV and VN): that is, these postbases can be seen in terms of the transformations-- not necessarily meaning-preserving-- which they bring about on the abstract phrase structure as they convert a noun in a complex noun phrase to a verb in a clause, or vice versa (see §§6-7).

#### 4.2. Structure of the noun phrase.<sup>1</sup>

The following is the structure of the noun phrase:

PHRASE STRUCTURE NOTATION:	[ d $\frown$ [ r1 $\rightarrow$ n ] ] <sub>n</sub>
SYNTACTIC MEANING:	[ demonstrative [ possessor possessum] ]
CASE:	[ X                      [ RL              X ] ] <sub>X</sub>

In the diagram, d is a demonstrative pronoun (§5.1.3) having case 'X', where 'X' is any case, and is the overall case of the noun phrase. d stands in apposition to a possessor-possessum construction, r1 $\rightarrow$ n, where r1 is the possessor in the relative case, and n is the possessum in case X. RL is syntactically dependent on n: the two are non-coreferent, and n is inflected with a suffix making reference to the person and number of r1, if r1 is present.

The phrase structure representation is illustrated by the following examples:

- (4.1) [d       $\frown$       [ r1       $\rightarrow$       n      ]<sub>n</sub>]<sub>n</sub>
- a. taun'                      nukalpiam                      pania  
     there:R-ABs              nukalpiar-RLs              daughter-AB(3s-s)  
     that                          great hunter's              his daughter
- b. tamakuneng              naruyat                      tekeryuitneng  
     there:E-MDp              seagull-(RL)p              tekeryug-MD(3p-p)  
     with those              seagull's                      with their wingfeathers
- c. makuk                      ayaruk  
     here:E-(AB)d              ayarur-(AB)d  
     these 2                      2 canes

Glosses:

- a. that great hunter's daughter (8d:8)
- b. with seagulls' wingfeathers (11a: p. 94)
- c. these two canes (13b:237)

Note that r1, which is cross-referenced in the noun ending on n, is optional. d is likewise optional. the word order is not fixed in the noun phrase: d can follow n (4.2), and, though it is rather rare, r1 can follow n (4.3). d can stand alone (see r1 in (4.3)). Further, there may be more than one d in a noun phrase (4.4), but d always precedes r1.

- (4.2) kuikegtaaraat              awkut  
     kuig-kegtaarar\*-(AB)p      going:E-(AB)p  
     bountiful rivers              those over there  
     those bountiful rivers over there (10a: p. 44)

- (4.3) nallii                      taum  
     nalle-AB(3s-s)              there:R-RLs  
     its location              of it  
     where it is, at that place (3:70)

- (4.4) taun'-                      imn'                      aralleg  
     there:R-ABs              afore-ABs              ashes-ABs  
     those ashes (mentioned before) (7a:15)

Because the main constituent break in the noun phrase consists of two elements, d and [ ]<sub>n</sub>, which stand in apposition to one another, a

noun plus demonstrative can function as a predication in the construction type I call nominal clause:

(4.5) kegglar-            una  
       kegglar-ABs    here:R-ABs  
       saw             this one  
       this is a saw (e)

This is represented as dominated by the node 'pd' (predication):

$$[ d \curvearrowright [ r1 \rightarrow n ]_n ]_{pd}$$

Note that the main constituents can occur in either order, e.g.,  $\text{una (=gga) kegglar}$ , where the enclitic =gga 'there, indeed' usually also occurs.

Finally, when the r1 constituent is indicated in the ending on n but is not syntactically overt, the noun phrase is represented as  $[\emptyset \rightarrow n]_n$  rather than  $[r1 \rightarrow n]_n$  in surface structure, but the role which is overtly expressed by r1 is considered present only in the ending. Thus taun' qetunraan 'that one, your son (AB(2s-s))' lacks a r1 constituent, but the possessor role is indicated with the 2s suffix in the ending on n. In taun' elpet qetunraan (elpet = you, your (singular)) the r1 constituent is present at the surface.

#### 4.3. Structure of the complex noun phrase.

The following is the structure of the complex noun phrase:

PHRASE STRUCTURE NOTATION:  $[ n \curvearrowright [ r1 \rightarrow, ob \rightarrow adj ]_{adj} ]_n$

SYNTACTIC MEANING:  $[ head [ posr. adverb posm. ]_{modf.} ]$

CASE:  $[ X [ RL OB X ]_X ]_X$

Basically this construction consists of a noun phrase head in apposition to an adjective functioning as modifier. Adjective is functionally defined here: either it is an inflected adjectival noun

base, a subclass of nouns, in which case it must function as an adj constituent, or it is a noun that has taken on the function of an adj constituent. It will be convenient to discuss complex noun phrases having and lacking ob constituents in separate sections. The following examples, then, illustrate complex noun phrases lacking ob constituents:

(4.6)	[n	_____	[r]	→	adj	]adj]n
a.	makut here:E:(AB)p these	qantait qantar-AB(3p-p) their plates			muragat muragar-(AB)p wood	
b.	makut	qantait			muragarrlainaat muragar-rrlainar*-(AB)p lots of wood	
c.	nukalpiat nukalpiar-(AB)p great hunters	makut	taum there:R-RLs his		tangerkengai tangerr@+kengar-AB(3s-p) his <u>seen</u> ones	
d.	qantag qantar-(AB)d two plates	-ukuk here:R-(AB)d these two			malruk malrur-(AB)d two	
e.	ilurii ilurar*-AB(3s-s) his male cross-cousin	kan'a below:R- -ABs one down	im' afore- -ABs there		angarvegurluq angarveg-rurlur*-ABs poor <u>great shaman</u>	
f.	Taivkaralriarulur=am Taivkaralria-rurlur*-ABs=but but dear Taivkaralria		Nuk'am Nuk'ar-RLs Nuk'aq's		qetunraa qetunrar*-AB(3s-s) his son	

Glosses:

- a. these plates of theirs, made out of wood (6b:22)
- b. these plates of theirs, made all of wood (e)
- c. great hunters whom he saw (around him) (e)
- d. these two plates (13a:20)
- e. his male cross-cousin down there, the poor dear great shaman  
(11a: p. 114)
- f. but dear Taivkaralria, Nuk'aq's son (10a:3).

In (4.6) (a-f), the first noun phrase functions as a head, and the second noun phrase, whether it is of the adjective form class or not, functions as modifier. *n* and *adj* are in apposition, and as such, coreference of some kind is presupposed between them. In (a), the *adj* is an ordinary noun, while in (b) it is an adjective, derived by means of the postbase *-rrlainar\**- 'lots of N' from the ordinary noun in (a). (c-d) also illustrate inflected adjectival noun bases in the *adj* slot; adjectives derived with the passive participle *@+kengar-* 'POSS's one whom he did V to' are said to be transitive since they must be possessed, as in (c); adjectives of some other classes may never be possessed and are termed intransitive (e.g., numerals, as in (d)). See §5.1.4 for more on adjectival nouns. (e-f) are further examples of ordinary noun phrases in the *adj* slot. The semantic classes of the noun phrases involved in the *n* and *adj* slots determine the type of coreference or identity that is presupposed in the appositional construction: in (e-f) this is straightforward (notice that the term with more restrictive reference appears in the *n* slot, just as one usually says Tom is Ned's son rather than Ned's son is Tom in English; context in both languages can of course reverse this). In (a-b) the coreference or identity is specialized: when *n* refers to a manufactured item, and *adj* refers to a raw material, *n* is presupposed to be made out of *adj*.

The *n* constituent in a complex noun phrase can be deleted entirely, leaving only a headless *adj* constituent. Thus from (c), *taum tangerke-ngai* 'the ones he saw' could stand by itself, as a headless *adj*, and would still be considered a complex noun phrase. But if a complex NP



the peculiarity of the noun phrase in the adj slot referring to the raw material out of which the referent of the noun phrase in the n slot is made, cf. (4.5) (a-b). Nominal clauses having the form of complex noun phrases are represented as dominated by the node pd, for predication:

$$[ n \widehat{ [ r1 \rightarrow \text{adj} ]_{\text{adj}} } ]_{\text{pd}}$$

Next to be examined are complex noun phrases containing an ob constituent. These are illustrated by the following:

(4.9)	[n	$\widehat{$	[r1	$\rightarrow,$	ob	$\rightarrow,$	adj	$]_{\text{adj}}$	]n
a.	ugna				kangirami		aqumgalria		
	exit:R-ABs				kangirar-LCs		aqumga-INP(3s)-ABs		
	the one by the exit				in corner		he (who) sits		
b.	angun				pingayuneng		angyalek		
	angute-ABs				pingayu-MDp		angyar-leg-ABs		
	man				with three		one having <u>boat</u>		
c.	una-	tawaam	Maliim=gguq		akurutmineng		kuvuqetaarvia		
	here:R-ABs	however	Malig-RLs=said		akurute-		kuve+ur-getaar-		
	this		Malik's		-MD(3Rs-s)		@*vig-AB(3s-s)		
	(place)				bathwater		his place of ha-		
							bitual <u>spilling</u>		

Glosses:

- a. that one over there (by the exit), sitting in the corner (9a:23, e)
- b. the man with three boats (e)
- c. They say this place here, Malik's place for pouring out his bath-water... (11a: p. 82)

In all these examples ob is dependent on adj, and it follows from that that it may in no way be regarded as coreferential with adj. Note also that the adj bases are derived, and the dependent ob stands in some sort of syntactic relation with the underlying base. Thus the localis case ob in (a) is a locational complement to aqumga-'to be sitting', which it-

self is derived with the intransitive participle to form what is functioning as an adj. In (b), the modalis case ob is itself an adjective modifying the base *angyar-*'boat' (cf. *angyat pingayun* 'three boats'), while *angyar-* is derived with *-leg-* NN 'provided with N'. And in (c), the modalis case ob is the logical object of *kuvuqetaar-* 'to habitually spill', which is in turn derived with *@\*vig-* 'POSS's place for V-ing'. Further proof of dependency of ob on adj is the fact that the 3R person is used to mark the possessor of the ob in (c). The syntactic relation of ob to adj is clearly determined by the syntactic affinities of the underlying base, as well as the syntactic effects of the derivational postbase (e.g., *aqumga-* takes a localis complement; *-leg-* places the modifier of the underlying noun base in the modalis case). Thus just as some adjectives must take a possessor and others may never take one, so it is the case here that different adjectives take different dependent ob constituents.

There is in addition to this an exceedingly common construction involving oblique and non-oblique noun phrases with the following phrase structure:

$$[ n \overset{\frown}{\text{ob}} ]_n$$

For example:

(4.10)    *uani=gga*                    *amik*  
           *exit:RA-LC=there*        *amig-ABs*  
   *entrance-ABs*  
           the one by the exit, the entrance = that entrance there

I suggest that this construction has its origins in complex noun phrases such as (4.9)(a), with deletion of an understood nominalized positional predicate in the adj slot, such as *aqumga-* 'to be sitting' in (4.9)(a).



With *aqumgalria* deleted, (4.9) (a) becomes *ugna kangirami* 'the one over there in the corner', a well formed instance of the  $[n \widehat{ob}]_n$  construction.

Because it is an appositional construction,  $[n \widehat{ob}]_n$  also occurs as a nominal clause. While in complex noun phrases with noun function such as (4.10) a kind of identity of the referent of the noun phrase in the *n* slot with the *ob* expressing its location is presupposed, this identity is asserted in the corresponding nominal clause, as illustrated in (4.11):

(4.11)	Ak'a	angun=wa	taun'-	ak'a,	ikaken
	ago	angute-ABS=there	there:R-ABS	ago	across:RA-MD
		man			
	nunallerneng				'Once there was a man, from the abandoned village across there' (8a:1)
	nuna-ller-MDp				
		from the former <u>village</u>			

Here there is a complex *ob*, *ikaken nunallerneng*. Nominal clauses of this kind can be represented as follows:

$$[n \widehat{ob}]_{pd}$$

#### 4.4. Structure of the clause.

The following is the structure of the clause:<sup>2</sup>

PHRASE STRUCTURE NOTATION:	[	<i>r1</i>	→,	<i>n</i>	→,	<i>ob</i>	→.	<i>pd</i>		]	<sub>pd</sub>
SYNTACTIC FUNCTION:	[	A		S/O		ADV		predicate		]	
CASE:	[	RL		AB		OB		--		]	<sub>--</sub>
MOOD:	[	--		--		--		X		]	<sub>X</sub>

Within the clause, constituents are dependent on the predication. The syntactic relation of apposition does not occur. *r1* is the constituent of the transitive subject, it is cross-referenced in the predication's

verb ending, and it is in the relative case. *n* is the constituent of the intransitive subject and the transitive object, it too is cross-referenced in the verb ending, and it is in the absolutive case. *ob* is the constituent of adverbial modifiers in oblique cases, and is not cross-referenced in the verb ending. In the phrase structure diagram above, its representation has been simplified in two ways. First (as with *ob* in complex noun phrases) there may be more than one oblique constituent, and these may be in the same or in different oblique cases. Second, *ob* constituents with adverbial meaning (see §2.3.1) frequently occur in an initial adverb slot that has been excluded from consideration in this chapter. Examples of this are (4.12b,d). When an oblique has syntactic function, however, it occurs, with rare exception, in contiguity with the predication or with other obliques contiguous with the predication (see examples in §2.3.1, and (4.12h)). *pd* is the constituent of the predication, and it occurs in one of the moods (see §2.3.2). The mood of the predication determines the mood of the clause. Clauses are endocentric constructions, with the predication as head.

The following examples illustrate the basic structure of the clause:

(4.12)

a. [arnak ]<sub>n</sub> tawa=ll' [ukuk ]<sub>n</sub> [aqumug- ]<sub>pd</sub> [yaatemnun]<sub>ob</sub>  
 arnar-(AB)d then=and here:R-(AB)d aqume-IND(3d) yaate-  
 2 women and then these 2 they sit -TM(1s-s/p)  
 to my side

Then these two women sat down beside me (10a:p. 42)

b. [Ayarukun ]<sub>ob</sub> taw'- [wii ]<sub>r1</sub> [acivallra ]<sub>n</sub>  
 ayarur-VLs then 1s-(RL) acivar-11er-AB(3s-s)  
 with cane I it's depth

[nallunritaqa ]<sub>pd</sub> I used the cane to figure out how deep it  
 nallunrite-IND(1s-3s) was. (13b:236)  
 I knew it

- c. [qerrutem ]<sub>r1</sub> [pinritaten ]<sub>pd</sub>  
 qerrute-RLs pi-nrit°e-IND(3s-2s)  
 cold it does not do to you  
 The cold does not affect you. (10a: p. 53)
- d. [Yaani Mamterillerni ]<sub>ob</sub> [taun'- Ayaksaq ]<sub>n</sub>  
 going:RA:LC Mamteriller-LCp there:R-ABs Ayaksar-ABs  
 over there at Bethel that Ayaksaq
- [cug'u11ru1r' ]<sub>pd</sub>  
 cug-ng:u-11ru-INP(3s)  
 he lived Ayaksaq lived over there in Bethel.  
 (10a: p. 42)
- e. [anngarpet ]<sub>r1</sub> [tekilliki ]<sub>pd</sub>  
 anngar-RL(2s-s/p) tekite-OPT(3s-3p)  
 older brother may he get to them  
 May your older brother get to them. (e)
- f. [wii quliragka ]<sub>n</sub> [nangengremek ]<sub>pd</sub>  
 1s-(RL) qulirar-AB(1s-d) nange-CS0(3Rd)  
 my my two tales even though they were over  
 even though my two tales are over (8a:31, e)
- g. Cuna=gguq [tutgararuluan taum' ]<sub>r1</sub>  
 then=said tutgararulur\*-RL(3s-s) there:R-RLs  
 her grandson that
- [umyugangucamikek ]<sub>pd</sub> [taukuk tuu11gek ]<sub>n</sub>  
 umyugar-nge@:(u)te-CQ0(3Rs-3d) there:R-(AB)d tuu11leg-(AB)d  
 when he began to think about them those 2 big loons
- And then her grandson begin to think about those two big loons  
 (7a:20)
- h. [Apayar- im' ]<sub>n</sub> [urasqaneng ]<sub>ob</sub> [tawaten ]<sub>ob</sub>  
 Apayar-ABs afore-ABs urasqar-MDp there:RA-EQ  
 Apayaq that clay like that
- [miryarayug1un' ]<sub>pd</sub> Like that, that Apayaq would keep  
 miryar+a\*yug-APO(3Rs) vomiting up clay (12a:93)  
 he would keep vomiting it up
- i. [anren'ni ]<sub>n</sub> [kepum1liureluku ]<sub>pd</sub>  
 aner@+ner-AB(3Rs-s) kepe+ur-m1liurar-APO(3s)  
 his breathing (he) cut it into tiny sections  
 He gave his breath a kind of wheezing sound (13b:262)

These examples illustrate two sets of points. The first concerns variability of clause arrangement, that is, word order and presence vs. absence of constituents, and the second concerns the morphology of the

ending as it relates to the syntax of the clause.

On word order, as noted earlier, ob constituents with adverbial meaning can occur clause-initially, as in (b) and (d), as well as in canonical position just before the predication, as with *tawaten* in (h). On the other hand ob constituents with syntactic function are almost always contiguous with the predication or with another ob contiguous with the predication, e.g., *urasqaneng* in (h). Any constituent, including ob constituents of all types, may also occur just after the predication, see in (a) the postposed ob *yaatemnun*, and in (g) the postposed *n taukuk tuullgek*. For postposed *r1*, see (2.21) *enaikutagaaten ik'um* 'he might deprive you of your place (IND(3s-2s)), the one across there (RLs) = the one across there might take your place'.

Another aspect of clause arrangement is the presence vs. absence of nominal constituents in primary cases, that is, of *n* and *r1*. Both of these are cross-referenced in verb endings, and thus when they are absent their syntactic and logical place is held in the clause by the verb ending. This is illustrated in (c) where *elpet* 'you' is absent as a *n* constituent, but the verb ending indicates 2s 0; in (e), where there is no overt *n* constituent, but the verb ending indicates 3s 0. A more complicated case is presented in (i), where there is no overt *r1* constituent, nor is there a pronominal suffix cross referencing an A in the verb ending of the appositional predication. However, an A is implied in the clause in two ways: first, the fact that the appositional mood ending is marked for 3s 0 rather than 3Rs S indicates that the clause is transitive and must have some A; second, the fact that the *n*, *aren'ni*, has a 3Rs possessor indicates that there is an A present, and further that it is coreferent with the possessor of *aren'ni*.

Thus angalkum aren'ni kepumlliureluku 'the shaman (RLs) gave his (own) breath a kind of wheezing sound' would be perfectly grammatical, though it is rare for the rl to be expressed overtly with the appositional mood, since one of its discourse function is to link series of clauses with the same S or A. Finally, it is possible for both the rl and the n constituents to be absent; thus from (e), tekiliki can stand alone, with the gloss given for it, as a well-formed clause.

The second set of points illustrated by these examples concerns the relation of the morphology of verb endings to the phrase structure of the clause. As discussed in §3, verb endings indicate person and number of S, A, and O with different morphemes and arrangements, depending on the mood and sometimes also the person involved. These differences, however, are not reflected syntactially; the same phrase structure holds for clauses of all moods. Thus in (4.12), all overt noun phrases functioning as S or O appear as n constituents, and all overt noun phrases functioning as A appear as rl constituents, but the formal marking of S, A, and O is variable, as shown in table 4-1.

Note in table 4-1 that overt noun phrases functioning as S are cross-referenced with pronominal suffixes of the POSR/S/A set in (a,d, f), but with one of the S/O set in (h); overt noun phrases functioning as A are cross-referenced with pronominal suffixes of the POSR/S/A set in (b, c, e, g), but in (c) an additional suffix of the POSM/O set also occurs; overt noun phrases functioning as O are cross referenced with a pronominal suffix of the POSR/S/A set in (b), but with ones of the S/O set in (g, i). Further, the relative case markers +m-/ +n- occur with S or A in some indicative (c), some optative (e), and most oblique mood endings (f,g), as discussed in §3. Yet, the relative case has no

Table 4-1: Formal marking of S, A, and O in verb endings in (4.12) that cross-reference overt noun phrase constituents.

<u>Example</u>	<u>Person-number-role of constituent</u>	<u>Mood of clause</u>	<u>Pronominal suffix form</u>	<u>Pronominal suffix set</u>
(a)	3d S	IND	+g-	POSR/S/A 3d
(d)	3s S	IND	+∅	POSR/S/A 3s
(f)	3Rd S	CSO	+m +nek	RL +POSR/S/A 3Rd
(h)	3Rs S	AP0	-ni	S/O 3Rs
(b)	1s A	IND	-ka	POSR/S/A 1s
(c)	3s A	IND	-ng:a +n +∅	POSM/O 3s +RL +POSR/S/A 3s
(e)	3s A	OPT	?+n +∅	?RL +POSR/S/A 3s
(g)	3Rs A	CQ0	+m -ni	RL +POSR/S/A 3Rs
(b)	3s 0	IND	+∅	POSR/S/A 3s
(g)	3d 0	CQ0	-kek	S/O 3d
(i)	3s 0	AP0	-ku	S/O 3s

isolable syntactic function synchronically, since even the nearest hypothesis, that it marks some kind of dependence, fails to explain its presence in parts of the indicative mood, and its absence in 3Rx S/A forms of the conditional mood (see discussion in §3.3 of Bergsland's hypothesis that the relative was analogically transferred to the indicative). In summary, then, there is no syntactic evidence for recognizing the morphologically distinct subtypes of S, A, and O, nor for recognizing as significant the presence vs. absence of the relative case marker in verb endings.

Thalbitzer and Hammerich, among others, considered it significant that the r1 constituent in examples like (b), (c), and (g) were cross-referenced by endings identical to noun endings marking possessors of the same person: thus for them, the ending in (b) was analyzable as AB(1s-s), the marker for A in (c) as AB(3s-s), and the marker for A in (g) as RL(3Rs-s/p). The argument was claimed to receive support from the appearance of a r1 constituent functioning as possessor in the noun phrase, so that the r1 constituent of the clause could then be viewed as the overt "possessor" of the predication. Note, though, that not all r1 constituents in clauses are cross-referenced with something identical to a possessed noun ending: thus the marker for 3s A in (e) has no corresponding possessed noun ending.

To require that constituents in phrase structure have specific syntactic functions in order to be recognized is not to say that the case marking on over noun phrases is all important while the distinctions made in verb endings is syntactically irrelevant. Two trivial cases in point are the lack of distinction between absolutive and relative cases in non-singular unpossessed noun endings, and the lack of a mark

on noun phrases to indicate whether they function as 3 or as 3R person. These distinctions are worth preserving in syntactic representations because they have effects elsewhere in the syntax. For example, a plural noun can function as possessor of a noun or A of a clause despite its lack of the relative case marker  $\pm m$ . Not so trivial is the three-way distinction in endings but not in the case system between S, A, and O, such that at times S and O are grouped together, as in the appositional mood (see (h-i) where only S or O is cross-referenced in the ending), and at times S and A are grouped together, as with the oblique moods (see (f-g), where S and A are marked with the relative suffix plus POSR/S/A, while O is marked with S/O pronominal suffixes). It happens that both groupings have functional importance in the syntax. To list a few for each, S/O is important in surface case marking, in parallelism between complex noun phrases and clauses, and in the syntactic effects of many postbases; S/A is important in providing an antecedent for the 3R person, and in the marking of independent relatives (see §5.1.4.2.). Thus these morphologically signaled distinctions are syntactically well motivated, and hence they belong in syntactic representations. Note, incidentally, that the phrase structure given for clauses lumps the functions S and O together under n. This is done simply as a notational convenience making it possible to collapse the representations of transitive and intransitive sentences. I opted for the S/O grouping rather than the S/A grouping in formulating the notation-- which would have been equally possible-- because it maps more neatly on the predominant surface case scheme. Note that it is always possible to tell in the representation of a particular clause whether n is functioning as S or as O: it is the former if the clause is intransitive, and the latter if



the clause is transitive. When it is useful to group S and A, an optimal analysis will make use of a phrase structure representation which reflects that grouping. Note that because the overall analysis recognizes a three-way distinction between S, A, and O, such a recasting of phrase structure would result in no additional terms in the analysis, but would add to its ability to capture significant generalizations.

#### 4.5. Parallels between nouns and predications.

We are now in a position to reassess parallels between nouns and predications. In table 4-2, the intra-clause phrase structures discussed in this chapter are summarized. Separate columns are given for representations with noun function and representations with predicational function. This is one dimension, then, of noun-predication parallels, and it is a matter more of function than of structure. Nevertheless, there are still some formal differences between noun phrases (simple and complex) with noun function vs. those with predicational function. As indicated in note (a) in table 4-2, both terms in apposition must be present for a noun phrase to have predicational function. This follows from the syntactic definition of noun phrases with predicational function (i.e., nominal clauses): they consist of terms in apposition where the identity of reference indicated by apposition is asserted rather than presupposed.

A second dimension of noun-predication parallelism is more structural than functional. Parallels are immediately evident as one compares noun phrases and complex noun phrases, and as one compares complex noun phrases and (full) clauses. In the first comparison, one finds that complex noun phrases consist basically of two noun phrases

Table 4-2: Summary of intra-clause phrase structures discussed in §4.

	WITH NOUN FUNCTION	WITH PREDICATIONAL FUNCTION
NOUN PHRASE <sup>a</sup>	$[ d \widehat{\quad} [ r ] \rightarrow n ]_n ]_n$	$[ d \widehat{\quad} [ r ] \rightarrow n ]_n ]_{pd}$
COMPLEX NOUN PHRASE <sup>a</sup>	$[ n \widehat{\quad} [ r ] \rightarrow, ob \rightarrow adj ]_{adj} ]_n$	$[ n \widehat{\quad} [ r ] \rightarrow, ob \rightarrow adj ]_{adj} ]_{pd}$
OBLIQUE APPPOSITIONAL PATTERN (DERIVED FROM COMPLEX NOUN PHRASE) <sup>a</sup>	$[ n \quad \quad \quad ob ]_n$	$[ n \quad \quad \quad ob ]_{pd}$
(FULL) CLAUSE	-----	$[ r ] \rightarrow, n \rightarrow, ob \rightarrow \quad pd ]_{pd}$

**Note:**

<sup>a</sup>For a noun phrase, complex noun phrase, or oblique appositional complex noun phrase to have predicational function, both terms in apposition must be present. For these structures to have noun function, one of the terms may be absent in certain cases, i.e., d or n may be absent from the noun phrase; n may be absent from the complex noun phrase (but not from the oblique appositional pattern of the complex noun phrase).

in apposition, with the second noun phrase, the adj, having a somewhat more complex structure, since it can have a dependent ob constituent (the absence of a D constituent in the noun phrase is perhaps partly due to the fact that any demonstrative present is analyzable as part of the n rather than as the adj of a complex noun phrase). In the second comparison, the phrase structure of the clause differs from that of the complex noun phrase in its treatment of the n constituent. In the clause, it is dependent on the pd, while in the complex noun phrase, it is in apposition to the adj.

Because of these similarities, it is possible to present a generalized phrase structure capturing what the particular phrase structures have in common. For our purposes, this is most relevant for complex noun phrases and (full) clauses:

GENERALIZED PHRASE STRUCTURE	[ n	rl →,	ob →	ap	]			
COMPLEX NP PHRASE STRUCTURE	[ n	⌢	[ rl →,	ob →	adj	]	adj	]n/pd
CLAUSE PHRASE STRUCTURE	[ n →,	rl →,	ob →	pd	]	pd		
GENERALIZED SYNTACTIC MEANING	[ residual	agent	adverbial	asserted/presupposed]	predicate			
GENERALIZED CASE	[ X	RL	OB	X	]	X		
GENERALIZED MOOD	[ --	--	--	Y	]	Y		

In the first line, the generalized phrase structure is given, with the phrase structure of complex noun phrases and of clauses aligned beneath it. Below that are formulations of generalized syntactic meaning, case, and mood, where X is any case and Y is any mood. In the general-

ized phrase structure, the constituent *n* corresponds to *n* of complex noun phrases and clauses, it has a residual or unspecified syntactic meaning, and it appears in any case (i.e., any case in complex noun phrases, and the absolutive case in clauses). The *n* constituent shows significant differences in complex noun phrases and clauses. In the former, the *n* constituent is in apposition with the *adj*, while in the latter, it is dependent on the *pd*. Note, further, that I have changed the clause phrase structure representation given above from previous clause phrase structure representations by placing *n* to the left of *r1*. This is of course wrong, and is done merely to illustrate the correspondences between complex noun phrases and clauses.<sup>3</sup> One must conclude, then, that the ordering of *n* in the generalized phrase structure is unspecified, as is its syntactic relation to *ap* (from *adj* plus *pd*). Thus, neither the ligature of apposition nor the arrow of dependency occurs after *n* in the generalized phrase structure, and *n* occurs there to the left of *r1* merely for mechanical reasons. It could as well have been written to the right of *r1*.

The *r1* constituent provides a far neater set of correspondences. Both in complex noun phrases and in clauses, it is dependent on *adj* or *pd*, it is marked with the relative case, and it canonically occurs before the *ob* constituent. Its syntactic meaning in complex noun phrases is possessor and in clauses is *A*; I tentatively generalize this under the term agent, though doubtless a more felicitous and perhaps more elaborate semantic characterization must exist.

The *ob* constituent is also quite tidy across construction types. Both in complex noun phrases and in clauses, it is dependent on *adj* or *pd*, it is marked with an oblique case or oblique cases, it can consist

of one or several distinct oblique constituents, and it canonically occurs just before the adj or pd. Its syntactic meaning can be described as adverbial, since it indicates location and manner; to that might be added, however, certain syntactic functions in both complex noun phrases and clauses.

Aside from some similarities in inflection already discussed, the adj of complex noun phrases and the pd of clauses have in common a cross-referenced dependent r1, a non cross-referenced dependent ob, and a tendency either to be transitive, i.e., taking a r1 constituent, or intransitive, i.e., taking no r1 constituent (transitivity of both adjectival bases and verb bases is discussed in §5). Adj and pd differ in that the former has a n constituent in apposition to it, which it does not cross-reference, while pd has a dependent n constituent, which it does cross-reference. In the generalized phrase structure, I represent this as ap, from adj plus pd. The syntactic meaning of ap is asserted or presupposed predicate; both these syntactico-semantic functions are, as noted, possible with complex noun phrases, but only the latter is possible with predications. ap has any case as its generalized case (i.e., any case for complex noun phrases, and no case for clauses); it has any mood as its generalized mood (i.e., no mood for complex noun phrases, any mood for clauses). Both complex noun phrases and clauses are endocentric in the sense that the case of the adj or the mood of the pd is made, respectively, the case of the entire complex noun phrase or the mood of the entire clause.

The two dimensions of parallelism discussed here between nouns and predications, which may be thought of as horizontal vs. vertical parallels relative to the arrangement of constructions and functions in table 4-2,



predicational function such as (b).

A problem with that analysis is that one does not really know whether (c) is not perhaps simply a complex noun phrase with predicational function. In fact, the enclitic =gga 'there, indeed', which is very common in nominal clauses, is common in constructions like that in (c) having predicational function. In fact, =gga is common in constructions such as (b), where the n constituent is clearly cross-referenced in the pd, making it not implausible to argue that (b) is in fact a complex noun phrase which cross-references its appositional n. I do not think, however, that it is as important to make analytic decisions about these constructions as it is to note their unique position on the borderline between nominal clauses with complex noun phrase structure, and full clauses. A construction on the borderline has potential for explaining syntactic change.

The intransitive and transitive participles, both of which display these borderline characteristics with third person S or O, take cross-references identical with those of the indicative. Thus, the ending in aqumgalria above corresponds formally to IND(3s) aqumgauq. Similarly, nukalpiat tangerkeka 'great hunter (ABs), my seen one (TRP-AB(1s-s)) = 'the great hunter I saw' (complex noun phrase reading) OR 'great hunter (ABs), I saw him (TRP(1s-3s)) = I saw the great hunter' (full clause reading) corresponds to IND(1s-3s) tangraqa 'I saw it'. What this indicates of course is a very close connection between complex noun phrases and indicative mood clauses, at least for some person combinations. Following the hypotheses of Thalbitzer and Hammerich, that predications are a subtype of noun, one naturally assumes that the indicative must have developed from a participial construction. This is not necessarily

true. The intransitive indicative in Yupik (Central Yup'ik +ur-/tur-) and Alaskan, most Canadian, and Polar Greenlandic Eskimo shows up as an intransitive participle in West Greenlandic. On the other hand, the transitive indicative in all Eskimo appears to be based on the passive participle (Central Yup'ik +ar-), a VN postbase (Greenlandic has the emphatic element -p-~v- before the passive participle in the indicative mood sign). Even still, it is conceivable that the passive participle could have developed from a mood sign.

Regardless of direction of development, the closeness between indicative and participial predications, and nominal clauses based on participles, has really to do with the relation of the n constituent to the ap (pd or adj) constituent. When n is non-third person, as in (4.13b), the presence of a pronominal cross-reference to ap marks n as dependent and the construction as a full clause, while the absence of a pronominal cross-reference marks n as appositional and hence the construction as a complex noun phrase. But when n is third person, the pronominal suffix is + $\emptyset$ , and a systematic structural and semantic ambiguity arises in the participial moods, which can form both complex noun phrases or clauses. Thus historically, a participial type mood can develop from an indicative type mood by ceasing to cross-reference its n; an indicative type mood can develop from a participial type mood by cross-referencing its appositional n. This simple difference explains the different uses of the participials as well as the vacillation between indicative and participial moods in Eskimo generally. It also illustrates an application of the phrase structure representations formulated in this chapter.



## §4-- Footnotes.

1. The positions of particles and enclitics in noun phrases and clauses have been omitted from this representation.
2. The positions of particles, enclitics, and fronted adverbial ob constituents have been omitted from this representation.
3. Rischel (1971:228-30), whom I follow in drawing a parallel between what I term the adj and pd constituents, uses an n - r1 - pd (i.e., OSV) underlying order for representing clauses for just this reason. He justifies this by pointing out that this order is attested (though not so frequently) in Greenlandic. It is also attested in Central Yup'ik, but only when the n constituent is fronted to a position of "focus". The initial "focused" n is additionally marked as such by placement of sentential enclitics after its first constituent, and by a characteristic intonation contour (rise until the last stress, with high-falling final unstressed syllables).

## 5. Syntactic and inflectional properties of bases.

The findings on intra-clause phrase structure in §4 provide a framework for describing and categorizing bases according to their syntactic properties. This in turn makes it possible to monitor the syntactic effects of postbases which derive one base type from another. Bases are classified according to the scheme that was outlined earlier (§2.2), that is, into noun bases, verb bases, and particle bases, with subclasses under each.<sup>1</sup> The classes are recognizable by inflectional as well as syntactic criteria. They are also recognizable by their combinatory habits with postbases, but for methodological reasons, it is best at this point to rely on the inflectional and syntactic definitions. In this way, it will later be possible to draw real correlations between inflectional and syntactic facts on the one hand, and postbase function on the other, rather than simply to "explain" postbase behavior in terms of categories having no definition independent of the postbases themselves.

By the syntax of a base, I mean the potential of that base for combining with elements in its phrase that are dependent on it or in apposition to it. Thus, the syntax of a noun base is its potential for combining in its noun phrase with the dependent r1 constituent and the appositional d constituent; the syntax of an adjectival noun base is its potential for combining with the dependent r1 and ob constituents and its appositional n constituent in its own complex noun phrase; and the syntax of a verb base is its potential for combining with the dependent r1, n̄, and ob constituents in its own (full) clause. These illustrations are sketchy, and more complete syntactic representations will be given in following sections. As a practical matter, I have chosen to concen-

trate on aspects of base syntax that are germane to postbase derivation. Some syntactic phenomena will therefore receive more attention than others.

A main goal of this chapter is to develop a fairly large inventory of base classes from the syntactic standpoint. Such an inventory permits a finer classification of the changes in base class which the derivational postbases carry out, since it provides more derivational beginning points and end points.

Finally, I must emphasize that this chapter is by no means a complete treatment of the grammar of bases. In particular, I have given only very scanty attention to the many lexicographic and semantic aspects of bases. In part, this is because it is the syntactic and classificatory aspects of bases which relate most directly to the goals of this study; also, however, it is because in earlier work on Central Yup'ik and on other Eskimo languages, lexicographic and semantic aspects have received very good coverage, while syntactic and classificatory aspects have in some respects received less attention, particularly those of non-ordinary nouns. In the areas of lexicography and semantics, and in some aspects of classification, I have largely followed Reed et al. (1977) and Miyaoka (1975), and also work on Greenlandic by Bergland (1955) and Kleinschmidt (1851) (Yupik-Inuit differences are mostly minor in these areas, at least at a broad functional level). There are, however, some reanalyses here, and I have noted dialect differences between Chevak and GCY where I have found them. For more lexicographic and semantic information, the reader is referred to the sources just mentioned, and to Jacobson (forthcoming), when it is published. Additional relevant sources will be cited in individual sections.

## 5.1. Noun bases.

Noun bases are classified here into ordinary noun bases, independent pronouns, adjectival noun bases (with subclasses), locational bases (with subclasses), and temporal bases.

### 5.1.1. Ordinary noun bases.

Ordinary noun bases are represented as follows:

$$\begin{array}{cccccc}
 [ \underline{d} \widehat{ [ \underline{r} ] \rightarrow \underline{n} ]_n ]_n \widehat{ [ \underline{r} ] \rightarrow, \underline{ob} \rightarrow \underline{adj} ]_{adj} } & & & & & \\
 (a) & (b) & [N] & (c) & (d) & (e)
 \end{array}$$

In the diagram, the top line is the notation for the phrase structure of complex noun phrases (see §4.3; note that the *n* constituent is expanded as a noun phrase in this representation). The line beneath that consists of a marker for noun base '[N]' under its appropriate syntactic constituent, and variables which fill all of the constituents around it. These variables are surrounded with parentheses since they are under constituents which are optional: an ordinary noun may or may not have a possessor (i.e., a *r* constituent), it may or may not have an adjectival noun modifying it (i.e., an *adj* constituent), and so on. The variables also serve as indices of the semantic roles coded in each constituent. Thus b is an index of the possessor role, relative to [N], e of the adjectival modifier role relative to [N], and so on. For particular noun bases, the interpretation of semantic role goes beyond the syntactic meaning of the constituent in which it occurs. Thus for panig- 'daughter' b designates not merely the role of possessor in a purely syntactico-semantic sense, but instead the specific role of parent. These role markers must not, however, be interpreted as referential indices: thus, even though *n* and *adj* are in apposition, and therefore are pre-

supposed or asserted to be coreferent, they would not bear the same semantic role index. That is, they index different roles for the same referent.

The diagram above is rather cumbersome, and can be abbreviated when at issue are only the syntactic relations between noun bases and co-constituents in phrases smaller than the entire complex noun phrase. Thus, for some purposes, it is necessary only to represent the relationship between a noun base, its possessor, and its demonstrative, as follows:

$$[ \underline{d} \widehat{ [ \underline{r} ] \rightarrow \underline{n} } ]_n ]_n$$

(a) (b) [N]

Ordinary noun bases are in part a negatively defined class, consisting of those noun bases not falling under any of the noun base classes discussed in following sections. Ordinary noun bases are further characterized by their lack of inflectional peculiarities; that is, they inflect according to the scheme presented in §3.2 for nouns. In general, ordinary noun bases are optionally possessible, but for semantic reasons, some are far more likely to be possessed than others. Ordinary nouns have pi- 'thing, it, being' as their anaphoric base; the interrogative-indefinite noun base is ca- 'what' for non-human nouns, but the demonstrative base kit- 'who' for human nouns.

A closer look at ordinary noun bases shows that a greater number of specialized classes could be isolated on syntactic, semantic, and even inflectional grounds. Thus, for instance, nouns classifying human beings such as tan'gurrar\*- 'boy', angalkur- 'shaman', often tend to function as unpossessed adjectives in complex noun phrases, e.g., Kangciurluq angalkuq 'Kangciurluq, the shaman', uyuraat tan'gurraq 'their

younger sibling, a boy'. Again, proper names could be isolated on the basis of (i) their formation of hypocoristics, e.g., Aren from Arnarayaq, Tegall from Tegalquq; (ii) the existence of a subclass among them with the ending  $\neq n$ , probably historically an inherent plural (cf. the ordinary plural  $\neq t$ ), e.g., Ulruan (one knows from examples like Ulruan atii 'Ulruan (RLs), his father (AB(3s-s)) = Ulruan's father' that like plurals, these names ending in  $\neq n$  do not take the RLs ending  $\neq m$  (cf. \*Ulruatem atii), but one knows from the ending on atii that Ulruan is treated syntactically as singular and as relative case). Again, too, kinship terms could be isolated because they are usually possessed, e.g., qetunraa 'his son', but very rarely qetunraq 'the son' (except for quasi-generic characters in some stories who are referred to with unpossessed kin terms, most commonly grandmothers and grandsons). One could isolate a large number of such classes in this way, but, in spite of its inherent interest, this becomes less and less rewarding a tool for investigating other parts of the grammar. For that reason, I have found it practical only to isolate classes displaying major syntactic or inflectional differences, and even then have arrived at a relatively large syntactic inventory.

#### 5.1.2. Independent pronoun bases.

Independent pronoun bases are represented as follows:

$$[r! \rightarrow n]_n$$


-- [PN]

This is similar to the representation for noun bases, except that pronoun bases may not take a relative case possessor. (The representation of pronouns in full noun phrases and in complex noun phrases is the same as

that of ordinary nouns: those details have been left out here as irrelevant.) Morphologically, all but first person pronouns have endings identical to possessed noun endings, but this is not of syntactic importance. Thus, while *ellii* AB 3s is analytically *ell-* (from *et°e-* 'to be'?) plus *-ng:a* AB(3s-s), one says *ellii, nukalpiaq* 'he, the great hunter' (literally, if one assumes the endings are possessed endings, 'his being, the great hunter') rather than \**nukalpiam ellii* (literally, 'of the great hunter, his being', i.e., 'of the great hunter's being'), with *nukalpiar-* 'great hunter' in the relative case.

Table 5-1 shows inflected independent pronouns. All but 1x are built on *ell-*. The 3s forms for all cases are based on the corresponding 3s-s possessed noun endings, and for 3p/d to the corresponding 3p/d-p possessed noun ending. AB and RL merge as categories for non-third person pronouns, and RL forms with *ɛm* are used in both functions. RL forms for 2/3Rx are based on RL(2/3Rx-s/p) endings, and the oblique case forms for 2/3Rx are based on the 2/3Rx-s/p endings of the oblique case in question (*localis* is used in the table as illustration). 1s pronouns are based on *wang(:)e-*, probably deriving ultimately from *wa-* 'here', a demonstrative adverb, plus *+ng(:)e-*, the 1s p/d 1-NEU pronominal suffix, as Miyaoka 1976:202-10 has shown (for AB/RL 1s *wang(:)e-* becomes *wii* by some variant of P20). The oblique cases are marked with simple suffixes (*+ni* LC, *+neg-* MD, etc.). 1p/d pronouns are based on *wangku-*, where *-ku-* is the 1p/d S/O pronominal suffix, probably cognate with the demonstrative pronoun non-singular marker *+ku-* and the *-ku-* in *ɛnku-* 'N and company (in plural or dual)' (see §3.1, and §5.1.3 for other discussion of *-ku-*). But *-ku-* here is unique in that it is followed in the 1p pronoun by the 1p 1-NEU pronominal suffix *+te-*, rather than by the ordinary plural *+t*

Table 5-1: Inflected independent pronouns.

	AB	RL	LC
3s	ellii	elliin	elliini
3p	ellait	ellaita	ellaitni
3d	elkek	elkenka	elkegni
			
1s	wii		wangni
1p	wangkuta		wangkutni, wangkuni
1d	wangkuk		wangkugni
2s	elpet		elpeni
2p	elpeci		elpecini
2d	elpetek		elpetegni
3Rs	ellmi		ellmini
3Rp	ellmeng		ellmeggni
3Rd	ellmek		ellmegni

Note: Other obliques are formed as the localis is, but with appropriate case endings.



that is found with it elsewhere (in the dual, the expected  $\#g-$  occurs with  $-ku-$ , however). In the first person as elsewhere, oblique cases are marked with plain case markers ( $+ni$  LC,  $+neg-$  MD, etc.). In Chevak but not GCY, however,  $1p$   $1-NEU$   $+t\epsilon-$  may be omitted for  $1p$  when followed by the oblique case markers, thus for LC  $1p$ , Chevak  $wangkutni$  or  $wangkuni$ , but GCY  $wangkutni$  only.

In addition to the syntactic reasons, there are morphological reasons for treating independent pronoun bases as having synchronic inflection for number but not for possessor:

- (5.1) Elpetnguyuklutek!  
 elpet $\#ng:u\#yuke$ -APO(3d)  
 thinking that those two were you  
 = I thought that those two (that I saw) were you! [Reported as said by a man as he approached two fellow villagers on the tundra]
- (5.2) Wangcugnitur- un'  
 wang+cugnite-IND(3s) here:R-ABs  
 it smells like me this  
 This one smells like me [Reported as said by a man on finding his steambath hat by sniffing each of a pile of them]

The postbase  $\#ng:u-$  'to be N always' attaches to unpossessed noun bases with synchronic number inflection not present. Note that  $elpet-$  AB/RL 2s in example (5.1) is the base used for referring to two addressees. Thus if possession were synchronic, one would expect  $elle-$  as the base, and some external form of expression of 2d; if neither possession nor number inflection were synchronic, we would expect  $elpeteg-$  AB/RL 2d as the base; but since the base is  $elpet-$  here, we infer that the possessed noun ending  $\#pet$  RL(2s-s/p) has become part of the base. In (5.2), the base  $wang-$  appears for 1s (the  $1p/d$  base  $wangku-$  is used for  $1p/d$ , since  $-ku$  is analyzed as part of the base, an assertion which is confirmed by the use of the pronominal suffix  $+t\epsilon-$   $1p$   $1-NEU$  after it in

the 1p pronoun).

The following examples illustrate other uses of the independent pronouns:

- (5.3) wii niitellemneng  
 AB/RL 1s niite-ller-MD(1s-s/p)  
 my my former heard thing  
 about what I heard (14c:1)
- (5.4) elliin=llu=gguq-taw' kaymurraarluku  
 RL 3s =& =said-then kaymurraar-APO(3s)  
 and then he too they say pushing it  
 and they they say he too pushed it (8a:19)
- (5.5) ellii=llu=gguq-taw' unkarlun' keyirremi  
 AB 3s uneg-gar-APO(3Rs) keyirrar\*-AB/RL 3Rs  
 and then they say he he left behind alone  
 and they say that he was left behind, all alone (8a:21)
- (5.6) Cali waten ayagyugarturngailnguci elpeci, wangtun  
 also thus ayagyugar+tur@\*ngait°e-INP(2p) AB/RL 2s EQ 1s  
 you won't always be teenagers
- ayuqliricicelriaci 'And you won't be teenagers like  
 ayuqe\*li+ri+cice-INP(2p) this forever, but you will become  
 you will come more and more more and more like me' (14c:7)  
 to be similar to
- (5.7) Ellimineng yuugarnniarrertuq  
 MD 3Rs yuu@+'arte@\*niarar\*-IND(3s)  
 by itself it will pop up again soon (13b:264)

In all of the examples, the pronouns are functionally unpossessed, in spite of the morphological origin of their inflectional endings. In (5.3) the pronoun is a possessor, syntactically in the relative case. The contrast in the third person between relative and absolutive case is illustrated in (5.4) and (5.5), respectively. Wangtun in (5.6) and ellimineng in (5.7) illustrate oblique case pronouns. The latter is an example of a common use of MD 1/2/3R pronouns for disambiguating intransitive reflexive constructions (compare yuugarnniarrertuq alone, meaning 'it will pop up again soon' or 'it will be permitted to pop up again

soon'; it has both reflexive and agentless readings.)

The overall function of independent pronouns in primary cases is disambiguation and emphasis. The first of these is illustrated in (5.4) and (5.5), where *elliin* and *ellii* are used, along with appropriate enclitics, to introduce a 3s topic in the discourse contexts in which these utterances occurred. The second is illustrated in (5.6), where *elpeci* and *wangtun* do not perform any disambiguating function, but instead sharpen the contrast being made between the audience and the speaker. In oblique cases, independent pronouns have a wider range of functions, since they provide the only means of making pronominal reference there.

### 5.1.3. Demonstrative pronoun bases.

Demonstrative pronouns are inflected unexpanded demonstrative bases. Demonstrative adverb bases, which are a type of expanded demonstrative base, will be taken up in §5.1.5.1. Demonstrative pronouns function as deictic determiners for noun phrases, and have the basic meaning 'that which is located at the area designated by the demonstrative base'.

The demonstrative bases are presented in the chart in table 5-2. I follow Reed et al. (1977:256-65) in most details, but have added the terminology given to the left of the bases themselves in the chart. An excellent discussion of the meanings of the bases is found in Jacobson (1980a).<sup>2</sup> The only significant differences that I have found between base meaning in Chevak, and GCY (as reported in the above sources) is that for Chevak but not GCY, *ing-/aw-/am-* can mean 'south', and *kegg-/qag-/qakem-* can mean 'north', regardless of the speaker's own location; i.e., they have become cardinal directions.

Table 5-2: Demonstrative bases.

	<u>R</u>	<u>E</u>	<u>O</u>	<u>Full gloss</u>	<u>Short gloss</u>
General	Proximal	u-	mat-	---	here
	Distal	tau-	tamat-	---	there
Interrogative			kit-	who, whoever	who
Anaphoric		im-		the aforementioned	afore
Directional			uk-	the one approaching	coming
	Askance	ing-	aw-	am-	going
	Direct	ik-	ag-	akem-	across
Closed/open	Askance	kiw-	qaw-	qam-	closed
	Direct	kegg-	qag-	qakem-	open
Higher	Askance	ping-	paw-	pam-	away
	Direct	pik-	pag-	pakem-	up
Lower	Askance	kat-	un-	cam-	below
	Direct	ug-	uneg-	cakem-	exit
				the one toward rivermouth; toward the exit of a house	

Semantically, the demonstrative bases express a set of abstract spatial relations which speakers most commonly illustrate in terms of its application to topology, to space inside a house, and to the human body. The glosses which I give (and which other treatments give) use the first two of these concretizations of the abstract system. The demonstratives have been arranged into a grid as far as practicable on morphological grounds; the rest has been done on semantic grounds. The arrangement given here is nearly the same as that given by Reed et al. (1977). General demonstratives are divided into proximal and distal sets; the interrogative and anaphoric are undivided; and the directionals are divided into four sets of general dimensions, which are in turn divided into askance vs. direct (the askance base is in some sense an off-center version of the direct base). Uk- is a morphological isolate, but its semantic affinity is indicated on the chart. The columns mark three classifier categories, restricted (R), extended (E), and obscured (O). Restricted demonstratives refer to objects or areas which are bounded in all dimensions: pointlike, rounded, stationary, or confined. Extended demonstratives refer to objects or areas which are unbounded in one or more dimensions: a line, long object, or something in linear motion through time or space (one unbounded dimension); an expanse (two unbounded dimensions); or a space or vast object (three unbounded dimensions). Obscured demonstratives refer to what is far away or invisible. The system is gender-like in that it classifies nouns, but the classification is not rigid or lexically invariant. The short glosses will be used in sentence example glosses, followed by a colon and an abbreviation for the classifier category, e.g., pik-'up:R', akem- 'across:O'.

Demonstrative pronouns take the usual unpossessed case endings, but with the following differences: the ABs marker is +na (but before +na, base-final dentals are deleted, e.g., tamat- 'there:E' plus +na gives tamana; un- below:E plus +na gives un'a); for singular, non-absolute inflection, the base is expanded with +u- (e.g., tau- 'there:R' plus +u- gives tau-, and kia is an irregular RLs of kit- 'who', though among younger speakers the more regular kit'um is also used); and for non-singular inflection in all cases, the base is first expanded with +ku- (e.g., u- 'here:R' plus +ku- gives uku-; exceptions are bases ending in k, which take †gku-, e.g., ik- 'across:R' plus †gku- becomes ikegku-, and two sets of bases ending in t, the first consisting only of (ta)mat- '(t)here:E', which lose t before +ku, thus (ta)maku-, and the second consisting of the rest, which convert t to n before +ku, thus kat- 'below:R' plus +ku- becomes kanku-). For vocative singular †yuq is added to the demonstrative base (except the distal bases tau- and tamat-, the interrogative kit-, and the anaphoric im-, which are not used in the vocative). For vocative non-singular, the ordinary AB/RL plural or dual is used. All vocatives then undergo final vowel lengthening, e.g., uyuuq 'you (sg) here!' (from underlying uyuq, from u- here:R plus †yuq vocative singular), kankuut 'you (pl) down there!' (from underlying kankut, from kat- below:R-AB/RLp). In Chevak and GCY, the #(C<sub>1</sub>)VC<sub>2</sub>-base kit- does not take initial syllable stress according to rule P1, and, in both dialects, when C<sub>2</sub> is deleted, the stress is also deleted (in effect, then, rule P27a applies only when C<sub>2</sub> is still present), e.g., mat'um (mat- 'here:R' +u+m RLs) vs. makut (mat- +ku+t p). In Chevak only, im- optionally skips P1, which stresses the initial syllable, thus for RLs Chevak has both im'um and imum, while GCY has im'um

only.

Syntactically, demonstrative bases have the following representation:

$$\begin{array}{c}
 [[ \underline{r1} \rightarrow \underline{d} ]_d \widehat{\quad} [ \underline{r1} \rightarrow \underline{n} ]_n ]_n \\
 \text{--} \quad [D] \quad \quad (b) \quad \quad a
 \end{array}$$

From this diagram it is clear that demonstrative bases are not capable of being possessed (the  $r1$  constituent written within  $[ ]_d$  is therefore non-existent, and hence is not included in the formulation in §4). The relationship between  $d$  and  $n$  is in some ways similar to the relationship between  $n$  and  $adj$  in complex noun phrases: both involve apposition, and number and case agreement, and both demonstrative bases and adjectival noun bases tend to be fixed with respect to transitivity, that is, demonstrative bases are never possessed (intransitive), while adjectival noun bases tend either to be obligatorily possessed (transitive) or unpossessed. Because of the appositional relationship, the  $n$  constituent and the  $d$  constituent in noun phrases are, as noted in §4.2, presupposed or asserted to be coreferential. Finally, when the  $n$  is not present (cf. 5.10, 11, 13), the semantic effect of the  $d$  constituent is that of a headless determiner: 'the one who is located at the area designated by the demonstrative base'. That is to say, the semantic slot for the  $n$  constituent may be empty or full, but its place is always held by the demonstrative base. This is indicated in the diagram by making  $\underline{a}$  an obligatory semantic role relation to the demonstrative base  $[D]$ . Demonstrative bases are not entirely like adjectival noun bases however. This is apparent from the fact that demonstrative pronouns are usually joined to their  $n$  constituents within a minimal intonation unit (evidenced by







adj constituents are presupposed or asserted to be coreferent, as noted in §4.3, since they are in apposition, and agree in case but not necessarily in number. Because of this appositional relation, and because the inflected adjectival noun has the semantics of a headless complex noun phrase when the n constituent is not present on the surface, a, the role index beneath the n constituent, is treated as an obligatory semantic role relation to the adjectival noun base. Finally, it has been noted in §4.3 that ordinary nouns sometimes function as adj constituents; in these cases, '[N]' fills the adj slot, and takes on the combinatory potential of an adjectival noun.

#### 5.1.4.1. Adjectival noun bases inflecting as ordinary nouns.

This group consists entirely or nearly entirely of expanded bases, derived with VN or NN postbases. On inflectional grounds alone, many of the unexpanded bases listed as specifier bases (§5.1.4.3) and positional bases (§5.1.5.2) could be included here, but have not been, for syntactic and semantic reasons. Two possible candidates for synchronically unexpanded bases belonging here are nutarar- 'new thing' and angtuar- 'big thing'; at some level both contain +ar- VN 'one which was V-ed', an adjectival-noun-deriving postbase, but the formations are not productive, since  $\sqrt{\text{nutar-}}$  is a root meaning 'new', and angtu-, though analyzable as ange- 'to be big' plus +tu- 'to have quality of N, V', does not itself occur as a base.

The following illustrate this group of adjectival noun bases:

- |        |   |                                 |  |
|--------|---|---------------------------------|--|
| (5.14) | nukalpiat<br>nukalpiar-(AB)p<br>great hunters | -makut<br>here:E-(AB)p<br>these | tangerkengani<br>tangerr@+kengar-AB(3Rs-s/p)<br>his ones whom he <u>sees</u> |
|--------|---|---------------------------------|--|

(5.14) (cont.) ayuqeqeryuumirluki  
 ayuqe-gar<sup>#</sup>yuumir-APO(3p)  
 yearning just to be like them

he yearned just to be like the great hunters whom he saw  
 (around him)' (7b:18a)

(5.15) qaygi=gguq=gga -man'' kenurrerrlainaq  
 qaygi-ABs=said=there here:E-ABs kenurrar\*-rrlainar\*-ABs  
 full of lights  
 and they say the qaygiq was full of lights (3:66)

@+kengar- VN 'what is V-ed by possessor' in (5.14) derives transitive adjectival noun bases, and -rrlainar\*- NN 'all N, nothing but N' in (5.15) derives intransitive adjectival noun bases. In (5.14) the whole complex noun phrase nukalpiat-makut tangerkengani functions as the O of the main predication, ayuqeqeryuumirluki; in (5.15) the whole sentence is a nominal clause based on a complex noun phrase.

#### 5.1.4.2. Independent relative bases.

Independent relative (IR) bases are inflected according to a scheme very similar to that used for intransitive oblique mood predications (§3.3.2.4). Because inflected independent relatives probably derive historically from some kind of oblique mood predication, it is often possible still to analyze them as such. However, the preponderance of syntactic evidence argues for their treatment synchronically as intransitive adjectival nouns. The following illustrate inflected IR's:

(5.16) uingit=ll' -makut allakarmeng, angutait,  
 ui-AB(3p-p)=& here:E-p allakar-3Rp angute-AB(3p-p)  
 and their husbands they, separately their men

unani maklagarrlurluteng  
 below:EA-LC maklagar+ssur-APO(3Rp)  
 they hunt baby bearded seal

And their husbands separately would hunt bearded seals down  
 there (in the sea) (6b:7)

(5.17)	qurrutmun	keyirraanun	elliluki
	qurrute-TMs	keyirrar*-TM 3s	elli-AP0(3p)
	into the urine vessel	into it alone	putting them
	he put them into the urine vessel only		(10a:51)

In (5.16), the analysis of the inflected IR *allakarmeng* as an oblique mood predication is particularly evident: *+meng* is the OBM(3Rp) cross-reference, added directly to the base, meaning something like 'when they doing separately'. By this interpretation, *uingit=11'-makut* is the S of *allakarmeng*, and *angutait* is the S of *maklagarrsurluteng*, to which the clause *uingit=11'-makut allakarmeng* is subordinate. In (5.17), however, the analysis of the inflected IR as an intransitive adjectival noun is clearest: the inflected IR *keyirraanun* agrees in case and number with the n constituent *qurrutmun*. Furthermore, the fact that the IR can take oblique case marking indicates that it is not in fact an oblique mood predication. Taking the adjectival noun analysis to (5.16), *uingit makut allakarmeng* becomes, functionally speaking, an ABp complex noun phrase, itself the n constituent of a still larger complex noun phrase with the noun *angutait* functioning as the adj constituent. The whole complex noun phrase is the S of *maklagarrsurluteng*. To treat an IR as an adjectival noun is to treat it as an immediate constituent of a complex noun phrase in a clause rather than of the clause itself; the proof of this is that IR's take oblique case marking.

There are three main classes of IR bases. First are inherent IR bases: *tamar\*-* or *tamalkur-* 'all'; *keyi-* (GCY *kii-*) or *keyirrar\*-* 'alone' (*keyirrar\*-* consists of *keyi-* plus *-rrar\*-* 'scanty N'; this combination is not reported for GCY); *allakar-* 'separately'; *angurr-lug-* 'never, not ever (that one)' (exhortive, from *angu!* 'don't!', plus *-rrlug-* 'dilapidated N'). The last two are not reported for GCY; Reed

et al. (1977:278) indicate that HBC has *keyi-* and *keyeq* for the IR meaning 'alone', but the latter is not found in Chevak (*keyeq* could have been posited based on mishearing of *keyirremi* 'alone' (3Rs) and similar forms, with rule P36b, /ɣ̣(W)\*-/deletion, leaving only a difficult-to-hear schwa). Second is a class of roots denoting bodily posture or condition (see Jacobson, 1980a for a 38-item list which is nearly exhaustive for his corpus). These roots can be expanded with two root-to-verb-base postbases, *-ngqa-* 'to be in condition of root', and *+te-* 'to get into condition of root', or they can serve as IR bases and take IR inflection. Thus, *√inar-* 'lying down', e.g., *tutgararuluq inarmi* 'the grandson, lying down'. Third is a postbase *+tuumar-* (GCY +(r)tuumar-) 'accompanied by N'. This postbase derives IR bases from nouns, e.g., *anuuruluq tutgararulurtuumarmi* 'the grandmother, accompanied by her grandson'.

Table 5-3 shows IR inflectional endings. In the paradigm there, markers for person, number, and case are identical to certain possessed noun endings. The AB/RL suffixes, with the exception of AB/RL 3p/d, are identical to the oblique mood intransitive cross-references. Thus RL(3s-s) appears to mark AB/RL 3s, RL(3p-p) appears to mark AB/RL 3p, and RL(3d-d) appears to mark AB/RL 3d, but RL(3d-p) appears to mark AB/RL 3d obligatorily for *tamar\**- 'all' (where *r\** is anomalously retained), and optionally for others. For oblique cases, OB(3s-s) appears to mark corresponding OB 3s, OB(3p-p) appears to mark corresponding OB 3p, and OB(3d-p) appears to mark corresponding OB 3d (again, *r\** in *tamar\**- 'all' is anomalously retained). Elsewhere, RL(1/2/3Rx-s/p) appears to mark AB/RL 1/2/3Rx, and the corresponding OB(1/2/3Rx-s/p) appears to mark OB 1/2/3Rx). As in the oblique moods, retaining juncture rather than deleting juncture occurs before ending-initial mV, except with *ld*,

Table 5-3: Independent Relative endings.

	<u>AB/RL</u>	<u>LC</u>
3s	- <u>ng</u> :an	- <u>ng</u> :ani
3p	- <u>ng</u> :ita	- <u>ng</u> :itni
3d	-kenka/†gkenka	-kegni
1s	+ma	-mni
1p	-mta	-mteñi
1d	-megnung	-megni
2s	† <u>p</u> et	† <u>p</u> ni
2p	+ <u>p</u> ci	+ <u>p</u> cini
2d	+ <u>p</u> tek	+ <u>p</u> tegni
3Rs	+mi	+mini
3Rp	+meng	+meggni
3Rd	+mek	+megni

Note: Like the localis, the other obliques are formed with plain oblique case suffixes (+neg- MD, +mun TM, etc.).

where deleting juncture remains. The similarities between IR inflection and independent pronoun inflection is discussed in §5.1.7.

The following are further examples illustrating inflected IR bases in construction (see also 5.5, 8):

- (5.18) tamaq'apiaramta            aturngaitenritarput  
 tamar\*-qapiarar\*-1p    aturngait°e-nrit°e-IND(1p-3s)  
 absolutely all of us    we will not avoid, escape it  
 not one of us will escape it    (14c:11)
- (5.19) al'qaat            taum            -taw' {keyirraan    / keyirremi }  
 al'qar-AB(3p-s)    there:R-RLs-then {keyirrar\*-3s    keyirrar\*-3Rs }  
 their<sub>i</sub> sister<sub>j</sub>    he<sub>k</sub> there            she<sub>j</sub> alone        he<sub>k</sub> alone
- tangvagtekluku                            'That one<sub>k</sub> was watched by their<sub>i</sub> sis-  
 tangvag+ste-ke-APO(3s)            ter<sub>j</sub> alone' (3:40) / 'That one<sub>k</sub> alone  
 having her<sub>j</sub> as a watcher    was watched by their<sub>i</sub> sister<sub>j</sub>' (e)
- (5.20) cuita            -taw'    tangvalqaat                            tamalkurmeng  
 cug-RL(3Rp-p)-then    tangvag-1qe-IND(3p-3s)    tamalkur-3Rp  
 then their people    they watched it                    all of them  
 all of their people watched it (13b:308)

In (5.18), the IR is followed by a modificatory postbase -qapiarar\*- 'really N, really V', and is inflected for 1p. Note that the inflected IR is easily interpreted either as an oblique mood predication, or as the A of aturngaitenritarput. Because of the probable origin of IR constructions in oblique mood predications, the AB/RL third person IR always modifies the O of a clause (e.g., keyirraan in 5.19), and the AB/RL 3R person IR always the S (e.g., 5.5, 5.16) or the A (e.g., keyirremi in 5.19, 5.20). The logic of this can be illustrated with the pair given in (5.19): if keyirraan is an oblique predication with al'qaat as its S, it must take 3 and not 3R person marking, because its S and the A of the superordinate clause are not coreferential; and if keyirremi is an oblique predication with the man, i.e., 'that one<sub>k</sub>', as its (unexpressed) S, it must take 3R and not 3rd person marking, because its S and the A of

the superordinate clause are coreferential. In the same way, if an IR is an oblique predication within an intransitive superordinate clause, as in (5.5) and (5.16), the S or the IR will always be coreferent with the S of the superordinate clause, and the IR will therefore take 3R person marking. Herein, however, lies a major reason for treating IR's as adjectival nouns, and not as oblique predications. The AB/RL case IR is always coreferent either with the S, the O, or the A of a "superordinate" clause, while this is not the case with oblique predications, e.g., taikan ayagciqua 'if he comes (CDO(3s)), I'll go (IND(3s))'. This coreference is not at all unusual if one insists that IR's are adjectival nouns. Thus here as elsewhere, inflection is best unraveled in terms of hypothetical earlier stages of the languages which are sometimes at variance with synchronic syntactic patterning.

A final point concerning IR's modifying noun phrases with A function is that the IR rarely intervenes between the A and its predication, tending instead to follow them both. In (5.20) tamalkurmeng occurs after tangvagtekluku (this should be borne in mind in considering (5.19)). The explanation for this is clear: IR's are still close enough to oblique predications for the usual constraints against central embedding still to be in effect (i.e., tamalkurmeng in between cuita and tangvalqaat in (5.20) is too much like an intervening clause), and yet they are adjectival nouns enough not to tolerate a following n constituent (thus \*tamalkurmeng cuita tangvalqaat is unacceptable).

#### 5.1.4.3. Quantificational bases.

Quantificational (Q) bases are a class of adjectival noun bases consisting of two subclasses, numeral (NM) bases, and specifier (SP) bases.



NM bases are cardinal when inflected with unpossessed endings (5.21-3), and ordinal when inflected with possessed endings, i.e., 'the NMth of the possessor' (5.24-5). SP bases are either inherently intransitive (cardinal, see 5.26), or inherently transitive (partitive, see 5.27-8). Because Q bases are not too different in their inflection from ordinary nouns, I will consider first their syntax, and then outline salient morphological aspects.

The following are examples with Q bases:

(5.21) qantag            ukuk            malruk  
 qantar-AB/RLd    here:R-AB/RLd    malrur-AB/RLd  
 two plates        these two        two  
 these two plates here (13a:20)

(5.22) ukuni            pingayuni        ernerni  
 here:R-LCp        pingayu-LCp     erner-LCp  
                       at three         at days  
 for, during three days (13a:23)

(5.23) qayutuneng        en'neng  
 qayutu-MDp        ene-MDp  
 from how many    from houses  
 from a few houses (lit: from however many houses) (13a:28)

(5.24) maklagaat            pingayuat  
 maklagar\*-(RL)p        pingayu-AB(3p-s)  
 the bearded seals'    their third (lit: their three)  
 the third bearded seal (e)

(5.25) nutaan-taw'    tangellrin            tallimit,  
 so now-then        tangerr-11er-RL(3s-p)    tallima-AB(3p-s)  
                       of his seen ones=        their fifth (lit: their  
                       of the ones he saw        five)

tawa=i            pitaqesqelluku  
 there:RA=!        pitar-ke+sqe-APO(3s)  
                       telling (him) to have it as his prey

now then, the fifth one that he sees, there now!, that's the one she told him to take as his prey (7a:93)

(5.26) Nunaneng=ggur-            allaneng=11'  
 nuna-MDp=said            alla-MDp=&  
 from villages, they say    and from others  
 and from other villages, they say (7a:4)

- (5.27) *kia imum ilavci=llu piqaraqlua*  
 who-RLs afore-RLs *ila-RL(2p-s/p)=& pi-garaqe-APO(1s)*  
 and one of you all now and again ask me
- uumeng* '(I'd like) anyone (*kia imum*), one of you, just to  
 here:R-MDs ask me about this every once in a while (if you  
 don't understand).' (14c:8)
- (5.28) *Naliata=kir- pawa qungut*  
*nalir-RL(3p-s)=I wonder away:EA qungur-(RL)p*  
 which one of them, I wonder of the graves
- irniank' alingcitaartatki*  
*irniar-AB(1s-p) alinge@citaar-INT(3p-3p)*  
 my children they made them be afraid?
- I wonder which of those (spirits in the) graves back there  
 tried to make my children afraid? (9a:19)

Numeral and specifier bases, both intransitive and transitive ver-  
 sions of each, can be represented as follows:

$$\begin{array}{l} \underline{n} \text{ } \overline{[ \underline{r1} ]} \text{ } \rightarrow \text{ } \underline{adj} \text{ } ]_{adj} \\ a \text{ } \text{--} \text{ } [Q\text{-intransitive}] \\ a_1 \text{ } (b_1+)b_2 \text{ } [Q\text{-transitive}] \end{array}$$

This is the general representation already given for adjectival noun  
 bases, and *n* and *adj* are presupposed or asserted to be coreferent. The  
 coreference situation for transitive Q bases is somewhat more complica-  
 ted, and this is indicated with a more elaborate set of semantic role  
 indexes in the representation. Basically, *n* and *adj* are also coreferent  
 with a part of the referent of *r1*. Thus in (5.24), *maklagaat* 'the  
 bearded seals' is *r1*, *pingayuat* 'their third' is *adj*, and *n* is unex-  
 pressed (for purposes of illustration, however, let us suppose that  
*tangelqa* 'the one I saw (AB(1s-s))' where the *n* there, giving *tangelqa*  
*maklagaat pingayuat* 'the one I saw, the third bearded seal'). Now,  
*tangelqa* 'the one I saw' and *maklagaat pingayuat* 'the third bearded

seal' are presupposed or asserted to be coreferent. The possessor of pingayuat, that is, maklagaat, refers to all of the bearded seals, or to all of the bearded seals but the third; whereas pingayuat 'their third' and tangelqaa 'the one I saw' refer only to the third one. This is represented in the diagram by indexing r1 with ( $b_1+b_2$ ), corresponding to all of the seals, or with ( $b_2$ ), referring to all but the possessum, the third one. The index of n,  $a_1$ , is presupposed or asserted to be coreferent with  $b_1$ , both of which index semantic roles that are filled by the third bearded seal in this example.

For intransitive Q bases (i.e., numeral bases), the n constituent is usually present at the surface (as in 5.21-23, 5.26), though occasionally it is deleted:

- (5.29) atauciq-taw'            ig'arrlun'            malruk=11'  
 ataucir-ABs-then    igte@+'ararte-APO(3Rs)    malrur-(AB)d=&  
 one, then            he suddenly dropped down    and two
- ukuk            ataucikun            igglutek  
 here:R-(AB)d    ataucir-VLs            igte-APO(3d)  
                   at the same time    the two dropped down  
                   (lit: at once)

then that one dropped down, and these other two dropped down  
 at the same time (8b:13)

For transitive Q bases, on the other hand, an n constituent present at the surface is decidedly rare (but kia imum in (5.27) qualifies if one considers kia to function as an n rather than as a demonstrative pronoun along with imum). This is very nicely explained, however, by the fact that the reference of the n with transitive Q bases is, by definition, partially the same as that of the r1 constituent. Thus, what is expressed in the n constituent for intransitive Q bases is expressed in the r1 constituent for transitive Q bases.

This also illustrates a crucial general point: possessed (that is, transitive) adjectival noun bases are almost always more definite in their reference than unpossessed ones, because they acquire referential precision from being in a fixed relation with a possessor noun phrase.

I will not give the details of the system of numeral base formation, as it is not directly relevant to this study. Accounts of the Central Yup'ik numerals are given by Nelson (1899:235-241) and Reed et al. (1977:201-209); the former is especially valuable for the associated ethnographic information concerning counting and enumeration, and the latter gives a fully rigorous linguistic exposition. Dialect differences between GCY as described by Reed et al. (1977) and Chevak are minor.<sup>3</sup> As their indefinite/interrogative base, numeral bases have qayutu+n (with numeral plural +n) 'how many, however many' (GCY qavci+n), illustrated in (5.23). A feature of numeral base patterning worth noting is that for ordinals, the numeral bases ataucir- 'one' and malrur+g- 'two' do not occur, but instead are replaced, respectively, by civuqlir\*- 'foremost' (a derived adjectival noun) and by aipar- 'the other of a pair with respect to the possessor' or by tunglir- 'the second with respect to the possessor'. Aipar- is a specifier base, and tunglir- is a derived specifier base.

The specifier bases are listed in table 5-4. The indefinite/interrogative specifier base is nalir-, which corresponds most closely to ila-. By a process to be discussed also in §5.1.5.2 for positional bases, partitive bases tend to take on ordinary noun functions with lexicalized meanings, in addition to their functions as members of non-ordinary noun base classes. Examples of these lexicalized ordinary noun meanings are aipar- 'spouse, partner', ila- 'relative, companion', inglu-

Table 5-4: Specifier bases.

<u>Cardinal (intransitive)</u>	<u>Partitive (transitive)</u>
alla- other	aipar- the other of a pair with respect to the possessor
amller- numerous	aveg- half of possessor
	ila- one, two, or some of the group referred to by the possessor
	inglu- the possessor's counterpart
	nalir- which (one, two, some) of the group referred to by the possessor
	tunglir- the second with respect to the possessor
	aki- equivalent, value

'enemy', aveg- 'half dollar; half moon', aki(r)- 'money'. When used as ordinary nouns, of course, possession is no longer obligatory for these bases.

Specifier bases are inflected just as ordinary nouns are, while numeral bases have peculiarities. Cardinal numerals agree in number with their n constituents, but the numerals for 'three' through 'ten' and some of their derivatives are obligatory marked for plural with #n. Certain numerals are invariantly singular, e.g., akimiar- 'fifteen', malrug-ipiaq 'forty'. Numeral base reference and grammatical number do not always coincide, e.g., ikamrag-ataucik 'one sled', from ikamrar- (dual base) 'sled' and ataucir- 'one', both inflected with #k AB/RL d.

There is an irregular set of ordinal numeral formations that are not mentioned in recent literature, used in counting aloud on one's hands. For this set -ng:ak AB(3d-s) is attached to the numeral bases

for 'one' through 'eight'. For 'six' through 'eight' final -leg-  
 NN 'provided with N' is dropped from the base due to a general gram-  
 mat'ical constraint against possessing intransitive adjectives derived  
 with -leg- (ordinarily, -leg- is possessable in numeral bases due to  
 lexicalization). Thus, with literal translations, there is atauciak  
 'the one belonging to the two', aipaak 'the two belonging to the two',  
 arvinrak 'the six belonging to the two' (from arvinleg- 'six'). Note  
 that for 'two' but not for 'one', the suppletive ordinal base is used.  
 My guess is that the dual possessor refers to the two hands of the  
 one counting, i.e., 'my hands' first (finger)', 'my hands' second (fin-  
 ger)', etc. If this is correct, it explains why qulngunritaraan 'nine  
 (unpossessed)' and qulen 'ten (unpossessed)' are included in this set  
 but are not possessed: qule- refers to the upper part of the body  
 (which has ten digits), and thus the numerals for 'nine' and 'ten',  
 which are derived from qule- (qule<sup>ng</sup>:unritarar\*<sup>n</sup> 'barely not being  
 ten (plural)' = 'nine', and qule<sup>n</sup> 'ten (plural)' = 'ten'), do not there-  
 fore have the correct relationship to the two hands to be possessed by  
 them. In counting beyond ten, the system starts over again from atau-  
 ciak, with the counter pointing to his feet in going from 'eleven' to  
 'twenty', though cuinaq 'twenty' is used unpossessed. This set of  
 counting forms, in different versions, is reported for NS by Nelson  
 (1899:238-9) and for GCY by Barnum (1901:220-1), who lists them as or-  
 dinals (perhaps he elicited them making hand signs; curiously, in his  
 discussion he refers to the usual ordinals with the expected 3p-s end-  
 ings).

### 5.1.5. Locational bases.

This class includes demonstrative adverbs, which are intransitive, and positional bases, which are transitive. Although these two classes are inflectionally different, they have semantic and syntactic similarities. Both refer to general areas or locations, but not to isolable objects. Both take on modifying function within ob constituents in both complex noun phrases and in clauses. Although positional bases can occur inflected with primary cases, I will show that they take on ordinary-noun function there, making it possible to identify locational function as an oblique case phenomenon only.

#### 5.1.5.1. Demonstrative adverb bases.

Demonstrative adverb bases are derived from demonstrative bases with a postbase +a- (+aa- in some circumstances; other irregularities are clear from table 5-5).

In table 5-5 the demonstrative adverb bases are presented, arranged according to the scheme used in table 5-2 for demonstrative bases. Only the short glosses follow; the long glosses can be derived from those given in table 5-2 for the demonstrative bases by substituting either 'the area' or  $\emptyset$  for 'the/this/that one', e.g., 'the one up above' becomes 'the area up above' or just 'up above'. For two DA bases, the full glosses cannot be derived that way: uka- '(the area) toward here', na- 'where, somewhere'. There is no anaphoric DA base corresponding to im-.

Demonstrative adverb bases are never possessed, and they are inflected for case but not number according to a special set of endings. These endings are also used with demonstrative adverbs that are derived

Table 5-5: Demonstrative adverb bases.

<u>R</u>	<u>E</u>	<u>O</u>	<u>Short gloss</u>
wa-	maa-	---	here
tawa-	tamaa-	---	there
	na-		where
	uka-		coming
yaa-	awa-	ama-	going
ika-	agaa-	akma-	across
kia-	qawa-	qama-	closed
kegga-	qagaa-	qakma-	open
pia-	pawa-	pama-	away
pika-	pagaa-	pakma-	up
kana-	una-	cama-	below
ua-	un'ga-	cakma-	exit

Table 5-6: Demonstrative adverb endings.

LC	+ni	TM1	+vet	VL	+ggun	Deictic: <sup>5</sup> =gga, =i, +∅ (abbreviated as '!' in glosses).
MD	+ken	TM2	+tmun	EQ	+ten	

with a special set of postbases. The demonstrative adverb endings are shown in table 5-6. The semantic distinction between TM 1 and TM 2 has been discussed in §2.3.1. There too, it was noted that +ken MD has ablative meaning only, and is derived from the Proto-Eskimo ablative.



+ten EQ only occurs in three forms, which are actually lexicalized as particles: waten 'like this', tawaten 'like that', and maaten 'when, at the time'. In effect when, the case endings on DA bases have purely adverbial meaning. The deictic will be taken up below.

The inflectional peculiarities of demonstrative adverbs neatly reflect their semantic nature. Thus, the grammar treats the general areas or locations designated by DA's as non-countable, indivisible wholes, glossable as 'all of what is located at the place designated by the DA base'. In fact though, this gloss is overly nominal, since DA's serve to predicate location of something, rather than to refer directly to an area. This is reflected by the absence of primary case DA endings. This is not to say that primary case DA endings are a logical impossibility; rather, it says that were they to occur, they would affect the semantics of DA bases (at least in those cases) by causing them to make direct reference to areas, rather than function as predicates of location.

Syntactically, inflected DA bases (i.e., DA's in oblique cases) function as ob constituents, and adverbially modify the ap constituents (i.e., adj constituents in complex noun phrases and pd constituents in clauses) on which they are dependent. The following representation is different from all representations given up to now in that it is concerned with the combinatory properties of an inflected word class, rather than of a class of bases before they are inflected. This departure is useful here for two reasons: first, for some NV postbases, inflected obliques (especially demonstrative adverbs) act themselves as bases to which postbases are added (see §7.3), so that the syntax of inflected obliques must be on record; second, it makes it easier to



(5.31) uani=gga            amik  
 exit:RA-LC=!        amig-ABs  
                           entrance  
 that entrance out toward the exit/entrance there = that  
 entrance there (6b:20)

In (5.30), the inflected DA's *tawaggun* and *amani* are dependent on the predications *iterluteng* and *atanqeciqnillruateng*, respectively, which function as *ap* in their own clauses. The semantic role index a stands for what is selected by the entire inflected DA, rather than by an uninflected DA base, which has entirely different syntactic selection properties. That is to say, an uninflected DA base implies no dependency on an *ap* constituent, since it is the case marking, and not the base itself, which indicates the syntactic relation of dependence for DA constituents. In (5.31), *uani* is in apposition to *amik*; the semantic role index b stands for what is selected by an entire inflected DA in order to form oblique appositional complex noun phrase constructions. An uninflected DA base would not imply apposition to an *n* constituent in that way, since it is the case marking on the *ob* vs. no case marking on the *n* which marks that construction.

When more than one *ob* constituent with the same locational reference occur together, internal structure develops among those *ob* constituents. In particular, they become appositional to one another (note that the semantic prerequisite for apposition, presupposed or asserted coreference, is indicated as a condition here). When an inflected DA is involved, it precedes other *ob* constituents, such as ordinary nouns marked with oblique case. These constructions are complex local obliques. In complex noun phrases and in clauses, each *ob* constituent within the complex local oblique retains its syntactic dependence on the *adj* or *pd*,

in addition to the appositional relation among each other. This can be represented as follows:

$$\dots \text{ob}_1 \xrightarrow{\quad} \text{ob}_2 \rightarrow \text{ap} \quad (\text{Where } \text{ob}_1 \text{ is an inflected DA})$$

That is, the two ob constituents are both dependent on the ap constituent, but at the same time have developed an appositional relation between each other.

Complex local obliques of course also occur in oblique appositional complex noun phrase constructions (e.g., 5.32 below, but not 5.33-5). This is represented as follows:

$$n \xrightarrow{\quad} \text{ob}_1 \xrightarrow{\quad} \text{ob}_2$$

(One might wish to claim some complex relation where  $\text{ob}_1$  and  $\text{ob}_2$  were each in special appositional relation to  $n$ , as well as to each other, on analogy to the pattern of dependency relations to  $\text{ap}$  in the previous instance; this would however be artificial and hard-to-prove, since the relation of apposition has an inherent tendency to level hierarchical relations).

In general, complex local obliques involve ob constituents in the same oblique case, as in (5.32-3) below, but occasionally it seems at least reasonable also to consider, as instances of this construction, utterance types in which the ob constituents are in different oblique cases, provided of course that they have the same local reference, an absolute precondition for the syntactic relation of apposition (e.g., 5.34). But even when the same case is involved, the inflected DA must occur with an ob constituent phrase which also has local reference. Thus while *atakumi* and *unani* in (5.35) both are in the localis

case, it is clear that unani is in construction with following natermi, and not with atakumi.<sup>6</sup>

- (5.32) Ak'a angun=wa taun' -ak'a, ikaken  
 ago angute-ABs=! there:R-ABs ago across:RA-MD  
 man from across there
- nunallerneng  
 nuna-ller-MDp Once there was a man, from the aban-  
 from the former village doned village across there (8a:1)
- (5.33) teguqaqatni tamaggun qaimikun  
 tegu-gar-CDO(3p-3Rs) there:EA-VL qai-VL(3Rs-s/p)  
 if they had even touched him on his body  
 if they had even touched him anywhere on his body there,...
- (5.34) waten tengautuluteng pagaani, cillakun  
 here:RA-EQ tenge+aur-tu-APO(3Rp) up:EA-LC cilla-VLs  
 like this they always keep flying up there through the sky  
 in this way they always keep flying up there, across the sky  
 (7b:9)
- (5.35) nenglengaqan atakumi unani natermi  
 nengle-nge-CTO(3s) ataku-LCs below:EA-LC nater-LCs  
 when it gets cold in the evening down there on the floor  
 When it gets cold in the evenings down on the floor, ... (6b:26)

Further evidence of constituency within complex local obliques such as those in (5.32-5) is provided by the semantic concord between the DA and the other oblique. Thus in (5.33), the vialis in tamaaggun takes on the special body part sense of the vialis case ('on N', where N is a body part noun, see §2.3.1) because tamaaggun is in construction with qaimikun. Further, the classificatory category (R, E, or O) of the DA's in (5.32-5) are the appropriate ones for the following oblique nouns.

It will be convenient to refer more explicitly to the various parts of complex local obliques in phrase structure representations, thus for those consisting of an inflected DA base and an oblique case ordinary noun:

COMPLEX NOUN PHRASES  
AND CLAUSES

...[da]<sub>ob</sub>  $\overrightarrow{\quad}$ , [n]<sub>ob</sub>  $\rightarrow$  ap

OBLIQUE APPOSITIONAL PATTERN  
OF COMPLEX NOUN PHRASES

n  $\overleftarrow{\quad}$  [da]<sub>ob</sub>  $\overrightarrow{\quad}$  [n]<sub>ob</sub>

In the diagram, da indicates a caseless (or absolutive) demonstrative adverb constituent, just as n is a caseless (or absolutive) noun phrase constituent. The case of [da]<sub>ob</sub> and [n]<sub>ob</sub> in the diagram may or may not be the same (to account for structures like that in (5.34)); but because the two are in apposition, they must be presupposed to be coreferential.

To represent the syntax of the uninflected DA base, we must consider the base minus its case marking, and the syntactic relations which can be attributed to the base itself at that stage. As has been noted, however, DA's only occur in oblique cases. Thus to determine the syntax of the caseless DA one must make deductions from the case-marked occurrences. If we begin with the representation for complex local obliques, case marking (of [ ]<sub>ob</sub>) can be stripped away, giving da  $\overleftarrow{\quad}$  n. With this non case-marked representation of complex local oblique phrase structure, we can represent the syntax of the uninflected DA base:

$$\begin{array}{l} \underline{[r]} \rightarrow \underline{da} ]_{da} \overleftarrow{\quad} \underline{n} \\ \text{--} \quad [DA] \quad a \end{array}$$

The r1 constituent dependent on da is included only to illustrate that the DA base is never possessed; it has no applicability to actual structures. Because the da and n constituents are in apposition, they are of course presupposed to be coreferent (never asserted, since [da  $\overleftarrow{\quad}$  n] never has predicational function as a nominal clause). Further, since DA bases can only take oblique case marking, the whole construction will

always occur only as complex local obliques (from which the structure was inferred in the first place).

By the analysis given here, the meaning of the DA base is predicated of the *n* when the *n* is present, e.g., *unaken imarpigmeng* (below:EA-MD, *imarpig*-MDs 'from the sea') 'from [the sea, down-slope there (E)]'. The meaning of the DA base is predicated of nothing when there is no *n*, giving an entirely abstract meaning, e.g., *unaken* 'from [down-slope there (E)]' = 'from (any or all places) down-slope there (E)'.

The DA base's relation to its following constituent, in this analysis, is in some ways similar to that of an *adj* constituent to the *n* constituent it modifies in a complex noun phrase. It is even more strikingly similar to a demonstrative pronoun and its *n* constituent within a noun phrase, since it precedes what it modifies (for both, word order is occasionally reversed, though), and, of course, for the semantic reasons associated with their morphological relationship. Interestingly, it is rare for a full demonstrative pronoun plus noun construction to occur in an oblique case with local reference (they are common when the oblique case has some grammatical function, and they are common when the noun itself has been deleted). To illustrate, while *tamaaggun qaimikun* 'on there, on his body' in (5.33) is of a common type, *tamatukun qaimikun* (there:E-VLs, on his body) 'one that one there, on his body' is of a rare type. Of interest too is that coreferential demonstrative pronouns and demonstrative adverbs in oblique cases with local reference do not co-occur in my corpus of texts. These facts point to some kind of deep similarity between demonstrative adverbs and demonstrative pronouns in oblique cases with local reference. I have nevertheless decided not to represent DA bases in phrase structure as a species of oblique





noun phrases in oblique appositional complex noun phrase constructions, e.g., in the phrase *naliata=kiq pawa qungut* 'I wonder which one of those (spirits in the) graves back there...' in (5.28). There *pawa* 'away:EA (=!)' modifies either the whole phrase *naliata qungut*, or just *qungut*. Incidentally, because of their universal combinability, it would be incorrect to suggest that deictic DA's are the missing primary case forms from the DA endings (table 5-6). Under such an assumption, one would have to say that, for example, *qaygiq ama=i* (cf. t.37) is the absolutive case version of *qaygimi amani* (*amani* 'going:OA-LC'), when in fact it is *qaygimi ama=i* which corresponds most closely to *qaygiq ami=i*.

#### 5.1.5.2. Positional bases.

Positional (PS) bases are the transitive (obligatorily possessed) counterparts to demonstrative adverb bases:

(5.39) *enem*            *iluanun*  
       *ene-RLs*        *ilu-TM(3s=s)*  
       of the house to its inside  
       to the inside of the house

(5.40) *qamavet*  
       *in:OA-TM1*  
       into there (0)

In this pair, the DA leaves unspecified that which is expressed as the possessor of the PS base *ilu-*, that is, the point of reference for the area designated by the PS base. The whole-to-part relationship existing between the possessor and the PS base is reminiscent of ordinal and partitive quantificational bases:

The positional bases inflect using the same endings that ordinary nouns use, except that they lack all intransitive inflection except *+tmun TM 2*, a significant similarity with DA bases, e.g., *ilutmun* 'to-

Table 5-7: Positional bases.<sup>7</sup> Glosses have been truncated, and should be read in the frame 'area that is (insert gloss) the possessor'.

aci-	below	manu-	in front of (animate)
aki-	opposite	mengle-	in the perimeter of
akule-	between, at the mid-section of	nalle-	corresponding to in time or in space
cani-	near, beside	nate-	somewhere in relation to
ciña-	at the edge of	nuna-	near, in the presence of
civu-	at the front of, front part of (non-animate)	pai-	at the mouth, opening of (non-anatomical)
elate-	outside, surrounding	qai-	at the surface, top of
ila-	part of	quka-	at the middle, center of
ilu-	inside	qule-	above
kelu-	behind, away from the river with respect to	taku-	in the presence, view of
kete-	toward the river with respect to	tunge-	in the direction of, toward
kingu-	at the rear of, back part of (non-animate)	tunu-	in the back of (animate)

ward the inside'. They most often have the structure #(C)VCV-. Positional bases are shown in table 5-7.

Positional bases are also derived from demonstrative adverb bases with the general transitivizing postbase +te-, the function of which is to add a relative case argument to a noun or a verb base: nate- itself is an example of this, being formed from the indefinite DA na- 'where'. Four DA bases do not form PS bases in this way, since they already correspond semantically to basis PS bases: kegga- 'out:RA' (cf. elate-), pia- 'back: RA' (cf. kelu-), pika- 'up:RA' (cf. qule-), and kana- 'be-

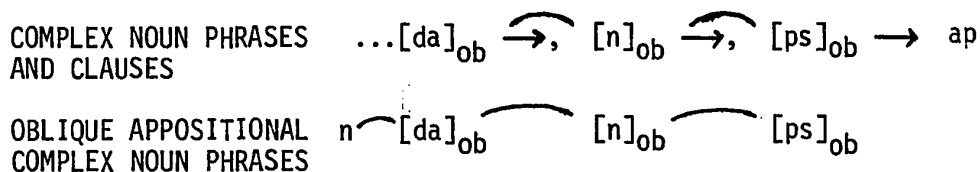




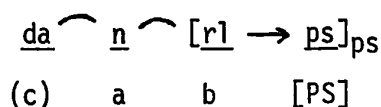




and in oblique appositional complex noun phrase constructions:



To represent uninflected PS bases, we need to consider the base minus its case marking, as we did when we considered uninflected DA bases:



The r1 constituent dependent on PS is obligatory, since PS bases are transitive. The structure represented here will only occur in oblique cases with local reference, as in the preceding diagram, since, by hypothesis, PS bases become ordinary nouns in primary cases (note that this does not prevent a PS in ordinary noun function from occurring as an n constituent here (e.g., *iluanun* would mean 'to its inside' as a in the ps slot, and 'to its intestine' in the n slot). As with DA bases, a PS base is claimed here to function semantically to predicate location of the n constituent when it is present, e.g., *nevumeng acineng* 'from [the soil, beneath him]' (cf. 5.47), but to have an entirely abstract meaning when the N is absent, since the PS base there is predicated of nothing, e.g., *acianeng* 'from [beneath him]' = 'from (any or all places) beneath him'.

There are similarities and differences when the internal structure of complex local obliques, as represented in the above diagram, is compared with that of complex noun phrases. The PS base bears a resemblance in function and position to adj constituents, just as the DA base

bears a resemblance in function and position to demonstrative pronouns. There are two differences though. First, it is difficult to find arguments that would indicate that the inflected DA, the inflected oblique case ordinary noun, and the inflected PS are anything but parallel constituents in apposition. Thus, while the PS and the DA both modify the oblique case ordinary noun semantically, there is no evidence that either one of them is more closely linked to it syntactically than the other. On the other hand, the demonstrative pronoun has been shown to be far more closely linked to what it modifies than is the adj constituent. Second, there is, as we have seen, a fundamental functional and referential similarity between DA and PS bases, making them more on a par with each other than demonstrative pronouns and adjectives are. A more abstract analysis than the present one may indeed choose to collapse the da and ps constituents into a single one for locationals. This constituent would occur to the right of the n constituent within the complex local oblique phrase, and inflected DA's would be moved: from it to the other side of the inflected n by a transformation motivated by analogy to demonstrative pronouns, which occur to the left of what they modify and stand with in apposition (at least canonically).

#### 5.1.6. Temporal bases.

The bases in this class straddle the line between noun bases and particle bases. They divide into two major subclasses, which I call temporal noun bases, and temporal particle bases, though it should be emphasized that the former behave in some ways like particles, and the latter in some ways like noun bases. Aside from Kleinschmidt's discussion of Greenlandic temporal particles (Kleinschmidt, 1851:60), I know



of no syntactic-lexicographic surveys of temporals for any Eskimo language, although there is good documentation for the lexical items themselves in the dictionaries, including Jacobson 1978 for Central Yup'ik. I treat temporals with noun bases because of the similarities which they show to locationals, and their tendency to take noun endings (though not always productively).

The temporal noun bases are primarily intransitive (but see (5.52)) and can be divided into those referring to cyclic time phases, and those referring to units of time measure, as shown in table 5-8.

Table 5-8: Temporal noun bases.

<u>Time phases<sup>a</sup></u>		<u>Units of time measure</u>	
unug-	night	al'rrakur-	year (cf. GCY allrakur-)
ataku-	evening	iralur-	month
unuaku-	morning	erner-	day (time of daylight) <sup>b</sup>
uksuar*-	autumn	cass'ar-	hour (from Russian)
uksur-	winter		
up'nerkar-	spring		
kiag-	summer		

Notes:

a. Names of days of the week and of months belong here. There are native names for both sets, but they are largely replaced by English loans in Chevak. The days of the week were post-contact coinages (Barnum 1901:226).

b. Although notionally this seems to be a time phase, the lexical item patterns as a unit of time measure.

All temporal noun bases can occur in oblique cases (5.50, also 5.22 and 5.35) as well as in primary cases (5.51-2). When time phase bases appear in primary cases, however, they refer to measured units of time (5.52), thus joining the other group, semantically. This follows the general pattern found among locational bases, where expression in primary cases tends to make more definite the reference of bases used mainly as relational or oblique case elements. Uninflected (i.e., formally absolutive case) time phase bases can also be used as particles (e.g., *kiag-* in 5.53). In that use, they are not cross-referenced by the ending on the predication, as would be expected if they were true absolutive case nouns (compare 5.51-2 with 5.53). When a time phase base being used as a particle ends with the postbase @4"ku- temporal irrealis (same as the conditional mood sign), the postbase has the meaning 'on the coming N'; for example, *ataku* means 'this evening to come' when it functions as a particle. Otherwise, time phase bases functioning as particles have the meaning 'on this past N' (5.53). Syntactically and semantically, they behave in particle uses as ob constituents, that is, they adverbially modify the ap constituent on which they may be considered dependent in a complex noun phrase or clause. The following are examples of temporal noun bases:

(5.50) { *up'nerkatmun* / *up'nerkamun* } *ingluvarrertaqan*  
 { *up'nerkar-TM2*                      -TMs } *inglu+var+arte-CT0(3s)*  
 to springtime                                      whenever it goes to the other  
 whenever it (the season) changes over to spring' (9b:20)  
 [both TM2 and TMs are acceptable here]

(5.51) *erneq*                      *takliriaqan*  
*erner-ABs*      take#*li+ri-CT0(3s)*  
 day                      whenever they get longer and longer  
 when the days get longer and longer (6b:43)

(5.52) atakuat            nanilcarluk'  
 ataku-AB(3p-s) nanit°e%@car-AP0(3s)  
 their evening shorten it  
 shorten their evening! (3:68)

(5.53) uyuqliarrerci            nukalpiam            ak'a  
 uyuqlir\* :arar\*-AB(2p-s)      nukalpiar-RLs      already  
 your youngest little brother      great hunter

kiak .                    ayau11uku  
 kiag-Ø                    ayag@!(u)te-AP0(3s)  
 this past summer went off with them

your youngest little brother was carried off already this  
 (past) summer by the great hunter (3:30)

Temporal particles bases can be classified into those which are formally uninflected, and those which contain a fossilized localis or other case marker, as shown in table 5-9. Syntactically, temporal particles function as ob constituents (5.54-5); for the most part they cannot take unpossessed endings beyond the lexicalized endings that have become inherent to them as bases. Semantically, they make time reference relative to the time of speaking. They can however make time reference relative to some other point in time when inflected for LC : (3s-s) (5.56-7). With this semantic relation of possessor to possessum, they show a similarity to the quantificational and locationals, where for the possessed versions, the possessor is the point of reference for interpreting the possessum.

The following are examples of temporal particle bases:

(5.54) unugpak            kenirtu'rluteng  
 unug-rpag-Ø      kenir+turar-AP0(3Rp)  
 all night      they kept lighting  
 they kept lighting it all night (9b:16)

(5.55) ayuqe11ruur-            tamaani  
 ayuqe-11ru-IND(3s)      there:EA-LC  
 it was like that      at that time  
 that's how it was back then (9b:7)

Table 5-9: Temporal particle bases.<sup>a</sup>

<u>Uninflected bases</u>		<u>With localis or other case inflection<sup>c</sup></u>	
qangvaq	when? (past)	uumi	recently, last time
icivaq	some days ago	amatiigni	two days/years ago
akwaugaq	yesterday	yaaliagni	three days/years ago
qaku	when? (future)	al'rragni	last year
unuaqu	tomorrow	nalle-LC(3s-s)	at the time of possession
amatiiku	two days/years hence	unuameng	this past morning (MDs)
yaaliaku	three days/years hence	unuakun	one morning (VLs)
al'rraku	next year		
uumirpak	for a while (past)		
ernerpak	all day		
ak'a	then indeed (i.e., 'already' or 'so long ago') <sup>b</sup>		

## Notes:

- a. Not exhaustive for my corpus of bases expanded with @4<sup>u</sup>ku- temporal irrealis or -rpag- 'all N (temporal)'.  
 b. Ak'a is in a class by itself in that it inflects for adverbial case (except localis), but does not occur in absolute noun function.  
 c. Also included here are many localis DA's, e.g., wani 'now', tamaani 'then', awani 'way back then'; also certain deictic DA's, e.g., maa=i 'at present', tamaa=i 'during that time'.

- (5.56) qakuani=11'            unuaquani            aqvayuglukek  
 qaku-LC(3s-s)=&    unuaqu-LC(3s-s)    aqva#yug-AP0(3d)  
 and at some time    the day after        wanting to fetch them  
after that            that  
 and some time after that, the day after, they wanted to fetch  
 them (3:120)
- (5.57) pingnatugatullemta            nalliini  
 pi-ngnatug+'a-tu-ller-RL(1p-s/p)    nalle-LC(3s-s)  
 of our former customary contin-    at the time of it  
 ual trying to do  
 at the time when we were trying to subsist (9b:5)

Temporal nouns and temporal particles belong together as a syntactic class because both groups can behave as uninflected particles acting as ob constituents with temporal meaning (in spite of the fact that fragments of inflectional suffixes and processes remain as fossilized parts of some of the bases). The temporal noun bases referring to units of time measurement are excepted from this, however, but are included for their semantic similarity to primary case nominal uses of time phase bases.

Although one may expect to find complex temporal obliques that follow the patterns discussed in §5.1.6 for complex locational obliques, in fact I have found far too few multi-word locational obliques in my corpus on which it would be possible to base generalizations.

#### 5.1.7. Conclusion: a syntactic trend among noun bases.

Throughout this discussion, a distinction of degree has been made between the more noun-like, referring classes (ordinary nouns, independent pronouns), and the more predicate-like, modificatory classes (demonstrative pronouns, adjectival noun bases inflecting as ordinary nouns, locationals, and temporals).

A general trend in the language that emerges here is the tendency

for certain changes to go in the predicate-like to noun-like direction. (This is of course not to say that there may not be other trends in the language, in the same or the opposite direction.) The first piece of evidence for this trend is provided by the independent pronouns, which, though noun-like in function themselves, are an etymological patchwork of elements from three of the more predicate-like noun-classes. 3x independent pronouns are morphologically most similar to partitives. Like partitives, they consist of a base (ell- 'being' (?)) with possessed noun endings. But they are unlike partitives syntactically in that they take no r1 constituent as possessor, and they generally do not function as adj constituents standing in apposition to an n constituent in a complex noun phrase. 1x independent pronouns are morphologically most similar to demonstrative pronouns. These similarities were pointed out in §5.1.2. Again, though, 1x independent pronouns are syntactically different from demonstrative pronouns in that they do not stand in apposition to a following n constituent, as D constituents do. 2/3Rx pronouns are morphologically similar to IR's. Like IR's, they do not take r1 constituents, but unlike IR's, they do not stand in apposition to an n constituent.

Because of this, it is most reasonable to assume that the independent pronouns, as a noun-like class, consist of elements adapted from three predicate-like classes. On the other hand there is no evidence that the three still-viable and productive classes of partitives, demonstrative pronouns, and IR's all began as syntactically noun-like classes, and then developed their present modificatory syntactic function. Rather, IR's must have developed from oblique mood clauses, as argued earlier; demonstrative pronouns are part of an ancient and functionally stable

modificatory system (see Bergsland 1951, which traces the forms and the system to the Proto-Eskimo-Aleut stage); and partitives, for which this claim is not directly provable, nevertheless participate in a still-observable trend toward noun-like function (see below).

A second piece of evidence for the trend can be found among adjectival noun bases inflecting as ordinary nouns. There, it is very common for an adjectival noun to cease to be productive as a derived adjective, and to take on ordinary noun function, e.g., kalikiurta (kalikar-liur-+ste-) 'one who (+ste- agent participle) handles (-liur-) paper (kalikar-)' = 'mailplane', Cimiralria (cimir+a-INP(3s)-ABs) 'one who (INP(3s)-ABs) always (+a-) switches or changes (cimir-)' = the proper name Cimiralria, which, as a proper name, behaves as an ordinary noun.

A third piece of evidence for the trend is what was claimed for PS bases, where through their use in primary cases, they take on lexicalized ordinary noun function.

There are three grammatical factors associated with noun syntax and inflection which induce the switch in syntactic function from predicate-like to noun-like. By "induce", I mean that these factors place noun bases from the predicate-like classes into syntactico-semantic environments which are generally reserved for ordinary nouns: in particular, they put them in positions where they function, or look like they are functioning, as n constituents of complex noun phrases and clauses. As is clear from the noun base representations given in this section, only ordinary noun bases and independent pronoun bases are supposed to function as n constituents. In that environment, then, nouns from predicate-like noun base classes can and often do get reinterpreted as ordinary nouns.

The first of these grammatical factors is the "headless" complex noun phrase construction, where on the surface the adj constituent stands in apposition with nothing, since the n is unexpressed; hence the adj alone looks like a simple noun phrase. This factor accounts for the frequent reinterpretation of adjectival noun bases inflecting as ordinary nouns, mentioned above.

The second grammatical factor is the presence of a possessor. As noted, ordinal numerals and partitives are far more common in "headless" constructions than are their unpossessed counterparts, cardinal numerals and cardinal specifiers. This is because the possessor clarifies the reference of the possessum, with which it has a whole-to-part semantic relationship. The headless adjectival noun construction that this brings about is subject to reinterpretation as an ordinary noun in an n constituent according to the principle given above as the first grammatical factor.

The third grammatical factor is the change from oblique case to primary case inflected versions observed with PS bases and with time phase temporal noun bases. As locationals and temporals, these bases occur in ob constituents, modifying the ap on which they are dependent. If they appear in primary cases, they no longer function as ob constituents, but function instead as n or adj constituents themselves. As n constituents or as headless adj constituents reinterpreted according to the principle given as the first grammatical factor, they are in a position to take on ordinary noun function, which in fact they do.

Several conclusions follow from the existence of a general tendency for change from predicate-like to noun-like. First, one would expect



there to be semantically empty derivations in the direction predicate-like to noun-like to be morphologically unmarked, i.e., marked with a null postbase + $\emptyset$ -. This is the case; and, though it is not directly predictable from the trend discussed here, changes in the opposite direction are not marked with + $\emptyset$ -. Second, one would expect derived adjectival noun bases or other predicate-like noun bases to have the capacity for functioning as ordinary nouns, but derived ordinary nouns not to have the capacity for functioning as adjectival nouns or other predicate-like noun bases. An expectation that follows logically, but not in fact, is for DA's to have ordinary noun uses in primary cases, and for possessed numeral bases to take on ordinary noun meanings. This shows that factors beyond the trend discussed here are in effect for those classes, among which may be the inflectional peculiarities of DA bases, and the semantics of numeral bases.

## 5.2. Verb bases.

Although verb bases can be classified in many ways on semantic grounds, and according to their combinability with postbases, inflectional and syntactic grounds for classification of verb bases are harder to come by. But a rather good classification can be made according to different potentials for forming intransitive and transitive predication words. In this scheme, the main division is between bases which are exclusively transitive ( $V_t$ ), bases which are exclusively intransitive ( $V_i$ ), and bases which are ambivalent. The ambivalent class is further divided into those identifying S with A, called S/A core ( $V_{SA}$ ), and those identifying S with O, called S/O core ( $V_{SO}$ ). The exclusively transitive class does occur with intransitive endings, but these variants always

have reflexive meaning, and are the result of a derivational process. Furthermore, in some limited cases exclusively intransitive bases occur with transitive endings, to be taken up below.

The following illustrate the classification:

<u>Base/class</u>		<u>Intrans. (IND(3s))</u>	<u>Trans. (IND(3s-3s))</u>
aqume- to sit	V <sub>i</sub>	aqumuq he sits	*aqumaa
erte- for dawn to break	V <sub>i</sub>	ertuq dawn is breaking	*ertaa
qillerte- to tie 0 up	V <sub>t</sub>	qillertuq (he tied himself up)	qillertaa he tied it up
elli- to put, place 0 somewhere-TM	V <sub>t</sub>	tawavet elliuq (?he put himself there)	tawavet ellia he put it there
aper- to utter (0)	V <sub>sa</sub>	(qaneryaraneng) apertuq he utters (words-MD)	qaneryarat ap'rai he utters words-AB
ayuqe- to resemble, be like (0)	V <sub>sa</sub>	(aw'utun) ayuquq he is like (the one who left-EQ)	awna ayuqaa he is like the one who left-AB
ayrurtur- to bless 0; to be blessed [blɛst]	V <sub>so</sub>	ayrurturtuq he is blessed	ayrurturaa he blessed him
qerrute- for "it" to make 0 cold; to feel cold	V <sub>so</sub>	qerrutuq he feels cold	qerrutaa "it" makes him cold, i.e., he feels cold

From these examples, it is possible to see some of the syntactic complexity underlying the simple classification. For example, *elli-* and usually the intransitive version of *ayuqe-* require oblique case constituents in order to be well-formed; the S/A core class generally permits (if not requires) the expression of the 0 of the transitive version in an oblique case; and *erte-* and the transitive version of *qerrute-* require, respectively, a 3s dummy S or A (glossed "it").

Thus, it is possible to refine classifications beyond transitivity patterns.

Exclusively intransitive bases can take transitive inflection in the appositional mood when they adverbially modify a transitive predication. In those cases, they take on both A and O coreferential with the A and O of the predication they modify:

- (5.58) a. elluarrluni            patumauq  
 elluarte-APO(3Rs)    patu :(u)ma-IND(3s)  
 it, properly            it is closed            (e)
- b. elluarrluku            patua  
 elluarte-APO(3s)        patu-IND(3s-3s)  
 doing to it properly    he closed it            (e)
- (5.59) a. apqaa            cukaunang !  
 aper-gar-OPT(3s)        cukait°e-APO(2s)  
 please utter!            slowly                    (e)
- b. apqerru            cukaunaku !  
 aper-gar-OPT(2s-3s)    cukait°e-APO(3s)  
 please utter it !        doing it slowly        (e)

This is restricted to intransitive bases with adverbial (especially manner adverbial) meaning. Again, the anaphoric base pi- and the interrogative base ca- can replace verb bases of any class, and in that sense they belong in all of the above classes, for example:

- (5.60) a. nerluni            pinaurtuq  
 ner-APO(3Rs)            pi@#naur-IND(3s)  
 eating                    that's what they would do            (e)
- b. nerluku            pinauraa  
 nere-APO(3s)            pi@#naur-IND(3s-3s)  
 eating it                    that's what they would do to it (e)

In this pair, pi-takes on the transitivity of nere- (sa) 'to eat (0)' in each instance where it stands for it.

The four base classes, and the features discussed in relation to

elli-, ayuqe-, erte-, and qerrute- can be represented as follows:

<u>rl</u> →,	<u>ab</u> →,	<u>ob</u> →,	<u>pd</u>
--	a	X	[V <sub>i</sub> ]
b	a	X	[V <sub>t</sub> ]
b	(a)	X	[V <sub>sa</sub> ]
(b)	a	X	[V <sub>so</sub> ]
--	b	a-EQ, X	} [ayuqe- ]
b	a	--, X	
b	a	c-TM, X	[elli- ]
--	dummy	X	[erte- ]
(dummy)	a	X	[qerrute-]

In the above diagram, 'X' is an open variable for whatever can occur as the ob constituent, optionally or obligatorily, for particular bases. The notation for [V<sub>sa</sub>] employs a shorthand: it is assumed that if a is not present, that b will automatically switch to the n constituent. An uncollapsed version would have b under rl and a under n for the transitive version, and b under n with nothing under rl for the intransitive version. For representing verb bases like ayuqe-, collapsing is cumbersome, so that the intransitive and transitive versions are represented on separate lines.

The four-way classification can further be expanded if one takes account of functioning with two postbases, +'i- VV antipassive (half-transitive in the Eskimo literature), and @:(u)te-, VV indirective. This is a departure from the usual methodology, which has been to classify bases independently of their behavior with postbases. Nevertheless, I feel it is justified here because these postbases are intimately

connected with the base-classification proposed so far (as I shall show), and because the classification will have implications for other postbases, different from these two, and will in that way aid in making non-circular generalizations about those other postbases.

First, +i- occurs with VV antipassive function (i.e., detransitivizes the base, converting A to S, and converting O to MD or  $\emptyset$ ) for all S/O core verb bases, and for all exclusively transitive bases except certain ones with motion meaning. This exclusively transitive motion subclass takes @:(u)te- as its VV antipassive marker, though not all exclusively transitive motion bases belong in this subclass. Thus exclusively transitive bases are divided into two subclasses, those taking +i- and those taking @:(u)te- VV antipassives, illustrated in the chart below with assike- and tegu-, respectively. Among exclusively intransitive and S/A core bases, only verbs of motion can take +i-, and in those cases, +i- converts the base to an S/A core expanded base with adversative meaning. At the same time, the exact same class of exclusively intransitive and S/A core motion verb bases has special behavior with respect to @:(u)te-, the VV indirective, so that a base is converted to an exclusively transitive expanded base in which the derived O is a secondary undergoer of the motion expressed by the verb base. Unlike the motion base subclass identified among exclusively transitive bases, the motion base subclass among exclusively intransitive and S/A core bases is strongly motivated semantically, and membership is easily predicted from the meaning. In the chart below, kite- is an intransitive motion verb base (compare kaig-, an intransitive non-motion verb base); and qeckar- is an S/A core motion verb base (compare igar-, an S/A core motion verb base):

<u>Base/class</u>		<u>With +'i</u>	<u>With @:(u)te-</u>
assike- to like 0	V <sub>t</sub>	assikiuq he likes (sth.-MD)	*assikutuq
tegu- to grasp, take 0	V <sub>t</sub>	*teguiguq	tegutuq he grasped, reached out to take (sth.-MD)
kite- to sink	V <sub>i</sub>	kiciuq/kicia it-MD sinks on him-AB/ it-AB sinks on him-RL	kiy'utaa he sinks with it, taking it along
kaig- to be hungry	V <sub>i</sub>	*kaigiuq/*kaigia	*kaigutaa
qekar- to jump (over 0)	V <sub>sa</sub>	qeckariuq/qeckaria it-MD jumped away from him-AB/it-AB jumped away from him-RL	qeckautaa he jumped with it, taking it along
igar- to write (0)	V <sub>sa</sub>	*igariuq/*igaria	igautaa he wrote it down

In summary, then, there is a seven-way classification for verb bases: (1) exclusively intransitive non-motion bases; (2) exclusively intransitive motion bases; (3) S/A core non-motion bases; (4) S/A core motion bases; (5) S/O core bases; (6) exclusively transitive bases taking +'i- antipassivization; and (7) exclusively transitive bases taking @:(u)te- antipassivization.

The following are examples for each class. Some of the classes have been subdivided into semantic groups, which were arrived at intuitively, for the most part, and which are therefore merely informal descriptive categories rather than rigorous categories to be applied to further analysis of the language.

(1) Exclusively intransitive, non-motion. Communication: qalrevag- 'to wail', neplir- 'to be noisy', mecirar- 'to avoid blame'; body position: napa- 'to stand upright', uyunge- 'to squat', aglurte- 'to yaw

(of floating object)'; body function: tuqu- 'to die', nangtau- 'to suffer', epe- 'to suffocate', qavar- 'to sleep'; emotion: qivru- 'to be sad over loss', aulluu- 'to disapprove strongly', naklegyug- 'to care about, cherish'; human social action: cali- 'to work', pite- 'to catch game', yaag- 'to fast, follow puberty taboos', yurar- 'to Eskimo dance'; subjective qualities: inurnarqe- 'to be pitiful', assir- 'to be good', uyaqsu- 'to be a good thrower'; dimension and other physical properties: ameltu- 'to be wide (of a river)', take- 'to be long', ange- 'to be big', ecur- 'to be murky'; adverbial (especially manner): tawatna- 'to do thus', qacigte- 'to be easy', elluarte- 'to be proper, fitting'; undergo or have undergone physical change: kuma- 'to be lit', aru- 'to rot', nange- 'to be used up (also finished, of a story), qager- 'to explode, pop'; weather: natquvigte- 'for snow to drift along the ground', kiag- 'for summer to approach', keluvarar- 'for the northeast wind to blow'; miscellaneous: kaime- 'to drop pieces, bits', alarte- 'to make an error', elliriqe- 'to be poor'.

(2) Exclusively intransitive, motion: ane- 'to go out', tenge- 'to fly', clatur- 'to be wedged in', uterte- 'to go home', nengar- 'to withdraw in anger or frustration'.

(3) S/A core, non-motion. Communication: kiu- 'to answer (0)', kenir- 'to point with a gesture (to 0)', aper- 'to utter (0)'; eating: nere- 'to eat (0)', mer- 'to drink (0)'; sensation: cavte- 'to feel around (for 0)', tangerr- 'to see (0)', uyangte- 'to peer down (into 0)'; obtaining: qalu- 'to fish (for 0) with a dipnet', kipute- 'to buy (0)'; bringing about change of state: pilag- 'to cut up, butcher (0)', nuleg- 'to chip (0)'; miscellaneous: taqe- 'to cease, finish (0)', ate- 'to put on 0 (where 0 = clothing)', nuteg- 'to shoot (0)'.

(4) S/A core, motion. malirqe- 'to pursue (0)', tekite- 'to arrive (at 0)', qeckar- 'to jump (over 0)', cinirte- 'to go along an edge, to visit (0)'.

(5) S/O core. Bring about qualities: patu- 'to be closed, to close 0', qupe- 'to be split, cracked, to split or crack 0', angayegte- 'to be at a slant, to lean 0 at a slant'; miscellaneous: kape- 'to be stabbed, to stab 0', matarte- 'to pull off clothing overhead, to undress 0', wayar- 'to be broke, to rob 0'.

(6) Exclusively transitive, taking +i- antipassivization. Speaking: keleg- 'to alert 0, to invite 0', inerqur- 'to admonish 0', qanrute- 'to tell 0'; change of state: yuu- 'to remove 0' (0 = clothing), kilir- 'to wound 0', qete- 'to hug, squeeze 0'; cause to change position: elli- 'to put 0 somewhere-TM', pegte- 'to release 0, let 0 drop'; subjective experience: assike- 'to like 0', paqnake- 'to be curious about 0'.

(7) Exclusively transitive, taking @:(u)te- antipassivization (limited class). Involving motion: tegu- 'to grasp or take 0', aqua- 'to fetch 0', ullag- 'to approach 0', malirte- 'to pursue 0', ikayur- 'to help 0' (a motion verb base?).

### 5.3. Particle bases.

Because particle bases are by definition uninflected, I will make no distinction between particle bases and particles, i.e., particle words. Particles have syntactic function which correspond to the syntactic functions of sentences (i.e., complete utterances), phrases, or inflected words. In addition, certain particles augment the functions of mood categories in marking connections between syntactic elements.



Because a detailed study of particles is at the heart of Central Yup'ik external syntax, but is of relatively little relevance to internal syntax, I will present only a brief discussion of their classification and syntactic properties. In §5.3.1 I will take up particles proper, and in §5.3.2 I will take up enclitics.

### 5.3.1. Particles proper.

Particles are divided into three classes, independent particles, sentential particles, and phrasal particles.

Independent particles can stand alone, that is, they can function as independent elements with predicational function, e.g., Angu! 'Don't!', Ii=i 'Yes', Wuuuiiq!, call of the arctic loon. Independent particles are the only particles which can be derived by postbase from other word classes, and which take NN and VV modificatory postbases with affective meaning and some class-free postbases, e.g., Nengllir-pagg! 'How cold it is!' (from nengllir- 'to be cold out' plus @+pagg 'My how V!'), Waqaurluq! 'What's up, dear one?' (from the particle Waqaa 'what's up?' plus -rurlur\*- NN, VV 'poor dear one (does V)'). Among independent particles are expressions of emotion: Eng~Eñg̃ (expression of disdain or defiance), Ala! (for men also [ɔle.]) 'Oh no!', Nutaan! 'Well now! Ah good!', Yi! (said when one is startled); directives: Amp! 'Come on!; OK!', Haa! 'To the left!' (said to sled dogs), Kaaka! 'Listen!', Keg'ek! 'Cut it out, darn you!' (to children); accompaniments to socially symbolic acts: Piuraa, Piurci, Piurtek (to singular, plural, and dual addresses, respectively) 'Goodbye', Quyana 'Thank you'; conversational affirmation/negation: Wat'awa 'That's fine by me', Qaang~Qang'a 'No', Ii=i 'Yes', Naumiki, Naamiki 'I don't

know', Iki=i 'indeed'; imitatives: Wuuuuiiq!, call of the arctic loon, Cerr!, sound of ocean breakers. This list is representative, not exhaustive.

In illocutionary status, the expressions of emotion correspond to emphatically uttered indicative mood clauses or nominal clauses, the directives to optative mood clauses with 2x S or A, and the rest mostly to indicative mood clauses or nominal clauses.

Sentential particles serve to introduce sentences, i.e., utterances with predicational function, or clauses. Among these are cali 'also', tawa=llu(=gguq) 'and then (they say)', tawa'amte=llu (and reductions: tawamte=llu, ta'amte=llu, taamte=llu) 'and then, next, after that', piqar-APO(Xx) 'and then once S.../and then once, doing to O' (agrees in person and number with S, O, and implicitly A of the main clause in the sentence in which it occurs), kiitawani 'so in the course of time', tawaam 'but, however'. Most independent particles can function as sentential particles (i.e., occurring in sentence-initial position and having scope over the entire sentence), and some sentential particles can also function as phrasal particles (e.g., tawaam 'but, however').

Phrasal particles modify or connect phrases or complex noun phrases. They do not necessarily occur in clause-initial position (except interrogative/indefinite particles, which are automatically fronted when in interrogative function). Among these are connectives: tawaam 'but, however', wall'i(-taw') 'or', cali 'also, and, again'; modifiers of manner or degree: cakneq 'very much', naawima 'like similar to (that)'; aspectual modifiers: egmian 'immediately', tayima 'elsewhere, at some other time', atunem 'simultaneously'; and interrogative/indefinites: ciin 'why', qaillun 'how'. This list is representative, not exhaustive.

### 5.3.2. Enclitics.

Enclitics are a structural subtype of particles. Because there are no enclitics that are derived by postbase from other base classes, their syntax is not relevant to the study of postbase derivation. Nevertheless, as parts of the word, their arrangement and function belongs to the overall internal syntax of the language, and will therefore be taken up here briefly.

Structurally, enclitics are morphemes which cannot stand alone (with the exception of =qaa, cf. Qaa(=ggem)? 'Huh, what do you say to that?'), and which attach by enclitic juncture to the ends of full words, in general to the first word in a sentence or in a prosodic line (and thus very often to a sentential particle). Semantically, they indicate various kinds of emphasis, serve as syntactic connectives, or mark various presuppositional categories or categories of illocutionary status. As may be expected, the last mentioned group's members are restricted in their occurrence to clauses, especially those in independent moods.

Enclitics occupy six structural positions, which are partially identifiable on semantic grounds (it is decidedly rare, however, for more than three enclitics to occur in succession). Table 5-10 shows the positions and the enclitics that occupy them, and table 5-11 lists the enclitics, with glosses and dialect notes (the list is exhaustive for my corpus).

A final group of free-standing particles commonly are joined by external sandhi to words after any enclitics, including ataki 'well then; come on', cal(i) 'also, and, again', tang 'look!', tayim(a) 'elsewhere, at some other time', taw(a) 'then', tawaam 'but, however'. This list is

not exhaustive, as the process is fairly productive.

Table 5-10: Enclitic positions.

P O S I T I O N					
Emphatic	Connective	Evaluative		(Mixed)	Modal
1	2	3	4	5	6
=i	=llu	=qaa	=gguq	=am	=ga, =wa
=gga			=ggem	=taan	
=mi			=kiq	=gga	
=lli			=tuq		

Table 5-11: Enclitic list, with dialect notes, by position.

=i and =gga (position 1). Form deictic for DA bases. GCY =wa [x<sup>w</sup>a] corresponds to =gga.

=mi (position 1). With interrogative clauses; indicates surprise, or anxiousness.

=lli (position 1). With independent particles and particle sentences; gives exclamatory force.

=llu (position 2). 'and', connective. Introduces sentences and clauses by attaching to the first word, or can conjoin phrases by attaching to the second conjunct.

=qaa (position 3). Forms yes-no questions from indicative clauses, and nominal clauses and particle sentences. On interrogative clauses, it serves overtly to invite a response from the addressee.

=gguq (position 4). 'they say that...; tell him...'

=ggem (position 4). 'what do you say to that?'. With indicative

Table 5-11 (continued).

- clauses, and nominal clauses and particle sentences. (From =gga=am?)  
 Reed et al. (1977:291) gloss this as 'I thought' or 'it seems'. For  
 Chevak, =ggem seems to present a challenge: Qanrutelqamken=ggem!  
 'I told you so, didn't I!' (qanrute-lqe-IND(1s-2s)).
- =kiq (position 4). 'I wonder'. With interrogative clauses.
- =tuq (position 4). 'I hope, wish'. With optative clauses or directive  
 particle sentences. Reed et al. (1977:215) report that some dialects  
 use =kin with this meaning: this is not the case for Chevak.
- =am (position 5). 'then, again, but'. No mood restrictions.
- =taan (position 5). 'just, perhaps'. Not reported for GCY as an en-  
 clitic, but is probably related to GCY tanem 'ever' (as in 'why ever',  
 etc.).
- =gga (position 5). 'there is, it happened that...' With indicative  
 clauses, and nominal clauses and particle sentences. Is closely re-  
 lated to =gga in position 1. =gga with this meaning also occurs be-  
 fore =gguq (position 4), directly following the word. this may ei-  
 ther be analyzed as an extension of the =gga in position 1 to uses  
 with non-DA bases, or as an alternative position for the =gga nor-  
 mally in position 5. For GCY, the cognate of =gga (i.e., =wa) is  
 not reported with the meaning 'there is, it happened that'.
- =ga, =wa (position 6). 'it is probable that...'. With indicative  
 clauses, and nominal clauses and particle sentences. Especially com-  
 mon in responses to questions, e.g., A: Kituuguq=qaa? B: Angun=ga.  
 'A: Who is that? (lit: is that someone?) B: It seems to be a man.'  
 GCY has =wa with this meaning (Reed et al., 1977:299).

## §5-- Footnotes.

1. As noted by Kleinschmidt (1851:11) and, in detail, by Bergsland (1955:140-1), some bases are capable of being inflected both as noun bases and as verb bases. According to the present classification, all of the noun base versions are either ordinary noun bases or time phase temporal noun bases. Examples from Central Yup'ik are *patu-* (N) 'covering', (V) 'to be closed, covered, to close or cover 0'; *qaygi(r)-* (N) 'men's communal house', (V) 'to go to the men's communal house'; (e)*mer-* (N) 'water', (V) 'to drink (0)' (0 = liquid); *tuqu-* (N) 'death', (V) 'to die'; *kiag-* (N) 'summer', (V) 'for summer to approach'; the anaphoric base *pi-* (N) 'thing, being', (V) 'to do it (to 0)'; and the interrogative-indefinite base *ca-* (V) 'what, something, (V) 'to do what (to 0), to do something (to 0)'. Because the semantic relationships between the noun bases and corresponding verb bases for these bases are so diverse, it would be impractical to set up general representations for each which would capture all of its syntactic and semantic combinatory possibilities. Instead, I treat these bases each as two bases, a noun base and a verb base, and those in turn are classified according to the same principles that the rest of the noun and verb bases are classified. The most realistic way to account for the relations between homophonous noun and verb bases is to do so lexically, by positing + $\emptyset$ - NV and + $\emptyset$ - VN postbases that are limited to the bases in question. Thus (e)*mer-* 'to drink (0)' (0 = liquid) will be derived from (e)*mer-* 'water' and + $\emptyset$ - NV, where + $\emptyset$ - NV parallels the function of +*tur-* NV 'to eat N', and *tuqu-* 'death' will be derived from *tuqu-* 'to die' and + $\emptyset$ - VN, where + $\emptyset$ - VN parallels the function of  $\emptyset$ -*ner-* VN 'activity or process of V-ing'. It is not always easy of course to decide which derivational di-

rection is the correct one, but the point is that these semantically diverse relations between homophonous noun and verb bases should be treated as lexical idiosyncracies, rather than as reflexes of some functionally unified base class.

2. For a somewhat different interpretation of the classifier categories 'restricted', 'extended', and 'obscured', see Miyaoka (1975:34-5). For reconstruction of the Proto Eskimo-Aleut demonstratives both as a morphological and a semantic system, see Bergsland 1951.

3. In addition to what could be predicted based on regular sound correspondences, Chevak shows these differences in the numerals, as follows. (a) It uses  $\text{ɛn}$  plural with numerals in -ng:unritarar\*- 'barely not being N', e.g., *quḷḷḷunritaraan* 'nine' rather than *quḷḷḷunrita'ar* (which is the GCY surface form for *quḷḷḷunritarar\**-). Reed et al. (1977:201) list both forms, but do not indicate their distribution. (b) It uses *ipiar-* 'twenty' in numeral bases for multiples of twenty from 'forty' to '380', and their derivatives. *Ipiar-* is cited for Yukon River GCY by Reed et al. (1977:204) and Miyaoka (1975:45), for NS (St. Michael) by Nelson (1899:239), and for Nelson Island GCY by Barnum (1903:220). (c) It has *ciicatsaar-* 'one thousand', cf. *tiissitsaar-*, *tiivitsaar-*, and *ciissitsaar-* cited (for GCY only?) by Jacobson (1980a), and traced by him (and by Barnum) to Russian *Ты́сяча* 'thousand'. (d) It has *aipaa-akimiaq* for 'thirty-five' and its derivative, literally, 'its second, fifteen' = 'the second or other "fifteen"', cf. GCY *yuinaq akimiaq*, literally 'twenty fifteen'. (e) Leo Moses, born 1933, reports hearing *uatnaɛn* (or *watnaɛn*, since compression obscures the difference) 'three' from his elders as a child.

4. In GCY and Chevak, the demonstrative bases *ag-* 'across:E', *qag-*

'open:E', and pag- 'up:E' (i.e., extended bases ending in ag) are formed by adding +aa-. In Chevak, in the MD and VL cases only,  $\emptyset$  may optionally substitute for +aa- with all three bases, e.g., Chevak agaaken or agken, GCY agaaken only for 'across:EA-MD, Chevak pagaaggun or pagg'un, GCY pagaaggun only for 'up:EA-VL'. According to Miyaoka (1976:204, 209) NS (caniliut and Kotlik) has qiini (from qag+ani 'open:EA-LC'), with +a, along with qagaani, and so on for all three bases. He suggests that for GCY and optionally for NS, +aa- is there to preserve the g from velar dropping (formulated as P20 in §1 in this work). This hypothesis is supported, from the opposite direction, by Chevak's  $\emptyset$ , which also preserves the g.

5. The deictic is marked with =i or with  $\emptyset$  (in free variation) for all demonstrative adverb bases except the following: for directional, direct, obscure DA bases (akma- 'across:OA', qakma- 'open:OA', pakma- 'up:OA', and cakma- 'exit:OA'), the mark is  $\emptyset$  only; for wa- 'here:RA', =gga is used with the localis form of the base, wani=gga; and for na- 'where' =gga is used with the base expanded with ng:u- 'to be N', nau=gga. Chevak differs from GCY in that =i is optional for the main group of bases while it is obligatory there in GCY, thus for example Chevak pawa=i or pawa, GCY pawa=i only, for 'away:EA=!'. A further difference is that Chevak =gga corresponds to GCY =wa /x<sup>w</sup>a/.

6. Reed et al. (1977:269) indicate for GCY that ordinary nouns cannot be used in apposition with demonstrative adverbs, though this is probably a reflection of their definition of apposition, since the same construction discussed here occurs in some of their exercise sentences:



amani	alqamni	aanaka	ner'uq
going:OA-LC	alqar-LC(1s-s/p)	aana-AB(1s-s)	nere-IND(3s)
	at my sister	my mother	she eats

My mother is eating over there at my sister's (From Reed et al. 1977:274; glosses and translations are mine.)

7. This list contains a few more items than Jacobson's (1980a) list, but this is a minor matter, since all of the items included here are included in his dictionary (Jacobson 1978), and the line between positional vs. non-positional bases is not always distinct. Notice the overlap with partitives, with aki- and ila- appearing in both lists.
8. It is hard to prove with comparative evidence in what direction, i.e., PS to ordinary noun or vice versa, that a meaning/function change has taken place. Thus to Central Yup'ik ilu- 'inside; intestine' corresponds Greenlandic ilu- 'interior; insides' and Aleut il- 'interior', and one supposes (but cannot say with certainty) from that that the 'insides/intestines' meaning was probably found in Proto-Eskimo-Aleut, indicating that if the ordinary noun meaning was a later development, the development happened early on. To Central Yup'ik aki- 'opposite; equivalent, value; money' corresponds Greenlandic aki- 'what is on the other side; payment, return; window', and Aleut aki 'price'. (Greenlandic cited from Schultz-Lorentzen 1927, Aleut from Bergsland, 1951.) Here, only the Eskimo languages have the PS meaning 'opposite', while all have the partitive meaning 'value, equivalent'; Central Yup'ik seems to have developed the ordinary noun meaning 'money' from the partitive meaning; and Greenlandic seems to have developed the ordinary noun meaning 'window' from the PS meaning. Thus the partitive meaning seems to be original with Proto-Eskimo-Aleut, but it is not really possible to say how and from what the PS meaning developed. Interesting-

ly, I find no cases where Central Yup'ik, Greenlandic, and Aleut all have the same ordinary noun meaning for a particular PS cognate set (the eleven given by Bergsland 1955:150-2 for Greenlandic, and Geoghegan 1944:77-8 for Aleut), tends to support the general direction of change I have posited, though I certainly would not rule out the possibility of change in the other direction, motivated by some entirely different considerations.

## 6. Postbases: introduction, literature, and theory.

This and the next chapter are concerned with the grammar of postbases. The general issues, and the theoretical approach I take to them, are outlined in this chapter. §7 works that approach out in detail for denominal verbalizing (NV) postbases.

Postbases constitute one of the richest areas in Eskimo grammar. They can be numerous in a single word (up to seven is common), and in Central Yup'ik, by one count (Jacobson, 1980c) there are around 400 of them, many, if not most of which are highly productive within their basic grammatical and semantic limits. Postbases cover a great deal of grammatical and semantic ground. From the English point of view, they cover phenomena as diverse as nominal quantification, adjectival and adverbial modification of nouns and of verbs, voice, aspect, negative, tense, and modal modification of verbs, certain types of verbal complementation, relative clause formation, and a type of verb-object compounding. Because of this functional diversity, one would not expect that a single, regular, and consistent set of integrated grammatical principles would satisfactorily "explain" the postbases, and account for their formations and regularities. On the other hand, the simple, rather mechanical way in which one postbase is suffixed to the next, having scope over what stands to the left of it, while determining the base class of what it derives, offers the hope that perhaps this consistent set of grammatical principles may be found. I would claim, however, that every consistent set of grammatical principles that has been found to account well for some subset of postbases can also be shown to account poorly for some other subset thereof. Thus at least as an heuristic, I advocate the use of different sets of working principles

for those aspects of the data that they are capable of handling, even if the sets are contradictory. Even this much, though it is contrary to the widespread conviction that natural languages are (or ought to be) fully internally consistent, is preferable to an analysis which, in the name of consistency, ends up slighting one area of the grammar to "save" the analysis of another. But one still need not accept a rag-tag overall description if one is able to find generalizations according to which one can predict what analysis will work where. In this and the next chapter, a number of theoretical issues will be discussed. I will take one side or the other on some of them; on others, however, I will take both sides when no one side accounts for all of the data. My strategy for counteracting the loosening of the grammar that this brings about is to state explicitly the characteristics of the data for which each works, thereby probing deeper into the data itself.

In §§6.1-5 I introduce the basic descriptive, classificatory, and theoretical issues which concern postbases by discussing their development in the literature on Greenlandic, since it is there that by far the most innovative and important work has been done on postbase grammar. (The general facts in Greenlandic are substantially the same as those in Central Yup'ik, and all other Eskimo languages that I know of). Following that (§6.6), I present my own approach. It is hoped that that approach will contribute to the discussion of Eskimo postbases generally, in spite of its immediate focus on the particular facts of Central Yup'ik. This chapter concludes with a short note on postbase dictionaries, with special reference to work on Central Yup'ik postbases.

6.1. Kleinschmidt: the basic issues of postbase grammar defined.

One of the most perspicacious treatments of postbase grammar is found in Kleinschmidt's (1851:107-66) grammar. In the introduction to that section (pp. 107-11) Kleinschmidt brings out most of the major issues which concern postbases, and it is that which I will describe and discuss in the following paragraphs.

Kleinschmidt counts suffixation of postbases as the dominant one of three word-formation techniques (Bildungsweise) in Greenlandic, the other two being (i) base modification (i.e., variation of a single root,<sup>1</sup> e.g., ukioq 'winter', ukiaq 'spring', ûma(-voq) '(he) is living', ûmar(-poq) '(he) becomes lively, revives'); and (ii) implicit derivation (cf. footnote 1 to §5 for exposition and discussion of this for Central Yup'ik).

Kleinschmidt brings up the issue of productivity (Beweglichkeit), noting that some postbases may be used freely (within basic grammatical and semantic constraints), while others are non-productive, and occur only in specialized lexical environments. He adds that the line between productive and non-productive is not always easy to draw, and that there are many intermediate cases (as for example where a lexicalized postbase combination yields an unpredictable meaning, or where a postbase is restricted in the bases to which it may attach). What is important for Kleinschmidt is the fact that most postbases are productive, and are used in creating new words on the spot. As such, he considers productive postbases a genuine part of the grammar of the language, and not of the lexicon.

Another issue, the issue of classification, has implications for most other aspects of how postbases are treated. Below is Klein-

schmidt's classification (my translation, with parenthetical annotation). It should be noted that within this classificatory skeleton, Kleinschmidt has (mostly untitled) subclasses which are implicit in the way he groups postbases for presentation.

## 1. Affixes on nouns and verbs.

### 1.1. Nominal affixes.

1.1.1. Class converting (umbildende) [i.e., VN].

1.1.2. Class elaborating (fortbildende) [i.e., NN].

1.1.2.1. Adjectival.

1.1.2.2. Substantival.

### 1.2. Verbal affixes.

1.2.1. Class converting [i.e., NV].

1.2.2. Class elaborating [i.e., VV].

1.2.2.1. Neutral.

1.2.2.1.1. With auxiliary-verb meaning.

1.2.2.1.2. With adverbial meaning.

1.2.2.2. Intransitive.

1.2.2.3. Transitive.

## 2. Affixes on demonstratives, particles, and fully inflected forms.

The basic classification under item 1 above is the same as that mentioned in §2.2, that is, deverbal nominalizing (VN), denominal nominalizing (NN), denominal verbalizing (NV) and deverbal verbalizing (VV) (notice though that Kleinschmidt's terminology is not as processual as that just cited-- I will return to this below). Kleinschmidt-- unlike Thalbitzer (1911:1054-5)-- breaks this down further. Thus cross-cutting this four-way classification is another distinction between neutral,

consisting of subclasses of NN and VV postbases, vis., his 1.1.2.1, as well as his 1.2.2.1, and derivational (umkehrende), consisting of all VN and NV postbases, as well as the rest of the NN (1.1.2.2) and VV (1.2.1.2 and 1.2.1.3) postbases. (In my terminology, modification and derivational.) Essentially, the neutral postbases modify the bases to which they are added without affecting their inflectional potential and (in the case of noun bases) their basic reference, as in the following examples from Central Yup'ik using the bases ene- (N) 'house' and qavar- (V) 'to sleep':

- (6.1) enpaarrluk -paarrlug- (NN neutral) 'huge N'  
 huge house
- (6.2) qavallruuq -llru- (VV neutral) past tense  
 he was sleeping

The derivational postbases on the other hand affect inflectional potential, through class conversion from verb to noun or from noun to verb, through change in verbal transitivity, or through change in nominal reference, e.g.:

- (6.3) qavaryaraq †yarar- (VN) 'way of V-ing'  
 way of sleeping
- (6.4) enmetuq †met°e- (NV) 'to be at N'  
 he's in the house
- (6.5) qavaasqaa †sqe- (VV derivational-- transitive) 'to  
 he told him to sleep tell 0 to do V-intr., to tell s.o.-TM to  
 do V-tr. to 0'
- (6.6) enlek -leg- (NN derivational) 'one provided  
 one who has a house with N'  
 (unpossessable)

It is interesting that Kleinschmidt draws structural and psychological implications from this distinction between neutral and deriva-

tional postbases. The real constraint, he says, on the number of postbases possible in a word is the number of derivational postbases present, so that more than three derivational postbases, that is, more than three switches back and forth between word classes or syntactic types, are rare.

The postbase classification is also the underpinning for what Kleinschmidt says about the issue of postbase ordering. As he puts it (p. 110):<sup>2</sup>

Die ordnung, in welcher die anhänge in solchen mehrfach zusammengesetzten wörtern auf einander folgen, beruht darauf, dass jeder anhang durch den vor ihm stehenden theil des worts ergänzt wird, oder sich auf diesen bezieht, nicht auf das nachfolgende,--während bei uns grade umgekehrt das ergänzende wort nachfolgt, daher die anhänge im grönländischen durchgängig in der umgekehrten ordnung unsrer gleichbedeutenden wörter stehen;-- doch leidet diese regel einige ausnahmen, indem nämlich gewisse neutrale anhangsredewörter andere nur in einer bestimmten ordnung (immer vorstehend, od. immer nachstehend) bei sich haben können...

In this passage Kleinschmidt expresses the notion that Greenlandic words are left-branching structures, with each postbase having semantic scope and grammatical dominance over all of what precedes it, that is, that there are, in addition to the combinatory ground-rules for each postbase, general logical principles which determine postbase ordering. The only retreat from this-- for as noted earlier postbases tend not to yield to a single analytic scheme-- is the observation that some of the neutral VV postbases seem to have fixed order with respect to each other when they occur contiguously. The set of generalizations represented by this exception are mentioned in connection with the postbases concerned, but not dwelt upon-- it has since been shown that these generalizations are worth dwelling upon-- nevertheless Kleinschmidt must be credited with having clearly stated three principles of postbase ordering:



(i) selection according to base type (i.e., VN postbases can only be added to verb bases, NN only to noun bases, etc.); (ii) left-branching semantic scope; (iii) fixed order among some VV neutral postbases.

A theoretical issue of importance on which Kleinschmidt takes a position (though not explicitly) is the issue of descriptive model. In a now classic paper, Charles Hockett (Hockett 1954) identifies two models of grammatical description which he calls item and process and item and arrangement. The first, which he associates in particular with Native Americanist linguists such as Boas, Sapir, Newman, and Haas, takes a kind of constructional view of grammar, where words-- or other grammatical structures-- are built by processes such as affixation, internal modification, reduplication, compounding, etc. The second, which he associates with some of Bloomfield's work (in an embryonic form) and with Wells, Bloch, Nida, and himself, takes grammatical structures as static, fully formed configurations whose patterning needs only to be described.

In Kleinschmidt's grammar there is an interesting mix of these approaches. There is some evidence of the item and arrangement approach in some of the headings in his postbase classification, treating postbases themselves as nouns, verbs, and adjectival and adverbial elements, rather than as nominalizers, verbalizers, and semantic restricters (I do not mean to imply that there is no processual metaphor present, so that, e.g., these nominal and verbal entities are viewed as added to bases in many places). The item and arrangement approach is again in evidence in the passage just quoted from Kleinschmidt, where a static relationship is seen between the postbase and the base, the latter being a complement to the former, rather than simply an earlier incarna-

tion, so to speak. On the other hand the item and process approach is evident in terms like 'class converting' and 'class elaborating'. Most interestingly, certain of the VV transitive and intransitive postbases (1.2.2.2 and 1.2.2.3) are treated (pp. 55-6) as markers of processes, indicating such voice changes as addition of a subject or an object, anti-passivization, passivization, etc., for example (Greenlandic examples, taken from Kleinschmidt):

- |           |  |    |   |
|-----------|--|----|---|
| (6.9) a.  | toqúpâ<br>kill-IND(3s-3s)<br>he kills him  | b. | toqutsivoq<br>kill-VV antipassive-IND(3s)<br>he kills (s.o.-MD)   |
| (6.10) a. | unatarpâ<br>beat-IND(3s-s)<br>he beats him | b. | unatarneqarpoq<br>beat-VV passive-IND(3s)<br>he has the results of being<br>beaten (wounds, bruises) =<br>he was beaten |

Kleinschmidt holds that these derivations do not alter the basic meaning, and in this sense this foreshadows a type of transformational grammar where processes, i.e., transformations, are recognized only when they preserve meaning, while arrangements, i.e., base-generated phrase markers that have undergone lexical insertion (or are interpreted with abstract semantic primes), represent structures with different meaning, with regularities of arrangement captured in the phrase structure rules generating the phrase markers.

To summarize, then, Kleinschmidt defined the major issues of post-base grammar by taking positions on productivity, classification, post-base ordering, and descriptive models. This, along with the many contributions to more particular issues concerning postbase grammar and lexicology that Kleinschmidt makes in his individual treatments of post-bases, makes his grammar the starting point for all serious work on post-

bases in Eskimo languages.

## 6.2. Swadesh: a semantic principle for classification.

Morris Swadesh, in his restatement of Kleinschmidt's grammar (Swadesh 1946) made an important reinterpretation of Kleinschmidt's classification, bringing up what I will call the issue of semantic nucleus.

According to Swadesh (p. 50):

On the basis of semantic relationship to the underlying theme, suffixes are to be classed into restrictive and governing suffixes. Restrictive suffixes modify or limit the meaning of the underlying theme (e.g., *uyaxaxşuaq* "large stone" < *uyaxak* "stone" + *-şuaq* "large"); governing suffixes bring about an essential change of meaning so that they refer to something different from the underlying theme, though defined in terms of the latter (e.g., *akilinişmiut* "inhabitants of Labrador" *akiliniq* "what is on the other side; Labrador" + *-miut* "inhabitants of...").

These terms were used by Swadesh earlier in his work with Edward Sapir<sup>3</sup> on the Nootka language of Vancouver Island, British Columbia. There (Sapir and Swadesh 1939:236; cf. also, in greater detail, Swadesh 1939:85), they give a rather more elegant and suggestive definition in relation to Nootka derivational morphology:

Derivational suffixes fall into two important classes, according to their semantic relation to the underlying theme: (1) governing suffixes, which introduce a new central notion to which the underlying stem or theme becomes subsidiary, e.g., *ʔ'apac* 'canoe' + *-ʔaʔ* 'see, perceive...' > *ʔ'apacoʔaʔ* 'see a canoe'; (2) restrictive suffixes, which introduce a notion that is semantically subordinate to or coordinate with that of the underlying theme, e.g., *ʔi·h* 'large' + *-qo·ʔa* 'on a rocky point' > *ʔi·h·qo·ʔa* 'large on a rocky point'.

A part of the difference between the formulations has to do with differences between the two languages, for example, Eskimo languages do not have "coordinate" type structures such as Nootka *ʔi·h·qo·ʔa* 'large on a

rocky point', but beyond this, it is very much the same thing that is being described for both languages. It is important to underline that for Nootka, the distinction as formulated is basically a (syntactico-) semantic one, with no formal earmark on which to base classificatory decisions. (Swadesh does, however, claim that in both languages, fixed suffix order is a property of restrictive suffixes.) It seems though that Swadesh must have seen the distinction he had used for Nootka embodied in a more concrete way in Kleinschmidt's postbase classification, as follows: all derivational postbases, in Kleinschmidt's sense, are taken as governing; VV neutral postbases which Kleinschmidt labels "with auxiliary meaning" are taken as governing; NN neutral postbases are taken as restrictive; and VV neutral postbases labeled "with adverbial meaning" are divided by Swadesh into governing (e.g.,  $\sim\text{p}^{\text{nit}}$  'not to...') and restrictive (e.g.,  $-\text{l}^{\text{uinaq}}$  'thoroughly') groups.

Swadesh, then, has made the distinction structurally concrete insofar as it identifies class-converting, VV transitive, and VV intransitive postbases as governing. The other distinctions are mainly intuitive semantic ones, both on Kleinschmidt's and on Swadesh's part (ironically Swadesh even reclassifies as governing some relatively fixed-order postbases, given as "with adverbial meaning" by Kleinschmidt, e.g.,  $\sim\text{ssa}$  'should...in the future'). I would claim however that there that there are two fundamental faults with Swadesh's use of the restrictive/governing distinction. First, where he has equated it with something concrete, he has done so in a mechanical way, losing sight of the semantic import of the distinction. Thus, for example,  $\text{toqut-sivoq}$  in (6.9b), though including the VV derivational (and hence for him governing) antipassive postbase, is hardly a case where the post-

base introduces a "new central notion" or "brings about an essential change of meaning". Second, where he has taken the distinction for what it is, a semantic distinction, he has not noted that there is a vast grey area for which principled distinctions-- especially if one does not take ordering into account-- are hard to make. Thus it seems rather arbitrary that he should classify -t/ṣaq 'repeatedly' as restrictive, but ṁḡiaq 'to be ...-ing' as governing, when arguments in either direction for either of them could be made.

Nevertheless the distinction, especially as formulated for Nootka, is very useful and germane (note, incidentally, its similarity to the clause from the passage quoted above from Kleinschmidt: "jeder anhang [wird] durch den vor ihm stehenden theil des worts ergänzt..., oder sich auf diesen bezieht..."). Its value lies in the opposing analytic techniques it provides, one where the base is taken as the (syntactico-) semantic nucleus (the restrictive ideal), and the other where the postbase is taken as the (syntactico-) semantic nucleus (the governing ideal). As I will show in the following chapter, some postbases are very amenable to one technique but not the other; others are equally amenable to both. Because some of the authors yet to be discussed tend to prefer the base-as-semantic-nucleus analysis throughout, and others prefer the postbase-as-semantic-nucleus analysis (at least in some places), it would be well to illustrate both with a Central Yup'ik from the grey area, i.e., for which both analyses are moderately but not extremely successful:

- (6.11)   aanama                   mer'utai                   muragarrlainaat  
           aana-RL(1s-s/p) mer'ute-AB(3s-p)   muragar-rrlainer-(AB)p  
           my mother's       her water dippers   completely of wood  
           my mother's water dippers, made completely of wood (e)

- (6.12) 

aanaka	mer'utairaak	muragarrlainarneng
aana-AB(1s-s)	mer'ute-ng:ir-IND(3d-3s)	muragar-rrlainer-MDp
my mother	they deprived her of her	completely of <u>wood</u>
	<u>dipper</u>	
they (d) deprived	my mother of her dipper,	make completely of
wood (e)		

In question is the NV postbase -ng:ir- 'to deprive O of his N; for S to be deprived of his N' (I have chosen an NV postbase to show that class-converting postbases too can be analyzed as restrictive). Taking the approach that -ng:ir- is the semantic nucleus (i.e., analyzing it as governing), we would say that it is a kind of suffixal verb which obligatorily incorporates the n of a complex noun phrase as its patient, and leaves behind the adj constituent of the complex noun phrase to be marked with the modalis case, which is the usual case for indefinite grammatical patients (see §2.3.1). This analysis has much to recommend it, but does not explain why the possessor of the incorporated complement and the subject of -ng:ir- are always coreferent, nor of course is it particularly satisfactory in the sense that one would expect the structural nucleus (i.e., the base) and the semantic nucleus to coincide. On the other hand we can take the approach that -ng:ir- is restrictive: the complex noun phrase, which as such can have either nominal and predicational function, is restricted to its predicational function through the addition of -ng:ir- to its n; thereby too, a reshuffling takes place such that the adj constituent moves to the modalis case, the possessor in the n constituent of the complex noun phrase moves to the modalis case, the possessor in the n constituent of the complex noun phrase moves to the absolute case, to become the n constituent of the derived clause, and a new participant is introduced in the relative case as the r1 constituent of the derived clause. But

this analysis has problems explaining the introduction of a participant with semantic subject relation to -ng:ir-, and the introduction of the semantic idea of deprivation, since those hardly restricts the sense of the base.

It should be clear then that the issue is not whether a given postbase is governing or is restrictive; what is important is what can be discovered and represented about a postbase through applying (and testing) both analyses. In §7 (see especially §7.5) it will be shown for NV postbases that certain inherent grammatical and semantic features of the postbases themselves control how applicable or inapplicable the postbase-as-nucleus (governing) vs. the base-as-nucleus (restrictive) analysis will be.

### 6.3. Bergsland.

In his grammar of Greenlandic, Bergsland (1955:19-20, 89-138) uses a classical item and process model to describe postbases, that is, postbases are viewed as performing derivational operations on the bases to which they are suffixed, whether or not that process preserves meaning. Further, the semantic approach follows morphology closely, and does not tend to locate the semantic nucleus in postbases even for the postbases for which that analysis is quite common, e.g., certain NV postbases, and "double-transitive" VV postbases. On the issue of postbase ordering, he follows Kleinschmidt in the main, but brings to light many generalizations concerning the ordering of his class-free postbase category (see below), as well as others concerning Kleinschmidt's VV neutral class not mentioned by Kleinschmidt.

One of the most important contributions of Bergsland's treatment--

along with its superb textual documentation and lexicological insights into postbases-- seems to me to be the syntactic orientation he brings to classification. That is, he attempts, as far as possible, to find concrete, preferably syntactic criteria of classification, rather than to rely on a priori ones. The first set of cuts in his classification corresponds to the main inflectional distinctions, that is, to derivations among and between major word classes:

1. Class bound.

1.1. Class converting.

1.1.1. Verbalizing (VV and NV/VV, i.e., those verbalizing noun bases only, and those verbalizing both noun and verb bases)

1.1.2. Nominalizing (VN, and VN/NN)

1.2. Class elaborating.

1.2.1. Verb elaborating (VV).

1.2.2. Noun elaborating (NN).

2. Class free (VV/NN).

Note that this classification takes account of postbases falling into more than one category, putting NV/VV (verbalizing both noun and verb bases) together with NV (verbalizing noun bases only), and VN/NN (nominalizing both noun and verb bases) together with VN (nominalizing verb bases only); however VV/NN (which may be added either to nouns or verbs and preserve the original word class) are segregated from the rest here. The next set of classificatory cuts is also "a classification in syntactical terms (relations of the derived stem as compared to the relations of the underlying stem or form), i.e., a further classification in terms of the inflective categories" (1955:90). That is, he is concerned



with the change in external syntactic potentialities (as marked by the inflectional system, as well as demonstrated by syntactic relations) brought about by suffixation. These criteria are behind Kleinschmidt's neutral vs. intransitive vs. transitive distinction among VV postbases. Bergsland extends this though to numerous other areas beyond transitivity: other VV voice types (e.g., "subject suppressing", "object adding", "equative adding"); VV postbases affecting clause linkage type (i.e., selecting particular mood endings); NN postbases affecting possession and other relations; VN participle types; various NV effects (e.g., "apposition changed to instrumental term" [= adj constituent of a complex noun phrase changed to modalis case in my terminology, as in (6.11-2) above], "dependent referee changed to object" [= r1 constituent of a noun phrase changed to n constituent of a clause, in my terminology], etc.); and others. Further classificatory criteria beyond the syntactic ones just mentioned include order classes based on partly-fixed ordering principles for some class-free and some VV postbases (though he calls his results tentative), semantic criteria (e.g., negative forms, restrictions on the base selected) and, as a last resort-- especially among what I would call modificatory postbases-- intuitive semantic criteria.

#### 6.4. Some transformational studies.

Rischel (1971, 1972), Sadock (1980, and lectures in the early 1970's), and I (Woodbury, 1975, 1977a,b) have taken what may more or less be characterized as variants on a generative semantic approach to the analysis of selected Greenlandic postbases (Rischel: some NV and VN postbases-- but I have not seen Rischel 1972; Sadock: some NV and

and VV postbases; Woodbury: some VN and VV postbases). All three share with Bergsland a fundamental concern with the syntactic effects of postbases on external syntax in the syntactic component of a transformational grammar.

On the issue of grammatical model, Sadock and I take an approach fairly similar to Kleinschmidt's, giving item and process treatment-- i.e., inserting them transformationally-- to those postbases regarded as meaning-preserving (e.g., the VV antipassive and passive cited in (6.9-10), and item and arrangement treatment-- i.e., generating them in the base-- to those regarded as meaning-changing. (As noted below, I have since changed my approach.) Rischel also includes postbases in base structure arrangement, but it is not completely clear whether he approves of inserting some by transformation (I rather think he would not approve, since he cites minimal pairs involving the VV antipassive and VV passive postbases in Rischel 1971:227-8 without positing or hinting at transformational insertaion, but this is pure speculation on my part). Since all three have external syntactic node labels (i.e., N, V) dominating base-generated postbases, the assignment of semantic nucleus is determined by the overall representation of a clause rather than by the morphological type (i.e., base or postbase) of the lexical elements; thus, the semantic nucleus of a surface word could either be the base or the postbase.

Rischel and Sadock introduce a new theoretical issue to the discussion of postbases, which can be called the issue of lexical autonomy. They are arguing with the notion that grammar inside the word (i.e., derivational morphology) and grammar outside the word are handled in discrete components, with the lexical component and all of its rules

completely preceding the syntactic component, into whose deep structure phrase markers lexical items are inserted before any derivation takes place. This, roughly, is the "lexicalist" hypothesis of Chomsky (1970) and later writers. Rischel and Sadock both use cases of incorporation corresponding to the Central Yup'ik examples in (6.11-2) to argue that the syntactic rules create complex noun phrases with agreement between the n and adj constituents before pieces of those complex noun phrases are incorporated into NV postbases which function as the verbs of their clauses. Sadock makes arguments to show that what have been called words in Greenlandic are in fact words, and not phrases, and goes on to detail the parallels between what goes on inside of the word in Greenlandic, but outside of the word in more analytic languages (e.g., complete productivity of many postbases, anaphoric references to incorporated objects).

Rischel, as pointed out in §4.1, is concerned with capturing noun-predication parallels. He works out a treatment for possessive constructions which brings out massive parallels between possessed nouns, and nouns derived with the postbase -gʔ-/ -rʔ- 'to have O as one's N'. He does not, however, directly derive possessives such as (6.13) from -gʔ-/ -rʔ- constructions, such as (6.15), but instead derives them from underlying structures such as (6.14) whose form is based on the surface patterning of -gʔ-/ -rʔ- constructions (pp. 235-7):

(6.13) (ajuqi)                    palasip            irnira  
           catechist-(AB)s    minister-R's    son-AB(3s-s)  
           (the catechist,) the minister's son

[Note: no one example given is complete for all aspects of the derivation, and I have inserted the parenthetical ajuqi here based on other examples; the above construction type, moreover, occurs in Central Yup'ik, see e.g., (4.6f)]

(6.14) [ ajuqi [ ajuqi palasip [ irnir- ∅ ]<sub>VP</sub> ]<sub>S</sub> ]<sub>NP</sub>  
           NP<sub>i</sub>      NP<sub>i</sub>      NP<sub>j</sub>          N<sub>k</sub>          V (affix)

(6.15) palasip ayuqi irniraa  
                                   son-r<sup>ʔ</sup>-IND(3s-3s)  
       the minister has the catechist as a son

(6.13) is derived from (6.14) by the usual rules. The V node in (6.14) is empty, but it governs a structure similar to that of -g<sup>ʔ</sup>-/-r<sup>ʔ</sup>-. Because -g<sup>ʔ</sup>-/-r<sup>ʔ</sup>- is the only postbase in the language which governs that structure, I think it is fair to claim that Rischel is in a real sense doing what at least must be called a notational variant on deriving possessives from -g<sup>ʔ</sup>-/-r<sup>ʔ</sup>- constructions. To translate his item and arrangement analysis into item and process terms, his use of a relative clause-type phrase marker (i.e., [NP<sub>i</sub>[..NP<sub>i</sub>..]<sub>S</sub>) to represent possessed nouns is the notational equivalent of what, in an item and process model, would be a derivation from V to N. That is, he is basically analyzing the whole phenomenon as the subtraction of -g<sup>ʔ</sup>-/-r<sup>ʔ</sup>-, giving it a VN analysis, rather than as the addition of -g<sup>ʔ</sup>-/-r<sup>ʔ</sup>-, which would give it a NV analysis. The proof of this is that an item and arrangement analysis corresponding to a NV additive analysis would be:

[ [ayuqi]<sub>NP</sub> [palasip      irniara ]<sub>NP</sub> ]<sub>NP</sub> [-g<sup>ʔ</sup>-/-r<sup>ʔ</sup>-] ]<sub>S</sub>  
       catech.  minister's  his son                  hāve as

Here, the complex noun phrase is what is intact at the lowest level of structure (rather than the predication with -g<sup>ʔ</sup>-/-r<sup>ʔ</sup>-), and the derivation proceeds with incorporation of palasip irnira, with the possessor palasip "floating" into transitive subject position. Because it can be shown that there is a NV additive analysis corresponding to Rischel's VN

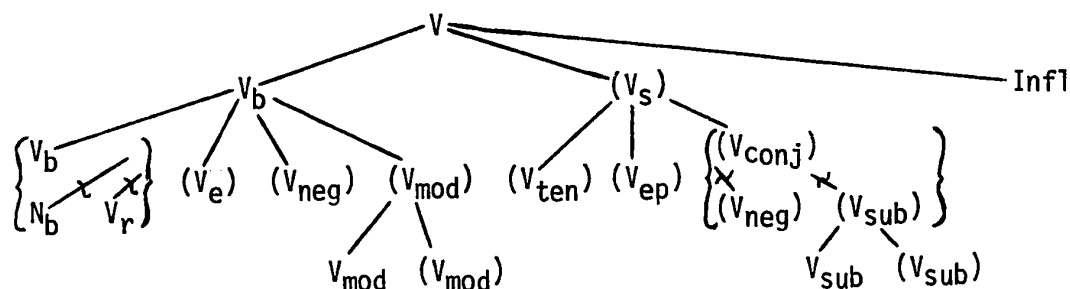
subtractive analysis, and that this NV analysis is equally expressible within the general formalism within which he works there, I think it is fair to criticize his analysis on the grounds that it violates the morphological rule of thumb saying that a derivation (to use the item and process term) is advanced by the addition rather than the subtraction of a morpheme. Rischel himself notes (p. 218) in connection with the work of another author that "within the general framework of transformational grammar it is natural to assume that possessive constructions are somehow derived from underlying sentences", and clearly his own analysis, though in the most restrained, item and arrangement format, was in keeping with the spirit of the times.

#### 6.5. Fortescue: a new approach to ordering.

Michael Fortescue (Fortescue, 1980) makes an important contribution to the postbase ordering issue in working out rules which generate labeled constituent structures for Greenlandic words. Figure 6-1 represents in tree form his rules for the structure of "complex verb forms" (predications, in my terminology).

The real claims made by Fortescue's formalism is that the sentential affix always stands to the right of everything else, and that it has fixed ordering within itself. The rest is merely an elaborate Turing machine, since the recursivity of  $V_b$  and the optionality of  $V_e$ ,  $V_{neg}$ , and  $V_{mod}$  insure that any ordering at all of these classes is possible (with any number of repetitions of each).<sup>4</sup> Thus Fortescue's analysis does not really controvert what Kleinschmidt says about ordering, that is, that WV postbases build one upon the other, having semantic scope over what stands to the left, except in the cases of a group

Fig. 6-1: Tree representation of Fortescue's rules (for V only).



Key (quoted from Fortescue, with my annotation in square brackets):

- V        verb [my predication]
- V<sub>b</sub>     verbal base
- N<sub>b</sub>     nominal base
- V<sub>r</sub>     verbalizing (denominal) affix
- N<sub>r</sub>     nominalizing (deverbal) affix [occurs in expansion of noun only]
- V<sub>e</sub>     Verbal, base expanding affix (verbal-deverbal, corresponding to embedding and auxiliary-like verbs in English) [=Kleinschmidt's VV class, minus his "with adverbial meaning" class]
- V<sub>neg</sub>    affix of negation
- V<sub>mod</sub>    affix of verbal modification-- manner, degree, or aspect
- V<sub>s</sub>     'sentential' verbal affix
- V<sub>ten</sub>    tense affix
- V<sub>ep</sub>     affix of epistemic modality
- V<sub>conj</sub>   conjunctive affix
- V<sub>sub</sub>    affix of subjective/narrative coloration

[Notes:

- a. The last seven classes cited here together correspond to Kleinschmidt's VV neutral "with adverbial meaning" class.
- b. Fortescue points out that "a handful of V<sub>e</sub> and N<sub>r</sub> affixes...may follow a V<sub>s</sub>".
- c. Fortescue's rules are recursive, hence the self-embedding nodes (i.e., V<sub>b</sub>, V<sub>mod</sub>, and V<sub>sub</sub>) may be re-expanded ad infinitum.]

whose ordering is fixed. Fortescue adds to what Kleinschmidt says by making claims about which postbases show fixed order (these being, in Kleinschmidt's terms, a subclass of VV neutral postbases "with adverbial meaning", although as will be noted below, Fortescue has rethought the postbase segmentations Kleinschmidt used), and showing what that order is. Further, his note on certain  $V_e$  and  $N_r$  affixes (quoted in figure 6-1, note (c)) provides important verification of his analysis positing a  $V_s$ . A useful point that Fortescue makes is that the notion of semantic scope, though valid, is very broad, and that the recognition of different postbase order-classes permits a more detailed look at what is meant by it.

An especially ingenious aspect of Fortescue's claims about fixed order is their implication for the issues of productivity and classification. Fortescue distinguishes between lexicalized and semi-lexicalized combinations of analyzable postbase morphemes, claiming that the former but not the latter are semantically something other than the sum of their parts. That is, a semi-lexicalized postbase is a very common but semantically transparent combination. He takes issue with Bergsland (1955) (and by implication with other earlier treatments) for not making this distinction, and, in general, treating only fully lexicalized postbase sequences as unitary, complex postbases.

If one inspects long Greenlandic words-- at least as a non-native speaker-- using the standard (i.e., Bergsland's and others') approach to segmentation, Fortescue's analysis of postbase ordering is hardly self-evident. What he has actually done is to posit a complex, semi- or fully lexicalized postbase to account for every exception to his rules, having in that way as it were buried the offending orders. An-

other way that he has handled exceptions is to place certain postbases in more than one slot. These, however, are not necessarily gimmicks. First, it is important to note that the majority of his semi-lexicalizations do not bury an exception to his rules, that is, the rules would generate them even if he had not treated them as semi-lexicalizations. Moreover, he has taken responsibility for justifying every semi-lexicalized postbase and every multiply entered postbase as a coherent semantic unit on independent grounds, through its semantic appropriateness to the slot to which it has been assigned,<sup>5</sup> through its frequency, and by other indicators. The methodology pursued, then, has as its goal to minimize the set of slots, and to maximize the set of postbases which can fit in each slot, all the while trying to see how much of the postbase grammar can be described according to fixed order principles. In all, he has identified around 80 productive  $V_S$  postbases in this way. There is of course a body of facts which can be accounted for both in terms of fixed order principles, and general semantic scope principles: thus (in Central Yup'ik) the postbase -llru- past tense ( $V_{ten}$ ) can follow but not precede the postbase -nge- 'to begin to V' ( $V_e$ ). This is predicted by Fortescue's model; but it also can be predicted in terms of general semantic principles. Fortescue's approach should not be criticized just because it weeds out semantic nonsense; rather, even if the fixed order analysis is pushed to extremes, it is likely to lead to formal expression of some semantic scope universals. Furthermore, it provides an operationalized scheme for positing "semi-lexicalizations".

In the area of classification, the main contribution is in the semantic/order-classes set up among what Kleinschmidt identifies as VV



neutral postbases with adverbial meaning. Fortescue also appends a classification of Greenlandic postbases to his paper, with the subclasses-- except among VV derivational postbases-- being made largely on intuitive semantic grounds, i.e., not making use of all of the syntactic criteria brought out by Bergsland.

In this paper and in another (Fortescue 1979), Fortescue argues that his findings on postbase ordering, classification, and lexicology demonstrate the need for a grammatical treatment where lexical autonomy is maintained, and where, for grammar within the word, a strictly item and arrangement model is adhered to.<sup>6</sup> In particular, he argues that his results offer support for the "extended standard theory" of Chomsky 1970, Emonds 1970, and Jackendoff 1972, a theory which embraces the lexicalist hypothesis mentioned earlier, and an "interpretive" approach to semantics.

In keeping with this theoretical approach, he seeks to maintain lexical autonomy even in treating the "incorporating" NV postbases discussed by Rischel and Sadock. Thus (in Fortescue 1979) for Greenlandic *puisip niqiturpuq* (seal-RLs meat-eat-IND(3s)) 'he eats sealmeat', where *puisip niqaa* (seal-RLs meat-AB(3s-s)) seems to be an underlying constituent that has +*tur-* 'to eat (or use) N' added to it, he claims that the phrase structure rules of the external syntax generate *puisip +tur-* (I infer this from his rule  $VP \Rightarrow V_{rel} + V_{inc}$ , where  $V_{inc}$  is an "incorporating"  $V_r$ ). In a footnote he cites a "better solution" which would treat *puisip niqi-* as a semi-lexicalized base. Both solutions of course mix internal and external syntax after all, since the first expands an external constituent (i.e., VP) into an external ( $V_{rel}$ ) and an internal ( $V_{inc}$ ) constituent, and the second interrupts a base (a morphological

unit) with a word boundary (a syntactic unit). I consider this no fault, but I do think it is an admission that the word-internal and word-external grammars are not entirely separate.

A theory which maintains lexical autonomy must somehow indicate in word-internal grammar the effects that postbases have on the combinatory properties of the resulting word, i.e., the valence of the expanded base. The richness of this aspect of postbase grammar formed the main basis for Bergsland's second set of classificatory cuts discussed above. Unfortunately Fortescue limits his indication of this to transitivity, which he marks by superscript on node labels, so that a VV neutral postbase takes on the transitivity marking of what precedes it, and, e.g., a detransitivizing VV postbase sets up an intransitive superscript of what precedes. Thus he does not mark possessivizing and depossessivizing nominalizing NN and VN for their inflection-changing properties. More seriously, he does not indicate the shiftings of semantic roles into different cases that the postbases bring about, e.g., in (6.9-10), and in the following Central Yup'ik examples (the same pattern occurs in Greenlandic):

(6.16) angutem        ukisqirai  
           angute-RLs    ukisqir-IND(3s-3p)  
           man            he helped them        'the man helped them'

(6.17) angutmun        ukisqiryukanka  
           angute-TMs    ukisqir\*yuqe-IND(1s-3p)  
           by the man    I think that they were helped  
           I think that the man helped them

In the above, he has no way of indicating that the A of ukisqir- 'to help O' is the semantic role that appears in the terminalis case when \*yuqe- 'to think that O is doing V-intr., to think that someone-TM is doing V-tr. to O', is added. Fortescue claims that this is irrelevant,

that it has no place in word-internal syntax, and that the external syntax is, in any case, the component which takes care of what noun phrases, in what cases, will be arrayed around the prediction word produced by the lexical component. The question, though, is how the external syntax is to know that, e.g., in (6.17), the noun in the terminalis case will be interpreted as the same semantic role as the relative case noun in (6.16). Transformational grammar (see e.g. Chomsky 1957) was formulated precisely in order to handle this type of generalization, which is easily formalized in the extended standard theory in what Jackendoff (1972), whom Fortescue follows, calls "functional structure". The decision to ignore this aspect of postbase grammar is therefore not an artifact of the theory.

On the grammatical model issue, Fortescue (1979, 1980), who as noted favors an item and arrangement approach to word-internal grammar, argues against my treatment (Woodbury 1975, 1977a) of a few derivational postbases as transformations, on the grounds (i) that it is suspicious, i.e., structurally unprincipled, to transformationally derive a few, and base-generate the rest, and (ii) that I have no way of inserting those postbases into the word in the right place, so that, for example, I might attach a VV derivational postbase such as the VV antipassive to an element of the sentential affix, which would be wrong. I now agree with him on (i), for structural reasons, but also for reasons brought up in criticism by Kálmár (1979) of the same work of mine, namely, that even processes such as antipassivization are not without their effects, particularly on discourse structure (though of course those effects can easily be made a part of underlying representation, with the transformations becoming obligatory, as e.g., Sadock 1980 does).

I find it useless to try to decide which derivationally produced meaning changes are so slight that transformations are allowable, and which ones are significant enough to warrant base generation of the postbase involved (or some kind of annotation to underlying structure). In the present work, however, rather than following Fortescue and Kálmár in selecting an entirely item and arrangement approach, I follow Swadesh and Bergsland by taking an item and process approach.

Fortescue's second criticism is deserved in that I did not pay attention to ordering, a relevant aspect of the problem. It is of course easy to restrict these transformations so that they will not apply to words expanded with sentential affix postbases, which, in the model I used, would appear as base-generated higher verbs incorporated through a transformation of predicate raising (Woodbury 1975:66-70). In an item and process approach, restrictions of this type on what bases a particular postbase may be added to constitute the normal way of expressing all locally governed ordering constraints. Note, incidentally, that Fortescue takes advantage of this type of formulation when he notes that "a handful of  $V_e$  and  $N_r$  affixes...may follow a  $V_s$ " (cited earlier, in fig. 6-1). To have integrated this simple statement into his formalism would have "cost" his grammar two extra categories, and, more importantly, some fairly cumbersome additional rules for generating the appropriate constituent structures for that integration. I hasten to add here that Fortescue's formalism is well suited to his purpose, i.e., bringing out the fixed, global aspects of ordering, and I think that he is quite sensible in mixing approaches.

## 6.6. The present approach.

The present approach can be characterized as item and process and constructional, viewing the word as built through successive additions of postbases. The basis cut in the postbase classification used is derivational vs. modification (= Kleinschmidt's derivational vs. neutral). According to the constructional approach taken here, then, each successive addition of a postbase is accompanied by the addition of a linguistically significant function, either a derivational function or a modification function. Because the approach is rather thoroughly item and process, it does not give different treatment to derivational postbases according to whether they can be said to preserve meaning; rather, it assumes that all postbases add some linguistically significant function, and that that function may be purely syntactic, purely semantic, purely pragmatic, or any combination thereof. On the question of lexical autonomy, this approach takes no a priori position. However, if one views the syntactic changes brought about by some postbases as changes in combinatory potential, rather than manipulations of a clause whose other lexical items have been inserted, it is usually (but not always) the case that lexical autonomy is maintained. On the issue of ordering, the approach I take recognizes three structural levels of derivation, a base complex (=Fortescue's  $V_b$ ), and a theme (= base expanded with, roughly, the first part of Fortescue's  $V_s$ , but here the languages seem to differ considerably), within both of which postbase ordering depends on semantic scope; and finally a subinflected base (= base expanded with, roughly, the last part of Fortescue's  $V_s$ ), within which ordering is fixed. Let me note here, as I will again later, that the analysis of ordering given here is most tentative.

### 6.6.1. Classification.

I use the following basic postbase classification. (PT stands for 'particle', and is intended also to include fully inflected forms of all classes to which postbases may be added):

#### 1. Derivational.

##### 1.1. Verbalizing.

1.1.1. NV (including also PT-V).

1.1.2. VV derivational.

##### 1.2. Nominalizing.

1.2.1. VN (including also V-PT).

1.2.2. NN derivational (including also N-PT, PT-N, PT-PT).

#### 2. Modificational.

2.1. VV modificational.

2.2. NN modificational (including PT-PT).

2.3. Class-free (VV/NN/PT-PT).

As noted the main classification follows Kleinschmidt's distinction derivational vs. neutral. The rest follows distinctions made by Kleinschmidt and/or Bergsland, already discussed, except that the present inclusion of particles is in some ways a departure. A lesser classification is made (not shown in the outline) in terms of derivations involving nominal sub-classes, e.g., DA-PS, PS-V, etc. VN/VV postbases and VN/NN postbases are treated each as having a basic and an implicitly derived member (at least etymologically), e.g., some NV/VV postbases are underlyingly  $(\emptyset_{VN})+NV$  (= Kleinschmidt's and Bergsland's treatment of them all), and others as underlyingly  $(\emptyset_{NV})+VV$ . Synchronically, however, it is usually necessary to treat them each as a separate postbase; the

same is the case for members of the class-free category.

Following Bergsland, the derivational postbases have further been classified according to the word-external syntactic changes they bring about, or, put differently, according to the changes in the inflectional and external combinatory potential of the base. The complicated array of patterns found provides a fruitful basis for further classification, particularly when the two techniques of analysis corresponding to Swadesh's governing vs. restrictive distinction are used to measure the relative syntactico-semantic centrality of the base and postbase.

Turning to the modificational category, I must first point out that the derivational vs. modificatory distinction is rather difficult to draw among NN postbases, but can be done rigorously if one insists that a derivational NN postbase must either change the nominal subclass of the base to which it is added, or in some way change the base's inflectional potentiality. This however requires one exception: for reasons of ordering, it seems most logical to place among modificational postbases a class of NN postbases with quantifier meaning which affect number inflection, and sometimes even derive adjectival nouns (see §6.6.4).

Further classification within the modificational category is done, among VV modificational postbases and to an extent also among NN modificational postbases, according to structural level of derivation, as defined by the ordering analysis. Other classification there proceeds on a priori semantic principles.

#### 6.6.2. Productivity.

On the problem of determining what sequences of postbase morphemes constitute internally complex postbases, and what sequences are simply

to be analyzed as productive sequences, I have largely followed the position taken in the Alaska Native Language Center work on Central Yup'ik, in particular, Jacobson 1980c. Jacobson's position is somewhere between Bergsland's and Fortescue's. Even a very small degree of semantic opacity in a postbase combination leads Jacobson to posit a separate postbase, e.g., (in my opinion) +turatu-/@quratu-/+'uratu- 'always to V, almost always to V' from +turar-/etc. 'to keep on V-ing, to continue to V' and -tu- 'to V customarily'. On the other hand he does not use frequency alone as a guide, so that frequent but transparent combinations, e.g., -tullru- (-tu- plus -llru- past tense) 'to have customarily V-ed in the past', are not considered to be single postbases.

I make use of a notion of postbase root in treating suffixal segments which do not themselves freely combine with bases, but do combine with other suffixes to form postbases, that is, elements which correspond to the cran of cranberry at the level of complex postbases: e.g.,  $\sqrt{-}$ knaggar\*- NN (itself from  $\sqrt{-}$ knag- NN '!' & -rrar\*- NN 'a bit of N'), intensifier in postbases like -knaggait°e- NV 'to completely lack N' (with -ng:it°e- 'to lack N'), +taknaggairute- 'for there to be absolutely no more N at S' (with  $\sqrt{+}$ ta- NN 'N which is at POS' and -ng:irute- 'to run out of N'). Another useful notion is that of root extender, a postbase whose (inherent or incidental) function is to create a stem from a root, e.g., -ngqa- 'to be in condition of root'. Discussion of postbase ordering and classification mainly concern productive postbases, but may be relevant-- in varying degrees-- to unproductive postbases.



### 6.6.3. Treatment of derivational postbases.

It will be useful at this point to go into some more detail by giving examples and introducing formalisms. In this section I will take up treatment of derivational postbases, and in the next section the treatment of ordering, and its bearing on classification of modificational postbases.

In a postbase representation, the syntactic representation of the underlying base (see §5) is taken as input, and the syntactic representation of the derived base is taken as output. For NN and VV postbases, the input and output are largely comparable, since both are based on the same phrase structure (noun phrase phrase structure for NN, clause phrase structure for VV). For VN and NV postbases, however, the input and output are based on different phrase structures. In order to bridge this difference, formulations are made there in terms of generalized phrase structure (see §4.5); thus VN and NV postbases are seen in terms of their effects on generalized phrase structure, rather than simply as converters between phrase structures having nothing in common.

To be precise, in the system of representation used here, postbases are treated, where possible, as changing the syntactic combinatory potential of bases, rather than changing the syntactic make-up of complex noun phrases and clauses into which all surface lexical items have been inserted. Though it is just as easy to interpret these operations as acting on full complex noun phrases and clauses into which surface lexical items have been inserted, one is then forced to abandon the surface distinction between word-internal and word-external elements, which is analytically viable in many (but not all) postbase derivations (see §7). In effect, then, I represent syntactic combinatory potential (an inter-

nal syntactic notion) even when the internal/external distinction breaks down, because it allows one to preserve the distinction where it exists (compare Rischel and Sadock, who dispense with the distinction entirely in the item and arrangement portions of their grammars). The one case where I do not treat postbases as changing syntactic combinatory potential of bases is that of postbases added directly to inflected words (see §7.3, §7.4). Unlike bases, words do not have combinatory potential, since inflection implies lexical insertion and the realization of a syntactic status.

No syntactic system is purely formal, lacking in semantic (or even pragmatic) interpretation. This one is no exception, and I have made its semantics explicit by identifying syntactic meaning for each constituent of each phrase structure in §4. By changing the syntactic combinatory potential of the underlying base, a postbase brings about changes in the semantics of the base at the same time. Thus, a post-

base which, syntactically speaking, causes a verb base to lose its potential for taking a r1 constituent, is semantically interpretable as agent-suppressing, since the syntactic meaning of the r1 constituent of a clause is that of agent. The rudimentary semantic system implicit in phrase structure of course falls far short of the complicated set of changes in semantic and pragmatic function brought about through the addition of a postbase to a base. Those aspects of postbase function are expressed in ordinary prose, outside of syntactic representations (though perhaps much would be gained if they too could be represented formally).

The first example I will take up involves the VV antipassive postbase +i-. In §5.2 it was pointed out that that postbase derives an S/A core verb base with adversative meaning from an intransitive or S/A core motion verb base, as in the following pair (I use an intransitive underlying base to illustrate):

- (6.18) maklagaq            kit'e11ruuq  
           maklagar\*-ABs    kite-11ru-IND(3s)  
           bearded seal    it sank  
           the bearded seal sank        (e)



+i- as an S or A. Note that the postbase +i- does not only induce a syntactic rearrangement and give the base the potential to combine with another noun phrase (i.e., a noun phrase with the role b, in the n or r1 slot). It also adds meaning, that is, the idea of suffering because something undergoes motion. This is expressed in the ordinary prose gloss of the postbase +i-, and is not included in the formal representation.

This example contains a useful illustration of the inherent meaningfulness of syntactic structures, discussed earlier. Consider the meaning difference between (6.19) and (6.20): because the md constituent carries with it the idea of indefiniteness (or some neighboring discourse-referential function, see §2.3.1 on the modalis case), while the n constituent carries the idea of definiteness (again, more or less), this aspect of meaning is already present in the representation of +i- with motion verb bases. Note that the use of the meaningfulness of syntactic structure to convey the difference in discourse referential category of maklagar\*- between (6.19-20) is far more economical than having to include a prose translation of the function of the modalis case with every verb base optionally taking a md constituent. Further, it treats as much meaning as possible as syntactic meaning, thus bringing it within the scope of our formal treatment. To illustrate this further, note that if there were a syntactic constituent having the exclusive function of marking the semantic role 'sufferer on account of..' or something to that effect, and if the role b from above appeared in that case, then we would perhaps be justified in saying that the entire meaning of the postbase +i- with verbs of motion can be expressed in syntactic terms.

The next example I wish to consider is the postbase -ng:ir- NV

'to deprive 0 of his N; for S to be deprived of his N', illustrated in (6.11-2). The following is a representation of its syntactic effects on noun bases:

$$[\underline{rl} \rightarrow \underline{n}]_n \widehat{[\underline{rl} \rightarrow \underline{adj}]_{adj}}$$

(e-)d [N] ((b) a)

$$\underline{rl} \rightarrow, [\underline{rl} \rightarrow \underline{n}]_n \rightarrow, [\underline{rl} \rightarrow \underline{n}]_{nd} \rightarrow \underline{pd}$$

$$\Rightarrow (f) \quad (e) \quad d \quad ((b) \quad a) \quad [N-\underline{ng}:\underline{ir}-\underline{v}]$$

This rather cumbersome mode of representation can be improved by taking advantage of the generalized phrase structure proposed in §4.5; to do this, the order of constituents must be made uniform, as noted there:

$$[\underline{rl} \rightarrow \underline{n}]_n \underline{rl} \rightarrow, [\underline{rl} \rightarrow \underline{n}]_{nd} \rightarrow \underline{ap}$$

(e-)d [N] ((b) -- -- a)

$$\Rightarrow (e) \quad d \quad (f) \quad ((b) \quad a) \quad [N-\underline{ng}:\underline{ir}-\underline{v}]$$

The only weakness here is that it is not immediately apparent that the role index a in the first line is referred to by an adj constituent or by a pd constituent. Since the latter is impossible-- pd constituents do not have reference-- this is not a major matter.

In the representation, the roles correspond as follows to the syntactic elements of (6.12): e = 1s referent; d = aana- 'mother'; b (not represented); a = muragarrlainar\*- 'completely of wood'; f = 3d referent. The postbase -ng:ir- adds the semantic idea of deprivation, among other things. This can be partially syntacticalized by identifying the role of the deprivee in the derived verb base and the possessor of the noun in the underlying noun base, indexed with d. The independent validation for this as a syntactic generalization comes from the fact

that -ng:ir- cannot be added to the intransitive (unpossessible) nouns, for example, the adjectival noun *muragarrlinar\**- 'completely wood' (cf. *\*muragarrlianairaa*, with -ng:ir- IND(3s-3s)).

It happens that the representation for -ng:ir- given above corresponds to the approach in which the base is treated as the syntactico-semantic nucleus. Thus the representation shows that [N] takes the postbase -ng:ir-, and as a result its possessor d becomes the role of the new n constituent, the role a goes from the ap constituent to the md constituent, and a new role f is introduced. It is, however, possible to represent this process so that the postbase -ng:ir- is treated as the syntactico-semantic nucleus, by positing an intermediate stage:

$$\begin{array}{ccccccc}
 & & & & [ \underline{rl} \rightarrow \underline{n} ]_n & \widehat{ } & [ \underline{rl} \rightarrow \underline{adj} ]_{adj} \\
 & & & & (e-)d & [N] & (b) \quad a \\
 \\
 \Rightarrow & [ \underline{rl} \rightarrow \underline{n} ]_n & \underline{rl} \rightarrow, & [ [ \underline{rl} \rightarrow \underline{n} ]_n & \widehat{ } & [ \underline{rl} \rightarrow \underline{adj} ]_{adj} ]_{md} & \rightarrow \underline{ap} \\
 \Rightarrow & (e) \quad d & (f) & (e-)d & [N] & (b) \quad a & [-ng:ir-v] \\
 \Rightarrow & (e) \quad d & (f) & -- & -- & (b) \quad a & [N-ng:ir-v]
 \end{array}$$

Here, an intermediate stage is posited, with -ng:ir- added as the verb-like nucleus of its own construction, into which is embedded the original complex noun phrase. I have assumed that -ng:ir-, which is treated essentially as a verb base would be treated, is formally transitive, with an indefinite patient as its md constituent; from the second to the final stage, -ng:ir- simply draws [N] out of the n constituent of the complex noun phrase which it has as its md constituent, and incorporates it by a mechanism very similar to what Rischel and especially Sadock propose.

The alternative representations presented here clearly show the weaknesses of each approach. Thus the postbase-as-syntactico-semantic nucleus approach, the second one presented, has the problem that the "matrix" n constituent and embedded n constituent-- see the second stage, where this is clearest-- have to be analyzed as the same in some sense, triggering some kind of obligatory deletion. That is, it seems odd to treat the construction in two levels and restrict the set of embeddable complex noun phrases on the basis of coreference with the matrix n, only to delete one of the two obligatory constituents later on (compare the simpler treatment of this in the base-as-syntactico-semantic nucleus approach). Note that this is the same problem that generative grammarians find themselves facing when they treat such English verbs as begin or command as governing their own clauses; with devices such as equi noun phrase deletion, raising, empty nodes, and their various equivalents (in English, of course, there are no compelling morphological reasons for treating the embedded clauses as syntactico-semantic nuclei). On the other hand the base-as-nucleus representation shows its own problems, namely, the addition of a role f as r1 constituent which has nothing to do with the original noun base [N], but which has the semantic earmarks of the agent-to-verb-base relation with the postbase -ng:ir-. It should be clear, then, that the analysis from two directions gives us a means for assessing how much of an independent entity a postbase is in syntactico-semantic terms.

The representations discussed in this section-- and what they represent-- will be used to classify postbases in syntactic terms. Sometimes representations of this kind are special to a particular postbase (e.g., +'i- with verbs of motion is one of a kind), but more often they



characterize whole classes of postbases which differ on other aspects of their function (e.g., according to semantic restrictions on the bases to which they may be added, or according to their meaning). The representations are also useful in pinpointing the similarities and differences between two patterns, which in turn is useful for classification and functional analysis.

#### 6.6.4. Ordering, some matters of classification, and modificational postbases.

I will take up ordering in general, and then present the outline for a classification in terms of ordering for derivational as well as modificational postbases. I must stress that my analysis here should be regarded as more of a guess than anything else, because the data it is based on is orders of magnitude off from the amount which simple mathematics would tell one is necessary for a definitive statement. My strategy is to give an overly "powerful" treatment which incorporates only those restricting generalizations which seem fairly secure to me.

The approach I take seeks to balance the two opposing aspects of postbase ordering, the locally governed labile aspect, where each postbase is added, according to its selectional restrictions, to a base over which it then has semantic scope; and the globally governed fixed aspect, where postbases line themselves up according to rigid position classes. My approach to this differs from Fortescue's in that I describe more in terms of the former, and less in terms of the latter, than he does. On the other hand, there are certain similarities buried in different formalisms.

As noted earlier, I recognize three levels of derivation in VV ex-

pansion, a verb base complex ( $V_b$ ), a verb theme ( $V_{th}$ ), and a subinflected verb base ( $V_{sj}$ ), in addition to the traditional verb stem ( $V_{st}$ ) (i.e., a verb base followed by no productive postbases). The first three are constituted as follows:

1. Verb base complex. A verb base complex consists either of a bare verb stem, or of an expanded base whose final postbase is base-complex deriving, vis.:
  - a. NV (all NV postbases are actually  $N-V_b$ ).
  - b.  $V_b-V_b$  (i.e., a class of postbases deriving a verb base complex from a verb base complex).
  - c.  $V_x-V_b$  (i.e., a small class of postbases deriving a verb base complex from any verb base; called double transitive in the literature on Greenlandic).
2. Verb theme. A verb theme consists of an expanded verb base whose final postbase is verb-theme deriving:
  - a.  $V_b-V_{th}$  /  $V_{th}-V_{th}$  (i.e., deriving a verb theme from a verb base complex, or from another verb theme).

Up to this point, we have an entirely locally governed model, with all ordering generalizations expressed as selectional restrictions made in terms of the levels of derivation ( $V_b$ ,  $V_{th}$ ). Permissible reversals in surface ordering of postbases, up to this point, should correspond to meaning differences attributable to changes in scope. But a somewhat different situation obtains for the final level:

3. Subinflected verb base. A subinflected verb base is a base to which the subinflection has been added. The subinflection is a string of one or more postbases, and it may be added to  $V_b$  or

$V_{th}$  ( $V_b-V_{si}$  /  $V_{th}$  /  $V_{si}$ ). Ordering within the subinflection is fixed with postbases falling into three position classes. Overall, the order classes have no semantic value. However, subinflection and inflection are interdependent, so that certain subinflections select certain moods (or, certain moods select certain subinflections). When broken down according to mood, the position classes take on semantic value, so that, e.g., for IND and some others position 1 contains markers of evidentiality (such as *-llini-* 'to evidently V'), while for the optative mood position 1 is reserved for *-gar-* 'just to V', which has there the function of making optative utterances less urgent and strident, and more polite. The following mechanism is proposed for deriving  $V_{si}$  from  $V_x$ :

$$\begin{array}{r} \underline{n} \quad \underline{r1} \longrightarrow, \underline{ob} \longrightarrow \underline{pd} \\ a \quad (b) \quad (c) \quad [V_x] \\ \underline{n} \quad \underline{r1} \longrightarrow, \underline{ob} \longrightarrow \underline{pd} \quad \underline{Pos. 1} \quad \underline{Pos. 2} \quad \underline{Pos. 3} \quad \underline{Infl.} \\ \Rightarrow \quad a \quad (b) \quad (c) \quad [V] + [[ \quad ] + [ \quad ] + [ \quad ] ]_{V_{si}} + [ \quad ] \end{array}$$

Here a global ordering is expressed within a constructional, item and process approach, with the entire subinflection being added at once. The problem arises of how best to treat the inflection relative to the subinflection. On the one hand, it seems that the inflection is parallel with the subinflection (either with the collective subinflection, or with each position within it), due to the mutual conditioning holding among them. On the other hand, the members of the subinflection are postbases that are distinct from the inflection since  $V_x-V_b$  and  $V_x-N$  (see

below) postbases may be added to them, but not to inflected bases. I am not sure how this problem is to be resolved, but I have chosen the term 'subinflection' in order to reflect this paradox.

In effect then, the following ordering constraints can be derived from this:

1.  $V_b-V_b$  postbases cannot be added to  $V_{th}$  or to  $V_{sj}$ , but they can be followed by anything.
2.  $V_x-V_b$  postbases can follow anything and be followed by anything.
3.  $V_b-V_{th}$  /  $V_{th}-V_{th}$  postbases can be followed by  $V_b-V_b$  postbases.
4. A subinflection cannot immediately be followed by another subinflection (N.B.: this refers to the entire aggregate making up a subinflection, not to the individual postbases).

Furthermore:

1. VN postbases are divided according to those which can follow any verb base ( $V_x-N$ ) and those which can only follow verb base complexes ( $V_b-N$ ).
2. In noun base expansion, there is a distinction in derivational level between  $N_b$  (corresponding to  $V_b$ ) and  $N_{sj}$  (corresponding to  $V_{sj}$ ). The distinction is relatively minor, however, because the nominal subinflection is rarely complex, and contains only a fairly small class of NN modificational postbases with quantifier meaning.

The classification that all of the preceding presupposes is as follows (the main classificatory framework for this is the same as is given in §6.6.1):

## 1. Derivational.

### 1.1. Verbalizing.

#### 1.1.1. NV.

#### 1.1.2. VV derivational.

1.1.2.1.  $V_x-V_b$  'Double transitive' or 'compound verbal' postbases.

1.1.2.2.  $V_b-V_b$  derivational. The remainder.

### 1.2. Nominalizing.

#### 1.2.1. VN.

1.2.1.1.  $V_x-N$ . All productive participial postbases, i.e., postbases which derive adjectival nouns.

1.2.1.2.  $V_b-N$ . The more lexicalized VN postbases, in general those deriving non-adjectival nouns.

#### 1.2.2. NN derivational.

## 2. Modificational.

### 2.1. VV modificational.

2.1.1.  $V_b-V_b$  modificational. Consists of VV postbases with auxiliary verb meaning, as well as some with adverbial meaning. All preserve the syntactic configuration of the underlying base. These two semantic subclasses are non-discrete (and largely based on English translation), but are useful for some descriptive purposes.

2.1.2.  $V_b-V_{th}$  /  $V_{th}-V_{th}$ . Consists of postbases with tense (not aspectual) meaning, negation (which also occurs as  $V_b-V_b$ ) and a handful of subjective, evaluative postbases.

2.1.3. VV modificational postbases occurring in the subinflection. Consists of some postbases with a variety of meanings, many

of which are lexicalized combinations of simpler postbases.

## 2.2. NN modificational.

### 2.2.1. NN modificational postbases occurring in the nominal subinflection.

### 2.2.2. $N_b-N_b$ modificational. The remainder.

It should be noted that some postbases belong to more than one class, e.g., -nrit<sup>o</sup>e- VV negative postbase, is  $V_b-V_b$  modificational and  $V_b-V_{th}$  /  $V_{th}-V_{th}$ , and -qar- 'just to V' is  $V_b-V_b$  and  $V_b-V_{th}$  /  $V_{th}-V_{th}$ , and can also occupy the subinflection.

This hypothesis is fairly minimal compared to Fortescue's, but it provides a means for classifying postbases according to their positioning that does not require extensive positing of "semi-lexicalizations". Although the degree of semi-lexicalization posited by Fortescue could well be justified, I consider this aspect of my approach a virtue in that it provides a more neutral starting point for an analysis of Central Yup'ik ordering. One difference between our analyses, and perhaps between Central Yup'ik and Greenlandic, is the freedom of ordering I have found within the  $V_{th}$  deriving class, where I claim that there are differences in mutual ordering which are reflected as differences in semantic scope. This is based simply on the observation that informants have ascribed different meanings to the different orderings I have proposed to them, that the meanings are explainable in terms of scope differences, and that the different orderings are also found in my texts (i.e., the initial observation is not an artifact of my field practice). It may be that the recognition of a few semi-lexicalizations where ordering has been reversed would iron things out so that an underlying fixed ordering would emerge. I must confess that I cannot

trust myself, at my present (meagre) state of knowledge of the language and its nuances, to attempt a solution of this kind.

In studying ordering, one continually finds near-generalizations, for example, that -tu- 'to customarily V' is almost never followed by a  $V_b$ - $V_b$  postbase; yet one finds cillameng ...kep'itungnaqaqut (kepe- 'to sever' plus +'i- VV antipassive plus -tu- plus -ngnaqe- ( $V_b$ - $V_b$ ) 'to try to V' plus +'aqe- ( $V_x$ - $V_{Si}$ ) 'S/A would do V' plus IND(3sp)) 'they would try to cut the (stormy) weather apart'. If ordering is largely based on semantic scope relations, though, it would follow that some meanings-- and hence some orders-- will simply be far more common than others. While these near-generalizations are certainly worth noting, it is not justified, at least at this stage of research on Central Yup'ik order, to ascribe that statistical finding to the formal rules of the grammar.

The ordering scheme proposed here is, nevertheless, in need of strong constraints. Chief among these must be semantic constraints on selection, an aspect of the problem which is covered in most good postbase dictionaries. Jacobson's (1980b) Central Yup'ik postbase dictionary is very meticulous on this point. Indeed, the range of useful generalizations to be made at the lexicological level seem to stand in contrast to the often uncertain fruits of the grammatical approach.

#### 6.7. A note on postbase dictionaries, and on postbase work on Central Yup'ik.

A number of alphabetical postbase glossaries or dictionaries are in existence for Eskimo languages. The earliest important such dictionary is a part of Kleinschmidt's (1871) Greenlandic-Danish dictionary,

which was revised by Schultz-Lorentzen (1926) and translated to Greenlandic-English the following year (Schultz-Lorentzen, 1927). The Kleinschmidt dictionary and its offspring give subordinate listing (in smaller type, sometimes out of alphabetical order) of postbases which are compounded from several simpler postbases; they give syntactic category (NN, VN, NV, VV) and illustrations of various uses of each, mostly with one or two-word examples. External syntactic effects of some postbases are also indicated.

In recent years two postbase dictionaries have appeared for dialects of Eastern Canadian Inuit, Smith (1978) for Labrador Inuttut, and Harper (1979) for Cumberland Peninsula and North Baffin Island dialects. Both specify syntactic category, and Smith proposes etymologies for most of his entries. Smith also has an interesting discussion of problems of translation of postbases, and of some aspects of what I have been calling the issue of productivity. A postbase dictionary of North Slope (Alaskan) Inupiaq is being prepared by Edna MacLean (MacLean, in preparation). This dictionary will be of major significance for postbase theory and lexicology because it is the first compiled by a native speaker (MacLean is a native of Barrow).

Turning to Central Yup'ik postbase studies-- grammars as well as postbase dictionaries-- the first extensive treatment is found in Barnum 1901, a very substantial part of which is devoted to postbases. Barnum viewed postbases as part of an extremely elaborate inflectional apparatus, and thus set up 170 "modes" corresponding to VV postbases, many of which are composite from the viewpoint of later work. His morphophonemics and segmentation leave something to be desired, yet his semantic description is remarkably good, and syntactically relevant



points are often mentioned. Hinz 1944 has a brief and very useful dictionary of postbases, with a fairly large number of entries (187), and with some exemplification. Swadesh (1951:69-71) cites 25 postbases with examples from the NS dialect, in much improved transcription.

The Alaska Native Language Center group is responsible for the greatest part of the current understanding of Central Yup'ik postbases, in morphophonemics, segmentation, lexicology, and dialectology. Miyao-ka (1975) gives a list of 80 major postbases, and Reed et al. (1977) present a little more than 100, with semantic, syntactic, and phonological commentary. The culmination of the work there on Central Yup'ik postbases is Steven Jacobson's forthcoming postbase dictionary (to be published as part of Jacobson, forthcoming). This dictionary has around 400 entries covering all four major dialects, and is especially strong in its lexical detail: for a good many of the rarer, more lexicalized postbases, exhaustive lists are given of the lexemic bases in which they occur. Jacobson's postbase dictionary gives copious exemplification for its entries, and includes attestations from narrative text. It was of tremendous value to me in my work on postbases at all stages. The postbase glosses used in the present work use or nearly use Jacobson's exact wording except (i) in cases where I have reanalyzed the meaning; (ii) where Chevak differs from the entry he gives, whether or not that entry of his was made specifically for HBC; (iii) that I use 'S', 'A', 'O', 'POS', and reference to oblique cases in glosses. Because this work and his may readily be compared, I have generally not indicated similarities and divergences between his glosses and mine, except where they bear on dialectological questions. I have also noted which postbases cited here are not found in the draft of his dictionary I consulted (Jacobson, 1980b).

## §6-- Footnotes.

1. Included here is also one case of putative consonant modification, reminiscent of the same phenomenon found in languages of the Northwest Pacific Coast: kuuk 'flowing water', quuq 'urine'. This is probably spurious, however, cf. Central Yup'ik ku- 'flowing, liquid' from which comes kuig- 'river', probably cognate with Greenlandic kuuk, but Proto Central Yup'ik \*eter-qur- from \*t̥t̥r- 'bottom, anus' and -qur- (NN, VV) 'one that is like N', cf. GCY, HBC teq'ur-, Nunivak etqur-. Greenlandic reflects a loss of Proto Eskimo \*t̥t̥ which must be old, cf. Central Yup'ik qurre- 'to urinate'.
2. "The ordering of the affixes in such multiply compounded words is based on the principle that each affix is completed by-- or stands in relation to-- only those parts of the word which precede it [i.e., to the base or expanded base which precedes it--ACW]. In German however just the opposite is the case, so that a word always follows what it completes. Thus, the affixes in Greenlandic appear in exactly the opposite order from that of the words in German with the corresponding meaning. This rule is subject to several exceptions, such that certain neutral VV postbases have fixed ordering with respect to one another, that is it either must always precede or always follow." [My translation.]
3. The issue of the location of the semantic nucleus in a morphologically complex word is a manifestation of a more general phenomenon with which Sapir was concerned throughout his career. In his general book Language, he discusses the different ways in which languages apportion types of meanings (along a continuum from concrete to relational) to types of grammatical processes (affixation, compounding, phonological

symbolism, etc.) (Sapir 1921). In Nootka, then, the issue is the degree to which affixation expresses concrete meanings: more so in governing suffixes, less so in restrictive suffixes. See his study of noun incorporation (Sapir 1911) for an early discussion of these issues.

4. Possibly this is only a mechanical error, and what he meant was that the order is  $V_b + (V_{neg}) + (V_{mod}) + (V_e + (V_{neg}) + (V_{mod}))_0^n + V_s + Infl$ . I am not in a position to evaluate such a claim for Greenlandic. Notice, incidentally, what a burden the correct rules for generating this sequence would put on his notational economics: at least one extra rule would have to be added, and  $V_{neg}$  and  $V_{mod}$  would be mentioned twice.

5. Fortescue makes the very interesting claim that the  $V_s$  is in general concerned with the relation of the proposition expressed in the expanded  $V_b$  to the "here and now if the speech situation". There are however major counterexamples, e.g., nearly all  $V_{conj}$  (such as *riar(-nani)* 'before').

6. In spite of his term "derivational rules" for his internal syntactic phrase-structure rules, his approach is item and arrangement because structures are generated from top to bottom (rather than constructionally, from bottom to top) and all insertion of morphemes takes place on fully formed constituent structure.

## 7. Denominal verbalizing postbases (NV).

This chapter is concerned primarily with the syntactic classification and lexicological description of NV postbases (§§7.1-5). A brief section follows where classification in terms of semantic selection is noted (§7.6), and the chapter closes with an etymological treatment of NV postbases (§7.7).

The internal structure of NV postbases is:

$$\text{NN} \begin{matrix} n \\ 0 \end{matrix} + \text{NV} + \text{VV} \begin{matrix} m \\ 0 \end{matrix}$$

NN here can also include noun inflections, and all subcomponents may either be postbases or postbase roots. The internal structure of postbases is often only ethmologically relevant.

NV derivation is a process where a noun base-- which as such has the inherent potential for combining with elements in specific structural relations to it to form complex noun phrases, noun phrases, etc.-- is converted to a verb base, with concomitant rearrangement of its combinatory potential. In the terms of an alternative, external syntactic account, NV derivation is a process where a complex noun phrase, noun base, or portion thereof is converted to a clause. As noted in §6, a fully adequate description must make use of both accounts.

According to syntactic criteria, NV derivation can be broken into four distinct subclasses. The first three correspond to the three major classes of syntactic constituents in complex noun phrases: adj-V, those deriving verb bases from noun bases which (can) occur as and adj constituent; n-V, those deriving verb bases from noun bases which (can) occur as an n constituent; and ob-V, those deriving verb bases from noun bases which (can) occur as an (inflected or uninflected)

ob constituents. The fourth class, pd-V, consists of those deriving verb bases from independent particles (and sometimes even longer independent utterances). It therefore corresponds not to a constituent of a complex noun phrase, but instead to any unit, including a complex noun phrase, that has independent predicational function (these are represented as dominated by pd).

The postbases in all four classes can each be analyzed in two ways. The first takes the base as syntactico-semantic nucleus, and the second takes the postbase as syntactico-semantic nucleus. The analyses are not uniformly successful: the former becomes increasingly less plausible as one goes down the list in the order cited, while the latter interpretation becomes increasingly less plausible taking the list in reverse order.

A short semantic characterization of each of the four classes will present the classification more vividly than the technical description just given, where syntactic terms specific to this language were used. In fact, I give here two semantic characterizations of each, the first taking the base as syntactico-semantic nucleus, and the second taking the postbase as syntactico-semantic nucleus:

#### 1. adj-V.

Base as nucleus: the postbase makes a predicate of a noun or adjectival noun.

Postbase as nucleus: the postbase is a verb which incorporates a noun or adjectival noun as a predicate nominal or adjective.

## 2. n-V.

Base as nucleus: the postbase makes a predicate of a noun.

Postbase as nucleus: the postbase is a verb which incorporates a noun as an indefinite patient.

## 3. ob-V.

Base as nucleus: the postbase makes a predicate of an implicitly or explicitly oblique modifier.

Postbase as nucleus: the postbase is a verb which incorporates an implicitly or explicitly oblique noun phrase as an oblique modifier.

## 4. pd-V.

Base as nucleus: the postbase makes a predicate of an independent predication or particle.

Postbase as nucleus: the postbase is a verb which incorporates an independent predication or particle as its complement.

Let me note that the relative plausibility of the two interpretations cannot be evaluated from the English descriptions. To me, in fact, the postbase-as-nucleus descriptions all make better intuitive sense, since the Western grammatical tradition takes the finite verb of a sentence as the starting point for its analysis (and that verb is never a structural appendage of a noun in the languages on which the tradition is based).

Cross-cutting this first four-way syntactic classification is another, more subtle syntactic classification. It hinges on whether a semantic role expressed in a constituent which stands in relation to the underlying (or incorporated) noun base regularly is expressed as S, A, O, or an oblique relation of the derived verb base. This sug-

Table 7-1: Classification of NV postbases.

PRESERVATION OF ELEMENTS IN RELATION TO THE UNDERLYING BASE			
	<u>r1-preserving</u>	<u>lc-preserving</u>	<u>∅-preserving</u>
<u>adj-V</u>	Possessive attributive (have 0 as one's N).	----	General attributive (to be N).
<u>n-V</u>	Possessive verbalizing (to have N, do to one's N).	Existential (for there to be N at S).	Object incorporating (to do to N).
<u>ob-V</u>	Oblique possessum incorporating (to go to the N of 0).	----	Oblique incorporating (to go to/be at/do like, etc., N).
<u>pd-V</u>	----	----	Delocutionary (to say pd (to 0)).

gests a good many possibilities, but only three are realized: either the r1 constituent resurfaces, a localis ob constituent resurfaces, or nothing resurfaces. I call these r1-preserving, lc-preserving, and ∅-preserving.

In semantic terms this distinction is extremely straightforward: the relation which is preserved becomes a part of what is asserted in potential clauses governed by the derived verb base: thus the idea of possession is asserted with r1-preserving postbases, and the idea of being at a location is asserted with lc-preserving postbases. These ideas are part of the inflectional system, and are presupposed in the syntactic potential of the underlying noun base. That is, the NV postbase brings out meaning which is already there in the underlying noun base's syntax.

Table 7-1 shows the main classes of NV postbases, using the two sets of classificatory criteria just noted. The boxes contain informal

terms for the classes, along with sample English glosses which cover the meaning of the basic syntactic pattern of the postbase classes.

In the sections that follow, postbases are listed and discussed according to this classification. Postbases with very limited occurrence cannot be classified with certainty but are placed in what seems to be the most likely class. References to postbase citations in Jacobson's postbase dictionary (Jacobson 1980b) take the form 'SJ(x)' where 'x' is Jacobson's entry number. Differences in NV postbase inventory are indicated in individual entries. Postbases cited by Jacobson but not recognized as occurring in Chevak by those there whom I consulted are as follows (i.e., other than those mentioned in following sections as not occurring):

- SJ(51.1) :(ng)icag- 'to be in need of N; to lack need-d N'.
- SJ(109.1) -laar(ar)- [Nunivak] 'to get a new N'.
- SJ(280) -rpau- 'to be a large N; to have a large N'. "...is...used in some areas to mean 'to have a large N', particularly with words for body parts."
- SJ(281) -rpi- 'to have a large N'.
- SJ(336) +(r)tuuma-, +(r)tuumar- 'together with one's N or N-s'. "...+(r)tuuma- is used with the subordinative [= APO] mood verb endings...[+(r)tuumar-] is used with 'independent relative' endings."
- SJ(352) +viar- 'subject acts toward object in area indicated by N'. "Used with demonstrative bases; takes transitive subordinative [= APO] endings."
- SJ(357) -vli- 'to have messy N' "of limited use".



SJ(51.1) is illustrated with piicagtuq (pi- 'thing', :(ng)icag-, IND(3s)) 'he needs something' "lexicalized meaning 'he is praying'" and two other examples. In Chevak there is piicartuq (pi- 'thing', -ng:it°e- NV(6) 'to lack N', \*yar- VV 'S/A would V', IND(3s) 'he is reciting his rosary'. Thus either Chevak has folk-etymologized g to r, or Jacobson mistook GCY r for g. Because Chevak's combination -ng:icar- is semantically and morphologically transparent, it is not listed separately.

SJ(280) is found in Chevak, but is not listed because it is transparent, derived from -rpag- 'big N, one with a big N' plus °ng:u- NV(3) 'to be N'. Neither -rpag- nor -rpau- in Chevak is especially associated with body part terms. SJ(281), probably from -rpag- plus --i- NV (34), is not found in Chevak at all.

SJ(336) is found in Chevak only with independent relatives (as +tuumar-, see §5.1.4.2).

### 7.1. Adj-V.

This class of postbases is best characterized as treating the base as syntactico-semantic nucleus. The postbase itself functions to convert a noun base serving as adj constituent of a potential complex noun phrase into a verb base serving as pd constituent of an exactly comparable potential clause. The two subclasses of adj-V postbases, possessive attributive and general attributive, complement each other precisely: the former acts on transitive noun bases (i.e., taking a possessive r1 constituent), and the latter on intransitive noun bases (i.e., taking no r1 constituent).

## 7.1.1. Possessive attributive (adj-V, r1-preserving).

This class consists of one elementary postbase and a derivative of it, and both have the following syntactic pattern:

## POSSESSIVE ATTRIBUTIVE (adj-V, r1-preserving)

$$\begin{array}{l}
 [\underline{r1} \rightarrow \underline{n}]_n \quad \underline{r1} \rightarrow \underline{ap} \\
 (d) \quad c \quad b \quad [N] \\
 \Rightarrow (d) \quad c \quad b \quad [N + \text{POS ATR}_V]
 \end{array}$$

The above representation presupposes the base-as-postbase nucleus analysis. Treating the postbase as semantic nucleus is cumbersome, as the following formulation shows (the postbase here is taken as a transitive verb):

$$\begin{array}{l}
 [\underline{r1} \rightarrow \underline{n}]_n \widehat{[\underline{r1} \rightarrow \underline{adj}]_{adj}} \\
 (d) \quad c \quad b \quad [N] \\
 [[\underline{r1} \rightarrow \underline{n}]_n \widehat{[\underline{r1} \rightarrow \underline{adj}]_{adj}}]_n \quad \underline{r1} \rightarrow \underline{ap} \\
 \Rightarrow (d) \quad c \quad b \quad [N] \quad b \quad [\text{POS ATR}_V] \\
 \Rightarrow (d) \quad c \quad -- \quad -- \quad b \quad [N + \text{POS ATR}_V]
 \end{array}$$

In particular, the above is problematical because it posits a r1 constituent with role b twice, one dependent on the original noun base [N], and the other dependent on the introduced postbase [POS ATR<sub>V</sub>]. Note that specific semantic selectional restrictions would have to be stated twice: thus for -ksagute- NV(2) below, the r1 has to be eligible to have [N] as kin, and this must be determined once where it marks the possessor of [N], and again where it marks the A of [POS ATR<sub>V</sub>] (into which [N] must already be inserted so that it is can be seen whether r1 can have [N] as kin!). Once all this has been done, one of the

two r1 constituents must be made to disappear, as in the third line of the representation above. The base as nucleus representation is more viable than the postbase as nucleus representation, since the latter creates identical r1 constituents only to delete one of them obligatorily.

The postbases are:

(1) -ke- 'for A to have O as its N'.

Examples:

(7.1) a. Taivkaralriarulur=am                      Nuk'am              qetunraa  
 Taivkaralria-rulur\*-ABs=but      Nuk'ar-RLs      qetunrar\*-AB(3s-s)  
 dear Taivkaralria                      Nuk'aq's              his son  
 but dear Taivkaralria, Nuk'aq's son... (10a:3)

b. Nuk'am Taivkaralriaruluq      qetunraqaa  
       -RLs                                      qetunrar\*-ke-IND(3s-3s)  
 Nuk'aq                                      he has him as a son  
 Nuk'aq has dear Taivkaralria as his son = Dear Taivkaralria  
 is Nuk'aq's son (e)

(7.2) mat'um              quliram              apallua (P)              apalluqaa,  
 here:E-RLs      qulirar-RLs      apallur-AB(3s-s)      apallur-ke-IND(3s-s)  
 this              legend's              its theme              it has as a theme

ayuqniaruciq                      this story's theme (P) it has as a theme  
 ayuqniar@!(u)cir-ABs              the desire to achieve success through  
 the desire to resemble              imitation (7b:19) [ 'P' = pause ]

(7.3) \*enet              kenurrerrlainaqai  
 ene-(AB)p      kenurar\*-rrlainar\*-ke-IND(3s-3p) (3:66, e)  
 house              \*having them as full of lights  
 (cf. enet kenurrerrlainaq 'house, full of lights')

(7.4) a. nunakait  
 nuna-ke-IND(3p-3p)  
 that's their village (cf. nunait 'their village')

b. \*nunakaat  
 nuna-ke-IND(3p-3s)  
 that's the land (rejected on grounds that land is occupied  
 but not owned) (cf. \*nunaat 'their land')

(7.5) civuqliqluku  
 civu-qlir\*-ke-APO(3s)  
 they had him as their one in front = he was the one in front of  
 them, in the lead (3:48)

- (7.6) a. malle<sup>n</sup>qelluki  
 malle<sup>n</sup>g-ner-ke-APO(3p)  
 he had them as his more close ones  
 = they were closer than he was (3:41)
- b. malle<sup>n</sup>rai  
 malle<sup>n</sup>g-ner-AB(3s-p)  
 his closer ones = the ones closer than him

(7.7) atanqeci<sup>n</sup>qamci  
 ataner-ke+ci<sup>n</sup>qe-IND(1s-2s)  
 you all will be my bosses (vol.)

(7.8) wangkut<sup>n</sup>ng caskukluta  
 MD 1p caskug-ke-APO(1p)  
 we had ourselves as tools = we were our own tools (9b:5)

(7.1) overtly illustrates the syntactic pattern expressed in the representation for possessive attributive postbases, with (7.1a-b) corresponding to the first and second lines, respectively. The underlying noun base is qetunrar\*- 'son', which can take a possessive r1 constituent (Nuk'am here) and, when it functions as an adj constituent itself (as it does here), a n constituent ( Taivkaralriaruluq here). The derived verb base is qetunraqe- 'for A to have O as his son', which takes a r1 constituent (here again Nuk'am) and a n constituent (here again Taivkaralriaruluq). (7.2) provides interesting confirmation of the syntactic pattern by showing that it is exploited as a process in actual speech. The passage contains a short pause after apallua, which is then substituted with apalluqaa (the usual self-correction intonation accompanies it on the tape). Importantly, the r1 constituent mat'um quliram is not repeated: it serves first as the possessive r1 constituent cross referenced by the ending on the noun apallua, and then as transitive subject r1 constituent cross referenced by the ending on the predication apalluqaa. This casts extreme doubt on the postbase-as-nucleus analysis here, and it shows that the simple addition

of -ke- has the function of converting a (potential) complex noun phrase to a (potential) clause, leaving everything else intact. (7.3) shows that intransitive (i.e., unpossessable) adjectival noun bases cannot take -ke-. (7.4) shows that the usual association of number with lexicalized meaning differences, as well as culturally based judgements on the appropriateness of the semantic and grammatical category of possession (7.4b) are unchanged by the addition of -ke-; incidentally, *nunakaat* can mean 'that's their village' if the n constituent refers to a village which breaks the usual rule that villages are lexical plurals: *Angkelic'aq nunakaat* 'Anchorage is their village' but *Angkelic'aq nunait* 'Anchorage, their village'. This reflects the fact that the n constituent which is syntactically dependent on the predication *nunakaat* triggers strict agreement, while the n constituent which is in syntactic apposition to the noun in adj function, *nunait*, triggers no agreement, letting the lexicalized plural number show through. (7.5-7) show different aspects of the semantic relation of possessor to possessum as they are translated into predicate form through -ke-: In (7.5), the PS base *civu-* 'area in front', derived as adj by the PS-adj postbase *-qlir\**- 'one far in the direction of PS', determines the spatial relation between what ends up as A and O of *civuliqe-*. In (7.6), the comparative relation between possessor and possessum set up by *-ner-* 'most V with respect to POS' determines the semantic relation between A and O in the predication with -ke-. Lastly in (7.7), it is the social relation between the base and possessor that determines the relation between A and O. The example in (7.8) shows a further operation of reflexivization on the derived verb base: because this only occurs with exclusively transitive bases, it proves that -ke-

is a deriver of exclusively transitive bases.

A final argument that -ke- makes verb bases of noun bases which have the potential for functioning as adj constituents is the high number of V-adj postbases which combine with -ke- to form VV postbases: +steke- (also @citeke- with class IV bases) 'for O to do V to A', with +ste- (also @cite-), VN active participle; -lqe- past tense (before transitive inflectional endings) with -l1er- VN completive prtciple; +'aqe- 'S/A would V' with +'ar- VN passive participle. Exception: @:(u)teke- 'to V on account of O', from @:(u)te- VN 'device for V-ing', which derives ordinary nouns, but note that the two postbases are highly lexicalized, and the former may have been formed when the latter was productive, and functioned more frequently as a deriver of adjectival noun bases.

(2) -ksagute- 'for A to acquire, have acquired O as his N, for O to become A's N'.

Dialect note: Also used instead of SJ(94) -kliute- 'to have obtained one's N, subject acquires object as his N', which is not used in Chevak (cf. (7.11)). Examples:

(7.9) Cuna=ggur -un'                    -taw'            nuliqluku                    -taw'  
 then=said here:R-ABs then            nulirr-ke-APO(3s) then  
 then it came to pass for her            having her as a wife

nuliqsagulluku  
 nulirr-ksagute-APO(3s)            Then they were married, and they lived  
 she had become his wife            as man and wife (8d:19)

(7.10) irniaqsagutaa  
 irniar-ksagute-IND(3s-3s)  
 that's his child, that child was born to him (e)

(7.11) a. angyaqsagutaa                    that's his boat now (e)  
 angyar-ksagute-IND(3s-3s)

b. \*angyaqliutaa                    (cf. SJ(94): it is his boat  
 angyar-kliute-IND(3s-3s)            now)

(7.12) caliaqsagutaa  
 caliar-ksagute-IND(3s-3s)  
 that's his job now

The postbase has the same syntactic patterning as -ke-, but adds an additional component of meaning: it usually implies the continuation of a state over duration of time. (7.9) shows this contrast with -ke- (made inchoative by *cuna=ggur-un'*). The postbase often selects kin bases (7.9-10), though others may also be selected (7.11-12).

#### 7.1.2. General attributive (adj-V, $\emptyset$ -preserving).

This class has two members, and both have the following syntactic pattern:

GENERAL ATTRIBUTIVE (adj-V,  $\emptyset$ -preserving)

$[r_l \rightarrow n]_n$	$r_l \rightarrow$ ,	$lc/tm \rightarrow$	$ap$
(d) c	(b)	--	[N]
$\Rightarrow$ (d)	c	--	(b),-- [N + GEN ATR <sub>V</sub> ]

The optional possessor for the underlying noun base here is needed to account for a very limited pattern displayed by the postbase #ng:u- (NV(3) 'to be N'), and is included since this pattern is of historical and theoretical interest (see the discussion of that postbase). The above representation presupposes the base-as-nucleus approach to the general attributive pattern. For this pattern, the postbase-as-nucleus approach is not problematical (the reader can see how that approach would be represented by deleting the  $r_l$  columns from the representation of the postbase-as-nucleus analysis of possessive attributives given earlier; note though that the  $r_l$  column for the underlying potential complex noun phrase would have to be left in for the optional possessor

if one wished also to represent that limited pattern). Leaving aside the limited pattern where the underlying noun base is possessed, the only argument that can be mustered for the superiority of the base-as-nucleus approach here is that it more closely reflects the surface division into bases and postbases.

The postbases are:

(3)  $\text{ng:u-}$  'to be N, for S (human) to live on as a N'.

Examples:

(7.13) a. anuurulur=am nukalpiaq  
 anuurulur-ABs=but nukalpiar-ABs  
 grandmother great hunter  
 but the grandmother, who was the great hunter (in disguise)  
 (3:59)

b. anuurulur=am nukalpiaruuq  
 $\text{ng:u-IND(3s)}$   
 but the grandmother was the great hunter (3:59 e)

(7.14) a. tunucillget makut taw'  
 tunucilleg-(AB)p here:E:(AB)p then  
 arctic loons

-cucunanqurraulruut -taw'  
 cucu@#nanqurrar\* $\text{ng:u-11ru-IND(3p)}$  then  
 they were the ones that were most admired

the loons, they were the ones which were the very most admirable (to him)

b. anguksagarmi mallenruluteng  
 angute@-ksagar\*-LCs malleg-ner $\text{ng:u-AP0(3Rp)}$   
 than the shabby man they being closer  
 they were closer than the shabby man (3:41 e)

(7.15) angutmun pisten̄guuq  
 angute-TMs piste $\text{ng:u-IND(3s)}$   
 he is a servant of the man (e; cf. Reed, et al. (1977:322))  
 (cf. angutem pistii 'the man's servant')

(7.16) pug'uk kanaqlaulutek  
 puge-IND(3d) kanaqlag $\text{ng:u-AP0(3d)}$   
 they emerged they being muskrats = as muskrats (8d:33)



- (7.17) qanemciuvkenan' qulirauyaaquq  
 qanemcir<sup>#</sup>ng:u+pk<sup>o</sup>et<sup>o</sup>e-APO(3Rs) qulirar<sup>#</sup>ng:u<sup>#</sup>yaaqe-IND(3s)  
 it's not an historical account it's supposed to be a legend  
 (8d:37)
- (7.18) cuuluteng , nunauluteng tawani kuigem  
 cuu-APO(3Rp) nuna-ng:u-APO(3Rp) there:RA-LC kuig-RLs  
 they living they being a village river's
- ciñiini Life went on, and the village went on there  
 ciña-LC(3s-s) on the riverbank (8d:7)  
 on it's bank
- (7.19) ilait=11'-taw' muragarrlainauluteng  
 ila-AB(3p-p)=&-then muragar-rrlainar\*<sup>#</sup>ng:u-APO(3Rp)  
 some of them being made all of wood (6b:13a)
- (7.20) pekcitngunaurtuq  
 pekete<sup>#</sup>cite<sup>#</sup>ng:u@<sup>#</sup>naur-IND(3s)  
 she was the (only) walker = she is the only one who was up and  
 about regularly (3:21)
- (7.21) atauciuluk=11u iqucuunaku ,  
 ataucir<sup>#</sup>ng:u-APO(3s)=& iquite<sup>#</sup>yuit<sup>o</sup>e-APO(3s)  
 and doing to one who is never making him fall  
one (single)
- qayutuuluk[i]-taw' aggnaur[ai]  
 qayutu<sup>#</sup>ng:u-APO(3p)-then agte@<sup>#</sup>naur-IND(3s-3p)  
 doing to them being so many he caused to go over
- he struck down not one, but sent many (to their deaths)  
 (3:111)
- (7.22) unuakuraungan  
 unuaku:arar\*<sup>#</sup>ng:u-CQO(3s)  
 because it was early morning (3:51)

The basic syntactic pattern is illustrated in (7.13a-b), corresponding, respectively, to the first and second lines in the representation. The adj constituent in (7.13a) is an ordinary noun in an unpossessed version. Underlying (7.19) is an inherently intransitive adjectival noun base. But <sup>#</sup>ng:u- does not restrict itself to intransitive underlying bases: cucunanqurrar\*- 'the ones most advanced by POS' in (7.14a) is an inherently transitive adjectival noun base. (7.14b) shows the fate of the possessor of the underlying base in this kind of

construction: it appears in the localis case (compare (7.6a,b) for underlying and -ke- forms). This is limited to cases where adj-V postbases are added to adjectival noun bases which themselves are derived with -ner-/@ller-, the VN comparative postbase. An example found in Reed et al. (1977) and reelicited in Chevak (7.15) shows the displaced possessor of the underlying noun base in the terminalis case. This illuminates the semi-productive VV passive postbase +'ar:u- 'to be V-ed by s.o.-TM', found in all Eskimo languages to my knowledge, which consists of "ng:u- preceded by +'ar- passive participle 'the one V-ed by POS': when "ng:u- is added to the latter, which derives transitive adjectival noun bases, the possessor goes to the TM case to form the paraphrastic agent phrase of the passive, just as the possessor of piste- in (7.15) does. I must point out that this is by no means a common, productive process, and I have not found any instances of tm constituents with possessor role in my texts on the model of (7.15).

Because it combines with transitive and intransitive noun bases which can function as adj constituents-- and nearly any noun base can do that-- "ng:u- is extremely versatile. The one constraint, of course, is that the proper presupposed or asserted coreference holds between the two elements, according to the semantic basis for the syntactic relation of apposition. Examples where ordinary nouns underlie forms with "ng:u- are (7.13, 15, 16, 17, 18). (7.17) is interesting in that it shows a contrastive construction where the postbase "ng:u- is held constant, and the base switches: this should serve as a warning that the postbase-as-nucleus analysis should not be discarded here entirely. In (7.18) is a use of "ng:u- frequent in narrative which can be glossed 'for S (human) to live on as a N' (note that in this examples, the S of

nunau- is the inhabitants, not the village itself). In fact the base cuu- 'to live' there seems to be an irregular formation from cug- 'person' plus ng:u-, literally, 'to live on as a person' (cf. the regular formation cug'u- 'to be a person'). Examples where adjectival noun bases underlie forms with ng:u- are (7.14, 19, 20); numeral bases: (7.21), two examples; temporal noun base: (7.22); pronoun base: (5.1). Examples have not been found for independent relatives, demonstrative bases (though that is found in Greenlandic, cf. Bergsland 1955:93), locationals, or inflected forms (reported for Labrador Inutitut in Smith 1978, e.g., =mu+u- (TM+be) 'to go (to) x'-- Central Yup'ik does this with inchoatives of various kinds, cf. §7.3 and §7.7). The transitive endings on the ng:u- bases in (7.21) are brought about by the process described in §5.2, where an exclusively intransitive base with stative meaning will, in the appositional mood, take transitive marking, with A and O coreferential, respectively, with the A and O of the main clause.

Finally, proof that ng:u- and -ke- form an alternating set comes from examples such as (7.6a,b) and (7.14a,b), comparative constructions; and from the alternation between -llru- the ordinary VV past tense, with -l1er- VN completive participle plus ng:u-, and -lqe- VV past tense used before transitive inflectional endings (with -l1er- plus -ke-).

- (4) ng:urte- 'for S to become N, like N; for A to cause O to become exposed as N (flesh, bone)'

Examples:

- (7.23) a. kanaqlaurtenqiggluku  
 kanaqlagng:urte-nqigte-APO(3s)  
 she made him turn back into a muskrat (8d:34)



of A), in spite of the etymological soundness of this approach, because (i) intransitive uses are more common by far, occurring with a wider range of noun bases in a wider range of moods (the transitive is largely found in the APO, making one suspect the process displayed in (5.21), discussed in §5.2); (ii) HBC and "some [other] areas" (SJ:346) are unique in having a transitive version. Jacobson gives the meaning of the transitive version of  $\text{ng:urte-}$  as 'subject exposes the N of object', but this gloss does not account for examples like (7.23) (though I agree that the notion of 'expose' is required as a supplementary English translation of transitive  $\text{ng:urte-}$ ). The real problem of translation, it seems, is that all cases of  $\text{-ng:urte-}$  show a semantic idea broader than English 'become', that is to say, a strict notion of 'identity' is not required. Thus in (7.24, 26) the body is visible as flesh; and in (7.25) the referents are like white people.

On the issue of its base selection,  $\text{ng:urte-}$  occurs with ordinary noun bases in (7.23, 25, 26), with adjectival noun bases in (7.24, 27), and with temporal bases in (7.28, 29). Erner- 'day' in (7.28) is a time measure noun base, and ak'a 'then, indeed' in (7.29) is an idiosyncratic temporal base. Notice that the lc constituent *tamaani* in (7.29a) is unchanged when  $\text{ng:urte-}$  is added to its constituent in (7.29b).

## 7.2. n-V.

This is by far the most numerous NV class, and it shows the greatest internal diversity. It has rl-preserving, lc-preserving, and  $\emptyset$ -preserving subclasses; the first of these is further broken down according to distinctions based on some VV derivational processes.

A theoretical problem common to the entire class is that the syntactic status of the underlying noun base within the derived base. To explore this problem, I will give here the basic representations for the possessive verbalizing class:

POSSESSIVE VERBALIZING (n-V / r1-preserving)

(i) Base as syntactico-semantic nucleus:

$$\begin{array}{l} [\underline{r1} \rightarrow \underline{n}]_n \quad \underline{r1} \rightarrow, \quad \underline{md} \rightarrow \quad \underline{ap} \\ (e-)d \quad [N] \quad ((b) \quad \quad \quad -- \quad \quad \quad a) \\ \Rightarrow (e) \quad d \quad -- \quad ((b-)a) \quad [N + POS \text{ VBL}_V] \end{array}$$

(ii) Postbase as syntactico-semantic nucleus:

$$\begin{array}{l} [\underline{r1} \rightarrow \underline{n}]_n \widehat{[\underline{r1} \rightarrow \underline{adj}]_{adj}} \\ (e-)d \quad [N] \quad ((b) \quad \quad \quad a) \\ \\ [\underline{r1} \rightarrow \underline{n}]_n \quad \underline{r1} \rightarrow, \quad [[\underline{r1} \rightarrow \underline{n}]_n \widehat{[\underline{r1} \rightarrow \underline{adj}]_{adj}}]_{md} \quad \underline{ap} \\ \Rightarrow (e) \quad d \quad -- \quad (e-)d \quad [N] \quad ((b) \quad \quad \quad a) \quad [POS \text{ VBL}_V] \\ \Rightarrow (e) \quad d \quad -- \quad \quad \quad -- \quad \quad \quad ((b) \quad \quad \quad a) \quad [N + POS \text{ VBL}_V] \end{array}$$

For illustration, see examples under -ngqerr- NV(5) 'to have N', below. According to the base-as-nucleus analysis, the role of the underlying adj constituent, a, ends up as the role of the md constituent, but there is no intermediate mechanism to explain how it gets there (though several can be give, see especially NV(8) -lgu- and the mechanism implied there).

According to the postbase-as-nucleus analysis, the syntactic status of the underlying base within the derived base is at issue. In the above, the possessive verbalizer postbase is represented as a verb with an n constituent (its agent) and a md constituent (its patient).

The md constituent corresponds to the syntactic use of the modalis case, where it marks indefinite patients (and indeed, the underlying noun base is always indefinite in construction with possessive verbalizing postbases). This configuration of constituents, which I call an antipassive construction, is found in verb bases derived with +i- VV antipassive and in the intransitive versions of S/A core verb bases (see §5.2 for both of these). Given these facts, one has the choice of deriving the antipassive construction given as the underlying representation above for possessive verbalizing postbases from a corresponding active form, i.e., one could treat the postbases as underlyingly transitive verbs which undergo obligatory antipassivization. A point in favor of this is treatment is that it allows one to consider all syntactic uses of the md constituent as derived rather than as underlying (provided one also derives the intransitive variants of S/A core verb bases from the transitive variants). But a point against this treatment is that unlike any of the other antipassive constructions, this one has no active version that is ever realized. Thus, it is impossible with a possessive verbalizing postbase (or any other n-V postbase) to express the underlying noun base as anything but indefinite. Therefore, within the postbase as nucleus approach, possessive verbalizing postbases are best treated as inherently antipassive. Within a base as nucleus approach, these postbases can be seen as deriving antipassive constructions from noun bases, such that any adj constituent to the noun base but not the noun base itself appears as a syntactic md constituent.

The arguments for and against treating possessive verbalizing postbases as governing fundamental antipassive constructions, rather than antipassive constructions derived from active transitive constructions,

have implications for the base- vs. postbase-as-nucleus issue. Up to a point, we saw that these postbases have similarities of patterning with verb bases, but they differ in that they have no active construction to complement the antipassive construction.

These arguments all hold for the other n-V postbase classes as well, since all of them can be analyzed as verbs taking a complex noun phrase as a md constituent, all treat that md constituent as an indefinite patient, and all take the noun base functioning as n constituent within the md constituent and join it with the n-V postbase.

#### 7.2.1. Possessive verbalizing (n-V, r1-preserving).

The basic representation shows an antipassive construction as the output, and was presented in the last section. It can be seen there that possessive verbalizing postbases are quite similar in effect to VV antipassive postbases: the role of the r1 constituent dependent on the underlying base shifts to the n constituent in relation to the derived base, and the role of the n or adj constituent in relation to the underlying base shifts to the md constituent dependent on the derived base. (There are two differences: the possessive verbalizing postbases begin with the role in the r1 dependent on n, and the role in the adj; while the VV antipassive begins with the role in the r1 dependent on pd and the role in the n.) Semantically speaking, possessive verbalizing postbases convert the possessor-possessum relation which is presupposed in the underlying noun base into the assertion of the derived verb base, e.g., a noun base meaning 'son (of someone)', presupposing possession becomes a verb base meaning 'to have a son', where possession is asserted.



The basic possessive verbalizing derivational patterns, which results in an antipassive construction, is shown in the possessive verbalizing representation above. But it is actually one among several possessive verbalizing postbase derivational patterns. The following shows those other patterns by giving their outputs, using the same role indices set up for the original possessive verbalizing representation:

Table 7-2: Possessive verbalizing subclasses.

<u>Output</u> (in terms of clause phrase structure)	<u>Subclass</u>	<u>Derived base class</u>
$\underline{rl} \rightarrow, [ \underline{rl} \rightarrow \underline{n} ]_{n \rightarrow}, \underline{md} \rightarrow \underline{pd}$		
-- (e) d ((b-)a) [N + APAS <sub>V</sub> ]	Antipassive	V <sub>i</sub>
(e-)d ((g) f) ((b-)a) [N + INDIR <sub>V</sub> ]	Indirective	V <sub>sa</sub>
(j-)h (e) d ((b-)a) [N + TR CAUS <sub>V</sub> ]	Transitive causative	V <sub>t</sub>
(h-)h ((e) d) ((b-)a) [N + S/A CAUS <sub>V</sub> ]	S/A core causative	V <sub>sa</sub>
((j-)h) (e) d ((b-)a) [N + S/O CAUS <sub>V</sub> ]	S/O core causative	V <sub>so</sub>

I will treat each of these derivational patterns except the first as secondary in some sense, derived from the first: that is, my technique for organizing the list of five derivational patterns above is to say that the first is an intermediate stage to the four others. Thus, the indirective adds a new 0 role to the basic antipassive construction-- just as the VV indirective @:(u)te- does-- and it has the skeletal meaning 'to V (for 0)'. The causatives add a new A role-- just as the VV causatives do-- and they have the skeletal meanings 'for A to cause 0 to V' (transitive causative); 'for A to cause 0 to V; for S to cause (someone) to do V' (S/A core causative); 'for S/O to be caused (by A) to V' (S/O core causative). Note that the causatives come in

three separate base classes ( $V_t$ ,  $V_{sa}$ ,  $V_{s0}$ ), while the indirective comes only in one ( $V_{sa}$ ). Because new roles are added, the postbase-as-nucleus interpretation is enhanced for these postbases. Etymologically, positing this intermediate stage is sometimes justified, and sometimes not justified. Thus, precisely as with  $\text{ng:urte- NV(4)}$  from  $\text{ng:u-}$ , some S/O core causatives are derived with the inchoative causative  $\sqrt{r}$ - from a corresponding antipassive postbase; in other cases, though, such transparency is not found.

#### 7.2.1.1. Possessive verbalizing, antipassive subclass.

Because this class adds no new syntactic elements, it is most amenable to the base-as-nucleus analysis. By contrast, the postbase-as-nucleus analysis is weak with this subclass since it requires double generation with subsequent deletion of the coreferent  $n$  and  $r1$  constituents indexed with  $d$  in the diagram for possessive verbalizing postbases.

The postbases are:

(5) -ngqerr- 'to have N'.

Examples:

(7.30) pugyarangqerrami kangtunrilngurmeng qaygiq  
 pugyarar-ngqerr-CQ0(3Rs) kangtu-nrit<sup>o</sup>e-INP-MDs qaygir-ABs  
 because it had a trapdoor not a very wide one  
entrance  
 because the qaygiq had a narrow trapdoor entrance (8b:12)

(7.31) cali muraganeng mer'utengqerrluteng  
 also muragar-MUp mer'ute-ngqerr-AP0(3Rp)  
 wood having drinking ladles  
 they also had wooden drinking ladles (6b:14)

(7.32) caayumeng iliini=ll' caarralameng, iliini=ll'-taw'  
 caayur-MDs ila-LC(3s-s)=& caarralar-MDs -then  
 tea sometimes sugar  
 caalangqerrnauertukut We used to have tea, sometimes  
 caalar-ngqerr@\*naur-IND(1p) sugar, and dometimes shortening  
 we used to have shortening (9b:21)

- (7.33) avingqerrsugnaunani=ll'                      ugna  
 avig-ngqerr+yugnait°e-APO(3Rs)=&      exit:R-ABs  
 it probably having no door                      the one out there  
 the one out there (= the entrance passage) probably has no  
 door (6:21)
- (7.34) nukalpiarat                                      paningqerrlun'  
 nukalpiar-AB(3p-s)=&                      panig-ngqerr-APO(3Rs)  
 and their great hunter                      had a daughter (8d:2)
- (7.35) ingringqerrlun[i]                              kelulirneq  
 ingrar\*-ngqerr-APO(3Rs)                      kelu<sup>u</sup>lirner-ABs  
 it having mountains                              the area behind  
 there were mountains behind (the village) (3:23)

The basic syntactic combinatory potential of bases derived with possessive verbalizing postbases is illustrated in (7.30-1), where the md constituents kangtunrilngurmeng and muraganeng express the roles which underlyingly would occur as adj constituent in a complex noun phrase where the underlying noun base was the n constituent. Notice that the derived md constituent accepts the same range of noun base types as the underlying adj constituent from which it is putatively derived, thus kangtunrilngur- is an adjectival noun base, and muragar- is an ordinary noun base.

-ngqerr- is the most purely syntactic member of the possessive verbalizing class, that is, it adds no meaning in the course of derivations, but instead brings out the meaning that already inheres in the inflectional category of possession. This is proven by the fact that -ngqerr- has the same broad range of possessive-like meanings that the inflectional category of possession has, and no others. Thus it asserts a whole-part relationship in (7.30, 33), ownership in (7.31-2), social relationship in (7.34), and spatial relationships (7.35). Note that in (7.34), paningqerrlun' does not mean 'he sired a daughter; his wife gave birth to a daughter' (unlike English he had a daughter, which could

have those meanings). I consider this as following from the fact that pania 'his daughter (AB(3s-s))' does not also mean 'the one whom his wife just gave birth to' in any explicit way; that is, both -ngqerr- and possession are aspectually stative.

Turning to syntax, (7.32) shows that the md constituent dependent on the derived verb base can include conjoined ordinary nouns; this indicates that anything in apposition with the underlying n constituent appears as the derived md constituent, and it strengthens arguments that the derived verb base is associated with an antipassive clause pattern. The most interesting aspect of the syntax of -ngqerr-, and the possessive verbalizing postbases in general, is what they cannot combine with: there are no cases where -ngqerr- combines with an exclusively intransitive adjectival noun, because it combines only with what is possessed; there are no cases with an exclusively transitive adjectival noun as underlying base, because these generally do not occur as n constituents in complex noun phrases; and it is found with PS bases only in ordinary noun uses. In fact, then, possessive verbalizers are almost entirely restricted to ordinary nouns, just as the n constituent in complex noun phrases is. An interesting construction is (7.35), where the derived n constituent kelulirneq is itself composed of a PS base kelu- 'area behind', derived with a PS-N postbase, which is reminiscent of existential postbase constructions (see +tangqerr- NV(50)'for there to be N at LC').

(6) -ng:it°e- 'to lack N'. (cf. VV 'to be the opposite of V (quality)').

Examples:

- (7.36) a. mer'utaunateng  
 mer'ute-ng:it°e-APO(3Rp)  
 not hiving drinking ladles (e)
- b. \*mer'utengqerpegnateng  
 +pk°et°e-  
 not V (e)

- (7.37) neqkaicugluta  
 neqkar-ng:it°e+yug-APO(1p)  
 we tended to lack food = we never used to have much food  
 (9b:14)
- (7.38) kemgunani  
 kemeg-ng:it°e-APO(3Rs)  
 he's lacking flesh = he's skinny (3:71)
- (7.39) nengliatuq  
 nengle-ng:it°e-IND(3s)  
 it's not cold (vol.)
- (7.40) iterviilnguut  
 iter@\*vig-ng:it°e-IND(3s)  
 those lacking a place to enter = those that can't go in (3:56)  
 (cf. iterviat 'their place to enter (AB(3p-s))')
- (7.41) ilangciqerkarauan'  
 ilangci-gar+skarar\*-ng:it°e-APO(3Rs)  
 she lacked ones who would just pay attention = nobody bothered  
 about her, paid attention to her (3:87)
- (7.42) cameng        nagutaunani  
 ca-MDs        nagte@:(u)te-APO(3Rs)  
 something he lacked a device for snagging  
 there was nothing at all that was an impediment to him (9a:4)
- (7.43) cuunateng=ggur                    -ikegkut  
 cug-ng:it°e-APO(3Rp)=said across:R-(AB)p  
 they lack people                    the ones across there  
 the (houses) across there had no people in them (9b:4)

From (7.36) it is clear that -ng:it°e- is the negation of -ngqerr- 'to have N'. The selectional properties and semantics of -ng:it°e-, like -ngqerr-, parallels that of possessed nouns. A special construction is shown in (7.39), where it occurs with a weather noun. It is doubtful whether a possessed noun base underlies this, since the possessor would have to be the dummy 3s of weather expressions. Far more likely, it is implicitly existential, cf. (7.35) with -ngqerr-, (7.43) with -ng:it°e-. -ng:it°e- has more of a tendency than -ngqerr- to combine with VN postbases (7.40-2); note that the VN postbases involved are only weakly, if at all, adjectival.

(7) -knaggait°e- 'to totally lack N'. [Not reported by Jacobson; not found in standard sources on GCY and NS].

Examples:

(7.44) kemeknagga[unani]  
 kemeg-knaggait°e-APO(3Rs)  
 having absolutely no flesh, being skin and bones (3:71)  
 (cf. (7.38))

(7.45) aqeygiknaggaituq  
 aqeygir-knaggait°e-IND(3s)  
 there are absolutely no ptarmigans (e)

This postbase is the emphatic version of -ng:it°e-.

(8) -lgu- 'for S to be the one having N'. (cf. -lgu- VV 'always to V').

Examples:

(7.46) a. angun qaya1guuq muragameng  
 angute-ABS qayar-lgu-IND(3s) muragar-MDs  
 man he is the one with the kayak wood  
 the man is the one with the wooden kayak (e)

b. angutem qayaa muraganemeng  
 -RLs -AB(3s-s) -MDs  
 the man's wooden kayak (e)

c. angun qayalek muragameng  
 -ABs -leg-ABs -MDs  
 the man having a wooden kayak (e)

(7.47) a. enelguuq b. enengqertuq  
 ene-lgu-IND(3s) ene-ngqerr-IND(3s)  
 he's the one (e.g., among he has a house (vol.)  
 them) who owns the house) (vol.)

This postbase is a transparent product of its parts, -leg- 'one provided with N' and #ng:u- 'to be N', and thus its status as a postbase is somewhat questionable. I include it, however, because it illustrates a synthetic possessive verbalizing syntactic pattern, which can be represented as follows:

	$[ \underline{r1} \rightarrow \underline{n} ]_n$	$\underline{r1} \rightarrow,$	$\underline{md} \rightarrow$	$\underline{ap}$
	(e-)d [N]	((b)	--	a)
=>	(e) d	--	((b-)a)	[N -leg-N]
=>	(e) d	--	((b-)a)	[N -leg-N <sup>u</sup> ng:u-V]

The first, second, and third lines of the representation are illustrated, respectively, with (7.46a,b,c); -leg- has in common with -ngqerr- the fact that it shifts the role of the adj constituent of the underlying base to the md constituent of the derived base. Notice that this two step process casts doubt on the positing of a VV antipassive process in the derivation of -lgu-, e.g., where first an NV postbase derives a transitive verb base with d as the role of the r1 constituent and a as the role of the n constituent, and then VV antipassive derivation takes place. On the other hand, I should caution that even though -leg- plus <sup>u</sup>ng:u- happen to produce a synthetic postbase very similar in meaning and patterning to -ngqerr- (cf. 7.47), this does not mean that -ngqerr- must be "decomposed" into a NN stage with the effects of -leg-, and a NV general attributive element with the effects of <sup>u</sup>ng:u-, for which there is no morphological justification. It seems quite reasonable then to consider the syntactic effects of possessive verbalizing postbases as an elemental process which can be mimicked synthetically by various postbase combinations.

The remaining postbases presented in this section are of limited productivity, and/or are found as lexicalized parts of bases only. Often, it is not possible to be sure which class they belong to because of these defects in patterning, and thus I have in some cases been guided only by my intuitions in including them here:





The NV postbase is limited to these two noun bases, both noted in SJ (323). Syntactically, it may belong in this class because the role in the derived n experiences the effects of his own N (again, however, there is no solid syntactic evidence to support this interpretation).

- (11) -liqe-<sup>1</sup> (i) 'to catch lots of N (especially game)';  
 (ii) 'to suffer on account of one's N (body part)';  
 (iii) 'to be bothered by N'.

Examples with meaning (i):

- (7.52) cal' amllermeng=ll' piliqsuitellruut  
 also amller-MDs=& pi-liqe#yuit°e-llru-IND(3p)  
 lots they never caught lots of it  
 and they never caught much (9b:14)
- (7.53) \*piliqai  
 -IND(3s-3p)
- (7.54) aarrangiiriqlinivagaqneq!  
 aarrangiirar\*-liqe-llini@#pagaqneq  
 it's a wonder they seemed to have gotten so many old squaws  
 (type of duck)! (13a:220)
- (7.55) aqevyiliquq  
 aqevyir-liqe-IND(3s) 'she got lots of salmonberries' (e)
- (7.56) muragaliquq  
 muragar-liqe-IND(3s) 'he got lots of wood' (e)
- (7.57) ?mel'iquq  
 (e)mer-liqe-IND(3s) 'he got lots of water' (e)

Example with meaning (ii):

- (7.58) nasqiquq  
 nasqur\*-liqe-IND(3s) 'he has a headache' (e)

Examples with meaning (iii):

- (7.59) tey'qiqelriameng  
 teyeqe-liqe-INP-MDs 'one suffering from weakness' (14c:11)
- (7.60) angalkiqluteng Nunivaarmiuneng  
 angalkur-liqe-APO(3Rp) Nunivaar\*#miu-MDp  
 they were harassed by the Nunivak shamans (angalkur-) (8b:2)

All of the three meanings given above are productive, and each suggests a different syntactic pattern (I include this postbase in this section for purely practical reasons, since it would also fit elsewhere). Meaning (i) fits the indirective class (§7.2.1.2) semantically in that it involves a notion of acquisition, as do the other members of that class; however it does not fit syntactically, since it lacks a transitive version (7.53). Though meaning (i) diverges semantically from the other members of the possessive verbalizing class, it does follow their syntactic pattern. I therefore class meaning (i) examples with the possessive verbalizing postbases, since I take syntactic similarity as a more reliable guide for classification. A point I will make here that will be relevant to the discussion in §7.2.1.2 is that -liqe- with meaning (i) selects animals and plant products taken from nature (7.54-56), but becomes marginal with other things gathered (7.57).

Meanings (ii) and (iii) are no doubt closely related, and may be entirely dependent on base selection. I have nevertheless separated them for the (dubious?) reason that (ii) would be classified as a possessive verbalizing postbase, while (iii) is merely object incorporating (n-V,  $\emptyset$ -preserving, see §7.2.3). Thus, in (7.60) the shamans are not possessed by their victims.

One might be tempted to consider the examples with meaning (iii) as evidence of incorporation of the r1 constituent expressing A, paralleling transitive predications like angalkut piatnga (shaman-(RL)p do-IND(3p-1s)) 'the shamans did to me = worked spells on me, etc.'. However, the appearance as md constituent of Nunivaarmiu- 'Nunivakers', which is presupposed to be coreferent with the underlying noun base angalkur- 'shaman(s)' suggests that -liqe- is object incorporating (the

complex noun phrase angalkut Nunivaarmiut 'the shamans, Nunivakers = the Nunivak shamans' is the corresponding post lexical-insertion realization of the underlying base angalkur-). If on the other hand -liqe-did govern bona fide incorporation of the r1 constituent expressing A, one would expect Nunivaarmiunun (-TmP) 'through the agency of the Nunivakers', with the terminalis case in its syntactic function of marking an agent role, in place of Nunivaarmiuneng in (7.60).

Etymologically (see §7.7), -liqe- is a formal, syntactic, and semantic puzzle. I do not know how meaning (i) is related to the other two, though obviously (i) takes from -lir- 'to be provided with lots of N' the 'lots of N' dimension, even though this dimension is not present in (ii-iii) in any way that I can prove.

To GCY -rrlugte- 'to be inconvenienced or afflicted with respect to N, to have N that has departed from its natural state' (Sj:292) corresponds -rrliqe- (from -rrlug- 'abnormal N' plus -liqe- (meaning (iii))), e.g., iqmiggliguten (iqmig-rrliqe-IND(2s)) 'you have chew tobacco stains on you' (GCY iqmigglugtuten (iqmig-rrlugte-IND(2s))).

(12) +lliqe- 'to have an N of poor quality, be afflicted with N'

(7.61) ugaani=gguq      qayarriqem  
 because of=said qayar+lliqe-RLs  
    of having a poor kayak  
 because of how really poor (his) kayak was (3:25)

(7.62) cikulliqq  
 ciku+lliqe-IND(3s)  
 it's caked up with ice (sled runner, implement, etc., but not a body of water such as a slough or bay) (e)

(7.63) qerrulligglisqi  
 qerrullig+lliqe+ssi  
 what a lousy pair of pants he has! (e)

This postbase is derived from +llug- 'bad N, one with a bad N' plus

-liqe- NV(11). Only the first meaning of the first postbase seems to be involved here. Because of phonological and semantic similarities with -rrliqe- (from -rrlug- plus -liqe- NV(11), mentioned in the discussion of NV(11)), it is sometimes hard to distinguish the two with consonant bases (e.g., 7.61, 7.63)). In (7.61), tengssuutelliqem, from tengssuute- 'airplane' was substituted for qayarriqem to ascertain that -rrliqe- was not involved (-rrliqe- would have given tengssuuterrliqem).

(13) \*nirqe- 'to be a good, nice N' (Cf. VV 'to be good, nice to V').

(14) \*niit°e- 'to be a bad N' (Cf. VV 'to be bad to V').

(15) \*nike- 'to consider O to be a good, nice N' (Cf. VV 'to consider O to be good, nice to V').

(16) \*niur- 'to suffer (especially emotionally) with respect to N' (Cf. VV 'to suffer (esp. emotional) difficulties involved with V-ing').

These four postbases are found only with a narrow range of bases. The following are examples:

(7.64) ali enem ilua neqniqlun' ayucugnimeng  
 oh ene-RLs ilu-AB(3s-s) neqe\*nirqe-APO(3Rs) ayu+cugni-MDs  
 house's its inside being good food the smell of  
 = being delicious Labrador tea  
 oh, inside the house there was the good smell of Labrador tea  
 (13a:35)

(7.65) al' ayucugniq neqniqlun'  
 -ABs  
 oh, the Labrador tea smells good (13a:65)

(7.66) ilaniitug  
 ila\*niit°e-IND(3s)  
 he is an unpleasant companion (e)

(7.67) cugnikaa  
 cug\*nike-IND(3s-3s)  
 he considers him a good person (e)

- (7.68) umyugarniurtuq  
 umyugar#niur-IND(3s)  
 he regrets it, is worried (e)

All of the above postbases are highly lexicalized. Semantically, #niur- seems separate from the others, but it appears to contain the same root  $\sqrt{\#ni(r)}$ -, common to many affectatively charged postbases. (7.64-5) shows that #nirqe-, when productive, may have been object-incorporating (see §7.2.3), with the role of the underlying noun base's adj constituent appearing as the md constituent of the derived verb base. (7.65) shows however that what can be selected as md constituent can also be selected as n constituent dependent on the derived base. (7.65-8) are reelicited from Jacobson (1978, 1980b), and I did not come upon examples with these postbases beyond the handful he cites. Syntactically, #niit°e- can be substituted in the constructions cited in (7.64-5); #nike- is obligatorily transitive, since it contains @4#ke- 'to consider O to be V'. #niur- is intransitive only, and is semantically akin to -lngu- NV(9) and -liqe- NV(11).

- (17) +tu- 'for S to have N (quality) in abundance'  
 (18) +kit°e- 'for S to lack N (quality) in abundance (i.e., to have little or none at all)'  
 (19) +killi- 'for S to have N (quality) less and less in abundance, to come to lack abundant N'

Dialect note: SJ(85) cites GCY +kelli- beside HBC +killi-.

These three postbases are highly restricted root extenders, and together define a set of roots which they convert to verb bases. Jacobson (1980a) gives a nineteen-item list of these roots which he indicates is exhaustive for his corpus. In addition, a very few verb bases take one

or several of these postbases. The following illustrate the postbases  
(base forms are cited without inflection):

- (7.69)  $\sqrt{q}$ ass-            loudness  
           qastu-            to be very loud  
           qaskit°e-        (for sound) to be soft  
           qaskilli-        (for sound) to fade
- (7.70) ilu-                inside (PS)  
           ilutu-            to be very deep  
           ilukit°e-        not to be deep at all  
           ilukilli-        to be getting shallower
- (7.71)  $\sqrt{m}$ angag-        endurance  
           mangagtu-        to endure, have endurance  
           mangkit°e-        to lack much endurance  
           ---
- (7.72)  $\sqrt{k}$ ang-            width  
           kangtu-            to be very wide  
           kangkit°e-        not to be wide at all  
           ---
- (7.73)  $\sqrt{q}$ umi-            stuff inside (digested food?)  
           qumitu-            to be bloated, full (in stomach)  
           qumikit°e-        not to be full or bloated (stomach, not container)  
           ---
- (7.74) kener-            light, fire (N)  
           kenertu-          to be aflame  
           ---  
           ---
- (7.75) quka-             middle, waist (PS)  
           ---  
           qukakit°e-        to have a slim waist  
           ---
- (7.76) kayu-             to be strong (V)  
           ---  
           kayukit°e-        for weather to be calm  
           ---

(7.69, 70) (except ilukilli- in 7.70) are also found in Jacobson's material; the rest was selected as special to Chevak or missing from his GCY corpus. The postbases are added to roots (7.69, 71-3), noun bases (7.70, 74-5) and to a verb base (7.76). No root or base has been found

that takes +killi- but is defective for the others. Semantically, +kit<sup>o</sup>e- derives a base whose meaning is the opposite rather than the simple negation of the meaning of the underlying base (compare 7.72 with the simple negation expressed in 7.30). In isolated elicitation, speakers often suggested corresponding forms in +kit<sup>o</sup>e- as improvements over forms proposed by me using +tu-nrit<sup>o</sup>e- (with -nrit<sup>o</sup>e- VV, the postbase of simple negation).

Syntactically, there is little to go on for classification. The idea of possession seems to be inherent in the derived bases, suggesting the possessive verbalizing class, but there is no corroborating syntactic evidence for this (such as a modifier of the underlying root or noun base turning up as a md constituent).

#### 7.2.1.2. Possessive verbalizing, indirective subclass.

The basic pattern, which is indicated in table 7-2, is illustrated with the following examples using -nge- 'to acquire N (for O)':

- (7.77) a. akii                      amllet  
           aki-AB(3s-p) amllet-(AB)p  
           his money            lots  
           lots of his money        (e)
- b. amllerneng akinguq  
           amllet-MDp aki-nge-IND(3s)  
           he gets lots of money    (e)
- c. uyurani                      akingaa                      amllerneng  
           uyurar\*-AB(3Rs-s) aki-nge-IND(3s-3s) amllet-MDp  
           his younger brother  
           he gets lots of money for his younger brother (e)

As noted, the derived base with these postbases is of the S/A core verb base class, showing an intransitive (b) and a transitive (c) version. The intransitive version results in an antipassive construction identi-

cal with that produced by the antipassive class, i.e., -ngqerr- 'to have N', etc. But the transitive construction shows the added 0 which is the earmark of the indirective pattern. This added 0 suggests a postbase-as-nucleus analysis, where the 0 is a patient of the postbase itself. It might well be objected that the role added as 0, a beneficiary of the acquisition, is as much to be linked with the possessor of the underlying noun base-- e.g., with the possessor in (a)-- as the role in S/A function. This is perfectly correct, but it must be realized that the 0 is a secondary acquirer, doing so through the activities of the S/A. This is actually a typical situation with indirectives, e.g., the VV indirective @:(u)te- converts motion verb bases such as ayag- 'to go off, leave' into bases where the added 0 is a secondary undergoer of the motion, along with the A, thus ayaute- 'for A to go off, leave, causing 0 to go off, leave along with him = for A to go off, leave, bringing 0 along'. All of this leads one to ask whether NV indirective postbases might not actually derive exclusively transitive bases, with the intransitive uses being brought about by reflexivization. This is a very attractive idea for some postbases in this group such as +karci- NV(23), e.g., angyarkarcii 'he's buying them what will be their boat', vs. angyarkarciiuq 'he's buying (himself) what will be his boat'. The idea is very unattractive for the many for which the transitive version is actually quite rare, e.g., -nge- NV(21) 'to acquire N', causing one to derive the frequent intransitive version as a reflexive version of the infrequent transitive version (which moreover does not even occur in some dialects of Central Yup'ik). Another argument against reflexivization here is that the intransitive versions in my corpus do not occur with modalis case reflexive independent pronouns such as ellmineng 'him-



self' (cf. true reflexive constructions such as *ellmineng tuqutuq* 'himself (MD 3Rs) he kills himself (IND(3s)) = he kills himself'). It is therefore unlikely that NV indirectives are underlyingly transitives whose intransitive versions are derived by reflexivization. If it should turn out that some NV indirective derived constructions can have a modalis reflexive pronoun, there will be grounds for recognizing a subclass where reflexivization is the correct analysis.

An interesting aspect of the meaning of all indirective NV postbases is that they involve a basic idea of acquisition, i.e., an active inchoative version of the idea of possession which is carried in the inflection of the underlying noun base. It is perhaps this active inchoative trend in the meaning that makes transitive expressions like (7.77c) possible, i.e., allowing for a beneficiary of the action. If so, we have an excellent example of syntactically-based classification as well as a rigorous technique that yields semantically satisfactory results. The active inchoative meaning trend is overt for many of the indirective postbases. Thus, *+tar-* NV(21), *+ssur-* NV(25), and *+ssuarar-* NV(26) all contain the VV active inchoative postbase root  $\sqrt{tr-}$ , while *-nge-* NV(20) is analyzed as  $\emptyset_{NV} + -nge-$  VV 'to begin to V', where *-nge-* VV is an active inchoative element. Other postbases have only semantic and syntactic affinity with this group, e.g., *+karci-* NV(23) and *-ssaag-* NV(27). Two are included here which actually belong with the antipassive pattern class, *+te-* NV(24), and *+ci-* NV(22), but have semantic affinities. With those two belongs *-liqe-* NV(11) in meaning (i), which was listed in the previous section with its full array of meanings.

The postbases are:

(20) -nge- 'to acquire N (for O)' (Cf. VV 'to begin to V').

Examples:

(7.78) uingesqelluk'-taw'                      pingyaaqaa  
 ui-nge+sqe-APO(3s)-then                      pi-nge\*yaaqe-IND(3s-3s)  
 telling her to get a husband he began in vain to tell her  
 he started trying to tell her to get married (8d:6)

(7.79) mallunqami-taw'...  
 mallu-nge-CTO(3Rs)-then  
 then, whenever he got a beached sea mammal carcass... (7b:5)

(7.80) neng]engaqaan...  
 nengle-nge-CTO(3s)  
 when it gets cold (nengle- N 'cold weather') (6b:26)

(7.77), as noted above, illustrates the basic indirective pattern. The above examples illustrate the far more common intransitive version of the postbase. (7.80) is rather similar to (7.39) nenglaituq 'it's not cold' in that the base is not immediately possessible. If there were a possessor, it would have to be the 3s dummy S/A found with weather expressions. For -nge- SJ(196) gives no transitive version, so that for GCY the postbase must be analyzed as following the antipassive pattern. Dialect difference of this kind confirms our treatment of the intransitive form of bases derived with -nge- as more basic than the transitive form. Finally, as noted above, -nge- NV is analyzed as  $\emptyset_{NV}$  plus -nge- VV 'to begin to V'. The reason for this is that the opposite analysis would claim that -nge- VV consists of  $\emptyset_{VN}$  plus -nge- NV, and such an analysis is not supported by the presence of the expected md constituent modifying the underlying verb-base-plus- $\emptyset_{VN}$  noun base. For example, if one claimed that qarutengaa (qarute-nge- $\emptyset_{VV}$  -IND(3s-3s)) 'he began to implore her' is underlyingly \*qarute- $\emptyset_{VN}$  'implored one' plus -nge- NV 'to acquire N', giving qarutenge- 'to acquire her as his implored one', we would expect to modify this hypothetical noun base \*qarute- $\emptyset_{VN}$  with

with the role of its adj constituent in a complex noun phrase, which would of course occur in an md constituent dependent on the derived verb base. This however is not possible: \*nulirkaneng qarutengaa (with nulirkaneng 'his future wife (MD(3s-s))') does not mean 'he implored his future wife'.

(21) +tar- 'to get, fetch N (natural product) from nature (for O)'.  
Examples:

- (7.81) qugtartuq  
(e)qug+tar-IND(3s)  
he is going for firewood ((e)qug- 'load carried on the shoulder') (e)
- (7.82) mertarai  
(e)mer+tar-IND(3s-3p)  
he's going to get them water (e)
- (7.83) mertarrsuun  
+ssuute-ABS  
device for getting water = bucket (vol)
- (7.84) cikutartuq  
ciku+tar-IND(3s)  
he's going for ice (e)  
(Unacceptable to some speakers)
- (7.85) \*qanikcartartuq cf. qanikcar- 'snow'  
\*senukurtartuq cf. senukur- 'snow machine'  
\*piipirtartuq cf. piipir- 'baby'

The basic indirective pattern is illustrated in (7.82). The postbase is limited to a few bases-- (7.81-4) are reelicited from SJ(313). The ungrammatical forms given in (7.85) are ruled out by the definition.

(22) +ci- 'to buy N'

(23) +karci- 'for S to buy what will be his N; for A to buy for O what will be O's N'.

Examples:

- (7.86) a. angyarciuq  
angyar+ci-IND(3s)  
he's buying a boat
- b. angyarkarciuq  
angyar+karci-IND(3s)  
he's buying what will be his  
boat
- (7.87) a. \*angyarcii  
-IND(3s-3s)
- b. angyarkarcii  
he's buying them a boat
- (7.88) a. tugkarciuq  
he's buying (a) piece(s)  
of ivory
- b. tugka'rkarciuq  
he's buying himself (a)  
piece(s) of ivory
- (7.89) a. tugkaracuarrerciuq  
he's buying (a) little  
(-cuarar\*-) piece(s) of  
ivory
- b. tugkaracuarrerkarciuq  
he's buying himself (a) little  
piece(s) of ivory
- (7.90) a. qup'lunguarciuq  
he's buying grains of  
rice
- b. qup'lunguarkarciuq  
he's buying himself grains of  
rice, a supply of grains of  
rice
- (7.91) a. qup'lunguarugarciuq  
he's buying lots of  
(-rugar\*-) grains of rice
- b. \*qup'lunguarugarkarciuq
- c. qup'kunguarkarugarciuq  
he's buying himself lots of  
grains of rice
- d. \*qup'lunguarkarugarcii  
+ci-IND(3s-3s)

From (7.86-7) it is clear that +ci- follows the antipassive pattern, and lacks a transitive version (7.87a), while +karci- follows the indirective pattern with a reflexive intransitive, though it might be a special type best analyzed as exclusively transitive with a reflexive intransitive form. (7.88-91) shows the interaction of the postbases with certain NN postbases. In (7.89), the two postbases follow a  $N_b$ - $N_b$  modificational postbase, while in (7.91b), it is clear that +karci- cannot follow the postbase -rugar\*- 'lots of N', a nominal subinflection NN postbase. Instead, -rugar\*- splits +karci- into its components +kar- NN 'future N' and +ci- NV(22) (7.91c), but the lexicalized combination +karci- is lost, since the transitive version is no longer permitted (7.91d), i.e., it follows the antipassive-- hence exclusively intran-



This postbase follows the antipassive pattern: to get the meaning conveyed by the transitive versions of the NV indirective postbases, the VV indirective @:(u)te- must be used (7.93). An interesting example is (7.95), showing a repetition of the base neqe- as the md constituent. It does not however controvert Rischel's and Sadock's claims about incorporation, or the analysis given here, since neqet, maussat neqait 'food, mouse's food' is a plausible complex noun phrase, with neqet as n constituent. Also interesting is (7.96), where A's use of the postbase +te- sets up the md constituent as the frame for B's elaboration of pi- 'thing (here referring to a person)', the underlying noun base.

Selection is complicated for this postbase. The postbase is most productive with game animal nouns (7.92-3); in combination with the anaphoric noun base pi-, catching game is implied (7.92, 94). But the full meaning includes any food item, cf. picu- in (7.92), which has been translated to me in isolation in the form picuuq (IND(3s)) as 'he's a good hustler', which in local English refers to general food-getting ability (but has none of the sordid implications of the expression in general American slang). Note in this connection (7.95), where a non-game noun base is selected. (7.96) illustrates a playful, possibly metaphoric extension with arnar- 'woman' (notice B's initial confusion). Finally, +te- occasionally occurs with manufactured items, e.g., tauna-taw' nenercaan (there:R:ABs-then nener+te\*yar-CQ0(3s)) 'when that man went back for his kayak-frame (lit.: bones)' (8:32); qantarcaqsaunateng (qantar+te\*yar-ksait°e-AP0(3Rp)) 'they not yet going to get their plates' (11a:84). It is possible that this use of +te- requires the presence of following \*yar- 'to go V-ing': if this is borne out by further research, it will be necessary to posit a postbase +car- NV 'to







### 7.2.1.3. Possessive verbalizing, causative subclass.

This is similar to the basic possessive verbalizing pattern in that it converts the inflectional idea of possession into part of what is asserted by the verb. It differs in that it also adds a causative agent role to the derived verb base as a r1 or n constituent (see table 7-2 for representation of the syntactic effects of the causative subclass postbases). The semantic result of this is the skeletal meaning 'to cause O to have N'. This pattern is more amenable to the postbase-as-nucleus analysis than is the basic antipassive pattern, which adds no roles which are in a particular semantic relation to the postbase (see §6.2, §6.6.3, where -ng:ir- NV(40), a causative pattern S/O core postbase, is discussed in the regard). It is also somewhat more amenable to the postbase-as-nucleus analysis than the indirective pattern, since there, there is some equivocation as to whether underlyingly the added direct object is simply a secondary possessor.

The causative pattern is subdivided according to the class of the derived verb base, exclusively transitive, S/A core, or S/O core. Of these, the first two classes are quite small, and all members of the second class are etymologically based on -li- NV(33) 'to make N (for O)'. The third class is large, but also has a limited etymological basis: all members are based on -li-, or its negative counterpart √-ng:i-, followed by √-r- agentive inchoative. Recall that √-r- is also found in the indirective class.

#### 7.2.1.3.1. Exclusively transitive.

This class consists of five postbases, each of quite different etymological origin. Three of the five, however, have very close se-

mantic connection, involving hitting on a body part. It is likely that members of this group could develop intransitive uses and thereby join either the S/A core or S/O core subclass. The postbases are:

- (28) -kcugi- 'to strike O with a projectile or implement in the N'.  
 (29) -cillerarte- 'to hit O unintentionally in the N (not necessarily with a projectile)'.  
 (30) -nqar- 'to hit O with a projectile unintentionally in the N'.

Dialect note: none of these are reported in Jacobson 1980b. He cites (SJ:23) -car(ar)te- 'to hit with a bullet, arrow, club, etc. right on the N', and (SJ:13) :(ng)ar(ar)te- 'to hit right on the N', which were unacceptable or unknown to those I asked in Chevak.

Examples:

- (7.105) a. nasqukcugiluku  
 nasqur\*-kcugi-APO(3s)  
 he hit it in the head (with a bullet, arrow, etc.) (e)  
 b. ?nasqukcugiluni  
 -APO(3s)  
 he hit himself... (Informant comment: Who would do that to himself intentionally?) (e)
- (7.106) a. icill'e'rtaqa  
 ii-cillerarte-IND(1s-3s)  
 I hit it in the eye, by mistake (with my hand, with implement, projectile, etc.) (e)  
 b. icill'e'rtuq  
 -IND(3s)  
 he hit himself... (e)
- (7.107) a. tukullengerluku  
 tukulleg-nqar-APO(3s)  
 he hit him in the foot (with a bullet, arrow, stone, or other projectile; not with club, hand, etc.) (e)  
 b. tukullengerluni  
 APO(3Rs)  
 he hit himself... (especially: he shot himself accidentally) (e)



- (7.111) qap'lunguarkitaa  
 qap'lunguar-  
 he gave him rice (i.e., transferred it to him, not served it  
 to him) (e)

(7.108) shows +(r)kite- is exclusively transitive, and expresses the role of the underlying complex noun phrase in the md constituent dependent on the derived verb base. SĴ(91) indicates that this postbase does not occur with noun bases denoting food, but for Chevak, there is no restriction of this kind (7.109-11).

- (32) -ngqercite- 'for A (natural force) to bring N (natural phenomenon) onto O'.

Examples:

- (7.112) qakemn'            nenglengqercilluku            cilla,  
 open:0-ABs    nengle-ngqercite-APO(3s)    cilla-ABs  
 outside        bring cold weather to it    atmosphere
- nenglemeng        waten    uksuryungqercilluku  
 nengle-MDs        thus     uksur\*ɣug-ngqercite-APO(3s)  
 cold weather        bring the onset of winter to it

the weather was getting cold out, it was getting to be a cold late autumn, just like now (3:20)

- (7.113) a. qanikcam            nenglengqercitaa  
 qanikcar-RLs            -IND(3s-3s)  
 the snow is bringing on the cold weather (to it, him) (e)
- b. negrem            nenglengqercitaa  
 neger-RLs  
 northwind  
 the northwind is bringing on the cold (e)

This common construction is roughly the sum of its parts: Jacobson may well be right in not listing it separately. I list it here because it is an illustration of a synthetic possessive verbalizing postbase having the causative pattern: -ngqerr- 'to have N' follows the basic anti-passive pattern, and to it is added the double transitive VV causative

@+cite- 'to cause O to do V-intr., to cause s.o.-TM to do V-tr. to O'. Literally, the combination means 'to cause O to have N'. Note that in (7.112), the noun base nengle- 'cold weather' has the role of the underlying adj to the noun base uksuryug- 'late autumn' and is expressed as the md constituent of the derived predication uksuryungqercilluku. The postbase, as I have identified it, selects noun bases designating natural phenomena, and in that way is quite similar to the lexicalized postbase --ir- NV(38, ii) 'for S (natural phenomenon) to occur' except that the latter is intransitive.

#### 7.2.1.3.2. S/A core.

This class consists of four postbases, -li- NV(33) and three derivatives of it. For the intransitive version, the role of the possessor of the underlying noun base is not expressed at all in the clause governed by the derived verb base. Because of this, the intransitives of this class are identical to intransitives derived with object-incorporating postbases. One of the postbases, --i- NV(34), is a non-productive reduction of -li-, and has the intransitive form only; it is, then, exclusively intransitive, and not S/A core. The postbases are:

(33) -li-<sup>1</sup> 'to make N (for O)' (but not in the English sense 'to prepare N as food').

Dialect note: SJ(119) reports also 'to make N out of ' (not found in Chevak).

Examples:

(7.114) a. Piqerlua=am -taw' qanermiigua,  
 I once =but-then qanermiar-li-IND(1s)  
 but once I... I made a smoke respirator

- (7.114) a. (cont.) qanermiapaarrlugneng           angelrianeng  
                   qanermiar-paarrlug-MDp        ange-INP-MDp  
                   big huge smoke respirators   ones that were big

But then, I used to make big huge smoke respirators (10a:39)

- b. qanermialiaqa  
       -IND(1s-3s)  
       I made him a smoke respirator (\*I made a smoke respirator out of it) (e)

- (7.115) muraganeng (/ \*muragaq) enlia  
           muragar-MDp           -ABS   ene-li-IND(3s-3s)  
           wood                            he made him a house  
           he made him (AB) a house out of wood (MD)  
           (\*he made a house out of wood (AB))

- (7.116) calistailami  
           ca-li+ste-ng:it°e-CQO(3Rs)  
           because he lacked one who makes things for him (= there was no one to make things for him) (7b:2)

- (7.117) tun'errliqatarluteng  
           tunrar-rrlug-li-qatar-AP0(3Rp)  
           they were about to conjure their lousy familiar spirits (8b:5)

- (7.118) a. caaniliuq   he makes tea           cf. caanig- 'kettle'  
           b. \*caaniluq                           cf. footnote 1.  
           c. \*caanilia                           with IND(3s-3s)  
           d. caanilitaa he makes tea for him with VV indirective  
   @:(u)te- plus IND(3s-3s)  
           e. \*caayuliuq                        cf. caayur- 'tea'.

(7.114) illustrates the basic syntactic pattern for causative pattern S/A core postbases. Jacobson's gloss 'to make N out of' (SJ:119) does not hold for Chevak (7.114b, 115). The appearance of a role in the derived md constituent expressing the material out of which the underlying noun base is made is no surprise, since this is a common semantic function of the adj constituent in complex noun phrases. Given the analysis presented in this work, the facts Jacobson brings out for GCY are best accounted for with an optional syntactic rule shifting that role from the md constituent to the n constituent dependent on the derived verb base. One is reminded here of the odd Greenlandic construction cited by For-

tescue (1979):

tuttu piniarpaa  
 tuttu-ABS pi-niar-IND(3s-3s)  
 reindeer he is hunting it  
 he is hunting a/the reindeer

Here, piniar- 'to hunt', is a lexicalized combination of pi- anaphoric noun base plus -niar- 'to hunt N' (= Central Yup'ik +ssur- NV(25)).

If piniar- were not lexicalized, one would expect tuttu- reindeer to appear in the modalis case, and the verb to appear with intransitive inflection.

(7.114a) is syntactically interesting in that it shows the semantic unity of structurally diverse elements. Qanermiaparrlug- in the md constituent modifies the underlying noun base qanermiar-, adding only the meaning carried in the postbase -parrlug- 'big huge N'. Meanwhile the verb base ange- 'to be big', nominalized with the intransitive participial, adds roughly the same meaning as a syntactic apposition to the md constituent qanermiaparrlugneng. A complex noun phrase involving the underlying noun base and the same lexical items as occur in (7.114a) would be qanermiat qanermiaparrluut angelriit 'smoke respirators, big huge smoke respirators, big ones'. There, the two sets of repetitions are apparent in a much more straightforward manner.

(7.117) shows some of the semantic breadth of -li-. (7.118) shows an idiosyncratic use, where it means something closer to 'to use N': note that the VV indirective is necessary for expressing a recipient role (7.118c,d). Finally, (7.118e) shows that -li- does not mean 'to prepare something out of N', in contrast to English he made tea.

(34) --i-<sup>1</sup>; +ar--i- (with class VI bases ending in g). (i) 'to spend N (temporal noun base)'; (ii) 'to be full in the N (body





base appears to be +i-.

The second meaning has been encountered in the two bases cited in (7.122-3), both also cited by Jacobson. Because the body part is possessed by the S of the derived verb base, one would expect that this version of the postbase fits with the antipassive pattern. This must remain as a conjecture, since I have no definite data on whether the underlying noun base can be modified by a md constituent that has the role of the noun base's underlying adj constituent.

(35) -liur-<sup>1</sup> 'to attend to N; to attend to O's N for him / in spite of him'.

Examples:

(7.124) aritviluki                    neqet                    amiitneng  
 aritvag-li-APO(3p)    neqe-(RL)p    amir-MD(3p-p)  
 made them mittens    fishes'            their skins

caliurtu'rluki  
 ca-liur+turar-APO(3p)  
 took care of all sorts of things of theirs for them

she made them fishskin mittens, and took care of all of their things (3:8)

(7.125) kiwku                    cillaliurtut  
 in:R-(AB)p                    cilla-liur-IND(3p)  
 those in there    they are attending to the weather  
 those (shamans) in there are casting weather spells (vol)

(7.126) anruciuraqameng  
 anrutar-liur-CTO(3Rp)  
 when they were attending to their stomachs = when they were preparing food, involved with meal preparations (9b:16)

(7.127) kalikiurta  
 kalikar-liur+ste-ABs  
 one who attends to people's letters = mailplane

(7.128) a. qayaliurtut  
 qayar-liur-IND(3p)  
 they are playing, roughhousing with a kayak (esp. children)  
 (e)

- (7.128) b. ingna qayaliuraat  
going:R-ABS qayar-liur-IND(3p-3s)  
they are playing, etc. with that fellow's kayak (in spite  
of him) (vol.)
- (7.129) ivruciliurciqai tamakuneng  
ivrucir-liur+ciqe-IND(3s-3p) there:E-MDp  
she makes and maintains those waterboots of theirs for them  
(3:8)

The basic S/A-core causative pattern is illustrated in (7.124, 128, 129). The meaning of the postbase is quite broad, and depends on context, as can be seen in (7.125-9). The connection between the the possessor of the underlying base, and the O of the derived verb base, when it is present, is very clear for this postbase. -liur- is contrasted with -li- in (7.124).

- (36) +kiur- 'to prepare, attend to what will be an N; to prepare, at-  
tend to what will be O's N, what will be an N for O'.

Examples:

- (7.130) a. qanermiarkiurtuq b. qanermiarkiuraaten  
qanermiar+kiur-IND(3s) IND(3s-2s)  
he's making what's going to he's making what's going to  
be a smoke respirator be your smoke respirator /  
(e) a smoke respirator for you
- (7.131) enkiurtuq  
ene+kiur-IND(3s)  
he's doing work preparatory to building a house (e)
- (7.132) civunerkiutulit  
civuner+kiur-tuli-p  
those (wise men) who make predications and give advice about  
the future (civuner- 'what is ahead') (14c:2)
- (7.133) qaillun pikiuraqelrianga tamakuneng  
how pi+kiur+'aqe-INP(1p) there:R-MDp  
I would attend to (future) things these  
(they knew) how I attended to what would be these things=  
(they knew) how I want about my daily business (14c:13)

This postbase is composed of +kar- NN 'future N' plus -liur- NV(35), and



- (7.135) kanaggun muragirluk' kenirluteng  
 below:RA-VL muragar-lir-AP0(3(s)) kener-lir-AP0(3Rp)  
 down there putting wood on it and lighting a fire  
 they put wood on it down there, lighting a fire (6b:19)
- (7.136) Nenercameng acirluku  
 Nenercar-MDs ater-lir-AP0(3s)  
 giving him a name  
 naming him Nenercaq (8a:32)
- (7.137) nevimeng cillaqlikacagirluteng  
 nevir-MDs cilla-qlikacagar\*-lir-AP0(3Rp)  
 sod being provided with an outermost (layer)  
 they (houses) having an outermost (layer) made of sod (6b:18)
- (7.138) ugaani=gguq teq'im imaa  
 how amazing its teq'ur-lir-RLs imar-AB(3s-s)  
 condition of...=said of containing urine its contents
- qercurpak (it) had urine in it which was in such a  
 qercu-rpag-ABs condition (i.e., old) that it was pure  
 pure white white (3:61)
- (7.139) a. angyalirtut b. angyirtut  
 angyar-lir-IND(3s) angyar-lir-IND(3p)(with P12b)  
 they have boats, esp., they have boats, not necessari-  
 lots of them (e) ly lots of them (e)
- (7.140) qayateng aminqigqelluki  
 qayar-AB(3Rp-p) amir-lir-nqigte@-(r)qe-AP0(3p)  
 their kayaks providing again with skins one by one  
 they put new skins on their kayaks one by one (3:37)

The basic S/O core causative pattern is illustrated in (7.134). (7.135) shows a contrast of transitive versus intransitive uses of -lir-. This is the most neutral of the S/O core causative postbases from the semantic point of view, in that it adds little meaning beyond the meaning of the syntactic pattern itself. One place where it does add meaning is in quantifying the underlying noun base in a way which can be glossed 'lots of'. This meaning is associated with -lir- when it is not reduced by P12b, as illustrated by the contrast in (7.139) (among the exceptions to this is akilir- 'to pay', from aki- 'money' plus -lir- without P12b, which does not imply that alot has been paid). In (7.134-8), where re-

duction by P12b does occur, the quantificational ('lots of') aspect of the meaning is gone from the glosses. A wide range of possessor-posses-sum relations are represented in verbalizations with -lir-: ownership (7.134, 139); name and referent (7.136); thing located at possessor (7.135); and whole-part (7.137, 138, 140). SJ(121) lists -linqigte- 'to change one's N, get another N' (from -lir- and -nqigte- 'to V again, anew') illustrated in (7.140). I do not list this separately since it seems to be a fully productive result of the combination of -lir- and -nqigte-. Such decisions are of course unavoidably subjective.

(38) --ir-<sup>1</sup> (i) 'to be provided with N'; (ii) 'for N (natural phenomenon) to occur; (iii) 'to set N (game capturing device)'.  
 non) to occur; (iii) 'to set N (game capturing device)'.  
 non) to occur; (iii) 'to set N (game capturing device)'.

Examples with meaning (i):

(7.141) a. imirtuq	b. imiraa
imar--ir-IND(3s)	-IND(3s-3s)
it has <u>contents</u> = is full	he fills it (e)

Examples with meaning (ii):

(7.142) ungalirtuq  
 ungalar--ir-IND(3s)  
 the southeast wind is blowing (vol)

(7.143) ivyirtuq  
 ivyug--ir-IND(3s)  
 it's raining (vol)

Examples with meaning (iii):

(7.144) taluyirtuq  
 taluyar--ir-IND(3s)  
 he's setting a fishtrap (e)

I follow Jacobson (SJ:58) in treating --ir- as a separate postbase with three meanings. For meanings (i) and (ii) a case could be made for considering --ir- as synchronically complex and transparent (consisting of -lir- with obligatory application of P12b), since semantically similar



The intransitive and transitive forms are shown in (7.145); (7.46) has an inflected numeral base as md constituent, which has the role of underlying adj constituent to the underlying noun base nuteg- 'rifle'. The meaning of the postbase is further elucidated in (7.147), where it is shown that the social conceptions about what goes vs. what goes along affect acceptability judgments of forms in isolation. This postbase appears not to be the sum of its parts, -leg- NN 'one provided with N', plus  $\sqrt{7}$ ar- NN postbase root (also posited in NV(34)'s etymology, see discussion of that postbase), plus -lir- NV(37): while one would expect from this a meaning 'to provide / be provided with one which is provided with N', one actually finds the meaning 'to provide / be provided with an N to take along'.

- (40) -ng:ir- 'for A to use up O's N; for S to be deprived of its N' (cf. also NV(82) 'to move at or through O's N').
- (41) -ng:ir:ute- 'for A to use up O's N; for S no longer to have N' (cf. NV(83) 'to gradually move at or through O's N'; VV 'to V no longer'; NN 'deceased N').
- (42) -knaggair- 'for A to take away all of O's N; for S to be completely deprived of its N'.
- (43) -knaggairute- 'for A to use up all of O's N; for S no longer to have a single bit of N left'.

Examples:

- (7.148) a. nutaraneng caskuiraanga  
 nutarar-MDp caskug-ng:ir-IND(3s-1s)  
 new he took away my tools  
 he took away, lost, etc. my new tools (e)
- b. nutaraneng caskuirutaanga  
 -MDp caskug-ng:ir:ute-IND(3s-1s)  
 he wore out, used up my new tools (e)

- (7.149) a. natriirtuq  
nater-ng:ir-IND(3s)  
he was deprived of his boot bottoms (e)
- b. natriutaqata  
nater-ng:ir:ute-CTO(3p)  
when their boot bottoms wore through, became used up (9b:5)
- (7.150) kuiget imairaqaki  
kuig-(AB)p imar-ng:ir-CTO(3s-3p)  
rivers "it" deprives them of their contents  
when the rivers run dry (9b:13)
- (7.151) pal'tuugilriatun  
pal'tuug-ng:ir-INP-EQs  
like one who is removing a coat (3:84)
- (7.152) elegpakarluki ulinka uliirutaanga  
eleg@+pakar-AP0(3p) ulig-AB(1s-p) ulig-ng:ir:ute-IND(3s-1s)  
burning them one by one my blankets he used up my blankets  
burning my blankets one by one, he destroyed them all (vol)
- (7.153) avenriutengani  
avner-ng:ir:ute-nge-CQ0(3s-3Rs)  
because she was beginning to drain him of his spirit (8a:26)
- (7.154) ivarvigkarairutellriit  
ivar@+vig+karar-ng:ir:ute-INP(3p)  
they ran out of p<sub>l</sub>aces for searching = there was nowhere left  
to look (3:17)
- (7.155) a. cuyaknaggairaqqa I took absolutely all of his  
cuyag-knaggair-IND(1s-3s) chew tobacco from him (e)
- b. cuyaknaggairutaanga he has used up absolutely all  
cuyag-knaggairute-IND(3s-1s) of my chew tobacco (e)
- (7.156) a. umyugaknaggairtuq he has completely lost his  
umyugar-knaggair-IND(3s) mind (e)
- b. umyugaknaggairutuq he went totally crazy (over a  
umyugar-knaggairute-IND(3s) period of time) (e)

The S/O causative pattern is in evidence in (7.148-9). The difference between -ng:ir- and -ng:ir:ute- is mainly one of aspect, the former indicating deprivation all at once, and the latter over a period of time, or in a less direct manner. -ng:ir:ute- is analyzable as -ng:ir- plus @:(u)te-, the VV indirective, but the latter appears here in an entire-



ly lexicalized and idiosyncratic use. The idea of 'deprivation' in these two postbases is very closely tied to the inflectional category of possession, and would best be described as the negative active inchoative of possession, that is, a kind of dis-possession. Note that I use the term possession here to refer to the Central Yup'ik category of possession, which includes (beside the notion of ownership) whole-part relations (7.150-1), and grammatically induced possession (7.154), thus in (7.154), *ivarviit* would mean 'their looking places = the places where they look (*ivarvig-AB(3p-p)*)'.

The emphatics containing the postbase root  $\sqrt{\text{-knaggar*}}$  may be special to Chevak, since they are not reported by Jacobson (see examples 7.155-6). Finally, *-ng:ir-* and some of its derivatives also occur with PS bases, but follow a somewhat different syntactic pattern that is best discussed among the rest of its class (see NV(82-3), in §7.3.2.2).

(44) *-ng:irar-* 'for A (3s weather dummy) to make O's N cold, deprive O's N of warmth; for S's N to be cold, deprived of warmth' (N is restricted to body parts).

(45) *-ng:irarte-* 'for A to injure O in the N; for S to be injured in the N' (N is restricted to body parts).

Examples:

- (7.157) a. *tukullegirrertua*                      my feet are cold (e)  
           *tukulleg-ng:irar-IND(1s)*
- b. *tukullegirrertua*                      I got a foot injury (e)  
           *tukulleg-ng:irarte-IND(1s)*
- (7.158) a. *tukullegireraanga*                    "it" makes my feet cold = my  
           *tuku!leg-ng:irar -IND(3s-1s)*            feet are cold
- b. *tukullegirrertaanga*                he injured me in the foot  
           *tukulleg-ng:irarte-IND(3s-1s)*

- (7.159) ulluvaireraanga  
 ulluvag-ng:irar-IND(3s-1s)  
 my cheeks are cold (e)
- (7.160) iingi'rrluku                    qengaaneng=llu  
 ii-ng:irarte-APO(3s)            qengar-MD(3s-s)=&  
 injuring him in the eye and (in) his nose (e)

Note that (7.157a-b) have the same surface form. Examples (7.157-8, 160) demonstrate the S/O core causative pattern. The A for transitive versions of -ng:irar- is always 3s (7.158-9), and makes implied reference to the forces of nature. Both postbases are built on -ng:ir-, and involve a kind of deprivation, though neither postbase is the exact semantic sum of its parts (see §7.7).

- (46) -kegte- 'to have an advantageous, correct N; to cause O to have an advantageous, correct N'.
- (47) -kegci- 'to have a good, nice N; to cause O to have a good, nice O'.
- (48) -kegcir- 'to provide O with a good N'

Examples:

- (7.161) a. umyugaqegtuq                    he has a good disposition, mind (e)  
 umyugar-kegte-IND(3s)
- b. umyugaqegciuq                    he has a good disposition, mind (e)  
 -kegci-
- c.\*umyugaqegcirtuq                    (he cheers himself up)                    (e)  
 -kegcir-
- (7.162) a. umyugaqegtaa                    he cheers him up (e)  
 -kegte-IND(3s-3s)
- b. umyugaqegcia                    he cheers him up (e)  
 -kegci-
- c. umyugaqegciraa                    he cheers him up (e)  
 -kegcir-

- (7.163) a. enkegtuq  
ene-kegte-IND(3s) it fits in the right place (e)
- b. enkegciuq  
ene-kegci-IND(3s) he has a good comfortable place,  
a good, nice house (e)
- (7.164) a. enkegtengnaqlukek  
ene-kegte-ngnaqe-AP0(3d) trying to have a good place for  
them (a wrestler trying to place  
his hands) (3:105)
- b. enkegcingnaqlukek  
ene-kegci-ngnaqe-AP0(3d) trying to get a good, comfortable  
place for them, a good, nice  
house for them (e)
- (7.165) a. qaygiqegciut  
qaygir-kegci-IND(3p) they have a nice qaygiq (e)
- b. \*qaygiqegtut  
-kegte-
- c. qengaqegciuq  
qengar-kegci-IND(3s) he has a handsome/sensitive nose  
(e)
- d. \*qengaqegtut  
-kegte-
- e. tukuqegciqapiarrertuq  
tukur-kegci-qapiarar- he really has a good host (13b:  
209)
- f. \*tukuqegtut  
-kegte-
- (7.166) a. ulucukegciirluten  
ulu-cug-kegci-AP0(2s) you give yourself a fine lousy  
tongue = you do nothing but  
whine! (3:80)
- b. ulukegciirluten (same meaning, less strong, lacks  
-cug- NN 'lousy N')
- (7.167) a. \*ii(cu)kegciirluten  
ii(-cug)-kegci-AP0(2s) (ii- 'eye')
- b. \*nuva(cu)kegciirluten  
nuvag- (nuvag- 'saliva')

-kegte- and -kegci- show an S/O core causative pattern (7.161-2) (a-b).  
-kegci- shows an exclusively transitive causative pattern (7.161-2)(c),  
with the reflexive intransitive (7.161) unacceptable for ontological  
reasons (cf. 7.166). I have no examples where the underlying noun base

is modified with a *md* constituent (but I did not test for it in the field). I strongly suspect they exist, but until found, classification here is tentative, and semantically based. (7.161-2) show no difference in translation between *-kegte-* and *-kegci-*; in (7.163-4) there is a contrast. Actually *-kegte-* is very much limited and occurs with a few bases only, while *-kegci-* is used productively (7.165). Jacobson (SJ:84) cites one base with *-kegte-* only, GCY *umyuar-* 'mind' (Chevak can use either postbase with this base, cf. &.161-2); he cites one base with *-kegci-* only, *angyar-* 'boat'; and he cites two bases as taking both with the same meaning, GCY *ella-* 'weather' (cf. Chevak *cillakegte-*, *cillakegci-* 'to have good weather') and *tepe-* 'odor' (cf. Chevak *tepegte-*, *tepegci-* 'to have a good smell'). Jacobson does not specifically label his lists as exhaustive, yet I know of no other forms taking *-kegte-*. *-kegcir-*, not cited by Jacobson, is also quite restricted, and derived from *-kegte*, not from *-kegci-* (see §7.7). (7.166a) is a textual example found with a body part base; the NN perjorative is optional in (7.166b). Substitution of other body part terms yielded no results (7.167).

### 7.2.2. Existential (n-V, 1c-preserving).

This is the only 1c-preserving NV class (see table 7-1). Syntactically, the role of the 1c constituent in apposition to the underlying noun base (cf. the oblique appositional pattern of complex noun phrases in §4.3, represented [ $n^{\wedge}ob$ ]) occurs in a constituent dependent on the derived verb base. For *+yag-* NV(49), it occurs in the *n* constituent as intransitive subject. For those built on  $\sqrt{+ta-}$  (NV(50-55)), however, it occurs either as *n* constituent or as 1c constituent dependent on the

derived verb base. The appearance of the role of the lc constituent which is in apposition to the underlying noun base in a dependent constituent to the derived verb base gives the skeletal meaning 'for there to be N at S/LC'. Where the role of the underlying lc constituent appears in an n constituent to the derived base, the base can be glossed 'for S to have N at it'; when it appears in a lc constituent to the derived base, the base can be glossed 'for there (3s) to be N at LC'.

The existential pattern has these basic syntactic representations:

EXISTENTIAL (n-V, lc-preserving)

(i) Base as syntactico-semantic nucleus.

$$\begin{array}{ccccccc} [\underline{rl} \rightarrow \underline{n}]_n \widehat{\underline{lc}} [\underline{rl} \rightarrow \underline{adj}]_{adj} \\ d \quad [N] \quad f \quad ((b) \quad a) \end{array}$$

$$\begin{array}{ccccccc} \underline{n} \rightarrow, & \underline{rl} \rightarrow, & \underline{md} \rightarrow, & \underline{lc} \rightarrow & \underline{pd} \\ \Rightarrow f/\emptyset & -- & ((b-)a) & --/f & [N + EXT_V] \end{array}$$

(ii) Postbase as syntactico-semantic nucleus.

$$\begin{array}{ccccccc} [\underline{rl} \rightarrow \underline{n}]_n \widehat{\underline{lc}} [\underline{rl} \rightarrow \underline{adj}]_{adj} \\ d \quad [N] \quad f \quad ((b) \quad a) \end{array}$$

$$\begin{array}{ccccccc} \underline{n} & \underline{rl} \rightarrow, & [[\underline{rl} \rightarrow \underline{n}]_n \widehat{\underline{lc}} [\underline{rl} \rightarrow \underline{adj}]_{adj}]_{md} \rightarrow, & \underline{lc} \rightarrow & \underline{ap} \\ \Rightarrow \emptyset & -- & d \quad [N] \quad ((b) \quad a) & f & [EXT_V] \\ \Rightarrow f/\emptyset & -- & -- & -- & --/f \quad [N + EXT_V] \end{array}$$

See (7.173-4) for a basic illustration of the pattern. In the diagram  $\emptyset$  is intended to represent the role of a dummy 3s "it" as in English there is/are... constructions. The constituent structure of the underlying noun base is represented as a triple apposition in order to in-

clude oblique appositional as well as ordinary complex noun phrases. In the postbase as nucleus representation, note that the appositional lc constituent of the complex noun phrase cannot be embedded in the md constituent, since it is already case marked, and is dependent on no other constituent in its complex noun phrase. It therefore becomes dependent on the ap constituent of the derived clause.

Quite clearly, the postbase-as-nucleus analysis is no more or less problematic than the base-as-nucleus analysis here, except that it less directly reflects the surface distinction between bases and postbases. Note in particular that as long as the postbase [EXT<sub>y</sub>] is represented with the dummy role  $\emptyset$  as its n constituent, there is no problem of duplicating the same role at two levels (cf. possessive verbalizing postbases, where this is a problem for the postbase as nucleus analysis). However, +yag- NV(49) always has f rather than a dummy  $\emptyset$  as the role of the n constituent. There, it is probably best to represent [+yag-<sub>y</sub>] as having f as its n constituent rather than a dummy role  $\emptyset$ . In that case, however, there is duplication of the f role at two levels (only to be deleted later), and the base as nucleus analysis becomes more attractive.

There is one unsegmentable existential postbase, +yag- NV(49). It is productive in Chevak and Nunivak, but it has been lost (except in a few lexical items) in GCY. Beside that is a set of synthetic existentials, composed of the postbase root  $\sqrt{+ta}$ - NN 'N which is at POS/LC' plus the most syntactic of the possessive verbalizers, -ngqerr- NV(5), -ng:it<sup>o</sup>e- NV(6), -nge- NV(20), -ng:ir:ute- NV(41), and some of the emphatics in  $\sqrt{-knaggar^*}$ . These combinations follow the usual rules of phonological and semantic synthesis, but because they vary by the

presence and absence of postbase roots, each treated as a separate post-base.

(49) +yag- 'for there to be lots of N at S'.

Examples:

- (7.168) wii =gguq amani, kiw'um paingani  
 (AB)ls =said going:0A-LC closed:R-RLs pai-LC(3s-s)  
 I over there one upriver's at its mouth  
 I (will be waiting) across there, at the mouth of the  
 (slough) upriver (3:42)
- (7.169) a. taun'- eneq qimugteyagtuq amllerneng  
 there:R-ABS ene-ABS qimugte+yag-IND(3s) amllerneng  
 that one house there are lots of many  
dogs in/at it
- b. ingna qimugteyagtuq amllerneng  
 going:R-ABS  
 that fellow has lots of dogs with him, there are lots of  
 dogs where that fellow is (e)
- c. \*ing'um eneq qimugteyagaa  
 -RLs IND(3s-3s)  
 (when proposed, I had "I have lots of dogs in the house  
 with me" in mind) (e)
- (7.170) Qaygi=gguq=gg'- man' cugyanqegcaa[ralria]  
 qaygir-ABS=said=there here:E-ABS cug+yag-nqegcaarar-INP(3s)  
 qaygiq this here it was really full of  
people  
 And so they say this qaygiq was really packed with people  
 (3:94)
- (7.171) nakacugyalriit makut  
 nakacug+yag-INP(3p) here:E-p  
 these (people) who have lots of bladders (as trophies; here  
 spread out to dry around their places in the qaygiq) (13a:104)
- (7.172) a. ?iluraryagtuq he has lots of male cross-cousins (im-  
 ilurar+yag-IND(3s) plies they are swarming around him)  
 (e)
- b. iluralirtuq he has lots of male cross-cousins (e)  
 ilurar-lir-IND(3s)

(7.168) shows the oblique appositional pattern of complex noun phrases, with a complex local oblique amani kiw'um paingani as its lc constituent.





(51) +tait°e- 'for there to be no N at S/LC'

Examples:

(7.175) ala piculirtailnguut nukalpiarungremeng  
 oh pi+te#yulir +tait°e-INP(3p) nukalpiar#ng:u-CS0(3Rp)  
 they had among them no great though they were great  
hunter (piculir-) hunters

tamalkurmeng Oh, there were among them no (other) great  
 tamalkur-3Rp hunter, though all of them were great hun-  
 all of them ters themselves (3:3)

(7.176) A: tekeryugtaicuitaqameng ukut  
 tekeryug+tait°e#yuit°e-CT0(3Rp) here:R-(AB)p  
 when they never were without wing feathers these (people)  
 ...when they always had wing feathers with them

B: kii tekeryugtaicuitut qaygiq  
 indeed -IND(3p) qaygir-∅ :  
 Indeed, they never were without wing feathers in the qay-  
 giq (11a: p. 93)

(7.177) a. nunat keiuat kuigtaituq  
 nuna-(RL)p kelu-AB(3p-s) kuig+tait°e-IND(3s)  
 there is no river behind (kelu-) the village (nuna-) (e)

b. nunat keluatni kuigtaituq  
 -LC(3s-s)  
 there is no river behind the village (e)

(52) +tange- 'for there to appear N at S/LC'

Examples:

(7.178) a. miyvik tengssuutetanguq  
 miyvig-ABS tengssuute+tange-IND(3s)  
 airport there appeared an airplane  
 a plane has appeared at the airport (e)

b. miyvigmi tengssuutetanguq  
 -LCs  
 a plane has appeared at the airport (e)

(53) +tairute- 'for there to be no more N at S/LC'

(7.179) a. yaassiik caskugtairutuq  
 yaassiig-ABS caskut+tairute-IND(3s)  
 box there aren't any more tools there  
 there aren't any more tools in the box (e)

(7.179) b. yaassiigmi caskugtairutuq  
 -LCs  
 there aren't any more tools in the box (e)

(54) +taknaggair°e- 'for there to be absolutely no N at S/LC'

Examples:

(7.180) a. nuna aqeygirtaknaggaituq  
 nuna-ABs aqeygir+taknaggait°e-IND(3s)  
 land there are absolutely no willow ptarmigans there  
 there are absolutely no willow ptarmigans in (this) land  
 (e)

b. nunami aqeygirtaknaggaituq  
 -LCs  
 there are absolutely no willow ptarmigans in this land (e)

(55) +taknaggairute- 'for there to be absolutely no more N at S/LC'

(7.181) a. kipuyvik cuyartaknaggairutuq  
 kipuyvig-ABs cuyar+taknaggairute-IND(3s)  
 store there is absolutely no more chew tobacco  
 there  
 there is absolutely no more chew tobacco at the store (e)

b. kipuyvigmi cuyartaknaggairutuq  
 -LCs  
 there is absolutely no more chew tobacco at the store (e)

These six postbases show both possibilities for the existential pattern: the role of the underlying lc constituent in apposition to the underlying noun base, represented as f in the diagram given earlier, may appear either in the derived n constituent (as with +yag- NV(49)) or in the derived lc constituent. The realization of this pattern is more complicated than meets the eye. As a first approximation, note the contrast between the (a) forms and the (b) forms in (7.174, 177-81). In the (a) forms, the underlying lc constituent is apparently an n constituent, and in the (b) forms, it is a lc constituent. It is the case, however, that some apparently absolutive case expressions of the underlying lc constituent are actually not n constituents, since

they are not cross referenced in the verb ending of the predication. Thus, in B's response in (7.176), qaygiq, which appears to be absolutive singular, is not indicated in the derived verb base's ending, which indicates 3p. Note, though, that the 3p cross reference refers to the people in the qaygiq, as is clear from what A says earlier. In some semantic sense, they are to be considered as the location of the abundance of wing feathers. Turning to the (b) forms of the other examples, the role in the n constituent is the dummy  $\emptyset$  (3s). One must also consider this dummy  $\emptyset$  as present as the n constituent of (7.173). There, the deictic form maa=i (which is a derived particle, see §5.1.5.1) seems quite parallel in function to the lc constituents in the (b) forms, and qaygiq in (7.176). It seems best then to consider qaygiq as a particle constituent, and to leave open the possibility that it may be a lc constituent at a deeper level. Turning finally to the (a) forms, it seems that there is no way of knowing if their apparent n constituents are true n constituents on the order of ukut in (7.176), or particle constituents on the order of maa=i in (7.173) and qaygiq in (7.176).

These six postbases are formed from  $\sqrt{+ta-}$  (NN) 'N which is at POS' plus the intransitive versions of the possessive verbalizing postbases -ngqerr- NV(5), -ng:it<sup>o</sup>e- NV(6), -nge- NV(20), -ng:ir:ute- NV(41), -knaggait<sup>o</sup>e- NV(7), and -knaggairute- NV(43). Note that all of those postbases, in their intransitive version, follow the general antipassive pattern, i.e., the pattern of -ngqerr-. Because of this, the following representation is given of the derivational steps in the formation of these postbases (naturally this derivation is of etymological concern, since the existential postbases are basic units synchronically):

$$\begin{array}{l}
 [\underline{rl} \rightarrow \underline{n}]_n \frown \underline{lc} \frown [\underline{rl} \rightarrow \underline{adj}]_{adj} \\
 d \quad [N] \quad f \quad ((b) \quad a) \\
 \Rightarrow f/\emptyset \quad [N +ta-N] \quad --/f \quad ((b) \quad a) \\
 \\
 \underline{n} \rightarrow, \underline{rl} \rightarrow, \underline{mid} \rightarrow, \underline{lc} \rightarrow, \underline{pd} \\
 \Rightarrow f/\emptyset \quad -- \quad ((b-)a) \quad --/f \quad [N +ta- + POS VBL_V]
 \end{array}$$

The operation leading from the middle line to the last line is that of possessive verbalizing postbases, discussed in §7.2.1; the operation leading from the first to the middle line is the inferred pattern of the postbase root  $\sqrt{+ta-}$  NN. The gloss 'N which is at POS' corresponds to the placement of  $\underline{f}$  in the  $\underline{rl}$  constituent in the middle line, while the gloss 'N which is at LC' corresponds to the placement of  $\underline{f}$  in the  $\underline{lc}$  constituent of the middle line. This can be represented as follows, using (7.174):

	Cev'ami	kuig-	(first line)
**Cev'am -RLs	kuigta-N	OR	**Cev'ami kuigta-N -LCs (middle line)
Cev'aq	kuigtangqerr-V	OR	Cev'ami kuigtangqerr-V (last line)

The middle line is hypothetical, since it involves only a postbase root rather than a synchronically viable postbase. The function of the postbase root is reconstructed as that of optionally making the  $\underline{lc}$  constituent of the underlying noun base its possessor.  $\sqrt{+ta-}$  NN is probably related to the deictic  $ta=$  of distal demonstrative bases.

(56) +cit°e- 'for S to be in the condition of N (atmospheric condition)'  
(cf. VV 'for S to be in a condition of V').

Examples:

(7.182) kiircinani                    man''            enem        ilua  
 kiir+cit<sup>o</sup>e-AP0(3Rs)    here:E-ABs    ene-RLs    ilu-AB(3s-s)  
 it being hot                    this            house's    its interior  
 it being hot inside of the house    (6b:25)

(7.183) tamlegcituq  
 tamleg+cit<sup>o</sup>e-IND(3s)  
 it's dark (e)

As indicated in the gloss, this postbase is restricted to a small semantic class of noun bases. Its syntax is difficult to ascertain. It seems to fit the existential pattern when compared with oblique appositional complex noun phrase constructions like *kiiq enem iluani* (heat-ABs house-RLs inside-LC(3s-s)) 'heat in the house'; but it seems to fit the antipassive possessive verbalizing pattern when compared with noun phrase constructions like *enem kiira* 'the house's heat'. I have no data in my text corpus showing the role of modifier of the underlying noun base appearing in a md constituent dependent on the derived verb base (note: this was not tested for in elicitation).

### 7.2.3. Object incorporating (n-V, $\emptyset$ -preserving).

In verb bases derived from noun bases by means of object incorporating postbases, the underlying noun base bears the relation of semantic patient to the postbase. Otherwise, however, neither the dependent rl constituent nor the appositional lc constituent to the underlying noun base is necessarily expressed as the n constituent (S or O) of the derived verb base. Thus, the skeletal meaning conveyed by these postbases is 'to do to N', and this meaning comes entirely from the patient relation of the N to the postbase. This is represented as follows:



processes is that some of the postbases to be discussed have  $+(r)-$  NV as their verbalizing element, further divisible into  $+(r)-$ , the absolutive case suffix plus  $+Ø-$  NV (see §7.7). This suggests that the postbase "incorporates" underlying noun bases which are for the absolutive case, rather than uninflected bases functioning as md constituents. By this analysis, the incorporated noun base would bear the relation of "indefinite n constituent" to the postbase, rather than md constituent, and, following incorporation, an antipassive-like process (see §7.2.0) would automatically have to shift the role of the unincorporated remainder of the "indefinite n constituent" to the md constituent. It is, then, a trade-off between ignoring  $+(r)-$  as an absolutive inflection, or setting up an abstract category "indefinite n constituent": I choose the former as the lesser of two evils, since the absolutive suffix  $+r-$  has the general tendency to become intrinsic to bases (hence the need for morphophonemes  $r^{\circ}$  and  $r^*$ ), and may therefore not be signalling something crucial about syntactic arrangement at all.

Object incorporating postbases can be divided into three subclasses on semantic and possibly also syntactic grounds: a general subclass, having the meaning 'to do the thing appropriate to nouns of the semantic class of N'; a sense-perception subclass, having the meaning 'to sense N (in some way)'; and a two member instrumental object incorporating subclass, having the meaning 'to do to O using N'.

#### 7.2.3.1. Object incorporating, general subclass.

Here, as noted, the basic meaning is 'to do the thing appropriate to nouns of the semantic class of N'. That is to say, it is the base, and not the postbase, which in large part is responsible for the seman-

tic relation between base and postbase. This "most appropriate thing" is usually eating for food, wearing for clothes, use for travel for vehicles, and ownership for manufactured items. In addition, the immediate speech situation shapes the semantic relationship. Some of these postbases are restricted to bases belonging to a few semantic classes and in that way, the set of verbal meanings they can convey is much reduced. For example, +tur- NV(61) usually selects only articles of clothing or food, and hence tends only to mean, respectively, 'to wear N' or 'to eat N'. This tendency for the base to determine the meaning of the postbase offers semantic evidence for the base-as-nucleus approach.

In spite of the semantic versatility of these postbases, it must be noted that they generally are restricted to ordinary noun bases (i.e., they are n-V), and they follow the object-incorporating syntactic pattern (i.e., they are  $\emptyset$ -preserving). When the meaning of one of these postbases happens, in a given situation, to involve the notion of ownership, the postbase follows the possessive verbalizing pattern. But since identity of role between underlying r1 constituent and derived n constituent is not a requirement for any of these postbases in all of its uses, I classify them as  $\emptyset$ -preserving (i.e., the underlying possessor and the derived S can be coreferent, but they do not have to be).

The most important of the members of this class is +(r)-, which is, in effect, a semantically null postbase which is marked with absolute +r- for class IV bases, and with + $\emptyset$ - elsewhere. Taken together with +(r)- NV(77) 'for it to be N (time phase temporal N base)', it has the peculiarity of being restricted to certain moods depending on the se-





- (7.188) caliarluta  
caliar+(r)-APO(1p)  
we have jobs (9b:5)
- (7.189) makuneng qakvayagneng awatek  
here:E-MDp qakvayagar\*-MDp going:EA+te-(AB)d  
these wheat grass its two sides  
  
caniqerrilitarlutek the sides (of the door) had  
caniqerrilitar+(r)-APO(3Rd) coverings made of wheat  
they (2) having side coverings grass (6b:20)
- (7.190) cupsarakcuaremeng waten cupsa'rluteng  
cupsarar\*-kcuarar\*-MDs thus cupsarar\*\*+(r)-APO(3Rp)  
little draft-shaft they have a draft-shaft  
they have a little draft-shaft like that (11a: p. 101)
- (7.191) ayagcissuuterluteng  
ayagcissuute+(r)-APO(3Rp)  
they have flushing-mechanisms (10b:25)
- (7.192) emyagluteng they are making the wail of ghosts (e)  
emyag+(r)-APO(3Rp)
- (7.193) cengqurluni making a snap, crack (e.g., gun report,  
cengqur+(r)-APO(3Rs) breaking twig) (e)
- (7.194) ayaruaralriit those who use meager canes (14c:2)  
ayarur+arar\*\*+(r)-INP(3p)

As noted, this postbase has the form +Ø- except with class IV bases (7.191), where +r-, the absolute singular suffix, is used. This null postbase corresponds in most cases to non-zero postbases: in (7.184) it corresponds to +tur- NV(61) 'to wear N'; in (7.185) to +tur- in its other meaning, 'to eat N'; in (7.187, 189) to +tangqerr- NV(50) 'for there to be N at S'; in (7.190-1) to -ngqerr- NV(5) 'to have N', with whole-part possessor to possessum semantic relations; and in (7.192-3) to +te- NV(63) 'to make the noise N'. (The parallel to +tangqerr- NV(50) in (7.187, 189) is especially strong: the PS bases ciña- and awate- can be analyzed as having the role of the 1c constituent in apposition to the underlying noun bases keggayagar\*- and caniqerrilitar-. This explains the occurrence of these PS bases as n constituents,

§5.1.5, where it is argued that PS bases are generally defective for non oblique cases except when they have taken on ordinary noun function.) Other cases do not correspond to any specific NV postbase: in (7.186), it means 'to travel by N'; in (7.194), 'to use N'; and in (7.188), its meaning is unclear to me. A final point is that +(r)-occur primarily with the appositional mood (but see 7.194). The inflected derived verb base sometimes bears a case-like relation to the main clause, e.g., in (7.184), where *angyarluteng* could be replaced with *angyakun* (VLs) 'by boat'. It is possible that +(r)- constructions like (7.187, 189) entirely replace forms with +*tangqerr-* NV(50) in subordinate clause uses of the appositional mood, since +*tangqerr-* does not seem to appear in that mood; this is only a hypothesis, however, and need further testing.

(58) +(r)yug- 'to want to do the appropriate thing to nouns of the semantic class of N; to want to have N'. (cf. \*yug- VV 'to want to V, tend to V').

(59) -laag- 'to quickly do the appropriate thing to nouns of the semantic class of N'. (cf. VV 'to V quickly, in a hurry').

(60) +sciigat<sup>o</sup>e- (-sciigat<sup>o</sup>e- for some younger speakers) 'to be unable to do the appropriate thing to nouns of the semantic class of N' (cf. VV 'to be unable to V').

Examples:

- |            |   |   |
|------------|---|---|
| (7.195) a. | kegginalegyugtua<br>kegginaleg+(r)yug-IND(1s)         | I want a <u>woman's knife</u> (e)                 |
| b.         | kegginal'laagtuq<br>-laag-IND(3s)                     | She quickly cut with a <u>woman's knife</u> (e)   |
| c.         | kegginalesciigatua<br>-sciigat <sup>o</sup> e-IND(1s) | I can't use (cut with) a <u>woman's knife</u> (e) |

- (7.196) a. *angyaryugtua* I want to go out on a boat (e)  
*angyar+(r)yug-IND(1s)*
- b. *angyalaagtuq* He rushed out on a boat (e)  
*-laag-IND(3s)*
- c. *angyasciigatua* I can't go out on a boat (e)  
*-sciigat°e-IND(1s)*
- (7.197) *atkucuaireyugtua* I want to wear a shirt, have a  
*atkucuarar\*+(r)yug-IND(1s)* shirt (e)
- (7.198) *naqtaareneng* *caquteryugluteng*  
*naqtar : arar\*-MDp* *caqute+(r)yug-AP0(3Rp)*  
woven bits of grass wanting to have containers  
they wanted containers made of woven grass (11a: p. 94, e)

Jacobson cites *-laag-* and *+(s)ciigate-°* as VV only (SJ:109, 32), but gives both *\*yug-* VV and *+(r)yug-* NV, as I have done here for Chevak (SJ:379). In addition, he cites *+(r)ngate-°* NV 'to seem like N' (SJ:195) beside *@<sub>2</sub>\*ngate-°* VV 'to seem to V'. In Chevak, only *@#ngat°e-* VV 'to seem to V' is found. Clearly, then, there is much dialect variation on which VV postbases become NV postbases. Etymologically, I analyze these postbases as consisting of *+(r)-* NV(57) plus the corresponding VV postbase. The (r) is not overt in *-laag-* NV and *+sciigat°e-* NV because the corresponding VV postbases are deleting (*-laag-* VV, and *-sciigat°e-* VV). The other variant of the second of these, *+sciigat°e-*, offers a problem for this analysis since one would expect *+rciigat°e-* (from *+r+sciigat°e-*) with class IV bases. All of the composite NV postbases with *+(r)-* NV(57) must be considered as lexicalized combinations, since *+(r)* NV(57) is ordinarily unable to appear elsewhere than in appositional mod predications.

It was noted that along with the semantic class of the underlying base, context also affects the exact meaning of object incorporating postbases. Note here that *\*yug-* VV 'to want, tend to V' affects *+(r)-*

such that 'to have N' becomes a preferred reading: see (7.195a) vs. (7.195b,c) with the two other postbases, but in (7.196a) the usual meaning with noun bases denoting vehicles is in evidence. (7.198) shows the role of modifier of the underlying noun base appearing in a md constituent dependent on the derived verb base.

(61) +tur- 'to eat N (food), drink N (potable liquid); wear N (clothing); use N (one lexicalized example)'.  
 ing); use N (one lexicalized example)'.  
 ing); use N (one lexicalized example)'.

Examples:

- (7.199) kass'allameng mat'umeng, waten-taw'  
 kass'allar-MDs here:E-MDs thus then  
 white people's food this  
 kass'allartutulruukut tamaani mukaaneng...  
 kass'allar+tur-llru-IND(1p) there:EA-LC mukaar-MDp  
 we used to eat w.p.'s food then units of flour  
 now (we always eat) white people's food like this, but then  
 we used to use such white people's foods as flour... (9b:21)
- (7.200) atkucuarrrerturtuq  
 atkucuarar\*\*tur-IND(3s)  
 he's wearing a shirt (e)
- (7.201) nacarturtuq  
 nacar+tur-IND(3s)  
 he's wearing his hood (e)
- (7.202) umyugarturnaqlun'  
 umyugar+tur@narqe-APO(3Rs)  
 it tends to make one think (use one's mind) (9b:4)
- (7.203) a. \*uyviturtuq cf. uyvi- 'wisdom, sense'  
 b. \*ivarut'turtuq cf. ivarute- 'song'  
 c. \*angyarturtuq cf. angyar- 'boat'

This postbase has a general meaning 'to do the appropriate thing to nouns of the semantic class of N', but it occurs productively only with two major semantic classes of noun bases, food (7.199) and clothing (7.200-1). (7.202) is an isolated case. One knows that the general meaning given above is correct because for the semantic classes of noun

bases with which it can occur, it has the same meaning as +(r)- NV(57). In (7.203) are some bases with which +tur- may not occur. (7.199) shows the role of modifier of the underlying noun base appearing in a md constituent dependent on the derived verb base.

(62) -liyar- 'to go and take part in N (social/ceremonial activity)'  
(cf. W 'to go and V (engaging in social/ceremonial activity)').

Examples:

- |  |   |
|--|---|
| (7.204) paskipalaliyarluk<br>paskipalar-liyar-OPT(1d)            | let's go to the <u>basketball game!</u> (vol.)                          |
| (7.205) Keliss'emiss'aliyarluk<br>keliss'emiss'ar-               | let's participate in <u>Christmas celebrations!</u> (vol)               |
| (7.206) muuvissaliyaqatartua<br>muuvissar-liyar-gatar-IND(1s)    | I'm going to <u>the movies</u> (vol)                                    |
| (7.207) wii tunraliyaryaaqaqami<br>1s tunrar-liyar*yaaqe-CTO(1s) | whenever I tried to make it to <u>familiar spirit conjurings</u> (8b:4) |
| (7.208) *pul'ggaalaliyarluk<br>pul'ggaalar-liyar-OPT(1d)         | (cf. pul'ggaalar- 'pool hall')  |
| (7.209) *Naparyarmiu-liyarluk<br>Naparyarmiu-liyar-OPT(1d)       | (cf. Naparyarmiu+t, Yup'ik ... name of Hooper Bay)                      |

This postbase is productive, but the category of noun bases is extremely small. Like +tur-, it can be treated as having the meaning 'to do the appropriate thing to nouns of the semantic class of N', but with limited selection. Note that mere locations, even when they are the site of festivities, cannot be selected (7.208-9); this incidentally rules out a ob-V terminalis-incorporating analysis (see §7.3) for this postbase. -liyar- is frequently heard with English loan noun bases, probably because introduced ceremonies and entertainments have to a large degree replaced traditional ones in Southwestern Alaska (so that

social change begins to be reflected in tendencies of semantic selection). Finally, I have no examples where the role of modifier of the underlying base appears in a md constituent dependent on the derived verb base.

(63) +te- 'to make the noise N' (cf. VV 'to cause V'). (Not cited by Jacobson).

Examples:

- (7.210) a. ceryerrluku            making a continuous crashing sound,  
           ceryer+te-APO(3Rs)    e.g., ocean waves (e)
- b. \*ceryerrluku  
               -APO(3s)
- (7.211) tem'irrluni            making a rumbling sound, e.g., an air-  
           tem'ir+te-            plane (e)
- (7.212) kalangqurruluni        making a hammering sound (e)  
           kalangqur+te-
- (7.213) luquluggluni            making a sloshing sound, e.g., waves  
           luqulug+te-            under rock outcroppings, oil in a near-  
    empty drum (e)
- (7.214) a. gitevvluni            speaking English (e)  
               √qitev +te-
- b. lurivvluni            babbling, talking noisily and uselessly  
               √luriv +te-            (e)

This postbase is fully lexicalized. It can be analyzed, however, as having the meaning 'to do the appropriate thing to nouns of the semantic class of N', but with selection limited to names of sounds (for which the "appropriate thing" is to utter them). Note that some sound nouns are verbalized with +(r)- NV(57), see (7.192-3) (I have no class IV examples of this, and thus cannot be entirely sure that this is actually +(r)-, and not some +∅-NV postbase). In (7.214) are some sound verb bases from which a hypothetical sound noun root can be inferred.

I have no examples where the role of modifier of the underlying noun base appears in a md constituent dependent on the derived verb base. This is not surprising in view of the degree to which this postbase is lexicalized.

#### 7.2.3.2. Object incorporating, sense perception subclass.

This class has fairly strong semantic unity. At this time I am unable to say whether the role of an adj constituent modifying the underlying noun base can be expressed in a constituent dependent on the derived verb base, and, if so, whether it would appear as the md constituent. In particular, it strikes me as possible that modification of the underlying noun base could be expressed in the equalis case, as an eq constituent. That is to say, I do not know whether, given qimugtellignituq (qimugte-llugnite-IND(3s)) 'it has the unpleasant smell of a dog' it would be possible to say \*\*angelriameng qimugtellignituq (ange-INP-MDs) '\*\*....of a big dog' or \*\*angelriatun qimugtellignituq (ange-INP-EQs) '\*\*....like a big dog'. If the modifier is expressible in the equalis, this class can be regarded as well-defined from a syntactic as well as a semantic standpoint. At the moment, this must remain a topic for future investigation. The postbases are:

(64) +cugnite- 'to smell like N'.

(65) -llugnite- / @-llugnite- 'to have the bad smell of N'.

Dialect note: Neither of these are reported by Jacobson. He cites GCY -ninarqe-, Nunivak -nilarqe- 'to smell or taste like N (SJ:213); GCY +cugninarqe-, Nunivak +cugnilarqe- 'to smell like N' (SJ:43); and GCY -rpnagninarqe- 'to smell potentially of N' (SJ:275). None of these are acceptable in Chevak.



Examples:

- (7.215) Cugglugarcugnitsi!  
 cug-rrlugar\*-cugnite#ssi  
 How it smells like funky old people here! (vol)
- (7.216) Wangcugnitur -un' !  
 wang+cugnite-IND(3s) here:R-ABS  
 This one smells like me! (Reported as said by a man on finding his steambath hat by sniffing each of a pile of them) (vol)
- (7.217) qimugtellignituq OR qimugglignituq  
 qimugte-llugnite-IND(3s) @-llugnite-  
 it has the unpleasant smell of a dog (e)
- (7.218) Pil'allignituq  
 Pil'ar-llugnite-IND(3s)  
 it has the unpleasant smell of Bill (e)

+cugnite- is illustrated in (7.215-6), and (@)-llugnite- in (7.217-8).

(66) @+pallar- 'to sound like N'.

Dialect note: Jacobson (SJ:278) reports -rpallar- 'to sound like N' limited to three bases, GCY caneg- 'grass', (e)mer- 'water', and (e)veg- 'grass'.

Examples:

- (7.219) evegpallartuq it sounds like grass rustling (e)  
 eveg@+pallar-IND(3s)
- (7.220) emigpallartuq it sounds like a thud (e)  
 emig@+pallar-IND(3s)
- (7.221) anuqvallartuq it sounds like a puff of wind (e)  
 anuqe@+pallar-IND(3s)
- (7.222) kuigpallartuq it sounds like the creaking of a frozen river, the rushing of an unfrozen river (e)  
 kuig@+pallar-IND(3s)

The postbase has wider use in Chevak than is reported for GCY; it nevertheless seems to be restricted to noun bases denoting natural phenomena and to some words for sounds.



- (7.227) itegmigaa                    he kicks it (puts it in proximity with  
iteg+mig-IND(3s-3s)    the top of his boot) (e)

In addition to the above, Jacobson (SJ:164) cites qanermig- 'to put 0 in one's mouth (qaner-)', iqmig- 'to put 0 in one's mouth (iqer- 'corner of the mouth')', and Nunivak qasmig- 'to put 0 in one's kayak'. None of these are found in Chevak, and I came upon no others in my own corpus. Thus +mig- NV appears to be even more restricted in Chevak than it is in other dialects. Rather common, on the other hand, is the postbase combination +mike-, +miaqe- NV 'for A to hold or keep 0 on/in/with his N (body part)', which consists of +mig-, +miar- NN 'something held or kept on/in/with POS's N (body part)', plus -ke- NV(1) 'to have 0 as one's N', e.g., angunquyugmiaqaa 'he is holding it in his toes (angunquyug-)'. Because +mig-, +miar- NN are somewhat idiosyncratic, and the verbalizations with -ke- follow those idiosyncrasies exactly, I do not treat +mike-, +miaqe- as a separate postbase (nor does Jacobson).

(69) -lkite- 'to make a noise involving N'.

Examples:

- (7.228) nepelkituq                    he makes a noise with his mouth (cf.  
nepe-lkite-IND(3s)                nepe- 'sourd') (e)
- (7.229) erinalkituq                    he makes a noise with his mouth (cf.  
erinar-lkite-IND(3s)                cf. erinar- 'voice') (e)
- (7.230) qanelkituq                    (Chevak: unacceptable; GCY: he makes  
qaner-lkite-IND(3s)                a noise with his mouth) (e)

The three bases repeated here are the only ones Jacobson (SJ:131) finds with this postbase, and all of the derived bases have the same meaning, 'for S to make a noise with his mouth'. In Chevak, the last of the three is unacceptable.

### 7.3. Ob-V.

In verb bases derived with ob-V postbases, the underlying noun base bears local or temporal oblique relation to the postbase itself. The underlying noun base can be an ordinary noun base, a locational (i.e., DA or PS) base, or a temporal base, since any of these can function as a local or temporal ob constituent, when properly inflected. The postbases in this class have the skeletal meaning 'to go to / be at N'. This class is further divided into a rl-preserving and a  $\emptyset$ -preserving subclass, which I call (oblique) possessum incorporating and oblique incorporating, respectively (see table 7-1). Partly intersecting with this distinction is another one, equally important, according to whether the postbase is added directly to noun bases (preinflectional), or is added to inflected noun bases (postinflectional). More accurately, postinflectional postbases can be analyzed as NV postbases whose first elements are noun endings. So far, all postbases encountered in this chapter have been preinflectional.

Postinflectional postbases are oblique incorporating only, and we will consider them first (§7.3.1) since they are most susceptible to the postbase as syntactico-semantic nucleus analysis (which is the better analysis for all of the ob-V postbases, as I attempt to show). Preinflectional postbases are either oblique incorporating or possessum incorporating, and will be taken up, respectively, in §7.3.2.1 and §7.3.2.2.



In these examples, it is clear that productively formed localis case nouns are involved, since the ending is always in the morphological form appropriate to the particular base it follows. Thus,  $\#mi$  LCs occurs with the ordinary noun base in (2.231),  $+ni$  LC occurs with the DA base in (7.232), and  $-ng:ani$  LC(3s-s) occurs with the PS bases in (7.233-4). The element  $+et^{\circ}e-$ , though not a productive verb base in the modern language, is clearly derived from one. Thus it appears with similar meaning ('to exist') but slightly different form ( $ete-$  instead of  $et^{\circ}e-$ ), in (7.235); and it appears with similar meaning in unaltered form as a root in words like  $eluciq$  ( $\sqrt{et^{\circ}e-}$  plus  $\theta:(u)cir-$  VN 'condition of V-ing') 'condition of existing = shape, form, condition'. Finally, the syntactic situation is such that a piece of a phrase is incorporated by  $+et^{\circ}e-$ , so that for examples like (7.233a), we would posit the following bracketing in light of complex local obliques (cf. §5.1.5) like that in (7.233b):

[ maani nunam akuliini ]<sub>1c</sub> +  $et^{\circ}e-$

This bracketing does not correspond to the placement of surface word boundaries, where  $akuliinet^{\circ}e-$  is treated as a unit. At a deeper level, however, it is important to note that the phonological processes binding LC((Xx-)x) and  $+et^{\circ}e-$  are those of external sandhi, and not the word-internal morphophonemic rules. Thus, the rule dropping final  $i$  of the localis case before  $+et^{\circ}e-$  is the same as that which drops the  $i$  of the localis before a vowel in  $maani$  in (7.233a), cf. §1.3.1; and the initial  $e$  of  $et^{\circ}e-$  is optionally lost by a version of something like P39.

We are now in a position to consider the representation of postin-

flectional postbases (LC((Xx-)x)+et°e- is used to illustrate):

OBLIQUE INCORPORATING (ob-V, Ø-preserving): POSTINFLECTIONAL.

Postbase (minus inflection) as syntactico-semantic nucleus (where a PS base is incorporated):

$$\begin{array}{ccccccc}
 \underline{da} & \frown & \underline{n} & \frown & [r1 \rightarrow ps]_{ps} & & \\
 g & & c & & j & [PS] & (i) \\
 \\ 
 [r1 \rightarrow \underline{n}]_n & & r1 \rightarrow, & \underline{da} & \frown & \underline{n} & \frown & [r1 \rightarrow ps]_{ps} & \xrightarrow{1c} & \underline{ap} \\
 \Rightarrow (e) & f & -- & g & & c & & j & [PS] & [+et^\circ e-v] & (ii) \\
 \Rightarrow (N+RL) & N+AB & -- & DA+LC & N+LC & N+RL & PS+LC & +et^\circ e-v & & (iii) \\
 \Rightarrow (N+RL) & N+AB & -- & DA+LC & N+LC & N+RL & -- & PS+LC+et^\circ e-v & & (iv)
 \end{array}$$

Processes:  $i \Rightarrow ii$ : construction;  $ii \Rightarrow iii$ : lexical insertion and case marking;  $iii \Rightarrow iv$ : incorporation.

The above diagram is rather involved because it takes us from internal syntactic base-determined stages (i and ii) to external syntactic clause level stages (iii-iv). That is, the first two stages deal with the combinatory potential of the underlying PS base of complex local obliques and of the element [+et°e-], while stages (iii-iv) have to do with inflected syntactic units. Notice that it does not really matter what is represented in the first two stages as the underlying base to be built on. Here it is a PS base, but it could as well be a DA or ordinary noun base. This is because whatever is in the localis case at stage (iii) is fair game for incorporation, see (7.231-2). That is to say, incorporation with +et°e- has little to do with the combinatory potential of bases themselves, but rather with how they actually are inflected. These data then strongly support Rischel's and Sadock's claims about interaction of internal and external syntax. At one level, all of the above is a word-formation process; at another level, it crucial-

ly involves morphological mechanisms associated with external syntax. It also supports the postbase-as-nucleus analysis, for three reasons. First, the fact that +et°e- is actually a verb base at a not-too-remote morphological level gives strong support for treating it as the nucleus of a clause of which the underlying base is a part. Second, it introduces a new role (f) as S. Third, the base as nucleus analysis-- which can be visualized by eliminating stages (ii) and (iii) from the representation just given-- causes massive, unexplained rearrangements (not the least of which is lexical insertion).

If the situation is rather pristine and clear cut for-LC((Xx-)x)+et°e-, it is not for the other postinflectional postbases (and less so still for the preinflectional ob-V postbases). In particular, the problem for the other postinflectional postbases is that (i) the noun inflection (corresponding to LC((Xx-)x)), and the NV element or verbal nucleus (corresponding to +et°e-) are highly fused, and (ii) the NV element or verbal nucleus cannot be traced back to an independent verb base, and can even be shown, in many instances, to be a lexicalized version of a productive NV postbase of the n-V class. This situation can be illustrated as follows with LC((Cc-)x)+et°e- by treating it as a fused unit:

OBLIQUE INCORPORATING (ob-V, ∅-preserving): PREINFLECTIONAL.

Postbase is treated as a fusion of the noun inflection and the NV element:



$$\begin{array}{c} \underline{da} \wedge \underline{n} \wedge [\underline{rl} \rightarrow \underline{ps}]_{ps} \\ g \quad c \quad j \quad [PS] \end{array} \quad (i)$$

$$\begin{array}{c} [\underline{rl} \rightarrow \underline{n}]_n \quad \underline{rl} \rightarrow, \quad [\underline{da} \wedge \underline{n} \wedge [\underline{rl} \rightarrow \underline{ps}]_{ps}]_{lc} \xrightarrow{ap} \\ \Rightarrow (e) \quad f \quad -- \quad g \quad c \quad j \quad [PS] \quad [LC+et^{\circ}e-v] \quad (ii) \end{array}$$

$$\Rightarrow (e) \quad f \quad -- \quad g \quad c \quad j \quad -- \quad [PS+LC+et^{\circ}e-v] \quad (iii)$$

Processes:  $i \Rightarrow ii$ : construction;  $ii \Rightarrow iii$ : incorporation.

This analysis is rather similar to the postbase as nucleus analysis given for n-V postbases (especially for those that are object incorporating, i.e.,  $\emptyset$ -preserving). The difference is that the postbase has the underlying noun base as a lc constituent rather than a md constituent (other ob-V postbases have the underlying noun base as other specific ob constituents with adverbial meaning, especially tm constituents and vl constituents). The relationship of the above to the non-fused representation, i.e., the postinflectional representation, is obscured by the fact that lexical insertion does not apply to its stage (ii). To backtrack a moment, note that lexical insertion was necessary in the postinflectional representation in order for the constituents to be inflected (and then incorporated). When the noun ending is fused into the postbase (and hence is considered to be an ending only in the etymological sense), lexical insertion remains possible, but is no longer necessary. This is of course significant in light of what was said in §6.6 and elsewhere concerning the preferability of treating the combinatory potential of bases, and how they are affected by the addition of postbases, rather than considering the postbases as mediators of external syntactic transformations acting after lexical insertion. Here, then, I have on general principles gone back to representing the combinatory potential of the base. The reader should be aware

that this is not an absolute analytic necessity: the analysis will work just as well from a technical standpoint if lexical insertion is seen as applying to stage (ii) of the second representation.

Returning to the problems presented by noun inflection fused with the NV element of the postbase, it can be seen that two of the three arguments against a base-as-nucleus approach are largely preempted. For the first argument, that the postbase is at etymological base at some not-too-remote morphological level, we find no support when the postbase is subject to deep fusion as a suffix. The second argument, that the postbase introduces a new role (f) still stands (comparable arguments are made for object-incorporating postbases in §7.2.3). The third argument, that the base as nucleus analysis instigates a chaotic mass of rearrangements, is greatly mitigated by the fact that it is no longer necessary to explain the presence of synchronically viable inflectional endings.

The matter of fusion itself is none too clear cut. The fusion analysis is least problematical for preinflectional oblique-incorporating postbases (see §7.3.2.1), since the fusion is total (i.e., the "noun inflection" can only be posited as an abstract element). But in the postinflectional postbases yet to be treated in this section, there are varying degrees of fusion (measurable by assorted criteria), and one finds that the more the fusion, the more the preinflectional analysis presents a plausible alternative to the postinflectional analysis.

The representations given so far have been formulated with the following in mind: (i) the postbase  $LC((Xx-)x)+et^{\circ}e-$ ; (ii) an underlying PS base, rather than, say, an underlying DA or ordinary noun base;

and (iii) the localis case, rather than some other oblique case with adverbial meaning. In discussions of individual postbases, I will note how the representations should be adapted to account for them, in particular, noting what bases (DA, PS, or N) they select, and what their local case relation is. Table 7-3, presented at the end of §7.3, summarizes this information.

The remaining postinflectional postbases are:

(71) +virte- 'for S to follow a path N-ward (N = DA)'.

(72) +var- 'for S to move N-ward (tending to fill in the entire area) (N = DA, PS)'.

Examples:

(7.236) A: Lintaq cassurta?  
Lintar-ABs ca+ssur-INT(3s)  
What's Linda up to?

B: Qagaavirtuq /\*qagaavartuq (\*Alarnermun)  
open:EA+virte-IND(3s) +var- Alarner-TMs  
She went northward to Alakanuk

A: Natmun?  
na-TM2 Where to?

B: Alarnermun (vol)  
to Alakanuk

(7.237) a. Uavirtuq (\*Pak'am kiampaan  
exit:RA+virte-IND(3s) Pak'ar-RLs kiampar-RL(3s-s)  
Buck's camp's  
tungiinun)  
tunge-TM(3s-s) He went downstream (\*in the direction  
in its direction of Buck's camp) (vol)

b. \*uavirtuq Pak'am kiampaanun  
kiampar-TM(3s-s) (vol)

(7.238) tallik pamavirrlukek  
tallir-(AB)d away:OA+virte-APO(3d)  
arms putting them behind (him)  
putting his arms behind him (13a:181)

- (7.239) a. acivarciiganatek  
 aci+var+sciigat<sup>o</sup>e-AP0(3Rd)  
 they could not go down (through a narrow passageway)
- b. \*acivirtuq  
 +virte-IND(3s)
- (7.240) up'nerkatmun (or: up'nerkamun) ingluvarrertaqan  
 up'nerkar-TM2 up'nerkar-TMs inglu+var+arte-CT0(3s)  
 toward spring when it quickly moves to-  
 ward the other (season)  
 when (winter) suddenly changes into spring (9b:20)
- (7.241) Kagitet tamakut ketvarteqerteki!  
 kagite-(AB)p there:E-(AB)p kete+var<sup>4</sup>te-gar-OPT(2d-3p)  
 broom (lexi- those just case them to come toward  
 cal plural) the center)  
 Bring out the broom! (11a:71)

These two postbases both contain +vet TM1 in fused combination with  $\sqrt{-i+r+te-}$  and  $\sqrt{-a+r-}$  (see etymology, §7.7). The terminalis case is to these two postbases what the localis case is to LC((Xx-)x)+et<sup>o</sup>e-. Syntactically, then, both postbases involve incorporation of a TM1 element. Note that +virte- never occurs where something is left behind in the tm constituent dependent on the derived verb base, e.g., (7.236) where Alarnermun is not permissible, and (7.237a-b), where Pak'am kiampaan tungiinun and Pak'am kiampaanun are not permissible. +var- occurs occasionally with TMx or TM2 (7.240). Full explanation of this awaits improved understanding of ob constituents. Ordinarily TM1 occurs only with DA bases, with the meaning 'advancing with the areal of DA as a goal' (see §2.3.1), but with +var- it is extended to implicitly detransitivized (i.e., depossessivized) PS bases as well (7.239, 241). This is an argument in favor of fusion, since this is not an ordinary inflectional pattern for PS bases. In (7.240) +var- is even found with a quantificational base. The semantic opposition between  $\sqrt{-i-}$  and  $\sqrt{-a-}$  accounts for the difference in meaning between the two postbases:

+virte- implies motion along a path (7.236, 238), while +var- implies coverage of an entire area (7.239-40, ?241). Two examples are transitivized, one (7.238) by the process affecting the appositional mood when the A and O are coreferential with the A and O of another clause (see §5.2), and the other (7.241) with the VV causative postbase \*te-.

(73) +tmurte- 'to travel in the direction of N (N = PS, DA, or directional ordinary noun base)'.  
 }  
 }

(7.242) uatmurtuq                      Pak'am  
 exit:RA+tmurte-IND(3s)      Pak'ar-RLs  
 he went downstream              Buck's

{ kampaan                      tungiinun                      / \*kampaanun  
 { kampaan-RL(3s-s)      tunge-TM(3s-s)              kampaan-TM(3s-s) }  
 of his camp                      in its direction

He went downstream {in the direction of Buck's camp / \*to  
 Buck's camp} (vol)

(7.243) uatmurutekat  
 exit:RA+tmurte@:(u)te+kar-(AB)p  
 the things that will go down there (= logs that will be chopped and put in the firepit) (10b:1)

(7.244) kingutmurtuq                      He went backwards (e)  
 kingu+tmurte-IND(3s)

(7.245) negetmurtuq                      He went toward the north (e)  
 neger+tmurte-IND(3s)

This postbase contains +tmun TM2 in fused combination with  $\sqrt{r+te-}$  (see etymology, §7.7); it is the TM2 version of the two preceding postbases. In (7.242) a general directional positional base remains as an unincorporated part of the underlying tm constituent. However, a non-directional ordinary noun base indicating a particular location cannot remain as an unincorporated tm constituent (\*kampaanun in (7.242)) in this fashion. +tmurte- occurs with (i.e., incorporates) DA bases (7.242-3), detransitivized PS bases (7.244), and directional ordinary noun bases



- (7.248) a. kuigkuirtuq  
 kuig+kuir-IND(3s)  
 he's going, following  
 along the river
- b. kuigkuartuq  
 kuig+kuar-IND(3s)  
 he's going along the river  
 (better with large open river  
 than narrow, winding river) (e)
- (7.249) a. unagguirtuq  
 below:FA+gguir-IND(3s)  
 he is traveling through  
 the costal area (on  
 land)
- b. \*unagguartuq  
 (e)

Both postbases occur with ordinary noun bases referring to geographical forms, and contain the vialis case marker +kun (but with retaining juncture). In addition, NV(75) occurs with DA bases, using the vialis ending appropriate to DA bases, +ggun. Neither postbase occurs with PS bases, but this gap is filled by -ng:ir- NV(82) 'to move at or through O's N' (§7.3.2.2), which is vialis incorporating.

Semantically, +kuar- can be understood as involving travel in two dimensions, while +kuir- involves travel in one dimension: note the informant comment on the unacceptability of (7.246b, 247a) in terms of traditional modes and conceptions of travel, and the different domains of (7.248a) and (7.248b) according to how a river is conceived. The form with DA bases may not make the distinction (it is difficult to tell in the absence of contrast).

(76) +tna- 'to do like N'.

Examples:

- (7.250) uitaniłuki                      tamakut                      tawatnatulit,  
 uita@\*ni-APO(3Rp)    there:E-(AB)p    there:RA+tna-tuli(AB)p  
 saying they stayed    those                      those who always do thusly
- nerengnatutulit                      quyungqaluki  
 nere-ngnatug-tuli-(AB)p              quyungqa-APO(3Rp)  
 those who tried to eat (subsist)    (saying) they were gathered

(7.250) (cont.) He told (us) that (they) stayed (in a church), those people who acted like that, those who tried to subsist living communally. (From a description of white beggars in Anchorage) (10a: p. 37)

This postbase occurs with only one base, the DA base, tawa- 'there:RA'. It is based on +ten, the EQ ending on DA bases. Perhaps it is a transparent equalis incorporating postbase which, though limited to one base, is syntactically parallel to the sense-perception object incorporating postbases (§7.2.3.2), which I suggested might incorporate a covertly equalis case underlying noun base, rather than a covertly modalis case patient.

(77) +(r)- 'for it to be N (time phase temporal noun base)'. (With oblique moods, and, rarely, other moods)'.

Phonological note: unlike +(r)- NV(57) 'to do the thing appropriate..', the +- variant occurs with class I as well as class IV. There are no class II bases among the temporal nouns, so no statement can be made about the choice of variant with that class.

Examples:

- |   |   |
|---|---|
| (7.251) up'nerkaan<br>up'nerkar+(r)-CQ0(3s)         | when it's <u>springtime</u> (8a:3)                          |
| (7.252) unugaqan<br>unug+(r)-CT0(3s)                | when <u>night</u> comes (e)                                 |
| (7.253) atakuraqan<br>ataku+(r)-CT0(3s)             | every <u>evening</u> (whenever it's <u>evening</u> ) (3:30) |
| (7.254) a. unugtuq<br>unug+(r)-IND(3s)              | it's <u>night</u> (e)                                       |
| b. atakurtuq<br>ataku+(r)-IND(3s)                   | it's <u>evening</u> (e)                                     |
| (7.255) kiagutaqatek<br>kiag+(r)@:(u)te-CT0(3s-3Rd) | whenever <u>summer</u> came to those two (7b:9)             |



This postbase can be said to be postinflectional and oblique incorporating if one takes +r- to be an absolutive case ending, and associates it with the temporal oblique function of the absolutive that is found with temporal noun bases (see §5.1.6). Another interpretation is that this is merely what happens when +(r)- NV(57) 'to do the thing appropriate...' is added to time phase temporal noun bases: that interpretation does not account for +r- with class I, and I therefore (tentatively) reject it. I do take +r- as an absolutive case ending, then, and thus strictly speaking, the postbase can be broken down into +r-, the inflectional ending, plus +Ø-, the actual NV element. This analysis is etymological only because +r- is (i) not the productive absolutive ending, and (ii) is conditioned by the presence of this putative +Ø- NV.

+ (r)- tends to occur in oblique moods (7.251) for consequential, (7.252-3, 255) for contingent. The indicative can be elicited (7.254), but it is rare in text. +(r)- NV(77) is not isolated as a postbase by Jacobson.

### 7.3.2. Preinflectional postbases.

Preinflectional postbases can be treated just as fused postinflectional postbases, with the difference that the fusion is hypothetical and abstract, rather than actually present in the morphology. It is, however, always possible through syntactic patterning and through meaning to tell what local oblique case is abstractly present in a preinflectional postbase (Sadock 1980 uses this kind of argumentation in identifying an allative (= terminalis) incorporating class in Greenlandic which contains some postbases that would be called preinflectional

in my terminology).

### 7.3.2.1. Oblique incorporating preinflectional postbases (ob-V, Ø-preserving).

In this group are four postbases, two of which are analyzed as treating the underlying noun base as an incorporated lc constituent (i.e., abstractly containing a localis ending), and two of which are analyzed as treating the underlying noun base as in incorporated tm constituent. The postbases are:

(78) +qsig- 'to be far in the area of N'. (N = DA or PS base).

(79) +qsigi- 'to be farther in the area of N'. (N = DA or PS base).

Examples:

(7.256) a. kinguqsigtuq            it's too far back (e.g., a load on  
kingu+qsig-IND(3s)            a sled) (e)

b. cillaqsigiuq                it's getting farther away in the  
cilla+qsigi-IND(3s)            distance (cilla- 'outside') (e)

(7.257) a. awaqsigtuq            it is spread out, scattered, far  
going:EA+qsig-IND(3s)        away (e)

b. un'gaqsigiuq                it's getting farther away down-  
exit:EA+qsigi-IND(3s)        river (e)

(7.258) yaaqsigiqerrlun'            -taw' tayim'  
going:RA+qsigi+qerte-APO(3Rs)-then    away  
it was already suddenly farther away (5a:16)

These postbases follow the pattern given in the fused representation of LC((Xx-)x)+et°e-; I do not know whether a portion of an underlying complex local oblique can remain as an lc constituent. These postbases occur with detransitivized PS bases (7.256), and with DA bases (7.257-8), but not with ordinary noun bases. Note that the role of the possessor of the PS bases in (7.256) is interpreted situation-





bine there with uka- 'coming:EA' (cf. \*ukavet uka-TM1). The etymology and the meaning both give evidence that the underlying noun base is an incorporated tm constituent. I have no data showing a portion of an underlying complex local oblique remaining as tm constituent dependent on the derived verb base.

### 7.3.2.2. Preinflectional, oblique possessum incorporating postbases (ob-V, r1-preserving).

r1-preserving postbases are quite minor among ob-V postbases, when compared to their importance as a class among n-V postbases. Here they mainly serve to express as 0 the underlying possessor of an incorporated PS base. Recall that for ob-V  $\emptyset$ -preserving postbases, PS bases are detransitivized so that the role of the underlying possessor is interpreted situationally. With LC((Xx-)x)+et<sup>o</sup>e-, the underlying possessor was expressed, but in a r1 constituent dependent on the underlying noun itself, rather than on the derived verb base.

Using the preinflectional representation for LC((Xx-)x)+et<sup>o</sup>e- as a point of departure, possessum incorporating postbases can be represented as follows:

#### POSSESSUM INCORPORATING (ob-V, r1-preserving)

$$\begin{array}{r}
 \underline{da} \widehat{\quad} \underline{n} \widehat{\quad} [\underline{r1} \rightarrow \underline{ps}]_{ps} \\
 g \quad c \quad j \quad [PS] \\
 \underline{n} \quad \underline{r1} \rightarrow, [\underline{da} \widehat{\quad} \underline{n} \widehat{\quad} [\underline{r1} \rightarrow \underline{ps}]_{ps}]_{ob} \rightarrow \underline{ap} \\
 \Rightarrow f \quad -- \quad g \quad c \quad j \quad [PS] \quad [POS \text{ INC}_V] \\
 \Rightarrow f \quad f \quad g \quad c \quad -- \quad -- \quad [PS + POS \text{ INC}_V]
 \end{array}$$

Postbases of this class incorporate PS bases as vialis (-ng:ir- NV(82), -ng:ir:ute- NV(83)) or terminalis (-lliarte- NV(84), -llite- NV(85)) constituents, i.e., 'ob' in the representation above is 'v1' for the first pair and 'tm' for the second pair. I will take up the first pair before taking up the issue of semantic nucleus.

(82) -ng:ir- 'to move at or through O's N'; literally: 'to annex, or take over from O (part of) its area at N'. (N = PS base). (cf. NV(40)).

(83) -ng:ir:ute- 'to gradually move at or through O's N'. (N = PS base). (cf. NV(41)).

Examples:

(7.264) kinguakun=llu makut ... kinguirturluku  
kingu-LC(3s-s)=& here:E-(RL)p kingu-ng:ir+tur-APO(3s)  
and through behind him followed him

going along behind him, they followed him (lit., annexed the area behind him; kingu- 'area behind POS'). (6b:41, vol. substitution).

(7.265) angyam aw'um kituraakut yaatairluta  
angyar-RLs going:E:RLs kitur-IND(3s-1p) yaate-ng:ir-APO(1p)  
boat it passed by us passing far away

the boat passed us in the distance (lit., annexed the area in the distance from us; yaate- derived PS, 'far away from POS') (vol)

(7.266) qerrayaakun keluirulluku  
qerrayar-LV(3s-s) kelu-ng:ir:ute-APO(3s)  
through the open space passing in back of it  
(the rope) just barely went through the open space behind it  
(13b:201).

(7.267) a. qaingirluku b. \*qaingirluni  
qai-ng:ir-APO(3s) -APO(3Rs)  
passing over the surface of it (e)

(7.268) natairtaugg?  
nate-ng:ir-INT(3s-3s)  
where in relation to it did it pass or move? (vol)

The basic pattern for -ng:ir- NV(82) and -ng:ir:ute- NV(83) is illustrated in (7.264) and (7.266), respectively. Both derive exclusively transitive verb bases from PS bases, but unlike the oblique incorporating postbases which select PS bases, they do not suppress the PS base's underlying possessor (or express it as a r1 constituent dependent on the underlying noun itself). Instead, the role of possessor of the underlying base is expressed as an n constituent dependent on the derived base (0, since the derived verb base is always transitive). The semantic role of the n constituent may be characterized as the point of orientation for the area referred to by the underlying PS base. These two postbases are ultimately just very specialized uses of the formally identical postbases NV(40) and NV(41), and the literal gloss given for the first is meant to reflect this (a similar gloss can be given for the second). A major difference the two present postbases and the two earlier ones is that NV(82-3) leave co-constituents (i.e., the underlying da constituent, n constituent, etc. from the incorporated base's potential complex local obliques) behind in the vialis case, while NV(40-1) leave co-constituents (i.e., the underlying adj constituent from the underlying noun bases potential complex noun phrases) behind in the modalis case. Further, the earlier ones derive S/O core rather than exclusively transitive verb bases.

We may now return to the general discussion of oblique possessum incorporating postbases. The fact that these postbases are r1-preserving makes them less susceptible to the postbase as nucleus analysis than oblique incorporating postbases are, since the underlying possessor role would have to be generated twice under one analysis, only to be deleted. It is also possible to say-- and this is what I have done-- that the

role of possessor of the incorporated PS base is raised into the n constituent of the derived verb base, causing underlying n constituent of the postbase to become the r1 constituent dependent on the derived verb base. In the representation I have given, then, role j replaces f, and f occupies the empty r1 constituent. Note that this "raising" analysis is less plausible for possessive verbalizing postbases (n-V, r1-preserving), since the postbase would have to be represented underlyingly as having a patient role as md constituent, but an empty n constituent.

Possessum incorporating postbases are like exclusively transitive causative pattern possessive verbalizing postbases (§7.2.1.3.1) in that the postbase adds a new role of its own as the r1 constituent of the derived verb base. But it seems unlikely to say that -ng:ir- NV(82) and -ng:ir:ute- NV(83) were subject to some kind of causativization process, as I claimed for causative pattern possessive verbalizing postbases. Rather, it seems that the added A with -ng:ir- NV(82) and -ng:ir:ute- NV(83) is akin to the added S of the oblique incorporating postbases, designating the undergoer of the motion expressed by the derived verb base. Given this, along with the "raising" analysis of the n constituent dependent on the derived verb base, there is no reason to consider the distinction r1-preserving vs.  $\emptyset$ -preserving as having a bearing within the ob-V postbase class on the relative viability of the base as nucleus vs. postbase as nucleus analyses. If the raising analysis is considered inadmissible, however, the r1-preserving ob-V postbases are relatively more favorable to the base as nucleus analysis.

The final two postbases in this class are highly lexicalized, and are well documented by Jacobson. They are:





and -ng:ir:ute- NV(83), with the possessor of the underlying PS base designating points or areas along the trajectory of a thrown object, or of the far end of an implement used for reaching. Although (e)ter- is not usually a PS base, one is led to suppose that in (7.271) it functions as one (cf. §5.1.5.2, where it was pointed out that the difference between PS bases and ordinary noun bases is sometimes unclear). The fact that the base has a general locational sense rather than an anatomical one in this utterance shows that it probably is functioning there as a PS base.

It is my guess that the underlying PS base is treated by the postbase as an incorporated tm constituent, but have no data showing unincorporated portions of a complex local oblique remaining as ob constituent to test this. This lack may well be due to the extreme lexicalization of this postbase.

(85) -llite-, -qlite-, -qite- 'to encounter (in some sense) N' (intransitive version; forms miscellaneous transitive versions).

Phonological characteristics: the following rule accounts for certain surface forms (its applicability is idiosyncratic):  $XVllite- \Rightarrow Xi$ , where X is a consonant or vowel preceding another vowel V. The rule is quite similar to rule P12b, cf. also footnote 1, and it is illustrated in (7.276-7).

Examples:

- |            |   |                                  |
|------------|---|----------------------------------|
| (7.273) a. | kumlaqituq<br>kumla- <u>qite</u> -IND(3s) | he reacts to the <u>cold</u> (e) |
| b.         | kumlaqitaanga<br>-IND(3s-1s)              | I'm feeling the <u>cold</u> (e)  |

- (7.274) a. *iquklituq* it is finished (*iqug-* 'end')  
*iqug-qlite-IND(3s)*
- b. *iquklitaa* he finished it, brought it to  
*-IND(3s-3s)* its end (e)
- (7.275) a. *akillituq* he reached the other side  
*aki-llite-IND(3s)*
- b. *akillitaa* he reached the other side of  
*-IND(3s-3s)* it (e)
- (7.276) *aiggagungitaa* he encounters his dear glove  
*aiggar-cungnar-llite-IND(3s-3s)* = he shakes hands with him  
 (aiggar- 'glove') (e)
- (7.277) a. *civunituq* he reached his destination  
*civu+ner-llite-IND(3s)* (civu- 'area in front')
- b. *civunitaanga* he stopped to visit me  
*-IND(3s-1s)* (e)

This postbase is highly lexicalized, and *aiggar-cungar-* (7.276) is the only base I found with it that is not cited with it by Jacobson (SJ: 258). As in the case of the previous postbase, the variants in *-q* and *-ll* probably derive from initial *\*-ql-*. This postbase, in addition to its phonological irregularities, is irregular syntactically, showing as many patterns as there are examples here. Thus in (7.273) there is an ordinary noun base, and a S/O core derived verb base whose transitive version has a dummy 3s A and a causativized meaning; in (7.274) there is a quasi-positional noun base, and a S/O core derived verb base with a causativized meaning; in (7.275) there is a PS base, and a S/A core derived base, the intransitive version of which corresponds to oblique incorporating postbases, and whose transitive version corresponds to oblique possessum incorporating postbases; in (7.276) there is an ordinary noun base, and an exclusively transitive derived verb base following something like the pattern in (7.275b); and in (7.277) there is an adjectivalized positional base (in *+ner-*, NN, which derives adject-

tival noun bases from PS bases) since *civunqa* (*civuner-AB(1s-s)*) 'my area in front of me' does not lend its possessor to (7.277b) as 0.

### 7.3.3. Summary of ob-V postbases.

The present discussion has laid much weight on different syntactic patterns, on the status of endings occurring within postbases, and on the degree to which postbases are syntactic entities. In all of this, the functional interdependence of the different classes defined, though mentioned, took a back seat. Table 7-3 is meant to remedy this, by showing which postbases incorporate which constituents of complex local obliques (n, da, ps) from which local oblique constituent (lc, tm, vl). In the table, it can be seen that postbases with true morphological incorporation (e.g., LC((Xx-)x)+et<sup>o</sup>e-), with morphological fusion (e.g., +kuir-, +tmurte-, etc.) and with preinflectional incorporation (i.e., where the case marking of the underlying noun base is hypothetical) all interact to fill in the total system represented in the chart. Note that though there are blanks, there is at least one postbase incorporating each of the three major local oblique constituents (lc, tm, vl) for each of the three major constituent types found in complex local obliques (n, da, ps). The blanks correspond mostly to impossible combinations (e.g., TM2 with possessed PS bases) and peripheral categories (e.g., lc-degree). Thus at a functional level, the morphological classification is fairly irrelevant. The syntactic distinction between  $\emptyset$ -preserving and r1-preserving is relevant in this functional sense: r1-preserving postbases (and they alone) incorporate transitive PS bases as ob constituents.

Table 7-3. The functional interdependence of ob-V postbases.

		CONSTITUENT INCORPORATED FROM COMPLEX LOCAL OBLIQUE				[r] -- ps] (trans.)
		<u>n</u>	<u>da</u>	<u>ps</u> (intr.)		
<u>lc</u>	general	LC((Xx-)x)+et°e- (70)	LC+et°e- (70)	LC+et°e- (70)	LC+et°e- (70)	LC+et°e- (70)
	1c-degree	---	+qsig- (78) +qsigi- (79)	+qsig- (78) +qsigi- (79)	---	---
<u>tm</u>	TM1 case	---	+var- (72) +virte- (71)	+var- (72)	---	---
	TM2 case	(+tmurte- (73))	+tmurte- (73)	+tmurte- (73)	---	---
	general	+te- (80)	---	(+te- (80))	-lliarte- (84) (-llite- (85))	
	tm-degree	---	+(q)vaqanir- (81)	+(q)vaqanir- (81)	---	---
<u>v1</u>	general	+kuir- (75) +kuar- (74)	+gguir- (75)	---	-ng:ir- (82) -ng:ir:ute- (83)	

CASE CATEGORY OF LOCAL OBLIQUE CONSTITUENT

Notes: (a) Citation numbers for each postbase are given in parentheses. (b) for two major oblique constituent case categories (1c, tm) ad hoc subcategories are indicated to avoid bunching-up: 1c-degree and tm-degree are semantic subclasses where the postbase indicates degree; the other subcategories should be self-evident.

## 7.4. Pd-V.

I call this class delocutionary, because it derives verb bases meaning 'to say pd (to 0)' from pd constituents (see §3) which function as independent utterances, especially independent particles and short (nominal or full) clauses. These postbases can be represented as follows:

DELOCUTIONARY (pd-V)

		<u>pd</u>	
		[pd]	
	<u>n</u> <u>rl</u> →,	[ <u>pd</u> ] <sub>md?</sub>	→ <u>ap</u>
⇒(a)	b	[pd]	[DLC <sub>v</sub> ]
⇒(a)	b	--	[pd + DLC <sub>v</sub> ]

This process is postinflectional when pd has an inflectional ending. When pd is an independent particle, there is no ending, so the delocutionary postbase is added directly to the postbase. It is my guess that the underlying pd constituent is incorporated as a md constituent, since that is the usual case for nominalizations of reported speech. However, I know of no direct evidence in the patterning of the delocutionary postbases themselves supporting this analysis of them.

Delocutionary postbases are far more adequately accounted for in a postbase as nucleus analysis. First, the postbase adds two roles in specific semantic relation to itself, the one who says pd (represented with b) and the one to whom pd is said (represented with a). Because the postbase is postinflectional, it operates as a pd constituent itself at the level of the external syntax. Third, there are no necessary coreference relations between elements within the pd and the constit-

uents in which two roles introduced by the postbase occur.

The postbases are:

(86) +(V)(V)r- 'to say pd (to 0)' (pd = complete utterance, usually an independent particle).

Phonological characteristics: It conspires to produce a verb base ending in  $\sqrt{r}$ - or VVr-, where the second vowel is a, unless both the vowels are i. It takes the form +r- after double (7.278) or lengthened (7.279) vowel; +ir- after single non-lengthened i (optionally) (7.280); +ar- after single non-lengthened vowel (free variation with +ir- in co-environments) (7.281-3); +aar- or +iir- after a consonant other than r (7.284-5); and is exceptional in some lexicalized cases (7.286-9).

Examples:

- |  |  |
|--|--|
| (7.278) akaaraluni<br>akaa+r+a-APO(3Rs)                | always saying " <u>akaa!</u> " ('ouch')<br>(3:74)  |
| (7.279) naamikirluku<br>naamiki+r-APO(3s)              | telling him " <u>naamiki</u> " ('I do<br>not seem to know') (e)                                    |
| (7.280) atakiirluku<br>ataki+ir-APO(3s)                | telling him " <u>out of the way!</u> "<br>(e)  |
| (7.281) kiikiarluku<br>kiiki+ar-APO(3s)                | telling him " <u>hurry up!</u> " (e)   |
| (7.282) quyanaarluku<br>quyana+ar-APO(3s)              | saying " <u>thank you</u> " to him (e)   |
| (7.283) pikaqaarluku<br>pi-ke+ar-IND(1s-3s)+ar-APO(3s) | telling him " <u>it's mine!</u> " (e)  |
| (7.284) a. engiirai=am<br>eng+iir-IND(3s-3p)=but       | he went " <u>eng!</u> " (defiant grunt)<br>to them (9a:9)  |
| b. eṅṅaaqerlun'<br>eṅṅ+aar-gar-APO(3Rs)                | he just went " <u>eṅṅ!</u> " (defiant<br>grunt) (8d:27)  |
| (7.285) atamgguqaarluku<br>atam=gguq+aar-APO(3s)       | he said to him " <u>atam=gguq</u> "<br>( <u>'they say (=gguq) to do it<br/>again (atam)'</u> ) (e) |

- (7.286) ggaayarlun'                    saying "g<sup>g</sup>ai!" (the English greeting  
ggai+ar-APO(3Rs)                    "hi") (e)
- (7.287) angerlun'                    saying "aang" ('yes') (e)  
aang+r-APO(3Rs)
- (7.288) arciarluni                    saying "ar<sup>ca</sup>!" ('cut it out!') (e)  
arca--iar-APO(3Rs)
- (7.289) angurrlualuku                telling him "angurrluk!" ('don't, darn  
angu-rrlug+a-APO(3s)                you!'). (cf. angu! 'don't!', but  
\*angurluku (with +r- NV(86)) (e)

The juncture phenomena are quite irregular for this postbase, and the most likely conclusion that can be drawn is that they are the remnants of external sandhi processes. If this is so, it gives strong support to the claim that the postbase is postinflectional, that is, that it is added to formally complete words. Further compelling evidence for this is the fact that when +aar- in (7.285) is added to *atam=gguq* 'they say to do it again', the final *r* of =*ggur-* is converted to *q* by rule P24b: thus, at the phonological level, *atam=gguq* actually is a full word, to which +*aar-* is then added.

The postbase is added to independent particles in (7.278-82, 284, 286-9); it is added to other short utterances in (7.278, 284b, 286-8), and a transitive verb base in (7.279-83, 284a, 285, 289).

In a transformational grammatical analysis, one may wish to derive constructions with this postbase from instances of the incorporated *pd* with =*gguq* 'they say that...'; tell him...'. Thus, (7.278) would come from *akaa=gguq* '(he) said "akaa" ('ouch')'; (7.285) would come from *atam=gguq=gguq* '(he) said "atam=gguq" ('they say to do it again')'. Note that =*gguq* is semantically less specific than the postbase, since it does not specify speaker or his addressee, leaving that to contextual interpretation.



(87) +te- 'to say pd (to 0)'. (pd = a temporal particle ending in the postbase @<sub>4</sub>"ku- temporal irrealis 'on the coming N' (where N is a temporal noun or particle base).

Examples:

- (7.290) yaaliakutuq                    he said "in two days" (e)  
yaaliaku+te-IND(3s)
- (7.291) a'l'rraquatai                he told them "next year" (e)  
a'l'rraqu+te-IND(3s-3p)
- (7.292) atatakuqu'r'luki            she told them "in a while" (3:55)  
atataku+te @qurar-APO(3p)

These constructions are semantically vague from the English point of view: in context, (7.292) happens to mean 'she told them to wait a while'. In other contexts it could mean 'she told them she would act in a while' or 'she told them something would happen in a while'. This range of meanings is of course precisely the same as that of the temporal particle atataku when it is uttered independently: 'you must wait a while; I'll do it in a while; it will happen in a while'.

As with the preceding postbase, one may wish in a transformational grammatical analysis to derive it from instances of the temporal particle with the enclitic =gguq 'they say that...; tell him...'. Thus, (7.290) would come from yaaliaku=gguq '(he) said "in two days"'; (7.291) would come from a'l'rraquatai=gguq '(she) said "next year"'. (7.292) would come from atataku=gguq '(she) said "in a while"'. (7.292)

#### 7.5. Conclusions to syntactic classification and lexicological description (§§7.1-4).

Up to now we have used contrasting base as syntactico-semantic nucleus and postbase as syntactico-semantic nucleus analyses as a framework for describing and classifying the NV postbases. I would like to

conclude this discussion with a closer examination of the fundamental characteristics of NV postbases that govern the viability of the two analytic approaches. There seem to be four such characteristics. All along, these characteristics have served as classificatory parameters, and I summarize them here (the first two are plotted in table 7-1):

- a. Position of the underlying noun base in a complex noun phrase.  
Subclasses: adj-V, n-V, ob-V, and pd-V.
- b. Preservation of syntactic roles from underlying noun base to derived verb base.  
Subclasses: r1-preserving, lc-preserving, and  $\emptyset$ -preserving.
- c. Addition of a new role to a more basic derived verb base (cf. especially §7.1.2, 7.2.1).  
Subclasses:  $\emptyset$ , indirective (adds O), causative (adds A).
- d. Morphological type.  
Subclasses: preinflectional, postinflectional (with further divisions into fused and transparent postinflectional, discussed in §7.3).

The postbase subclasses defined by each of these classificatory parameters can be ranked according to relative viability of the base as nucleus vs. postbase as nucleus analyses.

- a. Position of the underlying noun base in a complex noun phrase. The following ranking is found:

<u>Subclass</u>	<u>Preferred analysis</u>
adj-V	
n-V	
ob-V	
pd-V	

The following is independent evidence in the data for this ranking.

The adj-V subclass is more susceptible than the n-V subclass to the base as nucleus analysis because there is minimal perturbation of its combinatory potential in the course of derivation, and no new roles are added (except for #ng:urte- NV(4), but there the new A role is added beyond what is derived by its constituent #ng:u- NV(3)). The n-V subclass is less susceptible to the postbase as nucleus analysis than the ob-V subclass because the underlying noun base for ob-V postbases is frequently a locational (DA or PS) base. Locational bases can only occur in dependent cases (except PS bases, as discussed in §5.1.5.2), and as such always imply a governing "verb" on which they are dependent. Where NV postbases are concerned, then, this "verb" will be the postbase, and not a verb base. Much of the evidence that the pd-V subclass is more susceptible to the postbase as nucleus analysis than the ob-V subclass has been given in §7.4; note also that there are r1-preserving ob-V postbases but no r1-preserving pd-V postbases, arguing for greater independence of the incorporated element and the postbase in the case of pd-V postbases. Further, all pd-V postbases are transparent and postinflectional (where an inflectional ending would be expected), while some ob-V postbases are preinflectional or fused postinflectional. This indicates that there is more evidence for treating the underlying noun base for pd-V postbases as a fully formed external

syntactic element.

This ranking provides an interesting empirical result which is in no way an artifact of the analytic techniques I have used. It is that that the greater the syntactic dissimilarity between the underlying noun base and the derived verb base, the more likely it is that the postbase is not merely rearranging the underlying base, but is incorporating it into a new clause structure that it-- the postbase-- defines. Thus adj-V postbases involve the least radical derivation, since adjectival noun bases (and ordinary noun bases functioning as adj constituents in complex noun phrases) fill the corresponding constituent in complex noun phrases that verb bases fill in clauses, i.e., the ap constituent. Next are n-V postbases. In general ordinary nouns fill the n constituent of a complex noun phrase, but can fill the ap (= adj) constituent under certain circumstances, as well. Verb bases, on the other hand, can only fill the ap (= pd) constituent in a clause, never the n constituent. Still more radical are ob-V postbases. There the underlying base (which may or may not be inflected with an ending) is taken as a constituent in an inherently dependent complex local oblique. There are, by contrast, no verb bases which are inherently dependent in this way. Finally, the most radical derivation is pd-V. There, a complete utterance, rather than a (usually uninflected) constituent of a complex noun phrase or clause, is the underlying form, while a verb base is the derived form. The derivation, then, involves a transition from a complex form relative to the level of the clause, to an elemental form. This is of course the most favorable circumstance for an incorporation interpretation.

b. Preservation of syntactic roles from underlying noun base to derived verb base. The following pairing of subclass and analysis is found:

<u>Subclass</u>	<u>Preferred analysis</u>
r1-preserving } lc-preserving }	base as nucleus
∅-preserving	postbase as nucleus

Here there is no sliding scale, as in the case of the previous parameter. The relationship of preservation of syntactic roles to the two types of analyses has been discussed in §6.6.3 and 7.2, cf. also §7.3.3.2.

c. Addition of a new role to a more basic derived verb base. The following pairs of subclass and analysis is found:

<u>Subclass</u>	<u>Preferred analysis</u>
∅ (no addition)	[depends on classification of the NV postbase involved]
indirective } causative }	postbase as nucleus

Here again, there is no sliding scale. Addition of new roles enhances the susceptibility of a postbase to the postbase as nucleus analysis, since it indicates that the postbase-- like an actual verb base-- brings with it its own set of role relations. It is thus the opposite situation to preservation of syntactic roles, where the role relations to the derived verb base can be traced to the underlying base. The subclasses indicated here are special cases, where it can be argued that there is some intermediate derived verb base to which the new role is added (see §7.2.1; note also the discussion of -ng:ir- NV(40) in

§§6.2 and 6.6.3).

d. Morphological type. The following ranking is found:

<u>Subclass</u>	<u>Preferred analysis</u>
preinflectional	↑ base as nucleus
postinflectional: fused	↓
postinflectional: transparent	↓ postbase as nucleus

Here there is a sliding scale, since there are degrees of fusion. The relationship of morphological type to the two types of analysis is discussed in §7.3, and of course it provides the most concrete illustration of the entire problem, since with the most transparent postinflectional postbase,  $LC((Xx-)x)+et^{\circ}e-$  NV(70), the element  $+et^{\circ}e-$  can literally be traced to a base rather than a postbase.

From this, then, we can identify three general characteristics of NV postbases which determine the kind of analysis they are to receive: (i) the degree of functional dissimilarity between the underlying noun base and the derived verb base; (ii) the degree to which the potential of the underlying noun base to combine with certain roles is preserved or altered as an NV postbase is added; and (iii) the morphological nature of the postbase.

Sometimes the criteria corroborate each other from the point of view of the syntactico-semantic nucleus issue: thus, pd-V postbases are always postinflectional, while adj-V and n-V postbases are always preinflectional. Sometimes, they give mixed results, as for example with the preinflectional, possessum incorporating postbases (§7.3.2.2) which are ob-V but rl-preserving.

What we take as the syntactico-semantic nucleus in clause level

grammar is of central importance in our grammatical tradition. Work on postbase derivation discussed in §6 takes a strong stance, presupposing either/or decisions, so that gradations between base as nucleus and postbase as nucleus analyses are not recognized. Here it has been shown that these decisions are based on multiple, sometimes conflicting criteria, and that the criteria are sometimes scalar rather than absolute. These criteria, because of their generality, must be considered the most basic characteristics of NV postbases. Because of this, they provide the most valid and revealing parameters for classification and syntactic analysis.

#### 7.6. Classification in terms of semantic selection.

Certain semantic categories of ordinary noun bases are selected by a number of NV postbases. In some instances, all or most of the postbases selecting that particular category belong to the same syntactic class, thus postbases selecting noun bases denoting game animals and objects in nature belong to the indirective subclass of possessive verbalizers. One significant semantic category not restricted to a single syntactic class is that of body part noun bases, selected by the following postbases:

- (9) -lngu-            'for S to suffer because of N' (one example).  
 (10) +teqe-           'for S to experience the effects of the normal activity of his N (body part)'.  
 (11) -liqe-            (i) 'to catch lots of N (especially game)'; (ii) to suffer on account of one's N (body part)'; (iii) 'to be bothered by N'.

- (28) -kcugi- 'to strike O with a projectile or implement in the N'  
 (29) -cillerarte- 'to hit O unintentionally in the N (not necessarily with a projectile)'.  
 (30) -nqar- 'to hit O with a projectile unintentionally in the N'.  
 (34) --i- (i) 'to spend N (temporal noun base)'; (ii) 'to be full in the N (body part)'.  
 (45) -ng:irarte- 'for A to injure O in the N' for S to be injured in the N (N is restricted to body parts)'.  
 (68) +mig- 'for A to put O in proximity with his (A's) N, to do to O with his N'.

Note that the body part referred to must be that of S (9, 10, 11, 34), A (68), O (28, 29, 30), or S/O (45), never that of S/A or of an oblique. From the point of view of incorporation, the existence of this class is significant since incorporation of body part forms constitutes a special morphological class in many other native languages of North America (see e.g., Boas 1911c:902-5 for Dakota, Sapir 1922:72-86 for Takelma, and Sapir's (1911) general discussion of body part forms where he argues that their "incorporation" is so common that it does not constitute true noun incorporation).

#### 7.7. NV postbase etymology.

The internal structure of NV postbases is given at the beginning of §7. Etymologies are presented in tables 7-4a and 7-4b. Table 7-4a gives etymologies of adj-V, n-V, and pd-V postbases, while table 7-4b gives etymologies of ob-V postbases. The groupings in table 7-4a are organized around the etymological NV element, of which there is exact-



ly one per postbase. When that NV element is a postbase root, it is listed first separately, with a (hypothetical) gloss. The presentation in table 7-4b does not take each NV element separately, in order to illustrate patterning in the preceding NN and following VV elements. The NN and VV elements presented tables 7-4a and 7-4b are listed and glossed in table 7-5.

Table 7-4a: adj-V, n-V, and pd-V postbase etymologies.

<u>Postbase</u>	<u>NN</u>	<u>NV</u>	<u>VV</u>	<u>Short gloss (for full glosses, see entries in text)</u>
1. - <u>ke</u> -		- <u>ke</u> -		for A to have O as its N
2. - <u>ksagute</u> -		- <u>ke</u>	+yagute-	for A to acquire O as its N, for O to become A's N
46. - <u>kegte</u> -		- <u>ke</u>	√ <u>fgg</u> +te-	to have an advantageous N; cause O to have an adv. N
47. - <u>kegci</u> -		- <u>ke</u>	√ <u>fgg</u> +te +'i-	to have a good, nice N; to cause O to have a good, nice N
48. - <u>kegcir</u> -		- <u>ke</u>	√ <u>fgg</u> +te @+cir-	to provide O with a good N
67. + <u>nqegg</u> -	+ner	- <u>ke</u>	√ <u>fgg</u> -	to have the abstract shape characteristics of N
3. <u>ng:u</u> -		<u>ng:u</u> -		to be N, for S (human) to live on as a N
4. <u>ng:urte</u> -		<u>ng:u</u>	√ <u>r</u> +te-	for S to become N; for A to cause O to become N
8. - <u>lgu</u> -	-leg	<u>ng:u</u> -		for S to be the one having N
9. - <u>lngu</u> -	√ <u>t'e</u> (?) @ngu-	<u>ng:u</u> -		for S to suffer because of N
5. - <u>ngqerr</u> -		- <u>ngqerr</u> -		to have N
50. + <u>tangqerr</u> -	√ <u>ta</u>	- <u>ngqerr</u> -		for there to be N at S/LC
32. - <u>ngqercite</u> -		- <u>ngqerr</u>	@+cite-	for A (natural force) to bring N (natural phenomenon) onto O

Table 7-4a (cont.)

<u>Postbase</u>	<u>NN</u>	<u>NV</u>	<u>VV</u>	<u>Short gloss</u>
$\sqrt{-ng:i-}$		$\sqrt{-ng:i-}$		to lack N
6. $-ng:it^{\circ}e-$		$\sqrt{-ng:i}$	$\sqrt{t^{\circ}e-}$	to lack N
40. $-ng:ir-$		$\sqrt{-ng:i}$	$\sqrt{r-}$	to deprive O of its N; to be deprived of N
41. $-ng:ir:ute-$		$\sqrt{-ng:i}$	$\sqrt{r \text{ } \emptyset:(u)te-}$	to use up O's N; no longer to have N
51. $+tait^{\circ}e-$	$\sqrt{t^{\circ}a}$	$\sqrt{-ng:i}$	$\sqrt{t^{\circ}e-}$	for there to be no N at S/LC
53. $+tairute-$	$\sqrt{t^{\circ}a}$	$\sqrt{-ng:i}$	$\sqrt{r \text{ } \emptyset:(u)te-}$	for there to be no more N at S/LC
7. $-knaggait^{\circ}e-$	$\sqrt{-knag}$	$\sqrt{-ng:i}$	$\sqrt{t^{\circ}e-}$	(emphatic of NV(6))
42. $-knagga ir-$	$\sqrt{-knag}$	$\sqrt{-ng:i}$	$\sqrt{r-}$	(emphatic of NV(40))
43. $-knagga irute-$	$\sqrt{-knag}$	$\sqrt{-ng:i}$	$\sqrt{r \text{ } \emptyset:(u)te-}$	(emphatic of NV(41))
54. $+taknaggait^{\circ}e-$	$\sqrt{t^{\circ}a}$	$\sqrt{-ng:i}$	$\sqrt{t^{\circ}e-}$	(emphatic of NV(51))
55. $+taknagga irute-$	$\sqrt{t^{\circ}a}$	$\sqrt{-ng:i}$	$\sqrt{r \text{ } \emptyset:(u)te-}$	(emphatic of NV(53))
44. $-ng:irar-$		$\sqrt{-ng:i}$	$\sqrt{r \text{ } tar-}$	for S/O's N to be cold (due to A-3s)
45. $-ng:irarte-$		$\sqrt{-ng:i}$	$\sqrt{r \text{ } tar \text{ } te-}$	for S/O to be injured in the N (by A)

Table 7-4a (cont.)

<u>Postbase</u>	<u>NN</u>	<u>NV</u>	<u>VV</u>	<u>Short gloss</u>
$\sqrt{\#ni(r)-}$		$\sqrt{\#ni(r)-}$		NV affective element
13. $\#nirqe-$		$\sqrt{\#nir}$	+qe	to be a good N
14. $\#niit'e-$		$\sqrt{\#nir}$	-ng:it'e-	to be a bad N
15. $\#nike-$		$\sqrt{\#nir}$	@4'ae-	to consider O to be a good, nice N
16. $\#niur-$		$\sqrt{\#ni}$	+ur-	to suffer with respect to N
17. +cugnite-	$\sqrt{\#cug}$	$\sqrt{\#ni}$	+te-	to smell like N
18. (@)-llugnite-	(@)-llug	$\sqrt{\#ni}$	+te-	to have the bad smell of N
17. +tu-		+tu-		for S to have N (quality) in abundance
18. +kit'e-		$\sqrt{\#ki}$	$\sqrt{\#t'e-}$	for S to have little or no N (quality)
19. +kili-		$\sqrt{\#ki}$	$\sqrt{-lil-}$	for S to come to lack N (quality)

Table 7-4a (cont.)

<u>Postbase</u>	<u>NN</u>	<u>NV</u>	<u>VV</u>	<u>Short gloss</u>
24. +te-		+te-		to catch, fetch N from nature
21. +tar-		+te (?)	√far-	to get, fetch N (natural product) from nature (for 0)
22. +ci		+te	+ 'i-	to buy N
23. +karci-	+kar	+te	+ 'i-	to buy N (for 0)
25. +ssur-		+te	üyu √fr-	to try to obtain N from its natural setting (for 0)
26. +ssuarar-		+te-	üyu √fr : arar-	to obtain N (for 0) (not by hunting)
10. +teqe-		+te	+qe-	for S to experience N (body part)
56. +cit°e-		+te	√ft°e-	for S to be in (atmospheric) condition of N
61. +tur-		+te	+tur-	to eat, drink, wear N
29. -cillerarte-	-ciller tar	+te-		to hit 0 in the N unintentionally
27. -ssaag-		-ssaag-		to fetch N from storage (for 0)
30. -nqar-		-nqar-		to hit 0 in the N unintentionally, with a projectile

Table 7-4a (cont.)

<u>Postbase</u>	<u>NN</u>	<u>NV</u>	<u>VV</u>	<u>Short gloss</u>
33. -li-		-li		to make N (for O)
34. --i-, +i- <sup>1</sup>	[(+ar*)]	-li		to spend N, be full in N (+ar*- with class VI, g-final)
35. -liur-		-li	+ur-	to attend to N (for O, in spite of O)
36. +kiur- <sup>1</sup>	+k[ar]	-li	+ur-	to prepare N (for O)
62. -liyar-		-li	*yar-	to go and take part in N
28. -kcugi- <sup>1</sup>	-kcug [+ar*]	-li		to strike O in the N with with an implement or projectile
37. -liir-		-li	√fr-	to be provided with N (by A)
38. --ir- <sup>1</sup>		[ -li]	√fr-	to be provided with N; for N to occur; to set N
11. -liqe-		-li	√fr -ke-	to catch lots of N; to suffer from N; to be bothered by N
12. +liiqe- <sup>1</sup>	+li[ug-	-li]	√fr-	to have an N of poor quality, be afflicted with N
39. -lgir- <sup>1</sup>	-leg [+ar*]	-li]	√fr-	to take along N (provided by A)
√+∅-		√+∅-		to do the appropriate thing to N
57. +(r)-	+(r)	√+∅-		to do the appropriate thing to N
77. +(r)-	+(r)	√+∅-		for it to be N (time phase temporal N base) (+r- with class I)

Table 7-4a (cont.)

<u>Postbase</u>	<u>NN</u>	<u>NV</u>	<u>VV</u>	<u>Short gloss</u>
58. +(r)yug-	+(r)	√+∅	#yug-	to want to have N, do the appropriate thing to N
59. -laag-	+(r) (?)	√+∅	-laag-	to quickly do the appropriate thing to N
60. +sciigat°e-	+(r) (?)	√+∅	+sciigat°e-	to be unable to do the appropriate thing to N
20. -nge-	+(r) (?)	√+∅	-nge-	to acquire N (for O)
52. +tange-	√+ta +(r)- ?	√+∅	-nge-	for there to appear N at S/LC
63. +te-		√+∅	+te-	to make the noise N
87. +te-		√+∅	+te-	to say pd (to O) (pd = temp. PT with @4 <sup>u</sup> ku- irrealis)
69. +(V)(V)r-	√+(V)(V)r	√+∅		to say pd (to O) (pd = complete utterance)
√@ki-		√@ki-		?
69. -lkite-	√+t°e (?)	√@ki	+te-	to make a noise involving N
49. +yag-		+yag-		for there to be lots of N at S
66. @+pa1lar-		@+pa1lar-		to sound like N
68. +mig-		+mig-		for A to put O in proximity with his (A's) N

Table 7-4b: ob-V postbase etymologies.

<u>Postbase</u>	<u>NN / noun ending</u>	<u>NV</u>	<u>VV</u>	<u>Short gloss</u>
$\sqrt{-ng:i-}$		$\sqrt{-ng:i-}$		to travel along a path of N, N-ward
$\sqrt{-ng:a-}$		$\sqrt{-ng:a-}$		to travel over an area of N, N-ward
82. $-ng:ir-$		$\sqrt{-ng:i}$ +r-		to move at or through O's N
83. $-ng:ir:ute-$		$\sqrt{-ng:i}$ +r @:(u)te-		to gradually move at/through O's N
80. +te-		$\sqrt{+\emptyset}$ +te-		to go to N
70. LC((Xx-)x)et°e-	LC((Xx-)x)	et°e-		to be at N
71. +virte-	+ve(+t)	$\sqrt{-ng:i}$ +r +te-		for S to follow a path N-ward
72. +var-	+ve(+t)	$\sqrt{-ng:a}$ +r-		for S to move N-ward
73. +tmurte-	+tmu(+n)	$\sqrt{+\emptyset}$ +r +te-		to travel in the direction of N
75. +kuir-/+gguir-	+ku(+n)/+gg..	$\sqrt{-ng:i}$ +r-		to follow a path through/along N
74. +kuar-	+ku(+n)	$\sqrt{-ng:a}$ +r-		to go straight through/along N
76. +tna-	+ten	$\sqrt{-ng:a-}$ ?		to do like N
78. +qsig-	+qe $\sqrt{+yig}$	$\sqrt{+\emptyset-}$		to be far in the area of N
79. +qsigi-	+qe $\sqrt{+yig}$	$\sqrt{+\emptyset}$ +i-		to be farther in the area of N
84. -litiarte- etc.	(+qe) ulir	$\sqrt{-ng:a}$ +r +te-		for A to reach O's N
85. -litiite- etc.	(+qe) uli	$\sqrt{+\emptyset}$ +te-		to encounter N in some sense
81. +(q)vaqanir-	(+qe) +ve(+t)	$\sqrt{-ng:a}$ +r $\sqrt{-kanir-}$		for S/O to move further N-ward (due to A)



Table 7-5: List of NN and VV elements in etymologies.

√+ar-	VV ? (21).
+ar*-	NN just about an N (28, 29, 34, 35).
+ar-	VV to V to some degree (44). cf. also +ar+te- VV.
:arar-	VV barely to V (26).
+ar+te-	VV suddenly to V (45). cf. (29), where there is +arte- NV, unless it is +∅- NV plus +ar+te- VV.
-ciller-	NN worthless N (29).
@+cir-	VV A lets O do V, waits for O to do V (48).
@+cite-	VV to cause O to do V-intr.; cause someone-TM to do V-tr. to O (32).
√+cug-	NN smell of N (17, 18).
√+gg-	VV in combination with - <u>ke</u> - NV(1): √- <u>kegg</u> - NV 'have a good N'.
+i-	VV to become V (with class VI) (79).
+i-	VV antipassive (22, 23, 47).
√- <u>kanir</u> -	VV probably from +kanir- VV 'to V with greater intensi- ty' (81).
+kar-	NN future N (23, 36).
-kcug-	NN serviceable N, miserable N (28).
√- <u>ke</u> -	VV ? (11, 12). Probably related to @4 <sup>u</sup> ke- below, but has different form, and derives V-intr. rather than V-tr.
@4 <sup>u</sup> ke-	VV for A to consider O to have the effect V on himself (15).
√+knag-	NN with - <u>rrar</u> *-: √+knaggar*- NN 'a very little bit of N'. (7, 42, 43, 54, 55).

Table 7-5 (cont.)

+ku(+n), +ggu(+n)	N ending.	VLs, VL with DA bases (74, 75).
-laag-	VV	to V quickly, in a hurry (59).
LC((Xx-)x)	N ending.	Any instance of localis case inflection (70).
-leg-	NN	one provided with N (8, 39).
ʔli-, ʔli-	NN	(one in) the area of PS/DA (84, 85). ʔli- in (85) is aberrant.
√-lli-	VV	Perhaps from ʔi- 'to become V (quality)' (with class IVc).
(ʔ)-llug-	NN	N of poor quality (12, 18). Aberrant form +llug- in (12).
+ner-	NN	place at N (67).
-nge-	VV	to begin to V (20, 52).
-ng:it°e-	VV	to lack V (quality) (14). (cf. (6)).
√ʔngu-	NV	Perhaps from ʔng:u- (3) 'to be N'; occurs in (9).
+qe-	VV	durative (10, 13).
+qe-	NN	area of N (?) (78, 79, 81, 84, 85).
+(r)-	N ending.	Occasional marker of ABs. (57, 58, 77, 20?, 52?, 59?, 60?).
√+r-	VV	inchoative (11, 12, 25, 26, 37, 38, 39, 40, 41, 42, 43, 44, 45, 55, 72, 74, 75, 81, 82, 83). See also √+r+te- VV.
√+(V)(V)r-	N ending.	Probably a variant of +(r)- acted on by an earlier stratum of external sandhi processes.
-rrar*-	NN	a bit of N (see √-knag- NN).

Table 7-5 (cont.)

√+r+te-	VV inchoative causative (4, 71, 73, 84).
+sciigat°e-	VV to be unable to V (60).
√+ta-	NN N which is at POS; N which is at LC (50, 51, 52, 53, 54, 55).
+te-	VV causative (17, 18, 48, 63, 69, 80, 85, 87). See also √+r+te- VV and +ar+te- VV.
√+t°e-	NN ? (9, 56, 59).
√+t°e-	VV to be in a state of V (6, 7, 18, 51, 53, 54).
⊙:(u)te-	VV indirective (41, 43, 55, 83).
+ten	N ending. EQ (with DA bases). (76).
+tmu(+n)	N ending. From +tmun TM2 (73).
+ur-	VV habitual (16, 61).
+ve(+t)	N ending. From +vet TMJ (71, 72, 81).
*yagute-	VV to reach the state of V (2).
*yar-	VV to go V-ing (62).
√*yig-	NN far, distant N (78, 79).
*yu-	VV to customarily V well (25, 26).
*yug-	VV to want, tend to V (58).

## §7-- Footnote.

1. Postbases based on -li- 'to make N (for O)' (see §7.7) all are subject to rule P12b. As noted there, the rule is optional. In some cases however, application of rule P12b is a lexicalized part of the postbase. There, it is symbolized with the functure '--', replacing the suffix-initial -l: --i- NV(34) from -li-; --ir- NV(38) from -lir-. Mechanically, '--' indicates the following operation on the base-final sounds:

$$C(V)V(C_V)--i \Rightarrow C(i)i \quad (C_V = \text{velar fricative})$$

For example: (7.119-23, 7.141-4). In etymological representations (§7.7) obligatory application of this rule is symbolized with square brackets around the deleted material. Thus, +kiur- NV(36) is represented as +k[ar-l]i+ur-.

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