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A Grammar of Iñupiaq Morphosyntax

by

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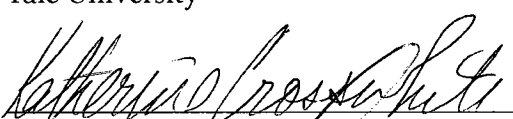

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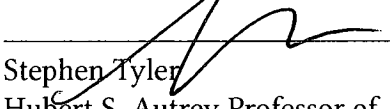

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ABSTRACT

A Grammar of Iñupiaq Morphosyntax

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This dissertation presents a reference grammar of the Malimiut Coastal dialect of Iñupiaq (Eskimo-Aleut > Eskimo > Inuit), an Eskimo-Aleut language spoken in northwestern Alaska (ISO codes ESI, ESK, IPK). Also known as Iñupiatun, it is the language of the Iñupiat people. The dissertation complements existing, incomplete documentation of Iñupiaq, filling gaps in our current understanding of Iñupiaq. The data presented in the dissertation is the result of five years of research, fieldwork and analysis. The aim is to contribute to comprehensive documentation of the Iñupiaq language, with particular focus on morphosyntax.

With approximately 2000 remaining speakers, mainly above 50 years of age, Iñupiaq is endangered. Within the Iñupiat community, there is a strong commitment to language documentation and revitalization, driven by groups such as the Alaska Native Language Center and local school districts. The current work aims to provide a comprehensive description of the morphosyntax of the language to the Iñupiat community as well as the academic community. This dissertation uses the standard Iñupiaq writing system—a modified Latin script—in order to make it accessible to members of the Iñupiat community, as well as to allow for easier comparison between examples included here and existing texts. Examples are also glossed in IPA for ease of use by linguists. It is hoped that by including both Iñupiaq orthography and IPA, the work here will be maximally useful to the Iñupiat community, scholars, and other interested parties.

After providing an introduction to the language and reviewing previous work, the dissertation describes Malimiut Iñupiaq phonetics and phonology, nominal and verbal morphology, syntactic categories, wordhood, constituency, and syntax. A final chapter is devoted to drawing comparisons between Iñupiaq and other Eskimo-Aleut languages and dialects, particularly other members of the Inuit dialect continuum. Major findings of the dissertation are also discussed. These include a previously undocumented phonological change in progress, the apparent shift of /ʐ/ (Iñupiaq 'r') to the American English /ɹ/ in younger speakers and heritage learners. I argue that this has several interrelated causes, including age, Iñupiaq literacy, declining Iñupiaq usage, and the influence of English. The dissertation also documents case stacking in Iñupiaq demonstrative adverbs and demonstrative pronouns, a phenomenon by which these words are marked with grammatical case twice. Though the process works differently for demonstrative adverbs and for demonstrative pronouns, both exhibit this double case marking, which is previously undocumented in Eskimo-Aleut. The existence of case stacking on adverbs is a particularly exciting discovery, because it challenges currently accepted theories of case stacking that motivate case stacking via argument structure. As adverbs are not a part of argument structure, it suggests another mechanism for multiple case stacking must be necessary.

Although eastern members of the Inuit dialect chain have been much more extensively documented, many areas of Iñupiaq grammar remain undocumented. This dissertation is the first to discuss a number of morphosyntactic topics specifically for Iñupiaq, including argument status, clause-level and sentence-level constituency, types of predication, wordhood (phonological vs. morphological vs. syntactic), and clause combining. What arises out of exploring many of these topics is that there is a real need to separate morphology and syntax in Malimiut Iñupiaq. It has often been assumed that because Inuit languages have so very much morphology—over 400 derivational suffixes alone—that morphology and syntax are one and the same in these languages. However, clause combining and constituency—among other phenomena—demonstrate that purely syntactic phenomena exist in the language.

Acknowledgments

This dissertation could never have become a reality without the help and support of many individuals and organizations. I want to express my gratitude to the many who provided direct or indirect assistance during the entire dissertation process. I would particularly like to acknowledge and thank Aqquġaq and her family, Iñupiaq consultants who wish to remain anonymous, the people of Noatak, and my committee members. Aqquġaq and anonymous consultants were very generous with their time and knowledge, and I appreciate their patience and kindness.

Claire Bowern has been a fantastic, supportive chair, always generous with her time and thorough knowledge of the literature. Numerous conversations with her during the fieldwork, analysis, and writing stages clarified my thinking. I would also like to thank the other committee members, Katherine Crosswhite and Steve Tyler, for their assistance with the dissertation manuscript. Errors of fact and interpretation are solely my mine.

Fieldwork leading to this dissertation was supported by generous financial assistance from the Endangered Language Fund, Bill Bright Memorial Award, and the Dolores Mitchell Trust. Thanks are also due to the archive staff at the Alaska Native Language Center, who assisted me in finding relevant materials.

I would also like to thank my friends and colleagues at Rice University, especially Vica Papp and Gujing Lin, whose friendship has been invaluable during the entire process. Thanks for putting up with me! Though not a primary consultant due to dialect differences, the late Ruth Tatqaviñ Sampson also deserves my warmest thanks for her patient encouragement of my studies and permission to use data from her Iñupiaq course. Finally, my parents, my husband Kostas, and other family members have also been incredibly loving and supportive. Quite simply, I cannot thank you enough.

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Chapter 1

Introduction

1.1 Iñupiaq overview

Iñupiaq is a member of the Eskimo-Aleut family (see Figure 1.1). It is also referred to by the name Iñupiatun, especially in Summer Institute of Linguistics materials; this is simply the similative case of 'Iñupiaq' (*Iñupiaq-tun* > *Iñupiatun* 'like Iñupiaq'). Iñupiaq is spoken by an estimated 2100 people representing all dialects (Krauss 2007) in northern Alaska (United States) and northwest Canada over a very large geographical area (see Figures 1.2 and 1.3). In Canada, it is known as Uummarmiutun (Lowe 1985). This dissertation focuses on Malimiut Coastal dialect (see Sections 1.1.4 and 1.2.1), particularly the dialect of Noatak village (Nuataaq in Iñupiaq), and so the focus here is on Alaskan villages rather than Canadian. The largest communities within the Alaskan Iñupiaq region are Barrow, Kotzebue, and Nome; there are also speakers in Fairbanks and Anchorage. With the exception of those towns, with populations ca. 3000 each, settlements within this area are all villages of 500 or fewer inhabitants (United States Census Bureau 2006). All communities are remote and neither connected to each other nor to other regions of Alaska by road or rail. See Section 1.1.4 for more details about the dialect situation.

1.1.1 Genetic classification

As shown in Figure 1.1, Iñupiaq belongs to the Inuit branch of the Eskimo subfamily within the Eskimo-Aleut language family. It is closely related to Inuktitut, to which it is adjacent in

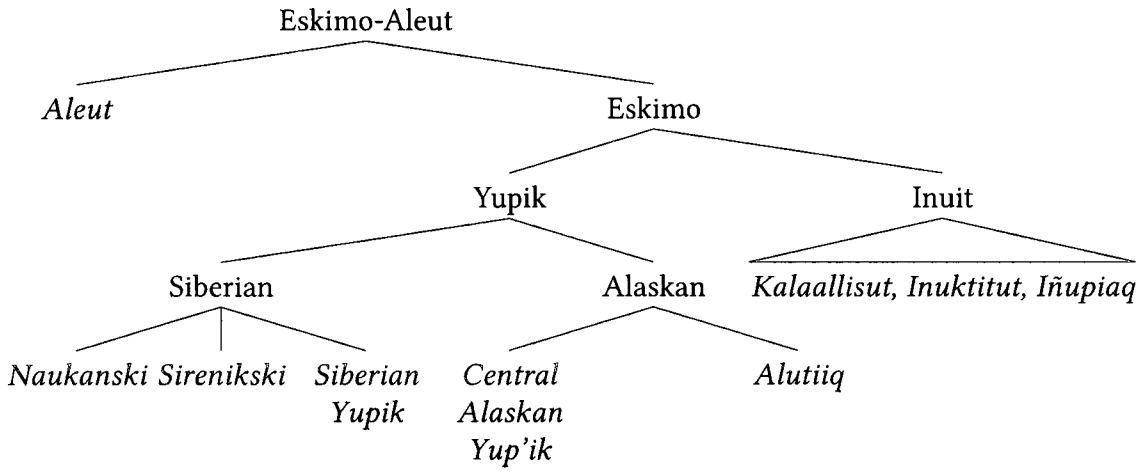

Figure 1.1 : Eskimo-Aleut language family

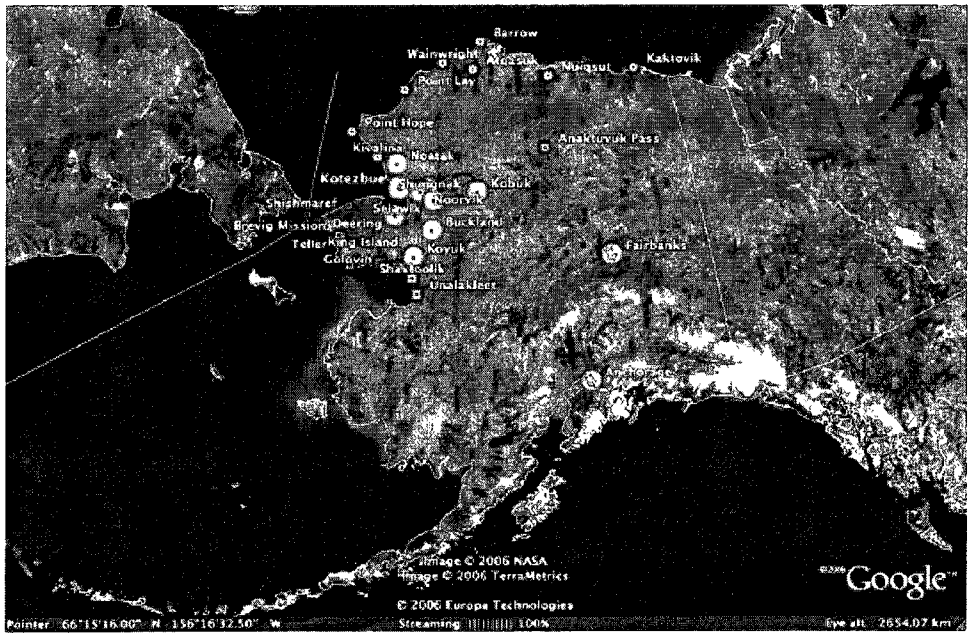

Figure 1.2 : Traditional Iñupiaq-speaking areas within Alaska

the east near the US-Canadian border; both form part of the large Inuit dialect continuum spanning the northern Arctic from Greenlandic to the Diomede Islands between the United States and Russia. In his survey of cross-linguistic and cross-dialectal Inuit phonology, Dorais (1986:20–21) notes that there are "at least fourteen different dialects" but that these are generally grouped into four major dialect divisions as follows (see also Fortescue (1985)):

- Greenlandic
  - East Greenlandic (EG)
  - West Greenlandic (WG), also known as Kalaallisut
  - Polar Eskimo (PE), also known as Thule Eskimo
- Eastern Inuktitut (also known as Central Eskimo)
  - North Baffin-Aivilik (NB)
  - South Baffin (SB)
  - Labrador (LA)
  - Arctic Quebec (AQ)
- Western Inuktitut
  - Caribou (CA)
  - Booth Peninsula Netsilik (NE)
  - Copper (CO)
  - Mackenzie, also known as Sigliq (SI)
- Alaskan Iñupiaq
  - North Slope (NS)
  - Malimiut (MA)
  - Seward Peninsula (SP)

Though Inuit languages form a large dialect chain, Iñupiat people with whom I have worked consider their language to be a distinct language, considerable dialect variation notwithstanding. While they feel an affinity with Inuktitut and Greenlandic speakers, for example, they mention at best extreme difficulty and at worst inability to understand them. It should be noted that at circumpolar/Inuit conferences, interpreters are needed in order for the Iñupiaq, Inuktitut, and Kalaallisut speakers to communicate with each other. The only published linguistic materials evaluating this intelligibility claim to my knowledge are Fortescue et al. (1994:x) and Dorais (1986:48). Fortescue et al. (1994:x) mentions that the Seward Peninsula dialects are "distanced from neighboring Inuit by the phonological influence of a Yupik substrate," and Fortescue (1985:p.188) states that "[T]he actual degree of interrelatedness and/or ease of mutual comprehension has been subject to rather exaggerated—or at least subjectively colored—statements...." He compared percentage of shared derivational affixes as well as phonological differences between dialects; his conclusion was that immediately adjacent dialects within the Inuit dialect chain are not necessarily mutually intelligible to any great extent, in part because of migrations that make the dialect chain geographically non-linear.

In an effort to quantify dialect distance—and presumably mutual comprehension—Dorais (1986:48) compares features to measure phonological distance between dialects. Using these measurements, he arrives at a model with sixteen dialects grouped in three or four major dialect divisions, where all Alaskan Iñupiaq dialects fall within one major dialect division. If Dorais's (1986) model is a reliable measure of dialect differences, it confirms previous dialect divisions established within the Eskimo-Aleut subfield.

Even within the cover term 'Iñupiaq', native speakers of various dialects report experiencing varying levels of difficult understanding other dialects. Native speakers of the Noatak dialect who I worked with, for example, said they have difficulty understanding the Kobuk

dialect, and all asserted that King Island Iñupiaq was completely unintelligible to them. Furthermore, although maps such as the one in Figure 1.3 show a continuous Inuit dialect chain, due to the low population density and large tracts of uninhabited land, there is not the frequent language contact one might imagine from the map. Figure 1.4[1] shows major dialect divisions within the Inuit branch of the Eskimo-Aleut family; the two Alaskan dialects are labeled Qawiaraq and Inupiatun in this map.

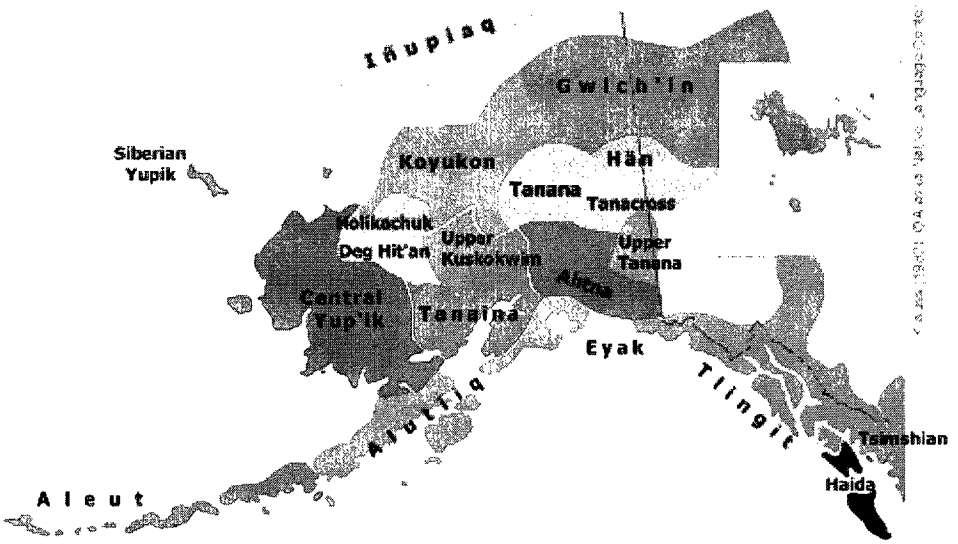

Figure 1.3 : Indigenous Alaskan languages

Iñupiaq's neighbor to the southwest near the coast is Central Alaskan Yup'ik, a more distant family member that is mutually unintelligible (see Figure 1.3). Immediately to the south of Iñupiaq are two Na-Dene languages, Koyukon and Gwich'in. English is the language of communication with other communities in present-day, and to a great extent, it is also the language of communication within Iñupiat communities. Iñupiaq is largely confined to

[1]Map image © Michael Krauss and the Alaska Native Language Center.

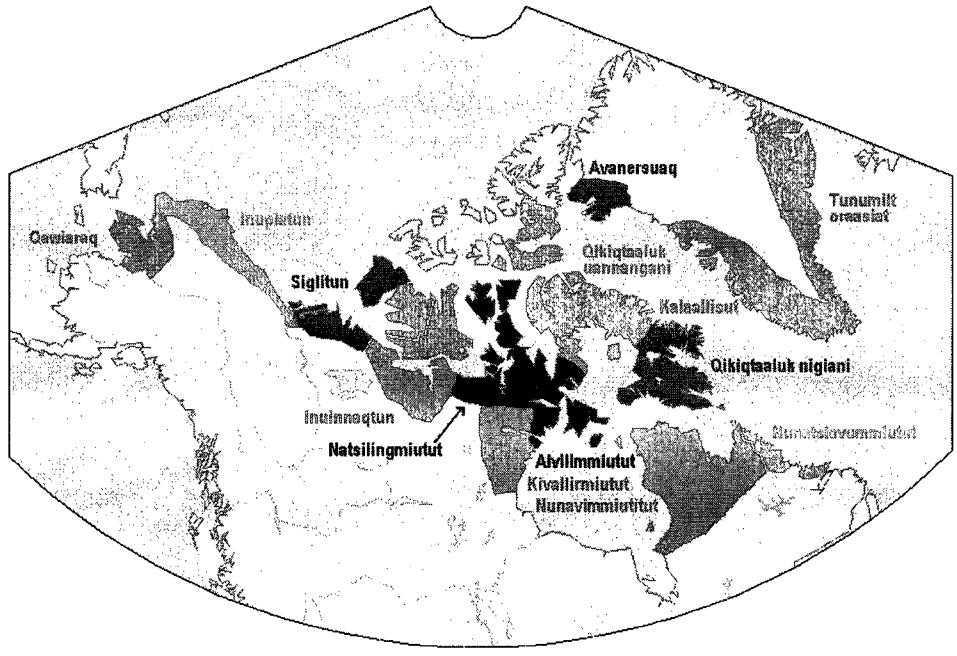

Figure 1.4 : Inuit dialect chain

spoken communication—there is no newspaper in Iñupiaq, for example, and books are few in number—and mainly used by older adults in the home or while participating in traditional Iñupiat activities. Education and the media are overwhelmingly in English, though many communities now have limited Iñupiaq immersion programs for elementary school students. Higher education is entirely in English; students can take Iñupiaq language courses at the university level, but they are focused on learning Iñupiaq, not Iñupiaq-medium courses.

1.1.2 Typological classification

Iñupiaq is a polysynthetic head-marking language with relatively free word order (see §7.2.1). The least marked word order is SOV (Nagai 2006), although subject and object NPs are often elided due to the person and number agreement marked on the verb. The majority of syntactic operations are achieved via suffixation; there is only one attested prefix in the en-

tire language (Kaplan 1979:1) but hundreds of derivational and inflectional suffixes (Kaplan 1979, Fortescue 1980, Seiler 1997, Nagai 2006). Like other Eskimo languages, Iñupiaq patterns ergatively but not canonically so (see §8.1.2); ergativity is only marked on lexical NPs in certain instances, though the demonstrative pronouns have a full ergative paradigm. Malimiut Iñupiaq also makes frequent use of the noun incorporation for which the Eskimo branch of the family is well known (see §6.3).

1.1.3 Current usage

Although the Alaska Native Language Center (2005) reports approximately 3000 speakers of Iñupiaq (most above 40 years of age), the estimate is based on data from at least 30 years ago. Krauss's (2007) recent estimate based on US census data is 2100 speakers. While many schools in the area now have Iñupiaq lessons, few if any children are learning the language fluently. The language of the workplace is predominantly English, and until recently, all schooling was also conducted in English. Iñupiaq is mostly spoken in the home by older adults. Geographical isolation adds to the difficulty of maintaining Iñupiaq as an everyday language, with most communities in the region being small (500 residents or fewer), distant from each other, and difficult to get to except by airplane. Also, with a population density of 0.1 person per square mile in northern Alaska (United States Census Bureau 2006), these 2100 speakers are spread quite thin, with the Iñupiaq region stretching over an area larger than the state of Texas.

Though Krauss (2007) estimates 2100 speakers, Argetsinger (2009:para. 9) reports that

> In 2005, the McDowell Group (2005) prepared a report ("Aqqaluk Trust Language Survey") documenting levels of fluency and understanding of the Inupiaq language in the Northwest Arctic.[2] Out of 4,112 [households] in the region, only

[2]Here "Northwest Arctic" is the Northwest Arctic Borough of Alaska, which includes the Malimiut Iñupiaq

> 575 people indicated Inupiatun fluency, ninety-two percent of whom were over the age of 65. For the Arctic as a whole, linguist Michael Krauss estimated in 2007 that only 2,144 fluent speakers of Inupiaq remain of 15,700 total Inupiat.

The McDowell Group (2005) also found that:

- fewer than 5% of Iñupiat under 18 years of age have any degree of Iñupiaq fluency (compared to 92% of elders (over 65 years) speaking Iñupiaq fluently)
- 21% of residents of all age groups report that they understand Iñupiaq well
- 80% of Northwest Arctic Borough residents report that they have at least some passive understanding of the language

The fact that so few children speak the language is particularly damaging to its potential for long-term maintenance. I consider the language as not only endangered but moribund, because unless significant changes take place, the language is unlikely to survive the next two generations.

Iñupiaq is written in a modified Latin script (see Section 2.3). However, the majority of speakers are illiterate in Iñupiaq (most read and write only English); the Summer Institute of Linguistics estimates the literacy rate among Iñupiaq speakers at 1–5% (Gordon 2005). There are books available for speakers who wish to learn to write Iñupiaq, as well as courses at the University of Alaska and its satellites. Most written materials produced for the Iñupiat people are in the North Slope (Barrow) dialect and most are short children's books. Written materials for other members of the Inuit dialect chain are unsatisfactory for use by Iñupiaq

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region. The Aqqaluk Trust—formally the Robert Aqqaluk Newlin, Sr. Memorial Trust—is based in Kotzebue, so in this context, Northwest Arctic also corresponds to the area assigned to NANA Regional Corporation, one of thirteen Alaska Native organizations under the federal Alaska Native Claims Settlement Act of 1971.

speakers. The closest language in terms of mutual intelligibility is Inuktitut, its neighbor to the east across the Alaska-Canada border, but because Inuktitut uses a non-Roman script (see Section 2.3), Inuktitut writing is inaccessible to Iñupiaq speakers. Even if written with a Roman script, Inuktitut is still difficult for Iñupiaq speakers. West Greenlandic (Kalaallisut), another member of the dialect chain, uses a Roman script, but the dialect differences between it and Iñupiaq are too great for mutual intelligibility.

1.1.4 Dialect situation

Iñupiaq has two major dialects, each with two dialect subdivisions (Kaplan 1979, MacLean 1993, Nagai 2006). The two major dialects are known under various names but for convenience's sake will be called Northern Alaska dialect and Seward Peninsula dialect here. These correpond to North Alaskan Inupiatun and Northwest Alaskan Inupiatun in the Ethnologue (ISO codes: ESI, ESK), which are now both listed as the macrolanguage IPK Gordon (2005). The Iñupiat community generally considers all these dialects to be one language, so I see no benefit in separating Iñupiaq into two languages following the Ethnologue; furthermore, I choose to use the name in use by the Iñupiat people themselves—Iñupiaq—rather than Iñupiatun (the similative case form). This grammar describes the Malimiut Coastal dialect, as my fieldwork was conducted primarily with native speakers from Noatak, some of whom have many years' residence in Kotzebue. The fieldwork consultants with whom I worked were all fluent L1 speakers of Iñupiaq who are also fluent in English. All attended compulsory schooling in English. In all cases, my consultants were married to other fluent Iñupiaq speakers and used a combination of Iñupiaq and English in the home. Based on informal discussions with other Iñupiat community members, the consultants are competent, respected speakers of Iñupiaq.

Northern Alaska dialect has two subdialects, North Slope dialect (also known as Barrow

dialect) and Malimiut (MacLean 1993:ix–x). These two dialects constitute the majority of Iñupiaq speakers. The North Slope dialect is spoken in settlements such as Barrow, Kivalina, Pt. Hope, and Anaktuvuk Pass; Anaktuvuk Pass has consonant lenition that other members of the subdialect do not have, particularly the lenition of /s/ to /h/. Malimiut is spoken in villages such as Unalakleet, Kotzebue, Noatak, Kobuk, and Shaktoolik. Kobuk is itself a subdialect of the Malimiut subdialect. More recently the term Coastal Iñupiaq has come into use to describe the dialects spoken by members of the NANA regional corporation headquartered in Kotzebue. Because the NANA region includes speakers of North Slope Iñupiaq (Pt. Hope, Kivalina), Malimiut Iñupiaq (Noatak), and Kobuk Iñupiaq (Shungnak, Kobuk), the term Coastal Iñupiaq is defined more on NANA shareholder status than linguistic features. This dissertation describes the Malimiut Coastal dialect; see Nagai (2006) for Malimiut Upper Kobuk dialect.

Seward Peninsula dialect also has two subdialects, known as Qawiaraq and Bering Strait. Qawiaraq is spoken in villages such as Nome, Mary's Igloo, Shaktoolik, and Unalakleet.[3] The King Island dialect, however, is nearly mutually unintelligible due to its extreme geographical isolation. Furthermore, the entire settlement of approximately 150 King Islanders moved to Nome on the mainland by 1966, meaning that the children attend(ed) school in Nome and learned another dialect (if they learned Iñupiaq at all).

Speakers are typically quite comfortable with several other dialects, often as a result of mixed-dialect families. Marriages often occur across dialect boundaries. It is often the case that an Iñupiaq speaker speaks the dialect of his/her home village, while his/her parents speak one or more different dialects. One of my primary consultants, for example, was

[3]Note that some village names are listed for more than one dialect. This is not a mistake; rather, it is the result of migration such that one village has speakers from different dialect groups. The Bering Strait dialect is spoken in places like Shishmaref, Little Diomede, and King Island (MacLean 1993:ix–x)

born and raised in Noatak, but neither of her parents were originally from that village and therefore did not speak the Noatak village dialect themselves. Furthermore, all four of her grandparents spoke different dialects, such that as a child, she had exposure to a minimum of five different dialects on a regular basis.

Traditionally, Iñupiat marriage practices included monogamy, polygamy (with polygyny being more common than polyandry), and co-marriage (often dubbed 'wife exchange' or 'wife-swapping') (Burch 1988). The co-marriage institution involved two couples (or polygamous marriage partners) linked together via marriage. These couples would most often reside in different villages, and it was not uncommon for one married couple/group to have more than one co-marriage in different locations. Therefore, traditional marriage practices nearly guaranteed exposure to multiple dialects. According to Burch (1988:162) and my own insights as a native of Alaska, in present-day Alaska all traditional forms of Iñupiat plural marriage have either been abandoned or are practiced in secret. In my own fieldwork, I have found that Iñupiaq elders, particularly those who self-identify strongly as Christians, are extremely reluctant to discuss traditional marriage practices. Modern Iñupiat marriage and divorce generally mirror standard American practice.

1.2 Literature review

1.2.1 Iñupiaq linguistic sources

Despite a good deal of documentation of Eskimo-Aleut languages in general, few works deal with Iñupiaq as anything but Inuktitut with a different name; the references provided are an exhaustive listing of linguistic work dealing specifically with Iñupiaq. General overviews may be found in Alaska Native Language Center (2005) and Campbell (2000). Fortescue et al. (1994) have produced an etymological dictionary of the entire Eskimo-Aleut family. While

it is not ideal as a dictionary for lay people, particularly learners—Modern Iñupiaq words can be found in it only with patience and knowledge of the morphosyntactic system and the complicated morphophonology—it is extremely useful for historical and comparative purposes. MacLean's (1993, 1994) grammars and the accompanying dictionary (1981)—intended as classroom materials for fluent speakers teaching Iñupiaq to learners—are scant on grammatical description. While they do include grammar explanations, they are intended for lay persons and accuracy was sacrificed for simplified explanation, making it difficult to glean accurate linguistic description from them. The same is true for Webster (1968), a 66-page introduction to the language comprised of vocabulary lists and extremely simplified grammar. Other dictionaries are Seiler (2005) (Malimiut dialect), Webster & Zibell (1970) dictionary (both North Slope and Malimiut dialects), and Sun et al. (1979) for elementary school classroom use (Kobuk dialect). Seiler (1978, 1997) has published two articles on Iñupiaq syntax, particularly dealing with grammatical relations as achieved by case and affix order. Ties between verb morphology and agentive/patientive semantics have been researched by Nagai (2006). A dissertation by MacLean (1995), a native speaker of the North Slope dialect, forms the entirety of research on Iñupiaq discourse. It is a detailed look into the role of demonstratives, tense, and aspect in Iñupiaq narrative; as such, it is extremely valuable, especially given the complexity of the Iñupiaq demonstrative system. While Nagai (2006) focuses mainly on the interaction of verb semantics, verb morphology, and argument structure, it includes a useful grammatical sketch of Ambler dialect, which is another Malimiut dialect (Upper Kobuk vs. the Coastal dialect described in this dissertation).

Kaplan (1979, 1981, 1982, 1985, 1994a) has completed substantial work on Iñupiaq phonology, covering all major dialects but focusing most on Seward Peninsula dialects. Most of his work focuses on the frequent consonant assimilation phenomena—both regressive and progressive—in the language. As a result, other areas of phonology, such as prosody, re-

main largely or entirely undocumented in published works. Miller (1993) also investigated consonant assimilation in one major dialect of Iñupiaq. In addition, there are linguistic publications about Eskimo-Aleut in other languages, especially Russian, French, and to some extent, Danish. However, the only one specifically pertaining to Iñupiaq (at least in part) is Menovshchikov (1980). Most Russian sources deal with the western branch of the family, particularly descriptive works of Siberian Yupik and other Yupik languages wholly or partly within current Russian territory.

1.2.2 Iñupiaq non-linguistic sources

The only audio recording of reasonable quality easily available to the general public is the tape accompanying Kaplan & Williams' (2000) Iñupiaq phrasebook, featuring a native speaker of the Malimiut dialect from Kotzebue. It was not produced for linguistic description but for people wishing to learn the handy phrases in the language. However, the tapes are useful for certain types of linguistic analysis; for example, I have analyzed these tapes for phonetic correlates of syllable prominence (Lanz 2008). Recently NANA Regional Corporation, the governing Iñupiat tribal council, collaborated with the Rosetta Stone software company to produce an Iñupiaq CD-ROM program. This high-quality program is intended for people wishing to learn conversational Iñupiaq. While available to order from NANA, its cost of $195 may be prohibitive for many learners. It features 'Coastal Iñupiaq'.

1.2.3 Eskimo-Aleut linguistic sources

Comparative Eskimo-Aleut phonological work that has included Iñupiaq can be found in Bergsland (1986), Bobaljik (1996), Kaplan (2001), Dorais (1986); the etymological dictionary by Fortescue et al. (1994) is also very useful for comparative phonology. Comparative morphological and/or syntactic work can be found in Mey (1971), Fortescue (1985, 1992), Siegel

(1998), Woodbury (2004). Non-comparative work on other Eskimo-Aleut languages that can be useful for purposes of forming hypotheses about Iñupiaq are as follows: 1) Kalaallisut (West Greenlandic): Fortescue (1980), Jacobsen (2000), Malouf (1999), Rischel (1972, 1985), Sadock (1980); 2) Inuktitut: Grimshaw & Mester (1985), Johnson (1980), Bittner & Hale (1996a), Rischel (1974); 3) Yupik languages (especially Central Alaskan Yup'ik): Jacobson (1977, 1984, 1995, 1998, 2001), Miyaoka (1996), Leer (1978), Woodbury (1975, 1985, 1987).

1.3 Approach

1.3.1 Data sources

I have studied Iñupiaq for several years and has also successfully carried out four fieldwork trips. Sources for the data will be published data, unpublished data (for example, materials housed in the Alaska Native Language Center's archives), and my fieldwork data collected 2006–2008 (notes along with approximately 100 hours of recordings). The fieldwork data,[4] which is the primary data source, is the result of several trips to Anchorage and Noatak, Alaska to work with native speakers of Malimiut dialect from the village of Noatak. In addition, I have access to Iñupiaq speakers through a distance education course offered by the University of Alaska Fairbanks in fall 2007 and spring 2008. Data from that course is also used where applicable, always with the permission of those speaker(s). Most of my data is audio with accompanying text annotation (in Toolbox database form); it was recorded on a solid-state flash recorder (specifically, the Marantz PMD670) as uncompressed WAV files, recorded in stereo at 44.1 kHz and 16 bits.

Approximately half of my native speakers consultants are married to speakers of the same dialect, and the other half are married to speakers of a different Iñupiaq dialect (in

[4]Human subjects approval protocol 06-124X, Rice University IRB.

most cases, North Slope dialect). All primary consultants (i.e., all consultants other than the ones who participated in the online distance education course) are fluent, L1 speakers of Iñupiaq who use the language on a daily basis in the home with family members.

1.3.2 Theoretical orientation and tools

Like Dryer (2006) and Rice (2006), among others, I am of the firm opinion that there can be no description (and hence documentation) without theory. This documentation of Malimiut Coastal Iñupiaq employs a functionalist, descriptive framework—in essence, the Basic Linguistic Theory described by Dryer (2006:207). Dryer (2006:207) also posits a distinction between descriptive theory and explanatory theory, a distinction very relevant to this dissertation in that I aim for descriptive theory—*how* to describe the data—and leave explanatory theory—i.e., *why* certain linguistic facts are as they are—for future research.

Theory also guides the topics a grammar writer choose to include. If a linguist does not believe, for example, that there are useful insights to be found in language variation, he or she will not document variation data. As Rice (2006:263) notes, "The theory provides a set of questions to ask; theoretical changes often force one to raise a new set of questions or to look at old questions in a new way."

The material is organized around function as much as possible. Section 8.7 on negation, for example, demonstrates the various means and types of negation—e.g. argument, predicate, and sentential negation—using the morphosyntactic inventory of the language. Similarly, Section 7.2.2 on predication types describes the grammatical devices used in Iñupiaq for various predication functions such as predicate nominals. My approach is synchronic, although I reference diachronic research where relevant, such as for describing phonology in chapter 2.

In this grammar, the data are presented using standardized terminology and accepted

cross-linguistic categories. Like every subfield, the field of Eskimo-Aleut linguistics has developed its own jargon and terms; unfortunately, this not without problems. These subfield-specific terms are often not defined (such as 'vialis' case), making them opaque to linguists outside the subfield. Moreover, the terms themselves are often duplicates of well-accepted terms (such as 'terminalis' instead of the more common 'allative'), leading to unnecessary confusion. Perhaps the most troublesome for cross-linguistic comparison, however, is the use of ill-defined terms such as 'half transitive'. In the interests of a description that will be usable for as wide an audience as possible, therefore, I avoid subfield-specific terms.

Chapter 2

Phonetics & Phonology

2.1 Consonants

The consonant inventory is shown in Tables 2.1 and 2.2. Table 2.1 lists only the phonemic consonants while Table 2.2 lists phonemes and their most common allophones. This is nearly identical to the inventory described for other dialects (Kaplan 1979, 1982, MacLean 1993, Nagai 2006). Where the current orthography differs from IPA, the orthographic symbol appears in < > brackets beneath the IPA symbol (see Section 2.3 for more details on the orthography).

	bilabial	labio-dental	alveolar	retroflex	palatal	velar	uvular	glottal
oral stop	p		t		c	k	q	
nasal stop	m		n			ŋ		
fricative		v	s	ʂ <sr> ʐ <r>		ɣ <g>	ʁ <ġ>	h
lateral fricative			ɬ <ł>					
approximant					j <y>			
lateral approximant			l					

Table 2.1 : Phoneme inventory of Iñupiaq consonants

The phoneme inventory is noticeably unbalanced, particularly in the number of fricatives, the lack of bilabial approximant, and the presence of voiced phonemes without corre-

	bilabial	labio-dental	alveolar	retroflex	alveo-palatal	palatal	velar	uvular	glottal
oral stop	p		t			c <ch, ṭ>	k	q	
nasal stop	m		n			ɲ <ñ>	ŋ	ɴ	
affricate			ʧ <ch>		ʃ				
fricative		v	s	ʂ <sr> ʐ <r>			x <kh> ɣ <g>	χ <qh> ʁ <ġ>	h
lateral fricative			ɬ <ł>			ɬʲ <ḷ>			
approximant			ɹ			j <y>			
lateral approximant			l			ʎ <ḷ>			

Table 2.2 : Most common consonant phonemes and allophones

sponding voiceless phonemes, such as /ɣ/ and /v/. There is no voicing contrast among stops, which are all unaspirated. For consonants without voiced counterparts, such as /t/, it is not generally the case that speakers have both voiceless and voiced allophones. Furthermore, I have observed native speakers correct learners and semi-fluent speakers who produce word- or syllable-initial aspirated consonants, insisting that they should produce unaspirated consonants instead, such as [tʰ] being corrected to [t]. Word-final aspiration is not unusual. For example, /q/ is routinely pronounced [qʰ] word-finally; see Section 2.4 for more details. The approximant /j/ is always a consonant in the language (see Section 2.6.1).

Although there is no /f/ phoneme, /v/ surfaces as [f] in environments where /v/ is adjacent to a voiceless consonant. For example, it is not uncommon to hear speakers pronounce the word *qapvik* [qapvik] 'wolverine' as [qapfik], using [f] as an allophone of /v/. Kaplan (1979:8) describes the same allophonic variation for Barrow and Kobuk dialects as well.

Note that /c/ is included as a phoneme here. Though many instances of [c] are the result of allophonic palatalization following /i/ (see Section 2.2.3), there are also words where allophonic palatalization cannot explain the occurrence of [c]. For example, in the word *atchak* [accak] 'aunt', [c] appears where /i/-palatalization cannot derive it; thus /c/ must be phonemic. Kaplan (1979) implies that /c/ is the only palatal phoneme, while all other palatals are the result of /i/-palatalization. Finally, note that [c] is often pronounced [ʧ], particularly by younger speakers and learners (see §2.5). Therefore in the lect of many speakers, there is affrication rather than palatalization.

The Iñupiaq sound written 'r' in the orthography is represented as /ʐ/ here, but its exact nature is messy. As noted in Lanz (2010a), it is a voiced retroflex but appears to have several allomorphs, including voiced retroflex fricative /ʐ/, retroflex tap, voiced retroflex trill, and alveolar rhotic approximant [ɹ]. It is not certain which allomorph is the underlying phoneme, except that the [ɹ] allomorph is relatively recent. Therefore the choice of /ʐ/ as phoneme here

is merely for notational convenience.

Recent work in Lanz (2010a) suggests that younger, semi-fluent speakers as well as heritage learners are increasingly adopting [ɹ] in place of /ɻ/. It is theorized that this shift is in part because /ɻ/ is written with the grapheme 'r' in the modern Iñupiaq orthography (see Section 2.3). Semi-fluent speakers and heritage learners, all of whom are English L1 speakers, are exposed to written Iñupiaq with 'r' and replace the expected Iñupiaq allomorphs with the American English [ɹ]. Thus spelling conventions influence the sound change. Changes in the pronunciation of /ɻ/ are just some of the ongoing changes in the phoneme inventory over the past 20–30 years. Most of the changes are largely due to contact with English. These are discussed in Section 2.5.

2.1.1 Minimal pairs

Table 2.3 provides minimal pairs illustrating consonant phoneme contrasts. Consonant length can be contrastive, as in the pairs *manik* 'gold' and *mannik* 'egg'. This consonant length can either be underlying, due to simple consonant hiatus, or due to a process of gemination (see §3.1.1 and Kaplan (1979:221)).

underlying CC: *qaniq* 'mouth' vs. *qanniq* 'to order (from a catalog or online)'

consonant hiatus: *makit* 'to stand' + *-tuq* '3S.INDIC' > *makittuq* '3S is standing'

gemination: *kamik* /kamək/ 'boot' + /'-k/ 'ABS.DU' > *kammak* [kammak] 'two boots'

There is no evidence, however, that long consonants are treated differently in the language depending on their origin. See Section 2.6.1 for more information about syllable structure.

I include both /s/ and /ʂ/ in the phoneme inventory for the Malimiut Coastal dialect, but there is considerable speaker variation. Not every dialect of Iñupiaq has both /s/ and /ʂ/

phoneme		minimal pair(s)	
/k/	/q/	*ukpik* 'snowy owl' *puuq* 'sealskin poke'	*uqpik* 'willow' *puuk* 'fall over'
/k/	/ɣ/ g	*ikit* [ikit] 'ignite (vt.)'	*igit* [iɣit] 'throw away (vt.)'
/ɣ/ g	/q/	*agak* [aɣak] 'damage something'	*aqak* [aqak] 'sing a lullaby'
/ʁ/ ġ	/q/	*aġit* [aʁit] 'dampen (vt.)'	*aqit* [aqit] 'be brittle'
/ʁ/ ġ	/ɣ/ g	*aġlu* [aʁlu] 'mandible'	*aglu* [aɣlu] 'sled runner; temple (body part)'
/n/	/ŋ/	*anak* 'surpass'	*aŋak* 'uncle (father's brother)'
/s/	/t/	*supik* 'turn something sideways (vt.)'	*tupik* 'tattoo (n.)'
/l/	/ɬ/ ł	*-luk* [-luk] 'increase/augment (der. suff.)'	*-łuk* [-łuk] 'old/used (der. suff.)'

Table 2.3 : Consonant minimal pairs

(Kaplan 1979); some dialects have no /s/, only /ʂ/. In such dialects, /ʂ/ is used in all instances where other dialects have /s/. For example, in Kobuk dialect 'walk (vi.)' is *pisruk* [piʂuk], while in North Slope and Malimiut Coastal dialects, it is *pisuk* /pisuk/. Malimiut Coastal has both phonemes, but there is considerable variation in whether speakers of Malimiut Coastal dialect use both /s/ and /ʂ/ or only /ʂ/. I recall one occasion during fieldwork when a speaker of Malimiut Coastal dialect from Noatak produced a word with /ʂ/ when it would normally be /s/ in that dialect. A family member interrupted to remind her that I was looking for Noatak dialect, at which point the speaker restated the word, this time with /s/.

I propose that this variation between /s/ and /ʂ/ in Malimiut Coastal dialect has at least two causes: first, Malimiut Coastal dialect lies at the border of two subdialects, one which has only /ʂ/ and one which has both (North Slope Iñupiaq). There is therefore a considerable amount of influence from /s/-less dialects. Second, it is not uncommon for speakers to have parents and grandparents speaking several different dialects in addition to the dialect spoken where one grew up. Therefore speakers may adopt an idiolect where they use /ʂ/ in situations

where /s/ is expected. In addition, some speakers produce [ʃ] as an allophone of /ʂ/.

2.2 Vowels

Malimiut Iñupiaq has small vowel inventory with contrastive length and no vowel harmony. The vowel inventory is a fairly typical three-vowel inventory of /a i u/ with one complication, an underlying phoneme /ə/ pronounced identically to /i/ on the surface (see Section 2.2.3). Vowel length is phonemic, yielding the following inventory of monophthongs: /a aː i iː u uː ə/. There is no /əː/ in modern Malimiut Iñupiaq (Kaplan 1979:147).

2.2.1 Minimal pairs

Minimal pairs for the monophthongs, both long and short, are listed in Table 2.4. Long vowels may appear in any syllable in Iñupiaq (see §2.6.1 for phonotactics). There are no synchronic minimal pairs illustrating the difference between /i/ and /ə/ because it is not due to minimal contrast but to a phonological rule. In modern Iñupiaq, both are pronounced [i]. The phonemes /i/ and /ə/ can only be differentiated by phonological processes, not pronunciation, as explained in Section 2.2.3).

phoneme		minimal pair(s)	
/a/	/u/	*savak* 'work; labor'	*suvak* 'roe'
/a/	/i/	*alik* 'to tear'	*ilik* 'to scorch'
		apun 'snow'	*ipun* 'oar'
/i/	/u/	*nivak* 'to dig'	*nuvak* 'snot'
/a/	/aː/	*amaq* 'hunchback (of animals)'	*amaaq* 'root'
/u/	/uː/	*aŋun* 'man'	*aŋuun* 'paddle'
/i/	/iː/	*savik* 'knife (sg.)'	*saviik* 'knives (dual)'

Table 2.4 : Vowel minimal pairs

2.2.2 Diphthongs

There are six diphthongs in the Malimiut Coastal dialect: /ai ia au ua iu ui/ (cf. MacLean (1993), Kaplan (1979) for the Barrow dialect). All diphthongs occur phonemically; that is, they can occur as syllable nuclei, as in the minimal pair /ku:k/ 'river' and /kauk/ 'walrus skin (food)', both of which are monosyllabic. The examples in (1) also illustrate a phonemic diphthong.

(1) a. q**uu**ruq
/q**u**:-ʒuq/
walk.bowlegged-3S.INDIC
'he/she walks bowlegged'

b. q**ui**ruq
/q**ui**-ʒuq/
urinate-3S.INDIC
'he/she urinates/is urinating'

Diphthongs are also created when two vowels belonging to two different morphemes are joined via suffixation, as in example (2).

(2) Naŋmak iglaŋ**ai**tchuq.
naŋmak-Ø iɣlaŋ**a**-**i**t-tuq
Naŋmak-ABS smile-NEG-3S.INDIC
'Naŋmak isn't smiling.'

The pronunciation of diphthongs varies somewhat between speakers, but there is almost always a distinction between diphthong pronunciation in careful speech vs. fast speech. Namely, /ai ia au ua iu ui/ are phonemic diphthongs, but in fast speech they are usually realized as monophthongs. /ai/ and /ia/ are both pronounced [æ] or [eɪ], depending on the environment. When preceding non-coronal consonants, they are both pronounced either as [æ] or as [^{j}æ], with an off-glide from the preceding consonant (i.e., [C^{j}æ]). One such example is /iŋupiaq/ 'Iñupiaq (sg.)', which is often realized as [iŋup^{j}æq] or [iŋupæq]; the off-glide

variant appears to be the most common. However, the same diphthong /ia/ is pronounced [eɪ] or [ɛː] when preceding coronals; the pronunciation of /iɲupiat/ 'Iñupiaq (pl.)' is therefore [iɲupeɪt]. Likewise, /au ua/ and /iu/ are often pronounced as monophthongs in fast speech. /au/ and /ua/ may be pronounced [aʊ] or [ɔ]. The choice between [aʊ] and [ɔ] is either due to free variation or an as-yet unknown conditioning factor. /iu/ is pronounced [iː] in almost all situations, such as *niu* [niː] 'leg'.[1] We can differentiate underlying /iː/ from /iu/ from the fact that /iu/ can be pronounced [iu] in careful speech. Kaplan (1979) and Nagai (2006:19) state that /ui/ is never leveled to [iː] like /iu/ is, but I have not found this to be true for the Malimiut Coastal dialect. In words such as *inuich* /inuit/ 'people (pl.)', /ui/ is maintained as a diphthong, pronounced [iɲuic], not *[iɲiːc]. However, in fast speech, words such as *ui* 'husband' are often pronounced with [iː] instead of [ui].

2.2.3 The status of /ə/ as a distinct phoneme

In Malimiut Iñupiaq /ə/ and /i/ are distinct phonemes, but both are pronounced [i] due to merged phonetic realization. Unlike the Yupik languages (Central Alaskan Yup'ik, Siberian Yupik, etc.), Iñupiaq and the other Inuit languages do not retain the surface pronunciation [ə] from Proto-Eskimo (Fortescue et al. (1994)); the modern reflex of /ə/ is [i] (Kaplan (1979)).[2] While on the surface /ə/ has merged with /i/ to the extent that native speakers feel that these are both the same vowel (Ruth Tatqaviñ Sampson, pc.), there is evidence that /ə/ remains as a phoneme. Namely, it does not trigger the phonological processes that underlying /i/ does

[1]Despite its similarity in sound and meaning to the English word 'knee', *niu* is not a loanword. It derives from the Proto-Eskimo form /niʁu/ (Fortescue et al. 1994).

[2]The only exception within the entire Inuit subgroup is found in various subdialects of Seward Peninsula Iñupiaq, one of two major dialect groups within Iñupiaq; these subdialects range from exhibiting phonetic [ə] in some lexical items (Qawiaraq dialect, for example) to preserving the Proto-Eskimo four-vowel contrast (Diomede dialect) (see Kaplan (1979, 1994a)).

despite being pronounced the same—as [i]—on the surface. Furthermore, /ə/ alternates with [a] in some situations while /i/ does not; see below. See also Lanz (2008, 2009a) for evidence that /ə/ and /i/ underwent complete phonetic merger.

Certain phonological processes strongly suggest that /ə/ remains a distinct phoneme in modern Iñupiaq despite its apparent complete merger into /i/ on the surface (Kaplan (1979, 1994a), MacLean (1981)). Kaplan (1994a:286) notes that Iñupiaq "show[s] traces of the historical fourth vowel, since even where it has merged phonetically with *i*, the two varieties of *i* may engage in different phonological processes." The most important of these are discussed in the sections that follow. For an exhaustive analysis of the diachronic and synchronic status of /ə/ vs. /i/ issues in Iñupiaq (Barrow and Kobuk dialects), see Kaplan (1979, 1981).

2.2.3.1 Assibilation

Assibilation is one of these morphophonological processes: /i/ near a morpheme boundary triggers progressive assibilation of /t/, resulting in a surface form [s], as demonstrated by example (3a). In contrast, /ə/ does not trigger assibilation in the same environment, noted by (Kaplan 1994a:286) and illustrated in example (3b). The assibilated consonant need not be immediately adjacent to the vowel, as demonstrated by example (3a). However, the assibilation at a distance can only occur if the C in the /iCt/ sequence is a voiceless anterior consonant; see the rule proposed below.

(3) a. Agi**ksu**ŋa.
aɣik-tuŋa
scrub-1S.INDIC
'I scrub' / 'I'm scrubbing'

b. Maki**ttu**ŋa.
makət-tuŋa
stand.up-1S.INDIC
'I stand up' / 'I'm standing up'

c. Natchiqsuqtuq.
nacciq-tuq-tuq
seal-EAT-3S.INDIC
'She is eating seal.' [source: 030708]

Rather than the expected **agiktuŋa* in example (3a), we get *agiksuŋa.* In *agiksuŋa,* /i/ has triggered the assibilation of /i/ in the sequence /ik.t/ with the surface result [ik.s]. This can be represented as in Figure 2.1.

$$\begin{bmatrix} -syll \\ -voice \\ +cons \\ -cont \\ -stri \end{bmatrix} \rightarrow \begin{bmatrix} -syll \\ -voice \\ +cons \\ +cont \\ +stri \end{bmatrix} / \text{i} \left(\begin{bmatrix} +syll \\ -voice \\ +cons \\ +cont \\ -ant \end{bmatrix} \right) \text{-} \_\_\_\_$$

Figure 2.1 : Assibilation rule

2.2.3.2 Palatalization

Another phonological process sensitive to the underlying phoneme is progressive palatalization: the presence of /i/ causes progressive palatalization of following non-strident coronal consonants, whereas /ə/ does not, as demonstrated by example (4). This palatalization can be represented by rule presented in Figure 2.2.

(4) a. iġġiḷu
iʁʁi=ʎu
mountain=and
'and a mountain'

b. tumilu
tumə=lu
footprint=and
'and a footprint'

$$\begin{bmatrix} +cons \\ +ant \\ +coronal \\ -strident \\ -distrib \\ -dorsal \end{bmatrix} \rightarrow \begin{bmatrix} +cons \\ -ant \\ +coronal \\ -strident \\ +distrib \\ +dorsal \\ +high \\ -back \end{bmatrix} / \text{ i } \_\_\_\_$$

Figure 2.2 : Palatalization rule

Number marking of nominals also reveals that differing behavior for /ə/ and /i/. Analysis of dual and plural marking, shown in Table 2.5 and also discussed at length in Kaplan (1979), reveals that all nouns ending in [n] on the surface have stems ending in /tə/; thus the stem of *aŋun* 'man' is /aŋutə/ (dual /aŋutək/ *aŋutik* 'two men') and the stem of *aglaun* 'pencil' is /aglautə/. Kaplan (1979) postulates that this stem variation is the result of apocope and subsequent nasalization of dental stop in the absolutive singular. Table 2.5 also demonstrates that the vowel preceding the suffix determines whether or not palatalization occurs. If the vowel is /i/, the plural suffix /-t/ palatalizes to [-c]; if the vowel is /ə/, it does not. This is the same rule of progressive palatalization discussed above. See Section 2.6.3 for more detailed discussion of this particular type of stem variation.

stem	absolutive singular	absolutive dual	absolutive plural
	/-Ø/	/-k/	/-t/
aŋutə	/aŋun/ 'man'	/aŋutək/	/aŋutət/
aglautə	/aglaun/ 'pencil'	/aglautək/	/aglautət/
savik	/savik/ 'knife'	/savi:k/	/savi:c/
qipmiq	/qipmiq/ 'dog'	/qipmik/	/qipmic/

Table 2.5 : Number marking and palatalization

Finally, /ə/-/a/ alternation provides more evidence that /ə/ remains a distinct phoneme. The phoneme /ə/ would normally be pronounced [i] synchronically, but in some situations it surfaces as [a] instead. Whenever underlying /i/ comes into hiatus with another vowel, a diphthong is formed, such as /i-a/ forming [ia]. When underlying /ə/ participates in a diphthong, however, it does not always appear as [i]. Instead, its [i] reflex can alternate with [a]. An example can be found with /atiɣə/ *atigi* 'parka': /atiɣə/ + /-uraq/ 'dim.' > /atiɣauraq/ 'little parka' (example from Kaplan (1981:119)). This alternation also occurs without vowel hiatus, such as *kamik* /kamək/ 'boot' + /'-k/ 'ABS.DU' > *kammak* [kammak] 'two boots'.

Aside from their phonological behavior, native speaker intuition is that /ə/ and /i/ sound identical (field consultants, p.c.). There is, of course, no reason to assume that fluent speakers need to be consciously aware of phonemes to apply morphophonological rules. Port et al. (1981), Port & O'Dell (1985), Port & Crawford (1989) found that final devoicing in German may be a case of incomplete neutralization even though native speakers find the two sounds identical. The same situation may apply with these two Iñupiaq vowels, though psycholinguistic studies on Iñupiaq vowel production and perception have not yet been undertaken. Speakers may also identify words as 'different' though phonetically identical if they are synonyms. However, speakers with whom I worked seemed aware of the fact that /i/ triggers palatalization and /ə/ does not, particularly as they will correct learners who fail to palatalize when /i/ is present.

In Iñupiaq pedagogical materials such as MacLean (1981, 1993, 1994), /ə/ is dubbed 'weak i' and /i/ is 'strong I'. These are marked for the benefit of learners so that they will know when various phonological processes should and should not occur. Without such marking, learners cannot differentiate the two phonemes, consistently erring on the side of /ə/ (i.e., failing to apply phonological rules for /i/). Phonetically, /ə/ and /i/ have undergone a complete merger, with /ə/ having adopted [i] as its surface form. Lanz (2008, 2009a) provides phonetic

evidence that these vowels' surface pronunciations are not significantly different, confirming phonological accounts that their surface forms have merged.

In summary, there are four phonological vowels in Malimiut Iñupiaq, but only three phonetic monophthongs. I posit that the phonemic distinction between words with palatalized consonants and with non-palatalized consonants lies in the vowel, at least for older, Iñupiaq-dominant speakers. Younger (often English-dominant) speakers and learners appear to be learning a three-vowel system where the phonemic distinction has shifted to the consonants. Further, in younger speakers there is no longer true palatalization but affrication instead. Rather than have both /i/ and /ə/ as phonemes, the first of which triggers palatalization (i.e., /t/ > [c]), younger speakers probably have only /i/ as a phoneme. Along with this vowel phoneme, they have a consonant phoneme distinction between alveolar stops, such as /t/, and alveopalatal affricates, such as /ʧ/. As a consequence of losing the /i/-/ə/ contrast, the emerging phonemic contrast between /t/ and /ʧ/ will result in lexical entries containing affricates rather than affricates generated by phonological rule.

2.3 Orthography

The Iñupiaq orthography is a revised Latin script, most often called *atchagat* but sometimes 'the new alphabet'. It is shown here in the accepted alphabetical order:

a c ch g ġ h i k l ļ ł ŀ m n ñ ŋ p q r s sr t ţ u v y

It was designed in 1946 by Roy Ahmaogak, a native speaker from Wainwright, and Eugene Nida, a linguist affiliated with SIL (Krauss 1979:49).

The orthography is largely phonemic. Where vowels are concerned, the orthography only represents the three phonemes /a i u/, and the fourth phoneme /ə/ is combined with /i/. In pedagogical grammar books, /i/ is sometimes written *I* 'strong I' while /ə/ is written *i*

'weak i'. However, in non-pedagogical materials, no distinction is made between /i/ and /ə/ in writing.

The consonants in the orthography are all phonemic as well, with one notable exception: there are separate graphemes for palatal allophones of alveolar consonants. Thus ļ, ɬ̣, ñ, ch/ṭ are the palatal allophones [ʎ ɬʲ ɲ c] of /l ɬ n t/, respectively. The digraph *ch* and the graph *ṭ* represent the same allophone [c] of /t/; the only difference is that *ch* is used for /c/ before vowels or at the end of a word while *ṭ* is used elsewhere. This is distinction is rapidly disappearing, with ch being used in all environments. The sequence *tch* represents a geminate palatal [cc]—a special convention obviously influenced by English.

The digraph *sr* represents the phoneme /ʂ/, with its voiced counterpart /ʐ/ now written with the letter *r*.[3] Younger speakers, including heritage learners, are increasingly replacing /ʐ/ with /ɹ/, undoubtedly due to the influence of the writing system combined with English language contact (see Section 2.5 for more information).

Because the orthography is for the most part phonemic, predictable phonological variation (other than palatalization) is not typically represented in writing. For example, /ʁ/ is always written with the letter *ġ* although it always appears as the allophone [ɴ] in an environment preceding a nasal. There are, however, exceptions to the largely phonemic spelling, where digraphs are used for predictable morphophonological variants. The digraph <kh>, for example, represents the allophone [x] of the phoneme /k/ when it occurs at a morpheme boundary and is followed by a vowel, as in /CVk-V/. This would be represented in the orthography as <CCVkhV>. This is illustrated by the verb *iļļakhuni* [iʎʎaxuni] '(he/she/it) is entangled and...' from the verb stem *iļļak* [iʎʎak] 'to get entangled (vi.)'. This spelling method was presumably chosen to preserve morphological boundary information for pedagogical materials, i.e., so learners can see that *iļļakhuni* comes from the verb stem *iļļak*.

---

[3]In previous versions of the orthography, /ʐ/ was written with the letter *z*.

2.3.1 Compared to other Eskimo-Aleut writing systems

Unlike other Eskimo-Aleut orthographies, Iñupiaq script does not use *r* for /ʁ/; instead, *ġ* is used. While apparently minor, this script difference makes Inuktitut and Kalaallisut writing difficult for Iñupiaq speakers to read. Furthermore, Inuktitut now uses an abugida, a type of syllabary in which all syllables beginning with the same consonant use the same basic symbol which is then modified in some small way to indicate the vowel quality. This makes Inuktitut writing completely inaccessible to Iñupiaq speakers despite whatever spoken mutual intelligibility may exist between the two.

2.4 Phonetics

The phonetics of Iñupiaq have received little attention, in contrast to its phonology, which has been described and analyzed in detail in Kaplan (1979). Lanz (2008) is the only phonetic work done on Iñupiaq, Malimiut Iñupiaq in particular, and it is preliminary in nature. Here I touch briefly on a few phonetic topics: first, I plot the short vowels posited in Section 2.2 to confirm that the phonetic characteristics support the phonological conclusion. Figure 2.3 is a scatterplot of F1 and F2 values in Hertz for the four underlying short vowels, /a i ə u/, for two female native speakers from Noatak. The plot shows that there are three large vowel spaces: one for /a/, one for /i/, and one where /i/ and /ə/ overlap.

Second, among Iñupiaq stops, aspiration is not typical in the onset. Word-final stops are often aspirated, but like stops in the onset, word-medial stops in the coda are not typically aspirated. Figure 2.4, a spectrogram of the word *titaalik* /təta:lik/ 'burbot' demonstrates that consonants in the syllable onset are not typically aspirated. Word-final stops often have quite marked aspiration to the point of hyperarticulation, particularly /q/. In Figure 2.4, there is a long period of aspiration following word-final /k/, yielding [tita:lik^{h}].

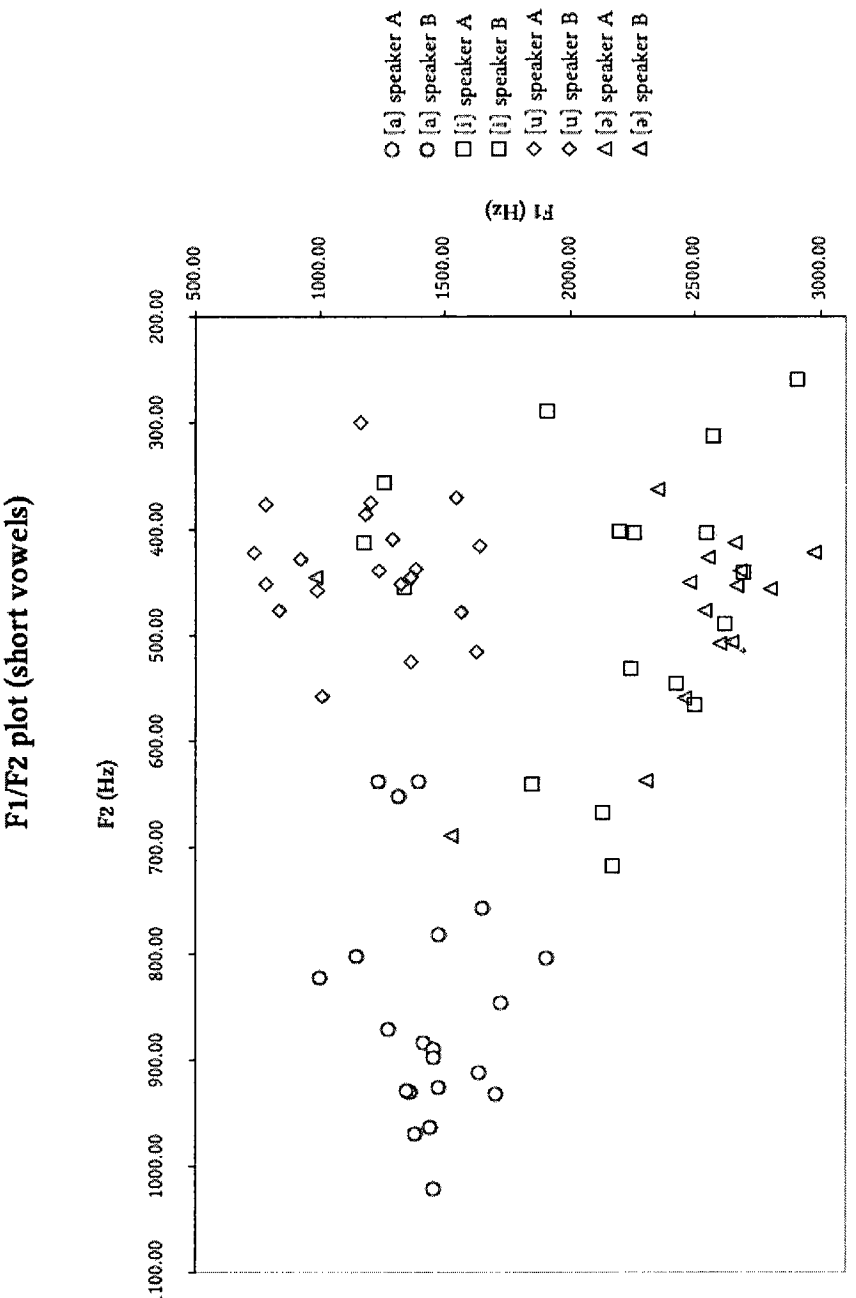

Figure 2.3 : F1 & F2 values (Hz) for two female speakers

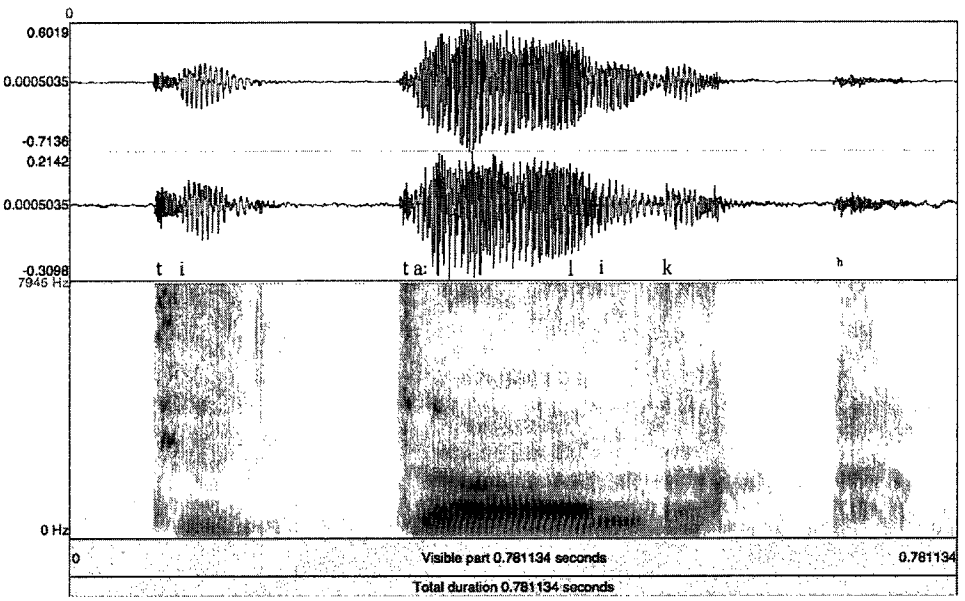

Figure 2.4 : Spectrogram: [tita:lik^{h}]

2.5 Changes in progress

Coinciding with the strong influence of English on Iñupiaq are many ongoing phonological changes. Most speakers below 60 years of age received schooling only in English, and many were punished for speaking Iñupiaq in school. As a result, most fluent speakers 40–60 years old are dominant in English, and this has sometimes affected their Iñupiaq pronunciation. Furthermore, heritage learners currently learning the language are reanalyzing many Iñupiaq sounds. This means that if Iñupiaq revitalization efforts are successful, the Iñupiaq spoken in the future will likely be different from the Iñupiaq spoken by elders today.

Babel (2009), Campbell & Muntzel (1989), Wolfram (2002), among others, have noted that along with language shift and/or death comes structural change (morphosyntactic, phonological, etc.). I argue that several changes are underway in Iñupiaq phonology that can be directly attributed to language obsolescence. For example, in younger speakers, the plosive

/c/ is usually replaced with the affricate /ʧ/, presumably due to influence from English. In speakers 40–65, I have heard some variation between /c/ and /ʧ/, but in speakers younger than 40—as well as heritage learners of any age—/c/ appears to have been completely reanalyzed as /ʧ/.

Lanz (2010a) presented evidence that younger speakers are also increasingly replacing /ʐ/ with [ɹ] due to influence of the Iñupiaq orthography and English. The majority of fluent speakers (especially L1 Iñupiaq speakers) are above 50 years of age, and there are few monolinguals. Younger Iñupiat, whether semi-speakers or heritage learners, are overwhelmingly L1 English speakers. Because English lacks a retroflex fricative, /ʐ/ is difficult for English-dominant learners to master. In addition, because it is spelled with the letter 'r' in Iñupiaq, some semi-fluent speakers and heritage learners are replacing /ʐ/ and its allophones with the rhotic found in their English phoneme inventory, /ɹ/. While at first glance the change may seem age-based, as elders do not seem to participate in it, as I argued in Lanz (2010a), the age variable itself is multifaceted such that it must be interrelated with proficiency, language shift/death, and literacy. The literacy rate in Iñupiaq of 1–5% (Gordon 2005), though speakers are usually literate in English. Elders (i.e., fluent speakers) are much more likely to be fluent speakers but much less likely to have Iñupiaq literacy skills. In contrast, young speakers and learners are exposed to Iñupiaq orthography from an early stage, often in bilingual school programs. The fact that younger speakers and learners have more exposure to the written language, and thus see /ʐ/ represented as 'r', is argued to have phonological consequences, as the choice of /ɹ/ is reinforced—or possibly motivated—by the orthography. Finally, this change appears to have happened rather rapidly, consistent with claims made in Campbell & Muntzel (1989), Wolfram (2002) regarding contact-induced change in moribund languages.

Overall, learners often fail to palatalize consonants where the underlying phoneme /i/ is supposed to trigger palatalization. Cases of hypercorrection, where the speaker palatalizes

even where she should not, are relatively few. Rather, learners are simply failing to apply the palatalization rules unless specifically corrected by fluent speakers. This implies that in the future, Iñupiaq may lose palatalization rules entirely, which would entail a complete reanalysis of the consonants. In turn, loss of the palatalization rules would erode the evidence learners have for positing separate /i/ and /ə/ in their phoneme inventories.

Finally, the letter *g* represents the velar fricative /ɣ/, but speakers seem to pronounce this as either [ɣ] or [g] in free variation or with no obvious conditioning factor. More phonetic study needs to be carried out on Iñupiaq to clarify details such as this.

2.6 Morphophonemics

2.6.1 Syllable structure

No surface consonant clusters are allowed in Malimiut Iñupiaq within the same syllable. Any apparent consonants clusters are either two consonants belong to separate syllables—i.e., the coda of one syllable and the onset of the next, as in /ag.laun/ 'pencil'—or digraphs representing single sounds, such as *ch* for [c] in words like *iñuich* [iɲuic] 'people; Inuit (pl.)'.

Vowel clusters are allowed, but the maximum length of a vowel is two, such as VV. A phonemically long vowel counts as VV, as does a diphthong. If suffixation would result in a VVV sequence, an epenthetic ŋ breaks up the VVV sequence. Example (5a) shows how ŋ is inserted before the negative suffix *-it*, giving [aaŋi] (VVŋV) instead of [aai] (VVV). Example (5c) shows that ŋ epenthesis does not occur with the negative morpheme when not necessary to prevent VVV. Note that in Iñupiaq, /j/ is always a consonant and can never fill a V position.

(5) a. Piquk tusaaŋitchuq.[4]
piquk-Ø tusa:-it-tuq
Piquk-ABS see-NEG-3S.INDIC
'Piquk doesn't see.'

b. *Piquk tusaaitchuq.
piquk-Ø tusa:-it-tuq
Piquk-ABS see-NEG-3S.INDIC
intended for 'Piquk doesn't see.'

c. Piquk iglaŋaitchuq.
piquk-Ø iɣlaŋa-it-tuq
Piquk-ABS smile-NEG-3S.INDIC
'Piquk isn't smiling.'

As a result of these cluster limitations, the maximal Iñupiaq syllable is (C)V(V)(C); see the examples listed in Table 2.6. If a CC sequence arises due to consonant hiatus or gemination, it is resyllabified such that each consonant belongs to a different syllable. For example, *makittuŋa* 'I'm standing up' has a geminate /t:/ as a result of suffixing *-tuq* '3S.INDIC' to *makit* [makət] 'stand (vi.)'. The CC sequence is split across two syllables: [ma.kit.tu.ŋa]. If a word has a doubled consonant underlyingly, such as the /nn/ sequence in *mannik* 'egg', the same syllabification rule applies, yielding [man.nik].

structure	*example*
V	*i.siq* 'smoke (n.)'
V:	*aa* 'yes; oh! (excl.)'
CV	*si.ḷi* 'sense (n.)'
CV:	*qaa* 'top side'
CVC	*maq* 'maq game'[5]
CV:C	*kuuk* 'river'
VC	*iŋ* '(the) self'
V:C	*auk* 'blood'

Table 2.6 : Possible syllable structures

[4]The negative suffix is *-it*, though the /i/ causes palatalization, leading to a surface form of [-ic]. Here the orthography obscures the phonological processes at work: although spelled 'tch', the sequence is pronounced [c:]. Therefore the word is pronounced [tusa:ŋiccuq]. [-ict] is not permitted, so /t/ assimilates to [c], yielding the surface pronunciation [ic:].

Speakers often insert an epenthetic [a] between non-homorganic CC sequences if the first C is a voiced fricative. For example: it is extremely common for the word /aʁnaq/ 'woman' to be pronounced [aʁanaq] instead of [aʁnaq]. In his cross-dialectal survey of Inuit phonology, Dorais (1990:47) claims that this epenthesis is more common in Kobuk than other parts of the Malimiut dialect. During my fieldwork, however, I observed that Malimiut Coastal speakers use epenthetic [a] quite frequently, so it seems to be a widespread feature of Malimiut.

2.6.1.1 Word-initial and onset restrictions

Any monophthong can be word-initial, while only some diphthongs can be. /iu/ is never word-initial, while /ui/ can be, such as in the word *ui* 'husband'. /ai/ is quite common as a word-initial vowel, such as in *aiq* 'sleeve', whereas /ia/ does not occur word-initially. This implies that diphthongs beginning in /i/ cannot be word-initial. Finally, in the diphthong 'pair' /ua/ and /au/, both may occur word-initially, as in *uati* 'rear; hind part (of animal)' and *auktuq* 'nosebleed'.

Consonants have more word-initial restrictions than vowels but are not limited in onsets. Table 2.7 indicates whether or not a consonant, whether phonemic or allophonic, can occur as either an onset or word initially. There are a few exceptions, such as *ñaañaaq* 'go to bed! (baby talk)', which we would not expect since /ɲ/ is not otherwise allowed to begin words. Words which are interjections, baby talk, onomatopoeia, or members of other special registers, however, often have peculiar phonological rules not otherwise allowed. Loanwords are the source of most other exceptions, such as *laaq* 'lard', which violates Iñupiaq phonology by having /l/ in word-initial position.[6]

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[5]*Maq*, also known as *maġauraq*, is a game in which the object is to keep quiet as long as possible. Players take turns attempting to make the others laugh using various means such as making funny faces.

[6]The English word 'lard' also violates Iñupiaq phonotactics by having /ɹd/ in the coda. Neither /ɹ/ nor /d/ is a phoneme in Iñupiaq. Iñupiaq loanword phonology is such that when a word is borrowed, an illegal coda is

	p	t	k	q	s	ʂ <sr>	h	ɬ <ɬ>	ɬʲ <ɬ̇>	
in onset?	yes	yes	yes	yes	yes	yes	yes	yes	yes	
word-initial?	yes	yes	yes	yes	yes	no	no	no	no	
	j <y>	m	n	ŋ	ɲ <ñ>	ʁ <ġ>	l	ʎ <l̇>	ʐ <r>	ɣ <g>
in onset?	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
word-initial?	yes	yes	yes	no	no	no	no	no	no	no

Table 2.7 : Word-initial and onset consonant restrictions

It is difficult to capture the natural classes involved in the word-initial consonant restrictions. Other than sonorants, all word-initial consonants must be voiceless; however, this is not sufficient to explain the full set of restrictions. Nor is fricative sufficient to explain the restriction, as some fricatives can appear word initially and others cannot. The classes that *are* allowed to occur word initially are as follows: bilabial and alveolar nasals [m n], voiced laterals [l], voiceless stops [p t k q], non-lateral approximants [j], and voiceless non-lateral alveolar fricatives [s]. Though /l/ is permitted word-initially, it is quite rare in this position. Word-initial /l/ is almost exclusively reserved for onomatopoeic bird names, such as *livilivillauraq* 'least sandpiper (*Erolia minutilla*)', and loan words, such as in *laaq* 'lard' and *laavlaaq* 'Lapp; Laplander; Sami'.

2.6.1.2 Word-final and coda restrictions

Word-final consonant restrictions are much more straightforward: only nasals and stops may be word final. These are [t c k q m n ɲ ŋ] (in the orthography, *t ch k q m n ñ ŋ*). This is consistent with the account in Kaplan (1979:15). The rule for codas is nearly identical, with

replaced by /q/. Furthermore, English primary stress is often interpreted in loanwords as a long vowel. Hence English /lɑɹd/ becomes Iñupiaq /la:q/.

the addition of /p/, which cannot be word-final. Therefore the consonants that can be in a coda are *any* oral or nasal stop in Malimiut dialect.

2.6.2 Assimilation

One very productive type of assimilation observed in Iñupiaq is intervocalic voicing of voiceless consonants at morpheme boundaries (either V-CV or VC-V). This is easy to observe in the obligatory person/number/mood suffix that appears at the end of every verb, demonstrated by example (6). Third person intransitive indicative *-tuq* [-tuq] changes to *-ruq* [-ɻuq] when it follows a vowel, and 2s.3s transitive interrogative *-piuŋ* [-pi:ŋ] changes to *-viuŋ* [-vi:ŋ] after a vowel. The rule is shown in Figure 2.5.

(6) a. savaktuq
savak-tuq
work-3S.INDIC
'he/she is working'

b. agliqiruq
aɣliqi-ɻuq
read-3S.INDIC
'he/she is reading'

c. imiqpiuŋ
imiq-piuŋ
drink-2S.3S.IMPER
'you (sg.) drink it!'

d. niġiviuŋ!
niʁi-viuŋ
eat-2S.3S.IMPER
'you (sg.) eat it!'

As the rule indicates, the input consonants have no corresponding voiced consonants, so they change to fricatives. This is why [t] > [ɻ] in example (6b) and [p] > [v] in example (6d).

$$\begin{bmatrix} +cons \\ -voice \\ -lat \\ -cont \end{bmatrix} \rightarrow \begin{bmatrix} +cons \\ +voice \\ -lat \\ +cont \end{bmatrix} / \begin{bmatrix} +syll \\ +voice \\ -cons \end{bmatrix} \text{-}\_\_\_\_ \begin{bmatrix} +syll \\ +voice \\ -cons \end{bmatrix}$$

Figure 2.5 : Intervocalic voicing rule

2.6.2.1 Progressive assimilation

Progressive assimilation is particularly noticeable due to its role in producing palatal allophones of non-palatal phonemes. For example, the palatalization rule described in Section 2.2.3.2 Figure 2.2, namely that non-strident coronals become palatalized after /i/ (where i is the phoneme /i/ and never the [i] allophone of /ə/), is a straightforward palatalization rule. For an extremely detailed account of progressive assimilation in several dialects of Iñupiaq, I refer readers to Kaplan (1979).

2.6.2.2 Regressive assimilation

Regressive assimilation is also quite common in Malimiut Iñupiaq. One common type of regressive assimilation in the language is that across morpheme boundaries, CC sequences must assimilate to have the same manner of articulation. Thus a sequence such as /k-n/ must assimilate to [ŋ-n] as in *aglagvik* 'school' + *-mi* 'LOC.SG' > *aglagviŋmi* 'at (the) school'.

Another example can be found with the uvular fricative /ʁ/, which assimilates the nasality of a following nasal stop (see also Kaplan (1979:9), Dorais (1986), and Bobaljik (1996)). The rule is quite straightforward: /ʁ/ > [ɴ] / _[+cons +nas] such as in *iġñiq* 'son' [iɴɲiq] and *taaġmi* [taːɴmi] 'in the dark' (from *taaq* 'to be dark').

As for progressive assimilation, I refer readers to Kaplan (1979) for an extremely detailed account of regressive assimilation.

2.6.2.3 Compared to other Inuit languages

Malimiut Iñupiaq does not exhibit the extreme degree of consonant assimilation found in the eastern Inuit languages Inuktitut and Kalaallisut—Kalaallisut in particular. With the exception of clusters beginning with /ʁ/, for example, Kalaallisut does not permit non-homorganic consonant clusters in terms of manner *and* place of articulation, such that any sequence C_1C_2 becomes C_2C_2 (Sadock 2003); thus *iglu* [iɣlu] 'house' in Iñupiaq is *illu* [iɬɬu] in Kalaallisut.[7] The extent of assimilation in eastern varieties has a negative effect on mutual intelligibility, particularly for speakers of western varieties who cannot recover the underlying phonemes. For more information on assimilation as well as other phonological characteristics, I refer readers to Dorais (1990) for a detailed account of cross-dialectal Inuit phonology and to Fortescue et al. (1994) for a pan-Eskimo analysis.

2.6.3 Stem variation

There are two major types of stem variation in Malimiut Iñupiaq. These are 1) nouns ending in /-n/ and 2) stem-internal vowel deletion. Nouns with singular forms ending in /-n/, such as *aglaun* 'pencil' and *aŋun* 'man', exhibit stem variation. In all cases, the /-n/ in these nouns alternates with /-tə/ whenever additional morphemes are suffixed to the stem. Thus when combined with the dual suffix /-k/, for example, these become *aglautik* 'two pencils' and *aŋutik* 'two men', respectively. Kaplan (1979, 1981) suggests this stem variation is due to apocope, whereby the underlying form contains /-tə/ and the /t/ nasalizes following the deletion of the vowel. As this explanation accurately predicts all /-n/ stem variation and I have encountered no counterexamples, it will be adopted here.

Vowel deletion occurs only in stems containing an underlying /ə/. Kaplan (1981:59) hy-

[7]Per Fortescue (1984:335), all geminate /l/ in Kalaallisut become voiceless fricatives, thus /ll/ > [ɬɬ].

pothesizes that /ə/ in a penultimate syllable deletes when a suffix has been attached to a noun. For example, the /ə/ in *tupiq* /tupəq/ 'house' deletes when the plural suffix /-it/ is suffixed. Thus /tupəq-it/ yields the surface form [tupqit] *tupqich* 'houses (pl.)'.

2.7 Stress

Surprisingly, there are no previously published studies of Iñupiaq prosody, including stress or lack thereof. In his dissertation on Iñupiaq phonology, Kaplan (1979) says little about stress at all, focusing instead on assimilation phenomena. Kaplan (1979:213) claims that positing a mora is necessary for Iñupiaq, as some phonological processes such as consonant gradation (not found in all dialects) only apply if the "first vowel of a word is long." This suggests a system where length is important, whether moras are involved or not. What he also tells us is that stress is one feature that differs between Yup'ik and Iñupiaq (or rather Yupik languages and Inuit languages); specifically, he says "the Yupik languages have various forms of rhythmic alternation of stressed and unstressed syllables, while such prosodic systems are absent from Inuit" (Kaplan 2001). This tells us, then, what Iñupiaq does *not* have—a system of rhythmic lengthening—but says nothing about what prosodic system(s) it *does* have. Furthermore, Kaplan (1994b) cites S. Jacobson (undated), saying Iñupiaq has no prosody at all, a dubious and typologically unlikely claim.

Listening to Iñupiaq, there is an intuitive sense that at least one syllable per word is more prominent than any others; whether this syllable prominence is lexical stress or not remains to be seen, as there is no a priori reason to assume that lexical stress is a salient feature of Iñupiaq. Furthermore, it may be prosodically motivated or morphologically motivated prominence (cf. Tuttle (2000:35–36) for Apache). I will use SYLLABLE PROMINENCE and STRESS interchangeably here and leave the status of stress as a possible meaning-bearing unit in Iñupiaq for later study.

With so few clues, what then might we expect of Iñupiaq syllable prominence? Studies of stress, accent, and/or syllable prominence often focus on acoustic and auditory correlates such as intensity in dB, loudness (in sones or phons), duration (ms), and pitch (Hz) (cf. Balusu (2001), Astruc & Prieto (2006a)). Based on Gabas (1996), we might assume that pitch is the most likely candidate for Iñupiaq syllable prominence, since pitch is the most important in Yup'ik stress and it is not unreasonable that somewhat closely related (and geographically close) languages might have similar stress rules.

Cross-linguistically, certain phonetic correlates consistently appear in investigations of stress, particularly fundamental frequency, intensity, duration, loudness, and spectral balance. What seems clear, however, is that the particular combination of these features as stress cues is language-specific. In Telugu, for example, duration is the best cue of stress (as well as accent), pitch is a reasonably important cue—with the stressed syllable having the lowest pitch, in contrast to many Indo-European languages—and both loudness and raw intensity are poor cues (Balusu 2001). Ortega-Llebaria et al. (2007) found that duration and intensity (dB) are phonetic cues of (Castilian) Spanish stress, but unlike what Sluijter & Heuven (1996) found for Dutch and American English, spectral balance is not a reliable cue. For Catalan, on the other hand, Astruc & Prieto (2006b) found that duration, vowel type, and spectral balance—but not intensity (dB)—are the important cues of stress. Łukaszewicz & Rozborski (2008) found that fundamental frequency is the most reliable cue of stress in Polish, while intensity is an intermediate cue and duration alone is not sufficient to mark stress.

We must also consider whether contrastive vowel length obviates the possible role of duration in stress, as the focus of this study, Malimiut Iñupiaq, has phonemically long vowels. Berinstein (1979) claims that duration is not a correlate of stress in languages with contrastive vowel length. However, subsequent studies reveal that duration may or may not be

an important stress cue in such languages. Bond (1991), for example, reports that in Latvian, duration is not a reliable cue of stress because the short:long ratio of vowel duration is consistent in stressed and unstressed syllables. Taff et al. (2001) report that for Aleut, another language with contrastive vowel length, duration is a significant cue of stress (i.e., vowels in stressed syllables have greater duration in Aleut than vowels in unstressed syllables), unlike what Bond (1991) found for Latvian. Based on cross-linguistic data, it is therefore clear that it is possible but not obligatory for duration to be a cue for stress in a language with contrastive vowel length.

2.7.1 Stress and prosody in other Eskimo-Aleut languages

First, let us take a brief look at phonological accounts of stress in Central Alaskan Yup'ik, which has been worked on thoroughly by several scholars, including Jacobson (1984, 1995), Miyaoka (1996) and Woodbury (1987). Phonologically, there are two types of stress in Yup'ik: the inherent stress and rhythmic stress, which is entirely predictable (Jacobson 1984, 1995, Miyaoka 1996). Miyaoka (1996) (qtd. in Gabas (1996)) proposes that rhythmic stress occurs on every other syllable working from left to right; the word-initial syllable is stressed if closed but unstressed if open, as in *na.já.ʁaq* 'younger sister' and *áʁ.naq* 'woman'. Jacobson (1984, 1995) proposes three types of stress: 1) inherent stress, which should fall on all heavy and initial closed syllables; 2) rhythmic stress, which occurs on every syllable after an unstressed syllable and lengthens its vowel as a consequence, and 3) secondary stress on prime vowels (/a i u/) before a heavy syllable. These assume the following four syllable structures: (C)V (open), (C)VC (closed), V (light), and VV (heavy). The most important of these is argued to be rhythmic stress.

Jacobsen (2000:40) notes that while (West) Greenlandic does not have lexical stress (cf. Rischel (1974), Nagano-Madsen (1992)), nevertheless "native speakers of Greenlandic and for-

eigners have the impression of the antepenultimate and/or the last syllable to be 'stressed'." Her experimental data confirms earlier claims that West Greenlandic does not have lexical stress. Instead, Jacobsen (2000) suggests that there are four degrees of syllable weight, differentiated by duration, which causes some syllables to appear more prominent than others.

The only phonetic account of stress in a Yupik language (to my knowledge) is Gabas (1996), whose study of Central Alaskan Yup'ik found that Yup'ik stress has three acoustic correlates: pitch, intensity, and duration. However, in his studyGabas (1996) found pitch the most important of the three, with duration playing some role and intensity very little. Based on this Yup'ik stress information, a reasonable starting point for a phonetic analysis of Iñupiaq syllable prominence would be to examine the roles of pitch, intensity, and duration.

2.7.2 Stress/syllable prominence in Iñupiaq

The phonetic study in Lanz (2008) was intended to form the basis for later phonological descriptions of stress/syllable prominence in Iñupiaq, including identification of prosodic rules operating in the language (or at least the Malimiut dialect). Rules for the placement of syllable prominence were not a priority; however, as Kaplan (2001) mentions that Iñupiaq does not have rhythmic stress or lengthening like Yup'ik does, any evidence that supports or contradicts his findings would be of interest.

Two-way repeated measures ANOVA tests in Lanz (2008) indicate that fundamental frequency (Hz), intensity (dB), loudness (sones), and spectral tilt (*phons – dB*) are all significant factors in Malimiut Iñupiaq syllable prominence. For all but intensity (dB), vowel type (i.e., which vowel phoneme) impacts perception of syllable prominence, although not to the extent that syllable prominence depends on vowel type (i.e., they are independent). The results indicated that duration, however, is not significant in Malimiut Iñupiaq syllable prominence.

Since duration was not found to be significant, it is unlikely to play a role in the place-

ment of prominent syllables; this in turn confirms that the syllable prominence system of Malimiut Iñupiaq does not have a compensatory lengthening feature as found in its cousin Central Alaskan Yup'ik. Moreover, unlike what Jacobsen (2000) found for West Greenlandic, a close relative of Iñupiaq, syllable prominence was not found to be determined by duration. In summary, we know that duration is not likely to be important in Malimiut Iñupiaq stress/syllable prominence, and that rhythmic lengthening is not happening. Kaplan's (1979) claim that some dialects of Iñupiaq must have the unit *mora* is independent of this, as length can still be a relevant feature for morphophonological processes such as gemination without playing a role in the stress/syllable prominence. We also know that fundamental frequency (Hz), intensity (dB), loudness (sones), and spectral tilt (*phons – dB*) may be important. More work is necessary to solve the dilemma of basic prosodic type in Iñupiaq as well as other Inuit languages/dialects.

2.8 Previous accounts

The most complete description of Iñupiaq phonology to date is Kaplan (1979), which is a complete description of the phonology of the Barrow (North Slope) dialect which also contains substantial information on Kobuk dialect phonology. Previous (morpho-)phonological descriptions such as MacLean (1993), Kaplan (1979) were strongly influenced by pedagogical factors. In MacLean (1993) in particular, pedagogical ease of explanation was preferred over linguistic accuracy; for example, the lateral approximant /l/ is listed as a fricative alongside the lateral fricative /ɬ/, though only the latter is actually a fricative. This was done in order to ease learners into allomorphy by arranging consonants in a grid based on how phonological rules apply. While this type of description is understandable for revitalization purposes, it is also in the interests of the Iñupiat community and linguists to have a linguistically accurate description. For that reason, I present the data here without regard for pedagogy.

Chapter 3

Nominal morphology

This chapters outlines major issues in Iñupiaq nominal morphology, particularly types of inflectional and derivational morphology. As noted in Haspelmath (2002:70–77), the matter of differentiating inflection and derivation is not as straightforward as it might appear to be. Some of the most commonly cited criteria discussed by Haspelmath (2002:70–77) include:

1. typically inflection cannot change the word class of its host, while derivation can; however, there are exceptions
2. inflection is obligatory, derivation is not
3. inflectional categories are less relevant to the meaning/syntax; derivational meanings are very relevant to the meaning/syntax
4. inflected words must be replaced by another inflected word; derived words can be replaced by a simple word form
5. inflection is typically found at word edges, while derivation is found close to the root
6. inflectional categories may be expressed by portmanteau morphemes, but derivational categories are unlikely to be portmanteau
7. inflectional categories cannot be iterative, while derivational formations can

One of the most common of these is that inflection is 'relevant' to the syntax while derivation is not. However, as Haspelmath (2002:70–72) points out, the issue of determining

relevancy is itself not straightforward. Inflectional morphology such as a grammatical case may in fact be directly relevant to the argument structure. In fact, none of the criteria in Haspelmath (2002:70–77) are without exceptions or problems. Haspelmath's (2002) solution is to adopt an inflection-derivation continuum rather than a strict either/or choice between inflection and derivation. This approach acknowledges the most common criteria for both inflection and derivation while still allowing for the possibility that a given criterion may not by easy to apply within a language.

I will take a continuum approach here, following Haspelmath (2002), noting that criteria 1, 2, 5, 6, and 7 are most helpful for Iñupiaq morphology. Most Eskimo-Aleut work assumes the only (verbal) inflectional suffixes are the verb endings, i.e., the portmanteau person/number/mood suffix that must appear at the end of any Eskimo verb. Fortescue (2002:258) says "The distinction between inflectional and derivational suffixes is fairly easy to make for [Eskimo-Aleut] languages: inflections are obligatory and form paradigms of portmanteau elements standing at the end of words, whereas derivational suffixes are not obligatory and do not form closed paradigms." Although more important for the analysis of verb morphology, I depart from this common Eskimo-Aleut practice in that I identify other suffixes such as optional tense and aspect marking as inflectiona. The criteria I adopt for nominal and verbal inflection versus derivation are the same. See Chapter 4 for inflectional and derivational verbal morphology.

3.1 Inflectional morphology

There are several types of inflectional nominal morphology in Malimiut Iñupiaq, including but not limited to number (Section 3.1.1), case (Section 3.1.2), and possession (Section 3.1.3).

3.1.1 Number

Nouns and pronouns are marked for number, which has three dimensions: singular, dual, and plural.[1] The absolutive singular case is unmarked (see §3.1.2.2 for discussion of the absolutive case). While a cursory glance at Iñupiaq lexical items may lead one to believe that all singular absolutives end in /q/, and that therefore /-q/ is the absolutive singular, this is not accurate. All absolutive singular nouns must end in /q/, /k/, /n/, or a vowel, as demonstrated in example (1). The dual and plural absolutive suffixes are *-k* and *-t*, respectively, as in example (2).

(1) a. aġnaq
aʁnaq
woman
'woman'

b. kamik
kamək
boot
'boot'

c. aglaun
aɣlautə[2]
pencil
'pencil'

d. nuna
nuna
land
'land'

[1]Iñupiaq is more conservative than its fellow Inuit language Kalaallisut in terms of number, as it maintains dual where Kalaallisut now has only singular and plural (Sadock 2003).

[2]All words ending in [n] have underlying /tə/ due to a set of sound changes; see the explanation on 51.

(2) a. aġnaq
aʁnaq
woman
'woman'

b. aġnak
aʁnaq-k
woman-ABS.DU
'two women'

c. aġnat
aʁnaq-t
woman-ABS.PL
'women (pl.)'

Although it is possible to assume that the absolutive case is unmarked and that *-k* and *-t* mark number only, there is a reason for treating *-k* and *-t* as portmanteau morphemes combining absolutive case and number. Namely, absolutive dual and plural nouns act as the host for oblique case dual and plurals (see §3.1.2). For economy of explanation, it is easier to assume that absolutive dual and plural are portmanteau: dual and plural oblique cases simply take dual and plural absolutives as their host. Otherwise, one would have to assume that dual and plural obliques first take unmarked absolutive case, add an unnecessary number suffix, then add the portmanteau oblique/number suffix. The two alternatives are schematized as follows:

- dispreferred: [N-$\emptyset_{ABS}$]-NUM-OBL.NUM
- preferred: [N-ABS.NUM]-OBL.NUM

While there is still multiple number marking in the preferred analysis, because each portmanteau suffix includes number, it is because the number cannot be separated from the absolutive case. In contrast, in the dispreferred analysis, a number suffix is added for no

apparent reason. As an explanation without unnecessary number suffixation is cleaner, that is the analysis I adopt.

Dual and plural marking of absolutive nouns is not straightforward, as simple affixation of *-k* or *-t* is not always sufficient to generate a well-formed noun. First, due to historical apocope and nasalization (Kaplan 1979:123), any Iñupiaq nominal ending with /n/ in the absolutive singular has a stem ending in *-ti* /-tə/, such as *tiŋmisuun* 'airplane' (stem /tiŋmisu:tə/). The absolutive dual and plural forms are *tiŋmisuutik* and *tiŋmisuutit.*

Second, nouns with underlying /ə/ undergo vowel alternation in dual formation. This occurs when /ə/ is the nucleus of the last syllable. In examples (3a) and (3b), the underlying /ə/ in the singular becomes [a] in the dual. Third, words such as *savik* /savik/ 'knife' as in example (3d), which already end in /k/ and have underlying /i/ in the final syllable, form duals by lengthening the final vowel.

(3) a. kamik, kammak
kamək, kammək
boot, boot.DU
'boot, two boots'

b. uqaɬiq, uqaɬɬak
uqaɬəq, uqaɬɬək
word, word.DU
'word, two words'

c. talu, talluk
talu, tallu-k
door, door-DU
'door, two doors'

d. savik, saviik
savik, savi:k
knife, knife.DU
'knife, two knives'

Fourth, many words undergo word-medial consonant gemination when the dual *-k* is suffixed to the stem, such as examples (3a)–(3c). This gemination seems to be phonologically motivated but the exact motivation is unclear. What is clear is that gemination with the dual only occurs when:

- a two-syllable word has (C)V.CV structure (no coda in either syllable) *or*
- the word has no coda in the penultimate syllable *and* the final syllable has /ə/ as its nucleus

The first condition accounts for words such as [ta.lu] 'door' in example (3c) geminates to [tal.lu-k] 'two doors'. The second condition accounts for [ka.mik] 'boot' (underlyingly /ka.mək/), which geminates to [kam.ma-k] 'two boots'. A word that does not match either of these conditions simply receives the /-k/ suffix without gemination, hence monosyllabic *niu* [ni:] 'knee' has the dual form *niuk* [ni:-k] 'two knees'.

Finally, it is important to note that if O, A, or S arguments are overt in an Iñupiaq utterance (i.e., ergative or absolutive arguments), they must agree with the verb in terms of number (see §4.1 for verb morphology).

3.1.2 Case

Iñupiaq has two core cases, ergative and absolutive, and seven oblique cases, summarized in Table 3.1. I use the distinction between core and oblique suggested in Andrews (2007:152–153): "[t]he core functions are by definition A, S, P and whatever other grammatical functions are sufficiently like them to be plausibly grouped with them and opposed to the others, which are the oblique functions." Core cases are used to mark grammatical relations—and thus morphosyntactic alignment—and in the case of the ergative, also possession (see Section 3.1.2.1). Oblique cases are used to mark other grammatical functions such as adjuncts and comple-

ments. Core and oblique cases can be distinguished easily: with the exception of vocative, only noun phrases marked with a core case can be the O, A, or S argument in a clause. If overt, the subject argument of an imperative must be an NP marked with vocative case.

An elaborate system of suffix notation is used in Iñupiaq pedagogical materials (MacLean 1981, 1993, 1994) and some Iñupiaq linguistics sources (Kaplan 1979, MacLean 1995, Nagai 2006). See Appendix B for an explanation of the notation system. Case suffixes are included in this notation in the first two rows of Table 3.1 to aid readers more familiar with that system. Although complex, the notation system also aids in correct formation of surface forms. Note that in the table, the fact that dual and plural suffixes are attached to dual absolutive and singular absolutive, respectively, has been included in the suffix notation. Thus ['-ŋnik] for instrumental dual indicates that nik is attached to a dual absolutive: since dual absolutive always ends in [k], which subsequently assimilates to a nasal following instrumental [-nik], ['-ŋnik] indicates the final syllable of the dual stem.

Most cases have multiple functions, as described in the sections that follow. Regardless of function, however, each case has a unique set of suffixes. For example, the marking used for instrumental case is constant though its functions may vary depending on context and argument structure. Each case is explained in more detail in the sections that follow. Before proceeding to the explanation of individual cases, note that the dual and plural absolutive forms of nouns serve as the stems to most of the dual and plural oblique cases.

Seiler (2005:444–445) divides Iñupiaq nouns into seven major noun classes based on morphophonological behavior. These classes have no semantic basis but are useful for case formation. While the case suffixes are the same for all noun classes, the stems of the various classes interact with the suffixes differently. For example, in Seiler's (2005) class 2, no change occurs in the stem, while in class 4c, the onset of the second syllable of the stem undergoes gemination when the absolutive dual suffix is attached. Seiler's (2005) noun classes serve the

number	ABS	ERG	INSTR	ALL	ABL	LOC	PERL	SIM
sg.	-Ø	(ʻ)-m, :um	÷mik	÷mun	÷miñ	÷mi	÷kun	÷tun
du.	ʻ-k		ʻ-ŋnik	ʻ-ŋnun	ʻ-ŋniñ	ʻ-ŋni	ʻ-kkun	ʻ-ktun
pl.	-t / :ich		÷nik	÷nun	÷niñ	÷ni	÷tigun	÷titun
sg.	nuna ʻland'	nunam	nunamik	nunamun	nunamiñ	nunami	nunakun	nunatun
du.	nunnak		nunnaŋnik	nunnaŋnun	nunnaŋniñ	nunnaŋni	nunnakkun	nunnaktun
pl.	nunat		nunanik	nunanun	nunaniñ	nunani	nunatigun	nunatitun
sg.	aŋun ʻman'	aŋutim	aŋutimik	aŋut(i)mun	aŋutimiñ	aŋutimi	aŋutikun	aŋutitun
du.	aŋutik		aŋutiŋnik	aŋutiŋnun	aŋutiŋniñ	aŋutiŋni	aŋutikkun	aŋutiktun
pl.	aŋutit		aŋutinik	aŋutinun	aŋutiniñ	aŋutini	aŋutigun	aŋutititun
sg.	aġnaq ʻwoman'	aġnam	aġnamik	aġnamun	aġnamiñ	aġnami	aġnakun	aġnatun
du.	aġnak		aġnaŋnik	aġnaŋnun	aġnaŋniñ	aġnaŋni	aġnakkun	aġnaktun
pl.	aġnat		aġnanik	aġnanun	aġnaniñ	aġnani	aġnatigun	aġnatitun

Table 3.1 : Core and oblique cases (unpossessed nouns)

same purpose as the elaborate suffix notation system used in Iñupiaq pedagogical materials.

3.1.2.1 Ergative

Iñupiaq is morphologically ergative, and this is manifested in ergative case marking among other ways (see Section 8.1 for a discussion of morphological and syntactic ergativity). Ergative case—called relative case in most Eskimo-Aleut linguistic sources—has two functions in Iñupiaq: marking the subject (A argument) of a transitive sentence and marking genitive noun phrases (specifically, marking the possessor of some possessed entity).

The ergative case suffix for unpossessed nouns is /-m/ with the allophone [-um] in some noun classes.[3] For unpossessed lexical nouns and personal pronouns, ergative is only marked if the A argument is third person (non-reflexive) singular. Possessed NPs are marked for ergative—as well as number of possessor and number of possessed—in all persons. The use of ergative case marking to mark grammatical relations is illustrated in (4).

(4) a. Aŋutim aġnaq tusaagaa.
aŋuti-**m** aʁnaq-Ø tusa:-ɣa:
man-ERG woman-ABS see-3S.3S.INDIC
'The man sees the woman.'

b. Aŋutit aġnaq tusaagaat.
aŋuti-t aʁnaq-Ø tusa:-ɣa:t
man-PL woman-SG see-3P.3S.INDIC
'The men (pl.) see the woman.'

c. Tiniikam upaktuġik qipmik.
tini:kaq-**m** upaktuq-ɣik qipmiq-k
moose-ERG charge-3S.3D.INDIC dog-DU
'The moose (sg.) charged the two dogs.'

[3]In addition, ergative singular can appear as the allophone [-im] with some loan words, particularly those ending in non-Iñupiaq consonants such as [d]; see example (7a).

Iñupiaq distinguishes possessed NPs from unpossessed NPs (i.e., NPs with no possessive marking) (see §3.1.3 below for more on possession in Iñupiaq). Possessed NPs have a full ergative and absolutive paradigm. In contrast, ergative and absolutive are unmarked on some unpossessed NPs—namely third person singular unpossessed NPs—as shown in example (5a). When ergative and absolutive case are not present, context is required to determine which of the arguments is the subject. When the ergative is a possessed NP, it is marked, as in (5b); absolutive remains unmarked.

(5) a. Aŋutik aġnak tusaagiŋik.
aŋuti-k aʁnaq-k tusaː-ɣiŋik
man-DU woman-DU see-3D.3D.INDIC
'The two men see the two women.' OR 'The two women see the two men.'

b. Aŋatchia**ŋma** aġnak tusaagiŋik.
aŋacciaq-**ŋma** aʁnaq-k tusaː-ɣiŋik
uncle-**1S.ERG.DU** woman-DU see-3D.3D.INDIC
'My two uncles see the two women.'

Ergative case is also marked in the demonstrative pronouns as in example (6). See chapter 5, §5.4.3) for more information about the demonstratives.

(6) a. Ikkuak qirriuqtuk.
ikkuak qiʐʐiuq-tuk
DEM.**ABS**.DU chop.wood-3D.INDIC
'Those two over there (visible, restricted) are chopping wood.'

b. Ikiguak mulikkai suluutit.
ikiɣuak mulik-kai suluutə-t
DEM.**ERG**.DU open-3D.3P.INDIC box-PL
'Those two over there (visible, restricted) are opening the boxes.'

The ergative case is also used to mark the genitive, as shown in example (7). The possessor is marked ergative whether it is a full noun as in (7a) or a pronoun as in (7b) and (7c).

(7) a. uqalua God-**im**
uqaluk-a God-**im**
word-3S.REFL.POSS God-**ERG**
'the word of God (lit. God's own word)' [source: summer 2007]

b. ilaan qiŋaŋa
ila:-**n** qiŋaq-ŋa
3S.PRO-**ERG** nose-3S.3S.POSS
'his/her nose' [source: spring 2008]

c. ilaan niuk
ila:-**n** niu-k
3S.PRO-**ERG** leg-3S.3D.POSS
'his/her (two) legs' [source: spring 2008]

See §3.1.3 for a more detailed description of possession in Iñupiaq.

As Trask (1979) points out, it is common in a morphologically ergative language for the ergative case to be identical to another case in the language, often genitive or instrumental. In Iñupiaq, ergative is identical to genitive. I argue that this is a case of one formal case with two functions, rather than two cases with the same form (i.e., case syncretism).

It is worth noting that I depart from the tendency in Eskimo-Aleut linguistics to call this case 'relative' (Woodbury 2004, Nagai 2006), instead using 'ergative' as the case name to acknowledge its role in the marking of grammatical relations. Ergative marking is the core use of the ergative case in Iñupiaq (at least synchronically), but the fact that it is also used for genitive does not necessitate a new case name. This is parallel to the situation in Latin, where ablative case has a core ablative usage as in example (8a) but can also be used for approximately fifteen other functions, such as instrumental (called 'ablative of instrument' by Classicists (Lehmann 1985, Pinkster 1990, van Hoecke 1996)), shown in example (8b).

(8) a. Ex urbe id mīsit.
from city-ABL.FEM.SG it.ACC send-3S.PRF
'He sent it from the city.' (Wheelock 1995:143)

b. Litter-ās sti-lō scrīps-it.
letter-ACC.FEM.PL pencil-ABL.MASC.SG write-3S.PRF
'He wrote the letter with a pencil.' (Wheelock 1995:91)

It is not uncommon in languages with ergative case to have the ergative case marker be identical in form to another case, most often genitive (Bittner & Hale 1996b). For example, genitive and ergative cases exhibit case isomorphism in Mayan languages (Coon 2008:104) and in Nez Perce (Rude 1991:25). In many of the languages with ergative-genitive isomorphism, the ergative and genitive cases have the same form as a result of diachronic change. For example, Baerman et al. (2002:4) note that in Burushaski, ergative and genitive have identical forms because the genitive "assumed the form of the ergative."

For Inuit languages in general, Bittner & Hale (1996b:61) claim that historically, ergative marking in Inuit was extended to marking possession, and thus the ergative acquired genitive function as well. Bok-Bennema (1992:202), however, claims that genitive marking extended to subject-marking and thus acquired ergative marking as one of its functions. Fortescue et al. (1994) seem to suggest that diachronically, the genitive case acquired ergative function, supporting Bok-Bennema's (1992) claim. I tentatively analyze this as a single case with two functions, ergative marking (i.e., marking of A arguments in transitive clauses) and genitive case marking. Genitive marking appears to have been the primary function diachronically, but synchronically there seems little reason to assume either function is primary in terms of the other. I use the cover term 'ergative' for the case form as a matter of convenience, noting its function as an ergative marker or genitive marker as appropriate. Moreoever, the typical Eskimo-Aleut term 'relative case' (Woodbury 2004, Nagai 2006) may be confusing for purposes of cross-linguistic comparison.

3.1.2.2 Absolutive

The subject of an intransitive sentence (example (9a)) and the object of a transitive sentence (example (9b)) take the absolutive case.

(9) a. Aŋutim aġnaq tusaagaa.
aŋuti-m aʁnaq-Ø tusaː-ɣaː
man-ERG woman-**ABS** see-3S.3S.INDIC
'The man sees the woman.'

b. Aġnaq iglaqtuq.
aʁnaq-Ø iɣlaq-tuq
woman-**ABS** laugh-3S.INDIC
'The woman is laughing.'

3.1.2.3 Instrumental

The instrumental case—usually called *modalis* case in Eskimo-Aleut linguistics—is arguably the least understood case in the entire language family due to its wide range of uses. Aside from its use as a garden variety instrumental case as in example (10a), it also marks the indefinite object of some transitive verbs (10d) as well as the apparent patient—or semantic 'object'—of syntactically intransitive verbs as in examples (10b) and (10c). See Section 8.9.1.4 for the role of instrumental case marking in antipassives. Note that MacLean (1995:96) states that use of instrumental case as in (10d) indicates that the NP has "not been previously focused upon"—i.e., it marks new information. Another important use of the instrumental is for modifying incorporated nouns (MacLean's (1993) "modalis of specification"), as in example (10e). See Section 6.3 for the role of instrumental case in noun incorporation.

(10) a. Aŋuniaqtim aġviġluaq tuqutkaa nauliga**mik**.
aŋuniaqti-m aʁviʁluaq-Ø tuqut-kaː nauliɣaq-**mik**
hunter-ERG gray whale-ABS kill-3S.3S.INDIC harpoon-**INSTR**
'The hunter killed the gray whale with a harpoon.'

b. Aġnaq tuttu**mik** tautuktuq.
aʁnaq-Ø tuttu-**mik** tautuk-tuq
woman-ABS caribou-**INSTR** see-3S.INDIC
'The woman sees a caribou.'

c. Miñułiqtugut umia**mik**.
mikułiq-tuɣut umiaq-**mik**
paint-3P.INDIC boat-**INSTR**
'We're painting a boat.'

d. Tuyuġaat tuyuuti**mik**.
tujuq-ɣa:t tuju:tə-**mik**
send-3P.3S.INDIC letter-**INSTR**
'They sent him a letter.'

e. Niġiqaqtuguk tuttu**mik**.
niʁi-qaq-tuɣuk tuttu-**mik**
food-HAVE-1D.INDIC caribou-**INSTR**
'We (dual) have caribou for food.'

f. Iḷisimatti-ruat iḷḷiamiŋ-**nik** umiaḷġu-rut.
ilisimatti-ʐuat illiamik-**nik** umialʁu-ʐut
know-1P.PTCP family.tree-**INSTR.PL** rich-INDIC.1P
'knowing (our) family trees, we are rich' (source: summer 2007 (B))

The singular form of the instrumental is *-mik* while the dual and plural form is *-nik*. The dual and plural forms are differentiated by what form of the noun the suffix attaches to: dual *-nik* suffixes to the dual absolutive while plural *-nik* suffixes to the singular absolutive. The examples in (11) illustrate the instrumental forms of the noun *kamik* [kamək] 'boot (sg.)'.[4]

(11) a. kamiŋ**mik**
kamək-**mik**
knife-**INSTR.SG**
'with (a) boot'

[4]The surface forms have [ŋ] due to assimilation of manner of articulation. In /kamək-mik/, for example, the /k/ in the /km/ cluster assimilates to [ŋ] to match the manner of articulation of /m/.

b. kammaŋ**nik**
kammak-**nik**
knife.DU-**INSTR.DU**
'with two boots'

c. kamiŋ**nik**
kamək-**nik**
knife-**INSTR.PL**
'with boots (pl.)'

3.1.2.4 Allative

The allative case—typically called *terminalis* case in Eskimo-Aleut linguistics—is a canonical allative used for motion directed toward a goal. Examples (12a) and (12b) illustrate its use in Iñupiaq.

(12) a. Qaliŋaum quppiġaaq atauksritchaa Nauya**mun**.
qaliŋak-m quppiʁa:q-Ø ataukʂit-ta: naujaq-**mun**
Qaliŋak-ERG coat-ABS lend-INDIC.3S.3S Nauyaq-**ALL**
'Qaliŋak lent a coat to Nauyaq.'

b. Nutiqaqtuq umia**mun**.
nutiqaq-tuq umiaq-**mun**
jump-INDIC.3S boat-**ALL**
'He/she/it jumped into [the] boat.'

The singular form is *-mun* while the dual and plural form is *-nun*. Like the instrumental case marking in §3.1.2.3, the dual/plural *-nun* is suffixed to the dual absolutive and the singular absolutive stem, respectively. The formation of the allative is illustrated in (13).

(13) a. aġnaura**mun**
aʁnauʐaq-**mun**
girl-**ALL.SG**
'to (the) girl'

b. aġnauraŋ**mun**
aʁnauʐa-k-**mun**
school-DU-**ALL.DU**
'to (the) two schools'

c. aġnaura**nun**
aʁnauʐaq-**nun**
girl-**ALL.PL**
'to the girls (pl.)'

In addition to marking motion toward a goal, the allative case is used for purpose (14a), beneficiary (14b), and addressee (14c). This is not surprising given that MacLean (1995:97) describes Iñupiaq allative (*terminalis*) as allative and dative cases combined.

(14) a. Niġiqpaŋ**mun** niqɬiuġñiaqtugut.
niʁiqpak-**mun** niqɬiuq-niaq-tuɣut
feast-**ALL.SG** prepare.a.meal-FUT-1P.INDIC
'We will prepare a meal for the feast.'

b. Piquum uligruat paipiura**nun** qiḷaŋniqsuq.
piquk-um uliɣʐuaq-t paipiuʐaq-**nun** qilak-niq-tuq
p.n.-ERG.SG blanket-ABS.PL baby-**ALL.PL** knit-EVID-3S.INDIC
'Evidently Piquk knits blankets for babies.'

c. Qaliŋaŋ**mun** uqautirut.
qaliŋak-**mun** uqauti-ʐut
p.n.-**ALL.SG** tell-3P.INDIC
'They (pl.) told Qaliŋak.'

3.1.2.5 Ablative

The ablative case is a canonical ablative. It is used for motion away from an object (15a) and to mark origin (15b). It is also the case used to mark source of comparison (15c) (see §8.3 for more details on comparatives).

(15) a. Pisuktuŋa tauqsiġñiaġviŋ**miñ**.
pisuk-tuŋa tauqsiʁniaʁvik-**min**
walk-1S.INDIC store-**ABL**
'I walked from the store.'

b. Tuuqpak qanniqpaluktuq Fairbanks-**miñ**.
tu:qpak-Ø qanniq-paluk-tuq Fairbanks-**min**
Tuuqpak-ABS order-probably-3S.INDIC Fairbanks-**ABL**
'Tuuqpak probably ordered something from Fairbanks.'

c. Aviññaq mikitluktuq siksrikpaŋ**miñ**.
avinnaq-Ø miki-tluk-tuq sikşikpak-**min**
mouse-ABS small-COMP-3S.INDIC marmot-**ABL**
'A mouse is smaller than a marmot.'

The singular form is *-miñ* while the dual and plural form is *-niñ*. Like the instrumental and allative cases, the dual/plural *-niñ* is suffixed to the dual absolutive and the singular absolutive stem, respectively. The formation of the ablative is illustrated in (16).

(16) a. qaluqsra**miñ**
qaluqṣaq-**min**
valley-**ABL.SG**
'from (the) valley'

b. qaluqsraŋ**niñ**
qaluqṣa-k-**nin**
school-DU-**ALL.DU**
'from (the) two valleys'

c. qaluqsra**niñ**
qaluqṣaq-**nin**
valley-**ABL.PL**
'from the valleys (pl.)'

3.1.2.6 Locative

The locative case is used for any reference to stative physical location as well as time. The singular form is *-mi* while the dual and plural form is *-ni*. Example (17a) shows its use to

mark physical location, while example (17b) shows how it is used to mark temporal location.

(17) a. Ikniġvik ittuq iglu**mi**.
ikniʁvik-Ø it-tuq iɣlu-**mi**
stove-ABS be-3S.INDIC house-**LOC**
'The stove is in the house.'

b. Ukia-**mi** aullaaqsruġuurugut.
ukiaq-**mi** aulla:qʂuq-ɣu:-ʐuɣut
autumn-**LOC** pick.berries-HAB-1P.INDIC
'In the autumn we (pl.) usually pick berries.'

The singular form is *-mi* while the dual and plural form is *-ni*. Like the instrumental, allative, and ablative cases, the dual/plural *-ni* is suffixed to the dual absolutive and the singular absolutive stem, respectively. The formation of the locative is illustrated in (18).

(18) a. iglu**mi**
iɣlu-**mi**
house-**LOC.SG**
'in/on/at (the) house'

b. iglu**ŋni**
iɣlu-k-**ni**
house-DU-**LOC.DU**
'in/on/at (the) two houses'

c. iglu**ni**
iɣlu-**ni**
house-**LOC.PL**
'in/on/at (the) houses (pl.)'

3.1.2.7 Perlative

The perlative case—called *vialis* case in Eskimo-Aleut linguistics—has a variety of functions. At its most basic, the perlative case in Iñupiaq marks the nominal indicating mode or path of transportion (examples (19a) and (19b). It also serves to mark the comitative as in example

(19f). Sadock (2003) dubs this perlative case in West Greenlandic 'movement through or along' and that summarizes most of the Iñupiaq functions as well. Its other function, marking topic, however, is not easily combined with the other meanings. Perlative is used to indicate topic of conversation, or as MacLean (1993:195) says, it "indicates what is being talked about" (see example (19c)).

(19) a. Tikitchuvit umia**kun**?
tikit-tuvit umiaq-**kun**
arrive-2S.INTERR boat-**PERL.SG**
'Did you (sg.) arrive by boat?'

b. Isiqtusik talu**kun**.
isiq-tusik talu-**kun**
enter-2D.INDIC door-**PERL.SG**
'You (dual) enter through [the] door.'

c. Uqaqpisi ukiu**kun**?
uqaq-pisi ukiuq-**kun**
talk-2P.INTERR boat-**PERL.SG**
'Are you (pl.) talking about winter?'

d. Kissitchini**kun** aŋun issumaruq.
kissittini-**kun** aŋun-Ø issuma-ʒuq
counting-**PERL.SG** man-ABS think-3S.INDIC
'the man is thinking about counting/numbers' [source: 080707]

e. Pisruktuŋa apquti**kun**.
pisuk-tuŋa apqutiq-**kun**
walk-1S.INDIC street-**PERL.SG**
'I walk by way of the street.'

f. Kali**kun** aiñiaqtugut.
kalik-**kun** ai-niaq-tuɣut
Kalik-**PERL.SG** go home-INCEPT-1P.INDIC
'We (pl.) will go home with Kalik.'

g. Uqaqsiitigun uqaqtuguk.
uqaqsi:ti-ɣun uqaq-tuɣuk
telephone-PERL.SG talk-1D.INDIC
'We (two) talk on the phone.' [source: 011408]

The singular form is *-kun*, the dual is *÷kun*,[5] and the plural form is *-tigun*, as in (20).

(20) a. umiakun
umiaq-kun
boat-PERL.SG
'by boat'

b. umiakkun
umia-k-kun
house-DU-PERL.DU
'by two boats'

c. umiatigun
umiaq-tigun
house-PERL.PL
'by boats (pl.)'

One striking use of the perlative is its apparent ability to mark instruments as in example (19g), despite the existence of an instrumental case. Bowern (p.c.) suggests that the distinction between the two apparent instrument types—marked with instrumental and perlative case, respectively—may be a distinction between instrument (INSTR) and means (PERL), where means includes modes of transportation and transmission (such as radio waves) as well as

[5]Following established Iñupiaq notation (MacLean 1993, Kaplan 1982), the dual suffix is *÷kun* as opposed to *-kun* for the singular. The /÷/ symbol is used to denote that a suffix deletes stem-final /q/ but not /k, n, Q/. In MacLean (1993), Q is used as a shorthand notion for any /q/ in a /-əq#/ sequence, as opposed to /-Vq#/ for any other vowel preceding q at the end of word or stem. This is because /ə/ will often delete from stems when suffixation occurs, while other vowels will not. Thus the use of Q has nothing to do with the consonant quality itself, but rather as a cue to learners when to delete the vowel without explaining the /ə/–/i/ distinction. See Appendix B for more information on the notation system.

indirect causes. It is clear that whenever an instrument/means is combined with motion and/or a path, the perlative is used rather than the instrumental. Using this analysis, example (19g) uses perlative case to mark 'telephone' rather than instrumental because the phone is both means and path. In contrast, direct, non-motion-related instruments would be limited to the instrumental cases. Data found in Nagai (2006:49) also supports the idea that the perlative case marks *path* and *means* while instrumental marks *instrument.*

3.1.2.8 Similative

The similative case (*similaris*) has a straightforward function: to mark similarity on one or more nominals. This is illustrated in examples (21a) and (21b).

(21) a. Uqaġlakput Iñupia**tun**.
uqaq-lak-put inupiaq-**tun**
talk-SHOULD-1P.INDIC Iñupiaq-SIM.SG
'We (pl.) should speak Iñupiaq (lit. like (an) Iñupiaq (person)).'

b. Aŋun iglaqtuq aġna**tun**.
aŋun-Ø iɣlaq-tuq aʁnaq-**tun**
man-ABS laugh-3S.INDIC woman-SIM.SG
'The man laughs like a woman.'

In terms of form, the singular and dual are the same and the plural is different: *-tun* (sg. and du.), *-titun* (pl.). However, the similative dual is suffixed to the absolutive dual, while the similative singular is suffixed to the absolutive singular, yielding different surface forms for the similative singular and dual. Furthermore, the similative case suffix causes a preceding consonant to delete; see Table 3.1. The formation of the similative is illustrated in (22).

(22) a. aġna**tun**
aʁnaq-**tun**
woman-SIM.SG
'like (a) woman'

b. aġnak**tun**
aʁnaq-k-**tun**
woman-DU-**SIM.DU**
'like two women'

c. aġna**titun**
aʁnaq-**titun**
woman-**SIM.PL**
'like women (pl.)'

3.1.2.9 Vocative

The vocative case is rarely mentioned in Eskimo-Aleut linguistics, but is nevertheless present in Iñupiaq. It is used for addressees, including the subject of an imperative clause. Vocative is indicated on a noun in two ways: first, lengthening the vowel in the final syllable of names, and second, noticeable rise in pitch. Compare examples (23a) and (23b):

(23) a. Piquk tusaaruq.
piquk-Ø tusaː-ʐuq
Piquk-ABS see-3S.INDIC
'Piquk sees.'

b. Piquk, niġilugu qaluk.
piquːk niʁi-luɣu qaluk-Ø
Piquk.VOC eat-2S.IMPER fish-ABS
'Piquk, eat the fish.'

Neither the syllable-final lengthening nor the pitch rise is indicated in the orthography; however, the length and intonation pattern are quite salient and learners are corrected by fluent speakers when they fail to do produce lengthening and/or pitch raising. In my data, vocative is only attested in for singular nouns that are personal names, but according to Kaplan (1979:148), any noun can be lengthened to create a vocative as shown in example (24).

(24) a. iġñiq / iġñiiq!
iʁniq-Ø / iʁni:q
son-ABS.SG / son.VOC.SG
'son / son!' [source: Kaplan (1979:148)]

b. panik / paniik!
panik-Ø / pani:k
daughter-ABS.SG / daughter.VOC.SG
'daughter / daughter!' [source: Kaplan (1979:148)]

c. kayuqtuq / kayuqtuuq!
kajuqtuq-Ø / kajuqtu:q
red.fox-ABS.SG / red.fox.VOC.SG
'red fox / red fox!' [source: Kaplan (1979:148)]

The application of vocative case to nominals other than personal names likely extends to the Malimiut Coastal dialect as well. However, it should be noted that the vocative plays only a small role in the case system.

3.1.3 Possession

Possession is marked via nominal suffixes. Iñupiaq marks the number of both the possessor NP and the possessed NP even if the possessor is not overt in the sentence. Possessive suffixes mark the number and person of the possessor as well as the possessed, which is shown in examples (25a) and 25b). The possessor NP cannot appear without the possessum NP, but the possessum NP can appear without its possessor NP.

(25) a. Iglukpuk aŋiruq.
iɣlu-kpuk aŋi-ʐuq
house-1D.3S.POSS be.big-3S.INDIC
'Our (du.) house (sg.) is big.'

b. Igluvuk aŋirut.
iɣlu-vuk aŋi-ʐut
house-1D.3P.POSS be.big-3P.INDIC
'Our (du.) houses (pl.) are big.'

c. Qaullu**m** qipmiñ**i** aŋiruq.
qaulluq-**m** qipmiq-**ni** aŋi-ʐuq
p.n.-**ERG.SG** dog-**3S.3S.POSS.ABS** be.big-3S.INDIC
'Qaulluq's dog is big.'

d. Iġñivaluktuq aakauraġ**a** uvlaakun.
iʁni-valuk-tuq a:kauʐaq-**ga** uvla:kun
give.birth-probably-3S.INDIC sister-**1S.POSS.ABS** tomorrow
'My sister will probably give birth tomorrow.' [source: 022908]

e. Aakauraġ**a** nakuaġiruŋa.
a:kauʐaq-**ga** nakuaʁi-ʐuŋa
sister-**1S.POSS.ABS** love-1.INDIC
'I love my sister.'

f. aakaura**ma** aksraktuaq tauqsiqsuq.
a:kauʐaq-**ma** akʂaktuaq tauqsiq-tuq
sister-**1S.POSS.ERG** car buy-3S.INDIC
'My sister bought a car.' [source: 011808]

The third person non-reflexive possessive suffixes are used when the possessor is not coreferential with the subject of the sentence. Compare examples (26a) and (26b).

(26) a. Miñułiġaa iglu**ni**.
minułiq-ɣa: iɣlu-**ni**
paint-3S.INDIC house-**3S.3S.REFL.POSS**
'He$_i$ is painting his$_i$ house.'

b. Miñułiġaa iglu**ŋa**.
minułiq-ɣa: iɣlu-**ŋa**
paint-3S.INDIC house-**3S.3S.POSS**
'He$_i$ is painting his$_j$ house.'

3.2 Derivational morphology

While not as numerous as derivational verbal suffixes (see Section 4.2), Iñupiaq does have productive derivational nominal morphology. The suffix *-ti*, for example, may be attached

to verbs to create an agent noun. When *-ti* is added to the verb stem *aŋuniaq-* 'to hunt', for example, the result is the noun *aŋuniaqti* 'hunter'. The resulting *-ti* form is unambiguously nominal as it takes nominal number suffixes such as *-t* 'plural', as shown in example (27):

(27) Aŋuniaq**tit** siñiktut.
aŋuniaq-**tə**-t sinik-tut
hunt-**NMLZ**-PL sleep-3P.INDIC
'The hunters are sleeping.'

(28) Qaliŋaum quppiġaaq atauksritchaa aŋuniaq**tim**un.
qaliŋak-m quppiʁa:q-Ø ataukʂit-ta: aŋuniaq-**tə**-mun
Qaliŋak-ERG.SG coat-ABS.SG lend-INDIC.3S.3S hunt-**NMLZ**-ALL.SG
'Qaliŋak lent (a) coat to (the) hunter.'

This suffix is extremely productive. Other examples include *atuqti* 'singer' from *atuq* 'to sing' and *aqpaqsruqti* 'runner' from *aqpaqsruq* 'to run'.

Another derivational nominal suffix is *-un*,[6] which derives an instrumental noun from a verb (either transitive or intransitive). This suffix applied to the verb stem *killaiyaq-* 'to sew' yields *killaiyaun* 'sewing machine'. Like *-ti*, it is a very productive suffix; additional examples are found in (29).

(29) a. taġġaqtu**un**
taʁʁaqtuq-**utə**
reflect-**NMLZ**
'mirror'

b. kigutigiksa**un**
kiɣutiɣiksaq-**utə**
brush.teeth-**NMLZ**
'toothbrush'

[6]Although it has the surface form *-un*, its underlying form is *-uti* /-utə/, just as the stem of *aŋun* 'man' is *aŋuti* /aŋutə/; see §2.2.3, page 27.

3.2.1 Other derivational morphology

Iñupiaq has derivational nominal morphology other than the case and number suffixes. Most can be analyzed as derivational morphemes indicating quality or quantity (other than grammatical number). Diminutive and augmentative are the two most common quality-type derivational suffixes that can attach to noun stems. The first type of these derivational suffixes is the diminutive, *-uraq* 'little N', such as in the pair *aġnaq* /aʁnaq/ 'woman' > *aġnauraq* /aʁnaq-uraq/ 'girl (lit. little woman)'. Other derivational suffixes denoting quality include *-aluaq* 'former' (Seiler 2005:243) and *-ġruaq* 'old; useless' (Seiler 2005:245).

The morpheme *-qpak* 'big' illustrates a common phenomenon in Iñupiaq: a suffix can have both inflectional and derivational uses. In the case of *-qpak* 'big', a frequently occurring suffix, only one of its two functions is inflectional. The first is simply augmentative, such that *N-qpak* means 'big N'. This is found in words such as *savikpak* 'big knife' and *kuvraqpak* 'big (fishing) net'. Its other use is where *N-qpak* does not mean 'big N' but instead denotes another lexical item (i.e., it is a word formation process and thus derivation). When *-qpak* is added to *tiŋmiaq* 'goose', for example, the resulting word *tiŋmiaqpak* means 'eagle', not 'big goose'. In most cases the semantic link between the two nouns is transparent; one can imagine that an eagle is simply a larger member of the same general class, birds. This is also the case with *tuttu* 'caribou (sg.)', where adding *-qpak* creates *tuttuqpak* 'horse', not 'big caribou'. In many cases, the resulting noun can be used in both senses; depending on context, *umiaqpak* may mean either 'big boat' (*umiaq*; skin boat) or 'ship' (in the sense of a large masted sailing vessel or cargo ship). Therefore the fact that a suffix may appear in a clause with inflectional function does not preclude the possibility that it can have derivational function elsewhere (and vice versa). This is another reason for adopting a continuum approach to inflection and derivation.

Derivational suffixes can also indicate quantity separately from the number marking at

the end of nouns. Example (30) illustrates this type of derivational nominal morphology.

(30) a. iḷisautriġ**ayaat**
ilisautẓi-**ʁaja:t**
teacher-**MANY**
'many teachers'

b. niviaqsiġ**apayaaq**
niviaqsiʁaq-**paja:q**
young.unmarried.woman-**every**
'every young woman of marriageable age'

See Section 6.2 for more on affix scope and ordering.

3.3 Maximal structure of nouns

As a general rule in Iñupiaq, only one lexical stem is permitted per word, to the extent that no compounding is permitted. This means that the maximal Iñupiaq noun can have one stem at most. In addition, it may have one or more derivational suffixes (postbase) and inflectional suffixes. If number and/or case is marked on the noun, it must be the final suffix in linear order, as shown below (see also §6.2):

stem-(deriv)*-(infl)*-(number.case)

In theory, a noun can have an unlimited number of derivational and inflectional suffixes; however, in practice, 0–2 inflectional suffixes is the most common, as in example (31). A typical noun will only have multiple derivational suffixes if it has changed lexical category more than once (e.g. N > V > N) or if there is a combination of derivational suffixes that change lexical category and those that do not.

(31) a. aksraktuaqɬuk
akṣaktuaq-qɬuk-Ø
car-old-ABS.SG
'(an) old car'

b. aksraktuaqłupiaq
akṣaktuaq-qłuk-piaq-Ø
car-old-really-ABS.SG
'(a) really old car'

Chapter 4

Verbal morphology

This chapter describes the inflectional and derivational morphology of Malimiut Iñupiaq verbs. Note that the criteria used to distinguish inflection and derivation are the same as those discussed in Chapter 3 for nominal morphology. Some morphological categories that are traditionally classed as derivational suffixes in Eskimo-Aleut verb morphology are treated as inflectional here, including tense and aspect (see Section 4.1.1).

Most Eskimo-Aleut work assumes the only verbal inflectional suffixes are the portmanteau person/number/mood suffixes that must appear at the end of verbs. Fortescue (2002:258) says "The distinction between inflectional and derivational suffixes is fairly easy to make for [Eskimo-Aleut] languages: inflections are obligatory and form paradigms of portmanteau elements standing at the end of words, whereas derivational suffixes are not obligatory and do not form closed paradigms." Thus in a traditional Eskimo-Aleut approach, the verb root may be followed by any number of derivational suffixes (or none at all) and then ends with one *and only one* inflectional suffix. This approach is convenient because it allows for a very simple verb template: V-(deriv)*-infl-(enclitic). However, I find this approach inaccurate, largely because it forces one to analyze the optional tense, aspect, and modality suffixes as derivational suffixes.

Iñupiaq is generally agglutinative, in that words, especially verbs, are composed of a root plus multiple suffixes. Most of these suffixes have only one meaning and fusion is rare (i.e., portmanteau morphemes are uncommon). The major exception to this agglutinative behavior are the portmanteau person/number/mood suffixes that are obligatory on every Iñupiaq

verb. Iñupiaq—and the Eskimo-Aleut family as a whole—is also considered polysynthetic, as there is a high ratio of morphemes per (syntactic) word. Indeed, Eskimo-Aleut is often cited as the canonical example of a polysynthetic language. Furthermore, Iñupiaq has an unusually high number of bound morphemes.

Finally, it is worth noting that there is no verbal compounding within the language (i.e., there can be only one verbal root per verb). Indeed, compounding is very rare in Iñupiaq as a whole; the only known instance where multiple roots are permitted in one syntactic word is with certain numerals composed of two roots (see Section 5.1.3).

4.1 Inflectional morphology

Iñupiaq inflectional verbal morphology is extensive. In addition to hundreds of portmanteau suffixes conflating person, number, and mood, there are also inflectional suffixes with other inflectional functions, such as tense and aspect (both optional), modality, and various adverbial functions.

4.1.1 Tense and aspect

Most published works on Iñupiaq refer to 'tense' (MacLean 1993, Nagai 2006) or 'tense/aspect' (Webster 1968, Nagai 2006). The prevailing theory on Inuit languages is that they have have a future vs. non-future tense system such that future tense is explicitly marked within verbs but past and present are not (Trondhjem 2009). Data from Malimiut Coastal dialect supports the theory that the Inuit languages/dialects are future/non-future languages. There is also a wide variety of suffixes for optionally marking aspect.

Tense in Iñupiaq, which is optional, can be marked with verbal suffixes or with adverbs such as *uvlupak* 'today'. This category is considered to be tense because it situates the activity or state of the verb with respect to time of utterance. While tense marking is optional, when

it is marked using a suffix rather than an adverb, the only choice is future tense. There is no method for explicitly marking past tense on a verb using a suffix, though adverbs such as *ikpaksraq* 'yesterday' can be used to mark time. Unmarked can imply past, present, or future. Present tense interpretation is arguably the most common when verbs are unmarked for tense. Example (1a) could be interpreted as past, present, or future depending on context, but in contrast, (1c) and (1d) can only have a future interpretation. Example (1b) is interpreted as future because of the adverb *uvlaakun* 'tomorrow', but without it, tense interpretation would rely entirely on context. Finally, note that when tense suffixes are used, they are in addition to the mandatory person/number/mood suffix at the end of every verb.

(1) a. Uqaqsiitigun uqaqtuguk.
uqaqsi:ti-ɣun uqaq-tuɣuk
telephone-PERL.SG talk-1D.INDIC
'We (two) talk on the phone.' [source: 011408]

b. Iġñivaluktuq aakauraġa **uvlaakun**.
iʁni-valuk-tuq a:kauẓaq-ɣa **uvla:kun**
give.birth-probably-3S.INDIC sister-1S.POSS.ABS **tomorrow**
'My sister will probably give birth tomorrow.' [source: 022908]

c. Niġiqpaŋmun niqɬiuġ**ñiaq**tugut.
niʁiqpak-mun niqɬiuq-**niaq**-tuɣut
feast-ALL.SG prepare.a.meal-**FUT**-1P.INDIC
'We will prepare a meal for the feast.'

d. Uqaqsiitigun uqa**ġisi**ruguk.
uqaqsi:ti-ɣun uqaq-**kisi**-tuɣuk
telephone-PERL.SG talk-**FUT**-1D.INDIC
'We (two) will talk on the phone.'

In Iñupiaq and other Inuit languages/dialects, it is not clear what motivates the use of unmarked forms vs. explicitly marked tense.

Aspect is also optional in Iñupiaq. It can be marked by a suffix that appears somewhere after the verb root and before the obligatory person/number/mood suffix (see §6.2 for more

on affix ordering). Alternatively, aspect can be marked *within* the person/number/mood suffix. The first type is shown in (2a), where the suffix *-anik* 'already; completive' marks action that is completed and is thus a perfective. The second type is illustrated by (2b). Sometimes aspect on a mood suffix can be separated out from the mood suffix, as in (2c), where perfective *-v* appears before the coordinative mood suffix *-luni.* However, sometimes aspect cannot be isolated from the mood suffix, as in (2d), where the coordinative mood suffix *-lugu* [-luɣu] appears in its realis form *-ɬugu* [-ɬuɣu]: the voiceless onset in this mood indicates perfective, while voiced onsets indicate imperfective.

(2) a. Iɬuaqsa**anik**pauŋ?
iɬuaqsaq-**anik**-pauŋ
fix-**already**-3S.3S.INTERR
'Did he/she already fix it?'

b. Niġiqqaaq**huni** siñiksaqtuq.
niʁi-qqa:q-**huni** sinik-saq-tuq
eat-first-**PERF.COOR** sleep-try-3S.INDIC
'After first eating, she went to sleep.' [source: 072507]

c. Kalium uqautivatin Kivaliñiqniaqnivḷuni?
kalik-um uqauti-vatin kivaliniq-niaq-ni-**v**-luni
p.n.-ERG.SG tell-3S.2S.INTERR Kivalina-FUT-COMP-**IMPF**-COOR
'Did Kalik tell you (that) she's going to Kivalina?' [source: 072607]

d. Kaliim paaqɬugu Aqquġaq qaitkaa
kalik-m pa:q-ɬugu aqquʁaq-Ø qaitka:
p.n.-ERG meet-3S.3S.**PERF**.COOR p.n.–ABS give-3S.3S.INDIC
puukataurani.
pu:katauẓaq-ni
bag-3S.REFL.POSS.ABS.SG
'Kalik$_i$ met Aqquġaq$_j$ and gave her$_j$ her$_i$ bag.' [source: 072607]

See also Fortescue (1983:14) for more on aspect in Inuit and MacLean (1995:112) for more on imperfective vs. perfective in Iñupiaq.

MacLean (1995:110–112) recognizes several aspectual categories for the North Slope dialect that also apply for the Malimiut Coastal dialect. The perfective/imperfective distinction is what has often been termed 'past' in some Iñupiaq publications. There are other aspectual suffixes as well, including but not limited to the following:

- frequentative: *-ataq* 'repeatedly'
- habitual: *-suu* 'always, habitually'
- inchoative: *-ɬhiñaaq* 'about to do'
- intentional: *-saġuma* 'intend to'

Finally, Trondhjem (2009:171) argues that for Kalaallisut, choice of mood in a sentence with two or more clauses can be considered tense marking in a sense. This is because choice of mood in the dependent clause(s) can indicate whether the action of the clauses is simultaneous or sequential. Iñupiaq dependent/independent clause marking works the same way as in Kalaallisut, as demonstrated by example (2d), where the use of perfective coordinative in the dependent clause indicates that the action in the dependent clause was complete before the action of the independent clause. However, I argue that this is aspect on a clause-level, not tense, because it still refers to the internal time of the actions in both clauses and is not marked with reference to actual time as we would expect for tense.

4.1.2 Mood

The moods of Iñupiaq are indicative, imperative affirmative, imperative negative, participial, interrogative, participial, coordinative, and conditional. The indicative, negative and affirmative imperatives, participial, and interrogative moods are independent moods, meaning that they can appear in independent clauses. Coordinative and conditional, however,

are dependent moods; as such, clauses created with these moods necessarily pair with an independent clause. This is demonstrated in example (3).

(3) a. Kaliim paaq**ɬugu** Aqquġaq qaitkaa
kalik-m pa:q-**ɬugu** aqquʁaq-Ø qaitka:
p.n.-ERG meet-**3S.3S.PERF.COOR** p.n.–ABS give-3S.3S.INDIC
puukataurani.
pu:katauẓaq-ni
bag-3S.REFL.POSS.ABS.SG
'Kalik$_i$ met Aqquġaq$_j$ and gave her$_j$ her$_i$ bag.' [source: 072607]

b. Aġnauram [aapaŋa tuquruaq] uqautigaaŋa
aʁnauẓaq-m [a:pa-ŋa tuqu-ẓuaq] uqauti-ɣa:ŋa
girl-ERG [father-3S.POSS die-3S.PTCP] tell-3S.1S.INDIC
alianniuġnivḷ**uni**.
alianniuq-ni-v-**luni**
be.sad-COMP-IMPF-**COOR**
'Having been sad, the girl told me (that) her father had died.' [source: 072707]

Each of these mood categories has a set of intransitive and transitive suffixes; see Table 4.1 for the intransitive mood paradigms and Tables 4.2–4.7 for the transitive mood paradigms. In addition to typical third person suffixes, the dependent moods also have third person reflexive suffixes (often called 'fourth person' in Eskimo-Aleut literature). The third person reflexive endings are used in dependent clauses, where with the exception of coordinative mood, it is obligatory to mark whether or not the subject of the dependent clause is identical to the subject of the independent clause (i.e., switch reference, if applicable, must be marked in dependent clauses). See Section 8.2 for an explanation of how moods are used for combining clauses.

Note that while it is possible in some moods to separate out the transitive/intransitive marking from the person/number/mood marking, I have not done so in the paradigms and examples provided here. For example, in the third person intransitive indicative suffix *-tuq*, it is possible to identify *-tu* as the intransitive indicative suffix and *-q* as the third person

suffix. However, I treat them as portmanteau transitivity/person/number/mood suffixes for two reasons.[1] First, in practice these are never separated from one another—no suffix can intervene between its parts. Second, while these suffixes can often be broken down into smaller pieces, it is not the case that the forms are constant between moods. For example, while *-ŋa* can be isolated as the first person subject on the basis on the intransitive indicative and imperative suffixes, there is no *-ŋa* in the intransitive interrogative (instead, first person intransitive interrogative is *-pik*). For these reasons, I gloss the final inflectional suffixes as single units throughout the dissertation unless a more fine-tuned analysis is required.

4.1.2.1 Indicative

The indicative mood is used for declarative statements, such as in example (4).

(4) a. Aŋuniaqtit siñik**tut**.
aŋuniaq-tə-t sinik-**tut**
hunt-NMLZ-PL sleep-**3P.INDIC**
'The hunters are sleeping.'

b. Aŋugaurağlu ağnaurağlu niksiksuq**tuq**.
aŋuɣauzʟaq=lu aʁnauzʟaq=lu niksiksuq-**tuq**
boy=AND girl=AND fish.with.hook-**3D.INDIC**
'The boy and girl are fishing with hooks.' [source: R, summer 2007]

[1]Treating the obligatory final inflectional suffixes as a single suffix or composite 'ending' is common in the Eskimo-Aleut subfield as a matter of convenience, though scholars are certainly aware that the suffixes can often be parsed into smaller pieces. Speaking of Central Alaskan Yup'ik, for example, Mithun (1999:408) notes that "The inflectional ending on verbs contain a mood marker followed by pronominal suffixes referring to the core arguments of the clause."

independent				
mood	person	singular	dual	plural
indicative	1	-tuŋa	-tuguk	-tugut
	2	-tutin	-tusik	-tusi
	3	-tuq	-tuk	-tut
interrogative	1	-pik	-pich	-pa
	2	-piñuk	-pisik	-pak
	3	-pisa	-pisi	-pat
imper. (AFFIRM.)	1	-laŋa	-in	-li
	2	-luk	-(t)itik	-lik
	3	-ta	-(t)itchi	-lich
imper. (NEG)	1	-naŋa	-nak	-nani
	2	-nanuk	-nasik	-natik
	3	-nata	-nasi	-natiŋ
dependent				
mood	person	singular	dual	plural
conditional	1	-kama	-kamnuk	-kapta
	2	-kavich	-kapsik	-kapsi
	3 REFL	-kami	-kamik	-kamiŋ
	3 NON-REFL	-pman	-pmaknik	-pmata
coordinative	1	-luŋa	-lunuk	-luta
	2	-lutin	-lusik	-lusi
	3	-luni	-lutik	-lutiŋ

Table 4.1 : Intransitive paradigms

OBJ →	first person			second person			third person		
SUBJ ↓	sing.	dual	plural	sing.	dual	plural	sing.	dual	plural
1S	—	—	—	-gikpiñ	-giptik	-gipsi	-giga	-gikka	-gitka
1D	—	—	—	-giptigiñ	-giptik	-gipsi	-gikpuk	-givuk	-givut
1P	—	—	—	-giptigiñ	-giptik	-gipsi	-gikput	-givut	-givut
2S	-gikma	-giptiguk	-giptigut	—	—	—	-gin	-gikkiñ	-gitin
2D	-gipsikŋa	-giptiguk	-giptigut	—	—	—	-giktik	-gitik	-gitik
2P	-gipsitŋa	-giptiguk	-giptigut	—	—	—	-giksi	-gisi	-gisi
3S	-gaaŋa	-gaatiguk	-gaatigut	-gaatin	-gaatik	-gaasi	-gaa	-gik	-gai
3D	-gaakŋa	-gaatiguk	-gaatigut	-gaatin	-gaatik	-gaasi	-gaak	-giŋik	-gaich
3P	-gaatŋa	-gaatiguk	-gaatigut	-gaatin	-gaatik	-gaasi	-gaat	-gaich	-gaich

Table 4.2 : Transitive indicative paradigm (independent mood)

OBJ →	first person			second person			third person		
SUBJ ↓	sing.	dual	plural	sing.	dual	plural	sing.	dual	plural
1S	—	—	—	-pigiñ	-pisik	-pisi	-pigu	-pigik	-pigich
1D	—	—	—	-pisigiñ	-pisik	-pisi	-pisiguk	-pisigik	-pisigik
1P	—	—	—	-pisigiñ	-pisik	-pisi	-pisigu	-pisigik	-pisigik
2S	-piŋa	-pisiguk	-pisigut	—	—	—	-piuŋ	-pisigik	-pisigich
2D	-pisitŋa	-pisiguk	-pisigut	—	—	—	-pitku	-pitkik	-pisigik
2P	-pisitŋa	-pisiguk	-pisigut	—	—	—	-pisiuŋ	-pisigik	-pisigik
3S	-paŋa	-patiguk	-patigut	-patin	-patik	-pasi	-pauŋ	-pagik	-pagich
3D	-patŋa	-patiguk	-patigut	-patin	-patik	-pasi	-patku	-patkik	-patigik
3P	-patŋa	-patiguk	-patigut	-patin	-patik	-pasi	-patruŋ	-patigik	-patigik

Table 4.3 : Transitive interrogative paradigm (independent mood)

OBJ →	first person			second person			third person		
SUBJ ↓	sing.	dual	plural	sing.	dual	plural	sing.	dual	plural
1S	—	—	—	-lakpiñ	-laptik	-lapsi	-lagu	-lagik	-lagich
1D	—	—	—	-laptigiñ	-laptik	-lapsi	-lakpuk	-laptik	-laptigich
1P	—	—	—	-laptigiñ	-laptik	-lapsi	-lakput	-lavut	-lavut
2S	-ŋŋa	-tiguk	-tigut	—	—	—	-uŋ	-(t)kik	-(k)kich
2D	-sikŋa	-tiguk	-tigut	—	—	—	-tku	-sigik	-sigich
2P	-sitŋa	-tiguk	-tigut	—	—	—	-siuŋ	-sigik	-sigich
3S	-liŋa	-lisiguk	-lisigut	-lisin	-lisik	-lisi	-liuŋ	-ligik	-ligich
3D	-likŋa	-lisiguk	-lisigut	-lisin	-lisik	-lisi	-litku	-lisigik	-lisigik
3P	-litŋa	-lisiguk	-lisigut	-lisin	-lisik	-lisi	-litruŋ	-lisigik	-lisigich

Table 4.4 : Transitive imperative affirmative paradigm (independent mood)

OBJ →	first person			second person			third person		
SUBJ ↓	sing.	dual	plural	sing.	dual	plural	sing.	dual	plural
1S	—	—	—	-naŋa	—	—	-naŋa	—	—
1D	—	—	—	-natiguk	—	—	-natiguk	—	—
1P	—	—	—	-natigut	—	—	-natigut	—	—
2S	—	—	—	—	—	—	-nagu		-nagich
2D	—	—	—	—	—	—	-nagu	—	—
2P	-nasitŋa		-nasigut	—	—	—	-nasiuŋ	—	-nasigik
3S	—	—	—	—	—	—	-nagu	—	—
3D	—	—	—	—	—	—	-nagik	—	—
3P	—	—	—	—	—	—	-nagu	—	—

Table 4.5 : Transitive imperative negative paradigm (independent mood)

OBJ →	first person			second person			third person		
SUBJ ↓	sing.	dual	plural	sing.	dual	plural	sing.	dual	plural
1S	—	—	—	-apkiñ	-aptik	-apsi	-apku	-apkik	-apkich
1D	—	—	—	-aptigiñ	-aptik	-apsi	-aptigu	-aptigik	-aptigik
1P	—	—	—	-aptigiñ	-aptik	-apsi	-aptigu	-aptigik	-aptigik
2S	-apŋa	-aptiguk	-aptigut	–	—	—	-apku	-apkik	-apkich
2D	-apsikŋa	-aptiguk	-aptigut	—	—	—	-aptigu	-aptigik	-aptigik
2P	-apsitŋa	-aptiguk	-aptigut	–	—	—	-apsiuŋ	-apsigik	-apsigik
3S.REFL	-amiŋa	-amisiguk	-amisigut	-amisin	-amisik	-amisi	-amiuŋ	-amigik	-amigich
3D.REFL	-amisiŋa	-amisiguk	-amisigut	-amisin	-amisik	-amisi	-amitku	-amitkik	-amitkik
3P.REFL	-amitŋa	-amisiguk	-amisigut	-amisin	-amisik	-amisi	-amitruŋ	-amisigik	-amisigiŋ
3S.NONREFL	-maŋa	-matiguk	-matigut	-matin	-matik	-masi	-magu	-magik	-magich
3D.NONREFL	-matŋa	-matiguk	-matigut	-matin	-matik	-masi	-matku	-matkik	-matigik
3P.NONREFL	-matŋa	-matiguk	-matigut	-matin	-matik	-masi	-matruŋ	-matigik	-matigik

Table 4.6 : Transitive conditional paradigm (dependent mood)

OBJ →	first person			second person			third person		
SUBJ ↓	sing.	dual	plural	sing.	dual	plural	sing.	dual	plural
1S	—	—	—	-lugu	-lugu	-lugu	-lugu	-lugu	-lugu
1D	—	—	—	-lugu	-lugu	-lugu	-lugu	-lugu	-lugu
1P	—	—	—	-lugu	-lugu	-lugu	-lugu	-lugu	-lugu
2S	-lugu	-lugu	-lugu	—	—	—	-lugu	-lugu	-lugu
2D	-lugu	-lugu	-lugu	—	—	—	-lugu	-lugu	-lugu
2P	-lugu	-lugu	-lugu	—	—	—	-lugu	-lugu	-lugu
3S	-lugu	-lugu	-lugu	-lugu	-lugu	-lugu	-lugu	-lugik	-lugich
3D	-lugu	-lugu	-lugu	-lugu	-lugu	-lugu	-lugu	-lugik	-lugich
3P	-lugu	-lugu	-lugu	-lugu	-lugu	-lugu	-lugu	-lugik	-lugich

Table 4.7 : Transitive coordinative paradigm (dependent mood)

4.1.2.2 Participial

Standard works in the subfield by include participles as a mood (cf. Nagai (2006:78–80), among others) rather than as a non-finite verb form. Previous analyses likely chose to analyze participals as a mood rather than as a verb form due to the peculiar behavior of Iñupiaq participles, which exhibit behaviors expected of both finite and non-finite verbs and thus do not fit cleanly into either category. Fortescue (1984:288) states that in the Eskimo-Aleut subfield, 'mood' is used more broadly than by other linguists "since it not only covers verb form paradigms performing various speech acts, but includes the important distinction between independent and dependent verb forms." By definition, participles are non-finite, but both transitive and intransitive participle forms in Iñupiaq are marked for person and number. However, the intransitive participial suffixes seem transparently based on the indicative, such that a participle would have mood marked twice. I include them here as moods due to their ability to stand as the sole finite verb in a clause.

person	singular	dual	plural
1	-tuaŋa	-tuaguk	-tuagut
2	-tuatin	-tuasik	-tuasi
3	-tuaq	-tuak	-tuat

Table 4.8 : Intransitive participle paradigm

Participles are formed by adding a suffix to the indicative inflectional suffixes. In Section 4.1.2, I discussed how it is possible to parse certain verb inflections (i.e., the obligatory final person/number/mood suffixes) into smaller pieces but that it is not general practice in Eskimo-Aleut linguistics to do so. For example, third person intransitive indicative suffix *-tuq* can be further parsed to *-tu* 'INTR.INDIC' and *-q* '3s'. However, formation of participles is one situation where parsing the verb inflections further is necessary, because the partici-

ple is formed by a suffix inserted after the transitivity suffix of the indicative mood. Table 4.8 demonstrates that for the intransitive participles, the suffix *-a* 'PTCP' is inserted after the transitivity/mood suffix but before the person/number suffix.

Formation of the transitive participle is less straightforward than for intransitive participles but still based on the indicative. The transitive participle suffix /-kka/ (or an allomorph) appears immediately following the verb stem but before the person/number suffixes, which are nearly identical to the person/number suffixes seen in the transitive indicative. Table 4.9 lists the suffixes for forming transitive participles from vowel-final verb stems. When the verb stem ends in /k/ or /q/, delete the first /k/ in the /-kka/ part of the suffix. When the verb stem ends in /t/, replace the /-kka/ part of the suffix with /-t/.

Participles are mainly used for creating relative clauses as described in Section 8.2.1. Some examples are as follows:

(5) a. Putu aŋutauruq [umiaqaqtuaq].
putu aŋutauʐuq [umiaq-qaq-tuaq]
p.n. young.man [boat-HAVE-3S.PTCP]
'Putu is a man [(who) owns a boat].' [source: 072607]

b. [Aŋutim amaġuq$_i$ qiñikkaŋa] taaqtaaŋuruq$_i$.
[aŋutə-m amaʁuq-Ø qiniq-kkaŋa] ta:qta:-ŋu-ʐuq
[man-ERG wolf-ABS see-3S.3S.PTCP] black-HAVE-3S.INDIC
'The wolf [(that) the man saw] is black.' [source: 072607]

c. [Akłaqtuaq] aŋun niqinik aitchuuruq utuqqanaamun.
[akłaq-tuaq] aŋun-Ø niqi-nik aittuu-ʐuq utuqqana:q-mun
[bear-3S.PTCP] man-ABS.SG meat-INSTR.PL give-3S.INDIC elder-ALL.SG
The man [who shot the bear] gave the meat to the elder. [source: 011608]

d. Qimmit [qiḷuktuat] kaaktut.
qimmiq-t [qiluk-tuat] ka:k-tut
dog-PL [bark-3P.PTCP] be.hungry-3P.INDIC
'The dogs [(that) are barking] are hungry.' [source: 071207]

OBJ →	first person			second person			third person		
SUBJ ↓	sing.	dual	plural	sing.	dual	plural	sing.	dual	plural
1S	—	—	—	-kkaqpiñ	-kkaptik	-kkapsi	-kkaġa	-kkaka	-kkatka
1D	—	—	—	-kkaptikkiñ	-kkaptigiñ	-kkaptigiñ	-kkaqpuk	-kkavuk	-kkavuk
1P	—	—	—	-kkaptigiñ	-kkaptigiñ	-kkaptigiñ	-kkaqput	-kkavut	-kkavut
2S	-kkaqma	-kkaptiguk	-kkaptigut	—	—	—	-kkan	-kkakiñ	-kkatin
2D	-kkaptikŋa	-kkaptiguk	-kkaptigut	—	—	—	-kkaqtik	-kkatik	-kkatik
2P	-kkasitŋa	-kkaptiguk	-kkaptigut	—	—	—	-kkaqsi	-kkasi	-kkasi
3S	-kkaŋani	-kkaŋatiguk	-kkaŋatigut	-kkaŋatin	-kkaŋatik	-kkaŋasi	-kkaŋa	-kkak	-kkaŋi
3D	-kkaŋakni	-kkaŋatiguk	-kkaŋatigut	-kkaŋatin	-kkaŋatik	-kkaŋasi	-kkaŋak	-kkaŋik	-kkaŋik
3P	-kkaŋatni	-kkaŋatiguk	-kkaŋatigut	-kkaŋatin	-kkaŋatik	-kkaŋasi	-kkaŋat	-kkaŋich	-kkaŋich

Table 4.9 : Transitive participle paradigm

4.1.2.3 Interrogative

The interrogative mood is only used for formation of yes-no questions and content questions, as illustrated in (6). See Section 8.8 for more details on question formation.

(6) a. Puuvratla**vich**?
pu:vʐa-tla-**vi:t**
swim-POT-**2S.INTERR**
'Can you (sg.) swim?'

b. Ugruuk niġi**vatigik** qaluich?
uɣʐu-:k niʁi-**vatiɣik** qalu-it?
bearded seal-DU eat-**3D.3P.INTERR** fish-PL
'Did the two bearded seals eat the fish (pl.)?'

c. Kiña atuq**pa**?
kina atuq-**pa**
who sing-**3S.INTERR**
'Who is singing?'

d. Su**visik**?
su-**visik**
what-**2D.INTERR**
'What are you two doing?'

Note that the potential suffix, such as in (6a), is not a verb mood in Iñupiaq in the traditional sense because it is non-finite and must appear together with one of the obligatory dependent mood suffixes.

4.1.2.4 Imperative

The imperative mood has separate affirmative and negative paradigms, as well as both intransitive and transitive paradigms (see Tables 4.1 and 4.5). The affirmative imperative is shown in example (7) with both transitive and intransitive verbs. The negative imperative is shown in example (7d).

(7) a. Naalaġ**iñ**!
na:laq-**in**
listen-**2S.IMPER**
'Listen!'

b. Niŋirru**ŋ** qayaq!
niŋit-**uŋ** qajaq-Ø
launch-**2S.3S.IMPER** kayak-ABS
'Launch [the] kayak!'

c. Amiq una tutquqtuġ**uŋ**.
amiq-Ø una tutquqtuq-**uŋ**
skin-ABS this.DEM.ADV put.away-**2S.3S.IMPER**
'Put this skin away.' [source: B, summer 2007]

d. Aksiŋ**nagu**!
aksik-**nayu**
touch-**2S.3S.IMPER.NEG**
'Don't touch it!'

4.1.2.5 Conditional

As the name implies, the conditional mood is used for conditionals, which much always be in dependent clauses. Example (8a) demonstrates the use of conditional mood for a conditional statement, while example (8b) shows that it is also used for hypothetical statements. See Section 8.4 for more information about conditional and hypothetical constructions.

(8) a. Kaak**kama** niġiŋaruŋa.
ka:k-**kama** niʁi-ŋa-ʐuŋa
hungry-**1S.COND.PERF** eat-PERF-1S.INDIC
'When I got hungry, I ate.'

b. Kaak**kumi** niġiñiaqtuŋa.
ka:k-**kumi** niʁi-niaq-tuŋa
hungry-**1S.COND.IMPF** eat-FUT-1S.INDIC
'If I get hungry, I will eat.'

The semantic difference between conditional and hypothetical in Iñupiaq lies in whether or not the action or state is realized or unrealized, and the mood suffix varies to reflect this. Realized action—i.e., perfective—has /a/ in the first syllable of the suffix, while unrealized action (imperfective) has /u/ in the first syllable. Thus perfective first person conditional mood is *-(k)ama*, while imperfective first person conditional mood is *-(k)uma*. As the aspect is easy to identify and carries a different function than mood itself, I treat the two forms of conditional here as two variants of one mood.

4.1.2.6 Coordinative

The coordinative mood has wide range of uses, including the formation of dependent clauses that function as modifiers of independent clauses. Examples (9a) and (9b) show two of its uses: temporal and manner modification, respectively.

(9) a. Agliqiłuŋa niġiruŋa.
aɣliqi-**łuŋa** niʁi-ʐuŋa
read-1S.COOR eat-1S.INDIC
'[While] reading, I eat.'

b. Atuqłuŋa aŋŋuaqtuŋa.
atuq-**łuŋa** aŋŋuaq-tuŋa
sing-1S.COOR Western.dance-1S.INDIC
'Singing, I dance.'

4.1.3 Modality

As Fortescue (1984) notes (for Kalaallisut), unlike mood, which is obligatorily marked on any verb, the expression of modality in Iñupiaq is optional. Following the typology of modality outlined in Palmer (2001:22), Iñupiaq has both types of propositional modality: epistemic and evidential, both of which can be expressed by inflectional suffixes or enclitics. This is illustrated with the suffixes *-tla* 'can' (potential) in example (10a) and *-niq* 'apparently' in

example (10b). As demonstrated by (10c), an enclitic can also be used to mark evidentiality. Note that expression of evidentiality in Iñupiaq is always optional; it does not constitute a 'full evidential' system such as described in Aikhenvald (2004).

(10) a. Puuvra**tla**vich?
pu:vʐa-**tla**-vi:t
swim-**POT**-2S.INTERR
'Can you (sg.) swim?'

b. Aullaqsruġniaqaqsi**ñiq**suk.
aullaqʂuq-niaq-aqsi-**niq**-tuk
go.berry.picking-FUT-INCH-**apparently**-3D.INDIC
'Apparently they (dual) began to go berry picking.'

c. Putum akłaq tuqqutchukkaa**guuq**.
putu-m akłaq-Ø tuqqut-suk-ka:=**gu:q**
p.n.-ERG.SG bear-ABS.SG kill-want-3S.3S.INDIC=**EVID**
'It is said that Putu wants to kill (the) bear.' [source: Seiler (2005:19)]

Iñupiaq also has ways of marking event modality, which includes deontic modality (Palmer 2001:22). This is illustrated with *-paluk* 'probably' and *-suk* 'want' in example (11).

(11) a. Tuuqpak qanniq**paluk**tuq Fairbanks-miñ.
tu:qpak-Ø qanniq-**paluk**-tuq Fairbanks-min
Tuuqpak-ABS order-**probably**-3S.INDIC Fairbanks-ABL
'Tuuqpak probably ordered something from Fairbanks.'

b. Aksraktuamik tauqsiq**suk**tuŋa.
akʂaktuaq-mik tauqsiq-**suk**-tuŋa
car-INSTR.SG buy-**want**-1S.INDIC
'I want to buy a car.' [source: 011808]

4.2 Derivational morphology

There are hundreds of suffixes that create verbs from other lexical categories in Iñupiaq. Some have no corresponding lexical verb (such as *-qaq* 'have/possess'), while others have

corresponding lexical verbs but are suppletive (such as *-tuq* 'eat/consume' vs. the verb *niġi* 'to eat'). Woodbury (2004:158–159) notes that in the Eskimo-Aleut family, these derivational suffixes have been historically stable and that in most cases they are not cognate with lexical verb stems. Two of the most commonly used derivational suffixes in Malimiut Iñupiaq are *-qaq* 'have/possess' and *-aq* 'utilize', shown in (12).

(12) a. Uluqaqtuq.
ulu-**qaq**-tuq
women's knife-**HAVE**-3S.INDIC
'She has an ulu (women's knife).'

b. Uluaqtuq.
ulu-**aq**-tuq
women's knife-**UTILIZE**-3S.INDIC
'She is using an ulu (women's knife).'

The difference between *-qaq* 'have' and *-aq* 'utilize' is very salient when comparing (13a) and (13b) where each is attached to the noun *aksraktuaq* 'car'. The suffix *-qaq* 'have' causes deletion of the final consonant in *aksraktuaq*, but *-aq* 'utilize' causes final consonant lenition.

(13) a. Aksraktuaqaqtuq.
akşaktuaq-**qaq**-tuq
car-**HAVE**-3S.INDIC
'She has a car.'

b. Aksraktauġaqtuq.
akşaktuaq-**aq**-tuq
car-**UTILIZE**-3S.INDIC
'She is using (driving) a car.'

In terms of function, there are two main types: derivational suffixes that change lexical category and those that do not, such as *-tuq* 'utilize' and *-piaq* 'really, much'. Furthermore, it is the derivational suffixes that assign argument structure.

Semantically speaking, the derivational suffixes fall into some broad categories such as the following:

- existence: *-u* 'be, exist', *-liq* 'become', *-it* 'not have/be', *-kit* 'be scarce, be not enough'
- possession: *-qaq* 'have', *-aq* 'utilize'
- consume, use, make: *-tuq* 'consume, use', *-liuq* 'make'
- movement: *-liaq* 'go to obtain'

The difficulty in sorting derivational suffixes by meaning becomes apparent when one sees the wide variety of meanings associated with one suffix, *-tuq*, as demonstrated in example (14). The uses of *-tuq* are quite broad, including consumption as well as use or making.

(14) a. Hamburgeq**tu**ġuuruŋa.
hamburgeq-**tuq**-su:-ʒuŋa
hamburger-eat-**always**-1S.INDIC
'I always eat hamburgers.' [source: 021208]

b. Natchiq**su**tluktuq
nacciq-**tuq**-tluk-tuq
hair.seal-**UTILIZE**-COMP-3S.INDIC
'He ate more seal meat (than the others).' [source: 021108]

c. Killaiyauti**tuq**tuŋa aiqpaŋnik.
killaijauti-**tuq**-tuŋa aiqpak-nik
sewing machine-**UTILIZE**-1S.INDIC mitten.DU-INSTR.DU
'I'm sewing a pair of mittens with a sewing machine.'

Because one suffix can have such a broad range of meanings, any classification of semantic types is at best only a general guideline.

4.3 Maximal structure of verbs

As a general rule in Iñupiaq, only one lexical root is permitted per word. This means that the maximal Iñupiaq verb can have one root at most. The root can be a verb root or, if paired with a derivational suffix, a member of another class. When the root is derived from another lexical category, a derivational suffix is mandatory and must be immediately to the right of the root. In theory, an Iñupiaq verb can have an unlimited number of derivational and inflectional suffixes. Minimally, however, at least one inflectional suffix indicating person/number/mood is required to create a well-formed verb. Thus the maximal verb template is as follows:

root-(deriv)*-(infl)*-person/number/mood=(enclitic)*

where 'root' can be any member of the set [V N ADV_{dem}]. See §6.2 for more details on the structure of nouns and verbs in relation to affix and clitic ordering. A root plus derivational suffix(es) can serve as input to further derivation and inflection. In Eskimo-Aleut linguistics, the root is typically called the *base*, and any derivational or inflectional suffix after the root (other than the obligatory final person/number/mood suffix) is called a *postbase*. A root + suffix combination can serve as the input to another suffix, in which case the unit is a stem, with the following template:

[[root-(deriv)*-(infl)*]$_{stem}$-(deriv)*-(infl)*]-person/number/mood=(enclitic)*

Chapter 5

Syntactic categories

There are six word classes in Malimiut Iñupiaq: noun, verb, adverb, pronoun, conjunctions, and interjections. As in other Eskimo-Aleut languages, the demonstratives in Iñupiaq are extremely complex; however, they do not constitute a single separate word class. Instead, all demonstratives in Iñupiaq are either adverbs or pronouns (see Section 5.3.1 and 5.4.3, respectively).

Conjunctions and interjections are indeclinable, and the other lexical categories are declinable. Nouns and pronouns take core and oblique cases, as do adverbs to a limited extent. Verbs alone are marked with aspect and mood; tense is optionally expressed, but when it is, it occurs only within a verb. Nouns and verbs can have identical roots but always appear differently on the surface due to the suffixes they can take, as demonstrated in (1).

(1) a. Kiliktuq.
kilik-tuq
warn-3S.INDIC
'He/she is warning (someone).'

b. kiliktuun
kilik-tu:n
warn-DER.AF
'warning (n.)'

c. Agaayuruguk.
aɣa:ju-ʐuɣuk
pray-1D.INDIC
'We (two) are praying.'

d. agaayułiq
aɣa:ju-łiq
pray-GER
'prayer (n.)'

There does appear to be some inherent lexical class categorization of roots. Some roots, such as *aŋun* 'man', appear to be inherently nominal, while some roots appears to be inherently verbal, such as *siñik* 'to sleep'. However, many roots can appear in any category, implying that they are either unmarked for lexical category or that there is zero derivation. I believe zero derivation is most likely, given that derivation is such a common process in the language. Zero derivation also allows for a zero morpheme responsible for assigning argument structure when verbs are derived from nouns; see Section 4.2. However, I argue that the lexical classes 'noun' and 'verb' are best defined by their function(s) and by the suffixes they can or cannot take (cf. Croft (1990) on inherent vs. derived syntactic categories).

Previous accounts of Iñupiaq (any dialect) and Eskimo-Aleut in general vary considerably in the number of posited lexical classes. Nagai (2006:35) argues that there are four lexical classes in Malimiut (Upper Kobuk) Iñupiaq: "nominals, adverbs, verbs and a small residual set of particles." Seiler (2005:18) argues that there are three word classes in Iñupiaq: expandable-inflective, inflective, and non-inflective. Within these three large groups, he further identifies several subtypes. For expandable-inflective, these are noun and verb roots (which he says have no clear-cut distinction), "positional base words", personal and indefinite pronouns, and demonstrative adverbs. The only members of his inflective class are the demonstrative pronouns, and the non-inflective class is comprised of interjections, conjunctions, and enclitics. Seiler's (2005) inclusion of enclitics as a lexical category is unusual and, as far as I am aware, not to be found in any other Eskimo-Aleut scholarship. For Uummarmiutun, which is closely related to Malimiut Iñupiaq, Lowe (1985:15) argues that there are no parts of speech whatsoever. Instead, he posits that there are only word-bases (with

no further subtypes), which "is not a word in itself but which can be used to form words." His approach is closely tied in with discourse in that the meaning, function, and structure of the word is emergent at the time of speech. For Kalaallisut (West Greenlandic), Fortescue (2007:816) argues that there are only three lexical classes: verbs, nominals, and uninflected particles.

My analysis is most similar to Nagai's (2006), though the number and identity of lexical classes differ. Here I define a lexical category per Anward (2001:726) as a group of lexical items which have a unique set of phonological, morphological, syntactic, and semantic features in common. Therefore, though both noun and verb stems may be inflectable a la Seiler (2005:18), I prefer to treat them as separate classes based on their differing behavior and functions.

5.1 Nouns

Nouns form one of the largest lexical classes in Iñupiaq, and it is an open class. They can be distinguished from verbs in several ways. First, nouns are marked for case and number as described in §5.1.1–5.1.2. While verbs agree with their argument(s) in number, they cannot take case as nouns can. Second, unlike verbs, nouns cannot take aspect or tense marking, as demonstrated in (2).

(2) a. Uvlaakun siḷalukniaqtuq.
uvla:kun silaluk-niaq-tuq
tomorrow rain-FUT-3S.INDIC
'It will rain tomorrow.'

b. *natchiq-niaq
nacciq-niaq
seal-FUT
intended for 'will seal (n.)'

Third, nouns cannot be negated. Compare example (3a), where the negation suffix *-(ŋ)it* attaches to a verb (and is followed by an intransitive verb suffix), and example (3b), which shows the ungrammaticality of negating nouns.

(3) a. Putu aquppiŋitchuq.
Putu aquppi-ŋit-tuq
p.n. be.sitting-NEG-3S.INDIC
'Putu is not sitting.'

b. *aġnaq-it
aʁnaq-it
woman-NEG
intended for 'not (a) woman'

c. Putu tupiq-ŋitchuq.
Putu tupiq-it-tuq
p.n. house-NEG-3S.INDIC
'Putu is without (a) house.' (i.e., Putu doesn't have a house.)

The negation suffix *-(ŋ)it* can attach to a noun, as in (3c) but when it does, it acts as a derivational suffix, creating a verb from the noun stem. In other words, it is not possible for a noun to take a negation suffix and still remain a noun.

Finally, nouns act as the arguments of verbs. This is demonstrated by the fact that as an argument of the verb in question, a noun must match the verb in number. As can be seen in (4b), ungrammaticality results when the nominal argument of a verb fails to match the verb in number. Furthermore, this number agreement exhibited on nouns applies to both subject and object arguments, as shown in (4c) and (4d).

(4) a. Amaġut magurut.
amaʁuq-t maɣu-ʐut
wolf-PL howl-3P.INDIC
'Wolves (pl.) are howling.'

b. *Amaġuk magurut.
amaʁuq-k maɣu-ɣut
wolf-DU howl-3P.INDIC
intended for 'Wolves (pl.) are howling.'

c. Aŋuniaqtim tiniikaq sikkaa.
aŋuniaqtə-m tini:kaq-Ø sik-ka:
hunter-ERG.SG moose-ABS.SG shoot-3S.3S.INDIC
'The hunter shot the moose (sg.).'

d. *Aŋuniaqtim tiniikat sikkaa.
aŋuniaqtə-m tini:kaq-t sik-ka:
hunter-ERG.SG moose-ABS.PL shoot-3S.3S.INDIC
intended for 'The hunter shot the moose (pl.).'

5.1.1 Number

Nouns are marked for number (singular, dual, or plural) and case (see Section 3.1.2). In general, the singular absolutive is unmarked, the dual absolutive suffix is *-k*, and the plural absolutive suffix is *-t*. However, there are a number of noun classes with differing dual and plural formation, particulary those that exhibit gemination of the noun stem. For example, the dual form of *qipmiq* 'dog' is *qipmik* 'two dogs', created by suffixing the dual *-k*, then deleting the first consonant in the resulting [qk] cluster to obey phonotactic rules. When a noun's singular form already ends in /k/, the dual form usually takes one of two forms. If the final vowel is /i/, /u/, or /a/ (i.e., any vowel except /ə/), typically that vowel is lengthened and the /k/ remains; examples of this lengthening type are *aqpik* 'salmonberry' with dual form *aqpiik* and *ugruk* 'bearded seal' with dual form *ugruuk*. If the final vowel is /ə/, however, lengthening does not take place. Instead, /ə/ changes to [a] and gemination usually takes place in the penultimate syllable. This is the case for *kamik* 'boot' (underlying /kamək/), which has the dual form *kammak*. See Section 3.1 for a description of dual and plural formation.

5.1.2 Case

Nouns can appear in a number of cases, as described in Section 3.1.2. In contrast, verbs cannot take case at all, even when noun incorporation occurs. Nouns are not the only lexical class which can take case marking, as pronouns and some adverbs can also take case. Lexical nouns and pronouns can appear in all nine cases, whereas adverbs are limited to five cases.

5.1.3 Numerals

Tables 5.1 and 5.2 show the basic cardinal and ordinal numbers, respectively. In typical Iñupiaq speech numerals are not widely used, perhaps due to extensive verb agreement; in addition, it is common to hear speakers use English numerals while speaking Iñupiaq (see example 5d below). The numerals display a combination of subtractive and additive: numerals such as *quliŋuġutaiłaq* '9' are subtractive (lit. 'lacking one-tenth [to 10]'), while others such as *akimiaq atausiq* '16' are additive (lit. '15 1'). Numerals appear to be the sole exception to the otherwise strong prohibition against multiple stems per word. For example, the numeral *akimiaq malġuk* 'seventeen' is an additive numeral composed of two other numeral stems. See also example (9c) below, which shows that even numerals composed of two roots take only one noun case, indicating that they are most likely compounded.

Numerals in Iñupiaq are a mixture of base-5, base-10, base-15, and base-20. Base-20 systems—and to a lesser extent, base-5 subsystems—are well documented in Eskimo-Aleut (Lipka 1994, Jacobson 1995, Chan 2009), but the Iñupiaq system is somewhat more complex.

- 1–6, 9–13 are base-10
- 7 and 8 are base-5
- 14–18 are base-15 (typologically rare)
- 19–100 are base-20

1	atausiq	11	qulit atausiq
2	malġuk	12	qulit malġuk
3	piŋasut	13	qulit piŋasut
4	sisamat	14	akimiaġutaiḷaq
5	tallimat	15	akimiaq
6	itchaksrat	16	akimiaq atausiq
7	tallimat malġuk	17	akimiaq malġuk
8	tallimat piŋasut	18	akimiaq piŋasut
9	quliŋuġutaiḷaq	19	iñuiñaġutaiḷaq
10	qulit	20	iñuiñaq
		21	iñuiñaq atausiq
30	iñuiñaq qulit	31	iñuiñaq qulit atausiq
40	malġukipiaq	41	malġukipiaq atausiq
50	malġukipiaq qulit	51	malġukipiaq qulit atausiq
60	piŋasukipiaq	61	piŋasukipiaq atausiq
70	piŋasukipiaq qulit	71	piŋasukipiaq qulit atausiq
80	sisamakipiaq	81	sisamakipiaq atausiq
90	sisamakipiaq qulit	91	sisamakipiaq qulit atausiq
100	qavluun *or* tallimakipiaq	101	qavluun atausiq *or* tallimakipiaq atausiq

Table 5.1 : Cardinal numbers

1	sivulliq
2	aippaak, alġiaq
3	piŋayauti
4	sisamaat
5	tallimaat
6	itchaksraat
7	*(unattested)*
8	*(unattested)*
9	quliŋuġutaiḷaat
10	quliŋuġutaat

Table 5.2 : Ordinal numbers

The numbers 14–18 are diachronically base-5, because *akimiaq* '15' comes from *aki-*, roughly 'other half' (Fortescue et al. 1994). However, in my fieldwork, this was not salient to speakers, so I argue that synchronically, they are base-15 numerals. Interestingly, numbers 30, 40, 50, 60, 70, 80, and 90 are base-20 but do not include the lexical word *iñuiñaq* 'twenty'. 80, for example, is the number *sisamat* '4' plus the suffix *-kipiaq*, yielding *sisamakipiaq* '80' (lit. 4 score). It is clear that in the numbers 40, 60, and 80, the suffix *-kipiaq* has the meaning 'twenty'.[1]

Numerals are a subclass of nouns rather than a word class in their own right (see also Lanz (2009b)). They take the same number and case suffixes as nouns. In example (5b), the number *quliŋuġutaiḷaq* 'nine' takes the plural suffix *-t* and stands in apposition to the other noun.

(5) a. tallimat niqiviñigit
tallimat niqiviniq-it
five piece.of.meat-ABS.PL
'five pieces of meat' [source: 070907]

b. Quliŋuġutaiḷat nasautit aquppiutami ittut.
quliŋuʁutailaq-t nasautə-t aquppiutaq-mi it-tut
ten-PL hat-PL chair-LOC be-3P.INDIC
'Ten hats are on the chair.'

c. Atausiq iñuk mayuŋuruq iglumi.
atausiq inuk majuq-u-ɣuq iɣlu-mi
one person climb/stand-be-3S.INDIC iglu-LOC.SG
'One man/person is standing on the house (on the roof).' [source: 080907]

[1]Viktoria Papp (pc.) suggests that perhaps *-kipiaq* is an obsolete form of 20, now replaced with *iñuiñaq*. This is neither corroborated nor disproven by etymological data found in Fortescue et al. (1994). It seems likely that *-kipiaq* contains the suffix *-piaq* 'real', but if so, the identity and underlying form of the *-ki(C)* suffix is unknown because *-piaq* deletes the final consonant of its host.

d. Aanaga 1990-mi tuqutuq.
a:na-ɣa 1990-mi tuqu-tuq
grandmother-1S.3.POSS 1990-LOC.SG die-3S.INDIC
'My grandmother died in 1990.'

Example (5d) would be pronounced *Aanaga nineteen ninety-mi tuqutuq.*

It is not simply the case that the numeral in (5b) has the plural suffix because it is a semantically plural concept. Citation forms of some numerals end with singular absolutive case regardless of plurality; for example, when counting in Iñupiaq, 'nine' is *quliŋuġutaiḷaq*, without the plural suffix *-t*. Note that this difference is only noticeable for those numerals not already ending with *t*; that is, numbers such as *quliŋuġutaiḷaq* 'nine', *akimiaq* 'fifteen', and *malġukipiaq* 'forty'. Numerals in constructions such as (5b) are in apposition to nouns but can appear alone as well.

Rather than posit a lexical category of adjectives consisting solely of numerals, I analyze the numeral in constructions such as (5b) as standing in apposition to nouns. Fortescue (1984:114–115) notes that apposition occurs in Eskimo-Aleut (particularly West Greenlandic), and examples such as those in (6) demonstrate that apposition is found with nouns other than numerals in Iñupiaq.

(6) a. Naŋmak iḷisautri atuqtuq.
naŋmak-Ø ilisautẓi-Ø atuq-tuq
pn-**ABS.SG** teacher-**ABS.SG** sing-3S.INDIC
'Naŋmak the teacher is singing.'

b. Qaliŋaum quppiġaaq atauksritchaa Nauya**mun** iḷisautri**mun**.
qaliŋak-m quppiʁa:q-Ø aukʂit-ta: naujaq-**mun** ilisautẓi-**mun**
Qaliŋak-ERG coat-ABS lend-INDIC.3S.3S Nauyaq-**ALL** teacher-**ALL**
'Qaliŋak lent a coat to Nauyaq (the) teacher.'

Further evidence that numerals behave like nouns is the fact that they can also be marked with case, as shown in (7).

(7) a. Itchaksra**nik** aksraktua**nik** tautuktuŋa.
iccakʂat-**nik** akʂaktuaq-**nik** tautuk-tuŋa
six-INSTR.PL car-INSTR.PL see-1S.INDIC
'I see six cars.'

b. Quliŋuġutaiḷa**nik** nukatchiaqaqtuŋa.
quliŋuʁutailaq-**nik** nukacciaq-qaq-tuŋa
nine-INSTR.PL younger.sibling-have-1S.INDIC
'I have nine younger siblings.' [source: Sun et al. (1979:173)]

A third piece of evidence that Iñupiaq numerals are nouns is the ability of numerals to act as heads of phrases. When they do, they trigger agreement on the verb like any other noun. For example, the grammatically singular numeral in (8) triggers singular agreement in the verb, despite the semantic plurality of 'fourteen'.

(8) Akimiaġutaiḷaq aggiqsuq.
akimiaʁutailaq aɣɣiq-tuq
fourteen come-1S.INDIC
'Fourteen [people] came.' [source: fieldwork data]

Finally, numerals participate in noun incorporation like other noun stems, as in examples (9a) and (9b). Additionally, numerals can serve as the instrumental-marked semantic 'arguments' of intransitive antipassive clauses, as in example (9c).

(9) a. Quliŋurut.
qulit-u-ʐut
ten-COP-3P.INDIC
'There are ten [of them].' [source: Sun et al. (1979:263)]

b. Atausriuruq.
atauʂiq-u-ʐuq
one-COP-1S.INDIC
'There is one.' [source: Sun et al. (1979:179)]

c. Ukiuniktuŋa akimiaq atausri**mik**.
ukiunik-tuŋa [akimiaq atauʂiq]-**mik**.
gain.years-1S.INDIC sixteen-INSTR.SG

'I have turned sixteen. (lit. I have gained 16 years.)' [source: Sun et al. (1979:232)]

However, numerals are not identical to other nouns in all features; this is why they are posited as a subclass of nouns. First, numerals cannot take all the cases that nouns can, such as vocative, as demonstrated in example (10).

(10) a. Piquk, niġilugu qaluk.
piqu:k niʁi-luɣu qaluk-Ø
Piquk.VOC eat-2S.IMPER fish-ABS
'Piquk, eat the fish!'

b. *Atausiq, niġilugu qaluk.
atausi:q niʁi-luɣu qaluk-Ø
one.VOC eat-2S.IMPER fish-ABS
intended for 'One, eat the fish!'

Second, unlike other nouns, there is no evidence for ergative-marked numbers, as shown by example (11). This may be because among unpossessed nouns, ergative case marking only appears on singular nouns. Thus the opportunities for ergative-marked nouns would be semantically limited.

(11) a. Tiniikam upaktuġik qipmik.
tini:kaq-m upaktuq-ɣik qipmiq-k
moose-ERG.SG charge-3S.3D.INDIC dog-DU
'The moose (sg.) charged the two dogs.' [source: fieldwork data]

b. *Atausim tiniikam upaktuġik qipmik.
atausiq-m tini:kaq-m upaktuq-ɣik qipmiq-k
one-ERG.SG moose-ERG.SG charge-3S.3D.INDIC dog-DU
intended for 'The one moose charged the two dogs.'

In short, numerals are a subclass of nouns, exhibiting some but not all features of nouns.

5.2 Verbs

Every Iñupiaq verb is marked with an obligatory portmanteau agreement suffix that conflates person, number, and mood. Tense and aspect are optionally marked (see Section 4.1.1). Unlike nouns, pronouns, and adverbs, verbs cannot take case marking. One piece of evidence for a lexical category of verbs is that only verbs can host nominalizing suffixes, as demonstrated in example (12).[2]

(12) a. agliqiusriq
aɣliqi-uʂiq
read-tool.for.doing
'tool for reading; way of reading'

b. *iñuuɬiusriq
inu:ɬiq-uʂiq
life-tool.for.doing
intended for 'tool for life; way of life'

5.2.1 Verb template

A minimal verb template consists of a verb root with one portmanteau inflectional suffix, such as *aglak-tutin* 'you (dual) are reading'. A maximal verb contains one verb root, a theoretically unlimited number of derivational suffixes (called *postbases* in traditional Eskimo-Aleut linguistics), inflectional suffix(es), and one or more enclitics, as follows:

[[root-(deriv)*-(infl)*]$_{stem}$-(deriv)*-(infl)*]-person/number/mood=(enclitic)*

In practice, however, it is atypical to find more than 5–7 suffixes and 1-2 enclitics on a verb. A typical verb is shown in example (13).

[2]A noun may take derivational suffixes, but not a derivational suffix changing V to N such as *-usriq* 'tool for X; way of X-ing'.

(13) Aġnak aullaqsruġniaqaqsiñiqsuk.
aʁnaq-k aullaqʂuq-niaq-aqsi-niq-tuk
woman-DU go.berry.picking-FUT-INCH-APPARENTLY-3D.INDIC
'Apparently two women began to go berrypicking.'

See Section 4.3 for more information on the maximal structure of verbs, including the distinction between roots and stems. See Section 6.2 for more on affix and clitic ordering in Malimiut Iñupiaq.

5.2.2 Adjectival function

There is no lexical category of adjectives in Iñupiaq. Example (14a) illustrates how stative verbs are used for attributive predication in Iñupiaq. For modification of nouns rather than attributive predication, the instrumental case is used, as shown in example (14b).

(14) a. Nunaaqqiqput aŋiruq.
nuna:qqiq-qput aŋi-ʐuq
city-1P.POSS be.large-3S.INDIC
'Our city is large.'

b. kaviqsaamik aksraktuaq
kaviqsa:q-mik akʂaktuaq-Ø
red-INSTR car-ABS
'red car'

A special construction seems to apply to color names. In example (15a), the color name *ittukpalat* 'pink (pl.)' modifies the noun *ataraat* 'dress (pl.)'. Color names in such constructions are nouns in apposition with the head noun. This is evidenced by the word *ittukpalak* 'pink (sg.)', which changes to *ittukpalat* 'pink (pl.) in order to agree with the noun *ataraat* 'dress (pl.)'. This is contrary to the behavior seen if an example like (14b) is pluralized, yielding (15b), where the modifier takes a plural case marker *-nik*. Furthermore, color names can take the instrumental case, as in examples (14b) and (15c), indicating that they are nominal.

(15) a. Itchaksrat ittukpalat ataraat qiñiyunaqtut.
iccakşat ittukpalak-t ataẓa:q-t qinijunaq-tut
six-3P pink-3P dress-3P be.pretty-3P.INDIC
'The six pink dresses are pretty.'

b. kaviqsaanik aksraktuat
kaviqsa:q-nik akşaktuaq-t
red-INSTR.PL car-PL
'red cars (pl.)'

c. Kaviaqtaamik atuqtuq.
kaviaqta:q-mik atuq-tuq
orange-INSTR.SG wear-3S.INDIC
"She is wearing orange.' [source: Williams (1999), Kotzebue]

5.3 Adverbs

Adverbs make up a large class of words in Iñupiaq, in part due to the large number of demonstrative adverbs. This class is defined by its function of modifying verbs and clauses, as demonstrated in (16).

(16) a. Qilamik pisuktut.
qilamik pisuk-tut
quickly walk-3P.INDIC
'(They) are walking quickly.'

b. Kigga ukalliuraq niġiruq.
kiɣɣa ukalliuẓaq-Ø niʁi-ẓuq
DEM.ADV snowshoe rabbit-ABS eat-3S.INDIC
'The snowshoe rabbit is eating out there (visible, restricted, near).'

c. Pakmanunaglaan aŋiiññaqtugut.
pakmanunaɣla:n aŋi:nnaq-tuɣut
until.now be.unsuccessful-1P.INDIC
'Until now, we (pl.) were unsuccessful.'

Note that in addition to lexical adverbs, there are suffixes with adverbial function (see Section 6.1.2 page 141). However, as suffixes, they are bound morphemes and not part of the lexical category of adverbs.

5.3.1 Demonstrative adverbs

Demonstrative adverbs can take the same non-core cases as nouns, as demonstrated in (17). Unlike demonstrative pronouns, however, they are not marked for number.

(17) a. Iñugiaktut asiaviich unani.
inuɣiak-tut asiavik-t una-ni
be.numerous-3P.INDIC blueberry-PL there-LOC
'There are many blueberries down there (extended, visible, distal).'

b. Qipmiq uvuuna isiqtuq.
qipmiq-Ø uvu-una isiq-tuq
dog-ABS DEM.ADV-PERL enter-3S.INDIC
'The dog came in through here (visible, restricted, proximal).' [source: 031708]

c. Aviññaq kanuŋa aullaqtuq.
avinnaq-Ø kan-uŋa aullaq-tuq
lemming-ABS DEM.ADV-ALL depart-3S.INDIC
'The lemming departed to down there (visible, restricted, distal).' [source: 031708]

d. Napaaqtut aani ittut.
napa:qtuq-t a:-ni it-tut
spruce.tree-PL DEM.ADV-LOC exist-3P.INDIC
'The (spruce) trees are over there (visible, extended, distal).' [source: 031808]

However, adverbs cannot take all nine cases, unlike nouns, being instead limited to locative, ablative, allative, perlative, and unmarked (absolutive). Thus case marking on adverbs is limited to oblique cases that are semantically compatible with spatial orientation. Table 5.3 shows the various forms of some representative demonstrative adverbs. As also noted by MacLean (1995:108), the oblique cases of demonstrative adverbs take the ergative/genitive form as their root.

	locative	allative	ablative	perlative
qakma 'out there, not visible, distal'	qakma-ni	qakm-uŋa	qakma-kŋa	qakm-uuna
pakma 'up there, not visible, distal'	pakma-ni	pakm-uŋa	pakma-kŋa	pakm-uuna
kanna 'down there, visible, restricted, distal'	kana-ni	kan-uŋa	kana-kŋa	kan-uuna
marra 'around here, visible, extended, proximal'	maa-ni	ma-uŋa	ma-ŋŋa	ma-una

Table 5.3 : Demonstrative adverb cases

5.3.1.1 Semantic parameters

There are 27 basic demonstrative adverbs in Iñupiaq (see Table 5.4), each of which can appear in multiple cases; thus the full set of demonstrative adverbs is quite large. In Seiler (2005:461–475), for example, a single-spaced list of the demonstrative adverb paradigms fills 15 full-sized pages.

Iñupiaq demonstratives (both adverbs and pronouns; see §5.4.3 for demonstrative pronouns) specify the follow characteristics: 1) visible or not visible (to speaker), 2) spatial compactness, and 3) physical distance. In describing the demonstrative system of the North Slope (Barrow) dialect, MacLean (1995:98–99) says, "[Demonstratives] indicate a person, an animal, an object, or an area by reference to its position with respect to the speaker and the addressee, and the position of the speaker and addressee in reference to the concept of "downness" represented by a body of water, a river or a downslope in the outside environs or the door inside a dwelling." This description applies to Malimiut Iñupiaq as well, following the parameters described below.

Visibility Visibility is a key component of the demonstrative system and is rather straightforward: a person, item, or location is either visible to the speaker (or deictic center) or not

visible. The visibility parameter can be collapsed with the spatial compactness parameter described below. Items or locations that are not visible are not further subdivided into restricted or extended, whereas visible items or locations are. For economy of explanation, I therefore consider the 'restricted'/'extended' parameter a sub-parameter of visibility.

Spatial compactness Spatial compactness is an important feature of the Iñupiaq demonstratives. The term 'extended' is used in Eskimo-Aleut linguistics (cf. Denny (1982), Fortescue et al. (1994), Jacobson (1990, 1995), MacLean (1995)) to describe items that are spread out spatially (in terms of distance), such as a herd of caribou spread out across a plain. 'Restricted', on the other hand, is for items that are spatially compact, such as a cup sitting on a table. The restricted/extended category can also include a stationary/moving distinction, but it is not a simple movement category; for example, a dog running around a small enclosed dog pen would be considered restricted, while a dog running around the village would be extended. In both cases, movement is occurring but different demonstratives would be used. This is similar to the description of motion in Inuktitut in Denny (1982:367), who says motion is not a separate category. Rather, objects that are moving across a large area are typically classified as extended. Objects or people moving within a small space may be classified as restricted because they are not traversing a large area.

Physical distance The final category has to do with an object's distance from the speech participants in physical space or time. Important features include proximity and distance to speaker and listener (or deictic center, if other referents are used), whether or not the location is enclosed, whether the location is on the same horizontal plane as the deictic center (i.e., up or down, relative to the deictic center), whether the location is in front of or behind the deictic center, and whether or not there is some obstacle between the speaker and the location (such as a river). Drawing from descriptions for other dialects such as those found

in MacLean (1995), Seiler (2005) and Nagai (2006), these characteristics of Malimiut Coastal demonstrative adverbs can be classified as follows:

- spatial
  - proximal [to speaker and to listener]
  - there [away from speaker, near listener]
  - over there [distal from speaker and listener]
  - up there [higher than speaker]
  - down there [lower than speaker; downriver]
  - in there [enclosed *or* inland/upriver]
  - out there [outdoors, not enclosed]
  - near the door [visible, restricted]
  - outside the door [not visible]
  - across there [separated from speaker by obstacle such as a river]
  - back there [behind speaker]
- temporal
  - remote past [also used when "speaker is not interested in the location of the referent at the time of speech" (Nagai 2006:60)]

Some of these features are obviously binary, such as the 'up there' and 'down there' parameters, while others, such as 'across there' belong to no clear binary pair. I have therefore chosen to not to subdivide the physical locations. Table 5.4 lists the absolutive forms of the demonstrative adverbs corresponding to these physical and temporal characteristics.

	visible		not visible
	restricted	extended	
proximal (to speaker)	uvva	marra	—
distal (to speaker), proximal (to listener)	tavra	—	—
distal (to speaker & listener)	iñña	avva	amma
up there	pikka	pagga	pakma
down there	kanna	unna	samma
in there	kivva	qavva	qamma
out there	kigga	qagga	qakma
near the door	ugga	—	—
outside the door	—	—	sakma
across there	ikka	agga	akma
back there	piñña	pavva	pamma
remote past	imma	—	—

Table 5.4 : Demonstratives adverbs (absolutive case)

Unlike the other demonstrative adverbs, *imma* 'remote past' can include temporal distance. While it can refer to physical distance, it is typically used to refer to the remote past. It is therefore also used anaphorically to refer to some person, object, or location previously mentioned in the discourse, or which the speaker believes does not need to be named for the benefit of the listener(s). When it does refer to physical distance, its features indicate a far distance from the speaker and the listener(s), but no visibility or compactness is indexed. See (18) for examples illustrating both the physical and temporal uses of *imma*.

(18) a. Imma tusraġnaq-siaq-si-ruq umiaqpak.
imma tuʂaʁnaq-siaq-si-ʐuq umiaq-pak
remote.distance be.audible-be.easy.to-PROG-3S.INDIC boat-big
'The sound of a big boat is audible in the distance.' [source: Seiler (2005:489)]

b. Iḷisaurim ima-ni qiñiġai iḷiġaat uqaqtauruat.
ilisauʐi-m ima-ni qiniq-ɣai iliʁa:q-t [uqaq-tau-ʐuat]
teacher-ERG remote.past-LOC see-3S.3P.INDIC child-PL [talk-PASS-3P.PTCP]
'At that time, the teacher saw the children [(who) were talking].' [source: 071607]

It is also worth noting that some of the demonstrative adverbs have acquired a more lexicalized meaning, which may vary from village to village. For example, in Noatak, *samma* 'down there (not visible)' can be used conventionally to refer to the regional hub Kotzebue, which is downriver and down the coast from Noatak. In Kotzebue, however, the same term would not be conventionalized with the same meaning. Some demonstratives have more widespread lexicalized meanings, such as *sakma* 'outside the door' to mean 'inside the arctic entry'.[3]

5.3.1.2 Double case marking

Iñupiaq demonstrative adverbs are unusual in their ability to take double case marking (also known as case stacking; see also Lanz (2010b)). In addition to the basic adverb cases shown in Table 5.3, the demonstrative adverbs can have two case suffixes, as demonstrated in example (19). Sadler & Nordlinger (2006:459) describe case stacking as "the phenomenon whereby a single word may bear multiple cases reflecting its relation to a number of different syntactic elements." Iñupiaq exhibits case stacking on demonstrative adverbs, as illustrated in (19) with the adverb *qamma* 'in there (not visible, distal)'. This is unusual, as it is typically described as something that occurs only on nominals (cf. Schweiger (1995:339, 359), Evans (1995), Kracht (2002:11), Sadler & Nordlinger (2004)). The existence of case stacking on non-arguments such as adverbs is also problematic for case stacking theories, which motivate case stacking via argument structure; see below for more details.

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[3]Houses in Alaska commonly have two front doors separated by a small enclosed space, commonly called an arctic entry, to help keep cold air from entering the house. In rural Alaska, such as in Noatak and other Iñupiat villages, these can take the form of large enclosed porches used for storage as well as their main function of keeping out cold air.

(19) **Qama-ni-aŋa-ni** it-tuq.
qama-ni-aŋa-ni it-tuq.
DEM.ADV-LOC-LIG-LOC exist-3S.INDIC
'He/she/it is (in the vicinity of) in there (not visible, distal).'

The locative form of the adverb *qakma* 'out there, not visible, distal' can be further marked for case, such as *qakmaniaŋani* 'located there somewhere', where the adverb *qakma* 'out there, not visible, distal' is followed by the locative suffix *-ni*, then a ligative suffix *-aŋa*,[4] and then another locative suffix *-ni*. The result is *qakmaniaŋani* 'located there somewhere'.[5] The first case (i.e., the one closest to the adverb stem) can be either locative or allative, while the second case can be locative, allative, ablative, or perlative. The template when LOC is the first case thus seems to be ADV-CASE-aŋa-CASE. All demonstrative adverbs follow the paradigm in Table 5.5.

amma 'over there (not visible, distal)'	
ama-ni	LOC
ama-ni-aŋa-ni	LOC-aŋa-LOC
ama-ni-aŋa-nun	LOC-aŋa-ALL
ama-ni-aŋa-niñ	LOC-aŋa-ABL
ama-ni-aŋa-gun	LOC-aŋa-PERL
am-uŋa	ALL
am-uŋa-tmun	ALL-ALL
ama-kŋa	ABL
am-uuna	PERL

Table 5.5 : Double case marking in demonstrative adverbs

[4]This as-yet unidentified suffix is presumably a suffix used for ligature of multiple cases, such as that documented for Australian languages in Schweiger (1995:341). It does not appear in any synchronic sources or the Fortescue et al. (1994) etymological dictionary.

[5]Incidentally, this case stacking data disproves Nagai (2006:36), who claims that Iñupiaq adverbs can take case marking but not other suffixes.

In demonstrative adverbs exhibiting case stacking, the second case suffix is unexpectedly plural. While I recognize that this occurs, I can find no synchronic explanation. For the North Slope dialect, Kaplan (1979:255) states that it is not known why demonstrative adverbs take the plural LOC case *-ni* instead of singular. He does, however, note that Edna MacLean (pc.) "suggests that this *ni* is not the plural but the allomorph of the locative case ending found with possessives, cf. *iraani* 'in his eye' from /irï + a + ni/" (*iri* 'eye' + *-a* '3S.3S.POSS' + *-ni* 'LOC', where the underlying /ə/ (ï in Kaplan's (1979) notation) appears in its allophonic form [a] preceding another [a]).

The double case seen on Iñupiaq adverbs is different from double case (Suffixaufnahme) as described in Plank (1995). In that volume, double case is described as something that occurs only on nouns and pronouns (Schweiger 1995:339, 359); case stacking also occurs on demonstrative pronouns in Iñupiaq (see Section 5.4.3). In her summary of the volume, Moravcsik (1995:452) states that "The core phenomenon of Suffixaufnahme will be taken to be a pattern where an attributive nominal carries two distinct case markers: one appropriate to its own function as an attributive, and the other appropriate to the function of the NP that includes both the attributive and its head."—i.e., double case (case stacking) is *only* defined as multiple case marking of nominals, and almost always in NPs where possession is involved. In that respect, this double case marking on Iñupiaq demonstrative adverbs is not the same phenomenon, as NPs are not involved.

Furthermore, Schweiger (1995:341) found that double case can be the result of restrictions whereby certain case markers cannot attach to bare nouns. Instead, they must attach to a noun that is already marked with another case. For example, in Kalkatungu (Schweiger 1995:341), the ablative case can only attach to noun-LOC, not to a bare noun. Therefore noun-LOC and noun-LOC-ABL are permitted, but *noun-ABL is ungrammatical. This type of double case is clearly different than the double case marking observed in Iñupiaq demonstrative

adverbs, because each of the cases permitted for the second case marker is also permitted to appear alone. That is to say, ADV-CASE is always permitted for locative, allative, ablative, and perlative. It remains to be seen why this double case permitting is allowed. Note that demonstrative pronouns in Iñupiaq also display double case marking, but unlike demonstrative adverbs, they require an ergative-marked host; for more details, see Section 5.4.3.

The presence of case stacking on adverbs is problematic for many theories on case stacking such as the theoretical framework laid out in Sadler & Nordlinger (2004, 2006), which explain case stacking via argument structure. Namely, case stacking is caused by the embedding of NPs in multiple phrases and/or clauses. Per Sadler & Nordlinger (2006), each case marker signifies the word's relationship to "successively higher syntactic constituents". According to Sadler & Nordlinger (2004:165), this is "to enable nominal constituents to define the larger syntactic (f-structure) context in which they are embedded. In this way, case-marked nominals can specify the grammatical function of the higher clause of which their f-structure is the value." Figure 5.1 shows the structure this entails for the Guugu Yalanji (Pama-Nyungan) example *Dicki-ndamun-du kaya-ngka* 'Dick's dog' given in Sadler & Nordlinger (2006). Sadler & Nordlinger (2006:462) argue that in an example such as depicted in Figure 5.1, one case marks grammatical relations while the other is case agreement with another nominal.

The problem that the Iñupiaq adverb data poses for embedding the item in multiple phrases is that the motivation for multiple structure is not present independently of the case marking. Although I do not have a solution at present, a number of possibilities exist. First, perhaps adverbs have quasi-argument status in Malimiut Iñupiaq, or perhaps the suffix *-aŋi* changes the argument status. According to Haegeman (1994:36), arguments are parts of a clause or sentence that are obligatory for predication, while adjuncts are not obligatory for predication; this leaves the possibility that while adjuncts are not *required*, they may be

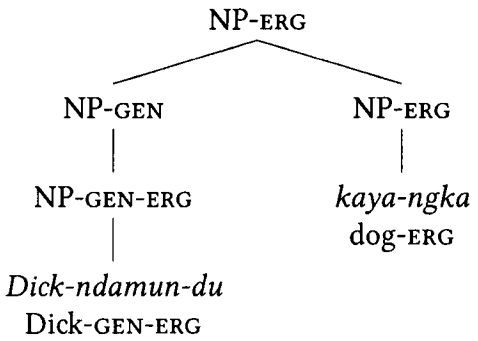

Figure 5.1 : Embedded structure of nominal with case stacking (adapted from Sadler & Nordlinger (2006:462))

permitted. Adverbs can also be attached to phrases despite not being arguments. Second, perhaps there is an unusual type of adverb agreement with some other feature of the clause. As Sadler & Nordlinger (2006:462) argue that some instances of case stacking are due to case agreement within a certain syntactic structure, it is not impossible to imagine that other similar types of agreement may take place. Third, perhaps in adverbs some morphosyntactic process applies vacuously, whereas with NPs it shows up in the grammatical structure. However, I do not have sufficient data at this time to come to a conclusion on this theoretical quandary and must therefore leave the solution to future research.

5.3.2 Adverbs of time, manner, and degree

There are also adverbs other than the demonstratives, including typical adverbs of time, degree, and manner. Example (20a) is shows a common time adverb and example (20b) shows a common manner adverb.

(20) a. Uvlaakun siḷalukpaluktuq.
uvla:kun silaluk-paluk-tuq
tomorrow rain-probably-3S.INDIC
'It's probably going to rain tomorrow.'

b. Aqpattut qilamik.
aqpat-tut qilamik
run-3P.INDIC quickly
'They (pl.) run quickly.'

There are also suffixes with adverbial function as in example (21). These are not, however, free morphemes and thus not part of the lexical category of adverbs. See Section 6.1.2 page 141 for more information.

(21) Aŋiḷaaqsimauraaqsiñaqtuq.
aŋila:q-sima-uẓa:q-sinnaq-tuq
go.home-state-continually-just-3S.INDIC
'He seems to do nothing but stay home all the time.' [lit. He seems to merely stay home all the time.' source: Collis (1978)]

Finally, there are *kisima*-type adverbs, which are typically analyzed as pronouns (see Seiler (2005:459), among others). These are a set of words with the meaning 'only' or 'alone'. As example (22) shows, this so-called pronoun can co-occur with a lexical noun in the S argument of an intransitive clause.

(22) Kisimi aŋun makittuq.
kisimi aŋun-Ø mak:t-tuq
only.3S.REFL man-ABS.SG stand.up-3S.INDIC
'Only that man stood up.' (He alone stood up.) [source: 012808]

Elsewhere in the language, it is not possible to have [Pro N] in one argument NP unless they are coordinated in a structure such as $[\text{Pro=lu N=lu}]_{\text{NP}}$. Furthermore, these words have adverbial meaning. I therefore classify *kisima*-type words as adverbs instead; see also Section 5.4.3.

5.4 Pronouns

Pronouns are a category distinct from lexical nouns in Iñupiaq. There are personal pronouns, reflexive pronouns, interrogative pronouns, and demonstrative pronouns. Evidence that pronouns constitute a lexical category is that they can replace lexical nouns, as illustrated in (23).

(23) a. Aaŋagata iḷilġaat aquvittitqai.
a:ŋa-ɣa-ta ililʁa:-t aquvit-tit-qai
grandmother-1S.POSS-ERG child-PL sit.down-CAUS-3S.3D.INDIC
'(My) grandma made the children sit down.' [source: Lanz 071907]

b. Ilaan iḷilġaat aquvittitqai.
ila:n ililʁa:-t aquvit-tit-qai
3S.PRO.ERG child-PL sit.down-CAUS-3S.3D.INDIC
'He/she/it made the children sit down.' [source: Lanz 071907]

5.4.1 Personal and reflexive pronouns

Personal pronouns (listed in Table 5.6), are not in wide use, perhaps due to the extensive verb agreement and PRO-drop. Personal pronouns are infrequently used to the extent that some speakers do not recall them readily. One of the primary consultants for this dissertation research, for example, found it difficult to recall personal pronouns other than the first person, despite being a native speaker and using Iñupiaq in the home on a daily basis. Furthermore, in many cases where English and other Indo-European languages would use a personal pronoun, Iñupiaq speakers prefer to use a demonstrative pronoun to refer to the participants in an utterance.

There are, however, some contexts where a personal pronoun is preferred. One use of personal pronouns in Iñupiaq is for creating predicate nominal constructions as in (24). See §7.2.2 for more details on predicate nominals.

	ABS	ERG	INSTR	ALL	ABL	LOC	PERL	SIM
1S	uvaŋa		uvamnik uvaŋnik	uvamnun uvaŋnun	uvamniñ uvaŋniñ	uvamni uvaŋni	uvapkun uvapkun	uvaptun uvaptun
1D	uvaguk		uvaptiknik	uvaptiknun	uvaptikniñ	uvaptikni	uvaptikkun	uvaptiktun
1P	uvagut		uvaptiknik	uvaptiknun	uvaptikniñ	uvaptikni	uvaptigun	uvaptitun
2S	ilvich		ilipnik	ilipnun	ilipniñ	ilipni	ilipkun	iliptun
2D	iliptik		iliptiknik	iliptiknun	iliptikniñ	iliptikni	iliptikkun	iliptiktun
2P	ilipsi		ilipsitñik	ilipsitnun	ilipsitniñ	ilipsini	ilipsigun	ilipsisun
3S	ilaa	ilaan	ilaanik	ilaanun	ilaaniñ	ilaani	ilaagun	ilaatun
3D	iliŋik	iliŋiknik	iliŋiknik	iliŋiknun	iliŋikniñ	iliŋikni	iliŋikkun	iliŋiktun
3P	iliŋich	iliŋisa	iliŋitñik	iliŋitñuñ	iliŋitñiñ	iliŋitñi	iliŋisigun	iliŋisitun
3S.REFL	(iŋmi)	—	iŋminik	iŋminun	iŋminiñ	iŋmini	iŋmigun	iŋmisun
3D.REFL	iŋmiknik			iŋmiknun	iŋmikniñ	iŋmikni	iŋmikkun	iŋmiktitun
3P.REFL	iŋmiknik			iŋmiknun	iŋmikniñ	iŋmikni	iŋmiktigun	iŋmiktitun

Table 5.6 : Personal pronouns

(24) a. Uvaŋa Iñupiaq.
uvaŋa inupiaq
1S.ABS Iñupiaq
'I am (an) Iñupiaq.'

b. Uvagut iḷisautrit.
uvagut ilisautʒi-t
1P.ABS teacher-PL
'We (pl.) are teachers.'

c. Qiḷuatitaqti aŋun.
qiluatitaqtə aŋun
drummer man
'The man is a drummer.' [source: 080707]

Another reason for the overt use of personal pronouns is to provide contrast, as in (25).

(25) Utqiaġviŋniaqtutin uvaŋa aullaġñiaŋitchuŋa.
utqiaʁvik-niaq-tutin uvaŋa aullaʁ-niaq-it-tuŋa
Barrow-FUT-2S 1S.ABS go-FUT-NEG-1S
'You will go to Barrow but I will not.' [source: 070207]

5.4.2 Interrogative pronouns

There are two interrogative pronouns in Malimiut Iñupaiq (see Table 5.7): *kiña* 'who? (ABS.SG)' and *sua* 'what? (ABS.SG)'.[6] My data for the interrogative pronoun paradigm is incomplete, but according to Nagai (2006:72) the paradigms for both are quite regular. Namely, *kiña* 'who' has the stem *ki* in absolutive singular and the stem *kisu* in absolutive dual and plural, but for all other cases, it follows the inflectional patterns of an unpossessed noun. For *sua* 'what?', Nagai says that inflection is like a regular unpossessed noun except for the absolutive singular, which has two variants, *sua* and *suna*. The forms in brackets in Table 5.7 are predicted on the basis of Nagai's (2006) claim.

[6]Other interrogatives exist but are not pronouns.

	ABS	ERG	INSTR	ALL	ABL	LOC	PERL	SIM
sing.	kiña	kia	[kimik]	[kimun]	[kimiñ]	[kimi]	[kikun]	[kitun]
dual	[kisuk]	[kisuk]	[kisuŋnik]	[kisuŋnun]	[kisuŋniñ]	[kisuŋni]	[kisukkun]	[kisuktun]
plural	kisut	kisut	[kisunik]	[kisunun]	[kisuniñ]	[kisuni]	[kisutigun]	[kisutitun]
sing.	sua, suna	[sum]	sumik	[sumun]	[sumiñ]	[sumi]	[sukun]	[sutun]
dual	suk	suk	[suŋnik]	[suŋnun]	[suŋniñ]	[suŋni]	[sukkun]	[suktun]
plural	sut	sut	[sunik]	[sunun]	[suniñ]	[suni]	[sutigun]	[sutitun]

Table 5.7 : Interrogative pronouns

5.4.3 Demonstrative pronouns

Demonstrative pronouns are very frequent in Iñupiaq speech, and like the demonstrative adverbs, they are very numerous (see Seiler (2005:476–488) for complete paradigms). The semantic parameters of demonstrative pronouns are the same as those for demonstrative adverbs (see §5.3.1.1). Table 5.8 lists the absolutive case of the demonstative pronouns, all of which correspond to the demonstrative adverbs in Table 5.4 in §5.3.1.1 above. Note that while each demonstrative adverb has a distinct lexical form, there is some overlap in the demonstrative pronouns. For example, the adverbs *qavva* 'in there (visible, extended, distal)' and *qamma* 'in there (not visible, distal)' both have a corresponding pronoun with the form *qamna* 'that one in here'. Whenever there are two identical pronoun forms, it is the *visible/extended* form and the *not visible* form that have collapsed, while the *visible/restricted* form remains distinct.

	visible		**not visible**
	restricted	**extended**	
proximal (to speaker)	una	manna	—
distal (to speaker), proximal (to listener)	taamna	—	—
distal (to speaker & listener)	iññа	amna	amna
up there	pikña	paŋna	pakimna
down there	kanna	unna	samna
in there	kimña	qamna	qamna
out there	kiŋña	qaŋna	qakimna
near the door	uŋna	—	—
outside the door	—	—	sakimna
across there	ikña	aŋna	akimna
back there	piññа	pamna	pamna
remote past	imña	—	—

Table 5.8 : Demonstrative pronouns (absolutive case)

The examples in (26) are typical of demonstrative pronouns.

(26) a. Ikkuak qirriuqtuk.
ikkuak qizẓiuq-tuk
those-DU chop.wood-3D.INDIC
'Those two over there (visible, restricted) are chopping wood.'

b. Amna siñik-tuq.
amna sinik-tuq
that-SG sleep-3S.INDIC
'That one over there (not visible, in a different room, restricted) is sleeping.'

c. Ukuak atniġñaqpaluktuk.
ukua-k atniʁnaq-paluk-tuk
this-DU be.sick-probably-3D.INDIC
'These two (visible, stationary, proximal, restricted) are probably sick.'

d. Papkua tuttut niqaaq niġirut.
papkua tuttu-t niqa:q-Ø niʁi-ẓut
back.there-PL caribou-PL moss-ABS.SG eat-3P.INDIC
'The caribou (pl.) back there (visible, extended, distal) are eating moss.'

e. Taavruma aglakkaa.
ta:vẓ-uma aɣlak-ka:
that.one-ERG read-3S.3S.INDIC
'That one there (visible, restricted, distal) is reading it.' [source: 032608]

Demonstrative pronouns can appear in all cases and numbers that lexical nouns can. MacLean (1995:106) says that in the North Slope dialect, demonstrative pronouns have vocatives; judging from her glosses, these seem to be formed by lengthening just as lexical nouns are (see Section 3.1.2.9). Vocative forms of the demonstrative pronouns are not included here, however, because I have no data for them in the Noatak village dialect.

Like demonstrative adverbs (see §5.3.1.2), demonstrative pronouns also exhibit double case features. However, in this respect Iñupiaq demonstrative pronouns match at least one type of double case marking as described in Plank (1995). Namely, the non-core cases of singular demonstrative pronouns are based on the singular ERG form, not on the absolutive (unmarked) form (see also (MacLean 1995:108), who states that demonstratives take

ergative roots). Table 5.9 provides the cases for one pronoun, *pamna* 'that one back there (not visible, distal)'. This is similar to what Schweiger (1995:341) described for Kalkatungu (Pama-Nyungan) in that certain cases much attach to a noun already marked for another case. Example (27) shows the Iñupiaq demonstrative pronoun *qamna* 'that one in there (not visible, distal)' first in a single-case form followed by a multiple-case form. All demonstrative pronouns in the language mark case according to the paradigm in Table 5.10.

(27) a. **Qavruma** pakak-pagik tuyuuti-k.
qavʐuma pakak-paɣik tuju:n-k
DEM.PRO.ERG search-3S.3D.INTERR letter-DU
'Is that one in there (not visible, distal) searching for the two letters?'

b. Naŋmak **qavrum-uuna** atuq-tuq.
naŋmak-Ø **qavʐuma-u:na** atuq-tuq.
p.n.-ABS.SG DEM.PRO.ERG-SIM sing-3S.INDIC
'Naŋmak sings like that one in there (not visible, distal).'

case	**singular**	**dual**	**plural**
absolutive	pamna	papkuak	papkua
ergative	pavruma	papkuak	papkua
instrumental	pavrum-iŋa	papkuŋniŋa	papkuniŋa
locative	pavruma-ni	papkuŋnaŋni	papkunani
allative	pavrum-uŋa	papkuŋnuŋa	papkunuŋa
ablative	pavruma-kŋa	papkuŋnakŋa	papkunakŋa
perlative	pavrum-uuna	papkuŋnuuna	papkunuuna
similative	pavruma-tun	papkuŋnaktun	papkunatun
vocative	pamna [pamna:]	*(unattested)*	*(unattested)*

Table 5.9 : Demonstrative pronoun cases

Finally, as noted in Section 5.3.2, I analyze so-called *kisima* pronouns as adverbs, unlike Seiler (2005:459). These are a set of words with the meaning 'only' or 'alone'. As example (28) shows, this so-called pronoun can co-occur with a lexical noun in the S argument of an intransitive clause.

amna 'that one over there (not visible, distal)'	
amna	ABS
avruma	ERG
avruma-ni	ERG-LOC
avrum-uŋa	ERG-ALL
avruma-kŋa	ERG-ABL
avrum-uuna	ERG-PERL
avruma-tun	ERG-SIM
avrum-iŋa	ERG-INSTR

Table 5.10 : Double case marking in demonstrative pronouns

(28) Kisimi aŋun makittuq.
kisimi aŋun-Ø makət-tuq
only.3S.REFL man-ABS.SG stand.up-3S.INDIC
'Only that man stood up.' (He alone stood up.) [source: 012808]

Elsewhere in the language, it is not possible to have [Pro N] in one argument NP unless they are coordinated in a structure such as [Pro=lu N=lu]$_{NP}$. Furthermore, these words have adverbial meaning. I classify *kisima*-type words as adverbs instead; see Section 5.3.2.

5.5 Conjunctions

Conjunctions are an indeclinable lexical category in Iñupiaq. They are typically used for linking noun phrases or clauses (see also Section 8.2), as in example (29). Note that as demonstrated by examples (29b) and (29c), both *suli* and *asiiñ* mean 'and', but *asiiñ* is contrastive while *suli* is not.

(29) a. Aŋugauraq niksiksuqtuq **aglaan** aġnauraq puuvraqtuq.
aŋuɣauzaq niksiksuq-tuq **aɣla:n** aʁnauzaq pu:vzaq-tuq
boy fish with hook-3S.INDIC **but** girl swim-3S.INDIC
'The boy is fishing but the girl is swimming.' [source: Lanz 072507]

b. Aŋugauraq niksiksuqtuq **asiiñ** aġnauraq puuvraqtuq.
aŋuɣauzʟaq niksiksuq-tuq **asi:n** aʁnauzʟaq pu:vzʟaq-tuq
boy fish with hook-3S.INDIC **and** girl swim-3S.INDIC
'The boy is fishing and [in contrast] the girl is swimming.' [source: Lanz 072507]

c. Aŋugauraq niksiksuqtuq **suli** aġnauraq puuvraqtuq.
aŋuɣauzʟaq niksiksuq-tuq **suli** aʁnauzʟaq pu:vzʟaq-tuq
boy fish with hook-3S.INDIC **and** girl swim-3S.INDIC
'The boy is fishing and the girl is swimming.' [source: Lanz 072507]

d. Naŋmak **suli** Piquk puuvraqtuk.
naŋmak **suli** piquk pu:vzʟaq-tuk
p.n. and p.n. swim-3D.INDIC
'Naŋmak and Piquk are swimming.'

5.6 Interjections

Interjections are another class of indeclinable words in Iñupiaq. These include a wide range of words, such as expressions of surprise, pain, and lamentation. Examples are given in (30).

(30) a. Alappaa!
alappa:
INTERJ
'It's cold!'

b. Yahii!
jahi:
INTERJ
'Oh no!'

Chapter 6

The word

This chapter deals with a number of word-related phenomena in Malimiut. Section 6.1 deals with criteria for determining wordhood in Malimiut Iñupiaq from phonological, morphological, and syntactic perspectives. Section 6.2 contains a description of affix ordering. Finally, Section 6.3 discusses noun incorporation, a very common word-building device in Iñupiaq and all Inuit languages/dialects.

6.1 Criteria for wordhood

Most linguists acknowledge that there are multiple levels of wordhood. The most commonly acknowledged levels of wordhood are phonological, morphological, and syntactic. Many scholars have noted that there can be a mismatch between types of wordhood, and that a linguistic unit may be a word in one sense but not in another (Di Sciullo & Williams 1987, Zwicky 1990, Foley 1991, Matsumoto 1992, Bresnan & Mchombo 1995, Alsina 1997, Ackerman & LeSourd 1997, Mohanan 1997, Russell 1999, Harris 2000, Dixon & Aikhenvald 2002, Stonham & Yiu 2002, van der Spuy 2006, Shibatani 2007). Some argue that the division lies between phonological and morphosyntactic words, while others such as Di Sciullo & Williams (1987) argue for separate morphological and syntactic wordhood (in addition to phonological wordhood). An NP may fit the language's criteria for phonological wordhood, for example, but fail to meet its criteria for syntactic wordhood. For example, the English NP *the dog* is phonologically one word, as evidenced by the fact that *the* does not receive primary word stress and its vowel is reduced to schwa. However, *the dog* is syntactically

two words, because the definite article could be omitted, replaced with another determiner, or separated from the head noun *dog* by intervening adjectives (among other tests).

With the exception of Sadock (1980) and Woodbury (2002), wordhood in Eskimo-Aleut has not been widely explored except in regard to noun incorporation (Grimshaw & Mester 1985, Woodbury & Sadock 1986). Grimshaw & Mester (1985) contend that Eskimo-Aleut noun incorporation must be lexical, while Woodbury & Sadock (1986:229) argue that it must be syntactic, saying "even Eskimo languages are more correctly explained in terms of a syntactic component not having access to individual elements of derivational morphology." Sadock (1985, 1991) later developed Autolexical Theory specifically to address noun incorporation in Inuit languages (particularly Kalaallisut); under this theory, lexical, morphological, and syntactic domains are autonomous. Beyond noun incorporation, wordhood has not been rigorously examined in Eskimo-Aleut. Some of the only studies that touch on phonological wordhood in Eskimo-Aleut language are Rischel (1974), Kaplan (1979), Compton (2009), and Woodbury's (2002) work on Cup'ik grammatical wordhood is among the only research on morphosyntactic wordhood in the family. In sum, the definition of wordhood is theory-dependent to a certain extent. Furthermore, the definition depends a great deal on which type of evidence is given prominence. In a language with a great deal of morphology such as Iñupiaq, for example, morphological evidence may be given much more prominence than in a language with little morphology, such as Mandarin.

Woodbury & Sadock (1986:229) note that the vast inventory of productive derivational suffixes in Eskimo-Aleut have been treated in some theories as parts of syntax. This is because they have "often concrete lexical meanings" but also due to "important syntactic similarities they bear to their word-level equivalents in better-known languages." While Woodbury & Sadock (1986)—arguing against Grimshaw & Mester (1985)—claim that Eskimo words are more accurately analyzed "in terms of a syntactic component not having access to indi-

vidual elements of derivational morphology," I argue that this is not the case. Among other reasons, it is inadvisable to place too much importance on translation equivalents. When analyzing Iñupiaq, it does not matter what the word-level equivalent is in another language, such as English or Tamil, only what the Iñupiaq data itself tells us. We cannot assume that because the translation equivalent is be syntactically formed, for example, the Iñupiaq data is as well. Instead, we must test Iñupiaq data using language-specific wordhood tests.

In the following sections, I present tests for three types of wordhood using Iñupiaq data. I will then use the results of these tests in Section 6.3 to discuss the wordhood status of incorporated nouns. I take morphological wordhood to be primary because it simplifies matters: since suffixation is nearly the only morphological process in the entire language—and indeed, the entire Eskimo side of the Eskimo-Aleut family (Woodbury 2004:157)— morphology is pervasive and more easily testable. In addition, morphological wordhood appears to correlate with phonological wordhood in almost all situations, so assuming morphological wordhood to be primary actually results in satisfying two types of wordhood.

6.1.1 Phonological word

Cross-linguistically, typically a phonological word is a minimum of one syllable or mora in length, and it possesses different prosodic, phonotactic, and phonological properties than segments which are not phonological words (Mohanan 1995, Hall 1999b, Dixon & Aikhenvald 2002, Stonham & Yiu 2002). That is, a phonological word may be bound by certain prosodic, phonotactic, or phonological rules which do not apply across word boundaries. For example, consonant clusters which are not permitted within a single phonological word may appear at the boundary of two words. Kroeger (2005:318) notes that a phonological word is also "the smallest possible utterance in the language; speakers do not normally say anything which is smaller than a complete phonological word."

Kaplan (1979:1) notes that using criteria established by Rischel (1974:11), the phonological word in Iñupiaq is a unit formed of multiple parts in which "internal pauses are not possible."[1] Kaplan (1979:1) also notes that speakers have an intuitive sense of phonological words, which he observed when witnessing fluent speakers learn Iñupiaq literacy. In short, Kaplan (1979) suggests that the phonological word is a salient unit because when acquiring literacy, speakers identify (orthographic) word breaks without difficulty.

One phonological criterion for a phonological word in Iñupiaq is palatalization, which never crosses a phonological word boundary. The phoneme /i/ causes palatalization of following alveolar continuants (see Section 2.2.3 for more details), but palatalization does not cross phonological word boundaries. Example (1a) illustrates palatalization within a word, while example (1b) illustrates how it fails to cross a word boundary.

(1) a. iġġiḷu [IPA: iʁʁiʎu]
iʁʁi=lu
mountain=and
'and a mountain'

b. iġġi nunami [IPA: iʁʁi nunami]
iġġi nuna-mi
mountain land-INSTR.SG
'(a) mountain in (the) land'

c. *iġġi ñunami [IPA: iʁʁi ɲunami]
iġġi nuna-mi
mountain land-INSTR.SG

[1]Claire Bowern (pc.) has suggested that Iñupiaq speakers may use repair strategies that make use of pieces of phonological words. While this may be true, I believe it need not interfere with the definition of a phonological word. Mudzingwa (2010) found, for example, that Shona speakers' repair strategies are focused on the goal of preserving CV syllable structure, whether or not the repaired piece is a phonological word, though there is plentiful evidence for a phonological word in Shona. It is therefore possible that speakers can have a phonological word but still make use of repair strategies below word level.

'(a) mountain in (the) land'

Assibilation, whereby coronal stops become sibilants, is another phonological test for wordhood. /i/ near a word-internal morpheme boundary triggers progressive assibilation of /t/, resulting in [s]. The assibilation can occur at a distance but still must be within one phonological word. Example (2a) demonstrates assibilation within a phonological word. Example (2b) shows that assibilation fails to occur across a phonological word boundary; if assibilation had occurred, we would expect **iġġi saamna* instead of *iġġi taamna.*

(2) a. Agiksuŋa.
aɣik-tuŋa
scrub-1S.INDIC
'I scrub' / 'I'm scrubbing'

b. Iġġi taamna.
iʁʁi ta:mna
mountain DEM.PRO
'That one over there (is a) mountain.'

Vowel hiatus provides a phonotactic test for phonological wordhood. Within a phonological word, a VVV sequences are not permitted (where VV can be either two subsequent vowels or a long vowel). If a sequence of VVV would arrive from suffixation, an epenthetic [ŋ] is inserted after the second V to break up the vowel hiatus, creating VVŋV. This rule does not apply across phonological word boundaries. Example (3) demonstrates that *niġigaa* '3S eats' and *akpik* 'salmonberry' are two independent phonological words, because no ŋ-epenthesis occurs although there are three vowels in a row.

(3) a. Aġnam niġigaa akpik.
aʁnaq-m niʁi-ɣa: akpik-Ø
woman-ERG eat-3S.3S.INDIC salmonberry-ABS
'The woman is eating a salmonberry.'

b. *Aġnam niġigaaŋakpik.
aʁnaq-m niʁi-ɣa:akpik-Ø
woman-ERG eat-3S.3S.INDIC salmonberry-ABS
intended for 'The woman is eating a salmonberry.'

Prosodic rules, such as stress placement and intonation, remain elusive. There is no strong evidence for word stress in Iñupiaq or other Inuit languages/dialects (Jacobsen 2000, Lanz 2008), so all tests remain tentative. For example, while Lanz (2008) finds phonetic evidence for prominent syllables, it is neither clear that these are salient to speakers nor what the rules for their occurrence might be. We therefore rely on phonological and phonotactic evidence.

6.1.2 Morphological word

A morphological word is a unit whose parts cannot be separated from one another (Matsumoto 1992). Alsina (1997) and Ackerman & LeSourd (1997) claim that morphological wordhood can be ascertained by noting whether or not the unit can serve as input to further derivational processes. Such theories assume that syntactically derived structures cannot undergo (further) morphological processes; hence, any structure that serves as input to a morphological derivation must be morphologically formed. By this definition, there is very little that is *not* a morphological word in Iñupiaq. Word formation appears to be morphological in Iñupiaq, because there are few words that cannot undergo further morphological derivation; were word formation syntactic, the words should not be able to undergo derivation more than once. In fact, it is common for a word to change lexical category and/or valency multiple times in Iñupiaq. As Grimshaw & Mester (1985) note, "lexical forms derived by Passive and Antipassive can themselves be input to other rules." For example, a noun may be incorporated into a verb stem, creating a new stem N-V_{intr}, which is then transitivized via the use of a derivational suffix, yielding yet another verb stem N-V_{intr}-V_{tran}. In the case of verbs, however, once the stem—whether simple or complex—takes the

obligatory person/number/mood suffix, no further derivation is possible.

Woodbury (2002) argues that for Cup'ik, a relative of Iñupiaq, wordhood can be defined both phonologically and grammatically. In his "grammatical wordhood", he subsumes both morphological and syntactic wordhood as well as constituency. For him, a Cup'ik word is one with minimally well-formed inflection which can also fill a syntactic slot such as NP or VP (i.e., is a constituent). For morphological wordhood, Woodbury's (2002) inflection test works for Iñupiaq as well. Foley (1991:81) argues, for example, that a morphological word is quite simply a unit that is subject to morphological rules. Therefore nouns, which are subject to case and number morphology (in Yimas), must be morphological, and the morphology itself can serve as a test. For example, one test for morphological wordhood Foley (1991:81) uses for Yimas works for Malimiut Iñupiaq as well: morpheme order. Within the lexical category of nouns, it is true that certain morphemes can only occur in a certain order; in English, for example, we may have a morpheme order such as *un-break-able* but not **break-un-able* (Aronoff & Fudeman 2005:37)). Though word order is relatively free in Iñupiaq, morpheme order has certain unbreakable rules. One of these is that case markers other than absolutive (which is unmarked) must be the final suffix in the word.[2]

(4) a. uluqpaŋnik
ulu-qpak-nik
women's knife-AUG-INSTR.PL
'with big knives (pl.)'

b. *ulunikpak
ulu-nik-qpak
women's knife-INSTR.PL-AUG
intended for 'with big knives (pl.)'

[2]Enclitics such as the coordinative *=lu* may follow the case suffix, but no other suffix can follow it.

Vowel lengthening in vocative case is another test for morphological wordhood. Stonham & Yiu (2002:331) use vowel lengthening in Nuuchahnulth as a test for morphological wordhood because in order to lengthen the correct vowel—thereby marking aspect—a speaker must locate the leftmost word boundary. The same vowel lengthening phenomenon occurs in Malimiut Iñupiaq, but in Iñupiaq is it used to mark vocative case rather than aspect. As mentioned in Section 3.1.2.9, the vocative case is manifested by the lengthening of the vowel in the final syllable of a noun (i.e., the rightmost word boundary). Example (5) demonstrates this vowel lengthening.

(5) a. Piquk, niġilugu qaluk.
piqu:k niʁi-luɣu qaluk-Ø
Piquk.VOC eat-2S.IMPER fish-ABS
'Piquk, eat the fish.'

b. Iḷisautri!
ilisautʒi:
teacher.VOC
'Teacher!'

This is a rather limited test, however, because it can only be used with nouns and, moreover, its use is rare except with personal names.

Another test for morphological wordhood is adverbial modification. A morphological word cannot be separated by a lexical adverb. Example (6b) demonstratives that insertion of a lexical adverb into a verb results in ungrammaticality.

(6) a. Kataum umiaŋa qilamik iłuaqsaġaa.
katak-m umiaq-ŋa qilamik iłuaqsaq-ɣa:
p.n.-ERG boat-3S.NONREFL.POSS.ABS quickly fix-3S.3S.INDIC
'He/she quickly fixed Katak's boat.'

b. *Kataum umiaŋa iłuaqsaqqilamikkaa.
katak-m umiaq-ŋa iłuaqsaq-qilamik-ɣa:
p.n.-ERG boat-3S.NONREFL.POSS.ABS fix-quickly-3S.3S.INDIC

intended for 'He/she quickly fixed Katak's boat.'

It is worth noting, however, that in addition to a lexical category of adverbs, Iñupiaq has numerous suffixes with adverbial function, most of which are suppletive. These include *-qpak* 'big, much, very' and *-piaq* 'really; completely'. As bound morphemes, these adverbial suffixes occur within morphological words. While example (6b) is ungrammatical because a full lexical adverb was inserted into the verb, example (7a) with its bound morpheme counterpart *-asruaq* 'quickly' is perfectly grammatical.

(7) a. Kataum umiaŋa iɬuaqsaqasruaġaa.
katak-m umiaq-ŋa iɬuaqsaq-aşuaq-ɣa:
p.n.-ERG boat-3S.NONREFL.POSS.ABS fix-quickly-3S.3S.INDIC
'He/she quickly fixed Katak's boat.'

b. Iġñivaluktuq aakauraġa uvlaakun.
iʁni-valuk-tuq a:kauʐaq-ɣa uvla:kun
give.birth-probably-3S.INDIC sister-1S.POSS.ABS tomorrow
'My sister will probably give birth tomorrow.' [source: 022908]

c. Qattaq nuŋutipiaqpiuŋ?
qattaq nuŋuti-piaq-piuŋ
bucket empty-completely-2S.INTERR
'Did you empty the bucket completely?' [source: Seiler (2005:255)]

In summary, then, a morphological word in Malimiut Iñupiaq can be identified by attempting to manipulate the order of morphemes, by testing for the vowel lengthening in vocative case, and by determining whether or not a lexical adverb can be inserted between two units. If a lexical adverb can be inserted between two units, they are not part of the same morphological word. The morpheme order and adverb placement tests are the strongest of these tests, because they can be used with multiple lexical categories. Finally, using these tests, it would appear that the morphological word in Iñupiaq strongly correlates with the phonological word. This meets with cross-linguistic expectations about phonological words

and morphological boundaries, as noted in Hall (1999a:15–16).

6.1.3 Syntactic word

A syntactic word is more or less the smallest possible unit to which syntactic operations apply (Kroeger 2005:318). Perhaps the most commonly cited test for syntactic wordhood is monoclausality (Matsumoto 1992, Mohanan 1997, Butt 1995, 1997, 2003). In Iñupiaq, one way to test monoclausality is by the number of mood suffixes. Only one mood suffix is permitted per clause (see §4.1.2). If a sentence contains two mood suffixes, they must each belong to a separate clause.[3] In example (8), there is a VP marked with participial mood (a dependent mood), as well as a VP marked with indicative mood (an independent mood).

(8) Atuqłuŋa aŋŋuaqtuŋa.
atuq-łuŋa aŋŋuaq-tuŋa
sing-1S.PTCP Western.dance-1S.INDIC
'Singing, I dance.'

Because each of the verbs takes a mood suffix, they each belong to a different clause.

Using this test, a verb containing an incorporated noun is a syntactic word because it takes a single mood suffix. This is demonstrated by example (9), where the noun *killaiyaun* 'sewing machine' has been incorporated into a verb to yield a new verb *killaiyautituq* 'to use a sewing machine'. The noun *killaiyaun* 'sewing machine' has itself been created from the verb *killaiyaq* 'to sew' via derivation.

(9) Killaiyautituqtuŋa aiqpaŋnik.
killaijautə-tuq-tuŋa aiqpak-nik
sewing machine-utilize-1S.INDIC mitten.DU-INSTR.DU

[3]An Iñupiaq sentence may contain multiple clauses, but if it does, each clause must have only one mood suffix. Furthermore, within a sentence, only one of the clauses may contain an independent mood; the rest must take dependent moods. See Section 4.1.2 for more about mood.

'I'm sewing a pair of mittens with a sewing machine.'

Despite changing lexical categories twice, the NI verb contains only one mood marker, the indicative, and is therefore one syntactic word. This analysis conflicts with theories that assume words are created syntactically. I therefore proceed from the assumption that words are created morphologically, because under a syntactic theory of word formation, words the result of a derivational process cannot be input into another derivational process (i.e., recurse derivation would not be possible under such theories).

Enclitics can also be used to test syntactic wordhood, as they are phonologically bound but syntactically free (Kroeger 2005:318–319). As Stonham & Yiu (2002:333) note, if clitics only occur at the end of a word, their behavior can reveal word boundaries. In Malimiut Iñupiaq, clitics must attach at one of two places: either the right edge of the word, or to another enclitic that is itself attached to the right edge of the word; example (10) shows two commonly used Iñupiaq enclitics, *=ami* 'what I mean is...' and *=lu* 'and'.

(10) a. Imaaqtugami.
ima:q-tuk=ami
fall.into.water-3D.INDIC=I.mean
'What I mean is, they (2) fell into the water.'

b. Yahii! imaaqtuk nukatpiaġruġlu qimmiġlu.
jahi: ima:q-tuk nukatpiaʁχuk=lu qimmiq=lu
oh no! fall.into.water-3D.INDIC boy=and dog=and
'The boy and the dog fell into the water.' [source: 081706]

Few tests for syntactic wordhood are employed here, but this is not accidental. Many of the tests typically used for syntactic wordhood, such as those found in Bresnan & Mchombo (1995), do not work for Malimiut Iñupiaq. The majority of such tests are morphosyntactic rather than purely morphological or purely syntactic, but when applied to Iñupiaq, where a great deal of syntax is carried out via morphological means, it becomes clear that they can

only serve as *morphological* tests in Iñupiaq. Woodbury (2002) tests for wordhood in Cup'ik, another member of the Eskimo-Aleut family, but his tests are for "grammatical word" and do not separate morphology from syntax. Commonly used tests such as gapping cannot be used for Iñupiaq simply because there is no evidence of gapping in the language. Tests such as clefting are not useful for Iñupiaq either, because one cannot reliably distinguish between relatively free word order and word order that is clefted.

6.2 Affix & clitic ordering

Iñupiaq, like other Eskimo-Aleut languages/dialects, has a large inventory of productive and non-productive affixes—all but one of which are suffixes[4]—and enclitics. By far the largest group of suffixes are derivational suffixes (known as *postbases* in Eskimo-Aleut literature). Nagai (2006:13) states that there are hundreds of derivational suffixes in (Upper Kobuk) Iñupiaq, and Seiler (1997) claims there are several hundred of them. Fortescue (1980) estimates that there are 300–400 derivational suffixes for the Inuit languages/dialects; he later lists these in quite detailed manner in Fortescue (1983). There are also many inflectional suffixes. See Chapters 3 and 4 for nominal and verbal inflection and derivation.

Fortescue (1983:4, 97) divides Inuit derivational suffixes into 26 types based on function and semantics, plus one class of enclitics. One consequence of Fortescue's (1983) grouping by function and semantics is that there is overlap in categorization: some suffixes belong to multiple categories. In addition, several of Fortescue's (1983) categories can be collapsed,

[4]There is only one prefix, *ta-*, in Inuit languages. It is not productive and can only attach to demonstratives. Its meaning seems to be 'emphatic distal' as noted in Kaplan (1979:1) and Lowe (1985:234–237). MacLean (1995:105) says that *ta-* indicates "(1) that the [Speaker] is identifying a Referent that is closer to the Addressee than to the [Speaker]; (2) a refocusing on a previously identified or introduced Referent that is no longer in focus but accessible; or (3) that emphasis or more attention is placed on the Referent."

such as combining suffixes for judgement, wishing, and hoping into modality. For economy of explanation, I prefer a simpler approach to affixes that does not conflate function and semantics. In addition, I propose that in order to capture tendencies and rules of affix and clitic order, it is necessary to include inflectional suffixes as well. I therefore propose that this plethora of suffixes and enclitics can be divided into several basic types:

- derivational suffixes
  - nominalizers (i.e., V > N)
    - *tuni* 'to sell (vt.)' + *-yumman* '(an) urge to do something' = *tuniyumman* '(an) urge to sell'
  - denominalizers (i.e., N > V)
    - *umiaq* 'boat' + *-giak* 'have/be many' = *umiaġiak* 'to have many boats'
- inflectional suffixes
  - attributive suffixes: modify nominals
    - *aksraktuaq* 'car' + *-qłuk* 'old' = *aksraktuaqłuk* 'old car'
  - adverbial suffixes: degree, manner, time, etc.
    - *pisuk* 'walk (vi.)' + *-uraaq* 'slowly' = *pisuguraaq* 'to walk slowly'
    - *uqaq* 'talk' + *-guu* 'usually' = *Uqaġuuruq* 'He/she usually talks.'
  - aspect, mood, person
    - *-pi:t* '2S.INTERR'
  - modality
    - *-tla* 'POT'

    * *siku* 'to freeze (vi.)' + *-niq* 'evidently' + *-tuq* '3S.INDIC' = *Sikuniqsuq narvaq* 'evidently (the) lake is freezing up'

  - tense
    * *-niaq* 'FUT'
  - negation
    * *-ṅġit* 'NEG'
  - possession
    * *-kpuk* '1D.3S.POSS'
  - case, number
    * *-m* 'ERG.SG'
    * *-t* 'ABS.PL'

- enclitics: coordination, evidentiality
  - nominal coordinator *=lu* 'and': *aġnaġlu paipiuraġlu* '(a) woman and (a) baby'
  - evidential *=guuq* 'it is said; they say': *Putum akłaq tuqqutchukkaa**guuq***. 'It is said that Putu wants to kill (the) bear.' [source: Seiler (2005:19)]

The proposed division of suffix and enclitic types, while simpler than Fortescue's (1983), is sufficient to capture order tendencies in Malimiut Iñupiaq. Fortescue's (1983) system is not without merit, but we gain very little explanatory power from multiple categories that we do not already have by recognizing that the order is semantically governed to a great extent. See also Section 4.3 for its specific application to verbs.

I will return to the semantic influence in suffix/enclitic order in a moment, but first let us examine the possible structure of nouns and verbs in Iñupiaq. At its simplest an Iñupiaq

verb must contain a root and a portmanteau person/number/mood suffix. A maximal verb template is as follows:

root-(deriv)*-(infl)*-person/number/mood=(enclitic)*

A maximal verb contains one root, a theoretically unlimited number of derivational suffixes (called *postbases* in traditional Eskimo-Aleut linguistics), and at least one inflectional suffix (see also Section 5.2.1). The inflectional suffixes constitute a closed class, while Seiler (1997) argues that the derivational suffixes are a "nearly closed class".

An Iñupiaq noun may consist of a bare noun without suffixes (such as *qipmiq* 'dog') or a noun plus various derivational and inflectional suffixes. A maximal noun template is as follows:

root-(deriv)*-(infl)*-(number.case)=(enclitic)*

If a noun is derived from a verb (i.e., has a verb root), the derivational V > N suffix must precede any inflectional suffixes that may be present. The number and/or case marking must be final, though there may be no overt number or case; for example, absolutive singular is unmarked.

Note that I assume a recursive word structure where stems are complex but there is only one derivational suffix at each level: $[[[[root]\text{-deriv-}]_N\text{-deriv}]_V\text{-deriv}]_N$-INFL=(encl)*.

For both nouns and verbs, a root can be either nominal or verbal. If a verb has a nominal root, a derivational suffix is employed to change the root's lexical category. Ultimately it is the presence or absence of obligatory verbal TAM marking that differentiates nouns and verbs, not the lexical category of the root. Furthermore, Woodbury (2004) and others have noted that if a derivational process applies to a root, a new stem is created that itself can be the input to another derivational process. In other words, if the verb template is [root-(deriv)*]-(infl)*-person/number/mood=(enclitic)*, the part between brackets must serve as a

complex stem to permit recursion. Suffixation in Iñupiaq and other Eskimo-Aleut languages is highly recursive. (Woodbury 2004) Example (11) illustrates this recursion:

(11) a. niġi
niʁi
eat
'to eat'

b. niġiyumman
niʁi-yummatə[5]
eat-urge (n.)
'(an) urge (n.) to eat'

c. [niġiyummati]qaqtuq
[niʁi-yummatə]-qaq-tuq
[eat-urge (n.)]-HAVE-3S.INDIC
'He/she has an urge to eat.' [source: (Seiler 2005:266)]

With so many suffixes, suffix and enclitic ordering can be crucial in determining scope and meaning, particularly as it relates to scope of negation (see Section 8.7). Fortescue (1983:97) discusses affix order, which he says is "the same for all Inuit dialects," but he notes that "in [North] Slope Iñupiaq for combinations of negation plus an affix of modality the prevailing order is with the negative affix first, whereas in [West] Greenlandic the preference is, as described, for negation to follow modality." Seiler (1997, 2005) also discusses suffix order in Iñupiaq. In Seiler (2005:242), he concludes that while there are various functions of derivational suffixes, their order is not strict; the only strictly observed suffix order is that the person/number/aspect/mood inflectional suffix must be verb-final. Despite this general laxity of order, if there is a derivational suffix which changes the root's lexical category, it has a strong tendency to occur immediately to the right of the root, as in example (11) above.

[5]Recall from Section 2.2.3 that the root of any word ending in /n/ is /tə/, thus the root of *-yumman* is *-yummati* /-yummatə/.

This is why it is necessary to consider the output of a root plus derivational suffix a new stem in its own right.

Suffix ordering within Iñupiaq nouns is rather straightforward and need not be repeated (see page 147 above). Verbs, however, have the following rules and tendencies:

- verbs must end with one—and only one—of the portmanteau person/number/mood inflectional suffixes (such as *-tuq* '3S.INDIC')
  - the only exception is that enclitics can follow the obligatory inflectional suffix
- a valency- or word-class-changing derivational suffix has a strong tendency to appear immediately to the right of its root or stem—in fact, in my fieldwork data there are no exceptions, so I claim that this is a rule rather than a tendency in Malimiut Iñupiaq.
  - to allow for recursion, a stem may consist of a bare noun or verb root, or it may be a complex stem such as [root-(deriv)*-(infl)*]
- polarity suffixes tend to follow inflectional suffixes *other* than the obligatory final person/number/mood suffix; e.g. *-paluk-it* 'probably-NEG' is more likely to occur than *-it-paluk* 'NEG-probably'). This is the opposite of the tendency for Kalaallisut noted by Fortescue (1983:97).
- tense, negation, and evidentiality are optionally marked, but if it is, it appears after any valency-changing suffixes and before the final person/number/mood suffix (cf. Fortescue (1980))—in simpler terms, any inflectional suffixes or *non*-valency-changing derivational suffixes have a strong tendency to appear after stem-(deriv)* but before the portmanteau person/number/mood suffix.

As mentioned on page 146, semantics is very important in Iñupiaq suffix/enclitic order, because the order of suffixes/enclitics can change the meaning and/or scope. Fortescue

(1983:97) may lead readers to the faulty—at least for Iñupiaq—assumption that, for example, because a suffix belongs to a given suffix category, it has one placement slot within a word and one only. However, this is mistaken; unlike the position class rules that work so well for Na-Dene (Kari 1989, Rice 1989, 2000, Hargus & Tuttle 1997) verbs, Iñupiaq suffixes can occur in nearly any arrangement between the verb root or stem and final inflectional suffix. There is no restriction that once a 'slot' is filled, the same suffix cannot be used again elsewhere in the verb. This is in part why I prefer fewer suffix categories. For similar ordering effects with negation suffixes, see §8.7.1.

Although arrived at independently, my analysis of the semantic importance of suffix order is essentially identical to the thesis provided in Woodbury (2004:160). He states that, "[a]nomalies, 'glitches', and other special qualitifications of the rules for inflectional and derivational suffixation ...are referred to the grammatical or semantic content of individual suffixes."

6.3 Noun incorporation

Iñupiaq, like other Eskimo-Aleut languages and dialects, makes frequent use of noun incorporation (NI). (Mithun 1984:889) summarizes noun incorporation succinctly: "It combines constituents, namely N's and V's, that are usually associated syntactically." Following (Mithun 1984:847), I define noun incorporation as a derivational process where a noun stem is attached to a verb stem, resulting in a new derived verb stem. In Iñupiaq, any given noun N can become part of a verb stem V as follows: [N-suffix$_{deriv}$-]$_V$.

In Iñupiaq (as in other Inuit languages/dialects), the incorporated noun is always leftmost within the verb, as shown in example (12). All noun incorporation takes the form of a full lexical noun or pronoun followed by a derivational suffix that results in a verb stem. That NI verb stem then takes whatever inflectional suffixes, TAM, and enclitics that any other simple

verb would take. Example (12) also demonstrates that nouns are incorporated by attaching a derivational suffix, thereby creating a verb which takes characteristic verbal suffixes.

(12) a. Qaqqulaakitpisi? / Ii, qaqqulaakitchugut.
qaqqula:k-it-pisi: / i: qaqqula:k-it-tuɣut
pilot bread-HAVE ENOUGH-2P.INTERR / yes pilot bread-HAVE ENOUGH-1P.INDIC
'Do you (pl.) not have enough pilot bread? / Yes, we (pl.) don't have enough pilot bread.'[6]

b. Kuulialiuqtuq.
ku:lia-liuq-tuq
Kool Aid-make-3S.INDIC
'She's making Kool-Aid.' [source: 021508]

The fact that the verb stem created by NI takes one and only one set of mood suffixes is evidence that it constitutes a syntactic word (see §6.1.3). This is demonstrated in example (13a), where the mood suffix from (12b) has been omitted, resulting in ungrammaticality. The NI verb is also a phonological word because it obeys word-internal phonological rules, such as the vowel hiatus rule (see §6.1.1). This is demonstrated in example (13b), where [ŋ] is inserted to prevent a VVV sequence. Finally, the NI verb appears to be a morphological word as well (see §6.1.2), because morpheme order must still be obeyed as demonstrated by example (13c). Moreover, examples (13d)–(13f) illustrated that modifiers such as adverbs cannot intervene between parts of the word, whether they are bound adverbial suffixes as in (13e) or lexical adverbs such as *ataramik* 'always' as in (13f).

(13) a. *Kuulialiuq.
ku:lia-liuq
Kool Aid-make
intended for 'make Kool-Aid' [source: 021508]

[6]The final vowel lengthening in the word *qaqqula:k-it-pisi:* is characteristic of yes/no question formation, but it is not indicated in the orthography. See Section 8.8 for more on question formation strategies.

b. Qikiqtaġruŋ**miuŋuruq**.
qikiqtaʁẓuk-**miu**-**u**-ẓuq
Kotzebue-resident-BE.3S.INDIC
'He/she is from Kotzebue.' [source: 020408]

c. *Tuttuniaqtuqtuq.
tuttu-niaq-tuq-tuq
caribou-INCEPT-EAT-3S.INDIC
intended for 'He/she will eat caribou.' [grammatical version: *Tuttutuġniaqtuq.*]

d. Hamburgeqtuġuuruŋa.
hamburgeq-tuq-su:-ẓuŋa
hamburger-eat-always-1S.INDIC
'I always eat hamburgers.' [source: 021208]

e. *Hamburgeġuutuqtuŋa.
hamburgeq-su:-tuq-tuŋa
hamburger-always-eat-1S.INDIC
intended for 'I always eat hamburgers.'

f. *Hamburgeġataramiktuqtuŋa.
hamburgeq-ataẓamik-tuq-tuŋa
hamburger-always-eat-1S.INDIC
intended for 'I always eat hamburgers.'

Mithun (1984, 1986) does not believe that Eskimo-Aleut languages have true noun incorporation. In Mithun (2009:3), she claims that Eskimo-Aleut languages have "constructions diachronically and functionally equivalent to prototypical noun incorporation" but that there are differences, mainly due to their diachronic origin. Regardless of its diachronic origin, I believe that Iñupiaq does have noun incorporation synchronically. First, it is widely accepted that this phenomenon in Eskimo-Aleut is noun incorporation, and further, that there is little to no compounding at all in the Eskimo side of the Eskimo-Aleut language family (Woodbury 2004:157). While I am inclined to agree with Booij (2005:6), who argues that "there is no sharp boundary between compounding and derivation", based on my own fieldwork data and research my reasons for believing that Iñupiaq really does have noun incorporation are

as follows:

1. It is still possible to modify the N in a NI-verb, which should not be possible with compounds (see example (17) below).

2. It is highly productive and nearly *anything* can be incorporated—this is not usually the case with compounding. Indeclinable particles and conjunctions are some of the only words in the language that cannot be incorporated into a verb.

3. The result is always a verb, but if it were compounding, we might expect V-N compounds, too. However, no V-N compounds exist in Iñupiaq to my knowledge. Given that N-N compounds are also prohibited, with the exception of a handful of additive numerals consisting of two numeral roots (see Section 5.1.3), it seems unlikely that N-V compounding would be not only permitted but extremely productive.

4. The resulting verb is both predicate of the clause and contains one of the arguments as its root. As noted by Gerdts (1998:88), the main difference between compounding and noun incorporation is that in NI, "the stem that results ... is both the verb and one of the arguments of the verb."

Ultimately Gerdts (1998:97) believes Eskimo-Aleut has 'denominal verbs' rather than NI, but the only real difference cited is that 'denominal verbs' have no corresponding non-incorporated version. The evidence provided is the fact that Eskimo languages have no lexical verb of possession (i.e., 'have'), while NI is used to create possession predicates. In other words, 'S O *have*' does not exist but 'O-*have*' does (see example (17b) below. This seems like an insufficient reason to rule out noun incorporation, particularly as there may be diachronic reasons for the lack of a lexical verb of possession. Moreover, the lack of an alternative method of achieving the same meaning should not imply that the first method is somehow not what it appears to be.

Theories of noun incorporation fall into two broad categories: those that treat noun incorporation as lexical process (Mithun 1984, Mohanan 1995), and those which treat it as a syntactic process (Sadock 1980, Woodbury & Sadock 1986). However, some theories recognize that noun incorporation is not easily explained by a lexical hypothesis or a syntactic one. Sadock's (1985) Autolexical Theory, for example, treats noun incorporation as being simultaneously morphological and syntactic. Likewise, Mohanan (1995:79, 81) claims that while that an incorporated noun is "a noun stem exhibiting dual behaviour [as] syntactic argument of a verb, but morphologically part of that verb," it is also true that "there must be some representation in which the incorporated noun is syntactically independent."

6.3.1 Types of noun incorporation

Mithun (1984) describes four types of noun incorporation, which form an implicational hierarchy such that a language with type IV is expected to have types I, II, and III. Iñupiaq has three of these types of noun incorporation, as demonstrated in the following sections.

6.3.1.1 Lexical compounding

Type I in Mithun (1984:847) is what she dubs "lexical compounding," where a noun is incorporated into a verb stem to create a new verb. The incorporated noun then bears a "semantic relationship to its host V" such as instrument, location, or patient (that is, the O argument of a transitive clause). The resulting verb is intransitive, meaning that the incorporated noun is not part of the clause's argument structure. This is essentially identical to what Kroeger (2005:280) calls "valency-decreasing incorporation," where the O argument is incorporated and the verb becomes intransitive.

Example (14a) shows a typical transitive clause with A and O arguments; example (14b) shows a noun-incorporating verb where the incorporated noun corresponds to the O argu-

ment of the transitive in (14a). Example (14c) shows noun incorporation where the incorporated noun is understood as the instrument. Example (14d) shows an incorporated location.

(14) a. Aŋutim tuttu niġigaa.
aŋuti-m tuttu-Ø niʁi-ɣa:
man-ERG caribou-ABS eat-3S.3S.INDIC
'[The] man eats caribou.'

b. Aŋun tuttutuqtuq.
aŋun-Ø tuttu-tuq-tuq
man-ABS caribou-eat-3S.INDIC
'[The] man eats caribou.' [O argument]

c. Umiaqtuqtuguk.
umiaq-tuq-tuɣuk
boat-utilize-1D.INDIC
'We (two) are traveling by boat.' [instrument]

d. Qikiqtaġruuruŋa.
qikiqtaʁʐuk-u-ʐuŋa
Kotzebue-BE.1S.INDIC
'I'm in Kotzebue.' *or* 'I'm going to Kotzebue.' [location]

6.3.1.2 Manipulation of case

Type II in Mithun (1984:847, 856) is "manipulation of case," where an oblique argument moves into the structural position vacated by the now incorporated noun. In type II, the resulting V is transitive and instrument, location, or possession obliques can assume O argument status. Strictly speaking, Iñupiaq does not have type II noun incorporation, because NI verbs in the language are syntactically intransitive. However, Iñupiaq does have *semantically* transitive noun incorporation, where an instrumental-marked oblique argument behaves as a semantic patient of the verb despite not being a syntactic argument, as demonstrated in example (15).

(15) a. Killaiyautituqtuŋa aiqpaŋnik.
killaijauti-tuq-tuŋa aiqpak-nik
sewing machine-utilize-1S.INDIC mitten.DU-INSTR.DU
'I'm sewing a pair of mittens with a sewing machine.'

b. Pukuktuq atnuġaanik.
pukuk-tuq atnuʁa:q-nik
pick.up-3S.INDIC piece.of.clothes-INSTR.PL
'She's picking up clothes.'

Examples such as (15a) and (15b) indicate that the instrumental-marked NP, while not a syntactic argument, is also not functioning as an instrumental oblique. The subject of the clause in (15a) is not using a pair of mittens to sew, nor is the subject of (15b) using clothes to pick up; rather, the mittens and clothes are the objects, albeit not syntactically.

6.3.1.3 Manipulation of discourse structure

Type III in Mithun (1984:847, 859) is "manipulation of discourse structure," where noun incorporation is used to background information, as opposed to non-incorporated forms being used for new information. There is no strong evidence that Iñupiaq uses noun incorporation for discourse structure. In a narrative elicited using the children's wordless picture book *A Boy, a Dog, and a Frog* (Mayer 1967), for example, my consultants consistently failed to use noun incorporation to track old information. Instead, they either used a full lexical noun to identify the referent or used no noun or pronoun whatsoever, relying on verb agreement alone, but without noun incorporation. In example (16a), two referents are being introduced for the first time. In example (16b), the boy and the dog are referred to once again with full lexical nouns, though at that point they were old information. The subject was already indicated by the verb agreement, and in context, no other dual subject was present, so the referent would have been clear without the overt NPs.

(16) a. Nukatpiaġruglu qimmiġlu pisuqtuk.
nukatpiaʁẓuk=lu qimmiq=lu pisuq-tuk
boy=and dog=and walk-3D.INDIC
'The boy and the dog are walking.' [source: 081706]

b. Yahii! imaaqtuk nukatpiaġruġlu qimmiġlu.
jahi: ima:q-tuk nukatpiaʁẓuk=lu qimmiq=lu
oh no! fall.into.water-3D.INDIC boy=and dog=and
'The boy and the dog fell into the water.' [source: 081706]

Iñupiaq therefore appears to be a counterexample to Mithun's implicational hierarchy, as Iñupiaq would appear to have Types I, II, and IV but not Type III. I acknowledge, however, that I have little narrative data suitable for tracking referents in discourse structure. Therefore as more discourse data is analyzed, it may indeed be the case that Iñupiaq uses noun incorporation to background information. It may also be a case where despite my best intentions, elicitation attempts interfered with natural discourse tracking, particularly since there is a bias toward new information in fieldwork elicitation.

6.3.1.4 Classificatory noun incorporation

Type IV in Mithun (1984:847) is "classificatory noun incorporation," where a typically very general N is incorporated into the V, while a more specific N narrows the scope. In Mithun (1984:869), she states that "[g]eneric N's can be incorporated to qualify V's, while more specific external NP's overtly identify their patients." Malimiut Iñupiaq uses this type of noun incorporation quite frequently. The external qualifying NP takes instrumental case, and MacLean (1993) calls this function of the instrumental (modalis) case the "modalis of specification."

(17) a. Niġiqaqtuguk tuttumik.
niʁi-qaq-tuɣuk tuttu-mik
food-HAVE-1D.INDIC caribou-INSTR
'We (dual) have caribou for food.'

b. Quliŋuġutaiḷanik nukatchiaqaqtuŋa.
qulinuʁutailaq-nik nukacciaq-qaq-tuŋa
nine-INSTR.PL younger.sibling-have-1S.INDIC
'I have nine younger siblings.'

c. Itchaksranik aksraktuanik tautuktuŋa.
iccakşat-nik akşaktuaq-nik tautuk-tuŋa
six-INSTR.PL car-INSTR.PL see-1S.INDIC
'I see six cars.'

d. Putum tupqa igalauraqaqtuq.
putu-m tupəq-a iɣalauẓaq-qaq-tuq
p.n.-ERG.SG house-3S.3S.POSS little.window-HAVE-3S.INDIC
'Putu's house has a little window.' [source: Seiler (2005:264)]

Caballero et al. (2008:13–14) notes that Rosen (1989) distinguishes between Type I (lexical compounding) and Type IV (classificatory noun incorporation): "In compounding incorporation the verb becomes intransitive (as though the incorporated noun were not in the argument structure), and the incorporated noun cannot have external modifiers; in classificatory incorporation the verb remains transitive and the incorporated noun can have external modifiers and the like...." In this respect, the Iñupiaq data do not fall neatly into either category. In Type I, the incorporated noun arguably remains part of the argument structure, but in Type IV, Iñupiaq verbs do not remain transitive despite the external modifiers.

This possibility for modification of incorporated nouns is problematic for both lexicalist and syntactic theories. Sadock (1980), for example, argues that Kalaallisut data like this Iñupiaq data demands a less rigid separation between the lexicon, morphology, and syntax than has been assumed by major schools of linguistic thought, while Mithun (1984) argues that noun incorporation is very clearly morphological. Mithun (1984:847) says that noun incorporation is a "solidly morphological device that derives lexical items, not sentences." I follow Mithun (1984) in the belief that noun incorporation is morphological but, to paraphase her, that it is about as close to syntactic as morphology can be.

In summary, Malimiut Iñupiaq has three of Mithun's (1984) four noun incorporation types. It appears to break the implicational hierarchy in Mithun (1984:874), however, because it lacks Type III but has Type IV . That it has three of the four uses is not surprising, given how frequent NI is in the language and the range of functions for which it is used.

Chapter 7

Constituency

This chapter concerns syntactic constituency in Malimiut Iñupiaq, both at the clause level and at the sentence level.

7.1 Clausal constituency

7.1.1 Noun phrase

Noun phrases (NPs) in Iñupiaq may consist of a single noun or pronoun, or they may consist of a head noun together with modifiers such as quantifiers. As there is no lexical category of adjectives (see §5.2.2), nouns within an NP can only be modified by other nouns in apposition or by modifying suffixes. For example, what would be expressed by an adjective in another language, such as 'big dog', can be expressed in Iñupiaq in one of two ways: either a noun with an augmentative suffix or a clause with an NP and a verb 'be big'. In the second case, the domain is larger than the NP and it will therefore not be discussed in this section.

One instance where an NP is used to modify another NP is with colors and numerals, as in example (1). Colors and numerals belong to the noun class (see §5.1.3 and §5.2.2), and they can stand in apposition to other nouns, as in example (1a) where *taaqtaaq* 'black(ness)' and *suluutnaq* 'square' are apposed.

(1) a. Taaqtaaq suluutnaq aqsraaq saniġaani ittuq.
ta:qta:q sulu:tnaq aqʂa:q saniʁaq-aani it-tuq
blackness square ball side-LOC.SG exist-3S.INDIC
'The black square is beside the ball.' [source: 030708]

b. Itchaksrat ittukpalat ataraat qiñiyunaqtut.
iccakʂat ittukpalak-t ataʐa:q-t qinijunaq-tut
six-3P pink-3P dress-3P be.pretty-3P.INDIC
'The six pink dresses are pretty.'

c. Quliŋuġutaiɬat nasautit aquppiutami ittut.
quliŋuʁutailaq-t nasautə-t aquppiutaq-mi it-tut
ten-PL hat-PL chair-LOC be-3P.INDIC
'Ten hats are on the chair.'

In practice, it is rare to find an Iñupiaq NP with more than one lexical modifier as in example (1b) above. However, the nouns themselves may take modifying suffixes with adverbial or adjectival function (see Sections 5.2.2 and 6.1.2), as shown in example (2a). To translate a noun phrase such as 'big black dog', it would be more common to find 'big' as a nominal suffix and 'black' as an independent modifier, as in example (2b).

(2) a. uluqpak
ulu-qpak
ulu.knife-AUG
'big ulu knife'

b. taaqtaaq qipmiqpak
ta:qta:q qipmiq-qpak
blackness dog-AUG
'big black dog'

Quantification and other types of modification interact with the morphology to a great extent; suffixation bears a large portion of the quantification and modification load.

The issue of modification is complicated by the frequent use of noun incorporation (see Section 6.3.1.4). Often if a noun needs to be modified, such as in example (3), it is incorporated into a verb and then modified with another noun in the instrumental case. When a noun is incorporated into a verb and then a modifying NP is used, the incorporated noun and its modifier no longer belong to the same NP.

(3) Taaqtaanik qipmikitchuq.
ta:qta:q-nik qipmiq-kit-tuq
black-INSTR.PL dog-not.have.enough-3S.INDIC
'He/she has few black dogs.' [source: 020808]

There are several pieces of evidence that the noun phrase is a valid syntactic constituent in Malimiut Iñupiaq. First, a noun phrase can be replaced only by another noun phrase; if a single word can be replaced by some other unit, that unit must be of the same kind as the single word (Kroeger 2005:29). For example, the NP *uvaguk* 'we (two)' in (4a) is a single word that can be replaced by another NP, such as *uvaŋalu aġnaġlu* 'the woman and I' in (4b). However, it cannot be replaced by something other than an NP, such as a verb in example (4c). Therefore the fact that an NP must be replaced by another NP indicates that NP is a syntactic constituent.

(4) a. Uvaguk niġiruguk.
uvaɣuk niʁi-ʐuɣuk
1D.PRO eat-1D.INDIC
'We two are eating.'

b. Uvaŋalu aġnaġlu niġiruguk.
uvaŋa=lu aʁnaq=lu niʁi-ʐuɣuk
1S.PRO=and woman=and eat-1D.INDIC
'The woman and I are eating.'

c. *Pisuktuguk niġiruguk.
pisuk-tuɣuk niʁi-ʐuɣuk
walk-1D.INDIC eat-1D.INDIC
intended for 'We (two) are walking and eating.'

Example (4c) also leads to a second test: if a unit is replaced, its replacement must bear the same grammatical relation to the clause as a whole as the original unit (cf. Kroeger (2005:29)). Replacing the NP in (4a) with another NP as in (4b) yields a grammatical result. However, replacing the NP in (4a) with a word or phrase that is not an NP, such as the verb *pisuktuguk*

'we (two) are walking' in (4c) yields an ungrammatical result.[1]

A third test of noun phrase constituency is content question formation: to form a content question, constituents can be replaced by question words (Kroeger 2005:31). The fact that *nukatpiaġruich* 'boys' in (5a) can be replaced with *kiña* 'who?' in (5b) indicates that *nukatpiaġruich* 'boys' is a syntactic constituent. Then, because *kiña* 'who?' can also replace the noun phrase *Naŋmaglu Qaulluġlu Qaliŋaglu* 'Naŋmak, Qaulluq, and Qaliŋak' in (5c), it follows that *Naŋmaglu Qaulluġlu Qaliŋaglu* must also be a constituent.

(5) a. Nukatpiaġruich tauqsiġñiaġviḷiaġniaqtut.
nukatpiaʁʐuk-it tauqsiʁniaʁvik-liaq-niaq-tut
boy-ABS.PL store-purpose-FUT-3P.INDIC
'The boys (pl.) are going to the store.'

b. Kiña tauqsiġñiaġviḷiaġniaqpat?
kina tauqsiʁniaʁvik-liaq-niaq-pat
who store-purpose-FUT-3P.INTERR
'Who (pl.) is going to the store?'

c. Naŋmaglu Qaulluġlu Qaliŋaglu tauqsiġñiaġviḷiaġniaqtut.
naŋmaɣlu qaulluʁlu qaliŋaɣlu tauqsiʁniaʁvik-liaq-niaq-tut
p.n.=and p.n.=and p.n.=and store-purpose-FUT-3P.INDIC
'Naŋmak, Qaulluq, and Qaliŋak are going to the store.'

Likewise, the answer to a content question must be a constituent (Kroeger 2005:31),[2] as demonstrated in (6). The answer to *qavsiñik natchiġnik* 'how many sealskins' in example (6a) is *malġugnik* 'two' in example (6b).[3]

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[1]It is possible to coordinate two verbs in Iñupiaq, of course, but this is usually accomplished by placing one of the verbs in the participial mood. Thus *Pisulunuk niġiruguk* 'We (two) are eating while walking.'

[2]However, as Claire Bowern reminded me, Kroeger's (2005) test is not without problems. The answer to a question such as "Who's going to the concert?" can be "Andrew is" although "Andrew is" is not a constituent. Nevertheless, the test works for Iñupiaq, simply because there are no auxiliary verbs in the language. The answer to "Who's going to the concert?" in Iñupiaq would be either the name(s) alone or a full sentence.

[3]Note that in example (6b) the word *malġugnik* 'two-INSTR.DU' is repeated twice due to speaker hesitation,

(6) a. Qavsiñik natchiġnik pauŋŋaaliuġuuvat?
qavsi-nik nacciq-nik pauŋŋa:k-liuq-ɣu:-vat
how.many-INSTR.PL hair.seal-INSTR.PL sealskin.boot-make-usually-3P.INTERR
'How many sealskins do they use when they are making those waterproof boots?'

[source: Edwardsen (1993:42)]

b. Malġugnik, malġugnik piḷiuġuurut
malʁuɣ-nik malʁuɣ-nik pi-liuq-ɣ:-ʐut
two-INSTR.DU two-INSTR.DU *pi*-make-usually-3P.INDIC
mikimmata.
miki-mmata
be.small-3P.NONREFL.COND
'They usually use two (sealskins) when they are small.' (i.e., if (the sealskins) are small, they usually use two) [source: Edwardsen (1993:43)]

A fourth test is that every member of a noun phrase must take the same case, as in example (7a). This is because as a constituent, the noun phrase can occur in various syntactic positions, including A, S, and O (cf. Kroeger (2005:30)). Examples (7b)–(7g) demonstrate the NP *aġnaq* 'woman' in a variety of grammatical relations. Example (7a) shows that coordinated NPs take the same case, although this is merely a tendency rather than an absolute rule. Iñupiaq speakers sometimes place the case on all coordinated NPs and sometimes on just some of them. There is no obvious conditioning factor for whether coordinated NPs are all marked with case or not, except that if only one of them is marked, it is almost certainly going to be the last one in the NP.

(7) a. Aŋutimlu aġnamlu tuttu tautukkaak.
aŋuti-m=lu aʁnaq-m=lu tuttu-Ø tautuk-ka:k
man-ERG.SG=and woman-ERG.SG=and caribou-ABS see-3D.3S.INDIC
'The man and woman saw a caribou.'

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not grammatical necessity. Without speaker hesitation, the sentence would be simply *Malġugnik piḷiuġuurut mikimmata.*

b. Aġnam akpik niġigaa.
aʁnaq-m akpik-Ø niʁi-ɣa:
woman-ERG salmonberry-ABS eat-3S.3S.INDIC
'The woman is eating a salmonberry.' [role: A]

c. Aġnaq akpiŋmik niġiruq.
aʁnaq-Ø akpik-mik niʁi-ʐuq
woman-ABS.SG salmonberry-INSTR.SG eat-3S.INDIC
'The woman is eating a salmonberry.' [role: S]

d. Aŋutim aġnaq tusaagaa.
aŋuti-m aʁnaq-Ø tusa:-ɣa:
man-ERG woman-ABS see-3S.3S.INDIC
'The man sees the woman.' [role: O]

e. Qaliŋaum quppiġaaq atauksɾitchaa aġnamun.
qaliŋak-m quppiʁa:q-Ø aukʂit-ta: aʁnaq-mun
Qaliŋak-ERG coat-ABS lend-INDIC.3S.3S woman-ALL
'Qaliŋak lent a coat to the woman.' [role: oblique]

f. Uqaqpisi aġnakun?
uqaq-pisi aʁnaq-kun
talk-2P.INTERR woman-PERL.SG
'Are you (pl.) talking about the woman?' [role: oblique]

g. Aŋun iglaqtuq aġnatun.
aŋun-Ø iɣlaq-tuq aʁnaq-tun
man-ABS laugh-3S.INDIC woman-SIM.SG
'The man laughs like a woman.' [role: oblique]

7.1.1.1 Constituent order

Although there are few strict requirements on argument order (see Section 7.2.1), there are some word order tendencies within noun phrases. These are difficult to categorize except to say that where noun phrase word order is concerned, the head of the NP typically follows any other parts of the NP. Like Fortescue (1984:117) notes for West Greenlandic, for example, within an Iñupiaq possessive noun phrase, the possessor—if present—must precede the head

noun. This is shown in example (8).

(8) [Kataum umiaŋa] iłuaqsaġaa.
[katak-m umiaq-ŋa] iłuaqsaq-ɣa:
[p.n.-ERG boat-3S.NONREFL.POSS.ABS] fix-3S.3S.INDIC
'He/she fixed [Katak's boat].'

See Section 3.1.3 for more on possession.

If modifiers such as colors, numbers, or quantifiers are used, they tend to precede their head, as in example (9). This is the opposite of the NP-internal order claimed by Fortescue & Lennert Olsen (1992:116) for West Greenlandic; they state that in West Greenlandic, the head must precede any modifier *except* for a possessor NP.

(9) a. Qavsiñik natchiġnik
qavsi-nik nacciq-nik
how.many-INSTR.PL hair.seal-INSTR.PL
pauŋŋaaliuġuuvat?
pauŋŋa:k-liuq-ɣu:-vat
sealskin.hip.boot-make-usually-3P.INTERR
'How many sealskins do they use when they are making those waterproof boots?'
[source: Edwardsen (1993:42)]

b. kaviqsaamik aksraktuaq
kaviqsa:q-mik akşaktuaq-Ø
red-INSTR car-ABS
'red car'

Perhaps because the verb is usually sentence-final, there is also a tendency for modifiers of incorporated nouns to precede the verb containing the incorporated noun. This is shown in (10), where the incorporated noun *qipmiq* 'dog' is modified by an external NP.

(10) Taaqtaanik qipmikitchuq.
ta:qta:q-nik qipmiq-kit-tuq
black-INSTR.PL dog-not.have.enough-3S.INDIC
'He/she has few black dogs.' [source: 020808]

7.1.2 Verb phrase & non-configurationality

There is no evidence for a verb phrase in Malimiut Coastal Iñupiaq, suggesting that it may be a non-configurational language of the type suggested by Hale (1983), among others. According to Lyons (1999:154), "The properties thought to typify non-configurationality include: free word order, "flat" (as opposed to hierarchical) phrase structure, discontinuous expressions, extensive use of null anaphora, absence of syntactic movement rules and (perhaps) of empty categories." Fortescue & Lennert Olsen (1992:116) have claimed that Kalaallisut, another member of the Inuit dialect continuum, is a non-configurational language, so it is not surprising that Iñupiaq is as well. Although Iñupiaq does not make extensive use of syntactically discontinuous expressions as Hale (1983:6) describes for Warlpiri, order of verb and argument(s) is free, and it exhibits frequent null anaphora.

Although there are some restrictions on order within an NP as discussed in Section 7.1.1.1, there are no apparent restrictions on the order of arguments in a sentence. In other words, there is more or less free word order, one of the criteria for non-configurationality adopted by Hale (1983). Word order variation in Iñupiaq does not appear to be pragmatically marked, unlike the situation in Russian where word order is relatively free but with pragmatic effects on the meaning such as shifting the focus; rather, the order seems to be largely up to the speaker. The verb is typically last in an Iñupiaq clause. It is not common for the verb to be first except, of course, in situations where the verb constitutes the entire clause. Note also that there are no complex predicates in the language of the prototypical type where multiple words combine to form one predicate (Bowern 2008), nor can there be verb serialization where there are multiple V stems within one verb. There are, however, complex verb structures due to noun incorporation and valency-changing and other derivational suffixes (see Sections 6.3 and 8.9). The examples in (11) demonstrate clauses with different numbers of arguments and obliques. For example, (11a) illustrates an intransitive sentence with unusual

verb-initial word order, and (11b) illustrates a typical transitive sentence.

(11) a. Naŋittuq nukatpiaġruk.
naŋit-tuq nukatpiaʁɣuk-Ø
be.sick-3S.INDIC boy-ABS.SG
'The boy is sick.' [source: 080707]

b. Dave-gum umŋiyaġaa Bill.
dave-ɣum umŋijaq-ɣa: bill-Ø
p.n.-ERG shave-3S.3S.INDIC p.n.-ABS
'Dave shaved Bill.' [source: 071907]

c. Ukia-mi aullaaqsruġuurugut.
ukiaq-mi aulla:qʂuq-su:-ʐuɣut
autumn-LOC pick.berries-HAB-1P.INDIC
'In the autumn we (pl.) usually pick berries.'

d. Kissitchinikun aŋun issumaruq.
kissittini-kun aŋun-Ø issuma-ʐuq
counting-PERL man-ABS think-3S.INDIC
'the man is thinking about counting/numbers' [source: 080707]

e. Aŋuniaqtim aġviġluaq tuqutkaa nauligamik.
aŋuniaqtə-m aʁviʁluaq-Ø tuqut-ka: nauliɣaq-mik
hunter-ERG gray whale-ABS kill-3S.3S.INDIC harpoon-INSTR
'The hunter killed the gray whale with a harpoon.'

f. Marim John amuqatigigaa kuvramik.
Mari-m John-Ø amu-qatiɣi-ɣa: kuvʐaq-mik
Mari-ERG.SG John-ABS.SG pull.out-together.with-3S.3S.INDIC net-INSTR.SG
'Mary, together with John, pulls out the net.' [source: Nivens (1986:82)]

g. Aŋun iglaqtuq aġnatun.
aŋun-Ø iɣlaq-tuq aʁnaq-tun
man-ABS laugh-3S.INDIC woman-SIM.SG
'The man laughs like a woman.'

There is also extensive use of null anaphora in Iñupiaq as in other Inuit languages/dialects, demonstrated by the examples in (12).

(12) a. Atniġaaŋa.
atniq-ɣa:ŋa
hurt-3S.1S.INDIC
'He/she/it hurt me.' [source: 062807]

b. Tusaaviŋa?
tusa:-viŋa
hear-2S.1S.INTERR
'Can you (sg.) hear me?' [source: 070307]

What may seem like evidence for a VP is only evidence for a verb. For example, if we test for constituency using replacement tests, it becomes apparent that a verb can only be replaced by another verb, as illustrated by examples (13a) and (13b). Examples (13c) and (13d) demonstrate that a verb can be replaced by the interrogative verb, *su* 'what'.

(13) a. Qipmiq uvuuna isiqtuq.
qipmiq-Ø uvu-una isiq-tuq
dog-ABS.SG DEM.ADV-PERL enter-3S.INDIC
'The dog came in through here (visible, restricted, proximal).' [source: 031708]

b. *Qipmiq uvuuna paalik.
qipmiq-Ø uvu-una pa:lik-Ø
dog-ABS.SG DEM.ADV-PERL entrance-ABS.SG
intended for 'The dog entered through here (visible, restricted, proximal).'

c. Suva aŋun?
su-va aŋun-Ø
what-3S.INTERR man-ABS.SG
'What is the man doing?'

d. Kissitchinikun aŋun issumaruq.
kissittini-kun aŋun-Ø issuma-ʒuq
counting-PERL man-ABS.SG think-3S.INDIC
'The man is thinking about counting/numbers.' [source: 080707]

Evidence from the use of the so-called 'dummy' stem *pi* also supports the conclusion that there is no verb phrase in Iñupiaq. If you use *pi* to replace a verb stem as in example (14), it

targets V, not VP.

(14) Makkaum niqi niġigaa, aglaan Kunayam
makkak-um niqi-Ø niʁi-ɣa:, agla:n kunajaq-m
p.n.-ERG.SG meat-ABS.SG eat-3S.3S.INDIC but p.n.-ERG.SG
akutuq pigaa.
akutuq-Ø pi-ɣa:
Eskimo.ice.cream-ABS.SG *pi*-3S.3S.INDIC
'Makkak is eating meat, but Kunayaq is eating Eskimo ice cream.'

The fact that the dummy verb *pi* can take its own overt argument indicates that the replacement is targeting a verb, not a VP.

Subject/object asymmetries may also shed light on non-configurationality in Iñupiaq, but at present I do not have sufficient relevant data from the Malimiut Coastal dialect to address that issue.

7.1.3 Coordination and conjunction

There are numerous strategies for constitutent coordination. One of the most common is the enclitic *=lu*, which can coordinate nouns and pronouns. *=lu* is polysyndetic, i.e., it may occur on all coordinands as in examples (15a) and (15a3). Example (15b) shows that the coordinand may occur on each component of a compound subject (in this case, *aġnamlu aŋutimlu* '(a) woman and (a) man').

(15) a. Aviġlu Nipiglu Maŋuyaglu qaluŋniaġuurut.
aviq=lu nipik=lu maŋujak=lu qaluŋniaq-su:-ʐut
Aviq=COORD Nipik=COORD Maŋuyak=COORD go fishing-HAB-3P.INDIC
'Aviq, Nipik, & Maŋuyak always go fishing.'

b. [Aġnamlu aŋutimlu] qiñigaak iḷigaq.
[aʁnaq-m=lu aŋuti-m=lu] qini-ɣa:k iliɣaq-Ø
woman-ERG=COORD man-ERG=COORD see-3D.3S.INDIC child-ABS
'The woman and the man see a child.'

However, it is not obligatory for *=lu* to occur on every coordinand. Sometimes *=lu* appears on the first coordinand, sometimes on the second, and sometimes on both. Its usage seems to be in free variation, i.e., it is up to speaker to decide whether to put it on all coordinands or only some.

It is also worth mentioning that Iñupiaq has a fairly productive usage of dyads, where a noun marked with the suffix *-giik* 'pair of' derives a noun indicating a pair, typically with a comitative sense. Example (16a) shows that *-giik* can be used simply to indicate a pair of identical Ns, while example (16b) shows that it can also be used to coordinate heterogenous Ns even though only one N is present. That is, it is not possible to interpret (16b) as a pair of fathers, only as a father and another person; the two people are in a sense coordinated though only one noun appears.

(16) a. aippaġiik
aippaq-ɣi:k
co-wife-DYAD
'pair of co-wives' / 'double letters (in the orthography)'

b. Aapagiik umialiqiruk.
aapa-ɣi:k umiaq-liqi-tuk
father-PAIR boat-work.on-3D.INDIC
'Father and son are working on (building) a boat.' [source: 080907]

These dyads do not participate in constituent coordination, as only one noun is involved, but certainly they involve *semantic* coordination. Formation of dyads appears mainly limited to personal names and kinship terms but is productive within its limited semantic range.

When verb phrases or entire sentences are coordinated, a lexical word such as *aglaan* 'but' or *suli* 'and' is used rather than *=lu*, which is limited to coordinating NPs. These independent words are not neutral as *=lu* is, however, and they carry a strong contrastive connotation as in example (17a). Coordination of VPs is not as common as combining clauses by placing one of the verbs in a dependent mood, however.

(17) a. Utraq tipituruq aglaan nakuuruq.
utʒaq-Ø tipitu-ʒuq aɣla:n naku:-ʒuq
fermented flipper-ABS stink-INDIC.3S but good-INDIC.3S
'Fermented flipper stinks all right, but it [tastes] good.'

b. Aŋun niksiksuġisiruq naaggaqaa aŋuniaġisiruq.
aŋun-Ø niksiksuq-kisi-ʒuq na:ɣɣaqa: aŋuniaq-kisi-ʒuq
man-ABS.SG fish.with.a.hook-FUT.3S.INDIC or hunt-FUT.3S.INDIC
'The man will fish or hunt.' [source: 072507]

In summary, NPs are most often coordinated with the enclitic *=lu*, which cannot be used for verbs. Verbs can be coordinated or conjoined with conjunctions (see Section 5.5) but the meaning is not neutral as with the nominal coordinator *=lu*. The most common strategy for combining verbs in one sentence is to use multiple clauses, one of which can be in an independent mood while the other(s) must be in a dependent mood (see Section 8.2).

7.2 Sentential constituency

7.2.1 Word order

Order of NPs and verbs at the sentential level is fluid, and argument ellipsis is quite common. Both verb agreement (18a) and case marking (18b) are used; the arguments in a sentence are therefore usually clear regardless of whether arguments are overt. In addition, due to its polysynthetic nature, an Iñupiaq sentence can consist entirely of one complex verb.

(18) a. Aullaqsruġniaqaqsiñiqsuk.
aullaqʂuq-niaq-aqsi-niq-tuk
go.berry.picking-FUT-INCH-apparently-3D.INDIC
'Apparently they (dual) began to go berry picking.'

b. Aġnam akpik niġigaa.
aʁnaq-m akpik-Ø niʁi-ɣa:
woman-ERG salmonberry-ABS eat-3S.3S.INDIC
'The woman is eating a salmonberry.'

SOV is the least marked word order in transitive sentences with two lexical arguments, but SVO is also quite common and other orders are permitted as well. The basis for this word order claim is twofold: first, it is generally accepted within Eskimo-Aleut linguistics that SOV is the basic word order (Nagai 2006, Fortescue 1984). Second, my own data from fieldwork support SOV as the basic word order, particularly when examples with observed "translation order" are eliminated from consideration. Nagai (2006:35) also observes that in addition to SOV, SVO is fairly commonly for the neighboring Malimiut (Upper Kobuk) dialect and the North Slope dialect.

Examples (19a) and (19b) show two of the six possible word orders for a three-word sentence in Iñupiaq. Note that although VSO and VOS are permitted, verb-initial sentences are unusual (except when a sentence consists solely of a verb).

(19) a. Aŋuniaqtik tautukkaak tuttu.
aŋuniaqtə-k tautuk-ka:k tuttu-Ø
hunter-DU see-3D.3S.INDIC caribou-ABS
'The two hunters see a caribou.'

b. Aŋuniaqtik tuttu tautukkaak.
aŋuniaqtə-k tuttu-Ø tautuk-ka:k
hunter-DU caribou-ABS see-3D.3S.INDIC
'The two hunters see a caribou.'

In intransitive clauses with an overt S argument, OV order is most common, as in example (20a). Example (20b) illustrates a sentence in which the arguments are ambiguous: neither the case marking nor the verb agreement identifies which NP is the A argument or which is the O argument. In such cases, SOV order is overwhelmingly assumed.

(20) a. Aqquġaq iḷisautriruq Iñupiatun.
aqquʁaq-Ø ilisautʒi-ʒuq inupiaq-tun
p.n.-ABS.SG teach-3S.INDIC Iñupiaq.language-SIM.SG
'Aqquġaq is teaching (in) Iñupiaq.' [source: 012808]

b. Aŋutik aġnak tusaagaik.
aŋutə-k aʁnaq-k tusa:-ɣaik
man-DU woman-DU hear-3D.3D.INDIC
'The two men hear the two woman.' *or* 'The two woman hear the two men.'

Modifiers such as adverbs tend to precede the verb, but as the examples in (21) show, they can occur anywhere in the sentence.

(21) a. Iñugiaktut asiaviich unani.
inuɣiak-tut asiavik-t una-ni
be.numerous-3P.INDIC blueberry-PL DEM.ADV-LOC
'There are many blueberries down there (extended, visible, distal).'

b. Aviññaq kanuŋa aullaqtuq.
avinnaq-Ø kan-uŋa aullaq-tuq
lemming-ABS DEM.ADV-ALL depart-3S.INDIC
'The lemming departed to down there (visible, restricted, distal).' [source: 031708]

c. Uvlaakun siḷalukpaluktuq.
uvla:kun silaluk-paluk-tuq
tomorrow rain-probably-3S.INDIC
'It's probably going to rain tomorrow.'

However, much adverbial meaning in Iñupiaq is achieved via the use of adverbial suffixes that are not lexical adverbs. These will not be explained here since they are not constituents; see Section 6.1.2 page 141. The presence of both indicates that the functional load of modification is divided between constituency and morphology in Iñupiaq.

7.2.2 Predication

There are several types of predication available to Iñupiaq speakers. Aside from transitive and intransitive sentences, Iñupiaq also has predicate nominals, existential predicates, locative predicates, and possessive predicates. There are no predicate adjectives (also known as attribute predicates) because there is no lexical class of adjectives in the language (see §5.2.2).

According to Payne (1997:112), "If the language lacks a grammatical category of adjective, there will be no grammatically distinct predicate adjective construction." The equivalent adjectival meaning can be accomplished in Iñupiaq with a lexical verb, as in example (22).

(22) a. Aŋuniaqtit sayaktut.
aŋuniaqtə-t sajak-tut
hunter-ABS.PL strong-3S.INDIC
'[The] hunters are strong.'

b. Tupiq salumaruq.
tupəq-Ø saluma-ʒuq
house-ABS be.clean-3S.INDIC
'[The] house is clean.'

7.2.2.1 Predicate nominals

Non-incorporated predicate nominals are verbless in the affirmative, as shown in (23a)–(23c). There is no lexical copula in Malimiut Iñupiaq in predicate nominals, nor are there auxiliary verbs or free modals. The suffix *-u* 'to be', however, can be used as a copula, typically by attaching to nouns to create verbs, as in example (23d).[4]

(23) a. Uvaŋa Iñupiaq.
uvaŋa inupiaq
1s Iñupiaq
'I am (an) Iñupiaq.'

b. Piquk naluaġmiu.
piquk naluaʁmiu
p.n. Caucasian
'Piquk is (a) Caucasian.'

[4]A reviewer questioned whether the stem of (23d) is *Iñupia* rather than *Iñupiaq*. Such an analysis would support the conclusion that the final /q/ in *Iñupiaq* is the absolutive case marker. However, the stem is indeed *Iñupiaq*: the final /q/ of the stem is deleted by the suffix *-u* 'be'. This suffix always deletes the final consonant of the stem preceding it. Thus *savik* 'knife' + *-u* 'be' + *-ruq* '3S.INDIC' yields *saviuruq* 'it is (a) knife'.

c. Uvagut iḷisautrit.
uvaɣut ilisautʒi-t
1P.ABS teacher-PL
'We (pl.) are teachers.'

d. Iñupiaŋuvitch?
inupiaq-u-vit
Iñupiaq-BE-2S.INTERR
'Are you (sg.) Iñupiaq?' [source: 070207]

If the predicate nominal is negative, as in (24a), the existential verb *it* can be used along with a negative suffix.[5] However, it is much more common to incorporate the noun in question and then negate the resulting verb, as in (24b).

(24) a. Uvagut iḷisautrit iñġitchugut.
uvaɣut ilisautʒi-t it-nʁit-tuɣut
1P.ABS teacher-PL be-NEG-1P.INDIC
'We (pl.) are not teachers.'

b. Naaga, Iñupiaŋuŋitchuŋa.
na:ɣa inupiaq-u-it-tuŋa
no Iñupiaq-BE-NEG-1S.INTERR
'No, I'm not (an) Iñupiaq.' [source: 070207]

As far as my data shows, other modalities in predicate nominals can only be accommodated by the use of modal suffixes; there are no free modal morphemes. Example (25) demonstrates how a modal such as *-umiñaq* 'might' can be suffixed to a copular construction.

(25) Aglaktuaŋuumiñaqtuq.
aɣlaktuaq-u-uminaq-tuq
policeman-be-might-3S.INDIC
'He/she might be a student.'

[5]It is merely a coincidence that *it* 'exist' and *-it* 'NEG' have the same surface form. Underlyingly, they are different, as *it* 'exist' has the form /ət/ and so does not cause palatalization as *-it* /-it/ 'NEG' does.

7.2.2.2 Existential & locative predicates

Existential predicates can be formed with *it* 'to be; to exist', such as in example (26a).

(26) a. Qikiqtaġruŋmi naŋirvik ittuq.
qikiqtaʁẓuk-mi naŋiẓvik it-tuq
Kotzebue-LOC.SG hospital exist-3S.INDIC
'There's [a] hospital in Kotzebue.' or '[The] hospital is in Kotzebue.'

b. Uvani ittuq.
uva-ni it-tuq
DEM.ADV-LOC exist-3S.INDIC
'It is here (visible, restricted, proximal).'

However, (26a) can be interpreted as a locative predicate as well. Clear-cut locative predicates can be formed using demonstrative adverbs, such as in (27).

(27) a. Uvva Naŋmak.
uvva naŋmak
DEM.ADV p.n.
'Here's Naŋmak (over here, visible, restricted, proximal).'

b. Iñuunniaqti iññа.
inu:nniaqtə inna
nurse DEM.ADV
'There's (the) nurse (over there, visible, restricted, distal).'

Locative verbs can also be made from demonstrative adverbs, where the demonstrative adverb stem predicates the location, including motion, of the NP (whether overt or marked only by verb agreement). An example is shown in (28), where the demonstrative adverb *kanna* 'down there (visible, restricted/stationary, distal)' is used to create a verb. In (28), the verbalizing suffix *-q* is suffixed to the ablative form of *kanna*, which is *kanakŋa* 'from down there (visible, restricted/stationary, distal)'. In (28b), the locative verb is created from the allative form of the demonstrative adverb *pavva* 'back there (visible, extended, distal)'.

(28) a. Qipmiq kanakŋaqtuq.
qipmiq-Ø kana-kŋa-q-tuq
dog-ABS.SG DEM.ADV-ABL-VERB-3S.INDIC
'(The) dog came from down there (visible, restricted, distal).' [source: 031908]

b. Pavuŋaqtuq.
pav-uŋa-q-tuq
DEM.ADV-ALL-VERB-3S.INDIC
'He/she/it is going back there (visible, extended, distal).' [source: 031908]

7.2.2.3 Possessive predicates

Possessive predicates are formed in Malimiut Iñupiaq using incorporated nouns (see §6.3 for more information on noun incorporation). Such verbs have a possessive meaning because of the derivational suffix *-qaq* 'to have', which creates a verb from the noun to which it is suffixed. This possessive predication is demonstrated by the examples in (29).

(29) a. Uluqaqtuq.
ulu-qaq-tuq
women's knife-DERIV-3S.INDIC
'She has an ulu (women's knife).'

b. Saviqaqtuksruarutin siikñiaġuvich aqaluknik.
savik-qaq-tukşua-ẓutin si:k-niaq-uvit aqaluk-nik
knife-DERIV-MUST-2S.INDIC cut.lengthwise-FUT-2S.COND fish-INSTR.PL
'You (sg.) must have a knife to cut [those] fish.' [source: 072707]

c. Quppiġaaġaqtuŋa.
quppiʁa:q-qaq-tuŋa
jacket-DERIV-1S.INDIC
'I have a jacket.' [source: 030708]

d. Umiaġaqpich?
umiaq-qaq-pit
boat-DERIV-2S.INTERR
'Do you (sg.) have a boat?' [source: 030708]

e. Quliŋuġutaiḷanik nukatchiaqaqtuŋa.
quliŋuʁutailaq-nik nukacciaq-qaq-tuŋa
nine-INSTR.PL younger.sibling-DERIV-1S.INDIC
'I have nine younger siblings.'

There is no lexical verb of possession; therefore creating possessive predicates with a bound derivational morpheme is the only option available to Iñupiaq speakers.

Chapter 8

Syntax

Nearly all syntactic operations in the Malimiut dialect of Iñupiaq—and Inuit languages and dialects in general—are carried out via morphological means. The following sections explain various syntactic processes of this dialect.

8.1 Ergativity

Like other Eskimo-Aleut languages, Iñupiaq has been called ergative-absolutive (Seiler 1978, Nagai 2006). In a canonically (morphological) ergative language, the object of a transitive verb (O) and the subject of an intransitive verb pattern (S) together in terms of case marking and agreement, while the subject of a transitive verb (A) behaves differently. This morphological or syntactic behavior is the opposite of the pattern found in nominative-accusative languages, such as English, where the subject of a transitive sentence patterns like the subject of an intransitive, in contrast to the object of a transitive sentence (see Figure 8.1). The standard treatment of ergativity comes from Dixon (1979), who described ergativity as a grouping of [semantic/syntactic] primitives S, A, and O. Dixon (1979:6) defined S, A, and O as the intransitive subject, the transitive subject, and the transitive object, respectively. Comrie (1989:104–123) adopts a similar treatment, although he uses the labels S, A, and P instead of Dixon's (1979) S, A, and O.

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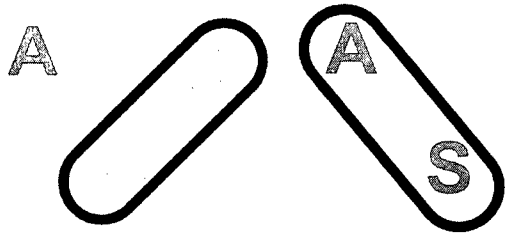
[1]Public domain images: http://en.wikipedia.org/wiki/File:Ergative_alignment.svg, http://en.wikipedia.org/wiki/File:Accusative_alignment.svg.



(a) ergative-absolutive (b) nominative-accusative

Figure 8.1 : Argument alignment[1]

In §8.1.1 and §8.1.2 below, I examine evidence for morphological and syntactic ergativity in Malimiut Iñupiaq.

8.1.1 Morphological ergativity

Evidence for ergativity in Iñupiaq is mainly morphological, including case marking (§8.1.1.1) and verb agreement (§8.1.1.2). Morphological ergativity exhibits in several ways, such as case marking and verb agreement. As I will explain in Sections 8.1.1.1 and 8.1.1.2 below, Iñupiaq is morphologically ergative but not canonically so. A canonical (morphological) ergative language is one that exhibits clear ergative case marking, for example, in all expected instances. Basque, for example, marks A with ergative case, while S and O are absolutive (which is unmarked in the language), as demonstrated in example (8.1.1):

(1) Jonek liburua irakurri du.
Jon-**ek** liburua-Ø irakurri du.
p.n.-ERG book.DET.ABS.PL read AUX 3.ABS-3.ERG
'John has read the book.' [source: San Martin (2003:1)]

(2) Jon bihar etorriko da.
Jon-Ø bihar etorriko da
p.n.-ABS tomorrow come-FUT AUX-3.ABS
'John will come tomorrow.' [source: San Martin (2003:1)]

In contrast, a non-canonical ergative language would be one that marks ergative in some expected ways but not in others; for example, Georgian (South Caucasian) marks the A argument with the ergative case marker only in aorist clauses (Comrie 1978:351–352).

Eskimo-Aleut languages—or at least the Eskimo branches of the family—are usually described as prototypical (morphologically) ergative languages. Bok-Bennema (1992:xv), for example, states that "[T]he Inuit languages are morphologically ergative." Fortescue (1995:71) strongly argues that Eskimo-Aleut languages are ergative, saying "Eskimo languages, rather than being only marginally ergative...are not far removed from a stage (proto Eskimo-Aleut...) which was about as close to pure morphological ergativity as any language gets." A commonly cited example from Central Alaskan Yup'ik is reproduced in (3):

(3) a. Doris-**aq** ayallruuq.
Doris-**ABS** traveled
'Doris traveled.' [source: Payne (1997:135)]

b. Tom-**am** Doris-**aq** cingallrua.
Tom-**ERG** Doris-**ABS** greeted
'Tom greeted Doris.' [source: Payne (1997:135)]

The evidence given for morphological ergativity in Eskimo-Aleut languages is almost always a transitive sentence with a third person singular subject and a third person singular object. However, as I will demonstrate in the following sections, the Malimiut dialect of Iñupiaq is not canonically ergative because when arguments are unpossessed, ergative marking appears *only* on the third person.

8.1.1.1 Case marking

Iñupiaq core case marking is morphologically ergative. Compare the intransitive sentence in (4a) with the transitive sentence in (4b); the subject of the transitive sentence is marked with the ergative case suffix *-m*. However, for unpossessed nominals, ergative case marking

is absent if the subject is anything other than third person singular, as shown in (4c) and (4d). (The situation is different for possessed nominals; see below.)

(4) a. Aġnaq niġiruq.
aʁnaq-Ø niʁi-ʐuq
woman-ABS eat-3S.INDIC
'(The) woman is eating.'

b. Aġnam akpik niġigaa.
aʁnaq-m akpik-Ø niʁi-ɣa:
woman-ERG salmonberry-ABS eat-3S.3S.INDIC
'The woman is eating a salmonberry.'

c. Aŋutik aġnaq tusaagaak.
aŋuti-k aʁnaq-Ø tusa:-ɣa:k
man-DU woman-ABS hear-3D.3S.INDIC
'(The) two men hear (the) woman.'

d. Aŋutik aġnak tusaaagaik.
aŋuti-k aʁna-k tusa:-ɣaik
man-DU woman-DU hear-3D.3D.INDIC
'The two men hear the two woman.' *or* 'The two woman hear the two men.'

Since ergative is marked on unpossessed nouns only when they are third person singular, Iñupiaq case marking is not canonically ergative. Ergative case marking fails to appear on any other unpossessed transitive subjects (i.e., A arguments); this holds for all clauses, whether dependent or independent. Possessed nominals, however, have a more complete ergative paradigm (see below).

Pronouns display split ergative case marking, as only third person pronouns can receive ergative case. See Tables (8.1) and (8.2) for a complete listing of the core cases for personal and demonstrative pronouns; note that in the demonstrative pronouns, the dual and plural forms are the same for absolutive and ergative, although they have distinct plural oblique cases. For example, the demonstrative pronoun *taamna* 'that one (visible, stationary, distal

to speaker, proximal to listener) (sg.)' has the dual form *taapkuak* 'those two' whether the pronoun functions as S, A, or O.

(5) a. (Uvaŋa) aġnaq tusaagiga.
(uvaŋa) aʁnaq-Ø tusa:-ɣiɣa
(1s) woman-ABS hear-1s.3s.INDIC
'I hear (the) woman.'

b. *Uvaŋa**m** aġnaq tusaagiga.
uvaŋa-**m** aġnaq-Ø tusa:-ɣiɣa.
1s.PRO-ERG woman-ABS hear-1s.3s.INDIC
intended for 'I hear (the) woman.'

c. (Iḷvich) aʁnaq tusaagin.
(ilvit) aʁnaq-Ø tusa:-ɣin
(2s.PRO) woman-ABS hear-2s.3s.INDIC
'You (sg.) hear (the) woman.'

	singular	*dual*	*plural*
first person	uvaŋa	uvaguk	uvagut
second person	ilvich	iliptik	ilipsi
third person absolutive	ilaa	iliŋik	iliŋich
third person ergative	ilaan	iliŋiknik	iliŋisa

Table 8.1 : Personal pronouns (core cases)

However, the case-marking situation is complicated by the fact that the ergative case has two main uses in the language, as explained in Section 3.1.2.1. In addition to its use for marking the subject of a transitive sentence (i.e., the A argument), ergative case is used for marking possession on nominals. (The ergative case is called *relative case* in several works on Iñupiaq to note that it has two functions, ergative and genitive (Kaplan 1979, MacLean 1993, Nagai 2006).) Specifically, it is used to mark a nominal if that nominal is the possessor of another nominal, as in example (6). Note how an ergative-marked nominal such as *Kataum*

	visible				not visible	
	restricted		extended			
	ABS	ERG	ABS	ERG	ABS	ERG
proximal (speaker)	una	uuma	manna	marruma	—	—
distal (speak.), prox. (list.)	taamna	taavruma	—	—	—	—
distal (speaker & listener)	iñña	irruma	amna	avruma	amna	avruma
up there	pikña	piksruma	paŋna	pagruma	pakimna	pakivruma
down there	kanna	karruma	unna	urruma	samna	savruma
in there	kimña	kivruma	qamna	qavruma	qamna	qavruma
out there	kiŋña	kigruma	qaŋna	qagruma	qakimna	qakivruma
near the door	uŋna	ugruma	—	—	—	—
outside the door	—	—	—	—	sakimna	sakivruma
across there	ikña	iksruma	aŋna	agruma	akimna	akivruma
back there	piñña	pirruma	pamna	pavruma	pamna	pavruma
remote past	imña	ivruma	—	—	—	—

Table 8.2 : Singular demonstrative pronouns (core cases)

in example (6a), can be part of the NP acting as the object of a transitive verb (i.e., the O argument), if it is the possessor of another NP. In such cases the NP's role as possessor requires ergative case marking.

(6) a. Kataum umiaŋa iɬuaqsaġaa.
katak-m umiaq-ŋa iɬuaqsaq-ɣa:
p.n.-ERG boat-3S.NONREFL.POSS.ABS fix-3S.3S.INDIC
'He/she fixed Katak's boat.'

b. Putum piqpagigaa tuvaaqatni.
putu-m piqpaɣi-ɣa: tuva:qatə-ni
p.n.-ERG.SG love-3S.3S.INDIC spouse-3S.REFL.POSS.ABS
'Putu$_i$ loves his$_i$ wife.' [source: 072607]

c. Putum piqpagigaa (allam) tuvaaqataa.
putu-m piqpaɣi-ɣa: (alla-m) tuva:qatə-a
p.n.-ERG.SG love-3S.3S.INDIC (another-ERG.SG) spouse-3S.NONREFL.POSS.ABS
'Putu$_i$ loves his$_j$ (another's) wife.' [source: 072607]

Remember that it is the possessor which takes ergative case, not the possessed nominal. A possessive NP consists minimally of a noun marked with a possessive suffix: [NP_{POSS}]. The possessor may also be present, in which case the NP consists of [NP_{ERG} NP_{POSS}]; when the ergative-marked possessor is overt, it tends to precede the possessed NP.

[NP_{POSS}] can act as S, A, or O in a clause, whether or not the ergative-marked possessor is overt. The possessive suffixes themselves therefore have both ergative and absolutive possessive endings, reflecting A, O, or S status. The absolutive possessive suffixes are used on possessed NPs acting as S or O (examples (7a) and (7b), respectively), while the ergative possessive suffixes are used on possessed NPs acting as A (example (7c)).

(7) a. Iġñivaluktuq aakauraġa uvlaakun.
iʁni-valuk-tuq a:kauʐaq-ɣa uvla:kun
give.birth-probably-3S.INDIC sister-1S.POSS.ABS tomorrow
'My sister will probably give birth tomorrow.' [source: 022908]

b. Aakauraġa nakuaġiruŋa.
a:kauẓaq-ɣa nakuaʁi-ẓuŋa
sister-1S.POSS.ABS love-1.INDIC
'I love my sister.'

c. aakaurama aksraktuaq tauqsiqsuq.
a:kauẓaq-ma akʂaktuaq tauqsiq-tuq
sister-1S.POSS.ERG car buy-3S.INDIC
'My sister bought a car.' [source: 011808]

Ergative case has no functions within Iñupiaq aside from marking ergative and genitive case (i.e., marking the A argument or the possessor of another NP).

8.1.1.2 Verb agreement

Verb agreement can also be exploited by languages to mark ergativity. For example, Du Bois (1987) shows that while Sacapultec (Mayan) has no case marking, its verb agreement treats S, A, and O arguments differently. Sacapultec transitive verbs obligatorily mark person and number of S and O arguments. Example (8) illustrates how Sacapultec S and O trigger a certain agreement suffix on the verb, whereas A triggers a different one.

(8) a. š-at-**qa**-kuna-:x
CMP-2SG.ABS-**1PL.ERG**-cure-TA
'We cured you (sg.).' [source: Du Bois (1987:809)] [**A**]

b. š-**ax**-a:-kuna-:x
CMP-**1PL.ABS**-2SG.ERG-cure-TA
'You (sg.) cured us.' [source: Du Bois (1987:809)] [**O**]

c. š-**ax**-war-ek
CMP-**1PL.ABS**-sleep-IF
'We slept.' [source: Du Bois (1987:810)] [**S**]

Du Bois (1987:810) notes that "The classic ergative morphological pattern is illustrated in the fact that a single prefix (*ax-*) marks 1pl. for either the O role (as in [example (8b)], glossed

'us') or the S (as in [example (8c)], glossed 'we'); a distinct prefix (*qa-*) marks the 1pl. for the A role (as in [example (8a)], also glossed 'we')." In other words, while S, A, and O are all marked on the verb, S and O use one set of suffixes while A uses another.

Using the same type of evidence, I argue that verb agreement is ergative-absolutive in Malimiut Iñupiaq. In (9a), the suffix *-ŋa* indexes an S argument that is first person singular. The suffix *-ŋa* is also used in (9c) to index an O argument that is first person singular. In contract, the suffix *-q* is used for a third person singular S argument in example (9b), whereas the third person singular A argument is indexed by *g-a:* in (9c). The fact that the S argument in (9b) is not indexed with the same suffix as in (9c) means that in Iñupiaq, the S and O agreement suffixes pattern the same while A suffixes pattern differently. The verbal agreement therefore has ergative alignment, and it differs from the case marking in being fully ergative rather than split or unmarked.

(9) a. Iglaqtuŋa.
iɣlaq-tu-**ŋa**[2]
laugh-INTR.INDIC-1S
'I'm laughing.' [S]

b. Iglaqtuq.
iɣlaq-tu-**q**
laugh-INTR.INDIC-3S
'He/she is laughing.' [S]

c. Aŋutim tusaagaaŋa.
aŋuti-m tusa:-ɣ-a:-**ŋa**
man-ERG hear-TRANS.INDIC-3S-1S
'The man hears me.' [A, O]

d. (Uvaŋa) tusaagiga.
(uvaŋa) tusa:-ɣ-i-**ɣa**
1S.PRO hear-TRANS.INDIC-1S-3S
'(I) hear him/her/it.' [A, O]

8.1.2 Syntactic ergativity

Syntactic ergativity is defined as syntactic processes which group S and O the same but A differently (Dixon 1979, McGregor 2009). McGregor (2009:484) notes that "More specifically, it is understood to refer to ergative patterning revealed by cross-clause coreference conditions that must be met in certain types of clause combination."[3] Syntactic ergativity is relatively rare typologically (Dixon 1979:10), even for languages with morphologically ergative characteristics. Dyirbal (Pama-Nyungan) is one of the few languages claimed to have predominantly ergative syntactic features (Dixon 1994:14). It is often the case that absolutive arguments (that is, S and O) are eligible for certain syntactic operations while ergative arguments (A) are not (Aldridge 2005:2); for example, in Dyirbal only S and O can form relative clauses (Aldridge 2005:2). Syntactic features considered to show ergative or accusative behavior include subordination, coordination, pivots, switch references, and reflexivization. In addition, the antipassive is considered an ergative syntactic construction.

Opinions on syntactic ergativity in Eskimo-Aleut languages are quite divided. Bok-Bennema (1992), for example, states that "Inuit languages" lack any features that are syntactically ergative, while many others claim that Eskimo-Aleut languages are syntactically ergative (Seiler 1978, Dixon 1994, Fortescue 1995, Manning 1994, 1996, Aldridge 2005, Johns

[2]Elsewhere I have treated indicative suffixes as units combining person, mood, and number as a matter of notational convenience, but it is possible to parse them further. For example, *-tuq* '3S.INDIC' can be analyzed as the intransitive indicative suffix *-tu* followed by the third person suffix *-q*. However, this analysis does not hold across all person/mood combinations, so I have elected to represent them in chunks such as *-tuq* throughout the dissertation unless detailed parsing is necessary for a particular analysis.

[3]Although for Dixon (1979:16) and McGregor (2009), syntactic ergativity particularly concerns clause-bound syntactic phenomena when formed into complex clauses (hence the term *intra-clausal ergativity* (Dixon 1994)), because the clausal status of verbs containing incorporated nouns is debated I will not place such a restriction here. I define syntactic ergativity simply as any syntactic process grouping S and O together in contrast to A.

2006). The strongest and most oft-cited evidence for syntactic ergativity in Eskimo-Aleut (or rather, just the Eskimo branch of the family) is the existence of an antipassive (Nagai 2006).

Syntactically, Iñupiaq exhibits both nominative-accusative and ergative-absolutive behavior. Because more syntactic operations in this dialect are nominative-accusative than ergative-absolutive, I call it syntactically split ergative.[4] Evidence for syntactic ergativity includes syntactic pivot, switch reference, relativization, noun incorporation, reflexivization, the existence of an antipassive, and word order. These pieces of evidence will be discussed individually below.

8.1.2.1 Syntactic pivot

Syntactic pivots have to do with which items can be omitted when clauses are coordinated. According to Dixon (1979:15), in a syntactically ergative language, two clauses "can only be coordinated if they involve a common NP which is in S or O function in each clause." Ergative arguments (A) are not eligible to be coordinated with S or O arguments. An ergative pivot is illustrated by example (10) from Dyirbal (Dixon 1994:12).

(10) a. ŋuma banagu-n^{y}u yabu-ŋgu bura-n
father.ABS return-NONFUT mother-ERG see-NONFUT
'father (S) returned and mother (A) saw him (O)' [source: Dixon (1994:12)]

b. ŋuma yabu-ŋgu bura-n banagu-n^{y}u
father.ABS mother-ERG see-NONFUT return-NONFUT
'mother (A) saw father (O) and he (S) returned' [source: Dixon (1994:12)]

In (10a), there are two clauses: one intransitive and one transitive. The transitive clause, 'mother saw him', contains no overt O argument. However, this sentence is only grammatical if the meaning is 'Father returned and mother saw (father)', where the S argument of the

[4]By tradition, languages exhibiting both nominative-accusative and ergative-absolutive behavior are called split ergative.

intransitive is coreferential with the O argument of the transitive. In (10b), the sentence can only mean that father returned, with the O argument of the transitive again coreferential with the S argument of the intransitive. In both of these examples, omitted NPs acting as the pivot must be S or O, in contrast to A. Therefore such the syntactic pivot pattern is ergative.

Syntactic pivots in Malimiut Iñupiaq are nominative-accusative, as shown in example (11), because it is the A argument which can be coordinated with the S argument.

(11) a. **Aġnam** qiñiġaa iḷigaaq qaiŋaruq.
aʁnaq-m qiniq-ɣa: iliɣaaq-Ø qaiŋa-ʐuq
woman-ERG see-3S.3S.INDIC baby-ABS.SG cry-3S.INDIC
'**The woman [A]** sees the baby [O] and [the woman [S]] cries.' [fieldwork]

b. **Aġnaiyaam** aqigaa nukatpiaġruk iglatigivlugu.
aʁnaija:q-m aqi-ɣa: nukatpiaʁʐuk-Ø iɣlaq-tiɣi-v-luɣu
girl-ERG.SG kick-3S.3S.INDIC boy-ABS.SG laugh-degree-IMPF-3S.3S.COOR
'**The girl [A]** kicked the boy [O] and (she [A]) laughed at him [O].' [011408]

Crucially, the omitted argument must be coreferential with S or A, not with O. For example, the S argument of the intransitive verb in (11a) is coreferential with the A argument of the transitive verb, indicating that the pivot is nominative-accusative.[5] If it were syntactically ergative, we would expect to find that the S and O arguments were treated the same, as in example the Dyirbal example (10b). Note also that the semantics of (11a) are not coercing a particular reading: while it is arguably more expected for a baby to cry than an adult, the meaning here is nonetheless that it is the *woman* who is crying, not the baby.

[5]Another way to express the same meaning would be as follows:

(1) Aġnaq qiñiqamiñ iḷigaaq qairutiruq.
aʁnaq-Ø qiniq-aq-min iligaaq-Ø qaiʐuti-ʐuq
woman-ABS.SG see-HAB-ABL.SG baby-ABS.SG cry-3S.INDIC
'The woman saw the baby and cried (lit. from seeing the baby, the woman cried).' [source: 011408]

Interestingly, example (11b) also shows that double pivots are possible: the A argument of the dependent clause *iglatigivlugu* laugh-degree-IMPF-3S.3S.COOR '(she) laughed (at him)' must be coreferential with the A argument of the independent clause. Likewise, the O argument of the dependent clause must be coreferential with the O argument of the independent clause. It cannot mean that the girl kicked the boy and *the boy* laughed.

8.1.2.2 Relativization

Syntactic ergativity affects which arguments can be relativized. According to Aldridge (2005:2) and Otsuka (2002:1–2) [among others], in ergative syntax, relative clauses can only be formed on S and O arguments. Otsuka (2002:3) says that "Dyirbal, for example, allows only ABS arguments to undergo relativization." Otsuka (2002:1–2) further notes that

> "Among the phenomena concerning syntactic ergativity, relativisation seems to show a fairly consistent pattern crosslinguistically. That is, syntactically ergative languages generally show an ergative pattern with respect to relativisation: while absolutive (ABS) arguments can undergo normal relativisation (i.e., the gap strategy), ergative (ERG) arguments cannot. This restriction is manifested in two ways: a) relativization of ERG arguments is strictly prohibited and therefore, the structure must be first antipassivized in order to undergo relativization (e.g., Dyirbal); or b) relativization of ERG arguments requires a resumptive pronoun (e.g., Tongan)."

This is true of Yup'ik and West Greenlandic, both Eskimo-Aleut languages, and so it is expected that Iñupiaq may also be ergative in this respect. Manning (1996:84) notes that in West Greenlandic, only the absolutive arguments of transitive clauses can be relativized. This is reproduced in example (12) below.

(12) a. nanuq Piita-p tuqu-ta-a
polar.bear.ABS Piita-ERG kill-TR.PART-3S
'a polar bear killed by Piita' [West Greenlandic (Manning 1996:84)]

b. *angut aallaat tigu-sima-sa-a
man.ABS gun.ABS take-PERF-REL.TR-3S
'the man who took the gun' [West Greenlandic (Manning 1996:84)]

Therefore, if a language is syntactically ergative, it should be impossible to relativize the subject of a transitive verb (A) as is.[6]

The examples in (13) indicate that Iñupiaq displays nominative-accusative relativization. The O argument can be relativized, as in example (13a). However, the A argument can also be relativized, as in (13b), suggesting that Iñupiaq relativization is nominative-accusative. Note that in (13b), no antipassive morpheme is present, so it is not the case that a transitive clause needs to be antipassivized in order to undergo relativization in Iñupiaq. While it is true that there is a null antipassive morpheme (see Section 8.9.1.4), the verb stem in (13b) is transitive and the verb takes transitive agreement markers, indicating that the valency of the clause is unchanged and that therefore no null antipassive morpheme is present.

(13) a. Aŋutim amaġuq qiñikkaŋaa taaqtaaŋuruq.
aŋuti-m amaʁuq-Ø qinik-kaŋa: ta:qta:ŋu-ʐuq
man-ERG wolf-ABS see-3S.3S.PTCP black-3S.INDIC
'The wolf that the man saw is black.'

b. Tavruma aŋutim qiñikkaŋaa amaġuq.
tavʐuma aŋuti-m qinik-kaŋa: amaʁuq-Ø
DEM.ADV.ERG man-ERG see-3S.3S.PTCP wolf-ABS
'That one (is) the man who saw the wolf.'

See Section 8.2.1 for more details on relative clauses in Iñupiaq.

[6]Dixon (1994) and Otsuka (2002:3) note that a strategy for relativizing the A argument is to form an antipassive first, thus transforming the A argument into S, which can then be relativized.

8.1.2.3 Noun incorporation

Another piece of evidence for syntactic ergativity (or lack thereof) is which arguments are available for noun incorporation (see §6.3 for more details on Iñupiaq noun incorporation). According to Nowak (1996:11–12), if absolutive arguments are available for noun incorporation, it is ergative noun incorporation. Likewise, Massam (2002) notes that if noun incorporation allows incorporation of A and S, it is nominative-accusative; hence we can conclude that if incorporation of S and O are allowed—but not A—then it is ergative-absolutive noun incorporation. This line of argumentation is complicated by the fact that—quite independently of ergativity—noun incorporation and similar constructions such as compounding are heavily O-oriented, leaving few opportunities to evaluate incorporated A or S arguments.

The O argument in Iñupiaq is a candidate for incorporation, as shown in (14a)–(14c).

(14) a. Aŋutim tuttu niġigaa.
aŋuti-m tuttu-Ø niʁi-ɣa:
man-ERG caribou-ABS eat-3S.3S.INDIC
'[The] man eats caribou.'

b. Tuttutuqtuq.
tuttu-tuq-tuq
caribou-eat-3S.INDIC
'He/she/it eats caribou.'

c. Hamburgeqtuġuuruŋa.
hamburgeq-tuq-su:-ʐuŋa
hamburger-eat-always-1S.INDIC
'I always eat hamburgers.' [source: 021208]

d. Isigakitchuq.
isiɣak-kit-tuq
foot-be.small-3S.INDIC
'He/she has small feet.' [source: 020808]

e. Isigaitch mikirut.
isiɣak-it miki-rut
foot-PL be.small-3S.INDIC
'(The) feet are small.'

f. Qikiqtaġruŋmiuŋuruq.
qikiqtaʁʐuk-miu-u-ʐuq
Kotzebue-resident-BE.3S.INDIC
'He/she is from Kotzebue.' [source: 020408]

g. Qikiqtaġruŋmiu ittuq.
qikiqtaʁʐuŋmiu ittuq
Kotzebue.resident be-3S.INDIC
'He/she is (a person) from Kotzebue.'

It is not clear whether the S argument can also be incorporated. If we consider incorporated existential verbs, as in (14d) and 14f), as incorporated counterparts of intransitive sentences such as (14e) and 14g), then we can claim that the S argument is a candidate for incorporation. That would mean that both O and S can be incorporated, while A cannot, and therefore Iñupiaq noun incorporation has ergative alignment. However, it is not clear that sentences such as (14e) and 14g) are truly counterparts to (14d) and 14f), so the evidence is tentative. Furthermore, this line of evidence may turn out to be a meaningless criterion a language that can incorporate any nominal, whether it is the intransitive subject or transitive object, as well as most other word classes.

8.1.2.4 Antipassive

The existence of an antipassive voice in Iñupiaq (and in other Inuit languages and dialects)[7] is probably the most compelling evidence for syntactic ergativity, as antipassives are much

[7]It is worth noting here that the antipassive is the most debated syntactic feature of Inuit languages, with some such as Bok-Bennema (1992) arguing that there is no antipassive in Inuit languages at all. I defer discussion of evidence for the antipassive until §8.9.1.4.

more common in ergative languages (Polinsky 2008). In a sample of 194 languages, Polinsky (2008) found 146 with no antipassive voice, 17 accusative languages with antipassive voice, and 31 ergative languages with antipassive voice. Ergative languages are therefore almost twice as likely to have an antipassive than accusative languages.[8] Moreover, there are no known cases where a syntactically ergative language lacks an antipassive voice. Morphologically ergative languages do not necessarily have antipassive voice, however, as demonstrated by Samoan (Mosel & Hovdhaugen 1992) and Burushaski (Morin & Tiffou 1988). Yidiny (Dixon 1977), Diyari (Austin 1981), and Kalkatungu (Blake 1978) are languages with split morphological ergativity and an antipassive voice.

Antipassive voice is a valency-reducing operation, whereby the A argument of a transitive clause is changed into the S argument of an intransitive clause and the O argument is either deleted or becomes oblique (cf. a passive, in which the O argument of a transitive clause is changed into the S argument of an intransitive clause). In Iñupiaq (and other Inuit languages and dialects), the antipassive can still have a semantic object (marked with instrumental case), despite being formally intransitive, as in example (15b).

(15) a. Aŋutim supputit-kaa akłaq.
aŋutə-m supputit-ka: akłaq-Ø
man-ERG shoot-3S.3S.INDIC bear-ABS
'The man shot the bear.' [source: 011608]

b. Aŋun pisiksiruq akłamik.
aŋun-Ø pisik-**si**-ʒuq akłaq-mik
man-ABS shoot-**ANTIPASS**-3S.INDIC bear-INSTR.SG
'The man shot a bear.' [source: 011608]

[8]Establishing the number of ergative languages without an antipassive is difficult, because many data sources do not include information on both ergativity and antipassives. In Polinsky (2008), for example, there are ergative languages listed in the sample for which there is no information about antipassives.

Due to the fact the the antipassive is so difficult to categorize in the language—for example, is it transitive, or is the semantic patient/O argument in fact a syntactic oblique?—and the fact that antipassives are not strictly limited to ergative languages (Polinsky 2008), the Iñupiaq antipassive is not good evidence for or against syntactic ergativity. See Section 8.9.1.4 for more details on the antipassive.

8.1.2.5 Word order

The basic word order in Iñupiaq is SOV, though word order is rather fluid. It is also common for both subject and object to be omitted, in which case word order is not observable. According to Payne (1997:137), word order can encode grammatical relations, particularly if the basic word order is verb medial. In a verb medial language, for example, one might find evidence that S and O always appeared to the left of the verb, while A always appeared to the right. Iñupiaq word order is not verb medial, so we would not expect its basic word order to encode grammatical relations. However, Payne's (1997) statement is just a starting point; in reality, *any* observed word order behavior that groups S and O in contrast to A (if ergative) or S and A vs. O (if accusative) can be used to determine syntactic alignment.

Dixon (1972, 1994) argues that although the word order in Dyirbal is relatively free, there is nonetheless a tendency in transitive clauses for O to precede A, as in example (16a). Likewise, Ochs (1982) reports a tendency in Samoan, another (morphologically) ergative language, for children to place the absolutive arguments (O or S) immediately after the verb, thus showing syntactically ergative word order. (Adult speakers of Samoan adhere to the strict VSO order and use case marking to assign grammatical relations. According to Ochs (1982), use of word order to mark grammatical relations is only found in child Samoan.)

The basic word order in Iñupiaq is SOV but this is relatively free; like Dyirbal, there is a tendency for a certain order. In Iñupiaq, the tendency is for the A to precede O in a transitive

clause, as in example (16b). In a typical intransitive clause such as (16c), S precedes the verb as well. We can say that S and O are typically immediately before the verb, while A is not, but this is merely a tendency. Therefore we can assert that word order in Iñupiaq tends to be ergative but only weakly. Note, of course, that weakly exhibited ergative word order is not a feature of ergative languages in general, it is merely the status quo for Iñupiaq.

(16) a. bayi yara baŋgun dugumbi-ru balgan
there.ABS man.ABS there.ERG woman-ERG hitting
'The woman is hitting the man' [source: Dixon (1972:59)]

b. Dave-gum umŋiyaġaa Bill.
Dave-ɣum umŋijaq-ɣa: Bill-Ø
p.n.-ERG shave-3S.3S.INDIC p.n.-ABS
'Dave shaved Bill.' [source: 071907]

c. Aġnaq iglaqtuq.
aʁnaq-Ø iɣlaq-tuq
woman-ABS laugh-3S.INDIC
'The woman is laughing.'

No other word order effects as relate to ergativity are known for Iñupiaq.

8.1.2.6 Reflexivization

According to Anderson (1976:15), syntactically accusative reflexivization is such that

> "it is the index corresponding to the object NP which is replaced by a reflexive form, while the index corresponding to the subject NP remains.... The behavior of reflexive with respect to case marking [ergativity] is sometimes difficult to determine, since it is fairly common for reflexive clauses to be treated as structurally intransitive. When that happens, it is impossible to determine whether reflexivization has gone 'from' the ergative NP 'to' the absolutive NP, or vice versa. Where we can determine a direction, however, it is generally clear that

it is the (absolutive) direct object NP of a transitive clause that has undergone reflexivization."

In syntactically ergative reflexivization, on the other hand, it is the ergative argument (A) which is a candidate for reflexivization. As Nowak (1996) notes for Inuktitut, "the antecedent of a reflexive is always a noun phrase in the absolutive case," which means they must be S or O arguments. Iñupiaq reflexives, which are carried out morphologically, are nominative-accusative, because the O arguments are antecedents of the reflexive, not A arguments, just as Anderson (1976:15) describes. This is illustrated by the examples in (17).

(17) a. Dave-gum umŋiyagaa Bill.
Dave-ɣum umŋijaq-ɣa: Bill-Ø
p.n.-ERG shave-3S.3S.INDIC p.n.-ABS
'Dave shaved Bill.' [source: 071907]

b. Iŋminik umŋiyaqtuq.
iŋminik umŋijaq-tuq
self-ABS.SG shave-3S.INDIC
'(Dave) shaved himself.' [source: 071907]

The fact that O (the transitive object) can be replaced with *iŋminik* 'self (ABS.SG)'[9] is further proof that the O argument is the candidate for reflexivization. As a reviewer pointed out, we cannot evaluate the status of S arguments, which are also absolutive arguments, because there is only one argument in the clause.

8.1.2.7 Switch reference

Switch reference in Iñupiaq is limited to dependent clauses with third person subjects (section 8.2 for more on switch reference in Malimiut Iñupiaq). Any verb in a dependent clause must

[9]Although *iŋminik* would appear to be *iŋmi* 'self' plus the instrumental plural suffix *-nik*, it is also used as the absolutive singular of 'self.' See Section 5.4.1 on personal and reflexive pronouns, and also Collis (1977).

obligatorily mark whether its subject (within the clause) is co-referential with the subject of the matrix clause, but only if the subject of the dependent clause is third person. This is done via separate verb agreement mood paradigms for third person reflexive and third person non-reflexive.

(18) a. Kaakkama niġiŋaruq.
ka:k-kami niʁi-ŋa-ʐuq
hungry-3S.**REFL**.COND eat-REAL-3S.INDIC
'When he/she$_i$ got hungry, he/she$_i$ ate.'

b. Kaaŋman niġiŋaruq.
ka:k-man niʁi-ŋa-ʐuq
hungry-3S.**NON-REFL**.COND eat-REAL-3S.INDIC
'When he/she$_j$ got hungry, he/she$_i$ ate.'

c. Aġnaiyaam aqikami nukatpiaġruk iglaqtuq.
aʁnaija:q-m aqi-kami nukatpiaʁʐuk-Ø iɣlaq-tuq
girl-ERG.SG kick-3S.**REFL**.PERF.COND boy-ABS.SG laugh-3S.INDIC
'When the girl [A] kicked the boy [O], (she [A]) laughed.' [source: 011408]

d. Aġnaiyaam aqipman nukatpiaġruk iglaqtuq.
aʁnaija:q-m aqi-pman nukatpiaʁʐuk-Ø iɣlaq-tuq
girl-ERG.SG kick-3S.**NON-REFL**.PERF.COND boy-ABS.SG laugh-3S.INDIC
'When the girl [A] kicked the boy [O], (he [O] *or someone else*) laughed.' [source: 011408]

e. *Piquum aqipman nukatpiaġruk (Piquk)
piquk-m aqi-pman nukatpiaʁʐuk-Ø piquk-Ø
p.n.-ERG.SG kick-3S.**NON-REFL**.PERF.COND boy-ABS.SG p.n.-ABS.SG
iglaqtuq.
iɣlaq-tuq
laugh-3S.INDIC
intended for 'When Piquk [A] kicked the boy [O], (Piquk [S]) laughed.' [source: 011408]

It is the co-referentiality of A and S which must be marked (or A and A, if the dependent clause is also transitive), while the status of O is never indicated. In example (18d), the

(omitted) S argument of the independent clause *iglaqtuq* '3S laughed' must be interpreted as either the boy or some other third person argument other than the girl. The conditional suffix on the verb in the dependent clause does not specify who the subject of the independent clause, only that it cannot be the same as the subject (A) of the dependent clause. Example (18e) shows that an attempt to mark the O argument of the independent clause co-referential with the S argument of the dependent clause is ungrammatical. This evidence indicates that switch reference in Iñupiaq is nominative-accusative.

8.1.2.8 Other tests for syntactic ergativity

According to Aldridge (2005:7), imperatives can also be used as a test for ergativity, because in a transitive clause it is the ergative argument which serves as the imperative addressee. See example (19a) from Central Alaskan Yup'ik and its corresponding Iñupiaq form in (19b).

(19) a. Ner-**ci**-u!
eat-2P-3S
'You all eat it!' [source: Payne (1982:90), Yup'ik]

b. Niġisiuŋ!
niʁi-siuŋ
eat-2P.3S.IMPER
'You all eat it!' [Malimiut Iñupiaq]

(Dixon 1979), however, states that there is no way for imperatives to encode syntactic alignment. Dixon (1979:113) says that, "all types of S are linked with A as being *potentially* the addressee of an imperative, in almost every language (Guarani being a fairly rare exception)." Dixon (1979:112) also notes that "the fact that S and A have the same possibilities of reference for the imperative constructions...is no evidence at all for the placement of that language on a continuum of syntactic 'ergativity' vs. 'accusativity'. Even the most ergative language will treat S and A NP's of imperatives the same." Due to this disagreement over

the validity of evidence from imperatives, the behavior of imperatives is not a particularly useful test for syntactic ergativity.

8.1.3 Summary

In summary, Malimiut Iñupiaq is morphologically ergative and also exhibits some syntactically ergative behavior. Ergativity is only evident in the case marking when nouns are possessed; unpossessed nouns take ergative case marking only when third person singular. Morphological ergativity is consistently marked in Iñupiaq verb agreement. Malimiut Iñupiaq has some ergative-absolutive syntactic properties, but it is not strongly ergative syntax such as that seen in Dyirbal. Syntactic pivots, relativization, relativization, and switch reference are nominative-accusative, while noun incorporation and word order both show weakly ergative tendencies. The antipassive is unambiguously ergative.

8.2 Clause combining

In this section, I discuss some of the numerous ways to combine clauses in Malimiut Iñupiaq, whether dependent or independent clauses. These include relative clauses and complement clauses.

One important characteristic of Malimiut Iñupiaq (and all Inuit languages/dialects) is that in dependent clauses (see §4.1.2 for dependent vs. independent verb moods), if there are third person arguments, the verb agreement obligatorily marks whether or not the (third person) subject of the dependent clause is co-referential with the subject of the matrix clause (see also §8.1.2.7 on switch reference). All dependent moods have separate verb agreement for third person reflexive and third person non-reflexive. Third person reflexive is often called *fourth person* in Eskimo-Aleut linguistics (Fortescue 1984, MacLean 1993, Nagai 2006)). Seiler (2005) refers to third person non-reflexive as *third person different.*

(20) a. Kaakkama niġiŋaruq.
ka:k-kami niʁi-ŋa-ʐuq
hungry-3S.**REFL**.COND eat-PERF-3S.INDIC
'When he/she$_i$ got hungry, he/she$_i$ ate.'

b. Kaaŋman niġiŋaruq.
ka:k-man niʁi-ŋa-ʐuq
hungry-3S.**NON-REFL**.COND eat-PERF-3S.INDIC
'When he/she$_j$ got hungry, he/she$_i$ ate.'

c. Kaliim paaqługu Aqquġaq qaitkaa
kalik-m pa:q-ługu aqquʁaq-Ø qaitka:
p.n.-ERG meet-3S.3S.PERF.COOR p.n.–ABS give-3S.3S.INDIC
puukataurani.
pu:katauʐaq-ni
bag-3S.**REFL**.POSS.ABS.SG
'Kalik$_i$ met Aqquġaq$_j$ and gave her$_j$ her$_i$ bag.' [source: 072607]

d. Kaliim paaqługu Aqquġaq qaitkaa (Aqquġam)
kalik-m pa:q-ługu aqquʁaq qaitka: (aqquʁaq-m)
p.n.-ERG meet-3S.3S.PERF.COOR p.n.–ABS.SG give-3S.3S.INDIC (p.n.–ERG.SG)
puukataurаŋa.
pu:katauʐaq-ŋa.
bag-3S.**NON-REFL**.POSS.ABS.SG
'Kalik$_i$ met Aqquġaq$_j$ and gave her$_j$ her$_j$ (Aqquġaq's) bag' [source: 072607]

8.2.1 Relative clauses

Relative clauses are formed without the use of a relativizer and are typically postposed. The relative clause contains a gap, which is coreferential with the head noun (except in the case of internally headed relative clauses; see below); no relative pronoun is used. No distinction is made between animate and inanimate arguments. The verb in the matrix clause takes no special marking, appearing identical to a verb in any other matrix clause, while the relative clause contains a participle, such as in (21a) and (21b).

(21) a. Putu aŋutauruq [umiaqaqtuaq].
putu aŋutauʐuq [umiaq-qaq-tuaq]
p.n. young.man [boat-HAVE-3S.PTCP]
'Putu is a man [(who) owns a boat].' [source: 072607]

b. [Aŋutim amaġuq$_i$ qiñikkaŋa] taaqtaaŋuruq$_i$.
[aŋutə-m amaʁuq-Ø qiniq-kkaŋa] ta:qta:-ŋu-ʐuq
[man-ERG wolf-ABS see-3S.3S.PTCP] black-HAVE-3S.INDIC
'The wolf [(that) the man saw] is black.' [source: 072607]

c. Tavruma aŋutim [qiñikkaŋa amaġuq].
tavʐuma aŋutə-m [qiniq-kkaŋa amaʁuq-Ø]
DEM.ADV.ERG man-ERG [see-3S.3S.PTCP wolf-ABS]
'That one [(is) the man (who) saw the wolf].' [source: 072607]

d. [Akłaqtuaq] aŋun niqinik aitchuuruq utuqqanaamun.
[akłaq-tuaq] aŋun-Ø niqi-nik aittuu-ʐuq utuqqana:q-mun
[bear-3S.PTCP] man-ABS.SG meat-INSTR.PL give-3S.INDIC elder-ALL.SG
The man [who shot the bear] gave the meat to the elder. [source: 011608]

e. Aŋun [umiaqaqtuaq] iñuiksuq.
aŋun [umiaq-qaq-tuaq] inuik-tuq
man [boat-HAVE-3S.3S.PTCP] be.nice-3S.INDIC
'The man [(who) owns this boat] is nice.' [source: 071207]

f. Quviasuktut [aġvaktut] aŋutit.
quviasuk-tut [aʁvak-tuat] aŋutə-t
be.happy-3P.INDIC [catch.a.whale-3P.PTCP] man-PL
'The hunters (lit. men) [(who) caught the whale] are happy].' [source: 071207]

g. Qimmit [qiḷuktuat] kaaktut.
qimmiq-t [qiluk-tuat] ka:k-tut
dog-PL [bark-3P.PTCP] be.hungry-3P.INDIC
'The dogs [(that) are barking] are hungry.' [source: 071207]

h. Iḷisautrim qiñiġai iḷiġaat uqaqtauruat.
ilisautʐi-m qiniq-ɣai iliʁa:q-t [uqaq-tau-ʐuat]
teacher-ERG see-3S.3P.INDIC child-PL [talk-PASS-3P.PTCP]
'The teacher saw the children [(who) were talking].' [source: 071607]

Example (21b) indicates that internally-headed relative clauses (IHRCs) are permitted in Malimiut Iñupiaq. In an IHRC, the head noun is both the O argument of the transitive clause in which it appears and the S argument of the matrix verb (Kroeger 2005:233-234). In (21b), the head noun *amaġuq* 'wolf.ABS' meets this definition. The presence of IHRCs in Iñupiaq is not unexpected, since they are very widespread in polysynthetic languages (Jelinek 1987, Kibrik 1992, Baker 1996).

8.2.1.1 Noun phrase accessibility hierarchy

Comrie (1989:156–163) proposed a noun phrase accessibility hierarchy (NPAH) to predict which parts of a clause can be antecedents of a relative clause. The NPAH was originally proposed for nominative-accusative languages, and there is some debate about whether it is useful for ergative languages as well. This is because it is not always easy to identify whether A or S is more subject-like in ergative languages. Fox (1987) argues that NPAH is not applicable to ergative languages at all and proposes an absolutive hierarchy (AH) in its place. Her AH theory proposes that in ergative languages S and O arguments (i.e., absolutives) are the most easily relativizable, not S and A.

In Malimiut Iñupiaq, antecedents of relative clauses can be absolutive (see examples (22a) and (22b)), or ergative (see example (22c)). The ergative case has genitive function in Iñupiaq (see Section 3.1.2.1), so we should expect that genitive arguments can be relativized if ergative ones can. As it turns out, then, the debate between NPAH and AH and their respective applicability to ergative languages is irrelevant for Iñupiaq, because A, S, and O arguments can all be relativized.

(22) a. Makpiġaaq [Putum qaisaŋa Kaliŋmun] utuqqauruq.
makpiʁa:q [putu-m qait-aŋa kalik-mun] utuqqau-ʐuq
book [p.n.-ERG give-3S.3S.PTCP p.n.-ALL] be.old-3S.INDIC
'The book [(that) Putu gave to Kalik] is old.' [source: 072707] [ABS, O]

b. Aġnauraq [Nutaam qiñikkaŋa] aakiyaaġigiga.
aʁnauʐaq [nuta:q-m qiniq-kkaŋa] a:kija:q-ɣi-ɣiɣa
girl p.n.-ERG see-3S.3S.PTCP older.sister-HAVE-1S.3S.INDIC
'The girl [(who) Nutaaq saw] is my sister.' [source: 072707] [ABS, S]

c. [Akłaq siksaqkaŋa] aŋutim niqi aitchuuġaa
[akłaq-Ø siksaq-kkaŋa] aŋutə-m niqi-Ø aittu:-ɣa:
[bear-ABS.SG shoot-3S.3S.PTCP man-ERG.SG] meat-ABS.SG give-3S.3S.INDIC
utuqqanaamun.
utuqqana:q-mun
elder-ALL.SG
'The man [(who) shot the bear] gave the meat to the elder.' [011608] [ERG, A]

Indirect objects, obliques, and objects of comparatives cannot be relativized in Iñupiaq; this refers to their roles within the matrix clause. There is no strong evidence for indirect objects in Iñupiaq; attempts to produce relativized IO yielded examples such as (23a). Obliques cannot be relativized. Speakers produced sentences such as (23b) when I attempted to elicit relativized obliques. Objects of comparatives cannot be relativized either. Requests for this type of meaning were responded to with plain comparatives, such as in example (23c), which was the response to an elicitation request for 'The man who I am taller than'.

(23) a. Aġnaq [aglakkaġaa] atchagigiga.
aʁnaq [aɣlaq-kkaʁa] accak-ɣi-ɣiɣa
woman [write-1S.3S.PTCP] aunt-HAVE-1S.3S.INDIC
'The woman [(to whom) I wrote a letter] is my aunt.' [source: 072707] [IO]

b. Aŋun [aquppiqatiga] aŋagigiga.
aŋun [aquppi-qatiq-a] aŋak-ɣi-ɣiɣa
man [sit-COM-1S.3S.POSS] paternal.uncle-HAVE-1S.3S.INDIC
'The man [(who) I sat next to (lit. is my sitting partner)] is my uncle.' [source: 072707] [OBL]

c. Taavrumaŋŋa aŋunmiñ iñugaqtutluktuŋa.
ta:vʐumaŋŋa aŋun-min inuɣaqtu-tluk-tuŋa
DEM.PRO.ABL man-ABL be.tall-COMP-1S.INDIC
'I am taller than that man.' [source: 072707] [COMP]

8.2.2 Complement clauses

Complement clauses can be formed either by simply putting two clauses together with no overt marking, by the use of a complementizer suffix such as *-ni* 'COMP' or *-asugi* 'COMP', or by using a dependent clause in the coordinative mood. The suffix *-ni* is often used for reported speech, as in examples (24a) and (24b).

(24) a. Aġnauram [aapaŋa tuquruaq] uqautigaaŋa
aʁnauʒaq-m [a:pa-ŋa tuqu-ʒuaq] uqauti-ɣa:ŋa
girl-ERG [father-3S.POSS die-3S.PTCP] tell-3S.1S.INDIC
alianniuġ**ni**vḷuni.
alianniuq-**ni**-v-luni
be.sad-**COMP**-IMPF-COOR
'Being sad, the girl told me (that) her father had died.' [source: 072707]

b. Putum Miiyuk nakuaġ**ini**gaa.
putu-m mi:juk-Ø nakuaʁi-**ni**-ɣa:
p.n.-ERG p.n.-ABS love-**COMP**-3S.3S.INDIC
'Putu said that he loves Miiyuk.' [source: Seiler (2005:252)]

c. Aġnaq uqaullaktuq Nuurviŋmi
aʁnaq-Ø uqaq-llak-tuq nu:ʒvik-mi
woman-ABS.SG talk-politely-3S.INDIC Noorvik-LOC
aullaġ**ni**vḷuni.
aullaq-**ni**-v-luni
go/leave.for-**COMP**-IMPF-3S.COOR
'The woman said she is going to Noorvik.' [source: 012808]

d. Aksraktuamik tauqsiġuktuŋa.
akʂaktuaq-mik tauqsiq-suk-tuŋa
car-INSTR.SG buy-want-1S.INDIC
'I want to buy a car.' [source: 011808]

e. Iḷisimavich auktituatin?
ilisima-vit auktit-tuatin
know-2S.INTERR have.nosebleed-2S.PTCP
'Did you know that you have a nosebleed?' [source: 011608]

f. Kalium uqautivatin Kivaliñiqniaq**niv**ḷuni?
kalik-um uqauti-vatin kivaliniq-niaq-**ni**-v-luni
p.n.-ERG.SG tell-3S.2S.INTERR Kivalina-FUT-**COMP**-IMPF-COOR
'Did Kalik tell you (that) she's going to Kivalina?' [source: 072607]

8.3 Comparatives

Comparatives are mainly expressed by the use of the inflectional verbal morpheme *-tluk*, illustrated in example (25b). The source of comparison is optional, but when present it is marked with the ablative case as in example (25c). Note that incorporated nouns can also be found in comparatives, such as example (25f).

(25) a. Saiḷaq sayaktuq.
sailaq-Ø sajak-tuq.
Saiḷaq-ABS strong-3S.INDIC
'Saiḷaq is strong.'

b. Saiḷaq sayaktugaluaqtuq aglaan Aalak
sailaq-Ø sajak-tuɣaluaq-tuq aɣla:n a:lak-Ø
Saiḷaq-ABS strong-APPARENTLY-3S.INDIC but Aalak-ABS
sayat**luk**tuq.
sajak-**tluk**-tuq.
strong-**COMP**-3S.INDIC
'Saiḷaq is strong, all right, but Aalak is stronger.'

c. Saiḷaq Aalaŋ**miñ** sayat**luk**tuq.
sailaq-Ø a:lak-**min** sajak-**tluk**-tuq
Saiḷaq-ABS Aalak-**ABL** strong-**COMP**-3S.INDIC
'Saiḷaq is stronger than Aalak.'

d. Ukua aŋugaurat sukalluktut aqpannamiŋ taapkunaŋŋa
ukua aŋuɣauẓaq-t suka-lluk-tut aqpat-namiŋ ta:pkunaŋŋa
these.PL boy-PL be.fast-COMP-3P.INDIC run-3P.COND.REAL those-ABL.PL
aŋugauraniñ.
aŋuɣauẓaq-nin
boy-ABL.PL
'These boys are faster when they run than those boys (run).' [source: 072607]

e. Aġnaurat niġiḷḷuktut asiaviŋnik aqpiŋniñ.
aʁnauʐat niʁi-lluk-tut asiavik-nik aqpik-nin
girl-PL eat-COMP-3P.INDIC blueberry-INSTR.PL salmonberry-ABL.PL
'The girls eat more blueberries than salmonberries.' [source: 072607]

f. Natchiqsu**tluk**tuq
nacciq-tuq-**tluk**-tuq
hair.seal-utilize-**COMP**-3S.INDIC
'He ate more seal meat (than the others).' [source: 021108]

8.4 Conditional and hypothetical

Conditional and hypothetical statements are created via the use of the conditional mood suffixes, as demonstrated by examples (26a) and (26b). No complementizer is required for either conditional or hypothetical statements.

(26) a. Kaakkama niġiŋaruŋa.
ka:k-kama niʁi-ŋa-ʐuŋa
hungry-1S.COND eat-PERF-1S.INDIC
'When I got hungry, I ate.'

b. Kaakkumi niġiñiaqtuŋa.
ka:k-kumi niʁi-niaq-tuŋa
hungry-1S.CONTEMP eat-FUT-1S.INDIC
'If I get hungry, I will eat.'

c. Aqaluich paurraġupkich kakkaaġniaŋitchutin.
aqaluk-it pauʐʐaq-upkit kakka:q-niaq-ŋit-tutin
fish-ABS.PL catch.fish-2S.3P.IMPF.COND starve-FUT-NEG-2S.INDIC
'If you catch many fish, you will not starve.' [source: 070207]

d. Aqaluich paurraŋitkupkich kakkaaġniaqtutin.
aqaluk-it pauʐʐaq-ŋit-kupkit kakka:q-niaq-tutin
fish-ABS.PL catch.fish-NEG-2S.3P.IMPF.COND starve-FUT-2S.INDIC
'If you don't catch many fish, you will starve.' [source: 070207]

e. Malġugnik, malġugnik piḷiuġuurut
malʁuɣ-nik malʁuɣ-nik pi-liuq-ɣu:-ʐut
two-INSTR.DU two-INSTR.DU *pi*-make-usually-3P.INDIC
mikimmata.
miki-mmata
be.small-3P.NONREFL.COND
'They usually use two (sealskins) when they are small.' [source: Edwardsen (1993:43)]

The semantic difference between conditional and hypothetical in Iñupiaq lies in whether or not the action or state is realized or unrealized, which are mapped to grammatical perfective and imperfective, respectively. A conditional clause marked perfective has 'when' interpretation, while a conditional clause marked imperfective has 'if' interpretation. For this reason, Iñupiaq and English 'if' and 'when' constructions do not semantically overlap a one-to-one manner. See §4.1.2.5 for more information about the conditional mood.

8.5 Other subordinate clauses

Subordinate clauses are also used for a variety of other meanings, including simultaneous action (27a), alternative action (27b), and sequential action (27c). These typically use the coordinative mood in the dependent clause.

(27) a. Pisuktuaġluni atuqtuk.
pisuk-tuaq-luni atuq-tuk
walk-PROG-COOR sing-3D.INDIC
'While they (2) were walking, they sang a song.' [source: 072507]

b. Niksiksusuŋaġuni aġnauraq puuvraqtuq.
niksiksuq-suŋaq-huni aʁnauʐaq pu:vʐaq-tuq
fish.with.a.hook-without.Ving-IMPF.COOR girl swim-3S.INDIC
'Instead of fishing, the girl is swimming. (lit. without fishing, the girl is swimming)' [source: 072507]

c. Niġiqqaaqhuni siñiksaqtuq.
niʁi-qqa:q-huni sinik-saq-tuq
eat-first-IMPF.COOR sleep-try-3S.INDIC
'After first eating, she went to sleep.' [source: 072507]

8.6 Gerunds

Gerunds are formed using *-tuni*, a special form of the intransitive coordinative mood, which Seiler (2005:448) dubs '3sg impersonal' (see example (28a)). It is special because the intransitive coordinative suffix is otherwise *-luni*, with various allomorphs. When used for gerunds, however, it takes the form *-tuni* (or *-runi* after a vowel), which I will gloss simply as GER.

(28) a. Iglaqtuni nakuuruq.
iɣlaq-tuni naku:-ʐuq
laugh-GER be.good-3S.INDIC
'Laughing is good.'

b. Atuqtuni naġġugaa.
atuq-tuni naʁʁu-ɣa:
sing-GER dislike-3S.3S.INDIC
'He dislikes his (own) singing.'

8.7 Negation

Regardless of mood, verbal predicates are negated via suffixation, with the exception of imperatives, which have a negative imperative paradigm (see §4.1.2.4). Stative predicates are most often negated via the negative morphemes *-it*. The negative morpheme must be attached to either a verb stem or another suffix. Examples (29a) and (29d) show *-it* attached directly to a verb stem, while in example (29b) it is attached to an inflectional morpheme. Active predicates are also negated with a suffix, but they tend to use *-ngit* rather than *-it* (see also Nagai (2006:105) for information on this in another Malimiut subdialect). In Malimiut

Coastal Iñupiaq, the stative negative *-it* seems to be used more generally, including for some activity predicates.

(29) a. Piquk tusaaŋitchuq.
piquk-Ø tusa:-ŋit[10]-tuq
Piquk-ABS see-NEG-3S.INDIC
'Piquk doesn't see.'

b. Iġñivalukitchuq aakauraġa uvlaakun.
iʁni-paluk-it-tuq a:kauẓaq-ɣa uvla:kun
give.birth-probably-NEG-3S.INDIC older.sister-1S.POSS tomorrow
'My sister will probably not give birth tomorrow.'

c. Saviga ipiktuq.
savik-ɣa ipik-tuq
knife-1S.POSS.ABS be.sharp-3S.INDIC
'My knife is sharp.' [source: 071607]

d. Saviga ipkitchuq
savik-ɣa ipik-it-tuq
knife-1S.POSS.ABS be.sharp-NEG-3S.INDIC
'My knife is dull (lit. not sharp).' [source: 071607]

e. Utqiaġviŋniaqtutin uvaŋa aullaaġñiaŋitchuŋa.
utqiaʁvik-niaq-tutin uvaŋa aulla:q-niaq-(ŋ)it-tuŋa
Barrow-INCEPT-2S.INDIC 1S.PRO go-INCEPT-NEG-1S.INDIC
'You will go to Barrow (but) I will not.' [source: 070207]

8.7.1 Scope of negation

One particularly interesting aspect of Iñupiaq is the scope of negation. According to the Corollary Scope Rule devised in Woodbury (2004:151, 155) for all Eskimo-Aleut languages,

[10]The stative negative suffix is *-it*, but it appears as *-ŋit* here because of a general phonotactic rule in the language that inserts ŋ to prevent hiatus of three vowels. Thus a sequence of VV-it becomes VV-ŋit.

each suffix has scope only over the part of the word immediately before it. There is an important exception to this general rule, however: certain verbal suffixes are sentential affixes, having scope only over the entire verb. This includes the obligatory final person/number/mood suffixes required for verb formation. Woodbury (2004:155) claims that this scope rule and its sentential suffix exception is applicable to the entire Eskimo-Aleut family: "Moreover, when suffixation is recursive, each new suffix pertains semantically to all and only the base to which it is added: not to a part of the base, nor (*except in the case of inflection*) to a whole phrase" (emphasis added). Data from my fieldwork confirms this claim by Woodbury. Compare examples (29b) above with (30). Although the English translations are identical, the meaning is not because in one the modal suffix is being negated and in the other, the verb is being negated. This is more obvious if the English is reformulated as questions and answers. For (29b), the answer to the question "Will my sister give birth tomorrow?" would be "Probably not;" the corresponding pair for (30) would be "Will my sister *not* give birth tomorrow?" with its answer "Probably."

(30) Iġñiitpaluktuq aakauraġa uvlaakun.
iʁni-it-paluk-tuq a:kauʐaq-ɣa uvla:kun
give.birth-NEG-probably-3S.INDIC older.sister-1S.POSS tomorrow
'My sister will probably not give birth tomorrow.'

Examples (31a–31c) illustrate the scope and recursivity of negation. The repeated negatives cancel each other out where semantically possible, such as in (31c). With a NEG morpheme on both the verb stem and the modal suffix, *Siñikitpalukitchuŋa.* means 'I will probably [not [*not* sleep]]'—in other words 'not sleeping' is something that I will not do.

(31) a. Siñikpalukitchuŋa.
sinik-paluk-it-tuŋa
sleep-probably-NEG-1S.INDIC
'I will probably not sleep.'

b. Siñikitpaluktuŋa.
sinik-it-paluk-tuŋa
sleep-NEG-probably-1S.INDIC
'I will probably not sleep.'

c. Siñikitpalukitchuŋa.
sinik-it-paluk-it-tuŋa
sleep-NEG-probably-NEG-1S.INDIC
'I will probably not *not* sleep (i.e., I *will* sleep).'

8.8 Question formation

Question formation is handled by a set of interrogative agreement suffixes. Like the indicative and other mood markers, the interrogative suffixes are portmanteau suffixes, combining person, number, aspect, and mood. Yes/no questions are created by using an interrogative suffix on the verb and lengthening the verb's final syllable (not indicated in the spelling system). If the final vowel is already a long vowel (including a diphthong), no additional lengthening takes place. Examples (32a) and (32b) illustrate yes/no questions with accompanying answers.

(32) a. Puuvratlavich? / Ii, puuvratlaruŋa.
pu:vʐa-tla-vi:t / i: pu:vʐa-tla-ʐuŋa
swim-POT-2S.INTERR / yes swim-POT-1S.INDIC
'Can you (sg.) swim? / Yes, I can swim.'

b. Ugruuk niġivatigik qaluich? / Ii, qaluich niġiġaich.
uɣʐu-:k niʁi-vatiɣik qalu-it? / i: qalu-it niʁi-ɣait
bearded seal-DU eat-3D.3P.INTERR fish-PL / yes fish-PL eat-3D.3P.INDIC
'Did the two bearded seals eat the fish (pl.)? / Yes, they ate the fish.'

Question-word questions (so-called *wh*-questions) use the same mood suffixes found in yes/no questions. Word-final lengthening is not found in question-word questions, however, and interrogative pronouns also appear. Question words may be independent as in example

(33a) or appear as interrogative verb stems as in example (33b).

(33) a. Kiña atuqtuq?
kina atuq-tuq
who sing-3S.INTERR
'Who is singing?'

b. Suvisik? / Aglaktuguk.
su-visik / aɣlak-tuɣuk
what-2D.INTERR / read-1D.INDIC
'What are you two doing? / We (dual) are reading.'

c. Qavsiñik natchiġnik
qavsi-nik nacciq-nik
how.many-INSTR.PL hair.seal-INSTR.PL
pauŋŋaaliuġuuvat?
pauŋŋa:k-liuq-ɣu:-vat
sealskin.hip.boot-make-usually-3P.INTERR
'How many sealskins do they use when they are making those waterproof boots?'

[source: Edwardsen (1993:42)]

8.9 Voice & valency

Valency and voice phenomena such as reflexives, reciprocals, causatives, and antipassives are formed mainly via morphological means. The basic valency types in Iñupiaq are intransitive (34a) and transitive (34b). A ditransitive is also possible (34c). These three types have valencies of one argument, two arguments, and three arguments, respectively.

(34) a. Naŋittuq nukatpiaġruk.
naŋit-tuq nukatpiaʁʐuk-Ø
be.sick-3S.INDIC boy-ABS.SG
'The boy is sick.' [source: 080707]

b. Dave-gum umŋiyaġaa Bill.
Dave-ɣum umŋijaq-ɣa: Bill-Ø
p.n.-ERG shave-3S.3S.INDIC p.n.-ABS
'Dave shaved Bill.' [source: 071907]

c. Marim John amuqatigigaa kuvramik.
Mari-m John-Ø amu-qatigi-ɣa: kuvʐaq-mik
Mari-ERG.SG John-ABS.SG pull.out-together.with-3S.3S.INDIC net-INSTR.SG
'Mary, together with John, pulls out the net.' [source: Nivens (1986:82)]

Note that in (34c), the direct object *kuvraq* 'net' takes instrumental case, while the indirect object, John, takes absolutive case.

It is well accepted in Eskimo-Aleut linguistics that a large portion of the verb stems within any given Eskimo-Aleut language are specified for valency, and further, that the valency of the verb correlates highly with the transitivity of the clause (cf. Bok-Bennema (1992:43), Mithun (2000:86–87). Throughout his grammar of West Greenlandic, for example, Fortescue (1984) describes its syntax and morphology from the perspective that verb stems are either transitive or intransitive. For Iñupiaq in particular, Nagai (2006:119) divides verb stems into three transitivity groups: inherently transitive, inherently intransitive, and unmarked. His evidence for the inherent transitivity of verb stems is which inflectional endings they take. If a particular verb stem is observed to take only transitive inflectional suffixes, for example, Nagai (2006:119) classifies the verb stem and inherently transitive, and so on. Verbs such as *niġi* 'to eat' that are observed to take either transitive or intransitive inflectional suffixes are unmarked in Nagai's (2006) analysis.

Verb stems that are specified for valency undergo valency reduction or increase in a relatively routine manner. The verb stems that can take either transitive or intransitive endings do not behave uniformly; I will discuss this in Section 8.9.1.4. In Iñupiaq, like other Eskimo-Aleut languages, the valency of any verb can be changed one or more times in a clause using various valency-changing suffixes. Valency-changing operations will be discussed in Sections 8.9.1 and 8.9.2 and below according to whether they increase or decrease valency. In Section 8.9.3, I will discuss how multiple valency suffixes can appear on one verb stem (or noun stem, if it is a denominalized verb), and how these valency suffixes interact.

8.9.1 Valency-reducing

8.9.1.1 Reflexive

Reflexives are done in one of two ways in Iñupiaq. If the reflexive argument is a possessed nominal, the strategy is as shown in Section 3.1.3, repeated here as examples (35a) and (35b). The third person reflexive possessive suffixes are used when the possessor is coreferential with the subject of the sentence (i.e., reflexive).

(35) a. Miñułiġaa igluni.
minułiq-ɣa: iɣlu-ni
paint-3S.INDIC house-3S.3S.REFL.ABS
'He$_i$ is painting his$_i$ house.'

b. Miñułiġaa igluŋa.
minułiq-ɣa: iɣlu-ŋa
paint-3S.INDIC house-3S.3S.POSS
'He$_i$ is painting his$_j$ house.'

If the reflexive nominal is an object coreferential with the subject of a transitive sentence, one simply uses an intransitive suffix on a verb stem that would otherwise be transitive only. Since no object is marked on the verb, the result is an implied reflexive, as in example (36a).

(36) a. Natchiqiruq.
nattiqi-ʒuq
wash-3S.INDIC
'He is washing himself.'

b. Aġnayaaq iŋminik aqiaruq.
aʁnaja:q-Ø iŋmi-nik aqia-ʒuq
girl-ABS.SG self-INSTR.SG kick-3S.INDIC
'The girl kicked herself.' [source: 071907]

c. Iŋminik anniŋaruq.
iŋmi-nik anniq-ŋa-ʒuq
self-INSTR.SG hurt-PERF-3S.INDIC
'She hurt herself.' [source: 071707]

d. Ilaan anniŋagai.
ila:-n anniq-ŋa-ɣai
3S.PRO-ERG hurt-PERF-3S.3P.INDIC
'She hurt them (other people).' [source: 071707]

As demonstrated in Nagai (2006), the implied reflexive interpretation is only possible with verb stems that are semantically agentive. Semantically patientive transitive verbs yield antipassive meaning when paired with intransitive suffixes, not reflexive (see more details on the antipassive in Section 8.9.1.4). Therefore lack of marking means different things depending on the semantics of the verb in question.

Indirect reflexives, such as 'She caught a fish for herself', are typically treated as applicatives in Malimiut Iñupiaq. As explained in §8.9.2.2, applicatives are often used for benefactive or malefactive meaning, including actions of benefit to the subject.

8.9.1.2 Reciprocal

According to Nagai (2006:135), the reciprocal suffix *-uti* changes a transitive into an intransitive, with A and O becoming one S. Morphosyntactically marked reciprocals were not found among the data collected during my fieldwork; my primary consultant instead provided transitive sentences which could easily be interpreted with reciprocal meaning, such as *Nukatpiaġruitch aqpattut* 'The boys (pl.) ran' interpreted as 'The boys (pl.) chased each other'. However, morphologically formed reciprocals such as the one in example (37b) from another Malimiut dialect (Nagai 2006) indicate that *-uti* reciprocals are likely to exist in the Coastal dialect as well. Example (37a) demonstrates that an adverb such as *avatmun* 'to each other' can be used to create reciprocal meaning even if the verb has no reciprocal suffix.

(37) a. Ikayuqtuk avatmun.
ikajuq-tuk avatmun
help-3D.INDIC each.other.ALL.SG
'We help each other.' [source: 071607]

b. Siuliglu kaviqsuaġlu siktautiruk
siulik=lu kaviqsuaq=lu siktaq-uti-ʒuk
pike.ABS.SG=COORD mudsucker.ABS.SG=COORD shoot-RECIP-3D.INDIC
qaġrupianik.
qaʁʒupiaq-nik
arrow-INSTR.PL
'The pike and the mudsucker shot at each other with arrows.' [source: Nagai (2006:136)]

The suffix *-uti* can also create transitive verbs, in which case its function is applicative rather than reciprocal. See 8.9.2.2 for applicative uses of *-uti*.

8.9.1.3 Passive & anticausative

A passive creates an intransitive clause from an active transitive clause; in doing so, the transitive A is omitted or changed to an oblique, and the transitive O becomes the (passive) intransitive S. A similar construction is the anticausative, which shows a subject that is affected but which has no semantic or syntactic causer. Many of the passives described for Iñupiaq and other Inuit languages/dialects may actually be anticausatives; I will return to this topic below.

In describing Iñupiaq passives, we need to differentiate between passive meaning and passive morphosyntax. Passive meaning is common without any overt passive morphosyntax, as in example (39b). Passive form, on the other hand, is rarely seen. Nagai (2006:124) argues that passive morphosyntax is merely a calque from English, used mainly in Bible translation, and that it is rare and unproductive. Nagai (2006:124) lists *-tau* as a passive morpheme, which can be broken down into *-taq* PTCP and *-u* 'have' (a derivational possession suffix that cannot act as a lexical verb). I agree with Nagai on this matter; passive morphology is so rare that I was unable to elicit more than one example in Malimiut (Coastal) dialect, example (38).

(38) Iḷisaurim qiñiġai iḷiġaat uqaqtaurut.
ilisauẓi-m qiniq-ɣai iliʁa:q-t [uqaq-**tau**-ẓut]
teacher-ERG see-3S.3P.INDIC child-PL [talk-PASS-3P.INDIC]
'The teacher saw the children [(who) were talking].' [source: 071607]

As noted above, a morphological active can denote semantic passive: (39a) vs. (39b). The noun *nuyai* 'hair' is not agent doing the cutting, so it is interpreted as a passive (cf. (39d). However, (39b) may be better understood as an anticausative, because no syntactic or semantic causer is present. The essential distinction between passive and anticausative voice is that in a passive, the agent can be expressed; in Iñupiaq, this is done by including a noun in allative case *-mun* (Collis 1978, Nagai 2006), such as in (39c).

(39) a. Aŋun kipiruq.
aŋun-Ø kipi-ẓuq
man-ABS.SG cut-3S.INDIC
'He$_i$ cut his$_i$ hair.' [source: Nagai's (2006) fieldnotes]

b. Nuyai kipirut.
nujai kipi-ẓut
hair.ABS.PL cut-3P.INDIC
'(His) hair has been cut.' [source: Nagai's (2006) fieldnotes]

c. Nuyai kipirut Nauyamun.
nujai kipi-ẓut naujaq-mun
hair.ABS.PL cut-3P.INDIC p.n.-ALL.SG
'(His) hair has been cut by Nauyaq.'

d. Aŋun kipigai nuyai.
aŋutə-m kipi-ɣai nujai
man-ERG cut-3S.3P.INDIC hair.ABS.PL
'(The) man$_i$ cut his$_j$ hair.'

e. Tupġa ulġuruq.
tupəq-ɣa ulʁu-ẓuq
tent-1S.POSS.ABS.SG topple-3S.INDIC
'My tent got knocked down (lit. toppled).' [source: 072706]

For example (39e), my primary consultant indicated that this means she assumes the tent was knocked down by the wind or an animal, but that she cannot be sure. This can be interpreted as an anticausative. However, since the distinction between the two voices is minor and the agent is often understood even when omitted, I treat passive and anticausatives in Iñupiaq as two sides of one coin: a transitive verb stem may have implied passive or anticausative voice when paired with a intransitive mood suffix, depending on whether the agent is overtly expressed or recoverable from context.

8.9.1.4 Antipassive

By definition, an antipassive is a verb construction which decreases the valency of a transitive clause, creating a monovalent intransitive clause. The A argument of a transitive clause corresponds to the S argument of the antipassive, and the O argument of the transitive is either entirely omitted from the antipassive or marked with an oblique case. A canonical antipassive is shown in example (40), which includes a transitive sentence and its corresponding antipassive sentence in Dyirbal, an Australian language (Dixon 1994:12–13).

(40) a. yabu ŋuma-ŋgu bura-n
mother.ABS father-ERG see-NONFUT
'Father (A) saw mother (S).'

b. ŋuma bural-**ŋa**-n^{y}u yabu-gu
father.ABS see-**ANTIPASS**-NONFUT mother-DAT
'Father (S) saw mother.'

The antipassive is perhaps the most debated feature of any Inuit language. This is mainly because Inuit antipassives may have a semantic object, which is marked with instrumental case (*-mik*) as demonstrated in (41), and its syntactic status is questioned (see below).

(41) a. Aŋutim supputitkaa akłaq.
aŋutə-m supputit-ka: akłaq-Ø
man-ERG shoot-3S.3S.INDIC bear-ABS
'The man shot the bear.' [source: 011608]

b. Aŋun pisiksiruq akłamik.
aŋun-Ø pisik-**si**-ʒuq akłaq-mik
man-ABS shoot-**ANTIPASS**-3S.INDIC bear-INSTR.SG
'The man shot a bear.' [source: 011608]

It is often claimed that the distinction between a transitive clause with A and O arguments, as in example (41a), and an intransitive antipassive with S argument and an oblique semantic 'object', as in example (41b), lies in definiteness (Aldridge 2005:36).

The syntactic transitive is generally considered to be for use with definite objects while the antipassive is for use with indefinite objects. There are numerous reasons cited for why the Inuit antipassive appears to allow a semantic object, if not a syntactic one, such as definiteness, scope, specificity, discourse structure, etc. Rather than discuss all of the possibilities debated, I focus on describing the Malimiut Iñupiaq data and refer the reader to the literature (Woodbury 1975, Seiler 1978, Kalmár 1979, Fortescue 1984, Bok-Bennema 1992, MacLean 1993, Fortescue 1995, Manning 1996, Givón 2001, Sadock 2003, Nagai 2006, Johns 2006). There is some evidence, however, that the INSTR NP in an Iñupiaq antipassive clause does not have to be indefinite, as shown in example (42):

(42) a. Salummaqsaqtuq aŋun iŋminik.
salummaq-saq-tuq aŋun-Ø iŋmi-nik
tidy.up-try-3S.INDIC man-ABS.SG self-INSTR.SG
'The man is trying to cleaning his own house.' [source: 080707]

b. Pukuktuq atnuġaanik.
pukuk-tuq atnuʁa:q-nik
pick.up-3S.INDIC piece.of.clothes-INSTR.PL
'She's picking up clothes.'

Givón (2001:168) suggest that antipassives are fundamentally concerned with patient suppression, so they are used "in discourse contexts when the patient in unimportant, non-topical, non-persistent, non-anaphoric, stereotypical or generally predictable." This is the approach I adopt concerning the semantic 'object' in intransitive antipassive clauses, because Givón's (2001) approach allows for cases where the semantic object of an antipassive is definite and anaphoric, but still suppressed. As pointed out to me by Claire Bowern (p.c.), Givón's (2001) approach contrasts with Dixon's, where the (main) purpose of the antipassive voice is as a syntactic construct used to manipulate verbs into the right form for the purposes of feeding syntactic pivots. In Iñupiaq, while antipassivized verbs can be used as input to other syntactic operations, that does not seem to be their main function. This might therefore constitute a cross-linguistic difference in terms of antipassive functions.

Some linguists, such as Bok-Bennema (1992), Fortescue (1995), argue that this 'antipassive' is actually a transitive clause with nominative-accusative alignment. Under such analyses, the *-mik* oblique is actually the O argument, where *-mik* is accusative (or instrumental with accusative *function*). Others, such as Nagai (2006), believe that it is a true antipassive.

Following Seiler (1978), MacLean (1993), Seiler (2005), Nagai (2006), I believe that Iñupiaq has an antipassive construction. In terms of form, the Iñupiaq antipassive in (41) looks very similar to the Dyirbal antipassive in (40). However, in Iñupiaq, an antipassive morpheme may or may not appear in sentences which are otherwise assumed to be antipassive, such as (43d). Nagai (2006:129) lists four different antipassive morphemes in Iñupiaq (Malimiut Upper Kobuk dialect). These are *-si, -i, -tnik* /-tnək/, and *-kłiq*. It is also possible for no antipassive morpheme to be present; I will gloss this as a null morpheme *-Ø* for ease of comparison. At least hree of these five antipassive strategies are also common in the Malimiut Coastal dialect: *-si, -i,* and *-Ø*. No examples of *-tnik* or *-kłiq* were found among my data. As Nagai (2006:133–134) notes, the antipassive suffixes *-tnik* and *-kłiq* are infrequent and not

productive. There are no examples of *-tnik* and *-kɬiq* in my data from the Coastal dialect.[11]

(43) a. Uvauna aŋun pisiksiruq akɬamik.
uvauna aŋun pisik-**si**-ʐuq akɬaq-mik
DEM.ADV man shoot-**ANTIPASS**-3S.INDIC bear-INSTR.SG
'That's the man who shot the bear.' [source: 011608]

b. Paniqsiruq natchim aminik.
paniq-**si**-ʐuq nacciq-m amiq-nik
dry-**ANTIPASS**-3S.INDIC hair.seal-ERG.SG skin-INSTR.PL
'He/she is drying the seal's skin.' [source: 080707]

c. Kikmiiruk umiamik.
kikmik-**i**-tuk umiaq-mik
kick-**ANTIPASS**-3D.INDIC boat-INSTR.SG
'They (two) were kicking (the) boat.'

d. Aksraktuamik tauqsiqsuŋa.
akʂaktuaq-mik tauqsiq-**Ø**-tuŋa
car-INSTR.SG buy-**ANTIPASS**-3S.INDIC
'I am buying a car.' [source: 011808]

Two characteristics of Iñupiaq antipassives are particularly striking: first, it is unusual for a language to have more than one antipassive morpheme (thanks to Claire Bowern (p.c.) for this observation). Second, example (43b) shows that an antipassive suffix (in this case, *-si*)

[11]Examples of these antipassive suffixes in another Malimiut subdialect (Upper Kobuk) are as follows:

(i) a. Qiaġumik qauq**niktuŋa**.
qiaʁuq-mik qauq-**tnək**-tuŋa
birch.bark-INSTR.SG peel.off-**ANTIPASS**-1S.INDIC
'I peeled off birch bark.' [source: Nagai (2006:131)]

b. Qaluŋnik ai**kɬiq**suŋa.
qaluk-nik ai-**kɬiq**-tuŋa
fish-INSTR.PL fetch-**ANTIPASS**-1S.INDIC
'I fetched some fish.' [source: Nagai (2006:131)]

can be added to a verb that was already intransitive. Therefore valency reduction cannot the only reason for using antipassive voice in Iñupiaq.

For the most complete work on the antipassive in Iñupiaq (any dialect), see Nagai (2006), who seeks to explain the function and distribution of antipassive morphemes in Iñupiaq. Nagai's analysis is appealing because it offers a much more predictable explanation for the otherwise apparently random distribution of *-si* and *-Ø*. Although not able to predict antipassive morpheme occurrence with 100% accuracy, Nagai (2006:iii) has rule for when an antipassive morpheme[12] occurs and when it does not. Nagai (2006:iii, 167) divides verb stems in Iñupiaq into two fundamental types: agentive and patientive. Agentive verbs are those which "have the intransitive subject corresponding with the transitive subject" (cf. examples (44a) and (44b)). Patientive verbs are those which "have the intransitive subject corresponding with the transitive object" (cf. examples (44c) and (44d)). Thus the S argument of an agentive verb stem is agent, while the S argument of a patientive verb stem is patient.

(44) a. Aŋutim niġigaa niqi.
aŋutə-m niʁi-ka: niqi-Ø
man-ERG eat-3S.3S.INDIC meat-ABS.SG
'The man ate the meat.' [source: Nagai (2006:131)]

b. Aŋun niġiruq niqimik.
aŋun-Ø niʁi-ʐuq niqi-mik
man-ABS.SG eat-3S.INDIC meat-INSTR.SG
'The man ate meat.' [source: Nagai (2006:132)]

c. Aŋutim tammaġaa aluutaq.
aŋutə-m tammaq-ka: alu:taq-Ø
man-ERG lose-3S.3S.INDIC spoon-ABS.SG
'The man lost the spoon.' [source: Nagai (2006:132)]

[12]Nagai (2006) uses the term 'half-transitive' as well as 'antipassive', sometimes interchangeably. I use 'antipassive' here, because the theoretical status of the so-called 'half-transitive' is ill-defined and questionable.

d. Aluutaq tammaqtuq.
alu:taq-Ø tammaq-tuq
spoon-ABS.SG get.lost-1S.INDIC
'The spoon got lost.' [source: Nagai (2006:132)]

e. Aŋun tammairuq aluutamik
aŋun-Ø tammaq-i-ʐuq alu:taq-mik
man-ABS.SG lose-ANTIPASS-3S.INDIC spoon-INSTR.SG
'The man lost a spoon.' [source: Nagai (2006:132)]

Nagai uses this agentive/patientive distinction to explain antipassive morpheme distribution in the Upper Kobuk dialect. Basically, he claims that agentive verbs do not require an antipassive morpheme to become antipassive when used intransitively: one simply replaces the transitive verb ending with an intransitive one and antipassive meaning is achieved. The object, if overt, will take instrumental case instead of absolutive.[13] This is the meaning achieved in example (44b). Patientive verbs, on the other hand, require an overt antipassive morpheme to achieve antipassive meaning, as in example (44e). Although Nagai does not call them such, the patientive verbs such as in (44d) are often anticausatives,[14] verbs that affect their subjects but where A is not overtly mentioned or implied (Dixon & Aikhenvald 2000:7). We can simplify Nagai's rules by stating that implied passives and anticausatives require an overt antipassive morpheme to achieve antipassive meaning.

Nagai's (2006) analysis is not without exceptions, because some verb stems can behave as either agentive or patientive (passive/anticausative). Nagai (2006:299) notes that even in such cases, a human vs. non-human distinction is often enough to predict the antipassive distribution: in a so-called 'ambivalent' verb, if the patient is human, an antipassive morpheme

[13]cf. Nyulnyulan *injoogoolij* 'he broke it' but *inyjoogoolij* 'it broke', where the agreement markers indicate which voice is implied (Claire Bowern, p.c.).

[14]Thanks are due to Claire Bowern [p.c.], for pointing out this possibility to me. See also Siegel (1998) for more on anticausative interpretation in Inuit.

appears; if the patient is not human, however, no antipassive morpheme appears (although the sentence will still have antipassive meaning, acting like an agentive verb). Any remaining unexplained verbs—i.e., one which cannot be predicted on the basis of agentive or patientive status—is explained in Nagai (2006:ch.6), basically by saying that the agentive/patientive split is not clean. However, it is still a useful approach for explaining the distribution of the antipassive in Iñupiaq dialects. This analysis works well for the Coastal dialect as well.

As mentioned in §8.1.2.2, one well-documented function of antipassives is to convert an A argument to an S argument, thereby making it relativizable. As Grimshaw & Mester (1985:13) note for Inuit languages/dialects in general, "lexical forms derived by Passive and Antipassive can themselves be input to other lexical rules", which is not surprising given the extensive possibilities for recursive derivational morphology in Inuit. Unfortunately I do not have relativization data from Malimiut Coastal dialect to verify the claim that antipassives can serve to feed relativization. Despite my best intentions, elicitation sessions did not yield any known examples of relativized antipassives. However, as shown in Section 8.1.2.2, the A argument in Iñupiaq can be relativized without an antipassive morpheme. Example (45) cannot be said to have a null antipassive morpheme, because the verb stem is transitive and so is the verb agreement (i.e., the valency never changes).

(45) Tavruma aŋutim [qiñikkaŋaa amaġuq].
tavʐuma aŋuti-m [qinik-kaŋa: amaʁuq-Ø]
DEM.ADV.ERG man-ERG see-3S.3S.PTCP wolf-ABS
'That one (is) the man [who saw the wolf].'

Therefore one of the major functions claimed for the antipassive—enabling the relativization of A arguments—is not *required* in Iñupiaq, but I lack sufficient data to determine whether it is possible despite not being obligatory. We may question, then, whether this construction in Iñupiaq is actually an antipassive as opposed to a general set of valency-reducing suffixes. Given that the main function of this construction in Iñupiaq seems to

be to de-emphasize patients—in line with commonly observed antipassive behavior in other languages, where, as Aldridge (2005:36) notes, "antipassive objects cross-linguistically tend to be indefinite, nonspecific, or less affected by the action of the verb"—I believe it is indeed an antipassive.

8.9.2 Valency-increasing

8.9.2.1 Causative

The causative is created by the use of a causative suffix such as *-tit* 'CAUS' after the verb stem, as shown in example (46). Example (46a) illustrates *-t*, which is either another causative suffix or an allomorph of *-tit*.[15] Its effect is to increase the valency of the verb by one (i.e., turning an intransitive into a transitive). In addition, the S argument becomes O.

(46) a. Nallautitkaa iḷiḷgaaq.
nallauti-t-ka: ililga:q-Ø
put.to.bed-CAUS-3S.3S.INDIC child-ABS
'She made (her) child go to bed.' [source: 071907]

b. Aanaŋata iḷiḷgaat aquvittitgai.
a:na-ŋata ililga:q-t aquvit-tit-ɣai
grandmother-3P.3S.NON-REFL.POSS.ERG child-ABS.PL sit.down-CAUS-3S.3P.INDIC
'Their grandma made the children sit down.' [source: 071907]

c. Uumisaqpatin?
u:mi-saq-patin
be.angry-CAUS-3S.2S.INTERR
'Is he making you mad?' [source: 071608]

[15]Fortescue (1983:13) also lists *-man* as North Slope causative morpheme, but I have not found a similar causative morpheme in Malimiut (Coastal).

8.9.2.2 Applicative

The suffix *-uti*, which was mentioned in §8.9.1.2, functions as a reciprocal marker when used with a transitive verb stem. It also functions as an applicative, and can be used with both intransitive and transitive verb roots. In its applicative use, it can have several meanings, including benefactive (47a), comitative (47b), and emotion (47c). When *-uti* is attached to an intransitive verb root, the S argument of the intransitive clause becomes the A argument of the applicative, and an O argument is introduced.

(47) a. Putum Qatuk alliuġutigaa.
putu-m qatuk-Ø alliuq-uti-ɣa:
p.n.-ERG.SG p.n.ABS.SG cook.dog.food-APPL-3S.3S.INDIC
'Putu made dog food for Qatuk.' [source: Seiler (2005:265)]

b. Aqquġam (uvaŋa) aullautiġaa.
aqquġaq-m (uvaŋa) aullaq-uti-ɣa:
p.n.-ERG.SG (1S) go.away-APPL-3S.3S.INDIC
'Aqquġaq took me with her.'

c. Naŋmaum Tulugaq saiñġitchautigaa.
naŋmaum tuluɣaq sainʁittak-uti-ɣa:
p.n.-ERG.SG p.n.ABS.SG be.frustrated-APPL-3S.3S.INDIC
'Naŋmak is frustrated with Tulugaq.'

d. Nukatpiaġrum tautuutigaa agliuraq aġnaiyaaq.
nukatpiaʁʐuk-m tautuk-uti-ɣa: aɣliuʐaq-Ø aʁnaija:q-Ø
boy-ERG.SG see-APPL-3S.3S.INDIC picture-ABS girl-ABS
'The boy is showing the picture to the girl.' [source: 080707]

Nagai (2006:154–155, 159) also notes that the applicative *-uti* can also attach to transitive verb roots, as demonstrated by examples (48a) and (48b) from the Malimiut Upper Kobuk dialect. When *-uti* is attached to a transitive verb root, the A argument remains unchanged, the O argument becomes an oblique allative NP, and a new O argument is introduced. The oblique NP appears to have the thematic relation *theme*, while the O argument remains

the patient. This means that *-uti* can function as either an applicative or a reciprocal when attached to a transitive root. This dual function is also found the Malimiut Coastal dialect, as demonstrated by example (48c) where the applicative suffix attaches to the transitive verb root *akut* 'to stir (something)'.

(48) a. Aŋutim kikiaktuġaa tupiq.
aŋutə-m kikiaktuq-ka: tupəq-Ø
man-ERG.SG nail-3S.3S.INDIC house-ABS.SG
'The man nailed the house.' [source: Nagai (2006:160)]

b. Aŋutim kikiaktuutigaa qiruk tupiġmun.
aŋutə-m kikiaktuq-uti-ka: qiɣuk-Ø tupəq-mun
man-ERG.SG nail-APPL-3S.3S.INDIC wood-ABS.SG house-ALL.SG
'The man nailed the wood to the house.' [source: Nagai (2006:160)]

c. Niviaqsiġam akurrun akuutigaa imiġauramun.
niviaqsiʁaq-m akuɣɣun-Ø akut-uti-ka: imiʁauɣaq-mun
teenage.girl-ERG.SG spoon-ABS.SG stir-APPL-3S.3S.INDIC soup-ALL.SG
'(The) teenage girl stirred (the) soup with (a) spoon.'

It is most accurate to say that *-uti* is a valency changer, not specificially reciprocal or applicative; its function depends on the valency of the verb to which it is suffixed and the presence of arguments. This is precisely the same argument Mithun (2000:108) makes for the Central Alaskan Yup'ik equivalent, *-(u)te*.

8.9.3 Interaction of valency suffixes

It is very common in Iñupiaq and other Inuit languages/dialects to change valency more than once within one morphological word. The valency of the verb can be changed one or more times within the same word to suit the speaker's needs. For example, you can add an antipassive suffix to a transitive verb stem to derive an intransitive, then add an applicative suffix to make it transitive again, etc. As Woodbury (2004) notes, with the exception of the

obligatory final person/number/mood suffix, which has scope over the entire verb, the scope of morphemes within a verb is limited. With few exceptions, a suffix has scope only over everything to its left. Therefore if an antipassive suffix appears after a verb stem hosting an applicative suffix as in in example (49), the valency increase caused by the applicative is cancelled out by the valency decrease of the antipassive.

(49) Aqquġaq qipminik aullautisiruq.
aqquʁaq qipmiq-nik aullaq-uti-si-tuq
p.n.-ABS.SG dog-INSTR.PL go.away-APPL-ANTIPASS-3S.INDIC
'Aqquġaq took (the) dogs with her.'

Chapter 9

Conclusion

This dissertation has provided a sketch grammar of the Malimiut Coastal dialect of Iñupiaq (ISO codes: ESI, ESK, IPK). Chapter 1 introduces the language and provides an overview of its current status, genetic relationships, and previous research.

In Chapter 2, I outline the phonology of Malimiut Coastal Iñupiaq and briefly discuss phonetics. Several changes in progress within the phoneme inventory are discussed. As first presented in Lanz (2010a), these changes include a previously undocumented phonological change in progress: namely, the apparent shift of /ɣ/ (Iñupiaq 'r') to the American English /ɹ/ in younger speakers and heritage learners. I argue that this has several interrelated causes, including age, Iñupiaq literacy, declining Iñupiaq usage, and the influence of English.

Chapter 3 documents the nominal morphology of the language, both inflectional and derivational. The inflectional morphology section discusses both the forms and functions of the various core and oblique cases, and derivational morphology section presents some of the types of derivational suffixes observed on Iñupiaq nouns. I argue that the ergative and genitive are a single case with two primary functions. The chapter concludes with the maximal structure of nouns.

Chapter 4 contains a description of the verbal morphology. Optional methods of marking tense and aspect are discussed in the inflectional morphology section, as are the obligatory verb moods. Derivational morphology and the maximal structure of an Iñupiaq verb conclude the chapter.

Syntactic categories and other morphosyntactic topics are covered in Chapter 5. Unlike

many other works on Inuit languages/dialects, I posit more than just two lexical categories, declinable and indeclinable. I claim that there are six lexical categories in Iñupiaq—noun, verb, adverb, pronoun, conjunction, and interjection—and that the last two are indeclinable. While it is possible to collapse the six categories into a large class of declinable stems, doing so does not provide a useful look at the functions exhibited by the expanded set of lexical categories. For example, while some stems can be either nouns or verbs depending on the suffixes with which they appear, it is also true that nouns and verbs each exhibit different morphosyntactic behavior.

Two new claims are also presented in this chapter: first, that numerals are a subcategory of the lexical category *noun*. Second, I present data illustrating that Iñupiaq exhibits case stacking (also known as double case marking) on demonstrative adverbs and demonstrative pronouns. Though the process works differently for demonstrative adverbs and for demonstrative pronouns, both exhibit this double case marking, which is previously undocumented in Eskimo-Aleut. Both demonstrative adverbs and demonstrative pronouns can be marked once or twice with case (or not at all). Demonstrative adverbs can only receive double case if both are oblique cases, while demonstrative pronouns take ergative case followed by an oblique case. The type of case stacking observed on demonstrative pronouns is not typologically unusual; it is simply that oblique cases on demonstrative pronouns must attach to an ergative stem rather than an absolutive stem.

The existence of case stacking on adverbs is a particularly exciting discovery, because it challenges currently accepted theories of case stacking that motivate case stacking via argument structure. As adverbs are not a part of argument structure, it suggests another mechanism for multiple case stacking must be necessary. Many theories on case stacking such as the theoretical framework laid out in Sadler & Nordlinger (2004, 2006) motivate case stacking via argument structure. Namely, it is claimed that case stacking is caused by

the embedding of NPs in multiple phrases and/or clauses. The problem that the Iñupiaq adverb data poses for embedding the item in multiple phrases is that the motivation for multiple structure is not present independently of the case marking. Although I do not have a solution at present, I suggest a number of possibilities. First, perhaps adverbs have quasi-argument status in Malimiut Iñupiaq, or perhaps the suffix *-aŋi* changes the argument status. According to Haegeman (1994:36), arguments are parts of a clause or sentence that are obligatory for predication, while adjuncts are not obligatory for predication; this leaves the possibility that while adjuncts are not *required*, they may be *permitted*. Second, perhaps there is an unusual type of adverb agreement with the syntactic structure of the clause. Third, perhaps in adverbs some morphosyntactic process applies vacuously, whereas with NPs it shows up in the grammatical structure.

Chapter 6 analyzes wordhood in Malimiut Coastal Iñupiaq. It is the first analysis of wordhood at multiple levels in Iñupiaq to my knowledge. I make the claim that it is necessary to consider three levels of wordhood in Iñupiaq—phonological, morphological, and syntactic—but take morphological wordhood to be primary. I reach the conclusion that the phonological word in Iñupiaq correlates strongly with the morphological word, so the major distinction is between morphological and syntactic word. Section 6.2 presents a general categorization schema for affix and clitic ordering.

Chapter 7 describes constituency, which is also unexplored territory for Iñupiaq. One major claim of the chapter is that Iñupiaq is a non-configurational language, because while there is strong evidence for a noun phrase there is no evidence for a verb phrase. Chapter 8 documents purely syntactic phenomena in the language, starting with an evaluation of its status as an ergative language. Through the use of several tests, it becomes clear that Iñupiaq exhibits only weakly ergative tendencies in terms of syntactic ergativity, though it is morphologically ergative. The chapter also describes clause combining and other types of

subordination, question formation, and valency. One outcome of the chapter is the conclusion that despite claims to the contrary, there must be syntax separate from morphology in Iñupiaq, despite the extreme functional load carried by the morphology.

Appendix A

Abbreviations

The following abbreviations are used in this dissertation. Where more than one person/number gloss is indicated, the first indicates the subject and the second indicates the object. Hence 2P.3S.INDIC means indicative second person plural subject, third person singular object.

1	first person
2	second person
3	third person
ABL	ablative
ABS	absolutive
ADV	adverb
ALL	allative
ANTIPASS	antipassive
APPL	applicative
AUG	augmentative
CAUS	causative
COMP	comparative
COMP	complementizer
COND	conditional
COOR	coordinative
COP	copula
D	dual
DEM	demonstrative
DU	dual
ERG	ergative
EVID	evidential
FUT	future
GEN	genitive
GER	gerund
HAB	habitual
IMPER	imperative
IMPF	imperfective
INCH	inchoative
INDIC	indicative
INSTR	instrumental
INTERR	interrogative
INTR	intransitive
LOC	locative
NEG	negation, negative
NMLZ	nominalizer
NONREFL	non-reflexive
NUM	number
OBL	oblique
P	plural
PASS	passive
PERF	perfective
PERL	perlative
PL	plural
POSS	possessive
POT	potential
PRO	pronoun
PTCP	participle, participial
RECIP	reciprocal
REFL	reflexive
S	singular
SG	singular
SIM	similative
TRANS	transitive
VOC	vocative

Appendix B

Suffix notation

The following table explains the quite complicated suffix notation used in the majority of Iñupiaq pedagogical materials (MacLean 1981, 1993, 1994) and some Iñupiaq linguistics sources (Kaplan 1979, MacLean 1995, Nagai 2006). Here 'stem' refers to whatever unit is to the left of the suffix, whether a root (of any lexical class) or a stem composed of a root plus one or more suffixes. This table is adapted from Nagai (2006:27–35).

Note that the symbol R in this notation system refers to "replacive" (Nagai 2006:34) and is not intended to represent an actual sound (whether phonemic or phonetic) in the language. That is, this R symbol is a mnemonic device and not a symbol for a rhotic, uvular fricative, or uvular trill.

-	delete final consonant of stem	*piqliq* 'to jump' *-tla* 'POT' *+tuq* '3S.INDIC' > *piqlitlaruq* '3S can jump'
+	1) add suffix without deleting anything; 2) however, if C_1-C_2C_3 will result, delete C_2	1) *aglak* 'write' *+tuq* '3S.INDIC' > *aglaktuq* '3S is writing' 2) *qipmiq* 'dog' *+kmatun* 'sounding like' > *qipmiqmatun* 'sounding like (a) dog'
‘	1) geminate the C preceding semi-final V of stem, 2) add suffix	*nigaq* 'rainbow' *‘-k* 'DU' > *niggak* 'two rainbows'
±	1) delete final [k, q] from stem but retain [t], 2) then add suffix	*kunik* 'to kiss' *±qqayaq* 'almost' *+kaa* '3S.3S.INDIC' > *kuniqqayaġaa* '$3S_i$ almost kissed $3S_j$'
ˆ	1) delete final [t] from stem but retain [k, q], 2) add suffix	*iput* 'to row' *ˆtit* 'make' *+kaa* '3S.3S.INDIC' > *iputitkaa* '$3S_i$ made $3S_j$ row'
÷	1) drop final /q/ ('weak C' in the literature) but retain final /əq/ ('strong C'), 2) add suffix	*aġnaq* /aʁnaq/ 'woman' *÷mun* 'ALL.SG' > *aġnamun* 'to (the) woman' *aiviq* /aivəq/ 'walrus' *÷mun* 'ALL.SG' > *aiviġmun* 'to (the) walrus'
:	1) if last syllable of stem contains /əC/, delete /ə/ *unless* CCC would result, 2) add suffix; 1) if stem ends in C *and* V in final syllable is *not* /ə/, delete final C, 2) add suffix 1) if stem ends in V, add suffix 1) if stem ends in /t/, replace /t/ with 'rr' [ɻɻ], 2) add suffix if VVV would result, insert /ŋ/ before suffix	*imiq* /iməq/ 'water' *:u* 'be' *+tuq* '3S.INDIC' > *imġuruq* 'it is water' *ikniq* /iknəq/ 'fire' *:u* 'be' *+tuq* '3S.INDIC' > *ikniġuruq* 'it is fire' *savik* /savik/ 'knife' *:u* 'be' *+tuq* '3S.INDIC' > *saviuruq* 'it is a knife' *katchi* /kacci/ 'wall' *:u* 'be' *+tuq* '3S.INDIC' > *katchiuruq* 'it is a wall' *nalaut* 'meet' *:uti* 'RECIP' *+tuk* '3D.INDIC' > *nalaurrutiruk* 'they (two) met each other' *naluaġmiu* 'Caucasian' *:u* 'be' *+tuq* '3S.INDIC' > *naluaġmiuŋuruq* '3S is (a) Caucasian'
R	1) Delete V in final syllable of stem *and everything that follows it.* 2) Geminate resulting stem, 3) add suffix to this new stem.	*panik* /panik/ 'daughter' *ʀi* '3S.REFL.POSS' > *panni* 'his/her own daughter'

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