ABSTRACT. This paper argues that the phenomenon of noun incorporation in Inuktitut derives from the fact that the particular set of verbs involved are all light verbs in the sense of verbal elements excluding the verbal root (Harley 2001). Light verbs in Inuktitut in little v Merge with a nominal complement as Root. That these elements are light verbs predicts that they are a finite class within the language with a restricted and distinct semantic range. Parallel data are found in Salish languages which also have verbal suffixes obligatorily appearing with nominals (Sapir 1911; Gerdts and Hukari 2002). Rather than adopting a grammaticalized account of the presence of these verbs (Mithun 1997, 1999), it is argued that these light verbs are members of a universally available set. Their comparative stability as a class within any one language is explained by this fact (Butt and Lahiri 2002). Thus noun incorporation in Inuktitut, its limited range of verbs, and its obligatory nature are all explained readily under a light verb account. This analysis also provides insight into light verbs as a verb class crosslinguistically, as the delineation of the class in Inuktitut is quite robust.

INTRODUCTION.

The phenomenon of noun incorporation has received much attention in the linguistic literature over the years (Baker 1988; 1996, Rosen 1989, Anderson 2000, etc.). A construction is usually considered to be an instance of noun incorporation when a (usually bare) noun is found either morphologically attached (1a,b) or in close association with the verb (1c).

(1) a  Wa'-ke-nákt-a-hnínu-
Fact-1sS-bed-∅-buy-PUNC
I bought the/a bed. (Mohawk, Baker 1996 p. 279)

b. qukiuti-taar-tunga
rifle-get-intr.part.1s.
I got a rifle. (Inuktitut - Mittimatalik²)

---

1Abbreviations for Mohawk are PUNC: punctual. For Niuean they are Abs: absolutive and Emph: emphatic. For Halkomelem they are aux: auxiliary; det: determiner. For Urdu they are Perf: perfect. Abbreviations for Inuktitut are intr: intransitive; trans: transitive part: participial mood; indic: indicative mood; conj: conjunctive mood; caus: causative mood (usually meaning ‘because’ or ‘when’); mod: modalis case; neg: negative; rel: relative case.

2Inuktitut examples are either from my own fieldwork, joint work with Jean Briggs or from published sources. The joint work with Jean Briggs is on the Utkuhikhalningmiut dialect. The facts are essentially the same across dialects except where noted. See also Fortescue (1983); Sadock (2002). The orthography used is the roman orthography of each dialect. The ICU roman is quite similar to IPA. The Labrador orthography differs in that e, o and â are the symbols for the long vowels ii, uu, and aa respectively. Also capital K is used instead of q.
RESTRICTING NOUN INCORPORATION

c. Takafaga ika tūmāu nī a ia
hunt fish always Emph Abs he
He is always fishing. (Niuean, Massam 2001 p. 157)

In the Mohawk example in (1a) the noun stem nák’t ‘bed’ is embedded within the verb complex. In the Inuktitut example (1b) the noun qukiuti ‘rifle’ appears attached to the left of the verb. Finally in the Niuean example the noun ika ‘fish’ is found in non-canonical object position (Niuean is a VSO language) adjacent to the verb and without any case marking.

What has interested linguists over the years is that noun incorporation seems to involve an argument of the verb, usually the object, which is in close proximity to the verb and is normally devoid of nominal inflection, e.g. case, number, etc. Thus the nominal appears on one hand to be a syntactic argument but on the other hand it appears to be contained within the verbal predicate itself.

Baker (1988; 1996) analyses such constructions as involving syntactic movement of the head noun from object position so that it adjoins to the verb head. In contrast, Rosen (1989) argues that a lexical (non-movement) analysis can provide us with two possibilities. The first of these is where the incorporated noun satisfies argument structure through word-formation, thus preventing a syntactic object from appearing. The second is where the incorporated noun acts like a classifier, restricting the interpretation of the syntactic argument which is external to the verb.

Thus the central issue which has been debated over recent decades is whether or not noun incorporation is a lexical or syntactic process. To a certain extent the lexical vs. syntactic issue has disappeared with the emergence of alternative theories such as Distributed Morphology (Halle and Marantz 1993; Marantz 1997), where morphology and the syntax can interact.

Neither Baker nor Rosen address Inuktitut in any depth, and both suggest that Inuktitut noun incorporation may fall outside their general analysis. In fact, Sapir (1911, 254) states that Inuktitut noun incorporating verbs (or denominative verbs as he terms them) are not canonical incorporating verbs since the “verbal elements are not verb stems but the verb-forming affixes....” Thus in both Baker’s and Rosen’s accounts, noun incorporation in Inuktitut is not central to the incorporation debate and may involve different issues.

Following Sapir (1911), Johns and Massam (1998) argue that noun incorporation across languages is not a unitary construction (see also Gerdts 1998). Instead the verb + noun sequences which are termed noun incorporation in the literature are often syntactically very different, some involving heads and others involving phrases. What these constructions all have in common, however, is that the incorporated noun differs in position and/or functional categories from a canonical object DP.

My central goal in this paper is to demonstrate that noun incorporation in Inuktitut is the result of the inherent properties of the specific verbs which are involved. It is these properties which make noun incorporation in Inuktitut distinct from the cases discussed in Baker (1988; 1996); Mithun (1984); Mithun and Corbett (1999), etc. More specifically the leading insight will be Sapir’s comment mentioned...
RESTRICTING NOUN INCORPORATION

above that the verb-forming affixes are “not verb stems.” That these elements are not standard verbs will be shown to explain a wide variety of properties associated with the construction, including the fact that they are a finite set and have very general meanings (Johns 1987; Mithun 1999).

The nature of these verbal elements leads us to another set of familiar issues in linguistics, but one which is not usually found in a discussion of noun incorporation. This is the existence in languages of so-called LIGHT VERBS or verbs which must combine with another element, often a nominalized form of a verb, to form a complete predicate (Jespersen 1965; Kearns 1988; Grimshaw and Mester 1988; Butt and Lahiri 2002). Although the complement of a light verb is usually considered to be either verbal noun, as in English take a rest, I assume here a more general definition of light verb, such that light verbs may also take nominal (non-verbal) complements (Harley 2001). What makes these verbs “light” in both instances is their lack of semantic complexity plus their syntactic dependency on another element as ROOT (Pesetsky 1995; Marantz 1997).

Analysis will show that the basis for noun incorporation in Inuktitut is directly linked to the class of the verbs involved.3 More specifically, these verbs are all “light” in the sense that they do not contain any semantic elements which characterize full verbal entries, especially manner (see Ritter and Rosen 1997 for an analysis of the verb have in English along these lines). Instead light verbs consist solely of a varying number of verbal operators (see Koenig and Davis 2001 for operators within lexical items), e.g. negation, etc. It is the lack of root properties of these verbs which requires that they merge with noun roots. The overall thrust of the analysis here is to identify and categorize the empirical restrictions of the phenomenon in Inuktitut we call noun incorporation, and to show at the same time that the properties underlying these restrictions are the basis of the entire phenomenon itself.

1. NOUN INCORPORATION IN INUKTITUT

Noun incorporation (or NI) in Inuktitut is very productive and very common in the language.4 While the noun is morphologically attached to the verb, it nonetheless has properties which indicate that it is not merely a verbal modifier nor a compound5. In a seminal article Sadock (1980) shows that in Kalaallisut (West Greenlandic Inuit), NI

3For one important view on verb class, see Rappaport Hovav and Levin (1998).

4Parkinson (1999) shows that Inuit children acquire noun incorporation at an early stage. This fact is expected under the account given here, given the simplicity and universality of the verbs.

5There are a number of pieces of evidence which make a compound analysis impossible. First and foremost, Inuktitut does not have either verbal or nominal compounds, i.e. there is nothing equivalent to English toothbrush or photocopy. See Sadock (1980; 1991) for arguments against compounding.
RESTRICTING NOUN INCORPORATION

is clearly syntactic (to be discussed in 1.1), rather than simply compounding.6 Thus noun incorporation in Inuktitut provides an interesting example of the interaction between the syntax and the morphological component.

1.1. Previous Investigations of Noun Incorporation in Inuktitut

Noun Incorporation in Inuktitut has been discussed by a number of linguists over the years. Undoubtedly the most influential paper is that of Sadock (1980) who labels the Inuktitut construction noun incorporation and demonstrates many of its syntactic properties. One the most striking of these is the potential for the incorporated noun to have referential properties. Sadock shows that nouns in noun incorporation structures can be referred back to in the discourse context. Using examples such as (2a), from a Kalaallisut children’s story book, he shows that once an incorporated noun has been introduced into the discourse, subsequent sentences may refer to it through agreement on verbs. Similar examples are found in the Canadian dialect Mittimatalik, as in (2b). I have coindexed the relevant elements to aid in interpretation.7

(2)a. Suulut timmisartu-lior-poq
    SØren plane-make-intr.indic.3s.
    SØren made a plane_i

    Suluusa-qar-poq_i    aquute-qar-llu-ni_i-llu
    wing-have-intr.indic.3s.    rudder-have-inf.-3Rs-and
    It_i has wings and a rudder (Kalaallisut from Sadock, 1980; 311)

b. Johnny uvirnirui-liu-laur-mat
    Johnny shirt-make-past-intr.caus.3s.
    Johnny made a shirt_i

    nulia-nga angirra-rami taku-llu-ni-uk_i
    wife-Poss3s. home-cause4s. see-conj.-4s.-3s
    And his wife came home and she saw it_i (Mittimatalik)

6 That noun incorporation in Inuktitut is not tied in with general word formation processes makes it distinct from noun incorporation in Iroquoian languages. Mithun and Corbett (1999) discuss the fact that the incorporated noun and its verb in Mohawk often mean more than the sum of the parts, in effect having a lexicalized status. To my knowledge, this never happens in Inuktitut, with the possible exception of body part ailments - see section 2.4.2.

7 Note that Inuktitut does not distinguish 3 person for gender or animacy. Accordingly the translations are given in English according to context, or translation of the moment.
RESTRICTING NOUN INCORPORATION

Thus we see in (2a) that the third person singular agreement markers -poq and -ni in the second line refers back to the incorporated noun timmisartu- ‘plane’ in the proceeding sentence. Likewise in (2b) the third person singular agreement element-uk in the second line refers back to uvirmiruq ‘shirt.’

Crucially however, although incorporated nouns may be referential, they are not always referential. This fact is not stated explicitly either by Sadock (1980) or Van Geenhoven (1998a, b), who investigates extensively the referential properties of incorporated nouns.8

(3) *ilinniatitsi-u-junga quviasuk-tuq
    teacher-be-intr.part.1s. happy-intr.part.3s.
    I am a teacher. He/she j, *i is happy. (Iqaluit)

As in English, the nominal introduced by the copula cannot have reference independent of the subject. Also like English, the existential properties of the noun depends on the properties of the individual verb, e.g. have a bird vs. be a bird. This distinction sets the stage for the general thrust of this paper, which is that inherent properties of verb are the determining factor of noun incorporation.

Another important observation in Sadock (1980); (2002) is that a subset of incorporating verbs allow possessive inflection on the noun root, while the rest do not. This can be seen in (4).

(4) a. Kalaall-it nuna-a-liar-poq
    Greenlander-pl. land-3pl.-go-intr.indic.
    He went to Greenland (i.e. to the Greenlanders’s country)
    (Kalaallisut: Sadock 1980; 314)

   b. sugusi-up illu-nga-no-vunga
      child-rel. house-3s.-go.to-intr.indic.1s.
      I am walking to the child’s house (Labrador Inuttut)

I will not be addressing this class of NI verbs, pointing out only that this distinction is clearly along the lines of verb class, and that the crucial factor which is involved is that the verb is locational/directional (Sadock 2002).9

---

8Van Geenhoven locates the source of the referential properties of the noun in the verb rather than the noun itself but does not discuss difference across verbs in this regard. In fact, her statement in Van Geenhoven (2002, 766) that “a ‘referent-introducer’ or, as I called it, as a semantically incorporating verb...” might lead the reader to assume that they are equivalent.

9Interestingly, these verbs are the only ones which allows genuine possessor stranding in Canadian Inuktitut. Canadian dialects do not allow possessor stranding unless there is possessive inflection on the head noun. Sadock (1980; 1991) shows that possessor stranding without possessive inflection is possible for certain...
RESTRICTING NOUN INCORPORATION

Sadock (1985; 1991) argues that noun incorporating verbs are both morphological and syntactic at the same time. Within his Autolexical Theory of syntax, this is not a problem since Autolexical Theory allows both morphological and syntactic representations, which have independent but connected representations, so long as the representations do not conflict in their mapping.

Bok-Bennema and Groos (1988) follow Sadock by adopting an analysis where the noun incorporating verbs in Kalaallisut are both morphological and syntactic at the same time. They propose a very simple approach to noun incorporation in the Inuit language, which is that the noun is linked to the verb by a left-adjacency requirement of the verb. This approach prefigures the syntactic account adopted here and later proposed in Van Geenhoven (1998a, b; 2002), Massam (2001) which is that the noun is base-generated in its position. Specifically I follow Hale (2001) who claims that it appears there through the operation Merge (Chomsky 2001). Under Bok-Bennema and Groos’s account, there is an operation similar to Merge but the features which trigger it are idiosyncratic, i.e. any verb which has affixal properties will participate. Crucially the proposal argued in this paper is that the class of verbs which has these properties is predictable on the basis of the lexical semantics and category of the verbal element. Thus a natural class of verbs underlies and determines the nature of the noun incorporation in Inuktitut.

Recently Van Geenhoven (1998a, b) presents an extensive investigation into the formal semantics of nouns involved in incorporation in Kalaallisut. She proposes an account involving semantic incorporation, whereby semantic properties relating to indefinites are absorbed by the incorporating verb and the incorporating verb itself conveys the existential interpretation of the nominal. Thus, similar to all previous analyses, incorporating verbs are considered to be identical to non-incorporating verbs except that they have some additional property. For Bok-Bennema and Groos it was a morphological requirement; for Van Geenhoven, the verbs have absorbed something extra, i.e. they are by definition semantically more complex. This is the exact opposite of the analysis proposed in this paper. In the sections to follow, I will show that the semantics of the Inuktitut incorporating verbs is considerably less complex than that of non-incorporating verbs, and it is this simplicity, or lightness, which is the actual property underlying the phenomenon of incorporation in this language. Thus no additional properties must be posited to account for incorporating verbs as a class. In fact it is the paucity of verbal properties which creates the need for morphological attachment (to a nominal).

While previous analyses have shed much light on noun incorporation in Inuktitut, there is one prominent omission in the discussion overall. This is the fact that, although every linguist is aware that NI in Inuktitut is based on a certain subset of verbs, no one has provided any explanation for the questions which arise from this fact. These are: a) Why is noun incorporation obligatory when it is possible? b) Why is it restricted to a certain set of verbs? and c) Why is it restricted to these particular verbs and not others? As noted in Johns (1987), the lexical semantics of lexicalized possessor/possessum combinations in Kalaallisut. It is a common misconception that this is a widespread phenomenon.
RESTRICTING NOUN INCORPORATION

incorporating verbs appears to have a commonality. After a brief exposure to the class, a linguist can make fairly good predictions as to which verb meanings cannot be incorporating verbs, although it is more difficult to predict which ones will be found. In the analysis to follow, I propose a basis for our understanding of this verb class as a whole. I will show that incorporating verbs in Inuktitut all consist of incomplete or “light” verbs, i.e. verbs lacking root elements (Marantz 1997).

2. THE INCORPORATING VERBS IN INUKTITUT

Noun incorporation in Inuktitut is restricted to a finite set of verbal items within each dialect. The set of verbal items is generally consistent across dialects, although the members of the set can vary slightly. Unlike other languages where NI appears to be optional, e.g. Mohawk,10 if a verbal element may appear without an incorporated noun, as in (5a) illustrating the verb nigi- ‘to eat’, then an N can never be incorporated, as illustrated by (5b).

(5) a. pitsi-mik nigi-vunga
    dried.fish-mod. eat-intr.indic.1s.
    I am eating dried fish
    (Labrador Inuktut)

b. *pitsi-nigi-vunga
    dried.fish-eat-intr.indic.1s.
    (Labrador Inuktut)

Equally, if a verbal item permits NI, as in (6a), then there must obligatorily be NI, as shown by the ungrammaticality of (6b), where the NP is externalized in a syntactic fashion parallel to the grammatical (5a) above.

(6) a. pitsi-tu-vunga
    dried.fish-consume-intrans.indic.1s.
    I'm eating dried fish
    (Labrador Inuktut)

b. *pitsi-mik tu-vunga
    dried.fish-mod. consume-intr.indic.1s.
    (Labrador Inuktut)

Even though pitsik ‘dried fish’ has modalis case attached in (6a), as in (5a), the lexical item -tu- ‘consume’ (often translated as ‘eat’) cannot appear alone. When no nominal is available, a dummy element pi- must attach to the verb, as in (7)

---

10Baker (1988; 1996) treats noun incorporation in Mohawk as optional but Mithun and Corbett (1999) argue that it is a lexicalization process and therefore the incorporated form and the non-incorporated form are not equivalent.
Thus it is clear that in Inuktitut there is a major division between verb classes, one class must incorporate nominals and the rest (the elsewhere case) cannot. It is also a well-known fact that the incorporating class is a smaller closed set of verbs (numbering around one hundred based on Fortescue 1983) than those which do not incorporate (number unknown). This difference is reflected in the fact that while the larger class of non-incorporating verbs are found in general dictionaries, the smaller set of incorporating verbs are found in what are called postbase dictionaries (non-inflectional affix dictionaries) or subsections of dictionaries (see for example Lowe 2001).

One should also note that there are no restrictions as to which nominal may be incorporated other than general pragmatic ones. Thus how commonly a noun is found associated with the verb has no bearing on the likelihood of it being incorporated, unlike the cases described for Iroquoian by Mithun (1999). The source of the incorporation stems only from the verb’s requirements.

Syntactic incorporation analyses such as Baker (1988; 1996), which are based on the idea of movement do not lend themselves to the sort of construction we observe with Inuktitut NI. As movement entails either optionality or alternation with a non-moved element, movement runs counter to the facts here. In short, a different type of analysis is called for, especially one which will explain the fact that the incorporating verbs are a finite set while the non-incorporating verbs are an open set. As mentioned above, all previous investigations of Inuktitut noun incorporation to date have ignored the issue of which verbs incorporate, focussing instead on either the syntactic or formal semantic properties of the construction in and of itself, and especially properties of the incorporated nominal.

2.1 A Lexical-semantic Analysis of Noun-incorporating Verbs in Inuktitut

Johns (1999a, 2000) pointed out that there are two related properties not explained by syntactic, lexical/compounding or semantic accounts of NI in Inuktitut. These are a) that the NI construction seem to involve very basic verbs with similar semantics and b) that verbal elements in NI constructions have a more general meaning than those in non-NI constructions. The explanation proposed is that NI in Inuktitut is constructed with a type of “light” verb which must take a nominal root to form a complete structure.

Mithun (1999, 50) also points out that in Yup’ik, a language quite closely related to Inuktitut, not only do verbs and verbal affixes differ in distribution but that the affixal variety (i.e. incorporating verbs) are “typically more general and diffuse semantically than roots.” It is exactly this type of generalization which is being utilized here in order to explain incorporation (although from a different perspective
RESTRICTING NOUN INCORPORATION

than that in Mithun 1999).\textsuperscript{11} I will be arguing like Mithun that the semantics of incorporating verbs is less complex than that of non-incorporating verbs. This contrasts with all previous analyses mentioned above.

In Van Geenhoven (1998a, b), existential operators are contained within incorporating verbs. Her central concern is to argue that the incorporated N is a predicate, and that incorporation involves base-generation and not movement of the nominal. Van Geenhoven distinguishes between incorporating verbs and non-incorporating verbs, as shown in (8) and (9), where I provide an Inuktitut example in a. and the corresponding formal semantic representation of that particular verb from Van Geenhoven (1998b) below it.

\begin{enumerate}
\item (8) a. Non-incorporating ‘eat’
\begin{flushright}
\begin{tabular}{ll}
puiji-vini-mmik & nigi-vunga \\
\textit{seal-former-mod.} & \textit{eat-intr.indic.1s} \\
I’m eating some seal meat’ & \textit{(Labrador Inuttut)}
\end{tabular}
\end{flushright}

b. $\lambda y \lambda x \left[ eat(x,y) \right]$ \hspace{1cm} (Van Geenhoven 1998b, ex. 38)

\item (9). a. Incorporating ‘eat’
\begin{flushright}
\begin{tabular}{ll}
puiji-vini-tu-vunga & \\
\textit{seal-former-consume-intr.indic.1s} & \\
I’m eating seal meat & \textit{(Labrador Inuttut)}
\end{tabular}
\end{flushright}

b. $\lambda P_{<e,t>} \lambda x \exists y \left[ eat(x,y) \land P(y) \right]$ \hspace{1cm} (Van Geenhoven 1998b, ex. 32)
\end{enumerate}

We see then that Van Geenhoven does distinguish between the two verb types in (8) and (9). However, the formal semantics of the incorporating verb ‘eat’ in (9) is more complex than that of the non-incorporating ‘eat’ in (8). In fact, the semantics of the incorporating verb subsumes that of the non-incorporating verb. The incorporating verb has a number of extra properties, including a) a slot for the property denoted by the nominal plus b) the incorporating verb contains an existential as part of the verb meaning. In terms of complexity of verb types I will propose something very different, in fact the opposite. I argue that the non-incorporating verb ‘eat’ is less specified with verbal meaning, and hence is not a full verb but is instead a light verb.

As mentioned above a problem for all previous analyses including Van Geenhoven’s is that they do not directly address the issue of which verbs incorporate. The question remains open as to why there are no NI verbs like ‘break’, ‘tickle’, ‘cook’ etc. with the properties shown in (9) above. There is nothing to prevent such cases. Yet such verbs never incorporate. The closest Van Geenhoven (1998b; 243) gets to

\textsuperscript{11}Mithun claims that NI is used in instances where the action is typical, and is less likely to be used in novel situations involving the N. I have seen no evidence of this distinction in Inuktitut.
RESTRICTING NOUN INCORPORATION

this question is her statement “a semantically incorporating verb does not introduce stages of a kind.”12 This suggests that verbs where the object undergoes a change of state never incorporate. Instead we observe that incorporating verbs can describe an object coming into being, coming into sight, etc. but they cannot describe an object changing from one state to another. We also observe there is never any description of the manner by which the subject of the incorporating verbs comes into contact with the object, thus tickling, brushing, etc. are not possible incorporating verbs. None of these possibilities is ruled out by the analysis in (9).

What we find upon examining NI verbs as a class is that they generally seem to involve either a predicate nominal or something to do with an object’s existence. All other NI verbs are simply variations of these two basic types, the variations brought about by the presence or absence of operators of negation, etc. This simplicity of class explains why many incorporating verbs are antonym pairs, e.g. ‘getting’/‘losing’, etc. What is needed is a theory of verb class in Inuktitut where the incorporating verbs do not contain canonical verbal material, but instead the most minimal verbal elements along with predictable variations. In the following sections I will provide an outline of this verb class in Inuktitut, showing how NI verbs display the properties of light verbs (v), i.e. verbs without root (√) elements (see Pesetsky 1995; Marantz 1997). Thus the main basis for the claim that Inuktitut incorporating verbs are light verbs is based on the argument that all of the member of this class may be readily characterized as light verbs. There can be no exceptions. Support for this claim that noun incorporation in Inuktitut is a light verb plus nominal root comes from Harley (2001) who claims light verbs without verbal roots take nominal complements. In the next section, I will survey the class of noun incorporating verbs, and show that every single one is a light verb.

2.2 NI Verbs in Inuktitut

The Inuktitut word obligatorily consists of a root and an inflection. Between these two elements appear a potentially infinite number of affixes, often referred to in the literature as postbases (or non-inflectional affixes). Postbases consist of verb modifying elements, nominal modifying elements, elements which change a verb into a nominal and elements which change a noun into a verb. The latter are the noun incorporating affixes. The most extensive and important research into the distribution and properties of postbases is Fortescue (1983). Fortescue divides postbases into 26 classes on the basis of semantic similarity. Among the many postbases are those which appear to be verbs by virtue of their English translation. However Johns (1999b) argues that volitional verbs are actually modals and, as such, are not full verbs.

Of Fortescue’s 26 classes of postbases, nine contain noun incorporating verbs.

12 In fact Van Geenhoven (2002, p. 805) explicitly states that incorporated nouns are predicative restrictions on the implicit argument of the verb. This goes against the very essence of the present analysis which is that incorporating verbs do not take arguments at all.
RESTRICTING NOUN INCORPORATION

Note that Fortescue himself does not describe this phenomena as noun incorporation but as verb forming. Fortescue provides approximately 90 examples of different incorporating verbs from each of four dialects, ranging across the arctic from Greenland to Alaska. The affixes are remarkably similar in both meaning and form across dialects (once the phonological systems of the different dialects is taken into account).

In (10) I provide Fortescue’s nine classes, each followed. Note that the class labels refers to a semantic commonalities; thus in Fortescue (1983) each class represents a set of related NI verbs.

(10)a. Being and becoming
   arna-u-junga
   *woman-be-intr.part.1s*
   *I'm a woman* (Mittimatalik)

b. Lacking
   ulu-iruti-junga
   *ulu-lack-intr.part.1s.*
   *I'm out of ulu’s* [ulu is a women’s knife] (Mittimatalik)

c. Feeling
   siu-siri-juq
   *ear-trouble-intr.part.3s*
   *His ear aches/he’s having trouble with his ear* (Mittimatalik)

d. Having
   savi-qaur-tunga
   *knife-have.a.lot-intr.part.1s*
   *I have plenty of knives* (Mittimatalik)

e. Acquiring
   qukiuti-taar-tunga
   *rifle-get-intr.part.1s.*
   *I got a rifle* (Mittimatalik)

\[\text{The reader might posit that if one were simply to claim that these elements were affixes, the analysis would fall out. I disagree with such an analysis because it would lose the generalization shown here that it is the nature of these verbs which makes them affixes, not vice-versa. Counterevidence to my claim would be the existence of an independent copula in Inuktitut. The affixal analysis is unfalsifiable.}\]

\[\text{These are West Greenlandic, Tarramiut, Copper and North Slope.}\]
RESTRICTING NOUN INCORPORATION

f. Movement
   sugusi-up    illu-nga-no-vunga
   child-rel.   house-3s.-go.to-intr.indic.1s.
   I am walking to the child's house  (Labrador Inuttut)

   (= ex. 4b. above)

   g. Acting and seeming like
   Naatali-urquuji-juq
   Natalie-resemble-intr.part.3s
   He/she looks like Natalie  (Mittimatalik)

   h. Doing with and providing
   tuktu-vinir-tur-tunga
   caribou-former-consume-intr.part.1s.
   I'm eating caribou meat  (Mittimatalik)

   i. Judging and Saying\(^{15}\)
   tipatsauti-sunniq-tuq
   perfume-smell-intr.part.3s
   It smells like perfume  (Iqaluit)

I propose that the basis of each NI verb is a light verb, and that variations among
the set them involve either simple modification through addition of modal elements
from a fixed set, e.g. negation, or other elements of this type. In other words, the verb
classes consist only of what in Generative Grammar is called little v. No V or root
segment is present. The proposal argued for here resembles in some respects the
analysis in Koenig and Davis (2001) who, working in a HPSG framework, claim that
the lexical entry of a verb is divided into two parts. One part is the modal part (here
little v), which can be modified by semantic operators, such as negation, etc. The
second part is the situational core (here the root), which contains the verb’s core
argument structure. What is novel in the claim presented in this paper is the claim
that there is no V element (or situational core) involved in incorporating verbs;
instead these verbs obtain a root through Merge with a nominal (see Harley 2001 for
an example of such an analysis of the English verb write.). In principle then, the exact
subset of verbs which incorporate in Inuktitut is not just a problem to be solved, but
is instead a robust clue to the nature of verbal category.

Following Koenig and Davis (2001), I will be assuming that there exists some
fixed set of operators which may be found in the modal component of a lexical entry.
In theory any one of these operators may combine with any one of the others, but
there is clearly a limit on the number which may be present within any one verb. This
restriction immediately limits the class of incorporating affixes, thus leading to a
finite set, which is the case. The modal elements involved are familiar semantic

\(^{15}\)This class is mixed in that it contains both verbs which are noun-
incorporating as well as verbs which attach to clauses or quotations, e.g. niraq ‘say
(that)....’ I will only deal with verbs from this group which attach to nominals.
RESTRICTING NOUN INCORPORATION

primitives, e.g. negation, quantity, etc. As a result of this restriction to basic elements, the majority of incorporating affixes are copulas, verbs of appearance, etc. The claim here is therefore that there is no genuine verb per se in incorporation constructions in Inuktitut, and that all the incorporating verbs are based on the equivalent of a semantically minimal verbal core (the light verb), with permutations created by the addition of the operator elements. In the following I will present an overview of the major elements which contribute to the meaning of incorporating verbs in Inuktitut. As expected within such a proposal, we will see is that these verbs frequently come in sets, related through relations of antonymy, the physical senses, and quantification, etc.

2.3 Operators and Light Verbs

In this section I will outline some of the basic semantic operators which are found in incorporating verbs. The main contrast between incorporating verbs is whether or not the incorporated noun has independent reference or not. This is the basic difference between ‘be’ and ‘have’. Following Van Geenhoven (1998a, b), I will be arguing that it is the verb itself which establishes the contrast, not the nominal. I differ from Van Geenhoven, however, in that I will be assuming that Inuit NPs are inherently existential, thus simultaneously explaining the lack of determiners. As a result, in the possessive and existential examples in (11), each nominal comes with its own existential operator. The light verb in question is semantically empty, as shown in (11c).

(11) a. qimmi-qaq-tunga
dog-have/exist-intr.part.1s.
I have a dog. (Iqaluit)

b. tuktu-qaq-tuq Nunavu-mi
caribou-have/exist-intr.part.3s.
There are caribou in Nunavut. (Iqaluit)

c. [ ]

Van Geenhoven (1998a, b; 2002) does not explain why the process of incorporation does not produce an existential interpretation for copulas and related incorporating verbs, as seemingly predicted by her analysis. The question for the present analysis is why is it that the existential interpretation of the nominals in these constructions seems to disappear, as in (12).

(12) a. Saali ilisaiji-u-juq
Sally teacher-be-intr.part.3s.
Sally is a teacher. (Mittimatlik)
b. inu-u-runga
   *inuk-be-intr.part.1s.*
   I am an Inuk (Eskimo) (Utkuhikhalingmiut)

c. [ I ]

If *ilisaiji* ‘teacher’ comes with an existential operator by default, there must be some mechanism whereby it can be explained that there are only two entities in the sentence. Here I appeal to the notion of predication or coindexing through operators. The copula contains something which the possessive does not, an identity operator linking the two existentials - that of the incorporated nominal and that of the subject. Thus the lexical semantics of the copula is shown in (12b).

In summary, the possessive and the copula are minimally distinguished by the introduction of an identity operator. The similarities between copulas and verbs of possession has long been noted (see discussion in Ritter and Rosen 1997).

2.3.1 Negation

We have seen the first and major division between incorporating verb types involves whether or not the reference of the nominal is identical to that of the subject of the verb. It is now easy to see how other verbs form sets based on the simple addition of an operator. For example, negation may be added to many of the verb meanings, producing antonyms. Thus, just as something may be possessed (see 11a above), the opposite is also be found.

(13)a. ulu-iruti-junga
   *ulu-lack-intr.part.1s.*
   I’m out of ulu’s. (Mittimatalik)

b. [ ~ ]

We note that there is no NI verb which is the negation of the copula. That the subject and the nominal are linked through an identity operator of the copula may explain this absence. The result would a negation of the existence of both. We will see more examples of negation, as we examine more incorporating verbs.

2.3.2 Quantity.

Quantity is also an operator which serves as the basis of many of the verbal distinctions. We will see that it can quantify over the nominal or over the verb itself, resulting in aspect. Quantify or Q is something like an adverbial clitic. Q can be found cliticized to the right of the light verb. Since possession is the most basic verb meaning here, this will result in the meaning ‘to have lots of’, as shown in (14).
RESTRICTING NOUN INCORPORATION

(14)a. savi-qaur-tunga
    knife-have.a.lot-intr.part.1s
    I have plenty of knives. (Mittimatalik)

   b. [ ]Q

Naturally it may also appear with negation, as in (15).

(15)a. savi-kiksa-rama
    knife-not.have.enough-intr.caus.1s
    I am short of knives. (Mittimatalik)

   b. [ ~ ]Q

Note that there is no independent negative element in the verb -kiksaq- ‘not have enough.’ The meanings are part of the light verb in question.

2.3.2.1 Quantity and Aspect

The operator Q will also play a role in the aspectual nature of the light verb. Aspect can be viewed as the quantification of an event, or its “measuring out” as Tenny (1987) puts it. Given that light verbs are inherently states, the only effect which Q can have on these states is to turn them into an event by prolonging them.

Koenig and Davis (2001) posit inchoative aspect as a possible operator within the modality component of the lexical item (or little v, as we have it here). The inchoative aspect creates an incremental period resulting in the final state. The verb -qaq- ‘have/exist’ is only a state and does not have inchoative aspect; however the verb -taaq- ‘get’ does, as shown in (16).

(16)a. qukiuti-taar-tunga
    rifle-get-intr.part.1s.
    I got a rifle. (Mittimatalik)

   b. Q[ ]

Here we see that the addition of the quantifier to the left of the light verb produces an inchoative meaning, whereby the having has been turned into an event. Note that this differs from causative inchoatives where there is some independent entity causing an event to take place, as in English transitive break.

We are not surprised that a negative form of (16b) exists as an incorporating verb as well.
RESTRICTING NOUN INCORPORATION

(17)a. ulu-irsir-tuq
   *(woman’s.knife-cannot.find-intr.part.3s)*
   She can’t find her ulu.\(^{16}\) (Mittimatalik)

   b. Q[ ~ ]

In a similar fashion, the copula can have Q added to it, producing the inchoative (18) (compare the copula in 12a).

(18)a. kigusiriji-nngur-tuq
   *(dentist-become-intr.part.3s)*
   He/she has become a dentist. (Mittimatalik)

   b. [QI ]

Finally the quantifier can be the sole occupant of the light verb itself, producing something of an iterative meaning ‘to be occupied or busy with something’, as in (19).

(19) a. qukiuti-liri-juq
   *(rifle-do.with-intr.part3s)*
   He/she is playing with/fixing the rifle. (Mittimatalik)

   b. [ Q ]

   c. kiguti-liri-ji
   *(tooth-do.with-agent.nominal)*
   ‘dentist’ (Mittimatalik)

As example (19c) indicates, this morpheme is sometimes found in terms denoting professions.

As can be seen from the above examples, many of the verbs from Fortescue (1983) fit in exactly with the analysis proposed here, which is that these verbs consist only of basic semantic primitives, such as negation, etc. We have already dealt with classes a. (12, 18), b. (13, 15, 17), d. (11, 14), e. (16) and one from h. (19) from the set of classes in (10) above. Note that Fortescue’s classes do not map exactly to the present analysis. While Fortescue has ‘having’ and ‘acquiring’ in different classes (d. and e. respectively), he also puts ‘lack’ and ‘losing’ in the same class b. Here, class derives from the presence of similar operators. There are no de facto classes. Thus the analogies between ‘having’, ‘lacking’, ‘getting’, and ‘not finding’ are more readily captured.\(^{17}\)

\(^{16}\)In some dialects, the cognate of this morpheme is translated as ‘to lose’ (see Fortescue 1983).

\(^{17}\)The NI verb *-siuq* meaning ‘to look for’ is clearly related to the meaning *-taaq* ‘get;’ however it is not obvious whether the best means to formally express this...
2.4 Elaborations on the Basic Cases

In this section we will see that the remaining case of verbs can all be explained on the basis of the core cases argued for in section 2.3. It is clear that each and every one of the NI verbs is distinct from canonical verbs which contain verb roots.

2.4.1 Physical Similarities

One group of incorporating verbs (Fortescue’s class i. from 10. above) all involve the evaluation of the identity of something through its physical properties. Thus something is said to seem like X in some physical way. Consider the example in (20).

(20) a. Naatali-urquji-juq
   Natalie-resemble-intr.part.3s
   He/she looks like Natalie. (Mittimatalik)

b. qamiuti-qpaluk-tuq
   sled-resemble-intr.part.3s
   It looks like a sled (Utkuhikhalingmiut)

c. [VISION ]

Recall that the core distinction between many NI verbs involves whether or not the nominal has independent existence. The NI verb in (20) straddles this distinction in that identity is involved but only in a restricted sense. Identity is predicated only through visual properties, no other. We can use our operator I which is found in the copula but restrict it to identity only in visual detail, i.e. not complete identity. This is shown in (20b) where the term VISION will be used as a physical restrictive. We find that a number of verbs pattern in this fashion, as seen in (21-23).

(21) a. urqusaut sikituur-valuk-tuq
   furnace(abs.) skidoo-sound.like-intr.part.3s.
   The furnace sounds like a skidoo. (Mittimatalik)

b. [SOUND ]
RESTRICTING NOUN INCORPORATION

(22) a. unnir-sunnir-tuq
   *armpit-smell-intr.part.3s.*
   It smells like an armpit.  (Mittimatalik)

b. anaq-hungnit-tuq
   *feces-smell-intr.part.3s*
   It smells like excrement  (Utkuhikhalingmiut)

c.  [I_SMELL]

(23)a. Naatali-rjuujaaq-tuq
   *Natalie-act.like-intr.part.3s*
   She is acting like Natalie.  (Mittimatalik)

b.  [I_ACTION]

Interestingly, rather than the full five physical senses, we find both touch and taste missing, yet action is there. In Inuit culture, taste and smell are very closely linked, so the lack of an independent taste NI verb comes as no surprise. The explanation behind the lack of touch verbs is probably related to the fact that the verbs of restricted identity entail that the speaker be some distance from the entity being evaluated.\(^{19}\) Finally the behavioural NI verb is likely to be a further restriction of the visual restriction.

2.4.2 Ailment Verbs

The majority of Fortescue’s class c. verbs from (10) above fall under the definition of feeling an unpleasant sensation in some body part over a prolonged period of time. These verbs are related to the verb *-liri-* meaning ‘to be occupied or busy with something’ in (19) above. The meaning of pain, etc. will derive from the context of the nominal, which is a body part. We can assume that body parts are in some sense inalienable universally, and therefore that their existence is dependent on another existence. With respect to the NI verbs of feeling, the interpretation is that a) that the nominal is a subset of the subject of the verb, and b) that this subset nominal occupies the attention of the owner over a period of time. This results in a negative connotation.

(24) a. siu-siri-juq  [same as 10c]
   *ear-trouble-intr.part.3s*
   His ear aches/he’s having trouble with his ear  (Mittimatalik)

b.  [Q]

\(^{19}\)This explanation could also explain why taste is absent (David Johns, personal communication).
RESTRICTING NOUN INCORPORATION

These verbs have the same properties as the one in (19b). The difference in meaning is a result of the subset relation between the nominal and the subject. We note that in the Mittimatalik dialect, lexicalization has taken place such that the incorporating verb is not identical to -liri- in (19), nor is the nominal a free lexical item (siuti is the word for ‘ear’). This is the only class of NI verbs where lexicalization seems to have involved the noun. However Fortescue (1983) gives -liri- (see 19 above) with an ailment meaning in a number of dialects. He in fact classifies -liri- both as class c. and h. Here -liri- is considered to be essentially the same morpheme, with meaning differences deriving from context (see Johns 1999b).

2.4.3 Verbs of Creation and Consumption

The next set of verbs appear to be quite challenging for the approach taken here, as they involve verbs of creation ‘make’ and consumption ‘eat’. However we will see that there is once again evidence that these verbs are underspecified for meaning, and that moreover these very meanings have been claimed to those of light verbs, e.g Harley (2001). In fact this class of verbs has received its own term within the field of lexical semantics - incremental theme verbs. Thus we again are not surprised that creation and consumption are unmarked antonyms of one another, i.e are linked via negation as we have seen above. However in this case, negation will produce not a non-event but an opposite process.

The first thing to note about incorporating verbs of creation and consumption in Inuktitut is that, like all the NI verbs we have seen so far, they specify very little detail of the action, as shown in (25).

(25) a. tun-tu-vi-ni-tu-vunga
   caribou-former-consume-intr.indic.1s.
   I'm eating caribou meat. (Labrador)

b. tii-tuq-tunga
   tea-consume-intr.part.1s
   I'm drinking tea (Iqaluit)

As noted in Mithun (1999, pp. 49-56), Eskimo-Aleut incorporating verbs are generally broad in meaning. Thus the verb -tur- means ‘consume’ rather than ‘eat’ or ‘drink,’ since the latter translations derives from the context, as shown by the contrast between (25a and b). In fact, -tur- is very broad in meaning, with no detail about mouth movement or any physical action involved. In some ways, this is similar to the English have a cup of coffee (see Ritter and Rosen 1997), except that the Inuktitut verb entails ingesting the item in question, while the English have can go with a good nap, etc. (see also Mithun 1999).20

20In Utkuhikhalingmiut -tuq- can not only mean ‘eat’, ‘drink’ but also ‘wear’, ‘use’ (Jean Briggs, personal communication).
RESTRICTING NOUN INCORPORATION

The creation verb is shown in (26).

(26) jappa-liur-tunga
    parka-make-intr.part.1s
I am making a parka

Again, the action is very underspecified as to the means by which it took place. Mithun (1999, 50) shows that in Yup’ik, a language closely related to Inuktitut, -liur- can mean ‘brush (teeth)’; ‘cook (reindeer meat)’; ‘chop (wood)’; ‘work (at store)’ or ‘cut (fish)’, all depending on the context.

Both verbs, as incremental theme verbs, involve the incremental bringing into existence of a nominal and its converse, the incremental elimination from existence of an entity. The entries for these verbs is therefore as in (27).

(27)a. -liuq- ‘make’
    [Q [ QI ]]

b. -tuq- ‘consume’
    [Q [ QI ]]

What these representations indicate is that in the case of -liuq- ‘make,’ there is an activity, whereby the identity of the nominal becomes gradually non-identical from that of the subject of the clause, i.e. first there is only one entity, but over time, there will be two distinct entities. Note that the outside Q resembles the formalism in (19b) for being occupied with something. In a similar fashion, the representation in (27b) indicates that the verb -tuq- ‘consume’ involves an entity busy with another entity such that the latter becomes identical in identity with the former.21

In summary, we have seen that verbs of creation and consumption fit our definition of light verbs. They are extremely underspecified in their semantics; they can be accounted for with simple semantic operators. Significantly, they are antonyms. That creation and destruction verbs are currently considered to be light verbs by independent analyses (e.g. Harley 2001) is further support for this proposal.

2.4.4 Polyadic NI Verbs

The remaining type of verbs which fall under the account proposed here are the class of verbs discussed in Van Geenhoven (2002). An example of this type (morpheme gloss mine) is shown in (28).

(28) Nuka-p puisi ame-er-paa    [Kalaallisut from Van Geenhoven 2002, ex. (1)]
    Nuka-rel. seal(abs) skin-remove-trans.3s/s
Nuka removed the skin from the seal

21There must be something more to this; otherwise it would predict that the subject “becomes a N”.
RESTRICTING NOUN INCORPORATION

As Van Geenhoven (2002) convincingly shows, these verbs do not involve possessor raising but are instead are verbs which seemingly have three arguments, an agent, theme (incorporated) and a goal. In other words, the more literal translation of (28) is the one shown, and not ‘Nuka removed the seal’s skin,’ as would be the case under a possessor raising analysis.22

Under the account of NI presented here, verbs of removing and providing would seem to be a problem for a light verb analysis; therefore there must be an explanation for why these verbs seem to be different. The answer to this lies in the fact that these verbs are morphologically complex. Transitivization can create causative forms from intransitive verbs in Inuktitut. While a full analysis of polyadic NI verbs is beyond the scope of this paper, it can easily be seen that all verbs of removing and providing are based on simpler forms, such as we have seen above. Consider the data from the Inuvialuktun (Siglit) dialect.

(29) a. niaqu-iq-tuq
   head-lack-intr.part.3s
   It has no more head. (Inuvialuktun - Lowe 1984, 109)

   b. niaqu-i-gaa
   head-lack-tr.part.3s/3s
   He took its head off (Inuvialuktun - Lowe 1984, 109)

The verb in (29b) is the same verb as in (29a). The change in meaning comes about as a result of the transitive morphology following it. In some cases, the polyadic NI verbs have applicative morphology as well, as the verb -liuut- meaning ‘build for’ cited in Van Geenhoven 2002, 761. This verb appears to be composed of -liuq- ‘make’ plus the applicative morpheme -ut(i)- (thus -liu-ut). What is crucial here is that the derivational morphology appears to the right of the NI verbs, thus supporting the claim made here that the NI verb on its own does not have any more content than a light verb, i.e. is neither semantically nor syntactically complex.

We have achieved the goal as originally stated. We have seen that all noun incorporating verbs are maximally simple semantically. In fact, all of them are variants of ‘have’ or ‘be’. Importantly, none of them involve manner of action e.g. ‘paint’, ‘brush’, etc., change of state, e.g. ‘open’, ‘break’, etc. All such verbs are independent non-incorporating verbs in Inuktitut.

While many of the NI verbs have the meaning of canonical light verbs, others

---

22It is not clear the degree to which the possessor raising analysis for these constructions in Inuktitut is a “straw man”. Van Geenhoven (2002, 760) attributes it to Bittner (1994). On p. 769 Van Geenhoven states that her discussion will be on the construction “would be analysed in a Bittner and Hale (1996) framework.” In fact Bittner (1994, 67) describes one of these constructions as containing a “triadic suffix,” in keeping with Van Geenhoven’s subsequent analysis; however on p. 71 Bittner analyses a similar construction as “pseudo-triadic” or possessor raising.
can readily be shown to be related via simple elaboration of the semantics through the addition of basic semantic operators. We have had to make use of three operators: negation, quantification and identity. While identity and negation are quite stable, always within the internal brackets, quantity plays a pivotal role through its varying positions. This seems to be an inherent property of quantifiers. In the next section, we will examine the syntactic structure of the construction containing an NI verb and an incorporated noun.

3. THE SYNTAX OF LIGHT VERBS

As mentioned above, the incorporating verbs under discussion (which form the majority of incorporating verbs in Inuktitut), have properties very similar to the modal part of the bipartite lexical structure proposed in Koenig and Davis (2001). In this section, I will propose an analysis which will explain why these verbs must have a nominal attached to them. In this, I am addressing the important question raised by Talmy (1985), which is how and why are verbs different in different languages (see also Harley 2001 and Déchaine 2002). While adopting the modality division of Koenig and Davis, I will instantiate it through the syntactic structures of Harley (2001). Harley provides a typology of (English) verbs with four basic structures, below. The first in (30) is the structure underlying unergative verbs, where X indicates the root element which incorporates into little v, thus providing the verbs with a name.23

\[(30) \quad \begin{array}{c}
  \text{vP} \\
  \text{v} \\
  \text{X}
\end{array}\]

The next type in (31) is the structure underlying ‘do’ verbs like push, hit, etc.

\[(31) \quad \begin{array}{c}
  \text{vP} \\
  \text{v} \\
  \text{XP} \\
  \text{X} \\
  \text{YP}
\end{array}\]

The third type is that shown in (32) which underlies ‘cause’ type verbs, like transitive clean.

---

23Harley has (agent) in the specifier position above these verbs, which I am leaving out here. In Harley’s framework, agency is indicated by putting an element in spec vP.
RESTRICTING NOUN INCORPORATION

Finally the fourth type in (33) underlies ‘give’ type verbs, like *saddle*, shelve, etc.

For each verb type in English, the X incorporates into v, such that the root ends up naming the verb as a whole, even though the structure from which it moves is different. As a result, each little v in English will have a different derivational history. According to Harley’s analysis, there are no different light verbs, just different structures as complement to little v.

Clearly as far as the analysis we have seen of incorporating verbs in Inuktitut is concerned, NI verbs fall solely under type a) except that the X is always a nominal and, most importantly, there is no incorporation into little v. Indeed what characterizes Inuktitut NI verbs from this perspective is their very lack of incorporation. They are pure little v, with the possible additions of the operators we have seen above. That there is no incorporation and that the complement of little v is a nominal may be related. Since no incorporation takes place, the complement of little v must be an element which is independently licensed. Within Distributed Morphology, a root must be licensed by a functional morpheme (Marantz 1997). It seems that a little v can only license a complement a) if the root of the complement incorporates into little v or b) if the root is already incorporated into another little v, as in the case of verbs embedded under morphological causatives. In other words, little v cannot not license bare roots in complement position. A bare N must be licensed then either by incorporating into little v, as in the case of unergatives, or by being licensed by something else. The only other possible licenser for a bare N in English is a D. Recall that above it was claimed that Inuktitut NPs are inherently licensed, i.e. are effectively DPs, although they are not phrasal syntactically. Thus a nominal can appear as the complement of little v, and need not, indeed cannot (if it is already licensed), incorporate. Inuktitut NI constructions are

24As to why there must be morphological attachment, this question is part of the larger question in Inuktitut as to why the majority of “light” lexical elements are morphologically bound, e.g. adverbs, negation, aspect, tense, modals, etc. In other
RESTRICTING NOUN INCORPORATION

base-generated with a bare nominal root (Ghomeshi and Massam 1994; Van Geenhoven 1998a, 1998b; Massam 2001), through the operation Merge (Chomsky 2001). In fact, Hale (2001) claims that all noun incorporation universally involves Merge, and certainly Inuktitut supports this claim. The result of merging a nominal root and light v is a complete predicate, but one whose components remain distinct at spell-out, as in (34), which is the structure underlying all NI verbs in Inuktitut.25

\( (34). \)
\[
\begin{array}{c}
\text{vP} \\
v \\
\text{N(=DP)}
\end{array}
\]

From this we see that there is no lexical verb root in this structure, and that while the little v is head of the vP or verb-phrase, the nominal complement has a slightly different relation to the vP than it would have if there were a full lexical verb in the structure. In fact, from a certain perspective, the nominal IS the lexical content of the verb. Harley (2001) proposes essentially the same structure in for verbs of creation/consumption, as shown in (35).

\( (35) \)
\[
\begin{array}{c}
\text{vP} \\
v \\
\text{WRITE} \\
\text{DP} \\
\text{the book}
\end{array}
\]

‘John is writing the book’

The structure in (35) represents the subject, which is generated as the specifier of little v. The Incremental Theme verb is identical to unergative verbs (see 30 above), except that there is no incorporation. In (35) there is also an incorporated manner WRITE which originates from a position on the right. Exactly as in the account argued here, the theme (the book) is a complement to little v. As Harley (2001, 14) states, incremental theme objects “are direct objects of a light verb of creation (or negative creation).”

words, once we have designated NI verbs as light, the fact that must be morphologically attached is no longer a matter of stipulation but part of a more general issue in the language.

25Since the root is to the left of the light verb, there must also be some other process which produces the correct morpheme order. Note that this is not noun incorporation because all roots must be the leftmost element of the word. Thus even a canonical verb will have a causative to its right. I leave aside this issue as it is orthogonal to the paper.
We now have arrived at the answer for why the incorporating verbs in Inuktitut are both a finite class, and semantically so general in meaning. Since the verbal component of the construction is only a light v, there is a restriction on the set of semantic contrasts possible. A verb which involves change of state, manner, etc. would necessarily require that there be incorporation into little v. NI verbs in Inuktitut have no incorporation whatsoever.

A by-product of this analysis is the fact that it predicts that an external argument can never appear as an incorporated element, since it will always be merged after the vP is created (see also Van Geenhoven 2002). Like the analysis in Van Geenhoven (1998a), the analysis here argues for a base-generated construction, involving no movement of a nominal from an object position; however unlike Van Geenhoven’s analysis, and unlike all previous analyses of Inuktitut noun incorporation (with the exception of Mithun 1997; 1999 - see below for discussion), the present account explains the most salient features of the construction: a) only some verbs “incorporate” and b) “incorporation” is obligatory. A) follows from the fact that the semantics of pure light verbs is intrinsically restricted and b) follows from the fact that in Inuktitut a bare N does not need an independent licenser, and that a light verb belongs to a class of elements which require a root.

The light verb account of noun incorporation in Inuktitut predicts that in a language with obligatory NI, noun incorporation will be a restricted phenomenon, light verbs being only a subset of the entire class of verbs. Previous accounts, not addressing the fact that only some verbs incorporate, have made incorporation a special morphological feature on the lexical item, e.g. Bok Bennema and Groos (1988). Van Geenhoven 2002, 808 states that “For purely morphological reasons, an affixal verb requires a nominal stem.” Such accounts provide no explanation for a) why NI verbs are not the general case, i.e. the majority of verbs, and b) why it is that a wide range of possible meanings, e.g. ‘tickle’, ‘shatter’ etc. are impossible and, as I claim here implausible, incorporating verbs in Inuktitut.

Moreover the account of noun incorporating verbs as light verbs provides empirical evidence for the existence of little v as an independent unit in syntax and semantics, as well as support for Harley’s (2001) approach to the lexical semantics of verbs class. In particular, it confirms the claim that verbs of creation and consumption are light verbs. In fact the class of NI verbs in Inuktitut is a robust set of data which sheds light on the nature of light verbs, since they can be readily identified by their having to appear with a merged nominal on the left.

4. IMPLICATIONS BEYOND INUKTITUT

The phenomenon described here, whereby restrictions on noun incorporation are shown to be the direct result of the fact that the verbs involved are all light verbs is found in other languages as well. Gerdts and Hukari (2002) describe what they term denominal verbs in Halkomelem Salish, where the verbs are a) obligatorily attached to a nominal stem and b) are a restricted set. A Halkomelem example is shown in (36).
RESTRICTING NOUN INCORPORATION

The meanings ‘buy’ is found among the Inuktitut light incorporating verbs, usually combined with the meaning ‘get’ or ‘acquire’. Not surprisingly, the other incorporating verbs mean ‘have/get/make/do,’ ‘ingest/partake’. They all create intransitive verb forms, just as the examples in Inuktitut examined above do. These verbs are clearly broad in meaning, as expected under the light verb analysis. More importantly, none of their meanings contains root elements of manner or change. Nevertheless Halkomelem and Inuktitut NI is not completely identical. Halkomelem does not allow stranded modifiers while Inuktitut does (see Sadock 1980; 1991 and Van Geenhoven 1998a for an analysis of this), and Halkomelem allows object doubling, where the same nominal appears both inside and outside the verbal construction. It is likely that these differences derive from independent differences in the languages.

Crosslinguistically, noun incorporation involving denominal verbs is likely to fall under the light verb analysis. Gerdt and Hukari (2002) cite the language Seri as containing only a single denominal verb. It means ‘have/put on/have as.’ These three meanings are also found in Inuktitut NI verbs. The coincidence is striking, and supports the light verb account.

5. ORIGINS OF NOUN INCORPORATING VERBAL AFFIXES

The analysis presented here claims that noun incorporating verbs of the type found in Inuktitut and in other languages (sometimes called denominal verbs or verbal affixes) are intrinsically light verbs only and that their restricted set of meanings and the fact that they obligatorily incorporate are explained from this fact. However other linguists have claimed that verbs of this sort result from grammaticalization processes (Mithun 1997; 1999 and Gerdt and Hukari 2002).

Under a grammaticalization account, the NI verbs would be semantically simple because of semantic bleaching. Similarly, the requirement that they must have a noun attached would be explained by the fact that grammaticalization has turned them into suffixes. The claim therefore is that they originated as full verbs and due to frequency of use underwent grammaticalization into affixes.

Mithun (1997; 1999) discusses prefix verbs in Salish, such as those we saw above in Halkomelem. She observes two properties a) that they are similar in meaning to verbal affixes in other languages and b) that they are very general in meaning. She states p. 367 that most of these verbs “simply indicate the presence or absence of entities, their coming into being, their appearance on the scene.” She also

---

26Malouf (1999) also treats NI verbs in West Greenlandic as suffixes within an HPSG account; however he stipulates that the NI verbs cannot be independent by labelling them as verbal-bases, thus ignoring semantic generalizations. In addition, his claim that the verbal-base can have the full valency of regular verbs, predicts a huge number of impossible occurrences (see for example footnote 8.).
notes that many of the English translations show specific meanings, but that these are a result of the nominals to which they are attached, not from the verb itself. This parallels exactly what we saw in section 2.4.3. with the verb -tuq- ‘consume’ in Inuktitut, which can variously mean ‘eat’ or ‘drink’ depending on the nominal to the left. Mithun also points out that the Salish class of verbs is similar in meaning to the class of incorporating verbs in Yup’ik Eskimo.27 Significantly, Mithun (1997, 368) mentions that the latter show “a high proportion of markers indicating presence or absence.” This is the antonym-like property discussed above in section 2.3.1. In fact Mithun seems to have noticed a great number of the generalizations which have been the basis of discussion in the above sections, and they are well-founded. However her conclusions are very different from the proposal in this paper. She posits that Yup’ik (and Salish) verbal affixes (NI verbs) are the diachronic descendants of independent lexical verbs which have been grammaticalized over time.

Mithun sees problems with this claim however. She ponders the question as to why, if grammaticalization has taken place, these elements have retained more root-like (lexical) properties than other affixes in the language. The root-like properties are a) that they are a numerous, even though a closed class, and b) that they are have concrete meanings relative to other affixes.28 Her answer to this problem is the proposal that the historical path of these incorporating verbs differs from other grammaticalization processes in that each verb did not undergo grammaticalization independently, but instead an entire class of compounded forms underwent grammaticalization, presumably around the same time. Mithun (1999) proposes a grammaticalization history for Inuktitut noun incorporation based on earlier compounding, even though she acknowledges that there is no compounding in the language. Indeed there is neither synchronic nor diachronic evidence for compounding in Inuktitut. Besides the lack of evidence for compounding, another problem with the compounding source for NI verbs is that it is based on the concept of recurring activities as the trigger for the compounding/grammaticalization. The fact that virtually any pragmatically possible noun can appear with an NI verb does not seem to be in keeping with a process determined by frequency of use.

Michael Fortescue, who is the foremost expert on the historical linguistics of Eskimo-Aleut, explicitly claims that affixes in Eskimo languages do not draw upon lexical stems, but from each other, through morphophonological change and recurrent lexicalization across affixes.29 Fortescue (1992, 8) states that none of the affixes “can be related to lexical bases, despite the lexical ‘weight’ of many of them.”

The proposal in this paper does not assume that NI verbs were ever anything other than what they are now, therefore no grammaticalization accounts would be

27What does seem to be different between Inuktitut and Salish languages is that in the latter some verb-noun combinations are lexicalized.
28We might also wonder why the grammaticalization is so uniform, each verb have reached the same degree of semantic bleaching.
29Sometimes it is difficult to know whether or not lexicalization has taken place, as in the case of the NI verb -liuut- in Kalaallisut discussed in section 2.4.4.
RESTRICTING NOUN INCORPORATION

The fact that compounds do not exist, nor presumably ever existed, in Inuktitut is of no import to the light verb analysis. Likewise the fact that the class of nominals which are merged with the light verbs are a large, open class, is exactly as expected if the nominals are merged during the derivation to form the lexical root of the vP.

5.1 The Stability of Light Verbs

As argued in section 5.0 there is no evidence to assume that the incorporating verbs in Inuktitut are the result of grammaticalization process. If grammaticalization had taken place, even if it were over an entire class as proposed by Mithun (1997; 1999), we might expect to see some comparative differences across dialects. Instead we observe that this class of verbs is quite uniform throughout the class, e.g. no verb carries manner as part of its lexical semantic inventory. Equally we see exactly the same range of verbs across the many dialects of Inuktitut from Alaska to Greenland. The class of NI verbs in Inuktitut seems to be a reasonably stable across dialects of Inuktitut, and potential membership in the class can be predicted based on lexical meaning of the item. We do not find any semantically bleached versions of ‘chew’ or ‘tickle’ in the language. Even common traditional Inuit activities, such as ‘skin,’ ‘cook,’ ‘sew’ or ‘clean’ are not found as affixes.

Butt and Lahiri (2002) discuss light verbs in South Asian languages. In these languages, the class of light verbs originally evolved from appearing after a verbal noun to appearing after a bare verb stem, as in the Urdu example in (37).

(37) nadya a ga-yi
    Nadya come go-Perf.F.Sg
    Nadya has arrived

In (37) the light verb ga meaning ‘go’ is added for semantic modification of the event of Nadya’s coming, not to indicate that Nadya went anywhere.

The phenomenon in South Asian languages is different from NI in Inuktitut, in that the complement of the light verb is a verbal element and, also that each light verb also has a full verb lexical counterpart which is identical in form. Butt and Lahiri consider light verbs to be V-V, Adj-V or N-V constructions. Importantly they examine the history the V-V construction in South Asian languages, arguing that it has been present in the language since the earliest written records (estimated at possibly 1200 BCE). They claim that this fact is due to the light verb construction being a basic part of universal grammar, rather than some construction which has evolved through grammaticalization. Their central is that as far as historical change is concerned, light verbs are a “dead end,” and that this fact derives from the central role they play.

---

30If it turns out that grammaticalization has in fact occurred in Salish languages, it may be that the verbs did not become prefixes until a certain level of bleaching has occurred.
RESTRICTING NOUN INCORPORATION

in universal grammar\textsuperscript{31}. This is exactly what is being claimed here. NI verbs have the properties which they do because they form a special subclass of verbs in human language, a subclass with distinct syntax and distinct semantics. Their distinct syntax is that they are associated with little v and therefore, if no other material is incorporated, have no root properties. Their distinct semantics is that they have no manner or change of state, thus presenting as a semantically bleached set of verbs as we have seen above in section 2. There is no need to derive these verbs from other verbs. They themselves form the initial building blocks of all verbs (see Harley 2001).

6. CONCLUSION

We have seen that a close look at the subclass of verbs involved in noun incorporation in Inuktitut is very revealing. Previous analyses of this phenomenon in this language have ignored this issue, with the exception of Mithun (1997; 1999). It turns out that the subclass in question can readily be shown to consist of meanings which are associated with light verbs or little v. In Inuktitut, many of these verbs sometimes also have operators of negation, quantity, etc. As a result, they seem semantically related to one another, almost as if in sets. This explains the limited semantic range which we find in these verbs. The fact that these verbs are in little v also provides an explanation for the fact that a nominal must be attached with the little v, thus providing a root element. As a result, it is clear that noun incorporation in Inuktitut does not involve movement (Van Geenhoven 1998a, b, 2002; Massam 2001) but simple Merge (Hale 2001).

As a result of this analysis we can dispense with all previous accounts which attribute an arbitrary morphological feature to merged light verbs. These verbs obligatorily suffix to the nouns because they are not root elements themselves. However, they are not affixes as a result of grammaticalization, as claimed in Mithun (1997; 1999). There is no plausible account along these lines in Inuktitut. Instead, the light verb account explains these properties in a straightforward fashion. Light verbs are a universally available subclass of verbs (Harley 2001; Butt and Lahiri 2002). That other languages with a similar phenomenon show members from the same subset supports this account.

This analysis supports a bipartite structure of verb syntax and semantics along the lines of Harley (2001) (see Koenig and Davis 2001 for a lexical semantic proposal). Verbs within and across languages vary depending on what sort of complements the little v takes and which elements incorporate (see also Déchaine 2002). In the case of Inuktitut, incorporation does not take place with a certain subclass of verbs, therefore these verbs show special properties within the language. Thus the light verb account affords us deeper understanding into the nature of verb types, and the ways in which languages are able to instantiate these differences.

\textsuperscript{31}They note that universally verbs such as ‘take’ ‘put’ ‘make’ and ‘do’ are semantically underspecified.
REFERENCES


Butt, Miriam and Aditi Lahiri. 2002. ‘Historical Stability vs. Historical Change’ manuscript, University of Konstanz.


Hale, Kenneth. 2001. ‘Navajo Verb Structure and Noun Incorporation’, Ms. MIT.


RESTRICTING NOUN INCORPORATION


Kearns, Kate. 1988. ‘Light Verbs in English’, Ms, University of Canterbury, New Zealand.


RESTRICTING NOUN INCORPORATION