Inuit Case and Agreement

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1.1 The Inuit language family

1 Introduction

1.1 The Inuit language family

Inuit is part of the Inuit–Aleut (or Eskimo–Aleut) language family spoken around the arctic circle in Greenland, Canada, Alaska and Siberia\(^1\). The Inuit presumably originated from the Eurasian continent and crossed the Bering Street during the last Ice Age. The Inuit language family is more a language continuum, than a family with clearly distinguishable subfamilies, languages and dialects. Nevertheless, the Yupik dialects in the West and Kalaallisut in the East are not mutually understandable. Inuit can be divided into the following subfamilies, with alternative names between parentheses\(^2\).

(1) **INUIT (ESKIMO)**

- **YUPIK**
  - Alutiiq (Sugpiaq, Pacific Yupik, and Alutiiq Alaskan Yupik)
  - Central Siberian Yupik (Yuit)
  - Central Alaskan/Arctic Yup’ik (Yuk, Yuit)
  - Naukan (Naukanski, Naukan Siberian Yupik)
  - Sirenik (Sirenikski)

- **INUIT**
  - Inupiaq (Inupiat, Inupik, Inuk, Inuktitut, Inuit)
  - Western Canadian Inuit
  - Eastern Canadian Inuit
  - Greenlandic Inuit (Kalaallisut)

Yupik is morphologically definitely the more conservative branch, but dialects like Sirenik have borrowed many words and syntactical elements from the neighboring Paleo-Siberian languages in Kamchatka. As said, not all dialects are mutually understandable, but the case systems of all dialects show a striking similarity. In this thesis, I will cite from different sources and grammars, in order to give an as complete as possible picture of Inuit. The language abbreviations in the margins and the glosses are separately listed in appendices A & B.

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\(^{1}\)Also see the map in appendix C.

\(^{2}\)Classification from Fortescue (1998). Different classifications (e.g. in Dorais (1990); Fortescue et al. (1994); de Reuse (1994)) have been proposed, but since a fine-tuned classification of the different languages/dialects is not of high relevance to my analyses, I will not mention them here. A nice overview and discussion of the pending issues can be found in Fortescue (1998).
1.2 Overview

Section 2 will focus on the case patterns of simple Inuit transitive clauses. After a short discussion on the case nomenclature that has been used over the last hundred year of Inuit research, I will introduce the reader to the two possible case patterns: direct/ergative (ergative–nominative) and antipassive (nominative–accusative). The antipassive case pattern often occurs with the so-called antipassive morpheme on the verbal complex. The antipassive construction in Inuit turns out not to be an anti-passive. While the agent of a passive verb is in an A-position, the object of an antipassive is in an A-position. The remainder of this section will focus on the question of the trigger of the antipassive construction. After a discussion of several approaches to this question, I will conclude that it is the fact that nominatives inherently have a relatively high focality, which triggers the antipassive construction.

Section 3 deals with the Inuit ‘ergative’ agreement system. After determining the type of ergative agreement that Inuit is exhibiting, I will deal with the internal morphology of the post-verbal agreement morphemes. Those appear to be morphologically complex, and the order of the morphemes that cross-reference with subject and object dependent on whether they refer to third persons or first/second persons. I will provide paradigms from several different Inuit dialects in order to prove this point, and propose an Optimality Theory (see p.18 for references) driven approach to the Inuit agreement morphology.

Section 4 addresses the Inuit phrase structure typology. Haider’s Basic Branching Constraint typology (see p.34 for references) provides a suitable framework for Inuit as a typical OV language family like Germanic. Inuit exhibits many features of OV language such as verb clustering, clause-union, object-initial base orders and scrambling. Finally, I will address the post-verbal objects that sometimes occur in Yupik. Their occurrence shows an interesting parallel with the Germanic language Yiddish, and a model for Yiddish might be applicable to Yupik.

Section 5 deals with the Inuit case system into more depth. Similar to my treatment of agreement in section 3, I will provide evidence in favor of an Optimality Theory approach to case assignment in Inuit intransitive, transitive and ditransitive clauses. I will propose a model that aims to unify this approach with a minimalist “Bare Phrase Structure” syntax (see p.59 for references) and Haiderian SOV phrase structure.
2 Inuit case-marking in simple clauses: Unmasking the antipassive

This section will focus on Inuit case-marking in simple intransitive and transitive clauses. After a short introduction, I will mainly discuss the so-called “antipassive” case-marking pattern, its status in Inuit syntax and its origin.

Inuit is generally described as an ergative language (Kalmár, 1979; Fortescue, 1984; Bok-Bennema, 1991). According to Dixon, ergativity is a term used “to describe a grammatical pattern in which the subject of an intransitive clause is treated in the same way as the object of a transitive clause, and differently from a transitive subject” (Dixon, 1994, p.1). Throughout the last few decades, a considerable amount of literature has appeared on this subject: Levin (1983); Marantz (1984a); Levin and Massam (1985); Bok-Bennema (1991); Johns (1992); Murasugi (1992); Bobaljik (1993); Jelinek (1993); Philips (1993); Dixon (1994); Mahajan (1994a); Bittner and Hale (1996a,b); Woolford (2000) inter alia. Despite all the different terminology that has been launched during the last decennia of Inuit research, it is a general assumption that Inuit is an ergative language family. This wide variety often obscures the basic facts about the available Inuit case patterns. While the existence of ergative case is generally no point of discussion, the existence of the two structural cases, nominative and accusative, remains controversial.

Many contemporary articles and grammars about ergative languages still use the term “absolutive” for the case that marks the object of a transitive verb (and the subject of an intransitive verb), but a series of recent articles on case theory have claimed that absolutive case is in fact a nominative (Marantz, 1984a; Murasugi, 1992; Bittner, 1994; Woolford, 2000; Legate, 2005; Anand and Nevins, to appear). A thorough discussion of the pros and cons of these proposals is beyond the scope of this thesis, but the two main arguments for treating absolutive as nominative case are that: (1) Absolutive, like nominative, is always the least, often zero marked case, and (2) “split-ergative” languages like Hindi, which, according to Dixon, would have both an absolutive and nominative case, show remarkably similar scope properties for both the nominative and absolutive (cf. Anand and Nevins (to appear)). Let us finally turn to Inuit. The following pair of sentences is from Bok-Bennema (1991).

(2) a. Piita tikip-puq.  
   Piita.NOM arrive-IND.3SG  
   ‘Piita arrived.’  

b. Piita-p mattrak niri-vaa.  
   Piita-ERG mattrak.NOM eat-IND.3SG/3SG  
   ‘Piita ate the mattrak (=whale skin).’

The sentence in (2a) is a normal intransitive verb, which takes a nominative case-marked subject. The nominative case throughout the Inuit family is always unmarked and also the only case that is expressed through a zero morpheme. Example (2b) is a transitive sentence.

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3There is wide variety in the nomenclature for Inuit cases. I will use the following: NOM: nominative (also: absolutive); ERG: ergative (also: relative, genitive, subjective); ACC: accusative (also: instrumental, modalis, secondary, objective); DAT: dative (also: allative, terminalis) and ABL: ablative (also: distantiatis).
featuring an object that is unmarked. Therefore it must be marked with the nominative case. The subject is marked differently with a case usually referred to as ergative. Ergative case is marked in Inuit with -p and in Yupik with -m.

2.1 Ambiguous verbs: two varieties

The agreement on the verb in (2a) is different from (2b). A possible explanation would be that verbs in intransitive sentences are marked differently from verbs in transitive sentences, which agree with both subject and object. There is, however, one additional possible case pattern for transitive sentences.

\[(3) \text{Hansi} \ (\text{mattak-mik}) \text{niri-vuq.} \]

\begin{verbatim}
Hansi.NOM mattak-ACC eat-IND.3SG
\end{verbatim}

‘Hansi eats mattak.’ (WG)

In (3), a transitive clause, the subject is unmarked. The null hypothesis would be to assume that it is marked with the nominative case. The object on the other hand, is marked with a case that we have not encountered yet. This case I will refer to as accusative (cf. Seiler (1978); Creider (1978); Bok-Bennema (1991)), since it marks the object in a transitive clause in which the subject is marked with nominative. The case-marking and agreement pattern in example (3) shows a familiarity to the morphological pattern we would encounter in a non-ergative language like English or German. The difference with these languages is however, that in Inuit accusative case-marked objects can optionally omitted. There has been done no research, to my knowledge, on whether this is true for all accusative case-marked objects in Inuit.

An argument used against such an analysis is that in (3) mattakmik can be omitted (e.g. Mennecier (1994, p.445)). The fact that it can be omitted may suggest its status as adjunct, and hence argue against its objecthood, and, simultaneously its accusative case-marking. This is an invalid argument. The verb ‘eat’ in English also doesn’t necessarily take an object.

\[(4) \text{John is eating (an apple).} \]

Nevertheless we do not question the status of an apple in (4). Verbs like ‘to eat’ in (3) and (4) are referred to as “ambiguous verbs” by Bok-Bennema, they can optionally take an object. Further arguments against an analysis of mattakmik in (3) as an adjunct are provided in section (2.3). Note that if we accept mattakmik in (3) as a theme in a regular object position, this would also have consequences for an analysis of the agreement in (2b). Apparently, subject–object agreement is not the right term to describe the verbal morphology. I will return to this in section 3.

In case an ambiguous verb takes an object, there are two available case patterns: ergative–nominative, and nominative–accusative. Only the latter case assignment allows for an omitted object. Note that the sentences in (2b) and (3) have slightly different translations.

\[4\]

I will refrain from using the parentheses in the remainder of this thesis.
2.2 The antipassive morpheme

These semantic differences associated with the different case patterns will be a point of discussion in section 2.5. Although these ambiguous verbs may seem exotic at first sight, their occurrence is not restricted to the Inuit language family. We encounter them in Germanic languages like English as in (4) and in some Caucasian languages like Abkhaz. Abkhaz has a class of “labile” verbs (cf. Chirikba (2003, p.50)), which behave exactly, like Inuit “ambiguous” verbs, including the agreement.

(5) a. s-3ax-wá-jt’
    I-sew-PRES:DYN-FIN
    ‘I am (busy with) sewing.’ (Abkh.)

b. ja-z-3ax-wá-jt’
    it-I-sew-PRES:DYN-FIN
    ‘I am sewing it.’ (Abkh.)

The point I want to make is that terminology often obscures the typological similarities between different languages and thus obstructs proper analysis. There are also ambiguous verbs, which can optionally take a subject, “anticausativization verbs” in Bok-Bennema’s terminology, but in fact completely parallel to examples (2b)–(3) and (5a)–(5b). I will give two examples from Inuit (Fortescue, 1984, p.85) and Abkhaz (Chirikba, 2003, p.51) as an illustration.

(6) a. napi-va
    break-IND.3SG/3SG
    ‘He broke it.’ (WG)

b. napi-vuq
    break-IND.3SG
    ‘It is broken.’ (WG)

(7) a. jə-pə-s-čə-0-jt’
    it-PREV-I-break-AOR:DYN-FIN
    ‘I broke it.’ (Abkh.)

b. jə-p+čə-0-jt’
    it-PREV.break-AOR:DYN-FIN
    ‘It broke.’ (Abkh.)

The subjects in (6a) and (7a) can be optionally omitted, yielding sentences (6b) and (7b). Since these verbs form a closed class, they are not of further use to my analysis. Any transitive verb, on the other hand, can be transformed into an ambiguously acting verb by the so-called antipassive morpheme. This antipassive morpheme will be the topic of discussion in the remainder of this section.

2.2 The antipassive morpheme

Since not every verb is inherently ambiguous, it cannot freely switch between the ergative–nominative and nominative–accusative case-marking pattern. Inuit morphology facilitates
this switch with the so-called “antipassive” morpheme. It has been claimed (e.g. Woodbury (1977); Jensen and Johns (1989); Allen (1994)), that ambiguous verbs in fact yield a -∅ antipassive suffix, but this is heavily argued against by Dixon (1994), stating that “The intransitive use of [...] labile verbs [cf. (5a)] has been called ‘antipassive’ but this is a mistaken application of the label” (Dixon, 1994, p.147). Although he might have a valid point, this quote also makes clear that it is not clear what exactly an antipassive is. Dixon defines an antipassive construction *inter alia* in terms of optionality of the object and explicit formal marking on the verb. The term “antipassive” has been used as such, or as a term for the explicit formal marking on the verb, or for the case-marking pattern. I will use the term “antipassive” for the case-marking pattern, which features nominative on the subject and accusative on the object. The term “direct” will refer to an ergative–nominative case pattern. “Antipassive morpheme” will refer to the overt morpheme on the verb. Under these terms, a sentence as in (3) can be defined as antipassive. An ambiguous verb can entertain an antipassive case pattern without an overt antipassive morpheme.

The term “antipassive” is also somewhat misleading since it suggests that this morpheme mirrors the behavior of the more common passive morpheme. As I will argue below in section 2.3, this is not the case. Let’s first turn to the data from Kalmár (1979, (18)–(19)), which are supposedly from Inupiaq. I will ignore the SVO word order for the moment.

    Joosi.NOM shoot-ANTIP-PTC.3SG caribou-ACC
    ‘Joosi shot a caribou.’

    b. Joosi-up quqi-kkaniq-taŋa tuttu.
    Joosi-ERG shoot-again-PTC.3SG/3SG caribou.NOM
    ‘Joosi shot the same caribou again.’

Sentence (8a) is parallel to (3). The difference lies in the fact that ‘to shoot’ isn’t an ambiguous verb and is therefore marked with the antipassive morpheme -si⁵, in order to be able to support the antipassive case pattern. (8b) is parallel to (2b). Kalmár stresses the semantic difference between the two sentences with the suffix for ‘again’ in (2b). He claims that generally, when an object has already been mentioned in the discourse, it is marked with nominative case. I will elaborate on this in section 2.4.

### 2.3 Passive–antipassive (a)symmetry

Now that we have had a short introduction of the antipassive morpheme, I would like to return to the status of the theme argument in an antipassive sentence. The term “antipassive” refers to the passive voice as if it were its opposite. It is generally agreed upon that the agent in a passive sentence is not in an argument position: it can be omitted freely. Symmetrically, it has been argued that the theme in an antipassive sentence is also in a non-argument position. I will try to show that this is not the case. Beach (2003) gives an overview of the current analyses, which have been proposed on the status of antipassive theme. They are listed in (9).

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⁵Siegel (1998) offers a nice overview and discussion of the different morphology associated with the antipassive morpheme in Inuit. In this paper we will only encounter the -(s)i morpheme.
2.3 Passive–antipassive (a)symmetry

(9) Status of the theme in the antipassive

a. The status of the theme in an antipassive construction is similar to the status of the agent in a passive construction; they are both adjuncts. (Grimshaw and Mester, 1986; Dixon, 1994; Johns, 1996; Manning, 1996)

b. The status of the theme in an antipassive construction is similar to the status of the theme in a direct construction, but in a different position. (Bittner, 1994; Bittner and Hale, 1996a)

c. The status of the theme in an antipassive construction is similar to the status of the theme in a direct construction, and in the same position. (Bok-Bennema, 1991; Manga, 1996a,b; van Geenhoven, 1996, 2002; Spreng, 2001; Beach, 2003)

I will favor the last option, since it is the option that seems to be backed by the most solid evidence, and furthermore it is typologically the most felicitous. Both approaches in (a) and (b) are based on the omission-argument, which, in my view, would have severe implications for the analysis of similar constructions like (4). Moreover, the data in Beach (2003), which I will summarize below, seem to point in the direction of an analysis that places the theme in an antipassive sentence in the same position as in a direct sentence.

Beach (2003) presents us with right-edge floating quantifier data from the Eastern Canadian Inuktitut dialect Tarramiutut. The quantifier atuniit ‘each’ can only occur as a floating quantifier with DPs in argument positions. As we will see, it can be disjunct from a theme in an antipassive construction, but can’t be disjunct from an agent in a passive construction. Doetjes (1997) claims that in Dutch, floating quantifiers can only be bound by constituents in argument positions. Assuming this is also the case for Inuit, this means that if we encounter a theme in an antipassive construction entertaining a floating quantifier, it must be in argument position. Similarly we would like to show that agents in passive sentences and adjuncts cannot entertain a floating quantifier. The following examples are from Beach (2003, (19)–(27)), but he unfortunately does not provide us with a non-floating quantifier sentence. The verb ‘to see’ also belongs to the class of ambiguous verbs, which is why no antipassive morpheme is present. The constituent entertaining the floating quantifier is in boldface.

(10) a. Anguti-it arnaq taku-laur-tangat atuniit.
    man-ERG.PL woman.NOM see-PAST-IND.3PL/3SG each
    ‘The men each saw the woman.’
    (ECt)

b. Arna-up anguti-it taku-laur-tangit atuniit.
    woman-ERG man.NOM.PL see-PAST-IND.3SG/3PL each
    ‘The woman sees the men each.’
    (ECt)

In the direct construction in (10a) and (10b) both the agent and theme can entertain a floating quantifier without causing ungrammaticality. The same holds for both agent and theme in the antipassive constructions in (11a) and (11b).

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6 The restriction of floating quantifiers to A-positions is not uncontroversial and the debate has not been settled yet. Bobaljik (1998) offers a nice overview of the available theories.

7 Notice that ergative and nominative plural morphology is similar in this Yupik dialect.
    man.NOM.PL woman-ACC see-PAST-IND.3PL each
    ‘The men each saw a woman.’

    woman.NOM man.ACC.PL see-PAST-IND-3SG each
    ‘The woman sees the men each.’

    This is positive evidence in favor of approach (c): a theme can entertain a floating quantifier in both a direct and antipassive construction. However, passive constructions cannot be construed with an agent DP entertaining a floating quantifier.

    woman.NOM man-ABL.PL see-PTC-be-PAST-IND.3SG each
    Intended: ‘The woman was seen by each of the men.’

    b. Anguti-it arna-mut taku-ja-u-laur-tuit atuniit.
    man.NOM.PL woman-ABL see-PTC-be-PAST-IND.3PL each
    ‘The men were each seen by the woman.’

    As we can see in (12a) the ablative marked agent DP in a passive sentence cannot entertain a floating quantifier. The theme on the other hand, which is in an argument position, can. Other DPs in adjunct positions also can’t entertain a floating atuniit, just like the agent in (12a).

(13) * Qimirquaqarvi-ni Jaani taku-sima-jara atuniit.
    library-LOC.PL Jaani.NOM see-PERF-IND.1SG/3SG each
    Intended: ‘I have seen Jaani in each of the libraries.’

(14) * Qirmusijauti-nut nanuq taku-ja-u-laur-tuq atuniit.
    binoculars-DAT.PL bear.NOM see-PTC-be-PAST-IND.3SG each
    Intended: ‘The bear was seen with each of the binoculars.’

    The adjunct DP in (14) is marked with the dative. However, not every dative marked constituent is necessarily an adjunct as we can see in double object constructions, which will be discussed later in this thesis. Dative marked goals can entertain a floating quantifier, since they do reside in argument positions.

(15) Qimirqua-mik anguti-nut aittu-i-laur-tunga atuniit.
    book-ACC man-DAT.PL give-ANTIP-PAST-IND.1SG each
    ‘I gave the book to each of the men.’

    A pair such as (14)–(15) argues against a claim that floating quantifiers can only be entertained by certain cases. The ability of entertaining floating quantifiers is connected to the position of the constituent, not its case. The data from Beach (2003) show that a theme can entertain a floating quantifier in both a direct and antipassive construction, and, following Doetjes (1997) and Beach (2003), that the theme resides in an argument position.
2.4 Why antipassive?

We have seen in the previous subsection that the accusative marked theme in an antipassive clause is in a position, which structurally differs from an ablative marked agent in a passive clause. In this subsection, I would like to discuss the properties of the antipassive construction in more detail. There are several proposals in the literature on how to deal with this construction. These proposals are centered around the question what causes the accusative case to appear on the theme.

(16) What causes accusative on the object?
   c. Unspecificity of the object, new discourse information (Francis Barnum, 1901; Kalmár, 1979; Johnson, 1980; Berge, 1997)
   d. The object is less specific than the subject (Kleinschmidt, 1851; Fortescue, 1984; Manga, 1996a,b).
   e. The object cannot be marked with nominative: nominative case always marks a specific DP. (Manning, 1996)

Manning (1996) offers a discussion of the different approaches, and reaches the conclusion that none of the approaches in (a)–(d) is completely satisfactory. Subsequently he argues in favor of a more universal statement (e), stating that nominative case is generally associated with a specific (or referential, old discourse information, topic) DP. It is in fact proposal (d) reformulated as a typological generalization that also partially encapsulates proposals (b) and (c).

2.4.1 No object incorporation

The incorporation (a) approach following Baker (1988) forces us to analyze mattak-mik in (17a) as an incorporated noun because it is marked with the accusative case. However, the sentence is not completely analogous to “real” incorporation sentences like (17b) and (17c) (from Fortescue (1984)).

    Hansi.NOM mattak-ACC eat-IND.3SG
    ‘Hansi eats mattak.’

    kamik-have.on-IND.3SG
    ‘He has kamiks on.’

    hot-ACC coffee-drink-IND.3PL
    ‘They drank hot coffee.’

8Or object. In transitive sentences, themes in Inuit always reside in or originate from object (complement of V0) position.
Example (17b) features a canonical noun incorporation sentence: a bare noun and a verb root have been head-adjoined and form one semantic and phonological complex. Note that the verbs ‘to eat’ and ‘to drink’ are both ambiguous and therefore need no antipassive morphology. Sentence (17c) is the source of the confusion about accusatives and incorporation, since the NP is incorporated, but its modifier is marked with the accusative case. (17c) can be rephrased in something like ‘They coffee-drinked (something being) hot.’ Rosen (1989) proposes a similar analysis for sentences like (17c) in Mohawk. Moreover, the floating quantifier data from Tarramiutut in the previous section suggest that the antipassive marked theme is in an argument position. Incorporated nouns are never in argument positions and would therefore not be able to entertain a floating quantifier. Unfortunately, there are, to the best of my knowledge, no available Inuit data in order to prove this.

2.4.2 No unspecificity of the theme or new discourse information

Kalmár (1979) suggests that the object must be non-specific, or new in the discourse in order to be marked with the accusative. His data are presented in (18a)–(18b). Again, I will ignore the word order for the moment.

(18) a. Inuk qimmir-mik taku-vuq.
   person.NOM dog-ACC see-IND.3SG
   ‘The/A person saw a dog.’ (Iñu.)

   Joosi.NOM shoot-ANTIP-PTC.3SG caribou-ACC
   ‘Joosi shot a caribou.’ (Iñu.=8a)

Although his generalization might be true in these two cases, we find in Manning (1996, (136)) cited from Bittner (1987) an example where a proper noun is marked with the accusative. If it were the case that only non-specific theme DPs can be marked with the accusative, this is a gross violation of that principle.

(19) Jesusi-mik taku(-si)-vuq.
   Jesus-ACC see-ANTIP-IND.3SG
   ‘He saw Jesus.’ (G)

Apparently, we cannot explain an antipassive construction from the viewpoint of object incorporation, as we have seen above.

2.4.3 Antipassive and aspect

The antipassive construction is not only used to signal a specific information structure. Siegel (1998) argues in favor for a dual analysis of the antipassive. One reflecting topic structure as we will see below, and one morpheme functioning as an aspectual marker. The aspectual use of the antipassive morpheme is not restricted to transitive clauses. Several instances of this use in intransitive clauses are found in the literature (cf. Kalmár (1979); Fortescue (1984); Bittner (1988); Bok-Bennema (1991); Siegel (1998)). Example (20a) is from Bittner (1988, 262), (20b) from Kalmár (1979, p.127).
2.4 Why antipassive?

(20) a. Qilalukka-nik pui-si-vuq.
whale-ACC.PL come.up.to.surface-ANTIP-IND.3SG
‘There appeared whales on the surface (of the sea).’ (WG)

b. Iqla-si-kallak-pak-unga.
laugh-ANTIP-suddenly-FREQ-IND.1.SG
‘I suddenly had to laugh.’ (Iñu.)

Siegel (1998) notes that in these cases the antipassive morpheme is used to encode an ‘inceptive’ aspect on the verb. The verb is also often marked with a morpheme for ‘suddenly’, i.e. kallak in (20b). We also find evidence for aspectual properties of the antipassive in transitive sentences, although the occurrence of an antipassive morpheme in general does not impose a specific aspect on a verb form, as we have seen in previous transitive sentences. There seems to be a lot of divergence in the literature on the aspectual properties of the antipassive marker; different dialects and languages sometimes seem to contribute nearly opposite aspectual values to the antipassive morpheme.

The variety in the aspectual meaning of the antipassive in Inuit seems to cover both ends of the aspectual universe. The following data in (21a)–(21b) are from Kalaallisut (Greenlandic, from Bittner (1987, p.202)) and the data in (22a)–(22b) from Mittimatalik (Eastern Canadian, from Spreng (2001, p.165)). As we can see the aspectual values of the sentences with a direct case-marking (21a) and (22a) are almost completely opposite, and the same holds for the aspectual readings of (21b) and (22b).

Jacob-ERG house.NOM this.NOM.SG build-IND.3SG/3SG
‘Jacob built/was/is building this house (may but need not to have finished).’ (WG)

Jacob.NOM house-ACC this.ACC.SG build-IND.3SG
‘Jacob built/was/is building this house (has not finished it yet).’ (WG)

(22) a. Jak-up iglu sana-vaa.
Jake-ERG house.NOM build-IND.3SG/3SG
‘Jacob is building the house (not yet finished).’ (ECm)

b. Jake sana-vuq iglu-mik.
Jake.NOM build-IND.3SG house-ACC
‘Jake is building a house (hands on, may or may not yet be finished).’ (ECm)

These data present us with a problem that still has to be solved before attempting a unified analysis of the antipassive. And moreover, any theory that would propose to explain the antipassive case pattern from a framework of aspectual semantics will have to face the data presented in this section. The scope data, which I will present next, will put the antipassive construction in a different light.
2.4 Why antipassive?

2.4.4 Scope issues

Bittner has claimed in a series of subsequent articles (Bittner, 1987, 1988, 1994, 1995) that the accusative morphology is caused by scope differences. Manning (1996) argues against such an analysis and points out that her data, on further testing with native speakers, do not hold completely. The data (23a)–(25) are adapted from Manning (1996, p.87ff).

   book.NOM one.NOM come-PERF-NEG-IND.3SG
   ‘There is a book which hasn’t come.’ /#‘No books have come.’ (WG)

   Juuna-ERG book.NOM one.NOM come-PERF-NEG-IND.3SG/3SG
   ‘There is a book which Juuna hasn’t got.’ /#‘Juuna hasn’t got any books.’ (WG)

In both subject (23a) and object position (23b), we find that the nominative marked numeral phrase can only have one reading, namely a wide scope reading over negation. Ergative marked constituents can have both wide and narrow readings,

   student-ERG one-ERG juuna.NOM talk.to-PERF-NEG-IND.3SG/3SG
   ‘There is a student who hasn’t talked to Juuna.’ /‘No student has talked to Juuna.’ (WG)

The accusative marked constituent in (25) has as preferred reading a narrow scope. The fact that a wide scope reading is possible is problematic for an analysis of the antipassive case-marking as a reflex of a narrow scope object.

   student-GEN.PL one.of.them-ACC help-ANTIP-MUST-IND.1SG
   ‘It is necessary that I help one of the students.’ /‘There is one of the students that I must help.’ (WG)

A wide scope reading is also possible, although pragmatically dispreferred. Bittner (1995, p.69) on the other hand insists that “[T]he judgments about the diagnostic scenarios […] were consistently obtained from several informants”. She illustrates this with a wide variety of examples of which I will cite one below, slightly adapted, (Bittner, 1995, p.69).

(26) Context: “Last year, Jaaku ordered five books. Yesterday, when I saw him…”
   a. … suli [ atuagaq ataasiq ] tigu-sima-nngi-la.
      yet book.NOM one.NOM get-PERF-NEG-IND.3SG/3SG
      … Four books have arrived, ‘but one (specific or unspecific) hasn’t come yet.’ (WG)

      yet book.ACC one.ACC get-ANTIP-PERF-NEG-IND.3SG/3SG
      … ‘None of the books have arrived yet.’ (WG)
Manning argues that Bittner is wrong because in sentence (23b) the accusative marked constituent can also, according to Manning, have wide scope. Bittner denies this. Instead of focussing on this discussion, which will most probably be useless due to a lack of additional data, we can at least state that, following Bittner and Manning, nominative case always has wide scope.

Instead, we might want to consider a different point of view. In (23a)–(26b) we can consider the case facts and the scope facts separately in two ways; (1), they may enter a relationship of cause and effect: certain cases can be caused by scope or vice versa, or (2), they might be both the effect – in different interfaces – of one or a combination of underlying features. The relationship between case and scope in these examples is not bijective: a constituent with wide scope is not necessarily marked with nominative case and an ergative marked argument does not necessarily have a narrow scope. Moreover, in a Minimalist Syntax framework (Chomsky, 1995, 2000) it is hard to determine whether case or scope is processed first, since both PF and LF are interpreted parallel. Therefore, it might be useful to entertain the third option for the moment. Both case-marking and scope effects find their common source in a single set of features, which are interpreted under different conditions in different interface systems. The Inuit nominative scope data are still robust, and lead to an approach that considers the accusative case-marking in an antipassive sentence to be a reflex of the fact that the subject is marked with the nominative (and ergative is not available for the object).

2.4.5 Specificity of the nominative

This leaves us with the last two options from (16). Kleinschmidt (1851); Fortescue (1984); Manga (1996a,b) propose that it is the specificity of the subject that triggers nominative case. According to Manning (1996) this statement is true, but he also claims that nominative objects are also always specific, referential, old discourse information, or topic. He states that he couldn’t find any counterexamples against this proposal in the literature, and takes it as a rule of thumb. Except for the data Manning has checked, it also seems to hold for the examples we have seen in this section: (17a), (18b), (23b) and (24) are proper nouns or indexical pronouns, (18a), (23a) and (26a) are specific noun phrases, which are all marked with the nominative case. In other words, nominative marked constituents have a relatively high level of topicality and definiteness, which also explains the robust scope data from Bittner. This definiteness might be present as a feature on an argument DP (with only one of such a feature available per clause) and marking a DP with this feature with a case other than nominative might cause a crash in the computation, yielding an ungrammatical sentence.

2.5 Summary

In this section I have tried to dissect the case-marking in simple Inuit transitive and intransitive clauses. Because of recent advancements made in case theory we can consider

9Hindi, an ergative language with a case-marking very similar to Inuit, doesn’t display this scope effect at all. Both ergative and nominative case-marked DPs can have either wide or narrow scope (Bittner, 1994, p.1).
absolutive and nominative to be one and the same case. Furthermore, I have provided evidence in favor of an analysis of the accusative case as a marker of the object in an antipassive clause. Thus, we can generally distinguish between two case patterns: ergative–nominative and nominative–accusative in transitive clauses. The alternation between those two variants is caused by a definiteness feature. This definiteness feature is best satisfied with a nominative case-marking and a wide scope reading. If the subject has this feature we find an antipassive case-marking pattern, if the object is marked with the definiteness feature, we find a direct case-marking pattern. We also find that the antipassive construction, always when employed in intransitive sentences and sometimes in transitive clauses, exhibits aspectual properties. Because of the adaptation of “regular” case terminology for Inuit, we can discuss other properties of the Inuit case system in the next sections in the context of other (ergative) languages.
3 The ergative agreement of Inuit

This section will deal with the Inuit agreement system, which I will analyze in an Optimality Theory (Prince and Smolensky (1993) and further publications. Henceforth, OT) framework. However, before I do that, I will discuss ergative agreement as such in a bit more detail.

It has been tacitly assumed in the literature that Inuit has an ergative agreement system, unlike a nominative–accusative agreement system as in English or Warlpiri (Bittner and Hale, 1996b). Ergative agreement is defined as the agreement pattern in which the verb agrees with the nominative subject in case of intransitive verbs, and with nominative objects in case of transitive verbs. Unlike nominative–accusative agreement systems, in which the verb never agrees with the accusative case and therefore forms a homogenous class, ergative agreement is considered to be heterogenous class (cf. Marantz (1984b) and Johns (1992)). Consider for example two languages that exhibit two different types of ergative agreement, Hindi and Jacaltec.

(27) a. Niina bacce-ko utʰaayegii.
Niina.f.NOM child-DAT lift.FUT.F
‘Nina will pick up the child.’ (Hi.)

b. Raam-ne roṭii khaayii thii.
Ram-M.ERG bread.f.NOM eat.PERF.F be.PAST.F
‘Ram had eaten bread.’ (Hi.)

c. Kuttōn-ne bhōṅkaa.
dog.Pl.M-ERG bark.M
‘The dogs barked.’ (Hi.)

The Hindi example (27a) features a sentence with a nominative subject of a transitive verb that selects a dative marked object. The verb agrees with the nominative subject, similarly, the object in (27b) agrees with the verb ‘to eat’. In case no nominative case is assigned, as in (27c), the verb exhibits default agreement; there is no agreement with the ergative marked constituent. Jacaltec, on the other, seems to behave quite differently.

(28) a. Ch-ach toyi.
ASP-2.NOM go
‘You go.’ (Jac.)

b. Ch-oṅi ha-colo.
ASP-1PL.NOM 2.ERG-help
‘You help us.’ (Jac.)

Jacaltec has agreement with both the nominative and ergative marked constituent, although overt case-marking is absent in Jacaltec. A sentence like (28a) would be grammatical in

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10 For the remainder of this thesis I will use the following terminology for verb morphology: **agreement** or **cross-referencing** for any morphology on a verb that reflects ϕ-features from arguments DPs in the sentence, **true agreement** for specifically cross-referencing with nominative case-marked arguments and **clitic** for cross-referencing with any other case-marked constituent.
Hindi, since the I^0-complex is agreeing with the nominative marked pro-dropped subject. In (28b) however, we also find agreement with the ergative constituent. Woolford argues that only the morphemes that agree with the nominative marked constituent can be addressed as ‘true agreement’. The cross-referencing in (28b) on ‘help’ does not qualify as such. Instead, cross-referencing with ergative case-marked constituents is done by clitics. Clitics can be distinguished from true agreement because they also appear in nominal contexts, for example in the form of possessives or as prosodically weak pronouns.

Inuit is similar to neither Jacaltec nor Hindi. Unlike Hindi, Inuit has cross-referencing with both the subject and the object in combination with an ergative case pattern, unlike Jacaltec, it has overt nominal case morphology. Woolford (2000) gives a concise typology of the different types of ergative languages, depending on their case and agreement systems. I give the detailed typology below (Woolford, 2000, (4)). Note that in this typology case and agreement are disjunct, i.e. they are independently operating systems. I will elaborate on this in section 5.

(29)

<table>
<thead>
<tr>
<th>NOM–ACC agr. (agr. with NOM only)</th>
<th>ergative agr. (agr. with ERG &amp; NOM)</th>
<th>ergative agr. (agr. with NOM only)</th>
<th>ergative agr. (agr. with ERG only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>unequivocal NOM–ACC case system</td>
<td>English</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>morphologically unmarked case</td>
<td>Swahili</td>
<td>Jacaltec</td>
<td>×</td>
</tr>
<tr>
<td>unequivocal ergative case system</td>
<td>Warlpiri</td>
<td>Kabardian</td>
<td>Hindi</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inuit</td>
<td></td>
</tr>
</tbody>
</table>

Inuit has both a morphologically overt (unequivocal in Woolford’s terminology) ergative case system and cross-referencing with both ergative and nominative marked constituents like the North-West Caucasian language Kabardian (Colarusso, 1992) and Sumerian (Krispijn, 2004). The (analytical) Kabardian examples are adapted from Colarusso (1992, p.170ff). The nominative marked constituents are in boldface; except for the cross-referencing I will not elaborate on the verbal morphology.

(30)  **F̄az-r**  ma-r-a-\text{ząw}^\text{w}-a-a  
woman-NOM 3-PRES-give.birth-INTR  
‘The woman is in labour/giving birth.’  

(31)  **Piita**  tikip-puq.  
Piita.NOM arrive-IND.3SG  
‘Piita arrived.’  

In both Inuit and Kabardian, the nominative case-marked constituent agrees with the verb, also, both languages have overt case morphology. Also, both Inuit and Kabardian support an antipassive case pattern, and in both languages we find intransitive agreement morphology. Note that Kabardian has no separate morphology for ergative and accusative. Both are
3.1 A double dichotomy: clitics vs. true agreement & subjects vs. objects

marked with -m (oblique case), disjunct plural morphemes as in (32b) can also be found in e.g. Sumerian.

(32) a. P’sasa’a-m g’aana-ha-r, ∅-q’a-y-a-da-ha,-r. ([q’eda’][a])
girl-obl shirt-pl-nom 3-hor-3-pres-sew-pl-pres
‘The girl is sewing the shirts.’

b. P’sasa’a-ra, g’aana-ha-m ∅-q’a-y-ha-a-da-a. ([q’eda’][a])
girl-nom shirt-pl-obl 3-hor-3-pl-dat-sew-intr
‘The girl is trying to sew the shirts.’

(33) a. Piita-p mattak niri-vaa.
Piita-erg mattak,nom eat-ind.3sg/3sg
‘Piita ate the mattak (=whale skin).’

b. Hansi mattak-mik niri-vuq.
Hansi,nom mattak-acc eat-ind.3sg
‘Hansi eats mattak.’

Now that we I have shown that Inuit fits into Woolford’s ergative case-agreement typology, and exhibits morphological behavior that is similar to other languages in its category, I will proceed with my analysis of the Inuit agreement system.

3.1 A double dichotomy: clitics vs. true agreement & subjects vs. objects

In this subsection, since the Inuit agreement morphemes have a complex internal structure, I will show by comparison between different Inuit dialects and languages that the agreement morphemes on transitive verbs in an ergative case-marking construction can be subdivided into a subject and object part. This fact has been noted by several authors (Reed et al., 1968; Fortescue, 1984, 1994; Bok-Bennema, 1991), but all have failed to systematically analyze the data from different dialects and establish that the agreement morpheme consists of a ‘true’ agreement part and several series of clitics, which are also preserved as possessives. Moreover, there seems to be a dichotomy between sap- (speech act participant) and third person true agreement and clitics in relation to their relative order after the verb stem. The following subsections will subsequently discuss the agreement morphology on intransitive and transitive verbs.

The material from several languages and dialects have been collected in the tables drawn throughout this section. The material was collected from grammars from six different languages and dialects. The Naukan data are from Menovščikov (1975)\(^{11}\), the Western Inuit data from Francis Barnum (1901), the Central Alaskan Yup’ik data from Reed et al. (1968), the Central Siberian Yupik data from Menovščikov (1980), the West Greenlandic data\(^{12}\) from Kleinschmidt (1851) and Fortescue (1984) and the Western Canadian data from Lowe

\(^{11}\)Menoshchikov also wrote a grammar of the Sirenik dialect (Menovščikov, 1964), but the agreement data show little resemblance to the other dialects.

\(^{12}\)Fortescue doesn’t list the dual forms; when Kleinschmidt gives different forms, they are marked with a †.
(1985c). I will list only the indicative forms and note that the initial vowel is a transitivity marker, which sometimes merges with the initial vowel of the adjacent true agreement or clitic.

### 3.1.1 Intransitive agreement

<table>
<thead>
<tr>
<th>Subject</th>
<th>Language</th>
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<th>Dual</th>
<th>Plural</th>
</tr>
</thead>
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<td>-u-kut</td>
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<td>-u-kuk</td>
<td>-u-kut</td>
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<td>-u-guk</td>
<td>-u-gut</td>
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<td>-u-guk</td>
<td>-u-gut</td>
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<tr>
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<td>-u-tak</td>
<td>-u-či</td>
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<td>-u-tak</td>
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<td>-u-tik</td>
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<td>-u-t</td>
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<td>-u-k</td>
<td>-u-t</td>
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</tbody>
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**Table 1: Subject agreement**

Table 1 lists the intransitive (subject) agreement suffixes. These suffixes are only found in a verbal, not in a nominal, context. I will refer to this paradigm as “true agreement”, because of this restriction to a verbal context. My null hypothesis will be that if Woolford is right, we expect these morphemes to be present in the composite transitive forms as well; in any language, there is never more than one series of agreement morphemes that agree with the nominative case-marked constituent. This is a claim contra Baker’s claim that “no single agreement morpheme can induce coindexing between the verb and its subject in some cases and its object in other case.” (Baker, 1985, p.381): the agreement morphemes in table 1 cross-reference to subjects in intransitive clauses and antipassive transitive clauses, but, as I will show below, to objects in ergative transitive clauses. Moreover, we expect to encounter at least one series of clitics, which, contrary to the morphemes in table 1, can be found in nominal contexts. This series should cross-reference with the ergative case-marked subject of a transitive clause.
3.1 A double dichotomy: clitics vs. true agreement & subjects vs. objects

<table>
<thead>
<tr>
<th>Object</th>
<th>Language</th>
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</thead>
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<td>-a-kuk</td>
<td>-a-kut</td>
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<td>-a-kuk</td>
<td>-a-kut</td>
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<tr>
<td>CSY</td>
</tr>
<tr>
<td>WG</td>
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<table>
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<tr>
<td>CSY</td>
</tr>
<tr>
<td>WG</td>
</tr>
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Table 2a: 3\(^{rd}\) Person Subject–1\(^{st}\) Person Object agreement

<table>
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<td>-a-χsi</td>
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<td>-a-tak</td>
<td>-a-ći</td>
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<td>-a-si</td>
</tr>
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<td></td>
<td>WG</td>
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<td>-a-tik</td>
<td>-a-si/se</td>
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<td>-ą-hik/tik</td>
<td>-ą-hi</td>
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<tr>
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<tr>
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<td>WG</td>
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<tr>
<td>WC</td>
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</tbody>
</table>

Table 2b: 3\(^{rd}\) Person Subject–2\(^{nd}\) Person Object agreement
3.1 A double dichotomy: clitics vs. true agreement & subjects vs. objects

3.1.2 Transitive agreement: 3\textsuperscript{rd} person > SAP and SAP > SAP

Let us examine two paradigms with a 3\textsuperscript{rd} person subject\textsuperscript{14}, summarized in tables 2a and 2b. Since the object in a transitive case pattern is marked with the nominative, and agreement, if there is any, is always supposed to be with the nominative case-marked constituent, we expect the morphemes from table 1 to recur in these paradigms. This is exactly what we find: the 1DU true agreement suffix is -kuk or -guk, which recurs in the 1DU object forms. This also holds for plural -kut/gut and singular -\textit{na} object forms. If we cut off the true agreement part we find a -t, which is sometimes assimilated to -n, in the 3PL subject forms. In the 3DU subject forms we find an initial velar consonant, although we find that some dialects have borrowed morphemes from the plural paradigm, something which also appears in the 3SG subject forms. There we find either a -∅ suffix or a uvular consonant, which Naukan exhibits systematically throughout the paradigm. This must be a recent innovation\textsuperscript{15}, because it is uncommon in Inuit for uvular consonants to be (completely) assimilated. This assimilation would have taken place in all other dialects except Naukan, which is highly unlikely (cf. Fortescue (1994, p.443ff)).

We find the same distribution of morpheme in the 3\textsuperscript{rd} person subject–2\textsuperscript{nd} person object paradigm. The nominative marked object cross-references with a true agreement morpheme: 2SG -\textit{tan}/\textit{tin}, 2DU -\textit{tak}/\textit{tik}, and 2PL -\textit{si}/\textit{ĉi}. The 3\textsuperscript{rd} person is again reflected in the series zero–velar–dental. Thus, we can establish an intrinsic order of the morphemes in these paradigms.

(34) \begin{align*} &3\text{>SAP: V }\overline{3}\text{: cl }\overline{3}\text{: agr} \\
&3\text{>SAP: V }\overline{3}\text{: cl }\overline{3}\text{: agr} \\
&1>2: \text{V }\overline{1}\text{: cl }\overline{2}\text{: agr}  \\
&2>1: \text{V }\overline{2}\text{: cl }\overline{1}\text{: agr}  \\
\end{align*}

We also find a paradigm similar to the one presented in (34), i.e. the SAP>SAP agreement morpheme paradigm: an initial clitic referring to the ergative subject is followed by true agreement referring to the nominative object. The data are presented in tables 3a–b.

These SAP>SAP paradigms are parallel to the paradigms in table 2. Compare for example the following verb forms from Naukan:

(36) \begin{align*} &a. \text{agluga-qu-si} \\
&\text{work-IND-2PL} \\
&\text{‘You (PL) work.’}  \\
&b. \text{unita-qā-x-si} \\
&\text{leave-IND-3DU>2PL} \\
&\text{‘They both leave you (PL).’}  \\
\end{align*} (Nau.)

\textsuperscript{13}I chose to use the Uummarmiut dialect as a representative for this area, because “the Uummarmiut dialect has not yet reached a state of uniformity comparable to Siglitun (Lowe, 1985b) or Kangiryuarmiutun (Lowe, 1985a).” (Lowe, 1985c).

\textsuperscript{14}Notational convention: \(\alpha > \beta\), \(\alpha\) is subject and \(\beta\) is object; \textit{agr} stands for true agreement, \textit{cl} for clitic.

\textsuperscript{15}Analogical to the intransitive 3\textsuperscript{rd} person paradigm, or to the SAP>3 suffixes in table 4.
### 3.1 A double dichotomy: clitics vs. true agreement & subjects vs. objects

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**Table 3a:** 1st Person Subject–2nd Person Object agreement

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<tr>
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**Table 3b:** 2nd Person Subject–1st Person Object agreement
3.1 A double dichotomy: 
clitics vs. true agreement & subjects vs. objects

(37) a. agluma-ū-ŋa
   work.textscpast-IND-1SG
   ‘I worked.’

b. unita-qa-χραταγόν-ŋa
   leave-IND-2DU>1SG
   ‘You both leave me.’

When we compare the intransitive verb agreement in (36a) with a transitive form of the verb ‘to leave’ in (36b), we find the same morpheme referring to the second person plural (-si). This also holds for forms from table 3. Compare for example (37a) and (37b). This correlation is present throughout all the four transitive paradigms that I have presented in the previous two tables. We can also find a correlation between the clitic part of the agreement suffix and a series of (pro)nominal elements. The clitic part of the agreement suffixes from table 3 (sap>3) are similar to the (non-analytic) suffix series for ergative case-marked possessed nouns. Observe for example the resemblance between the clitic (italic marked) part of (37b) and the suffix in (38).

(38) mikisqi-χρατακ
   child-poss.2DU.ERG.SG
   ‘Your (DU) son’

The parallelism between these two paradigms also continues throughout. The clitic morphemes of the sap>3 series in table 2 (e.g. (36b)) are identical to the nominative case endings.

So far I have shown that (1) the true agreement morphemes that cross-reference with nominative subjects in intransitive sentences are indeed present in transitive agreement suffixes and (2) that the remainder of these transitive suffixes consists of series of clitics: they are also found in a nominal context as (possessive) case-marking.

3.1.3 Transitive agreement: SAP>3rd person

If we turn to the two transitive agreement paradigms in which an SAP is in subject position and a third person in object position, we find the opposite order in true agreement and clitic ordering. Whereas in the four paradigms that we have seen in the previous two tables the subject clitic precedes the object true agreement, the clitic follows the true agreement in the paradigms that are summarized overleaf in table 4. These forms might seem a bit more problematic, since they look quite similar to the forms we have seen in tables 2a and 2b. We expect a uvular-velar-dental (third person true agreement) pattern in these morphemes to cross-reference with nominative marked 3rd person object, but instead of finding this series morpheme-final as we would expect, we find it morpheme-initial. The second part of these agreement morphemes might look like true agreement too on first sight, but they pattern completely with nominative case-marked possessed nouns (whereas the clitics in the tables 3a–b were similar to ergative case-marked possessed nouns). Especially the occurrence of -k- in the 1SG>3 paradigm and the single -n- in the 2SG>3SG paradigm point into a direction of such an analysis. We can conclude that the intrinsic order of the subject and object
### 3.1 A double dichotomy:
clitics vs. true agreement & subjects vs. objects

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Table 4a: 1<sup>st</sup> Person Subject–3<sup>rd</sup> Person Object agreement

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<td>WC</td>
<td>-i-n</td>
<td>-i-kkiñ</td>
<td>-i-tin</td>
</tr>
<tr>
<td></td>
<td>Subject 2&lt;sup&gt;nd&lt;/sup&gt; person dual</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Nau.</td>
<td>-ä-çtak</td>
<td>-ä-xtak</td>
<td>-ä-tak</td>
</tr>
<tr>
<td></td>
<td>Wiñu.</td>
<td>-a-htuk</td>
<td>-a-xtuk</td>
<td>-a-tuk</td>
</tr>
<tr>
<td></td>
<td>CAY</td>
<td>-a-çtak</td>
<td>-a-çtak</td>
<td>-a-tak</td>
</tr>
<tr>
<td></td>
<td>CSY</td>
<td>-i-sí</td>
<td>-i-ksi</td>
<td>-i-sí</td>
</tr>
<tr>
<td></td>
<td>WG</td>
<td>-a-rtik</td>
<td>-a-gtik</td>
<td>-a-tik</td>
</tr>
<tr>
<td></td>
<td>WC</td>
<td>-i-khik</td>
<td>-i-hik/tik</td>
<td>-i-hik/tik</td>
</tr>
<tr>
<td></td>
<td>Subject 2&lt;sup&gt;nd&lt;/sup&gt; person plural</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Nau.</td>
<td>-ä-çsi</td>
<td>-ä-xsi</td>
<td>-ä-si</td>
</tr>
<tr>
<td></td>
<td>Wiñu.</td>
<td>-a-hçi</td>
<td>-a-xçi</td>
<td>-a-çi</td>
</tr>
<tr>
<td></td>
<td>CAY</td>
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<td>-a-ççi</td>
<td>-a-çi</td>
</tr>
<tr>
<td></td>
<td>CSY</td>
<td>-i-sí</td>
<td>-i-kssi</td>
<td>-i-sí</td>
</tr>
<tr>
<td></td>
<td>WG</td>
<td>-a-rsi/rse†</td>
<td>-a-gse</td>
<td>-a-si/se†</td>
</tr>
<tr>
<td></td>
<td>WC</td>
<td>-i-khi</td>
<td>-i-hi</td>
<td>-i-hi</td>
</tr>
</tbody>
</table>

Table 4b: 2<sup>nd</sup> Person Subject–3<sup>rd</sup> Person Object agreement
3.1 A double dichotomy: clitics vs. true agreement & subjects vs. objects

cross-referencing morpheme in these paradigms is opposite from the order we have seen in tables 2 and 3:

(39) \text{sap}>3: \text{V } -3: \text{ag}r \text{ } -\text{sap}: \text{cl}

From the data we have seen up to now we can deduce the following description of the internal morphology of Inuit agreement.

(40) \text{The double dichotomy in Inuit agreement morphemes

Subject vs. object} Transitive agreement consists of true agreement with the nominative marked constituent (object in an ergative case pattern or subject in the antipassive) and a clitic cross-referencing with the ergative marked constituent (subject in an ergative case pattern).

SAP vs. 3\textsuperscript{rd} person The neutral order fixes the clitic directly after the verb stem, followed by the agreement morpheme. Third person agreement is an exception to this rule. If there is a morpheme cross-referencing with a third person argument, that morpheme is adjacent to the verb stem.

The question is how to deal with the patterns in (34)–(35) and (39). In Woolford (2000), she devices an OT-model, which I will elaborate on in section 3.2, to deal with patterns like in Jacaltec (e.g. (28a)–(28b)) and K’iche’ (below). If we compare them to parallel Inuit verb forms, we can see that we would need to add additional constraints to her model in order to be able to account for the Inuit data. The clitics in these forms from K’iche’ (Mayan, similar to Jacaltec) and Naukan (Yupik Inuit) are boldface.

(41) a. x-at-r-il le achi.  
\text{asp-2.nom-3.erg-see the man
‘The man saw you.’} \hspace{1cm} \text{(K’i.)}

b. unita-qā-χ-tak  
\text{leave-ind-3sg>2sg
‘He leaves you.’} \hspace{1cm} \text{(Nau.)}

(42) a. x-∅-aw-il le achi.  
\text{asp-3.nom-2.erg-see the man
‘You saw the man.’} \hspace{1cm} \text{(K’i.)}

b. unita-qā-∅-n  
\text{leave-ind-3sg<2sg
‘You leave him.’} \hspace{1cm} \text{(Nau.)}

In the K’iche’ examples (41a) and (42a), the position of the true agreement is stable: it always comes first after the aspect marker. In Naukan however, and this is consistent throughout all the Inuit dialects, the morpheme that cross-references with the third person, be it true agreement or a clitic, is closest to the verb. As we can see in the sap>sap forms like (37b), the neutral order is clitic-agreement.
3.2 Agreement alignment

Keeping the sap–3rd person asymmetry in mind, I will propose in this section an Optimality Theory based approach to the Inuit agreement system, adapted from Woolford (2000).

Inuit both has clitics and true agreement morphemes. In order to ever have overt agreement morphology we need the following constraint.

\[(43) \text{Realize } \Phi \quad \text{Morphologically realize } \Phi \text{ features (person, number, etc.) that occur on a head in agreement relationship with an argument.}\]

The expression of these morphemes is costly and not universal (there are languages without any overt agreement morphology), hence their application will violate markedness constraints, which are ranked below Realize \(\Phi\).

\[(44) \quad *\text{CL} \quad \text{Avoid clitics}\]

\[\quad *\text{AGR} \quad \text{Avoid true agreement}\]

There are two possible rankings of these two markedness constraints, of which \(*\text{CL} \gg *\text{AGR}\) is concordant with the fact that true agreement, not a clitic, occurs on the verb in an intransitive clause. We have also seen that if the verb cross-references with both the subject and the object, we never find two true agreement morphemes, always one clitic and one true agreement morpheme. In the spirit of Yip (1995, 1998), Woolford (2000) proposes two constraints\(^{16}\).

\[(45) \quad \text{LimitOne(CL)} \quad \text{There is a limit of one clitic per clause}\]

\[\quad \text{LimitOne(AGR)} \quad \text{There is a limit of one true agreement morpheme per clause}\]

We can determine the ranking of LimitOne(AGR) \(\gg *\text{CL} \gg *\text{AGR}\), because Inuit never cross-references on the verb with two true agreement morphemes. The ranking of LimitOne(CL) is still uncertain, since we do not know yet whether data with two clitics are ungrammatical: an output with one true agreement morpheme and one clitic is more harmonic than an output with two clitics, independent from the ranking of LimitOne(CL).

In order to assure that the sap object clitic forms will be well-formed, we need a high ranked constraint, which refers to the concept of person hierarchy and a constraint that assures the standard V–clitic–agr order. Person hierarchy\(^{17}\) is a concept that is active throughout a variety of language families in the world. Person hierarchy can affect for example the case selection on nouns and the availability of agreement morphology on the verb. Structurally very different languages employ ordering constraints on true agreement and clitics and mostly show the dichotomy we find in Inuit (third person vs. sap) or a more elaborate system. For example Yimas, a Papuan language (Foley, 1991) and Nishnaabemwin, an Algonquian language (Valentine, 2001).

\(^{16}\)Yip (1995) proposes a family of *Repeat\((i)\) constraints. Similar to Woolford’s LimitOne\([i]\) constraints, these show a remarkable similarity to the OCP constraints in phonology (cf. McCarthy (1981) and further articles).

\(^{17}\)Also nominal or animacy hierarchy, see Comrie (1989); Dixon (1994); Woolford (1999) inter alia.
Inuit, Yimas and Nishnaabemwin share the feature that the order of the agreement is constrained according to their person features. For Inuit, we can postulate the following minimal person hierarchy \([\text{sap} \succ 3]\). We would also like to have a faithfulness constraint guard the neutral agreement morpheme internal order, since otherwise the attachment of clitics and true agreement would be allowed in any order. I define the following faithfulness constraints.

\[(48)\]  
**Faith-Hier** A verb form must be faithful to the person hierarchy. The lower an argument in the person hierarchy, the closer it is to the verb stem.

**Faith-Order** A verb form must be faithful to the neutral Inuit order \(V – \text{clitic} – \text{agr}\).

Note that these faithfulness constraints are not completely similar to faithfulness constraints in classical OT phonology, where they guard the relation between input and output. In OT syntax they can also guard faithfulness to order and (person) hierarchies. The internal ranking of these constraints is \(\text{Faith-Hier} \gg \text{Faith-Order}\), since the canonical (agreement follows clitic after the stem) order is sometimes violated in case of third person clitics. The ranking of these two constraints in relation to the other constraints proposed up to now is uncertain, but since there is no grammatical output in which this constraint is violated, \(\text{Faith-Hier}\) is ranked at least as high as \(\text{Realize } \Phi\) and \(\text{LimitOne}(\text{Agr})\). We can therefore postulate the following constraint hierarchy for the Inuit agreement system.

\[(49)\]  
**Realize } \Phi, \text{LimitOne}[\text{Agr}], \text{Faith-Hier } \gg \text{Faith-Order } \gg *\text{Cl } \gg *\text{Agr}\)

Next to the constraints and \(\text{Eval}\), the evaluation mechanism that picks out the most harmonic output, we need to specify our input. The input should at least consist of the verb stem and the maximally two constituents that can be cross-referenced. I will assume a minimal system, in which the constituents are not yet (case)-marked as subjects or objects. The standard input for intransitive verbs will be \(\{\alpha\} V\) and \(\{\alpha, \beta\} V\) for transitive verbs, \(\alpha\) and \(\beta\) being a bundle of person and number \(\varphi\)-features. In the latter case, the two most harmonic candidates will be selected, and both can be overtly realized according to the grammatical functions each of the constituents will assume. The fact that \(\varphi\)-features are present in the input is consistent with the following statement of Huybregts that “if in a
language $L$ the verb carries $\varphi$-morphology[,] the nominal system must carry a (superset of) this $\varphi$-morphology.” (Huybregts, 1997).

Let us first take a look at the intransitive agreement data.

(50) Agluga-quq.
    work-IND.3SG
    ‘He works.’

(51) {3} V Realize $\Phi$ *Cl *Agr

<table>
<thead>
<tr>
<th></th>
<th>V-3:agr</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>☞</td>
<td></td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>(b)</td>
<td>V-3:cl</td>
<td>*!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c)</td>
<td>V</td>
<td></td>
<td>*!</td>
<td></td>
</tr>
</tbody>
</table>

Since intransitive and antipassive verbs only agree with one argument (the nominative case-marked subject), we do not need Faith-Order and Faith-Hier to govern any ordering of morphemes. Since *Agr is ranked lowest, candidate (a) is the most harmonic output.

If we turn to the transitive verb forms, we can have two possible orders of the agreement morphemes: $V$–agr–cl and $V$–cl–agr. In order to get these two orders I chose to present as an input a third person and an sap, since the alternation above only occurs in this case.

(52) a. Unita-qâ-χ-tak.
    leave-IND-3SG>2DU
    ‘He leaves you both.’

b. Unita-qâ-χ-tak.
    leave-IND-3SG<2DU
    ‘You both leave him.’

(53) {3, sap} V Real. $\Phi$ Lim1[Agr.] Faith-H. Faith-O. *Cl *Agr

<table>
<thead>
<tr>
<th></th>
<th>V-3:cl-sap:agr</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>☞</td>
<td></td>
<td></td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>(b)</td>
<td>V-sap:agr-3:cl</td>
<td>*!</td>
<td></td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>(c)</td>
<td>☞</td>
<td></td>
<td></td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>(d)</td>
<td>V-sap:cl-3:agr</td>
<td>*!</td>
<td></td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>(e)</td>
<td>V-3:agr-sap:agr</td>
<td>*!</td>
<td></td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>(f)</td>
<td>V-3:cl</td>
<td>*!</td>
<td></td>
<td></td>
<td>*</td>
</tr>
</tbody>
</table>

With an input of two arguments, we want the two most harmonic candidates to the output for reasons explained above. Moreover, these two candidates are supposed to match in structure the agreement morphemes we have encountered in the previous subsection. With the ranking that I have proposed in (49), this seems to be the case. Candidates (a) and (c) rank highest if we would follow formal ranking system as Coetzee (2004) proposes: EVAL does not pick out one most harmonic candidate, but ranks all candidates from least to most harmonic. Candidate (b) fatally violates Faith-Hier, because the third person clitic is not closer to the verb stem than the sap cross-referencing morpheme and also violates Faith-
ORDER by not obeying to the canonical V-cl-agr order; candidate (d) corrects this, but still fatally violates FAITH-HIER; candidates (e) and (f) both fatally high ranked constraints.

When our argument input set includes only saps, we do not have to consider FAITH-HIER, since both argument are equally high in this hierarchy. FAITH-ORDER, the constraint that guards the internal order of the agreement morpheme is the only constraint here that can be violated by the internal order.

(54) a. Unita-qām-təq.  
   leave-IND.1SG>2DU  
   ‘I leave you both.’ (Nau.)

b. Unita-qārpətəqən-ŋə.  
   leave-IND.2DU>1SG  
   ‘You both leave me.’ (Nau.)

(55)  

<table>
<thead>
<tr>
<th></th>
<th>{1, 2} V</th>
<th>FAITH-ORDER</th>
<th>*Cl</th>
<th>*AGR</th>
</tr>
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<tbody>
<tr>
<td>(a)</td>
<td>V-1:cl-2:agr</td>
<td>*</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>(b)</td>
<td>V-2:agr-1:cl</td>
<td>*!</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>(c)</td>
<td>V-1:agr-2:cl</td>
<td>*!</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>(d)</td>
<td>V-2:cl-1:agr</td>
<td>*!</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

In this tableau candidates (a) and (d) are the highest ranked. Since none of the candidates violates REALIZE Φ, LIMITONE[AGR] or FAITH-HIER, these are left out of the tableau. Candidates (b) and (c) both fatally violate FAITH-ORDER.

Although the optimality theoretic system for Inuit agreement that I have proposed in this section succeeds in capturing the data that I have presented in section 3.1 and the double dichotomy that we have found inside the agreement system, several objections can be made. The concept of a person hierarchy is a completely normal descriptive tool used in many grammars, but its formal definition is still unclear; it is uncertain which structural or morphological effects one may contribute to the concept of person hierarchy. The FAITH-ORDER constraint might be typologically infelicitous since clitics usually seem to suffix on the edge of constituents, not infix. On the other hand, an inverse, typologically more ‘correct’ definition will encounter problems when trying to fix the order in (55). There is one major problem left, which is the transitive 3>3 agreement paradigm.

3.3 Problematic: 3>3 paradigms

The third person subject and third person object transitive paradigm, given in table 5, is problematic, since the agreement suffixes seem to be monomorphemic. There is one fact that might oppose a monomorphemic approach to these morphemes: the 3>3SG paradigm ends in the familiar series of -∅, -k, -t. This is also the case for the 3>3DU and 3>3PL paradigms. If these agreement suffixes were similar in composition to the suffixes encountered in tables (2)–(4) and the second part of these suffixes indeed cross-reference with the subject, we expect the first part of these agreement morpheme to consist of true agreement morphemes as in table (1). As we can see, this is not the case. And although the last part of these
### Subject 3rd Person Singular

<table>
<thead>
<tr>
<th>Object</th>
<th>Language</th>
<th>Singular</th>
<th>Dual</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Nau.</td>
<td>-a-a</td>
<td>-a-xtən</td>
<td>-a-t</td>
</tr>
<tr>
<td></td>
<td>Wiņu.</td>
<td>-a-a</td>
<td>-a-ak</td>
<td>-a-ai</td>
</tr>
<tr>
<td></td>
<td>CAY</td>
<td>-a-a</td>
<td>-a-k</td>
<td>-a-i</td>
</tr>
<tr>
<td></td>
<td>CSY</td>
<td>-a-a</td>
<td>-ēk</td>
<td>-ēt</td>
</tr>
<tr>
<td></td>
<td>WG</td>
<td>-a-a</td>
<td>-a-k</td>
<td>-a-i</td>
</tr>
<tr>
<td></td>
<td>WC</td>
<td>-a-a</td>
<td>-a-ik</td>
<td>-a-i</td>
</tr>
</tbody>
</table>

### Subject 3rd Person Dual

| 3      | Nau. | -a-ak | -a-(gə)xkək | -a-xkət |
|        | Wiņu. | -a-k  | -a-xkuk | -a-kuk |
|        | CAY  | -a-k  | -a-ɣkək | -a-kək |
|        | CSY  | -     | -       | -      |
|        | WG   | -a-k  | -a-kik  | -a-kik |
|        | WC   | -a-ak | -a-ik   | -a-it/ik |

### Subject 3rd Person Plural

| 3      | Nau. | -e | -a-(gə)xkət | -e |
|        | Wiņu. | -a-t | -a-xkət | -a-ait |
|        | CAY  | -a-at | -a-ɣkət | -a-it |
|        | CSY  | -a-t | -i-git | -e|
|        | WG   | -a-t | -a-gik | -a-at/-it† |
|        | WC   | -a-at | -a-ik/it | -a-it |

Table 5: 3rd Person Subject–3rd Person Object agreement

...suffixes indeed seems to cross-reference with the subject, the complete paradigm in table 5 shows a remarkable similarity to the nominative case-marked third person possessed suffixes. Fortescue (1994) claims that they are one and the same, and this fact might be evidence in support of an analysis that these forms are nominals (cf. Johns (1992, 1996)), or at least that Inuit verbal agreement morphology in these paradigms has evolved from nominal morphology: these possessive suffixes have filled in a gap, or replaced previously existing morphology, in the verbal paradigm. In any case, it seems to be the case that these suffixes cannot be analyzed in the theoretical framework that I have presented above, since that would force us to adapt the constraint hierarchy in such a way, which is disastrous for the computation of the other agreement morphemes.

### 3.4 Summary

In this section I have posited Inuit into a typology of ergative agreement languages as proposed by Woolford (2000). Inuit turns out show a similarity to other ergative languages with both overt case and agreement morphology such as the North-West Caucasian language Kabardian. From this typological categorization we can predict the behavior and structure of the Inuit agreement system. As expected, Inuit has true agreement morphemes that cross-reference with nominative marked subject of intransitive verbs and object of transitive verbs, and several series of clitics, which are similar to (possessed) case suffixes. The
internal agreement morpheme order seems to be determined by whether SAP or third person cross-references with the subject or object argument. This person hierarchy effect is also found in other, unrelated, languages. The Optimality Theory based approach that I have advocated seems to able to capture the Inuit agreement data considerably easy, and is an elegant, though not completely unproblematic, way of dealing with double cross-referencing and person hierarchy effects.
4 Inuit as an SOV language

In this section, I will discuss the status of Inuit in the framework of VO and OV typology. It has been claimed that Inuit has free word order (Johnson, 1980; Bittner, 1987). However, most scholars converge on the position that SOV is the neutral sentence order. The question of Inuit word order is discussed at length in Woodbury (1981); Fortescue (1984); Bok-Bennema (1991). The basic surface word order they converge on is the following.

\[(56) \quad \text{Inuit Basic Surface Word Order} \]
\[
\text{adv}_1 \rightarrow \text{erg} \rightarrow \text{nom} \rightarrow \text{obl}/\text{adv}_2 \rightarrow \text{verb}
\]

As we can see in (56), the verb is always in final position, there is a position for sentence-initial adverbs as well as a VP adjunct adverb or obliquely marked constituent. Ergative case-marked constituents always precede nominative marked constituents. Fortescue (1994) notes there might be a third adverb position between the ergative and nominative case-marked constituent. This position however, is only available if the subject is fronted.

More recently, (Haider, 1997, 2000, 2003, In Press) has developed a typology for word order that subdivides the languages of the world in VO and OV languages, with the footnote that there is evidence for languages that are in a transitional state. I will discuss those data at the end of this section. After discussing the asymmetrical theoretical framework in which he has presented his typology, I will provide evidence for the OV status of Inuit by comparing it to languages from the Germanic family, which it has a lot in common with. There hasn’t been done much research on the word order structure of Inuit and related topics such as scrambling and verb clustering, which makes it tough to provide robust evidence; future research is definitely needed on the different paths of inquiry that I will initiate here. Haider (In Press) gives a list of pairs of contrastive features VO and OV languages have.

\[(57) \quad \text{VO vs. OV} \]
\[
\begin{itemize}
  \item Stacked VPs vs. V^0-clustering and clause-union;
  \item EPP vs. possible object-intial orders (OSV);
  \item Object shift vs. scrambling;
  \item Particle constructions with \textit{multiple} vs. \textit{single} stranded particles;
  \item Unique and obligatory \textit{functional} subject position vs. \textit{VP-internal} nominative licensing;
\end{itemize}
\]

I will investigate these properties, when possible, for Inuit. These typological features can be derived from Haider’s Basic Branching Constraint, which I will discuss first and compare with Kayne’s Linear Correspondence Axiom (Kayne, 1994).

4.1 Antisymmetry

The Basic Branching Constraint (henceforth, BBC), proposed in Haider (1992) and developed in subsequent papers (Haider, 1997, 2000, 2003, In Press), puts forth a theory of
asymmetric syntax that I will adopt for the remainder of this thesis. Haider (1992) formalizes the BBC as top–down, but I will rephrase it below as a bottom–up process, because the construction of a syntactic structure is also a bottom–up procedure.

(58) **Basic Branching Constraint** For any merge of (XP, YP), where YP is a non-maximal (functionally or lexically extended) projection node, XP merges on the *left* side of YP (cf. Haider (1992)).

The BBC makes no notice of the position of the heads in a projection, which are therefore free to either *follow* or *precede* their complements. In OV language the heads are in a following relationship with their complements, in VO languages in a preceding relationship. This is because the *licensing domain* of heads in VO languages differ from OV languages: “A head licenses its specifier and everything in the direction it selects its complement in and all XPs have to be licensed.” (cf. Haider (2000)). An immediate consequence of the BBC combined with the concept of licensing domain is that VO languages necessarily need a VP-shell structure (cf. Larson (1988)). OV languages exhibit clustering effects.

(59) **SOV:**

```
    VP       VP       VP
   ↓        ↓        ↓
ZP←V⁰      YP      Xp
   ZP←V⁰    YP
   ZP←V⁰
```

If we build up the SOV tree in (59) we start out with, we first merge V⁰ with ZP, with V⁰ licensing its complement at its left side. If we merge the second constituent YP, it will have to attach on the left side of it sister VP node, following the BBC, and similarly for the XP constituent. XP, YP and ZP are all inside the licensing domain of V⁰, because V⁰ licenses to the left.

(60) **SVO:**

```
   VP₂       VP₂       VP₁       VP₁
  ↓         ↓         ↓         ↓
V₂⁰→ZP   YP   V₂⁰→ZP   V₁⁰→V₂⁰   YP   V₂⁰→ZP
   V₂⁰→ZP   V₂⁰→ZP   V₁⁰→V₂⁰   YP
   V₂⁰→ZP
```

The SVO tree in (60) on the other hand, has a completely different structure. On the first merge of V⁰ and ZP, V⁰ precedes ZP, YP is then merged on the left side of its sister VP node. Both ZP and YP are licensed by V⁰. This time however, we cannot immediately merge with XP, because XP is *not* in the licensing domain of the lowest V⁰. In order to license XP, we need an additional verbal head, which produces the familiar VP-shell structure.

Haider’s OV/VO typology competes with Kayne’s Linear Correspondence Axiom (henceforth, LCA). Haider discusses the differences between the two theories at length in Haider...
4.2 Verb clustering


(61) **Linear Correspondence Axiom**  
\( d(A) \) is a linear order of \( T \), for a given phrase marker \( P \), with \( T \) the set of terminals and \( A \) the maximal set of ordered pairs \( \langle X_j, Y_j \rangle \), such that for each \( j \), \( X_j \) asymmetrically c-commands \( Y_j \).

In both the BBC and the LCA there is a choice between a *preceding* or *following* relationship. In Haider’s BBC theory the choice between these two results in two *different* syntactical structures (cf. (59)); OV and VO structures are derived from a *different* parameter setting of the branching directionality, combined with the notion of licensing domain. In Kayne’s LCA there is a choice to be made in the order of the maximal set of ordered pairs \( \langle X_j, Y_j \rangle \). Kayne fixes this order in \( X_j \) *precedes* \( Y_j \). A following relationship would have disastrous consequences for c-command. It must be stressed however, that there is no external justification for this parameter setting, and a similar idiosyncratic choice does not have to be made in the BBC. The result of the LCA, as defined by Kayne, is a default SVO word order based on a mere definition of c-command. Johnson (1997) points out that the LCA is in the first place a theory about *c-command*, because linearization, and therefore word order, is a direct reflex of c-command. This SVO linearization, in which SOV is a *derivative* of SVO does not seem to capture the generalizations claimed in (57). If these generalizations do hold throughout different languages — Haider has tested them mainly on Germanic languages — the BBC will prove descriptively more adequate and elegant than the LCA.

Taking this into account, I will adopt the BBC to investigate the structural properties of Inuit as an OV language. The problem is that to my knowledge, there has not been any thorough typological study of Inuit, and the data we need in order to argue for it’s OV-ness are not always available in the existing literature and grammars.

4.2 Verb clustering

Verb clustering is a descriptive term for the phenomenon that two or more verbal heads merge on the right edge of a sentence\(^{18}\). These clusters are usually opaque to intervention. Similarly, gapping and left-deletion constructions in which only a part of the cluster is elided are ungrammatical (Haider, 2000). For example (Haider, p.c.):

\[
\begin{align*}
\text{(62) a. } & \text{ Wenn Keiko Japanisch sprechen möchte, und Fritz Deutsch —.} \\
& \text{if Keiko Japanese talk-INF wants and Fritz German} \\
& \text{‘If Keiko wants to speak Japanese, and Fritz German.’} \\
& \text{(Ge.)} \\
\text{b. } & \text{* Wenn Keiko Japanisch sprechen möchte, und Fritz Deutsch sprechen.} \\
\text{(63) a. } & \text{Keiko wa eego o —, Fritz wa nihongo o hanasite mita.} \\
& \text{Keiko TOP English ACC Fritz TOP Japanese ACC speak try.PAST} \\
& \text{‘Keiko tried to speak English, and Fritz Japanese.’} \\
& \text{(Jap.)} \\
\text{b. } & \text{* Keiko wa eego o hanasite, Fritz wa nihongo o hanasite mita.}
\end{align*}
\]

\(^{18}\)Verb clusters in a BBC framework have a compact, non-shell structure. E.g. a transitive three-verb cluster \([v_p \ X P \ [v_p \ Y P \ [v_o \ V^0 \ [v_o \ V^0 \ V^0 ] ] ]]]\).
In both the German (62) and Japanese (63) examples a partial copying of the verb cluster causes ungrammaticality. This is because verb clusters are a structurally opaque unity.

Verb clustering is a well-studied phenomenon in the linguistic literature and a variety of languages have been studied such as Dutch, German, Hungarian and Japanese\textsuperscript{19}. This subsection will focus on verb clustering properties of Inuit. I will use representative data from Dutch and German to illustrate Germanic verb clustering and its kinship to Inuit verb clustering. Examples (64)–(66) are different types of verb clustering constructions in Inuit. (64)–(65) are from Bok-Bennema (1991), (66) from de Reuse (1994). The control and raising verbs are in boldface.

(64) Hansi-p qajaq atur-uma-vaa.
Hansi-ERG kayak.NOM borrow-want-IND.3SG<3SG
‘Hansi wants to borrow a kayak.’ (WG)

(65) Hansi-p qimmiq taku-lir-paa.
Hansi-ERG dog.NOM see-begin-IND.3SG<3SG
‘Hansi begins to see the dog.’ (WG)

(66) Yug-m iknaqugh-sagh-naagh-ii.
man-ERG become.stronger-CAUS-FUT-IND.3SG<3PL.
‘The man will make them become stronger.’ (CSY)

As we can see in examples (64)–(66), the verbs in Inuit are clustering together at the right edge of the sentence, they form one syntactic, semantic and also phonological unit. This type of behavior has often been described as agglutinative, but is in fact a verb clustering phenomenon; one can construct Dutch examples parallel to (64)–(66), which have a similar structure. Again the control and raising verbs are boldfaced. Note that the cluster-internal structure of Dutch is the inverse of the Inuit structure. This fact does not affect the opacity of the cluster and other related properties, as we will see below. Moreover, Dutch employs a particle te in certain verb clustering constructions. Again, the presence of this particle does not affect the opacity of the verb cluster. The sentences are all embedded under complementizer dat to avoid the Verb Second effect that occurs in Dutch matrix clauses.

(67) dat Hans een kayak [ wil lenen ].
that Hans a kayak want.3SG borrow.INF
‘that Hans wants to borrow a kayak.’ (Du.)

(68) dat Hans de hond [ begin te zien ].
that Hans the dog begin.3SG to see.INF
‘that Hans begins to see the dog.’ (Du.)

(69) dat de man hen sterker [ zal laten worden ].
that the man they.ACC stronger will.3SG let.INF become.INF
‘that the man will make them become stronger.’ (Du.)

\textsuperscript{19}See for an extensive bibliography on verb clustering the ‘Verb Cluster Homepage’: \url{http://wurmbrand.uconn.edu/research/Bibliographies/vc-bib.html}.\
There are several features that the Inuit verbal complexes in (64)–(66) and the Dutch verbal complexes in (67)–(69) have in common. First of all, only the matrix verb bears the finite inflection. Finite inflection on other verbs is ungrammatical.

(70) a. *Yug-m iknaugh-sagh-ii-naagh.
   man-erg become.stronger-caus-ind.3sg<3pl-fut.
   ‘The man will make them become stronger.’ (CSY)
   b. *dat de man hen sterker [zullen laat worden ].
   that the man ACC stronger will.inf let.3sg become.inf
   ‘that the man will make them become stronger.’ (Du.)

Furthermore, in both languages, there seems to be a hierarchy in the order in which cluster internal verbs appear. Auxiliaries and modals for example, are always higher than raising verbs like causatives. Inversion of these two will cause ungrammaticality as in (71a)–(71b).

(71) a. *Yug-m iknaugh-naagh-sagh-ii.
   man-erg become.stronger-fut-caus-ind.3sg<3pl.
   Intended: ‘The man will make them become stronger.’ (CSY)
   b. *dat de man hen sterker laat zullen worden.
   that the man ACC stronger let.3sg will.inf become.inf
   Intended: ‘that the man will make them become stronger.’ (Du.)

Also, verb clusters are opaque and do not allow for arguments intervention. This might seem natural in Inuit, since the verb is “one word” and nobody ever really considered breaking it up, but fact is that Germanic verb clusters behave exactly the same. Similarly, verb clusters are opaque to adjunct intervention, but since Inuit normally expresses these using raising verbs, opacity effects do not occur. There are restrictions on the order, but very little research has been done in that field.

   Hansi-erg borrow kayak.nom want-ind.3sg<3sg
   Intended: ‘Hansi wants to borrow a kayak.’ (WG)
   b. *dat Hans wil een kayak lenen.
   that Hans want.3sg a kayak borrow.inf
   Intended: ‘that Hans wants to borrow a kayak.’

Complement intervention is sometimes possible in Dutch, but this can be explained by the fact that some verbs like _proberen_ ‘try’ exhibit optional clustering. This optional clustering only occurs with a closed set of verbs.

(73) a. dat Jan [vp een boek probeert (*om) te lezen ].
   that Jan a book try.3sg pcl to read.inf
   ‘that Jan is trying to read a book.’ (Du.)

---

20A thorough overview concerning post-base (post-main verb) order on CSY is presented in de Reuse (1994).
4.3 Clause-union

In sentence (73a) we find a regular verb clustering construction, which cannot be have the particle _om_. The non-clustering variant in (73b) does allow for this particle, which usually signals an embedded IP. Inuit has no class of verbs with optional clustering properties, hence no constructions as in (73a)–(73b).

4.3 Clause-union

Whereas _qajaq_ in (64) only acts as the object of ‘to borrow’, _Jaani_ in (74) and _Jan_ in (75) are both the object of ‘to tell’ and the subject of ‘to leave’.

(74) Piita-up Jaani ani-rqu-vaa.
    Piita-ERG Jaani.NOM leave-tell.IND.3SG<3SG
    ‘Piita tells Jaani to leave.’

(75) dat Hans Jan [ beveelt te vertrekken ].
    that Hans Jan order.3SG to leave.INF.
    ‘that Hans orders Jan to leave.’

This type of argument sharing is common in verb clustering constructions and is usually called clause-union. One of the most directly visible clause-union effects is the pooling of the arguments of all verbs, and therefore the case assignment is performed by the cluster as one unit. Haider (2003) gives several examples for German that show the case pattern differences in clustering and non-clustering contexts. Similar to the optional clustering with verbs like ‘try’ in (73), the long distance passive construction in German has no obligatory clustering.

The advantage of German over Dutch is that it exhibits overt case, so that we can see the clause-union effect; the pooling of arguments. Haider (2003, 8) is a typical example of the long passive, which I will repeat here with my own bracketing in (76a)–(77b).

(76) a. daß [ [ _den Wagen_ zu reparieren ] versucht wurde ].
    that the.ACC car to repair tried was
    ‘that it was tried to repair the car’

b. daß [ e_i versucht wurde ] [ _den Wagen_ zu reparieren ].
    that tried was the.ACC car to repair
    ‘that it was tried to repair the car’

(76a) represents the non-clustering context, in which _den Wagen_ receives accusative case from ‘repair’, not an apparent cluster. Extrapoosition in (76b) of the embedded clause reveals the fact that no cluster is present in (76a). (76a) can be rephrased into a sentence with a verb cluster. The only overt difference is the nominative case-marking on ‘the car’.

(77) a. daß _der Wagen_ [ zu reparieren versucht wurde ].
    that the.NOM car to repair tried was
    ‘that it was tried to repair the car’

(77)
b. [Zu reparieren versuchte der Wagen nicht], wurde der Wagen nicht repariert.

‘It wasn’t tried to repair the car’ (Ge.)

(77a) is the clustering context, in which der Wagen is the subject of the whole passive cluster, receiving nominative case. We know that this is a case of verb clustering, since we can front the whole cluster (modulo verb second), in which we still find the nominative case-marking on ‘the car’ (77b). The German long passive is one of the few constructions in which clause-union is non-obligatory. A case-marking pattern as in (74) and (77) is typical for verb clustering and clause-union constructions. The whole cluster in (77b) acts as an intransitive verb, and no accusative case is assigned, although ‘the car’ is an object of repair.

Clause-union constructions can pool up to three arguments. Since the verb cluster behaves as a unit, we expect to see the same case pattern in a ditransitive sentence, since ditransitives also support three arguments. This is exactly what we find. (78) is from Bok-Bennema (1991, p.227), (79) from Beach (2003, p.47).

(78) Hansi-p quaq uatsin-nut niriquu-aa.
    Hansi-ERG frozen.meat.NOM we-DAT eat-tell-IND.3SG<3SG
    ‘Hansi told us to eat the frozen meat.’ (WG)

(79) Pattaq innumarim-mut aittu-lauq-tara.
    ball.NOM adult-DAT give-PAST-IND-3SG<1SG
    ‘I gave the ball to the adult.’ (WG)

This clause-union effect has in fact been noted by Bok-Bennema (1991, p.15), but she did not to discuss it any further. The clause-union effect also provides a reason why a sentence like (80) is ungrammatical.

(80) * Arna-up tuturaq titirauti nani-rqu-vaa.
    woman-ERG child.NOM pencil.NOM find-tell-IND.3SG<3SG
    Intended: ‘The woman tells the child to find the pencil.’ (WG)

Bok-Bennema fails to give a satisfactory explanation for the ungrammaticality of (80), which is quite easy to formulate under the assumption that the verb cluster as a whole assigns case. In that case there is no way in which two nominative cases can be assigned.

Clause-union constructions even allow for the four possible case assignment patterns that are present in sentences with ditransitive verbs. I will not discuss the following examples in depth here, but give them because the parallels between clause-union and ditransitive verb constructions are quite striking. This type of case assignment behavior is typical for clause-union constructions in SOV languages. The first pair of this series was (78)–(79). The remaining three other possible sentences feature case patterns different from the ones in (78)–(79), although the sentences as a whole have a similar meaning. These patterns will be discussed in depth in section 5.3.3 I will ignore the post-verbal objects in (82b) and (83b) for the moment (discussed in section 4.6) as well the antipassive suffixes on the verbs in the (a) examples (discussed in section 5.4).
4.4 Object-initial base orders

SOV languages like German don’t have an EPP requirement “always fill SpecIP” (cf. Haider (In Press)), since the subject is in the licensing domain of the verb. English on the other hand requires that the subject move to SpecIP to be licensed by Spec–Head agreement with I₀. The basic principle is drawn in (84) (cf. (59)).

Since Germanic is SOV, and therefore has no EPP requirement, we expect those languages to support object initial orders, by fronting to SpecIP and possibly subsequently to higher positions, which should be ungrammatical in English. The following German data (85a)–(86b) are adapted from Haider (In Press). The objects are in boldface. Note that in German,
matrix clauses exhibit verb second phenomena. In a neutral sentence with no left edge adverb, the subject occupies the highest Spec position.

(85) a. Kein Rat hat **ihm** geholfen.
    No advice has him.DAT helped.
    ‘No advice has helped him.’  \(\text{(Ge.)}\)

   b. **Ihm** hat kein Rat geholfen.

(86) a. Keiner hat **sie** angerufen.
    no.one has her.ACC phoned.up
    ‘No one has called her.’  \(\text{(Ge.)}\)

   b. **Sie** hat keiner angerufen.

The (a) examples are the unmarked order, with the main verb in \(I^0\) because of verb second, and the subject presumably in SpecIP. In the (b) examples, the object is fronted over the subject and in a focus position (cf. Neeleman (1994)). One could still argue that in both (85b) and (86b) the subject is in SpecIP, satisfying an EPP feature, but even with an adverb in initial position, the object can still be higher than the subject \(^{21}\), as we can see in (87a)–(87c). The fact that in these sentences the object is pronominal is not a prerequisite for these object-fronting constructions. They are equally grammatical with full DPs.

(87) a. Keiner hat **sie** gestern angerufen.
    no.one has her.ACC yesterday phoned.up
    ‘No one has called her yesterday.’  \(\text{(Ge.)}\)

   b. **Gestern** hat **sie** keiner angerufen.

   c. **Sie** hat keiner **gestern** angerufen.

It is essential that in examples (87a)–(87c) the basic meanings of the sentences are the same, only with different focus. (87a) is the neutral order, with focus on the subject, in (87b) the focus is on the adverb, implying for example that today she *did* get a call, in (87c) the focus is on the object, implying that somebody else *did* get a call \(^{22}\).


(88) a. **Taku-lir-paa** [sarva-p **qajaq** ingirlak-kaa ].
    see-begin-IND.3SG<3SG current-ERG kayak.NOM move.along-PTC.3SG<3SG
    ‘He saw the current moving the kayak along.’  \(\text{(WG)}\)

   b. Takulirpaa [**qajaq** sarvap ingirlakkaa ].

\(^{21}\)There have been arguments in the literature that in this case the object is *adjoined* above the subject to the IP, but since there doesn’t seem to be a clear reason why OV languages would need to perform this trick. Moreover, it doesn’t explain why VO *can’t* front their objects.

\(^{22}\)For a detailed semantic analysis of focus phrases consult for example Krifka (1992, 2004).
4.5 Scrambling

In (88a) we find the basic SOV word order in the embedded CP, notice that the verbal morphology changes to the so-called ‘participial morphology’. In (88b) the object qajaq is fronted CP-internally. Similarly, the same process is allowed in matrix clauses.

   hunter-ERG seal.NOM catch-IND.3SG<3SG
   ‘The hunter caught the seal.’

   b. Puiji piniartup pisaraa.
   c. [ Puiji pisaraa ]; piniartup e_

(89a) and (89b) are parallel to (88a) and (88b) respectively. (89c) represents the only example that I have found in the literature that features VP fronting as in German (77b). The problem with these data is that Fortescue (1984) is the only grammar that mentions them, and additional material is definitely needed to draw further conclusions. However, the overall behavior of the object is as expected for an SOV language.

4.5 Scrambling

There is possibly another parallel between Germanic and Inuit, which has often been referred to in the literature as scrambling. There is some uncertainty about the precise definition of scrambling, but I will use it for the optional movement of the object over an adverb. This type of movement does not have any focus or other discourse related function, but only generates scope differences (cf. Neeleman and Reinhart (1998) inter alia), and is claimed by Haider among others only to be available in SOV languages. E.g. a bare plural, in base position (after the adverb), can have either an existential or generic reading, but when moved over an adverb or adjunct, it loses the existential reading (cf. Kerstens (1975); Diesing (1992); de Hoop (1992); Ruys (2001)).

(90) a. dat de politie altijd krakers oppakt. (existential/generic)
   that the police always squatters arrests
   ‘that the police always arrest squatters.’

   b. dat de politie krakers altijd oppakt. (generic)

We can find data similar to (90a) and (90b) in Inuit. The data adapted are from Fortescue (1984).

(91) a. Jensip aqagu niuirtukkun-ni issiavil pisiari-ssa-vaa.
   Jensip-ERG tomorrow shopkeeper-LOC chair.NOM buy-FUT-IND.3SG<3SG
   ‘Jensi will buy the chair at the shopkeeper’s tomorrow.’

   b. Jensip aqagu issiavil niuirtukkunni pisiarissavaa.

(92) a. Imaalat Nuum-mi filmi taku-a-ra.
   luckily Nuuk-LOC film.NOM see-IND.3SG<1SG
   ‘Luckily I saw that film in Nuuk.’

   b. Imaalat filmi Nuummi takuara
Unfortunately, Fortescue does not address any the scope effects that arise with the movement of the object over the adjunct. We have physical evidence of scrambling, but we cannot tell whether the same scope effects arise as in Germanic.

4.6 Post-verbal objects: Yiddish vs. Yupik

Strict SOV languages like Japanese do not allow for any post-verbal elements. However, many SOV languages support a small class of post-verbal elements such as floating quantifiers (cf. (10a)ff.). However, the main problem we have to face with Inuit word order is post-verbal objects. I will try to establish a relation between the post-verbal object data from Inuit and the post-verbal object data we find in several Germanic OV languages.

We have found several examples of post-verbal objects such (82b) and (83b). Apart from the double object constructions, post-verbal object also occur in canonical transitive verb sentences. This seems only to be allowed in the Yupik branch of the Inuit family; I have found no evidence for post-verbal objects in the Inuit branch of the Inuit family. Example (93) is from de Reuse (1994).

\[(93) \text{Yug-m anengagh-mmun negh-sq-aa kayu.} \]
\[\text{man.ERG older.brother-1SG.DAT eat-ask-IND.3SG/3SG fish.NOM} \]
\[\text{‘The man asked my brother to eat the fish.’ (CSY)} \]

\[(94) \]
\[\text{a. Joosi quqi-ri-yuq tuttu-mik.} \]
\[\text{Joosi.NOM shoot-ANTIP-PTC.3SG caribou-ACC} \]
\[\text{‘Joosi shot a caribou.’ (Iñu.=8a)} \]
\[\text{b. Joosi-up quqi-kkiq-ta tuttu.} \]
\[\text{Joosi-ERG shoot-again-PTC.3SG/3SG caribou.NOM} \]
\[\text{‘Joosi shot the same caribou again.’ (Iñu.=8b)} \]

In the Central Alaskan Yupik and Iñupiaq examples above we find that both nominative and accusative marked objects can be post-verbal, while in other dialects such as Eastern Canadian Inuit (95a)–(95b), the position of the object is dependent on the case-marking. I would like to stress that the alternation is not because of case. As I will argue in the next section, movement of arguments is never because of case assignment reasons.

\[(95) \]
\[\text{a. Jak-up [ iglu sana-vaa]}. \]
\[\text{Jake-ERG house.NOM build-IND.3SG<3SG} \]
\[\text{‘Jacob is building the house (not yet finished).’} \]
\[\text{(ECm=22a)} \]
\[\text{b. Jake [ sana-vuq iglu-mik]}. \]
\[\text{Jake.NOM build-IND.3SG house-ACC} \]
\[\text{‘Jake is building a house (hands on, may or may not yet be finished).’} \]
\[\text{(ECm=22b)} \]

Notice that the object is restricted to a position adjacent to the verb.

There have been proposals in the literature that there is a subclass of SOV languages that can have these post-verbal objects. Although these languages exhibit verb clustering behavior typical for SOV languages, they may optionally postpone the object. This has
been claimed for languages like Hindi (cf. Mahajan (1997)), Yiddish (Haider, In Press). The following Yiddish examples are from Vikner (2001, p.66). Note that Yiddish can have verb second in embedded clauses.

(96) a. az Jonas vil [ a hoys koyfn ].
    that Jonas want.3SG a house buy.INF
    ‘that Jonas wants to buy a house.’ (Yid.)

b. az Jonas vil [ koyfn a hoys ].

The alternation, modulo the case pattern, in (96) is similar to the alternation we find in (95). Although Yiddish behaves like an OV language: it has verb clustering, clause-union, object fronting and scrambling, it has features that we, if we follow Haider’s typology, typically find in VO languages, such as post-verbal objects and post-verbal particles. It looks as if Yiddish is in a transitory state between VO and OV. Observe the following examples with particle verbs (97)–(98). The data are from Vikner (2001, p.37) and mean ‘The letter he has sent off.’

(97) a. * Den Brief hat er geschickt ab. (Ge.)
    b. Den Brief hat er abgeschickt.

(98) a. Brevet har han sendt afsted. (Da.)
    b. * Brevet har han afsted sendt.

Generally, OV languages like German and Dutch have pre-verbal particles, VO languages like Danish and English only support particles in a post-verbal position. Yiddish favors the ‘German’ order, but allows, although highly marked, the ‘Danish’ order, which is completely ungrammatical in German and Dutch.

(99) a. ?? Dem Briv hat er geshikt avek. (Yid.)
    b. Dem Briv hat er avekgeshikt.

This is again evidence that there is a set of OV languages, which have these optional post-verbal elements. Similarly we find OV features in Old English and Old Icelandic, whereas it is commonly assumed that both their modern variants are VO. The following data23 (100)–(101) show that Old English displayed typical Germanic OV features, like verb second, scrambling and particle stranding in (100) and particle stranding inside a verb cluster containing a modal (101).

(100)  |a sticodeᵢ him mon |a eagen [ ut tᵢ ].
    then stuck him someone the eyes out
    ‘then his eyes were gouged out.’ (OE)

(101)  ær he [ ut wolde faran ] to gefeohte.
    before he out wanted go to fight.
    ‘before he wanted to go out to the fight.’ (OE)

The few data that I have given above suggest that the split between OV and VO languages is not as hard as we have assumed in the beginning of this section. Both in Inuit and in Germanic, there are several languages that are somewhere in between. A branching theory that would account for these data will have to present a structure for these languages that would look like a ‘flexible’ OV structure, which is schematically drawn in (102).

\[
\begin{array}{c}
\text{Spec} \\
\text{IP} \\
\text{I}^0 \\
\text{VP} \\
\text{Subj} \\
\text{Obj} \\
\end{array}
\rightarrow
\begin{array}{c}
\text{Spec} \\
\text{IP} \\
\text{I}^0 \\
\text{VP} \\
\text{Subj} \\
\text{V}^0 \rightarrow \text{Obj} \\
\end{array}
\]

This would seem conceptually to me the most felicitous outcome, and would involve, if we assume Haider’s framework, some kind of optional switch in branching directionality (Haider, In Press). Moreover, this optionality occurs in a subclass of SOV, not SVO languages. This is also fits the generalization that ergativity only occurs in SOV languages (cf. Mahajan (1994b) *inter alia*): Inuit is an SOV ergative language family, but Yupik seems to have post-verbal objects. These post-verbal objects can possibly be accounted for BBC theory-internal, analogically to Yiddish an Old-English, without damaging the SOV–ergativity correlation. It would carry too far to discuss this proposition into depth, but if one were going to apply it to Inuit, much more field work has to be done.

### 4.7 Summary

In this section I have applied Haider’s asymmetry framework on the Inuit languages family. After arguing that this syntactical framework can be easier be adapted to SOV languages and does predict SOV features better than Kayne’s antisymmetry framework, I have described several syntactical constructions in Inuit that would classify it as an SOV language: verb clustering, clause-union effects, object shift, and scrambling. The data for verb clustering and clause-union effects is robust, but there is definitely more research needed in order to provide evidence for object shift and scrambling and rule out alternative “SVO-type” accounts, which would involve an EPP for SpecIP. A potential problem to the analysis of Inuit as an SOV is the existence of post-verbal objects in certain languages and dialects. There are interesting parallels with the Germanic languages and a potentially viable explanation for these data inside the BBC framework, but more data are definitely needed in order to establish a clear typological relationship between these two language families.
5 The Inuit case system

In this section I will provide an analysis of the Inuit case system. Before doing so, I will discuss the difference between structural and non-structural case, and ‘semi-structural’ approach to so-called ‘inherent’ cases such as ergative and dative. The approach to case that I will pursue, similar to my treatment of Inuit agreement, is based on Optimality Theory, combined with the structural typology that I have argued for in the previous section. After providing evidence in favor of an OT approach to case, I will briefly introduce the reader to the constraints of such an OT system. After this introduction, I will discuss the application of this system combined with a minimalist “Bare Phrase Structure” approach to the construction of Inuit syntactical structures.

5.1 Structural vs. non-structural case

Cases can be divided into structural cases, such as nominative and accusative, and non-structural cases such as ergative and dative. Structural cases are assigned by specific heads, respectively $I^0$ and $V^0$ for nominative and accusative, but the debate on what assigns non-structural cases, such as ergative and dative, is still unsettled. In order to provide an account for the assignment of non-structural cases, Woolford subdivides in Woolford (2004) non-structural case into inherent and lexical cases. The reason to do so is that there seems to be a difference between ‘predictable’ and ‘non-predictable’ non-structural cases (following Zaenen et al. (1985); Yip (1987); Czepuch (1988); Holmberg and Platzack (1995); Wunderlich (1997); Butt and Geuder (1998); Maling (2002); Jónsson (2003)). Observe the following Icelandic examples cited from Woolford (2004).

(103) Deir gáfu konunginum ambáttina.
     they gave king.the.DAT slave.girl.the.ACC
     ‘They gave the king the slave girl.’
(104) Bátnum hvolfdi.
     boat.the.DAT capsized
     ‘The boat capsized’

In both examples the dative marked argument is in boldface. In example (103) the occurrence of the dative case on the recipient is predictable. Recipients or goals in Icelandic, as well as in many other languages, are marked with dative case. The dative case on ‘boat’ in (104) is not predictable. Not all patients of unaccusative intransitive verbs like ‘capsize’ are marked with the dative case. Woolford calls the dative case assignment in (103) inherent, and the assignment in (104) lexical. Lexical case assignment is specified in the lexical entry of the verb, inherent case assignment occurs on a ‘category’. Woolford proposes three categories that can be assigned a specific inherent case: A(gent), G(oal) and T(heme). Although these categories are usually filled with arguments that they derive their name from (i.e. goals are in category G), this is not necessarily the case. In Sinhalese for example, category G is (also) filled with agents in middle constructions.

(105) a. lamāya æŋjuva.
     child.NOM weep.PAST.ACT
5.1 Structural vs. non-structural case

‘The child wept (in order to attract sympathy or attention).’ (Sin.)

b. lamayaata aediquna.
   child.DAT weep.PAST.MID
‘The child wept (involuntarily).’ (Sin.)

In Sinhalese, dative is consequently assigned to agents in middle constructions. Therefore it is not an instance of lexical case, but it is also not structural: it is not assigned by a V0 or I0. Instead, it is assigned by another head, which is not always present in a phrase structure like V0 and I0. I will come back to this below.

It has been claimed that ergative case, like dative, is an inherent case (Mahajan, 1989; Laughren, 1989, 1992; Harbert, 1991; Woolford, 1993, 1997, 2000, 2001, 2003a,b, 2004; van Gerven Oei, 2004). Ergative is linked to category A, since it usually attaches itself to agents. In Inuit, category A is filled with agents in transitive constructions, but this is, again, not a cross-linguistic truth. For example, both Basque and Assamese can also assign ergative case to certain subjects of intransitive sentences. The Basque example (106) is from Levin (1989, p.57), the Assamese example from Woolford (2004, (21))

(106) Gizona-k kurritu du.
   man-ERG ran 3SG.AUX
   ‘The man ran.’ (Ba.)

(107) Ram-e doribo bisarise.
   Ram-ERG run wants
   ‘Ram wants to run.’ (Ass.)

As we can see in (106) and (107), ergative case is assigned to the subject of an intransitive verb24, and similarly in (107). The advantage of the flexibility of this categorial approach is that it can probably handle so called split-ergative languages (Dixon, 1994, p.70ff). However, the lack of a clear definition of the boundaries of and restrictions on these categories is a major defect, which might have typologically infelicitous consequences. In despite of the possible problems with this categorial, ‘semi-structural’ approach to inherent case assignment, I will adopt it for the remainder of this paper, since the implementation of such a system fits well into the Inuit typology.

To tackle the issue of the assignment of inherent case, Woolford (2004) proposes two vP shells above the VP, the first one has been the proposed base position of the agent (cf. Hung (1988); Chomsky (1995); Kratzer (1996)), which Woolford proposes to license ergative case (cf. Legate (2003)) to category A DPs (category A contains only agents in Inuit). Between this vP and the VP, a second vP is located, licensing dative case (cf. Marantz (1989); McGinnis (1996, 1998, 2001)) to category G DPs (category G contains only goals in Inuit).

I will assume two possible implementations of these two vPs in (108). (a), an SOV structure, in which the opacity of the VP is preserved. The licensing direction of the v0's

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24There have been arguments against the intransitivity of these kinds of verbs (e.g. Cutting (1994) and Austin and López (1995)), which I won’t discuss here.
is to the right, and because A and G are equidistant\(^{25}\); they are both equally close to both \(\nu\)Ps. And (b), and SVO structure, which unifies the shell structure of SVO VPs with the two proposed \(\nu\)Ps. Note that both trees have an equal branching depth, which is what you expect in a syntactical framework that treats SVO and SOV languages as equals and non-derivative from each other. The \(\nu\)Ps are similar to former Agreement Phrases (AgrSP and AgrOP, cf. Pollock (1989)), Transitive Phrases (TrP, cf. Bowers (2002)) and an additional TP (Pesetsky and Torrego, 2004), which all were supposed to reside between TP and VP, and provide locations for case assignment and A-movement. The difference with the treatment that I propose below is, that both \(\nu\)Ps only act as optional (non-structural) case assigning heads, and are not available for A-movement/second merge. The architecture of the tree structures in the following sections is mainly based on Chomsky’s minimalist program (Chomsky, 1995, 2000, 2001) and Adger’s recent book on minimalist syntax (Adger, 2003).

\[ \text{(108) a. SOV:} \]
\[ \begin{array}{c}
  \begin{array}{c}
    A \\
    \nu_A^0
  \end{array} \\
  \begin{array}{c}
    \nu_A P \\
    \nu_G P
  \end{array} \\
  \begin{array}{c}
    VP \\
    \nu_G^0
  \end{array} \\
  \begin{array}{c}
    A \\
    V^0
  \end{array}
\end{array} \]

\[ \text{b. SVO:} \]
\[ \begin{array}{c}
  \begin{array}{c}
    A \\
    \nu_A^0
  \end{array} \\
  \begin{array}{c}
    \nu_A P \\
    \nu_G P
  \end{array} \\
  \begin{array}{c}
    A \\
    \nu_G^0
  \end{array} \\
  \begin{array}{c}
    \nu_G P \\
    \nu_G^0
  \end{array} \\
  \begin{array}{c}
    VP \\
    \nu_G^0
  \end{array} \\
  \begin{array}{c}
    G \\
    V^0
  \end{array} \\
  \begin{array}{c}
    G \\
    \nu_G^0
  \end{array} \\
  \begin{array}{c}
    T \\
    V^0
  \end{array}
\end{array} \]

In SOV languages, the verbal arguments are generated inside the VP. This means that if no ergative case is assigned, we can assume that no \(\nu_A P\) is present. In section (5.2.2) I will show, that if we keep ourselves to the bottom-up merging as advocated in minimalist syntax, the verb in \(V^0\) indicates that presence or absence of ergative case. In SVO languages on the other hand, verbal arguments are base-generated in these \(\nu P\)-shells. If no ergative case is assigned \(\nu_A P\) is still present, but inactive. Summarized:

\[ \text{(109) \textbf{Inherent case assignment in Inuit:}} \]

i. **Ergative** case is assigned to elements from Category A, which is filled with agents of transitive verbs. Ergative case is assigned by \(\nu_A^0\).

ii. **Dative** case is assigned to elements from Category G, which is filled with goals. Dative case is assigned by \(\nu_G^0\).

Before applying this structure to Inuit sentences, I will discuss the status of case inside syntactic theory.

### 5.2 Case in OT

In this section I will propose a constraint approach to case, in which properties such as licensing domains for case (e.g. Case Licensing Domain of Woolford (2003a), Phase Impenetrability Constraint of Chomsky (2000, 2001) and Haider’s Licensing Directionality) and

\[^{25}\text{A term introduced in Chomsky (1993). Two specifiers of the same projection are equidistant.}\]
a minimalist approach to syntactic structure are the foundation on which our constraint approach is based.

5.2.1 Case as a metaderivational system

I would like to propose that case is, similar to agreement, a metaderivational system. The first thing that we have to argue against is movement for case. If case can be treated as a metaderivational system, we do not expect case assignment to be dependent on derivational operations such as merge. As we will see below, it often occurs that slightly different case assignment patterns can be found in sentences with a similar surface structure and semantic content.

(110) Arguments against movement for case

i. Structural case is not necessarily bound to syntactic position.
   
ii. Different case assignments in structurally similar languages may differ without causing any semantic difference.
   
iii. Nominative objects aren’t more common in nominative OV languages compared to VO languages.

As we have seen in Inuit, structural cases such as nominative are not bound by the syntactic position of the arguments targeted by the nominative case. Nominative case can be assigned either to the object inside the VP, or to the subject. There is also no indication that sentences with an ergative and antipassive case pattern behave differently from one another structurally. Similarly, case assignments in structurally similar languages can vary without causing any semantic or syntactic differences. I will give language pairs as an illustration.

A case of two languages that are structurally close relatives is Icelandic/Faroese. If the subject of an experiencer verb is assigned an inherent case like dative, nominative is licensed on the object DP in Icelandic, in Faroese accusative is licensed and nominative case blocked (cf. Woolford (2003a)). The different case assignment in both languages has no structural or semantic consequences. The Icelandic example (111) is from Yip et al. (1987) and the Faroese example (112) from Barnes (1986).

(111) Barninu batnaði veikin.

child.DAT recovered.from.3SG disease.NOM

‘The child recovered from the disease.’ (Ice.)

(112) Mær líkar henda filmin.

I.DAT like.3SG this.ACC film.ACC

‘I like this film.’ (Far.)

Both (111) and (112) are sentences featuring a dative subject. In Icelandic it is possible to license nominative on the object, whereas that is ungrammatical in Faroese, which licenses accusative case. If languages would move for case, one expects (111) to have a completely different syntactic structure from (112), which would, considering the fact that Icelandic and Faroese behave very similar in most environments, be highly infelicitous. For example, both
sentences can be embedded under ‘to think’, with similar constraints on wh-movement. This is not what one would expect if veikin in (111) and henda filmin in (112) were in structurally different positions.

We can find the same pattern in Nez Perce (Rude, 1987, 1988; Woolford, 1997; van Gerven Oei, 2004) and Sahaptin (Rude, 1994, 1997; van Gerven Oei, 2004), two closely related Sahaptian languages. In both languages we find the familiar pattern of two possible case assignments in a transitive clause. This alternation shows a similarity to the ergative–antipassive case pattern alternation in Inuit. Similar to the data in (111)–(112), the case-marking on the object in these two related languages is different in the (a) examples. In the (b) (ergative) examples the case-marking is the same.

(113) a. háama-∅ hi-’wi-ye wewúkiye-∅
    man-NOM 3-shoot-PAST elk-ACC
    ‘The man shot an elk.’

b. háama-nm pée-’wi-ye wewúkiye-ne
    man-erg 3/3-shoot-PAST elk-obj
    ‘The man shot an elk.’

(114) a. i.wínš-∅ i-nánan-a tlłaaki-na
    man-NOM 3-bring-PAST woman-obj
    ‘The man brought the woman.’

b. i.wínš-in pá-nanan-a tlłaaki-na
    man-erg INV-bring-PAST woman-obj
    ‘The man brought the woman.’

Again, it would be infelicitous to assume vacuous movement of the object DPs; there is no semantic trigger such as focus that would require these DPs to move and there is no difference in the overall semantics between the (a) examples and between the (b) examples. Apparently, structural case such as accusative in (113a) is not bound to a specific syntactic position (complement of V0).

If we accept that case assignment never causes or is a trigger for syntactic movement, we will have to assume that case assignment is governed by constraints outside the syntactic derivation of a sentence. These constraints do not influence the merging itself, but govern the case assignments on the different (argument) DPs. Although case is connected with certain lexical or functional projections, heads that check off case don’t carry any local licensing directionality of that case. In other words, I0 may host a +NOM feature, but that does not imply that any nominative marked DP must reside in SpecIP. This metaderivational approach to case should oblige to the principles of economy (Chomsky, 1995, 2000; Rizzi, 1997; Bresnan, 2001). Since it would be reasonable to suppose that the economy principle not only holds for movement, but for any subsystem present in UG, in casu case and agreement.

"... we may proceed to refine “least effort” conditions on movement, raising them from the status of imprecise guideline to actual principles of UG.” (Chomsky, 1995, p.146)
In case of a constraint approach, this means that the assignment in which the least amount of the constraints are violated, the more economic and harmonic the assignment is (cf. Grimshaw (2001)).

Argument (c) in (110) refers to the fact that by adopting Haider’s BBC framework we assumed that VO, OV and mixed type languages have different typologies. If movement for the sole purpose of case assignment were allowed, we expect that OV languages behave differently in their case assignment from VO languages. For example, objects in OV languages can move out of the VP easier than objects in VO languages, since that movement would be inside the licensing domain of the V⁰ head (cf. Haider (In Press)). If case-marking were attached to merge, this typological fact would imply that nominative case-marking on objects would be more frequent in OV languages, which is not the case. Moreover, if we would assume that case is structurally bound, that assumption doesn’t capture the generalization that some structurally and typologically different languages display the same case patterns. It would definitely neither be elegant nor economical to define case movement for every language anew, and ignore the obvious display of similarity between case patterns in VO- and OV-languages. A metaderivational, OT-based approach to case allows us to capture those generalizations.

5.2.2 The first thing to parse

Before I present a possible OT model for case assignment in Inuit, there is an interesting question I would like to address briefly: if case as well as agreement are processed in a metaderivational OT type environment, which of these two is processed first? Is agreement processed before, after or simultaneous to case assignment? I have tacitly assumed in (3.2) that agreement is attached to verbs while there is still no information on argument structure or case assignment. I have treated case as something that only becomes visible after the assignment of agreement.

If the agreement and case module would be processed simultaneously, that would require us to rank constraints governing agreement mixed with constraints governing case assignment. This would predict languages in which for example a nominative can only agree with SAPs, and not with third persons, or that only third persons have clitic doubling when they are marked with dative case. To my knowledge, there is no record of such a language.

If the agreement would be processed after case, and be feeding from its output, we would predict the existence of languages in which we have overt morphological case assignment, but no agreement or clitics whatsoever. These languages don’t exist either to my knowledge. Even Japanese or Korean, which have an overt case system, have agreement in certain contexts (e.g. honorifics). Therefore, I will assume for the remainder of this paper, that case is processed after agreement, and that agreement morphemes are visible in the input of the evaluation matrix that processes case assignments.

If agreement is indeed processed first, we can handle the optionality of ν₃P in the SOV structure as proposed in (108). As soon as first merge combines object and verb, it is immediate clear whether a ν₃P should be merged higher up in the tree structure. If there is cross-referencing with both the subject and object, a ν₃P should be merged above the VP
to prevent ungrammaticality. If there is only agreement with the subject, no $\nu_a P$ should be merged for the same reason. Let’s see how the implementation of this system works out for Inuit simple transitive clauses\textsuperscript{26}.

(115) a. Inuk qimmir-mik taku-vuq.
   person NOM dog-ACC see IND 3SG
   ‘The/A person saw a dog.’ (Inu.=18a)

b. 
\[
\begin{array}{c}
\text{IP} \\
\text{\textit{I}^0: [nom]} \\
\text{DP: [Case: NOM 3SG]}
\end{array}
\begin{array}{c}
\text{VP} \\
\text{DP: [Case: ACC]}
\end{array}
\begin{array}{c}
\text{V}^0: [\text{ACC 3SG]}
\end{array}
\]

Example (115a) features a canonical nominative–accusative case pattern. The verb only agrees with one argument, therefore no $\nu_a P$ is merged above the VP and no ergative is assigned.

(116) a. Inu-up qimmiq taku-vaa.
   person-ERG dog NOM see IND 3SG 3SG
   ‘The/A person saw the dog.’ (Inu.=18b)

b. 
\[
\begin{array}{c}
\text{IP} \\
\text{\textit{I}^0: [nom]} \\
\text{\nu_a P} \\
\text{\nu_a^0: [erg]}
\end{array}
\begin{array}{c}
\text{VP} \\
\text{DP: [Case: ERG 3SG]}
\end{array}
\begin{array}{c}
\text{DP: [Case: NOM 3SG]}
\end{array}
\begin{array}{c}
\text{V}^0: [\text{ACC 3SG]}
\end{array}
\]

In (116a) the verb agrees with two arguments\textsuperscript{27}. Therefore, a $\nu_a P$ is merged above the VP. $\nu_a$ assigns ergative case and the object is marked with the nominative case. Note that in both structures, the subject DP does not have to move up to SpecIP in order to check off

\textsuperscript{26}Features like tense and aspect are left out from the tree structures.

\textsuperscript{27}The $V^0$ cluster with the clitic is drawn with the central dot (.), since the internal composition is opaque.
nominative case, since there is no case-driven movement. Also, there is no EPP requirement for Inuit (see section 4.4). The question is, how to get the right cases on the arguments. How are these uninterpreted features checked off? I will formulate a proposal in the next section that is similar to the OT treatment of agreement in section (3.2). In section (5.3.3) I will present a possible way of computing the tree structures like the ones above.

5.2.3 Case alignment

In this subsection, I will follow Woolford (2001) in describing a set of constraints governing Inuit case assignment. Notice that the universal properties of case as presented in Chomsky’s Case Theory (Chomsky, 1981, 1986, 1995) don’t need to be discarded. On the contrary, since language-proper case assignments (e.g. ergative or dative case assignment to subjects) are controlled by our set of constraints, any overgeneration effect of the Case Theory is fixed by this set, which reduces the redundancy. This conforms the null-hypothesis introduced by Prince and Smolensky (1993), stating that “differences between languages are no barrier to constraint universality when constraints are violable.” (McCarthy, 2002, p.11). I will introduce the following constraints.

(117) **Faith-Lex** Be faithful to the lexical specification of the verb

The faithfulness constraint ensures that the ergative case is assigned only in transitive clauses, and only if the verb has agreement with both arguments. If ergative case is assigned, while there is only one argument that is cross-referenced on the verb, a violation is assigned. There is no need for a contextually restricted Faith-Lex$_{trans}$ as proposed in Woolford (2001), since agreement is overtly present in the input. This makes it clear whether ergative case should be assigned or not.

(118) *ERG, *DAT $\gg$ *ACC $\gg$ *NOM Avoid overt case-marking

(119) *OCP$_{case}$ Do not assign the same case more than once

Overt case assignment is costly. Therefore a violation mark is assigned as soon one of these cases is assigned. Nominative is generally agreed upon to be the least marked case (cf. (Dixon, 1979; Tsunoda, 1981)), thus should be ranked lowest. Inherent cases like dative and ergative are more likely to be morphologically marked, and therefore also higher in the constraint hierarchy. Woolford also argues that *DAT should be ranked above *ACC (cf. Beatrice (1999); Grimshaw (2001); Woolford (2003b)). There is no evidence for internal ordering of *DAT and *ERG. The OCP constraint prevents the double assignment of the same case.

5.3 The application

Equipped with this set of constraints we can try to analyze the case patterns in intransitive, transitive and ditransitive clauses and clause-union constructions.

5.3.1 Intransitives

Intransitive verbs support only one argument, which is always assigned nominative case.
5.3 The application

Tableau (120) is a typical calculation of the case assignment in an intransitive clause. The verb is unmarked for any lexical case, and least marked case, nominative, is assigned.

### 5.3.2 Transitives and Revised Relativized Minimality

For transitive clauses we have two possible case assignments as in (115a) and (116a). (121) is the tableau for example (115a).

In this case we find that two possible case assignments emerge. There are no more constraints violated in (a) than in (b). Our case assignment subroutine does not say anything about word order; therefore either of the two input DPs can bear accusative or nominative case. This raises the question why we never find accusative marked subjects and nominative marked objects simultaneously in sentence as in (122) (cf. output (b) in tableau (121)).

Rizzi’s recent revision of his Relativized Minimality (Rizzi (2001), cf. Chomsky (2000)) offers a solution. In Woolford’s words he claims that a “potentential target is what can block access to a further target.” (Woolford, 2003b). Formally:

1. **Case feature** $K$ is licensed on $(X, YP)$ only if $YP$ is in a Minimal Configuration with $X$ and $X$ c-commands/is c-commanded by $YP$. (Rizzi, 2001, (56))
2. **Where Minimal Configuration is defined as:**
   - $Y$ is in a Minimal Configuration (mc) with $X$ iff there is no $Z$ such that
     - $Z$ is of the same structural type as $X$, and
     - $Z$ intervenes between $X$ and $Y$ (Rizzi, 2001, (4))

In order to prevent a case assignment as in (122) we need to establish that one or both arguments are not in a Minimal Configuration with one of the two structural case assigning

---

28 $[+S_{agr}]$ designates only agreement with the (nominative marked) subject.
heads. If ‘person’ in (122) is in a Minimal Configuration with V⁰, which assigns accusative case, there should be no other intervening DP, which can be assigned structural case. This is not the case: the object intervenes. Moreover, the subject in SpecVP (remember there is no EPP requirement in Inuit) is blocking nominative case assignment to the object. The fact that in (116a) neither the subject, nor the object are in a Minimal Configuration with their respective case assigning heads. Notice that in this Revised Relativized Minimality (henceforth, RRM) framework there is, again, no need for movement of the subject to SpecIP in order to get case. Tableau (124) gives the computation for the normal ergative case assignment.

Output (a) is the most harmonic output. Contrary to (122), the subject DP is not an intervener, since it already obligatorily marked with the ergative case. Therefore, nominative case can be assigned to the object. Although the accusative case assigning head is closer to the object, assignment of the accusative case in (b) causes a fatal violation, since accusative is more marked than nominative case. Fixing this by assigning nominative instead of ergative in (c) violates Faith-Lex, since the verb is marked with both subject and object agreement.

### 5.3.3 Ditransitives and Bare Phrase Structure

We have already encountered the four possible case assignments in ditransitive clauses before in (79, 81b, 82b and 83b). I will repeat the paradigm below. ‘>_F<’ means: ‘has a higher focal prominence than’.

\[
\begin{align*}
\text{DP} & \quad \text{DP} \quad V^{[+S\&O_{agr}]} & \text{FAITH-LEX} & \text{*ERG} & \text{*ACC} & \text{*NOM} \\
(a) & \text{DP-ERG DP-NOM} & & \ast & & \ast \\
(b) & \text{DP-ERG DP-ACC} & & \ast & \ast & ! \\
(c) & \text{DP-NOM DP-ACC} & & ! & \ast & \ast
\end{align*}
\]

In these four sentences there are two forces at work: the specificity requirement of the nominative marked DP, and dative shift, which deals with the focus on either the theme...
5.3 The application

or the goal. Since I am only concerned with case assignment, I will ignore for the moment
the arguments in favor of a different syntactic structure for the (a) and (b) examples from
Barss and Lasnik (1986); Larson (1988, 1990); Jackendoff (1990); Pesetsky (1995); Beck and
Johnson (2004) inter alia, since there are no Inuit data available to investigate the abundance
of proposals on the nature of double object constructions. I will stick to the straightforward
tree structure as proposed in (108) for the remainder of this section.

The two sentences in (125) yield an ergative case for the agent, while the two sentences
in (126) yield the nominative. In (125) there is a choice between assigning the nominative
case to either the theme or the goal. If the theme is more specific or in focus (THEME \(\geq_F \)
goal), it is assigned nominative case, the recipient dative case as in (125a). If the recipient
receives nominative case because it is more focal (GOAL \(\geq_F \) THEME), dative is not mapped on
the theme; the theme receives the accusative case as in (125b). I will come back to this below.
Notice that in (125a), the nominative case-marked theme moves to a higher position, and is
not adjacent to the verb anymore. This can either reflect a different syntactic structure, and
thus provide evidence for dative shift as a syntactic transformation, or be a case of object
fronting, as in (88)–(89). The fact that the subject pronoun is pro-dropped and the lack
of other evidence on the position of the object (e.g. the position of adverbs etc.) makes
impossible to argue for one of the two.

Sentence (126a) features the familiar antipassive case pattern, with a (pro-dropped)
nominative marked subject, and an accusative marked object. The goal is marked with
the dative assigned by \(\nu_g^0\). Similar to (125a), the theme has a higher focal prominence
than the goal. This difference between theme and goal however, cannot be expressed by the
assignment of nominative case as in (125), since nominative case has already been assigned
to the agent. In (126b) we find a double accusative marking. Since nominative is already
assigned to the agent, and dative is not available, I assume that accusative case is assigned
to the goal. In order not to violate OCP\textsubscript{case}, ‘ball’ is assigned zero, or default, case, which
is also expressed through the accusative case morphology. This default case-marking can
also be found in other contexts: some intransitives can take an antipassive morpheme; their
subjects are also assigned default case.

\[(127)\quad \text{Qilalukka-nik pu-i-si-vuq.} \]
\[
\text{whale-ACC.PL come.up.to.surface-ANTIP-IND.3SG} \]
\[\text{‘There appeared whales on the surface (of the sea).’} \quad (\text{WG}=20a)\]

Accusative is also default case morphology in English for example.

\[(128)\quad \text{Who is at the door? It’s me./*It’s I.}\]

Default case assignment is not the most felicitous solution to the double occurrence of the
accusative case in (126b), but I see no other option in the framework that I have proposed so
far. A double assignment of accusative case will always violate OCP\textsubscript{case}, unless we stipulate
that (126b) is an exception and some kind of lexical case assignment. Lowering the position
of OCP\textsubscript{case} would cause infelicitous case assignment patterns in other ditransitive sentences.
Note that the fact that the object is post-verbal has no consequences for the case assignment.
The few double object examples in Bok-Bennema (1991) are all SOV. We are possibly dealing
again with structures similar to those in section (4.6).

There is also a case theory internal reason for proposing accusative case licensing on the goal in (126b) instead of on the theme. From the Inuit case facts that we have seen in the ditransitive clauses above, I would like to propose the following generalization.

(129) **Case–Markedness Generalization**

Discourse markedness of a DP is diametrically related to the markedness of the case assigned to it.

E.g. a subject of a transitive verb, highest in focal position in the sentence, receives the least marked case, namely nominative. This helps us to explain the data we find in (126b). Nominative case has already been assigned to the agent. The two inherent cases, ergative and dative are not available for the theme or goal; ergative case is not assigned since the verb is antipassive, dative case is not assigned due to the dative shift as we can also see in the English translation. Still, the goal is in a higher focus position than the theme. The only available case is accusative, which is then assigned to the ‘most’ focal argument, the goal, because it’s the least marked case after nominative. The generalization in (129) might also be able to explain for example the fact that case assignment in Turkish only shows up on specific arguments (cf. Lewis (1967); Ergunvanlı (1984); Dede (1986); Kornfilt (1997) *inter alia*).

Below I will give the trees for examples (125)–(126), similar in structure to the trees in (115b) and (116b), and their respective case assignment tableaux. In (115b) and (116b) we had a tree without and with a $ν_a P$. In case of the trees of ditransitive sentences, we can have four possibilities: (i) with $ν_a P$ and $ν_g P$, (ii) with only $ν_a P$, (iii) with only $ν_g P$, and (iv) with no $ν_P$s. These, in this order, correspond to the sentences in (125)–(126).

(130) **IP**

```
I^0 : [NOM]
    ν_a P
        ν_λ : [ERG]
            ν_g : [DAT]
                VP
                    DP: [Case : ERG 1SG]
                        pro_1SG
                    VP
                        DP: [Case : DAT ]
                            innumarimmum
                    VP
                        DP: [Case : NOM ]
                            pattaq
                            V^0 : [ACC 3SG ]
                                aittulaqtara
```
5.3 The application

(131)

<table>
<thead>
<tr>
<th></th>
<th>DP</th>
<th>DP</th>
<th>DP</th>
<th>V[+S&amp;O_{agr}]</th>
<th>Faith-Lex</th>
<th>*ERG</th>
<th>*DAT</th>
<th>*ACC</th>
<th>*NOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>☞</td>
<td>DP-ERG</td>
<td>DP-DAT</td>
<td>DP-NOM</td>
<td></td>
<td>*</td>
<td>*</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>(b)</td>
<td>DP-ERG</td>
<td>DP-DAT</td>
<td>DP-ACC</td>
<td></td>
<td></td>
<td>*</td>
<td>*</td>
<td>*!</td>
<td></td>
</tr>
<tr>
<td>(c)</td>
<td>DP-NOM</td>
<td>DP-DAT</td>
<td>DP-ACC</td>
<td></td>
<td></td>
<td>*!</td>
<td></td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

(130) reflects the structure of sentence (125a). The nominative is assigned to the most focal DP, which is the theme. The dative case can only be assigned to the goal, and the ergative in Inuit always has to be assigned to the agent argument. Tableau (131) is very similar, to tableau (124), and also obeys the RRM framework. Both arguments in SpecVP cannot block the assignment of nominative case to the object, since they, because of the presence of the $\nu$Ps, have to be marked with their respective inherent cases.

Before discussing the tree structures of sentences (125b)–(126b), I would like to present a possible computation of the tree in (130), since it is the most complex one that we will encounter; the tree structures for (125b)–(126b) are structures with one or two $\nu$Ps less I will adopt the formalization of the “Bare Phrase Structure” algorithm for tree construction from Uriagereka (1999) and Chomsky (2001) as presented in Johnson (2004, (37)).

(132) i. The Numeration $\mathcal{N}$ begins with the set of terminal items that will build the phrase marker.

ii. $\text{MERGE}(\alpha)(\beta) = \{\gamma, \alpha, \beta\}$ with $\alpha, \beta$, and $\gamma \in \mathcal{N}$.

iii. $\gamma \{\alpha, \beta\}$ signifies that $\alpha$ and $\beta$ are sisters and daughters of $\gamma$.

iii. Repeat $\text{MERGE}$ until $\mathcal{N}$ has just one member.

The computation of (130) will look as follows. We start out with our enumeration $\mathcal{N}$.

(133) $\mathcal{N} = \{I, \nu_\lambda, \nu_G, pro_{1sg}, \text{innumarimmut}, \text{pattaq}, \text{aittulauqtara}\}$

(134) $\text{Merge: } \mathcal{N} = \{I, \nu_\lambda, \nu_G, pro_{1sg}, \text{innumarimmut}, \text{pattaq}, \text{aittulauqtara}\}$

(135) $\text{Merge: } \mathcal{N} = \{I, \nu_\lambda, \nu_G, pro_{1sg}, \text{innumarimmut}, \text{pattaq}, \text{aittulauqtara}\}$

At this point $\text{aittulauqtara}$ has been merged with a nominative marked DP. Nominative case cannot be checked off by $V^0$, but the agreement inflection on $V^0$ can be checked off by $\text{pattaq}$. Note that the merge in (134) is with a non-overtly expressed head $D^0$, a terminal node that I have left out from $\mathcal{N}$.

(136) $\text{Merge: } \mathcal{N} = \{I, \nu_\lambda, \nu_G, pro_{1sg}, \text{innumarimmut}, \text{pattaq}\}$

At this point $\text{aittulauqtara}$ has been merged with a nominative marked DP. Nominative case cannot be checked off by $V^0$, but the agreement inflection on $V^0$ can be checked off by $\text{pattaq}$. Note that the merge in (134) is with a non-overtly expressed head $D^0$, a terminal node that I have left out from $\mathcal{N}$. 
(137) **Merge:** $\mathcal{N} = \{I, \nu_A, \nu_G, \text{pro}_{1sg}, \}$

```
    VP
   /   \
DP   VP
   /     \
immumarimmut      aittulaaqtara
   /            pattaq
```

The goal *immumarimmut* cannot check off the 1SG cross-referencing on the verb, since in Inuit, goals are never cross-referenced with. Nor can $V^0$ check off the dative case on the goal.

(138) **Merge:** $\mathcal{N} = \{I, \nu_A, \nu_G, \text{DP} \}

```
    VP
   /   \
DP   VP
   /     \
immumarimmut      aittulaaqtara
   /            pattaq
```

At this point in the computation, *pro*$_{1sg}$ can check off the cross-referencing feature on $V^0$. The other two DPs do not intervene, because they cannot cross-reference with a clitic on the verb. The computation continues with the merge of the two $\nu$Ps.

(139) **Merge:** $\mathcal{N} = \{I, \nu_A, \nu_G, \}$

```
    VP
   /   \
DP   VP
   /     \
immumarimmut      aittulaaqtara
   /            pattaq
```

(140) **Merge:** $\mathcal{N} = \{I, \nu_A, \nu_G, \}$

```
    VP
   /   \
DP   VP
   /     \
immumarimmut      aittulaaqtara
   /            pattaq
```
5.3 The application

(141) **Merge:** \( \mathcal{N} = \{I, \nu_A, \nu_G, \nu_P, \nu_g, \nu_a, \nu_{ag}, \nu_{ag}, \nu_{ag}, \nu_{ag} \} \)

After (140), \( \nu_g^0 \) checks of the dative case on *innumarimmut*. \( \nu_g \) can do this, because *innumarimmut* is a goal, and category G contains goals and only goals in Inuit. In (141) \( \nu_A^0 \) checks off ergative case on *pro1sg*. *Pro1sg* is the agent, and category A contains agents and only agents in Inuit. The only unchecked feature that is left is the nominative case on *pattaq*, which is checked off after the final merge.

(142) **Merge:** \( \mathcal{N} = \{ \} \)

After the merge in (142), \( \mathcal{N} \) contains only one element, which ends the computation. As we have seen, we do not have to refer to the case assignment system during the computation. It more or less goes automatically. The computation in tableau (131) is necessary as a safeguard for case assignment; nothing in the computation above prevents us from merging an accusative case-marked DP in (135). The theme would be in the case licensing domain of \( V^0 \), and the accusative case feature could have been checked off by \( V^0 \) without any problem. The computation in tableau (131) shows us, why it is that such a case assignment causes ungrammaticality: an accusative case assignment in a ditransitive sentence is not the most harmonic output. The computation of a syntactic tree and the computation of case assignment are two disjoint processes, but combined, they guarantee the grammaticality of a sentence. The following trees for sentences (125b)–(126b) are built in a similar fashion.
5.3 The application

(143) IP

I^0: [NOM]  
ν_αP  
ν_α: [ERG]  
VP  
DP: [ #Case : ERG ]  
1SG  
pro_1SG  
DP: [ #Case : NOM ]  
3SG  
innumarik  
DP: [ #Case : ACC ]  
ACC  
pattamik  
V^0: [ #Inf : 3SG ]  
V^0·Cl: [ #Inf : 1SG ]  
aittulauqtara

(144) IP

I^0: [NOM]  
ν_αP  
ν_α: [DAT]  
VP  
DP: [ #Case : NOM ]  
1SG  
pro_1SG  
DP: [ #Case : DAT ]  
3SG  
innumarimmut  
V^0: [ #Inf : 1SG ]  
DP: [ #Case : ACC ]  
pattamik  
aittulauqtanga

(145) IP

I^0: [NOM]  
ν_αP  
ν_α: [NOM]  
VP  
DP: [ #Case : NOM ]  
1SG  
pro_1SG  
DP: [ #Case : ACC ]  
3SG  
innumarimmik  
V^0: [ #Inf : 1SG ]  
DP: [ #Case : ]  
aittulauqtanga  
pattamik
5.4 Clause-union: The antipassive morpheme and Dutch ‘te’

As I have proposed above, innumarimmik (145) is necessarily marked with default (accusative) case. We can also see in tableau (146) that this is in fact the most harmonic output (a).

\[
\begin{array}{|c|c|c|c|c|}
\hline
\text{DP-\text{nom}} & \text{DP-\text{acc}} & \text{DP-\emptyset} & \text{Faith-Lex} & \text{OCP}_{\text{case}}
\end{array}
\]

| (a) | * | * | * |
| (b) | *! | ** | * |
| (c) | *! | * | ** |
| (d) | *! | * | * |

If we try to assign double accusative (b), or even nominative case (c) this causes a violation of OCP\text{case}. If we try to fix (c) by assigning nominative case only once, and marking one of the arguments with the ergative case, this fatally violates Faith-Lex.

5.4 Clause-union: The antipassive morpheme and Dutch ‘te’

As we have seen above, we find the same case assignment pattern in clause-union constructions. Remember that in clause-union all arguments of participating verbs are shared in one pool. We therefore expect clause-union constructions, in which three arguments are pooled to behave like ditransitive verbs, which is indeed the case.

(147) a. Arna-up nutaraq titrauti-mik nani-si-rqu-vaav-\emptyset.
woman-\text{erg} child-\text{nom} pencil-\text{acc} find-\text{antip-tell-IND.3SG<3SG}
‘The woman tells the child to find the pencil.’

b. Hansi-p quaq uatsin-mut niri-qqu-aa-\emptyset.
Hansi-\text{erg} frozen.meat-\text{nom} we-\text{dat} eat-\text{tell-IND.3SG<3SG}
‘Hansi told us to eat the frozen meat.’

woman-\text{nom} child-\text{acc} pencil-\text{acc} find-\text{antip-tell-ANTIP-IND.3SG}
‘The woman tells the child to find the pencil.’

b. Hansi miiqqqa-mut niqi-mik aa-\text{lli}-qqu-\text{si-vuq}.
Hansi-\text{nom} child-\text{dat} meat-\text{acc} fetch-\text{antip-tell-ANTIP-IND.3SG}
‘Hansi ordered the child to fetch some meat.’

All four sentences are parallel to the sentences in (125)–(126), except that the embedded verb must be marked with the antipassive morpheme (or be ambiguous as in (147b)). The use of the additional antipassive morpheme (in boldface) directly after the verb root is unexpected, since it disrupts the parallel with the ditransitive verbs, where no antipassive marking is found.

Tentatively, I would like to suggest the following approach to this unexpected occurrence of the antipassive morpheme. The Dutch and Afrikaans particle te and the German particle zu occur under certain circumstances in clause-union constructions. For example, compare (148b) with its Dutch equivalent.
5.5 Summary

In the final section of this thesis I have applied an OT approach to case assignment in Inuit, together with the assumption of Rizzi’s Revised Relativized Minimality hypothesis, while keeping Haider’s minimalist typology intact. After proposing a model to deal with non-structural case such as ergative and dative, I have argued that the case assignment system is processed after the agreement system; this seems to be typologically the most felicitous order. The application of this framework to intransitive and transitive sentences is relatively unproblematic. However, ditransitive sentences occur in four varieties. I have argued that this variety correlates with the four possible combinations of $\nu_a$P and $\nu_g$P. I have also shown that in a Bare Phrase Structure syntax, the case licensing can be done without extra stipulations on case licensing domains. The OT model has, in this case, more of a descriptive purpose, whereas the OT model for agreement that I proposed in section 3 has a more explanatory power. The OT-model for case assignment does not say anything about the order of the case-marked constituents, nor does it tell us which argument gets which case. It only provides information about the case pattern. Only in combination with a syntactic model and a theory about case licensing domains, is an OT approach to case viable; any grammatical case assignment must be licensed inside case licensing domain as specified in Rizzi’s Revised Relativized Minimality, and the case pattern in the sentence as a whole must be the most harmonic output in a OT model of case assignment of the target language. The conceptual relationship between syntax and a metaderivational OT approach on certain areas has still to be explored and formalized. But there have already been explorations to incorporate RRM into the OT framework (cf. Woolford (2003a)).
6 Concluding Remarks

The main aim of this thesis was to elucidate some of the syntactic and morphological processes in Inuit. Many previous studies of Inuit have suffered from the use of an idiosyncratic nomenclature; the risk of proposing very language/dialect particular terms and constructions is, that it obscures the relation that exists between languages and dialects, and between any particular language and UG. To avoid this, consistency with the existing terminology in other language-particular studies has been my main guide through the choice of terms. Terms like absolutive and modalis are not only old-fashioned, but also obscure the grammatical relationships inside the sentence and obstruct comparison with other languages, which sometimes prove to be strikingly similar.

The analysis of the Inuit case and agreement system in this thesis is based on several, partially overlapping, theories and assumptions. The most prominent of which is that both case and agreement are computed in a metaderivational system, i.e. outside the syntactic computation. This system has been modeled in an Optimality Theory environment. On order for the case and agreement to be mapped on respectively the right nouns and verbs without causing an ungrammatical sentence, I have adopted, as a basis, a Haiderian asymmetric syntactic framework, in which OV and VO languages have different typologies. I have proposed two $\nu$Ps above the VP, which accommodate the (optional) heads, which license inherent cases: ergative and dative. This asymmetric framework can be constructed along the ways of a Bare Phrase Structure syntax. Additionally, we need restrictions on case assignment, by means of Case Licensing Domain restrictions.

It is through the interaction of those five systems, that I have accounted for the Inuit case and agreement patterns. They are not at all disjoint, and much more future research is needed in order to develop a more internally consistent model of integration between case and agreement systems and syntactic theories. This can be done in terms of reformulating one system in the terminology of the other, or incorporation of one system into the other, e.g. the incorporation of restrictions on Case Licensing Domains into an OT framework. Moreover, case-marking proves to be related to or a reflex of a supraphrasal discourse structure, which handles semantic functions such as topic, focus and specificity. Case systems might be an interface between syntax and discourse. As a family, Inuit proves to be a fertile area of research for linguists concerned with case theory, ergativity, verb clustering and language typology.
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References


Appendix A: Abbreviations of languages and dialects

Abkh.: Abkhaz; Ass.: Assamese; Ba.: Basque; CAY: Central Alaskan Yup’ik; CSY: Central Siberian Yupik; ECT: Eastern Canadian Inuit (Tarramituut dialect); ECM: Eastern Canadian Inuit (Mittimatalik dialect); Du.: Dutch; Far.: Faroese; G: Greenlandic Inuit; Ge.: German; Hi.: Hindi; Ice.: Icelandic; Inu.: Inupiaq; Jac.: Jacaltec; Jap.: Japanese; Kab.: Kabardian; K’i.: K’iche’; Nau.: Naukan; Nish.: Nishnaabemwin; NP: Nez Perce; OE: Old English; Sah.: Sahaptin; Sin.: Sinhalese; WG: Greenlandic Inuit (Western dialect); Yid.: Yiddish; Yim.: Yimas;

Appendix B: Abbreviations used in glosses

ABL: Ablative (case); ACC: Accusative (case); ACT: Active (voice); AMB: Ambiguous (verb type); ANTIP: Antipassive (voice); AOR: Aorist (aspect); ASP: Aspectual marker; AUX: Auxiliary; CAUS: Causative; CONT: Contemporative (mood); DAT: Dative (case); DIR: Direct (voice); DU: Dual (number); DYN: Dynamic (aspect); ERG: Ergative (case); EXCL: Exclusive (number); F: Feminine (gender); FIN: Finite (aspect); FUT: Future (tense); GEN: Genitive (case); HOR: Horizon of interest; IMPF: Imperfect (aspect); IND: Indicative (mood); INF: Infinitive (mood); INT: Interrogative (mood); INV: Inverse (voice); LOC: Locative (case); M: Masculine (gender); MID: Middle (voice); NEG: Negation; NOM: Nominative (case); NONAMB: Nonambiguous (verb type); OBJ: Objective (case); OBL: Oblique (case); PASS: Passive (voice); PAST: Past (tense); PERF: Perfect (aspect); PL: Plural (number); PRE: Present (tense); PREV: Preverb; PTC: Participe (mood); SAP: Speech act participant; SG: Singular (number); UNACC: Unaccusative (verb type); UNERG: Unergative (verb type).
Appendix C: The Inuit language family