Mainland Scandinavian Object Shift and the Puzzling Ergative Pattern in Aleut

1. Introduction

\citet{holmberg1986word} Holmberg 1986 establishes that Scandinavian languages divide into two types with respect to the kind of objects that undergo object shift (movement of an object out of the VP to a position below the subject): In Mainland Scandinavian languages such as Swedish, only pronouns undergo object shift, as in (1), while Icelandic allows all specific objects to undergo object shift, as in (2)[1]:

(1) Swedish \citep[242]{holmberg1986word} (Holmberg 1986:242)

Johan	*köpte*	*den*	*inte.*
John	bought	it	not
'John did not buy it.'			

(2) Swedish \citep[242]{holmberg1986word} (Holmberg 1986:242)

Johan	*köpte*	*boken*	*inte.*
John	bought	the book	not
'John did not buy the book.'			

(3) Icelandic \citep[2]{holmberg1986word} (Holmberg 1986:2)

Jón	*keypti*	*bókina*	*ekki.*
John	bought	the book	not
'John did not buy the book.'			

The goal of this paper is to show that the Eskimo-Aleut languages divide into the same two types. Inuit parallels Icelandic in that specific objects undergo object shift \citep{bittner1996ergativity}(Bittner and Hale 1996).[2] In this paper I argue that, despite its obfuscating surface

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[1] The verb moves out of the VP to 'second position'. Objects that precede the negative have undergone object shift.

Structure without object shift: [subject V_i neg [$_{VP}$ t_i object]]

Structure with object shift: [subject V_i object$_j$ neg [$_{VP}$ t_i tj]]

[2] Although object shift is typically associated with Scandinavian languages, it is known to occur in other languages, such as Turkish \citep{diesing1996semantic} (Diesing 1996) and Hindi \citep{bhatt1996object} (Bhatt and Anagnostopoulou 1996). See \citet{thrainsson20016} Thráinsson 2001 for an overview of object shift. \citet{bittner1996ergativity} Bittner and Hale 1996 show that specific objects move out of the VP in Inuit/West Greenlandic; although they do not label this movement as object shift, it nevertheless fits the definition of object shift as movement of an object out of

complexity, Aleut is like the Mainland Scandinavian languages in that only pronouns undergo object shift.

There are some additional consequences of object shift in the Eskimo Aleut languages which are not present in the Scandinavian languages. In clauses with object shift in the Eskimo-Aleut languages, the case pattern is ergative-nominative, and the agreement is portmanteau, reflecting features of both the ergative subject and the nominative object.[3] The two types of object shift produce two slightly different surface case and agreement patterns in Inuit versus Aleut. In Inuit, the subject is ergative and the agreement is portmanteau when the object is specific, because specific objects undergo object shift in Inuit. In contrast, in Aleut, the subject is ergative and the agreement is portmanteau only if the object is a pronoun, because only pronouns undergo object shift in Aleut.

Additional complications in Aleut (to be discussed below) produce a surface ergative pattern which initially seems entirely unlike that of other ergative languages, even that of the related language Inuit. The Aleut pattern has been described as marking the subject with ergative case if and only if there is a null argument elsewhere in the clause \citep{bergsland1997aleut,boyle2000aleut,sadock2000aleut,sadock2009efficacy} (Bergsland 1997, Boyle 2000, Sadock 2000, 2009). This surprising correlation between ergative case and null arguments has been referred to as the Aleut Effect:

(4)   Description of The Aleut Ergative Pattern (the Aleut Effect):

        In Aleut, the subject gets ergative case if and only if there is a null NP elsewhere in the clause.

This description of the Aleut pattern contrasts sharply with the

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the VP to a position below the subject.

[3] Exactly why object shift alters the case pattern in Eskimo-Aleut languages is controversial. \citet{bittner1996ergativity} Bittner and Hale 1996, working within dependency case theory, claim that shifting the object brings it close enough to the subject to allow it to serve as a case competitor. \citet{woolford2015ergativity} Woolford 2015 suggests that object shift creates a defective intervention effect that can be avoided by a 'last resort' use of ergative case on the subject.

ergative pattern in Inuit, following \citet{bittner1996ergativity} Bittner and Hale 1996:

(5)   The Inuit Ergative Pattern:

In Inuit Greenlandic, the subject is marked with ergative case if and only if the object moves out of the VP, and only specific objects move out of the VP.

Despite this apparent dissimilarity, \citet{hale1997misumalpan} Hale 1997 nevertheless suggests that the analysis of Inuit in \citet{bittner1996ergativity} Bittner and Hale 1996 can be extended to Aleut [4]. Hale sketches an analysis wherein only null pronouns move out of the VP in Aleut. [5] \citet{sadock2000aleut} Sadock 2000 and \citet{boyle2000aleut} Boyle 2000 point out that Hale's account of Aleut suffers from various technical problems, and does not account for all of the Aleut data. While Hale's proposal to extend Bittner and Hale's account of Inuit to Aleut is incomplete, and handicapped by some now outmoded assumptions of the framework of \citet{chomsky1995minimalist} Chomsky 1995, I argue that his basic idea is correct: object shift is the key to understanding the case patterns of both Inuit and Aleut. I show that the differences between these two languages stem from the difference in what type of objects undergo object shift; specific objects object shift in Inuit but only pronouns undergo object shift in Aleut, a difference that parallels the two types of object shift that \citet{holmberg1986word} Holmberg 1986 shows occurs in Scandinavian languages.

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[4] \citet[6]{fortescue1985anaphoric} Fortescue 1985:6 also recognizes the parallel between Aleut and other Eskimo languages with respect to constructions with and without an ergative subject and agreement with both the subject and the object.

[5] \citet{hale1997misumalpan} Hale 1997 proposes that only null objects move out of the VP in Aleut, and assuming that case drives movement, following \citet{chomsky1995minimalist} Chomsky 1995, he postulates that null pronouns in Aleut lack case and must therefore move to get case. \citet{boyle2000aleut}Boyle 2000 shares this assumption that only null pronouns that move out of the VP, although his motivation for the movement is different: a need for null pronouns to be licensed by moving to Spec TP. \citet{merchant2011aleut} Merchant 2011 suggests the movement of null pronouns in Aleut is like clitic movement in other languages.

With the benefit of improvements in syntactic theory since Hale's 1997 paper, particularly in the area of case and agreement, and with the benefit of excellent subsequent work on other Native American languages, I am able to present an account of the complex Aleut pattern which preserves Hale's basic idea: subjects get ergative case only when the object moves out of the VP in both Inuit and Aleut, however the two languages differ in what kind of objects move out of the VP. Nevertheless, I argue that Hale's proposal has one important factor backwards: Hale postulates that pronouns undergo object shift only if they are null in Aleut.[6] In contrast, I argue that cause and effect goes in the other direction: pronouns are null only if they undergo object shift, because only shifted pronouns are in a position to trigger agreement, and only agreeing pronouns can be pro dropped (not spelled out/pronounced at PF), in both Aleut and Inuit.

A complication in Aleut is that object shifting some kinds of pronouns is blocked because it would cause the derivation to crash. Object shifting first and second person pronouns out of the VP is blocked by PCC-like effects on the resulting portmanteau agreement (with the ergative subject and nominative object), similar to what we see in dative-nominative constructions in Icelandic with first and second person objects \citep{sigurdhsson1996icelandic} (Sigurðsson 1996).[7] Thus first and second person object do not undergo object shift in Aleut, and thus they do not agree. Because they do not agree, they cannot be pro dropped (null). Thus first and second person object

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[6] To limit object shift to null pronouns, \citet{hale1997misumalpan} Hale 1997 claims that overt pronouns get case in situ, but null pronouns have to move to get case. Aside from the problem of why this would be so, case no longer drives movement in more recent versions of theory (e.g. \citet{chomsky1995minimalist} Chomsky 2000). Moreover, under the assumption that the decision as to which pronouns will and will not be pronounced (spelled out) is not made until PF, there is no distinction between overt and null pronouns in syntax.

[7] PCC stands for Person Case Constraint. \citet{bonet1994person} Bonet 1994 formulated this constraint to account for person restrictions on sequences of a dative and accusative clitic in Romance. This term has been extended to apply to person restrictions on agreement in clauses with a dative subject and a nominative object in Icelandic and other languages. See \citet{anagnostopoulou2005strong} Anagnostopoulou 2005 for discussion and additional references.

pronouns are overt and in situ in Aleut. Object shift of reflexives is also blocked, due to the Anaphor Agreement Effect \citep{rizzi1990anaphor,woolford1999more} (Rizzi 1990, Woolford 1999).[8]

The proposed analysis of Aleut does not posit anything new. The complex Aleut pattern results from the interaction of nine known syntactic and morphological properties, each of which is independently motivated in other languages. Almost all of these properties have been documented in Inuit and/or other Native American languages such as Nez Perce and Navajo:[9]

(6) Nine Independently Motivated Properties of Aleut:

1. Mainland Scandinavian type object shift (pronouns only)

2. Possessor raising, as in Inuit \citep[71]{bittner1994case} (Bittner 1994:71) and Nez Perce \citet{deal2010ergative} Deal (2010)

3. Possessed positional nouns/nominal stems in Aleut which have the function of postpositions \citep{fortescue1985anaphoric,bergsland1997aleut} (Fortescue 1985, Bergsland 1997:47)

4. Ergative subject only in object shift constructions (as in Inuit and Nez Perce)[10]

5. Portmanteau agreement with subject and object in object shift

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[8] Reflexives are prohibited in positions construed with agreement \citep{rizzi1990anaphor} (Rizzi 1990).

[9] This contrasts with the view expressed in Boyle 2000 that Aleut syntax is unlike that of any other language.

[10] Since \citet{bittner1996ergativity} Bittner and Hale 1996 established that there is a type of ergative language where ergative case is used on the subject only when the object moves out of the VP, additional languages of this type have emerged, e.g. Nez Perce and Niuean. See \citet{woolford2015ergativity} Woolford 2015 for a survey and discussion of this type of ergative language.

constructions (as in Inuit)

6. Object shift of reflexives is blocked in Aleut, as in Inuit \citep[82]{bittner1994case} (Bittner 1994:82) and Nez Perce \citep{deal2010ergative} (Deal 2010), which is an instances of the Anaphor Agreement Effect \citep{rizzi1990anaphor,woolford1999more} (Rizzi 1990, Woolford 1999).

7. Object shift of first and second person objects is blocked because the resulting portmanteau agreement from probing both the ergative subject and the nominative object would incur a PCC-type violation (cf. Icelandic dative subject constructions \citep{sigurdhsson1996icelandic} (Sigurðsson 1996)).

8. Pro Drop of pronouns that agree (as in Inuit (\citep{bok1983on, bok1991case} Bok-Bennema 1983, 1991))

9. Fronted topical objects, with a resumptive pronoun in situ (as in Navajo (\citep{speas1990phrase,willie1991navajo}Speas 1990, Willie 1991)) and as argued for Aleut by \citet{boyle2000aleut} Boyle 2000).

The conclusion of this paper is that the Aleut Effect, that is, the observed surface correlation between ergative case on the subject and a null argument elsewhere in the clause in Aleut is a true correlation, but there is no direct causal relation. Both ergative subjects and null objects are independent, indirect consequences of Mainland Type Object Shift of pronouns:

- Pronouns that undergo object shift agree, and agreeing pronouns are dropped (null) in Eskimo Aleut languages, as in many languages.

- Object shift places the object in a local relation with the subject, which requires ergative case on the subject in the Eskimo-Aleut languages, as in Niuean and Nez Perce.[11]

This paper is organized as follows. The data and the proposed analysis of basic transitive clauses in Aleut, with a comparison to Inuit, is presented in section 2. This section includes a discussion of clauses with a fronted topical object, clauses with a first or second person object, and clauses with a reflexive object. Section 3 focuses on possessor raising constructions in Aleut, where the raised possessor behaves like any object, just as in Inuit and Nez Perce. Section 4 turns to possessed relational/positional nouns in Aleut, which also allow possessor raising. Section 5 discusses some remaining questions and Section 6 is the conclusion.

2. Transitive clauses in Inuit and Aleut

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[11] See \citet{woolford2015ergativity} Woolford 2015 for a survey and discussion of this type of ergative language.

2.1. Object shift

Object shift occurs in both Inuit and Aleut, but the two languages differ as to what kind of object undergoes object shift, paralleling the Scandinavian languages. Inuit is like Icelandic wherein specific objects undergo object shift, while non-specific objects do not. \citet{bittner1994case} Bittner 1994 gives the following minimal pair. In the example in (7), the object is specific: there is one specific book which Juuna has not got:

(7) Inuit \citep[2]{bittner1994case} (Bittner 1994:2)
   Junna-p atuagaq ataasiq tigu-sima-nngi-laa.
   Junaa-ERG book one get-PERF-NEG-IND.3SG.SG
   'There is one book which Juuna hasn't got (yet).'

Bittner argues that the specific object has moved out of the VP, based on evidence involving the scope of negation.

(8) [Junna-erg one book$_i$ [$_{VP}$ t$_i$ got.neg]]

The case pattern in object shift constructions in Inuit is ergative-nominative, with portmanteau agreement resulting from the multiple agree relation created when T probes to and through the ergative subject down to the nominative object.

In contrast, in the example in (9), the object is non-specific. This object "can only take narrow scope, indicating that it remains below negation, inside the VP \citep[35]{bittner1994case} (Bittner 1994:35)."

(9) Inuit \citep[35]{bittner1994case} (Bittner 1994:35)
   Juuna ataukka-mik ataasi-mik tigu-si-sima-nngi-la-q.
   Junna book-INSTR one-INSTR get-AP-PERF-NEG-IND-3SG
   'Juuna has not got one book.'

(10) [Junna-erg [$_{VP}$ one book got]]

Here the subject has nominative case and the agreement is only with the subject.

Although we don't see a word order change in the above pair of examples, more ergative languages of this type have emerged in the

linguistics literature, and for some there is clear word order evidence. One of these is Niuean. \citet{massam2000vso} Massam 2000 gives the following pair of examples from Niuean where word order changes indicate whether or not object shift has occurred before the VP fronting that characterizes this verb initial language. In the example in (11), there is a specific object and object shift occurred before VP fronting. The resulting word order is VSO and the case pattern is ergative nominative:

(11) Niuean \citep[98]{massam2000vso} (Massam 2000:98)

[VSO specific object] [12]

Ne	*inu*	*e*	*Sione*	*e*	*kofe.*
past	drink	ERG	Sione	NOM	coffee

'Sione drank the coffee.'

(12) a. Base order: S [$_{VP}$ V O]
      b. Order after object shift: S O$_i$ [$_{VP}$ V t$_i$]
      c. Order after VP fronting   [$_{VP}$ V t] S O

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[12]
  In Niuean the ergative case morpheme for proper nouns, *e*, happens to look just like the nominative case morpheme for common nouns, *e*.

In contrast, the example in (12) has a non-specific object and no object shift has occurred. The object thus fronts with the verb inside the fronted VP, so that the resulting word order is VOS:

(13) Niuean \citep[98]{massam2000vso} (Massam 2000:98)
    [VOS non-specific object]
    Ne   inu   kofe   a   Sione.
    past   drink   coffee   NOM   Sione
    Sione drank coffee.

(14) a.   Base order: S [$_{VP}$ V O]
     b.   Order after VP fronting: [$_{VP}$ V O] S

I argue that Aleut manifests a pattern similar to the related Inuit language, the difference being that only pronouns undergo object shift in Aleut, paralleling Mainland Scandinavian. Transitive clauses with non-pronominal arguments have an ordinary nominative-accusative case pattern in Aleut (although neither case is marked) and agreement is only with the subject:

(15) Aleut (\citet[2]{boyle2000aleut} Boyle 2000:2 (1a) from \citet[32]{bergsland1981atkan} Bergsland & Dirks 1981:32)
    Piitra-x̂   Ivaana-x̂   kidu-ku-x̂.
    Peter-3sg   John-3sg   help-pres-3sg
    'Peter is helping John.'

Non-pronominal objects remain in situ in the VP in Aleut:

(16) [Peter(nom)   [$_{VP}$ John(acc)   V-3sg]]

In contrast, I argue that (third person) pronoun objects undergo object shift in Aleut, as in Mainland Scandinavian.[13] The case pattern in object shift constructions in Aleut is ergative-nominative, as in Inuit \citep{bittner1994case,bittner1996ergativity} (Bittner 1994, Bittner and Hale 1996). The agreement is portmanteau, expressing features from both the ergative subject and the nominative object:[14]

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[13] We will see below that the object shift construction is blocked with first and second person objects, as well as with reflexive objects in Aleut.

[14] The ergative case is labeled 'relative' in descriptive work on Aleut. The portmanteau agreement series is referred to as the anaphoric series, reflecting the fact that this series identifies the feature of a null object. Work on Aleut

(17) Aleut (\citet[3]{boyle2000aleut} Boyle 2000:2 (1b) from
\citet[32]{bergsland1981atkan} Bergsland & Dirks 1981:32)

    Piitra-m   *kidu-ku-u.*
    Peter-erg   help-pres-3sg/3sg
    'Peter is helping him.'

(18) [Peter-erg   pro.nom$_i$ [$_{VP}$ t$_i$ V-3sg/3sg]]

The object pronoun is not pronounced (not spelled out at PF) because
it agrees and agreeing pronouns drop in Aleut, as in Inuit. We see both
subject and object pronoun drop in the following Aleut example:

(19) Aleut (\citet[3]{boyle2000aleut} Boyle 2000:3 (5) from
\citet[10]{bergsland1981atkan} Bergsland & Dirks 1981:10)

    kidu-ku-ngis
    help-pres-3/3pl
    'They are helping him/her/them.'

\citet{bok1983on} Bok-Bennema (1983) gives the following
examples with subject and object pronoun drop from Yupi'k:

(20) Yupi'k \citep[1]{bok1983on} (Bok-Bennema 1983:1)

    yurar-tug.
    dance-ind.3sg
    'She/he is dancing.'

(21) Yupi'k \citep[2]{bok1983on} (Bok-Bennema 1983:2)

    tangrr-aa
    see-ind.3/3
    'He/she sees him/her/it.

2.2. Topical objects

Aleut allows a topical object to precede the clause, with a resumptive
pronoun in situ, as in example (23):

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generally uses the traditional typological label 'absolutive' for the object of a
clause with an ergative subject, however the term 'absolutive' was meant to be
the neutral label of a typological pattern \citep{dixon1994ergativity} (Dixon
1994) rather than the label of an actual case. As \citet{bittner1994case} Bittner
(1994) argues for the related language Inuit/West Greenlandic, the identity of
this case is nominative in Aleut. There are ergative languages that have
accusative objects, e.g. Warlpiri \citep{legate2006split} (Legate 2006), but
accusative objects do not participate in portmanteau agreement with the subject.

(22) Aleut (\citet[3]{boyle2000aleut} Boyle 2000:3 (6a) from
\citet[27]{bergslandBergsland 1969:27)

> *tayaĝu-x̂*   *qa-x̂*   *qa-ku-x̂*
> man-sg   fish-sg   eat-pres-3sg.
> 'The man is eating the fish.'

(23) Aleut (\citet[4]{boyle2000aleut} Boyle 2000:4 (6b) from
Bergsland 1969:27)

> *qa-x̂*   *tayaĝu-m*   *qa-ku-u.*
> fish-sg$_i$ man-erg   eat-pres-3/3sg
> 'The fish, the man is eating it.'

This is not movement leaving a trace, but rather a base generated topic
linked to a resumptive pronoun in situ \citep{boyle2000aleut} (Boyle
2000), paralleling what \citet{willie1991navajo} Willie 1991 and
\citet{speas1990phrase} Speas 1990 argue for in Navajo. As with any
pronoun object, this resumptive pronoun undergoes object shift,
triggers agreement on the verb, and is thus not spelled out at PF (Pro
Dropped):

(24) fish$_i$ [man-erg   pro.nom$_i$ [$_{VP}$ t$_i$ V-3/3]]

2.3. First and second person objects

Something different happens with first and second person objects;
these do not undergo object shift, do not agree, and must thus be
spelled out at PF. The case pattern is nominative-accusative, as in any
transitive clause without object shift in Aleut:

(25) Aleut \citep[344]{bergsland1997aleut} (Bergsland 1997:344)

> *Tayaĝu-x̂*   *ting*   *kidu-ku-x̂.ˆ*
> man-3sg(nom)   me(acc)   help-pres-3sg
> 'The man is helping me.'

I argue that the object shift construction is blocked/crashes with first
and second person objects because the portmanteau agreement that
would result violates PCC-type constraints, similar to what has been
observed in Icelandic dative subject constructions with first and
second person nominative objects, as in Sigurðsson 1996, 2004):[15]

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[15] See \citet{anagnostopoulou2005strong} Anagnostopoulou 2005 for discussion
and additional references on PCC effects.

(26) Icelandic \citep[148]{sigurdhsson2004icelandic} (Sigurðsson 2004:148)

Honum	*mundu*	*alltaf*	*líka*	*þeir*
him.dative	would.3pl	always	like	they.nom

'He would always like them.'

(27) Icelandic \citep[148]{sigurdhsson2004icelandic} (Sigurðsson 2004:148)

*Honum	*munduð*	*alltaf*	*líka*	*þið.*
him.dative	would.2pl	always	like	you.nom

'He would always like you.'

Thus the only grammatical version of this construction in Aleut is the one without object shift, as in (25), because it has a nominative-accusative case pattern and agreement only with the subject.[16]

2.4. The pattern with reflexive objects

In both Inuit and Aleut, object shift is blocked (or the object shift construction crashes) when the object is a reflexive. We see this for Inuit in the following pair of examples from Bittner 1994. The Inuit example in (28) has a specific object, which undergoes object shift, with the resulting ergative-nominative case pattern. In contrast, in the example in (29) with a reflexive object, object shift has not occurred and the case pattern is nominative-dative:

(28) Inuit \citep[82]{bittner1994case} (Bittner 1994:82)

Suulu(t)-p	*Kaali*	*aallaa-vaa*
Suulu-erg	Kaali	shoot-indicative.3sg/3sg

'Suulut shot Kaali.'

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[16] In contrast to Aleut, the related language Inuit allows first and second person objects to undergo object shift. We know that PCC-type effects are not universal, and that languages that do manifest PCC effects vary widely in exactly which feature combinations are prohibited; however, we may be able to identify a more specific reason why first and second person objects are allowed to undergo object shift in Inuit, in contrast to Aleut. In addition to portmanteau agreement, Inuit has pronominal clitics which suffix to the portmanteau agreement. When a first or second person object moves out of the VP, Inuit may avoid some PCC-type violations by encoding only the number of the object in the portmanteau agreement, and encoding the first or second person feature of the object in a separate pronominal clitic. See \citet{fortescue1984anaphoric} Fortescue 1984 and \citet{woolford2016two} Woolford 2016.

(29) Inuit \citep[82]{bittner1994case} (Bittner 1994:82)

> *Sullut*   *immi-nut*   *aallaa-vuq*
> Sullut   self-dat   shoot-indicative.3sg
> 'Suulut shot himself.'

The object shift version of the reflexive object example is ungrammatical:

(30) Inuit \citep[82]{bittner1994case} (Bittner 1994:82)

> **Suulu(t)-p*   *immi*   *aallaa-vaa*
> Sullut-erg   self   shoot-indicative.3sg/3sg
> 'Suulut shot himself.'

This is an example of the Anaphor Agreement effect (Rizzi 1990, Woolford 1999): anaphors cannot occur in positions normally associated with agreement.[17]

     We see the same pattern with reflexive objects in Aleut. The following example in (31) has a pronoun subject (which is not spelled out because it agrees), and an overt reflexive object. The agreement, which is only with the subject, tells us that object shift has not occurred. Although the subject pronoun is not spelled out, because it agrees, the reflexive pronoun has to be spelled out because it does not agree:

(31) Aleut \citep[139]{bergsland1969(Bergsland 1969:139)

> *txin*   *achixa-ku-x̂*
> 3.refl.sg   teach-pres-3sg
> 'He taught himself.'

This contrasts with the example in (32) with a pronoun object that is disjoint in reference with the subject. Here we see by the portmanteau agreement on the verb that object shift has occurred. The shifted object is dropped (not spelled out at PF) because it agrees.

(32) Aleut \citep[139]{bergsland1969(Bergsland 1969:139)

> *kidu-ku-u*
> help-pres-3/3sg
> 'He is helping him.'

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[17] The Anaphor Agreement Effect appears to be universal \citep{woolford1999more} (Woolford 1999), but why it holds is still a mystery.

3. Possessed objects

3.1. Possessor raising

Pronominal possessors of objects behave like pronominal objects in Aleut. I argue that this is due to possessor raising, paralleling Nez Perce \citep{deal2013possessor} (Deal 2013).[18] Nez Perce is like Aleut in that it has object shift resulting in an ergative subject and portmanteau agreement, and it also has clearly transitive clauses without object shift where the subject is nominative and agreement is only with the subject.

(33) Nez Perce \citep[552]{rude1988ergative} (Rude 1988:552 (30))

Háama	*hi-'wí-ye*	*wewúkiye.*
man(nom)	3-shoot-asp	elk(acc)

'The man shot an elk.'

(34) Nez Perce \citep[552]{rude1988ergative} (Rude 1988:552 (31))

b. Háama-nm	*pée-'wi-ye*	*wewúkiye-ne.*
man-erg	3/3-shoot-asp	elk-obj

'The man shot an elk.'

In terms of what kind of object undergoes object shift, Nez Perce is more like Inuit and Icelandic in that non-pronominal arguments can undergo object shift. According to \citet{rude1982promotion,rude1986topicality} Rude (1982, 1986), it is the more topical objects that undergo object shift in Nez Perce, and less topical objects do not.

Nez Perce allows possessor raising, as \citet{deal2013possessor} Deal 2013 shows, and raised possessors undergo object shift; as in other object shift constructions in Nez Perce, the subject is ergative and the agreement is portmanteau and the object takes the case glossed as objective:[19]

(35) Nez Perce \citet[398]{deal2013possessor} (Deal 2013:398 (14) from \citet[119]{rude1986topicality} Rude (1986:119))

hi-nees-hex-ne'ny-e	*ma-may'as-na*	*pist.*
3rd-pl.obj-see-μ-past	pl-child-obj	father

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[18] \citet[71]{bittner1994case} Bittner (1994:71-2) shows that Inuit allows possessor raising, but only with some verbs.

[19] See \citet{deal2013possessor} Deal 2013 for a discussion of the morpheme she glosses as μ.

'He saw the children's father.'

In contrast, we see an unraised possessor in the following example in (36). The first object has undergone object shift, and we see the genitive possessor in the second object:

(36) Nez Perce \citet[400]{deal2013possessor} (Deal 2013:400 (20a))

'ew-'nii-se	*Tatlo-na*	*Angel-nim*	*taaqmaał.*
3obj-give-imperf	Tatlo-obj	Angel-gen	hat

'I'm giving Tatlo Angel's hat.'

In contrast to Nez Perce, Aleut only allows pronominal possessors to undergo possessor raising and object shift.[20] The pair of examples below shows the contrast between an NP possessor in (37), and a pronominal possessor in (38). In (37), there is no object shift, which is what we expect with non-pronominal objects in Aleut; thus the subject case is nominative and the agreement on the verb is only with the nominative subject:

(37) Aleut (\citet[3]{boyle2000aleut} Boyle 2000:3 (4a) from \citet[144]{bergsland1997aleut} Bergsland 1997:144)

Piitra-x̂	*[hal-s*	*ada-a]*	*kidu-ku-x̂.*
Peter-3sg	[boy-pl	father-3/3]	help-pres-3sg

'Peter is helping the boys' father.'

In contrast in (38) below the possessor of the object is a pronoun. This pronoun undergoes object shift, and we see all the usual consequences of object shift in Aleut. The subject is ergative and the shifted plural pronoun is cross-referenced in the portmanteau agreement on the verb. Because it agrees, the object shifted pronoun is not pronounced (i.e. it is Pro Dropped):

(38) Aleut \citep[144]{bergsland1997aleut} (Bergsland 1997:144)

Piitra-m	*ada-ngis*	*kidu-ku-ngis*
Peter-erg	father-3/3pl	help-tns-3/3pl

'Peter is helping their father.'

(39) [Peter-erg   ~~their.nom~~$_i$ [[t $_i$ father] help-3/3pl]]

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[20] \citet{deal2013possessor} Deal 2013 argues that object shift is directly from the possessor position, without a separate step of possessor raising in Nez Perce. This could be true of Aleut as well.

3.2. No object shift of coreferent possessors

Aleut parallels Nez Perce as well in constructions where the pronominal possessor of the object is coreferent with the subject. Here object shift is blocked in both languages, and that Deal's account of why extends to Aleut. \citet[413]{deal2013Deal 2013:413 points out that Binding Condition B rules out a pronominal object being coreferent with the subject, as in the Nez Perce example in (40) where the pronominal possessor has undergone object shift (as evidenced by the ergative subject and portmanteau agreement on the verb):

(40) Nez Perce \citet[413]{deal2013possessor} (Deal 2013:413 (54a))

Pit'iin'-im	*paa-'yaⓧ̂-na'ny-a*	*'ip-ne*	*picpic.*
girl-erg	3/3-find-μ-rem.past	his/her-obj	cat
'The girl$_i$ found his/her$_j$ cat.'		(no coreference)	

If there is coreference, only the version without object shift (and without ergative case and portmanteau agreement) in (41) is grammatical:

(41) Nez Perce \citet[413]{deal2013possessor} (Deal 2013:413 (54b))

Pit'iin'	*hi-'yaaⓧ̂-n-a*	*['ip-nimi*	*picpic].*
girl(nom)	3-find-asp-rem.past	[her-gen	cat]
'The girl$_i$ found her$_i$ cat.'		(coreference)	

If the object shifted pronoun were to be interpreted as a reflexive rather than an ordinary pronoun, coreference in (41) would also be ruled out, but for a different reason: the reflexive pronount would agree and that would be an instance of the Anaphor Agreement Effect: anaphors are barred from positions that agree. Thus the only solution is to block object shift when there is co-reference between the subject and the possessor of an object.

The same pattern is found in Aleut. When a pronoun possessor undergoes object shift, it cannot be interpreted as coreferent with the subject:

(42) Aleut \citep[54]{bergsland1997aleut} (Bergsland 1997:54)

Hla-m		*[*	*ada-a]*	*kidu-ku-u*
boy-erg$_i$	pro$_j$	[t$_j$	father-3/3]	help-pres-3/3
'The boy$_i$ is helping his $_j$			father.'	(no coreference)

As \citet{deal2013possessor} Deal (2013) concludes for Nez Perce, this is due to Binding Condition B which prohibits coreference between a pronoun object and a c-commanding subject in the same clause.

Coreference is only possible if the pronoun possessor does *not* undergo object shift, as in (43). We can tell that object shift has not occurred in (43) because the subject is not ergative and the verbal agreement is only with the subject..

(43) Aleut \citep[54]{bergsland1997aleut} (Bergsland 1997:54)

Hla-x̂	*[ada-an]*	*kidu-ku-x̂.*
boy-sg(nom)$_i$	[pro$_i$ father-3.refl]	help-tns-sg

'Peter is helping his (own) father.'

Note that the pronoun possessor is null (not spelled out) even in its base position inside the object NP in (43) because it agrees with the head noun, and agreeing pronouns are dropped (not spelled out).

4. Possessed relational nouns in Aleut

From the English translations of the following examples, one could easily get the impression that the subject is ergative in Aleut when the object of a PP is null, and as far as we know, object shift does not occur out of PPs. However, these constructions do not actually involve PPs, but rather possessed directional nouns with an oblique case suffix \citep{fortescue1985anaphoric, bergsland1997aleut}(Fortescue 1985, Bergsland 1997:47). These constructions work like the possessed object constructions discussed above in section 3. The version of the sentence in (44) has a non-pronominal NP possessor, which remains in situ, since only pronouns undergo object shift in Aleut. In contrast, the version of the sentence in (45) has a pronominal possessor, which does undergo object shift.

(44) Aleut \citep[126]{bergsland1997aleut} (Bergsland 1997:126)
   Piitra-x̂   *tayagu-m*   *had-a-*   *huya-ku-x̂.*
   Peter-3sg   man-gen   direction-3/3-loc   go-pres-3sg
   'Peter is going toward the man (in the man's direction).'

(45) Aleut \citep[127]{bergsland1997aleut} (Bergsland 1997:127)
   Piitra-m   *had-a-n*   *huya-ku-u*
   Peter-erg   direction-3/3]-loc   go-pres-3/3sg
   'Perer is going toward him/her (in his/her direction).'

We observe the same differences in the case and agreement patterns in these examples as we do in examples (37) and (38) in section 3.

5. Remaining questions

There are remaining issues concerning Aleut grammar that have not been discussed in this paper. One is the question that \citet{sadock2000aleut} Sadock 2000 asks: what determines which features are expressed by the agreement morphology in different constructions in Aleut? This paper addresses only part of this question, predicting when verbal agreement in clauses can and cannot be portmanteau; verbal agreement cannot be portmanteau unless object shift has occurred. However, the question of which agreement features will be spelled out at PF is a separate issue. Sadock suggests that in some instances, the choice of what agreement features to realize at PF, especially in agreement in DPs (which have not been discussed in this paper), can depend on functional/communicative factors.

Another remaining question concerns Aleut examples where (under the analysis proposed in this paper) object shift appears to occur out of some kind of embedded/adjunct clause. \citet{berge2010unexpected} Berge 2010 cites the following pair of examples from \citet[248]{bergsland1997aleut} Bergsland (1997: 248). In the first example in (46), the verb 'go.to.sleep' agrees only with its subject. In contrast, in the second example in (47), the agreement is portmanteau, also encoding the 3pl features of what looks like the null subject of the adjunct/embedded clause, "When (they) stopped talking":

(46)   Aleut, Atkan dialect \citet[10]{berge2010unexpected} (Berge 2010:10)

      Hla-s   tunum-kada-ku-z̧-iin ting sag̑ani-na-q
      boy-pl   talk-cess-ind-pl-encl 1sg go.to.sleep-part-1sg
      'When the boys stopped talking, I went to sleep.'

(47)   Aleut, Atkan dialect \citet[10]{berge2010unexpected} (Berge 2010:10)

      Tunum-kada-ku-z̧-iin ting sag̑ani-qa-ning.
      talk-cess-ind-pl-encl 1sg   go.to.sleep-part.an-1sg/3pl.an
      'When they stopped talking, I went to sleep.'

One possible clue to understanding these particular examples is that the morpheme *-iin* which Berge glosses simply as 'enclitic' is actually the 2nd/3rd plural possessive ending on nouns *–iin*, as in *adam-aziin* 'to our fathers' \citet[149]{bergsland1997aleut} (Bergsland 1997:149). This suggests the possibility that what is translated as 'when they stopped talking' might be more accurately translated as '(at) their stopping-talking'. If so, this could be another instance of possessor raising.

Merchant (personal communication) suggests the possibility of a similar analysis of Aleut examples which, from their English translations, would appear to involve movement out of a relative clause. As Merchant notes in his 2011 paper "Some Aleut relative clauses have something like the form of a possessed clause\citep[397]{merchant2011aleut} (Merchant 2011:397)."

6. Summary and conclusions

The goal of this paper has been to show that the Eskimo-Aleut languages parallel the Scandinavian languages in manifesting two types of object shift, one where only pronouns undergo object shift, and one where all specific objects undergo object shift. Aleut is like the Mainland Scandinavian languages in allowing only pronouns to undergo object shift, while Inuit is like Icelandic in allowing all specific objects to shift.

We have seen that the consequences of object shift are much more complex in the Eskimo Aleut languages than they are in Scandinavian languages. In the Eskimo-Aleut languages, clauses with object shift have an ergative subject and portmanteau agreement, in contrast to clauses without object shift which have a nominative subject and agreement only with the subject. These consequences of object shift have also been observed in other ergative languages such as Nez Perce and Niuean. Additional factors interacting with object shift in Aleut include possessed relational nouns instead of PPs and possessor raising.

A second goal of this paper has been to show that, although the surface pattern of Aleut shows a perfect correlation between ergative case on the subject and a null object (The Aleut Effect), this correlation does not reflect causation. Instead, object shift (interacting with other factors) causes both ergative subjects and null objects in Aleut. While the surface complexity of the Aleut pattern might initially seem to warrant adding significant generative machinery to the grammar, I have shown in this paper that the Aleut Effect follows automatically from a combination of nine grammatical constructions/factors, each of which is independently motivated in other languages.[21]