From hierarchies to features: person splits and direct-inverse alternations[1]

Artemis Alexiadou and Elena Anagnostopoulou
January 2006
To appear in C. Boeckx (ed.) *Agreement Systems*. Amsterdam: Benjamins

Abstract

In the recent literature there is growing interest in the morpho-syntactic encoding of hierarchical effects. The paper investigates one domain where such effects are attested: ergative splits conditioned by person. This type of splits is then compared to hierarchical effects in direct-inverse alternations. On the basis of two case studies (Lummi instantiating an ergative split person language and Passamaquoddy an inverse language) we offer an account that makes no use of hierarchies as a primitive. We propose that the two language types differ as far as the location of person features is concerned. In inverse systems person features are located exclusively in T, while in ergative systems, they are located in T and a particular type of v.[2]

A consequence of our analysis is that Case checking in split and inverse systems is guided by the presence/absence of specific *phi-features*. This in turn provides evidence for a close connection between Case and φ-features, reminiscent of Chomsky's (2000, 2001) *Agree*.

1. Person splits, hierarchies and markedness

Many ergative languages employ nominative-accusative and absolutive-ergative markings depending on a) person distinctions (person splits), b) tense/aspect/mood of the clause or c) the main/subordinate clause distinction (Dixon 1994). In this paper we concentrate on person splits.
In languages with person splits, sentences with 1st and 2nd person arguments have a different syntax than sentences with 3rd person arguments. 1st and 2nd person pronouns exhibit a nominative-accusative pattern, i.e. transitive subjects and intransitive arguments bear nominative case/ agreement marking while transitive objects bear accusative marking. The nominative-accusative pattern

[1] An earlier version of this paper was presented at the 25th GLOW Colloquium in Amsterdam (April 9-11, 2002) and at the McGill Linguistics Colloquium (October 4, 2002). We would like to thank the participants for their comments.
[2] Our proposal differs from approaches that link person splits to properties of the T-C system and to the mapping hypothesis (Jelinek 1993 and others).

is illustrated in (1) and (2) with examples from Dyirbal (from Dixon 1994: 10, 14) and Lummi (Coast Salish, from Jelinek 1993: 19, 24, 25), respectively:

(1) a. *ɲ^{y}urra nana-na buran Dyirbal*
you-all.NOM we all.ACC see-NONFUT
"you all saw us"

b. *ɲ^{y}urra banaga-ɲ^{y}u*
you-all.NOM return-NONFUT
"you all returned"

(2) a. *t'əm'-t-oŋəs=sən* NOM ACC *Lummi*
hit-TR-1/2 ACC=1.S.NOM
"I hit you"

b. *čey=lə'= sən*
work=Past=1.S.NOM
"I worked"

3rd person arguments (pronouns, NPs) exhibit an absolutive-ergative pattern, i.e. transitive subjects bear ergative while transitive objects and intransitive arguments bear absolutive:

(3) a. *yabu ŋuma-ŋgu buta-n*
mother.ABS father.ERG see-NONFUT
"The father saw the mother"

b. *yabu banaga-ɲ^{y}u*
mother.ABS return.NONFUT
"The mother returned"

(4) a. *t'əm'-t-s=lə=∅*
hit-TRANS-3.ERG=PAST=3.ABS
"He hit him"

b. *t'iləm'=∅*
sing=3.ABS
"He sang"

Splits of the type illustrated in (1)-(4) have been described in the typological literature as phenomena of *case markedness* on the *core referents* of the NPs in the A (subject of transitive verb) and O (object of transitive verb) grammatical functions. Nominative is taken to be the unmarked case of the nominative-accusative system and absolutive the unmarked case of the ergative-absolutive system. Being unmarked, nominative and absolutive surface on the single argument of intransitives, and they are often null or associated with less morphology than accusative and ergative. In languages with person splits 1st and 2nd person pronouns surface with *unmarked*

nominative and 3rd person arguments with *marked ergative* when they occur in the A function. 1st and 2nd person pronouns surface with *marked accusative* and 3rd person arguments with *unmarked absolutive* when they occur in the O function. This sensitivity of case-distribution (marked vs. unmarked) to the grammatical function (A vs. O) of particular argument types (1st, 2nd vs. 3rd) has been explained in terms of the nominal hierarchy in (5) (Silverstein 1976) in combination with the view that marked case is associated with marked grammatical function (see e.g. Silverstein 1976; Kuno 1976; Dixon 1994: 85).

(5)				Common Nouns		
1st person pronouns	2nd person pronouns	3rd person pronouns, demonstratives	Proper Names	Human	Animate	Inanimate

It is proposed that the elements in the left-hand side of (5) are more likely to appear in the A function as they are prototypical agents, i.e. "natural instigators of actions". The ones on the right-hand side of (5) are more likely to appear in the O function as they prototypical patients, i.e. "natural" undergoers. 1st and 2nd (*local*) person arguments display an accusative pattern and 3rd person (*non-local*) arguments an ergative pattern because unmarked cases (nominative for A and absolutive for O) appear on prototypical agents/ patients (local subjects, non-local objects), while marked cases (ergative for A and accusative for O) appear on non-prototypical agents/ patients (non-local subjects, local objects). This account is summarized in table I (from Aissen 1999: 675):

Table I: Person Splits in Ergative Languages

	Unmarked	Marked
Local Persons	Subject	Object
3rd Person	Object	Subject
Case	Nominative/ Absolutive	Accusative / Ergative

Building on Silverstein (1976), a number of researchers (DeLancey 1981, Legendre & al. 1993, Aissen 1999) have argued that person splits should be analysed in terms of the requirement, expressed in (6), for harmonic alignment of prominence scales, as in (7), which are considered to be part of the universal grammar.

(6) Universal person scales, role scales, relational scales must be brought into alignment

(7) *Person Scale*

a. Local person > Pronoun 3rd > Proper noun 3rd > Human 3rd > Animate 3rd > Inanimate 3rd

Role Scale
b. Agent > Patient
Relational Scale
c. Subject > Non-subject (Aissen 1999: 679)

Harmonic alignment associates the high-ranking elements as well as the low-ranking elements on the three scales. According to (6), the maximally unmarked clause is one in which the agent subject is a local (1st, 2nd person) argument and the patient object is a non-local (3rd person) argument. The maximally marked clause is one in which the agent subject is a non-local (3rd person) argument while the patient object is a local (1st, 2nd person) argument.

Person splits have been linked to a number of other phenomena that can be understood in terms of (morphological and syntactic) markedness reflecting alignment of scales of the type illustrated in (7). The alternation between the *direct* and *inverse* voice instantiates one such phenomenon. Consider Passamaquoddy, a language showing the direct/ inverse alternation (Bruening 2001). In Passamaquoddy, transitive verbs are formed with finals that reflect the animacy of the object. There are TA (Transitive Animate) verbs that take animate objects, and TI (Transitive Inanimate) verbs that take inanimate objects. All animate nouns qualify as either *proximate* or *obviative*, depending on several (discourse and grammatical) factors. TA verbs have a prefix that always marks the proximate argument (italicized in (8)). A plural suffix (italicized in (8)) also marks this argument. The other argument is marked by a suffix in final position (underlined in (8)). If the subject is the proximate argument, the verb is direct (marked by *a*), as in (8a). If the object is the proximate argument, the verb is inverse (marked by *ku*), as in (8b). First and second persons are always proximate with respect to third persons:

(8) a. *k*-ciksotuw-a-*nnu*-k *Direct*
2-listen to TA-DIR-1P-3P
"we (Incl) listen to them"
b. *k*-ciksota-ku-*nnu*-k *Inverse*
2-listen to TA-INV-1P-3P
"they listen to us (Incl)"

Accounts that treat the alternation in (8) in terms of syntactic markedness crucially assume that the direct is the unmarked and the inverse the marked member of the direct/ inverse opposition. In (8a) the unmarked direct is chosen because the subject is local and the object non-local, a configuration reflecting harmonic alignment of the person and the relational scales in (7). Choice of the marked inverse in (8b) signals the maximally marked configuration with a non-local 3rd person subject and a local 2nd person object.

Markedness relations have also been argued to derive the active/passive voice opposition in another set of languages. As will be discussed in section 4 below, Lummi has no (unmarked) transitive sentence corresponding to a string like (9a) where a non-local agent acts upon a local patient. Only the (marked) passive is possible in such cases, as in (9b):

(9) a. * ERG ACC "He knows me"
b. *xči-t-ŋ=sən* NOM "I am known (by someone)"

A final phenomenon that has been treated along similar lines is illustrated in (10):

(10) a. *Tha su ton stilune*
Fut Cl(Gen, 2nd, sg) Cl(Acc, *3rd,* sg, masc) send-3pl
"They will send him to you"
b. **Tha tu se stilune*
Fut Cl(Gen, 3rd, sg, masc) Cl(Acc, *2nd*, sg) send-3pl
"They will send you to him"

The phenomenon in (10) is known in the literature as the **me lui/I-II Constraint,* or *Person-Case Constraint* (henceforth the PCC; see Perlmutter 1971, Kayne 1975, Bonet 1991, 1994, Ormazabal & Romero 2001, Haspelmath 2001, Anagnostopoulou 2003, 2005; Bianchi 2003 among others). The PCC restricts combinations of dative and accusative phonologically weak elements (clitics, agreement markers, weak pronouns). One formulation of the PCC is given in (11) ((11) is the, so called, *Weak version of the PCC* assumed to be the core case of the PCC by Haspelmath 2001, Bianchi 2003 and others; see Bonet 1991 and Anagnostopoulou 2005 for discussion of the two versions of the PCC):

(11) In a combination of a weak direct object and an indirect object [clitic, agreementmarker or weak pronoun], if there is a third person it has to be the direct object. (Bonet 1991: 182)

(11) prevents 1st and 2nd person weak direct objects from co-occurring with 3rd person weak indirect objects, capturing the fact that (10a), with a local indirect object and a non-local direct object, is grammatical, while (10b), with a non-local indirect object and a local direct-object, is ungrammatical. As discussed in Haspelmath (2001), among others, the effects of the PCC in (10), under the

formulation in (11),[3] can be straightforwardly accommodated in terms of alignment of scales, if goal/ benefactors are taken to outrank patient themes in the Role Scale and indirect objects outrank direct objects in the Relational Scale, as in (12):

(12) *Person Scale*
a. Local person > Pronoun 3rd > Proper noun 3rd > Human 3rd > Animate 3rd > Inanimate 3rd
Role Scale
b. Agent > Goal> Patient
Relational Scale
c. Subject > Indirect Object > Direct Object

The requirement for alignment of grammatical function prominence and person/ animacy prominence has as a consequence that the direct object cannot be ranked higher than the indirect object in the person/animacy scale, explaining the ungrammaticality of (10b).

At first sight, the above mentioned accounts might seem attractive as they treat a number of different phenomena as reflexes of a single generalization, association of semantic role with person/ animacy rank. They raise, however, questions having to do with the status of Silverstein's nominal hierarchy and the way in which markedness generalizations can be expressed in a formal theory of grammar.

More specifically, as pointed out by Jelinek (1993: 18), the most obvious difficulty with Silverstein's scale is that contrary to the claim that 1st and 2nd person arguments are "more natural" agents than 3rd person arguments, the referents of 3rd person arguments are statistically as likely to be agents as 1st and 2nd person arguments, a fact confirmed by text counts by Wierzbicka (1981). Moreover, much research in the *Principles and Parameters* framework has shown that hierarchies, such as the theta-hierarchy – even though descriptively useful – are not primitive but can be derived from independently motivated interacting principles. A further set of questions concerns markedness, and in particular the way in which statements about markedness can be encoded in the theory of morpho-syntax. Should the formal theory of Case include statements about case markedness? Is unmarked case a morphological or syntactic notion? In what sense is the passive more marked than the active and the inverse more marked than the direct? Is it correct to unify the different expressions of markedness and to treat case markedness on a par with voice markedness? A final consideration is that it is not at all evident

[3] As discussed in Anagnostopoulou (2005), the strong version of the PCC cannot be as easily accommodated in an alignment approach.

that all the phenomena mentioned above (person splits, direct-inverse, active-passive, the PCC) should be reduced to exactly the same principles.

Recent work on the PCC (Ormazabal & Romero 2001; Anagnostopoulou 2003, 2005; Adger and Harbour 2003; Bejar and Rezac 2003, Bianchi 2003) has shown that the constraint can be successfully analyzed in terms of agreement checking procedures. Person/ animacy and case scales turn out to be *epiphenomenal* the effects of which can be derived from independent components of the grammar. The present paper continues this line of research focusing in particular on person splits. Our goal is to explore the extent to which effects which have been described in terms of hierarchies can be successfully analyzed in terms of familiar agreement and Case checking in a number of well-defined syntactic environments. We argue for an analysis of person splits based on a particular view of ergativity and feature checking. We then compare hierarchical effects in person splits to hierarchical effects in direct-inverse alternations, pointing to the similarities and differences between the two types of phenomena. We conclude that it is incorrect to unify split ergativity, direct-inverse alternations and PCC effects under a single explanation. The three phenomena arise under different syntactic conditions.

In the next section we present our core assumptions on ergativity. In section 3 we turn to a detailed study of Lummi. In section 4 we examine inverse systems. In section 5 we offer our general conclusions.

2. Ergativity: core assumptions

The literature on ergativity contains several attempts to reconcile the well known Case and Agreement patterns of ergative languages with a constrained theory of Universal Grammar. Bobaljik (1993) and Laka (1993) argue that absolutive case is low case, the counterpart of accusative. Ergative is seen as a 'high' case, the counterpart of nominative. On this view, the parameter differentiating ergative from accusative languages manifests itself in the intransitive clause and has to do with the case that is active in intransitives: high nominative takes precedence over accusative in accusative languages; low absolutive takes precedence over ergative in ergative languages. On the other hand, many analyses within the Principles and Parameters theory equate absolutive case to the nominative of the nominative-accusative languages (Bok-Bennema 1991; Nash 1995, 1996; Woolford 1997). The ergative case is analyzed as a by-phrase (Hale 1970), a PP or a KP (Bittner 1994), a genitive NP (Bok-Bennema 1991) or an abstract equivalent of the accusative (Murasugi

1992).[4] Mahajan (1993), Nash (1996) and Woolford (1997) argue that ergative is not a structural case parallel to nominative, but rather a lexical case parallel to dative.

In this paper we will adopt the view that ergative is what Marantz (1991) calls dependent case similar to accusative. Marantz argues that there is an important similarity between ergative and accusative case: both are what he calls "dependent cases". Dependent case is assigned when a distinct position is (i) not part of a chain having lexical case and (ii) distinct from the chain being assigned dependent case. Marantz proposes that ergative is dependent case assigned "upwards" to the subject, while accusative is dependent case assigned "downwards" to the object. On Marantz's theory, it is the definition of dependent case that explains the data covered by Burzio's generalization (accusative case on the object is assigned only when a subject is present) as well as the generalization that ergative case is assigned only when an object is present. This view will be re-stated within the v system.

We will place our analysis in a system without agreement projections following Chomsky (1995, 2000, 2001). Following Alexiadou (2001),[5] we propose that ergativity/ accusativity is tied to the properties of a semi-functional head v introducing the external argument and checking Case of the internal argument (Kratzer 1994, Chomsky 1995). In the literature, see e.g Collins (1997) and Marantz (1997), it has been argued that there are two main types of v: transitive vs. intransitive. The former combines with the external argument, the latter does not:

(13) a. transitive v [+external argument] v-TR
b. intransitive v [-external argument] v-INTR

Extending this distinction we will assume that there are several types of intransitive (Embick 1998, Alexiadou 2001) and transitive vs available to the computational system (Harley & Noyer 1998, Arad 1999).

In the transitive clause of nominative-accusative languages, the object checks Case and phi-features against v-TR and the subject checks Case and phi-features against T. Passives and unaccusatives contain a deficient v-INTR which cannot check the Case of the object. As a result, the object enters Agree/Move with T, resulting in Nominative Case and Subject Agreement.

Following a recent trend in the literature (see e.g. Bobaljik & Branigan, to appear) we assume that ergativity is not a uniform phenomenon. We propose that certain types of ergative languages include a v that does not enter Agree

[4] Müller's (2004) analysis of ergativity is quite close to Murasugi's view. In Müller's system the ergative vs. accusative marking is regulated by an earliness condition on Merge vs. Agree respectively.

[5] It should be mentioned here that Alexiadou (2001) pursues an analysis of ergative as a lexical case.

with the object (cf. Müller 2004). In these languages, the object checks absolutive case under Agree with T (with or without movement). Ergative is a case on the subject assigned by v. We will call this type of v, v-ERG. Thus the "dependent case" generalizations state above can be stated as properties of v-TR and what we called here v-ERG. Specifically, v-ERG checks Case on the subject only when an object is present , while v-TR enters Agree with the object only when a subject is present. The "dependent case" statements are, in turn, reducible to a requirement of T to always enter Agree. In clauses containing a single argument, this must enter Agree with T, yielding Nominative or Absolutive, which, therefore, take precedence over Accusative and Ergative. The treatment of ergative as dependent case is consistent with a view of ergative as structural rather than lexical Case.

3. The Syntax of Splits: Case distinctions reflect different types of vs

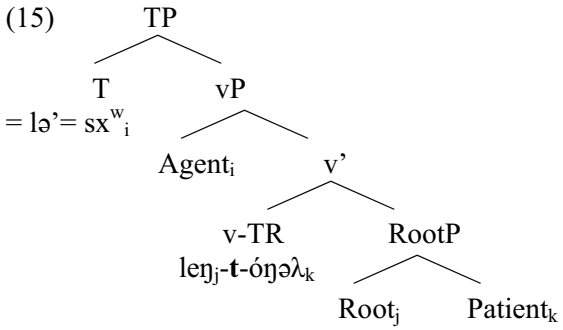
On the basis of Lummi, we argue that person splits result from choices of particular Voice heads: (i) ergative vs. accusative v. In particular, Ergative v reflects the lack of person features (3). On the other hand, accusative v reflects the presence of person features (1,2).

To begin with, there is clear morphological evidence that ergative arguments are realized in a low position in Lummi (Jelinek 1993: 19-23), supporting the view that ERG is assigned to the subject in its base position, adopted in this paper. Lummi has a second position clitic sequence marking Mood, Tense, Modality and the Nominative Subject. These unstressed clitics follow the first word in the sentence, the predicate. The predicate contains a root, derivational suffixes and internal arguments. These arguments are morphologically internal; they are suffixes preceding the clitic string. The clitics are unstressed while the internal argument suffixes are integrated into the predicate and may receive the sentence stress. In transitive predicates the root is obligatorily followed by transitivizing suffixes which mark the valence of the predicates. Sentences with a local object and a local subject have a nominative-accusative syntax. The accusative suffix ACC is associated with the TR head which immediately precedes ACC. The subject is the rightmost element in the clitic cluster:

(14)	*leŋ-t-óŋəλ*	*=ləʼ*	*=sx^{w}*
	see-TR-1.P.ACC	=PAST	=2.S.NOM
	"You saw us"		

Following and modifying Murasugi (1992) and Jelinek (1993), we assume that the TR suffix is a realization of v-TR. The structure we assume for (14) is given in (15) (compare to tree (23) in Jelinek 1993: 23):

(15)

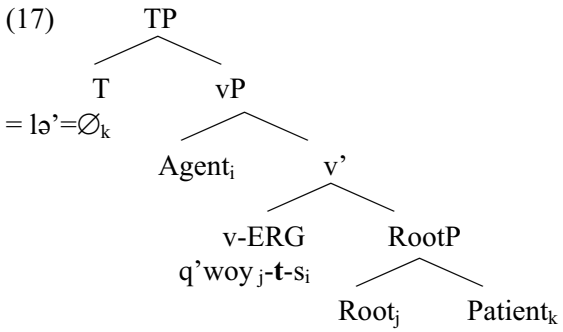


The 1.P.ACC morpheme "óŋəλ" on the predicate cluster in v-TR spells out Agree between v-TR and the object while the 2.S.NOM morpheme *sx*^{w} on the clitic cluster in T spells out Agree between T and the subject.[6] Crucially, ergative morphemes in Lummi occur in the same place as accusative morphemes. As shown in (16), the 3rd person ergative marking *s* occurs internal to the predicate, right next to the TR head, just like the accusative "óŋəλ" in (14) (Jelinek 1993: 25-26):

(16) *q'woy*-t-s =lə' =∅
die-TR-3ERG =PAST =3ABS
"He killed him"

The ergative suffix precedes the tense clitic in (16) while the nominative clitic follows the tense clitic in (14). We propose that the string in (16) has the syntax in (17):

(17)



[6] We remain neutral as to whether Agree is combined with Move (of a small pro argument, as in Baker 1996) in these examples or not.. As will be seen below (see fn 8), there is evidence that Nominative arguments do move in Lummi. The ERG morpheme, though, in (16)/ (17) is a reflex of Agree without Move in our analysis.

The ERG morpheme on the predicate cluster in v-ERG spells out Agree between v-ERG and the subject, while the zero absolutive morpheme on T spells out Agree between T and the object. In Lummi, absolutive arguments are phonologically null. All other arguments are overt.

The presence of an ergative agent in spec, vP in (17) does not block Agree between T and the lower absolutive patient, i.e. the agent does not cause what Chomsky (2000; 2001) calls "a defective intervention effect". This is not surprising, however. As stressed by Bobaljik (2004), defective intervention effects are never caused in monoclausal environments. Thus, while in Icelandic biclausal sentences (cf. 18a,b from Schütze 1997 and Holmberg and Hróarsdóttir 2002) the intervening dative blocks Agree between matrix T and the embedded nominative, in monoclausal contexts (cf. 19, taken from Bobaljik 2004) the dative does not block Agree between T and the nominative object:

(18) a. *Mér fannst/*fundust henni leiðast þeir*
Me-DAT seem-3sg/*3pl she-DAT to-be bored they-NOM
"I thought she was bored with them"

b. *Það virðist/ *virðast einhverjum manni [hestarnir vera seinir]*
there seems-sg/seem-pl some man-DAT the horses-NOM be slow
"It seems to some man that the horses are slow"

(19) a. *Það líkuðu einhverjum þessir sokkar*
there liked-PL someone-DAT these socks-NOM
"Someone liked these socks"

b. *Um veturinn voru konunginum gefnar ambáttir*
In the winter were-PL the king-DAT given slaves-NOM
"In the winter the king was given (female) slaves"

It is beyond the scope of the present paper to explain the presence vs. absence of the intervention effect in (18) vs. (19). What matters for present purposes is the fact that the nominative object enters Agree with T across an intervening dative experiencer in (19a) and goal in (19b). In a similar manner, the absolutive object enters Agree with T across an intervening ergative agent in (16), (17). [7]

In (15) and (17) above we have seen the derivations for the patterns that involve 1-2 person (see ex. (14)) and third-third person (see example (16)) subject-object combinations respectively. In the system we are assuming the difference between (14) and (16) is expressed through the presence of *different types of vs:* in particular two such vs are taken to present, an accusative v that

[7] Bobaljik (2004) proposes that the defective intervention effect constrains Move but not Agree. If he is right, then the null absolutive morpheme spells out Agree without Move in Lummi. For the present paper, it is sufficient to state our generalizations in terms of Agree.

leads to a pattern where the object bears accusative and the subject nominative, and an ergative v that leads to a pattern in which the object bears absolutive and the subject ergative.

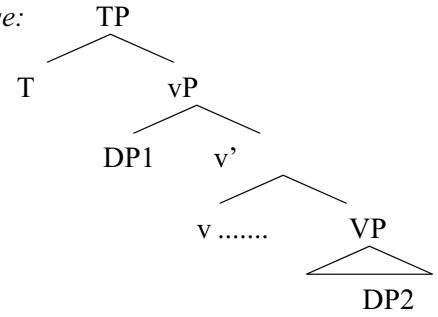
Now consider how this system enables us to account for the attested and non-attested patterns in Lummi (20):

(20)	a. NOM ACC xči-t-oŋəs=sən	'I know you'	1,2 >1,2
	b. ERG ABS xči-t-s=0	'He knows him'	3>3
	c. ***ERG ACC**	'*He knows me'	*3>1,2
	d. NOM ABS xči-t-0=sən	'I know him'	1>3

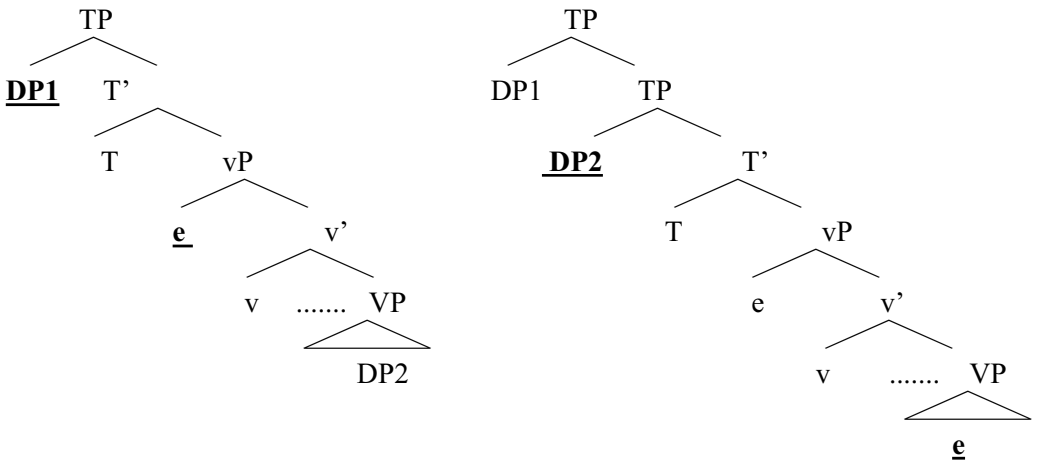
We have seen that (20a) has the syntax in (15), while (20b) has the syntax of (17). The NOM ACC pattern relies on the presence of v-TR, which yields the syntax that appears throughout in nominative-accusative languages. The ERG ABS pattern relies on the presence of v-ERG, which yields the ergative-absolutive clause. The interesting cases to explain are the ungrammatical (20c) and the grammatical (20d) which mix a case from the ergative system with a case from the accusative system.

Starting from the well-formed (20d), where NOM co-occurs with ABS, we propose that this is an instance of a multiple Move/ Agree construction (Ura 1996, Richards 1997, Anagnostopoulou 2003), in which both arguments enter Agree with T, checking their features on T. Following Richards (1997) and Anagnostopoulou (2003), we propose that when two arguments enter Move/Agree with a higher head the order of operations must respect the Minimal Link Condition. The higher argument Moves first, followed by Move or just Agree of the lower argument. When the lower argument moves, it tucks in beneath the first one. The derivation proceeds as shown in (21). First the DP1 moves to T because it is closer to it, and sub-sequently the DP2 moves to T. Movement of DP.2 across the trace of DP1 is licit because traces do not count as interveners (Chomsky 1995; 2000; 2001).

(21) *Base:*



Step I: Movement of High Argument *Step II: Movement of Low Argument*



When the lower argument (DP2) does not move, it enters Agree with T after DP1 has moved to T because Agree across an A-movement trace is possible (see Holmberg and Hróarsdóttir 2002 for evidence from Icelandic).

We propose that (20d) has either an analysis as in (21) or an analysis where the NOM moves to T and then the ABS enters Agree with T.[8] Under either analysis both arguments, subject and object, enter Agree with T. In recent research on the PCC (Anagnostopoulou 1999; 2003, 2005; Bobaljik & Branigan to appear; Bejar and Rezac 2003) it has been argued that two arguments are allowed to check features against a functional head, v-TR or T, provided that certain conditions are met. The core observation is that when two arguments check features against a single functional head either (22) or (23) must hold:

(22) *Strong Condition on Multiple Feature Checking*
When two arguments check features against a single functional head, the lower one must be third person

(23) *Weak Condition on Multiple Feature Checking*
When two arguments check features against a single functional head, if there is a third person it has to be the lower argument.

Conditions (22) and (23) subsume the Strong and the Weak version of the PCC discussed in Bonet (1991; 1994), Bianchi (2003) and

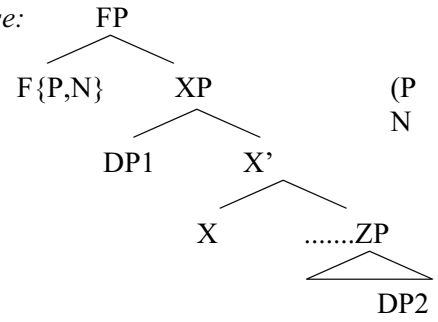
[8] The nominative argument must be assumed to move to T, regardless of whether the absolutive argument is taken to Move to T or just to enter Agree with T (see also footnotes 6 and 7 for discussion of the issue of Move and Agree).

Anagnostopoulou (2005) (see section 2 above for an explicit formulation of the Weak Version of the PCC). According to (22), when two arguments enter feature checking against the same head the lower argument is not allowed to be 1st or 2nd person, regardless of the person specification of the higher argument, i.e. whether it is 1st , 2nd , or 3rd. According to (23), what is not allowed is for the lower argument to outrank the higher one in person. 1st and 2nd person low arguments are licit in the presence of 1st and 2nd person high arguments and illicit in the presence of 3rd person high arguments. Which Constraint is active in a particular language, i.e. whether a language has (22) or (23), appears to be a parameter (see Anagnostopoulou 2005, for extensive discussion). In the literature several proposals have been developed to derive Conditions (22) and (23).

NOM>ABS sequences like (20d) in Lummi are compatible with both the Strong Condition in (22) and the Weak Condition in (23). The language is such that in NOM>ABS configurations the NOM argument is always 1st or 2nd person and the ABS argument always 3rd. Recall that when both the subject and the object are equally ranked in person, i.e. when they are both 1st and 2nd person, then they check features against distinct heads, T the subject and v-TR the object, bleeding the Multiple Feature Checking Configuration

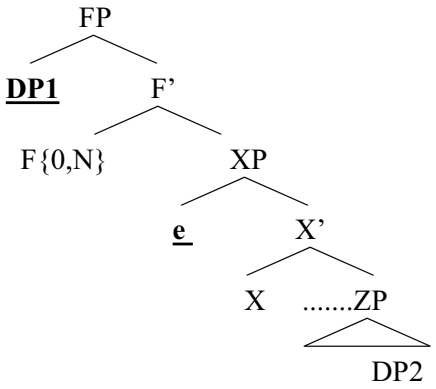
For the purposes of the present discussion we will assume that the Strong Condition (22) holds in Lummi. Following Anagnostopoulou (2003; 2005) we propose that in Multiple Feature Checking configurations the derivation proceeds as detailed above. In such configurations phi-features are not checked as a bundle. The argument that moves first to a functional head F checks person on F and the argument that moves/ agrees second may only check number on F, as depicted in (24) for the Multiple Move construction:

(24) *Base:*

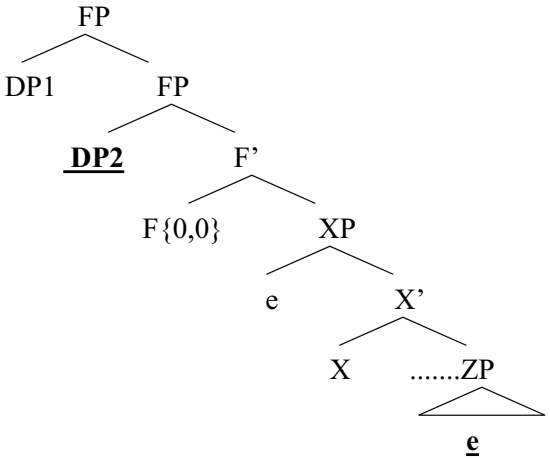


(P = person features
N = number features)

Step I: Checking of person feature by high argument



Step II: Checking of number by low argument



If the lower argument is of an appropriate type (third person) the derivation converges. If, however, the lower argument is inappropriate (1st, 2ndperson) the derivation crashes. On the assumption that 3rd person arguments lack a person feature (they are no person; Benveniste 1966, Postal 1966, Silverstein 1986, Bonet 1991, Johns 1993, Taraldsen 1995, Ritter 1995 and Kayne 2000 among many others), they are the only ones that can match the number feature of F, once person on F has been checked.

Before closing the discussion of (20d), there is a final question we need to address. Why is it that 3rd person objects in Lummi must check features against T, i.e. why is it that they are not allowed to check features against v-TR which would lead to a surface ACC form? We propose that presence vs. absence of person features is exactly what differentiates the two types of v of Lummi, v-TR vs. v-ERG. The presence of an ACC Case feature on v matches objects specified as [+person].[9] The presence of an ERG Case feature on v matches subjects that lack person.

Turning, finally, to the ungrammatical ERG>ACC combinations in (20c), there are at least three ways to account for them. One possibility is to resort to the definition of ERG and ACC as dependent Cases. Assuming, as in section 3, that the "dependent case" statements are reducible to a requirement of T to always enter Agree, ERG>ACC combinations are ruled out because there is no argument that can enter Agree with T. Another option is to assume that v-ERG is basically an intransitive v (cf. Jelinek 1993; Alexiadou 2001). (24c) is, on this view, ruled out because an intransitive v introducing the

[9] Person split languages provide evidence that case checking is linked to person checking as claimed on purely theoretical grounds in Chomsky (2000, 2001).

ergative subject cannot check accusative Case on the object. A final possibility is that ERG>ACC combinations are ruled out because they violate the Conditions on Multiple feature checking (22) and (23) discussed above. ERG>ACC combinations would represent instances where a 3rd person subject and a 1st or 2nd person object check features against the same head, an inappropriate configuration, for the reasons outlined above.[10]

To summarize, thus far we have argued that:

(i) The person split in Lummi is linked to choice of two different vs.

(ii) The presence vs. absence of person features guides choice of v-TR vs. v-ERG

In the next section we turn to inverse systems.

4. Inverse Systems

We now turn to Passamaquoddy, where, as will be seen in this section, hierarchical effects result from the interaction of the following factors:

(i) Person features are hosted on only one head in the clause, namely T.

(ii) In the transitive clause, a [+Proximate] feature on T must be checked.

(iii) [+Person] arguments are always [+Proximate] and must check their features against T.

(iv) 3rd person animate arguments check features against T in order to satisfy the requirement of T in the transitive clause to enter Agree with a [+proximate] NP (see condition (ii) above).

Recall from section 2 the main characteristics of Passamaquoddy. In Passamaquoddy, transitive verbs are formed with finals that reflect the animacy of the object. Transitive Animate verbs take animate objects, and Transitive Inanimate verbs take inanimate objects. Animate nouns qualify as either *proximate* or *obviative*. Transitive animate verbs have a prefix and a suffix (italicized in (25)) that mark the proximate argument and a suffix in final position (underlined in (25)) for the other argument. If the subject is proximate, the verb is direct, as in (25a). If the object is proximate, the verb is inverse, as

[10] Note however that in Halkomelem Salish ERG>ACC is not always ruled out. It is also not ruled out in Dyirbal (language with Case marking not Agreement Marking). The fact that ERG>ACC is possible in Dyirbal is expected in a theory that treats the ungrammaticality of ERG>ACC combinations as a subcase of the PCC constraint, because the PCC restricts combinations of agreement markers and clitics and does not obtain with strong pronouns (see Bonet 1991, 1994 and many others for discussion). In Halkomelem Salish the ERG>ACC constraint could be morphological in nature. As Wiltschko (2003) notes, certain ERG>ACC combinations are possible when a portmanteau morpheme is available for them. As discussed by Anagnostopoulou (2003), Haspelmath (2001), Ormazabal and Romero (2001) and others, the PCC is not a universal, contra Bonet (1994).

in (25b). First and second persons are always proximate with respect to third persons:

(25) a. *k*-ciksotuw-a-*nnu*-k *Direct*
2-listen to TA-DIR-1P-3P
"we (Incl) listen to them"
b. *k*-ciksota-ku-*nnu*-k *Inverse*
2-listen to TA-INV-1P-3P
"they listen to us (Incl)"

Drawing on evidence from binding, Bruening (2001) argues convincingly that inversion is A-movement of the object across the subject to a higher head H, which proceeds via a secondary specifier to v-TR, the head that introduces the subject. As argued extensively in Ura (1996), Richards (1997) and Anagnostopoulou (2003), non-local A-movement always proceeds successive cyclically through the specifier of a higher head introducing the intervener. We will therefore adopt the essentials of Bruening's analysis and we will assume that the target H of inversion is T. Inverse languages thus have two types of v-Tr (see Ura 1996): (i) *(Direct) v-Tr* does not license a secondary specifier that can host the object on its way to T; therefore, only the subject is allowed to move to T in the Direct Voice. (ii) *(Inverse) v-Tr* licenses a secondary specifier through which the object moves to T across the subject.

In intransitives, 1st and 2nd person arguments agree on the verb in intransitives as subjects of transitives ((26a), (26b)), but third persons agree on the verb like objects (27):

(26) a. *nt*-op
1-sit
"I sit"
b. *kt*-op
"2-sit"

(27) opu-*wok* (cf. n-tokom-a-*k*)
sit-3P 1-hit-Dir-3P
"they sit" "I hit them"

At first sight, this could be seen as a person split of the type found in Lummi. 1st and 2nd person arguments could be seen as having NOM in (26), while 3rd person arguments could be seen as having ABS in (27). However, a closer look into Passamaquoddy shows that this is not the right way of looking at things. Crucially, 1st and 2nd person subjects and objects in transitives show a different agreement pattern than the one illustrated in (25). As pointed out by Bruening, they behave as if they are competing for the same agreement slot: the slot they would occupy if their co-argument were a third person. The principle that

decides the conflict is that the second person prefix always over-rules the first person prefix. Suffixes display the opposite preference: if there is a first person plural it is marked. Otherwise, a second person plural is marked. Which is the subject and which the object is marked by a sign: first person subject, second person object is marked by *l*; second person subject, first person object is marked by *i*:

(28) a. *k*-ciksotuw-i-*pon*
2-listen to TA-2/1-1P
"you(Sg/P) listen to us (Excl)"
b. *k*-ciksotu-l-*pon*
2-listen to TA-1/2-1P
"we listen to you (Sg/P)"

The fact that 1st and 2nd person subjects and objects both occupy the subject agreement slot in (28) suggests that they both check features against the same head, namely T. In contrast, we have seen that in Lummi 1st and 2nd person arguments check their features against two different heads, T and v-TR.

To account for the facts in (25)-(28), Bruening proposes that there is a syntactic uninterpretable feature in Passamaquoddy *Proximate* [P] which is a feature on NPs. When this feature has a positive specification [+P] it must be checked against T. First and second person pronouns are always [+P], and must check their features against T. Inanimates cannot be [+P]. Animate third person arguments have unvalued [P]. When two animate NPs co-occur in a single clause, one of them is assigned [+P]. If the subject is [+P], it enters Agree with T. If the object is [+P] it has to move to T through a layered specifier to (inverse) v-Tr. The other argument receives an unvalued [P] feature which is checked against v, and is then assigned another feature [Obv] which is spelled out as the obviative suffix in the morphology.

Obligatory assignment of a [Proximate] feature to one third person animate DP in a transitive clause lacking another 1st or 2nd person argument can be shown to be linked to a requirement of T in the transitive clause to check a [+P] feature, unlike T in intransitives which may or may not enter Agree with a [Proximate] feature.

Recall from (27) that there is never a prefix for third person arguments in intransitives, suggesting that only 1st and 2nd person arguments, which are inherently specified as [+Person], check their features against T in the intransitive clause. 3rd person arguments do not enter Agree with T but with v-INTR. Syntactically they behave as *obviative*, even though they surface with unmarked (i.e. *proximate*) case morphology. In contrast, T in transitives must enter Agree. For this reason, when 1st and 2nd person arguments are not present in the clause, a 3rd person animate argument that is considered central is singled out as proximate; all other third persons are obviative. When the proximate

argument is the subject, as in (29) below (Bruening 2001: 38), the Direct Voice is employed:

(29) *Mali ´-kis-ewestuwam-a-l peskuw-ol pomawsuwinuw-ol*
Mary 3-Perf-talk to-Dir-3 one-Obv person-Obv
"Mary (Prox) spoke to one person (Obv)"

When the proximate argument is the object, the Inverse Voice is employed. Crucially, it is absolutely impossible for two inanimates to co-occur as subject and object in Passamaquoddy (see Bruening 2001: 127 who shows that there is no such restriction against inanimate arguments in intransitives), a restriction that follows from the requirement that T must enter Agree in transitives. Since inanimate arguments cannot be assigned a [Proximate] feature, the requirement of T to enter Agree is not satisfied, and the derivation crashes.[11]

The Proximate feature of Passamaquoddy can be seen as a dependent Case feature, the counterpart of ACC in nominative-accusative languages and ERG in ergative-absolutive languages, as discussed in the previous section. Just as ACC and ERG, PROX is assigned in opposition to another argument in the clause, and is therefore present only in transitives. Unlike ACC and ERG, though, PROX is not checked against v. Rather, it is checked against T. The above considerations lead to the following distribution of dependent Case features:

(30) *Ditsribution of Dependent Cases: ACC, ERG, PROX*
Downwards: ACC. In Intransitives NOM is assigned because Intransitive T needs to enter Agree. NOM is compatible with 1st 2nd and 3rd person animate and inanimate (i.e. no person).
Upwards: ERG. In Intransitives ABS is assigned because Intransitive T needs to enter Agree. ABS is compatible with 1st 2nd and 3rd person animate and inanimate (i.e. no person).
Both directions: PROX. In Intransitives PROX is not assigned because Intransitive T does not need to enter Agree. PROX is compatible with 1st 2nd and 3rd person animate, therefore two animates cannot co-occur in transitives.

---

[11] The asymmetry between transitive and intransitive T in Passamaquoddy (intransitive T does not have to enter Agree, transitive T has to enter Agree) is reminiscent of a Generalization extensively discussed in Alexiadou & Anagnostopoulou (2001), namely *The Subject In-situ Generalization (SSG)*, formulated in (i) (compare (i) to the original formulation of the SSG in Alexiadou and Anagnostopoulou 2001: 193):
(i) The vP can contain no more than one argument with structural Case
Just as in the cases falling under SSG one argument in transitive clauses, the subject or the object must vacate the vP, in Passamaquoddy transitive clauses, one argument, the subject or the object must enter Agree with T.

The discussion of person splits in Salish has led us to propose that ACC in Lummi matches 1st and 2nd person, supporting the connection between Case and agreement checking suggested in Chomsky (2000, 2001). The same link between Case and phi-features can be established on the basis of assignment of PROX in Passamaquoddy, if PROX is seen as a Case feature. More specifically, suppose that the syntactic uninterpretable feature *Proximate* [P] has an interpretable feature as a correlate, namely Person. As will be seen, this quite naturally accounts for the characterization of certain NPs as necessarily proximate and of other NPs as necessarily obviative.

A number of researchers have argued on the basis of PCC effects (see sections 2 and 4) that indirect objects behave as if they have a person feature, even when they are 3rd person (see Anagnostopoulou 2003: 270-271 who discusses evidence for this based on the serialization of agreement markers in Georgian). In contrast, accusative-nominative/ direct object 3rd person pronouns behave as if they lack person features altogether. Adger and Harbour (2003) propose to express this distinction as follows. They argue that 3rd person indirect objects have a negative person specification (i.e. they are [-person]) while 3rd person direct objects lack a person feature entirely. On this view, there are two ways in which an argument can be 3rd person: either by being [-person] or by lacking a person feature. Indirect objects in PCC environments must have a +/- person value since they encode point of view, affectedness etc. On the other hand, direct objects are undergoers and therefore they do not have to have a participant value (they have one only when they are 1st or 2nd person). Suppose we adopt this view for subjects and objects Passamaquoddy. We can then propose that in this language, the feature PROX is assigned to NPs that are either [+Person] or [-Person], but not to NPs that lack a person feature entirely. 1st and 2nd person pronouns are necessarily [+Person]. Inanimate NPs lack [Person] features as they cannot encode point of view, affectedness etc, and can therefore never bear PROX. Animate 3rd person NPs, though, can, in principle, have a specification for person. When they are contextually salient (topic-like) they are assigned the feature [-Person], i.e. they have a feature specification similar to 3rd person indirect objects. When they are not salient they lack a person/ participant feature, being similar to 3rd person accusative/ nominative/ absolutive arguments. When 3rd person animates are assigned the feature [-Person/ Participant] they surface with unmarked *proximate* morphology, and the prefix on the verb agrees with them. When they lack the participant feature they have marked *obviative* morphology and are coindexed with the verb's final suffix. The [-Person] specification is assigned in opposition to another third person which lacks the [Person] feature.

In this analysis, the feature specification of NPs in languages with inverse systems is no different than the feature specification of NPs in other languages. What is special about inverse languages is that animate 3rd person NPs must be assigned a feature [-Person] in opposition to another 3rd person

NP. Obligatory assignment of a [-Person] feature to one third person animate NP in a transitive clause lacking another 1st or 2nd person argument is linked to the requirement of T in the transitive clause to check a Person feature. Another crucial property of languages with inverse systems is that only T hosts person features that can be checked against NPs. That is, a [+/-Person] object cannot check its person feature against v-Tr, and must enter an Agree relation with T. Finally, the fact that 1,2>3 combinations are licit and 3>1,2 combinations are illicit in this language is reduced to the following factor. As has been seen above, arguments inherently specified as [+Person] must always enter Agree with T. In contrast, 3rd person animate arguments are assigned the feature [-Person] only in opposition to another third person argument as a Last-Resort: when there is no other way to satisfy properties of T. Therefore, 1st and 2nd person arguments always move to T preventing 3rd person arguments from doing so.

5. Conclusions

In this paper we examined ergative splits conditioned by person, which we compared to hierarchical effects in direct-inverse alternations. On the basis of two case studies (Lummi instantiating an ergative split person language and Passamaquoddy an inverse language) we proposed that the two language types differ as far as the location of person features is concerned. In inverse systems person features are located exclusively in T, while in ergative systems, they are located in T and a particular type of v.

Naturally, our treatment of such splits raises a number of questions, e.g. the treatment of tense splits in ergative languages and of animacy splits in languages such as Spanish. We leave these questions for further research.

References

Adger, D. and D. Harbour. 2003. The Syntax and Syncretisms of the Person Case Constraint. Ms. Queen Mary, University of London and MIT. (To appear in *MIT Working Papers in Linguistics*).

Alexiadou, A. 2001. *Functional structure in nominals: nominalization, and ergativity*. Amsterdam: John Benjamins

Alexiadou, A and E. Anagnostopoulou.2001. The Subject In-situ Generalization, and the role of Case in driving computations. *Linguistic Inquiry* 32.2: 192-233.

Aissen, J. 1999. Markedness and Subject Choice in Optimality Theory. *Natural Language and Linguistic Theory* **17**: 673-711.

Anagnostopoulou, E. 1999. Person Restrictions. Paper presented at the 21st GLOW Colloquium, ZAS-Berlin, March 29 [GLOW Newsletter 42 : 12-13].

Anagnostopoulou, E. 2003. *The Syntax of Ditransitives. Evidence from Clitics.* Mouton de Gruyter.

Anagnostopoulou, E. 2005. Weak and Strong Person Restrictions: A feature-checking analysis. In In L. Heggie & F. Ordonez (eds.) *Clitics and affixation*. Amsterdam: Benjamins.

Arad, M. 1999. 'On the Nature of v: Evidence from Object Experiencer verbs'. Paper presented at the 22 GLOW Colloquium, Berlin March 1999.

Baker, M. 1996. *The Polysynthesis Parameter.* Oxford: Oxford University Press.

Bejar, S. and M. Rezac. 2003. Person licensing and the derivation of PCC effects. Ms. University of Toronto.

Benveniste, E. 1966. *Problèmes de linguistique générale.* Gallimard.

Bianchi, V. 2003. On the Syntax of Personal Arguments. Paper presented at the XXIX Incontro di Grammatica Generativa, Urbino, 13-15 February 2003.

Bittner, M. 1994. *Case, Scope and Binding*. Dordrecht: Kluwer.

Bobaljik, J. 1992. 'On Ergativity and Ergative Parameters'. *MIT Working Papers in Linguistics* 19: 45-88

Bobaljik, J. 2004. Towards a Φ-free Syntax? Paper presented at the MIT Ling-Lunch, May 13.

Bobaljik, J. and P. Branigan. To appear. Eccentric agreement. In Alana Johns, Diane
Massam, and Juvenal Ndayiragije, eds., *Ergativity: Emerging Issues*. Kluwer,
Dordrecht.

Bok-Bennema. R. 1991. *Case and Agreement in Inuit*. Dordrecht: Foris.

Bonet, E. 1991. *Morphology after Syntax: Pronominal Clitics in Romance Languages.* Ph.D. Dissertation, Cambridge MA: MIT.

Bonet, E. 1994. The Person-Case Constraint: A Morphological Approach. *MIT Working Papers in Linguistics 22. The Morphology-Syntax Connection*: 33-52.

Bruening, B. 2001. Syntax at the edge: Cross-Clausal Phenomena and the Syntax of Passamaquoddy. Ph.D. Dissertation, MIT.

Chomsky, N. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.

Chomsky, N. 2000. Minimalist inquiries: the framework. In R. Martin, D. Michaels and J. Uriagereka (Eds.), *Step by step:* 89-155. Cambridge, MA: MIT Press.

Chomsky, N. 2001. Derivations by Phase. In M. Kenstowicz (Ed.) *Ken Hale: A life in Language*, 1-52. Cambridge, MA: MIT Press.

Collins, C. 1997. *Local Economy*. Cambridge, MA: MIT Press.

DeLancey, S. 1981. An Interpretation of Split Ergativity. *Language* 57: 626-657.

Dixon, R.M.W. 1994. *Ergativity.* Cambridge: Cambridge University Press.

Embick, D. 1998. Voice Systems and the Syntax/Morphology Interface. *Papers from the UPenn/MIT Roundtable on Argument Structure and Aspect, MIT Working Papers in Linguistics* **32**: 41-72. Cambridge MA: MIT.

Hale, K. 1970. 'The Passive and Ergative in Language Change: the Australian case'. In S. Wurm & D. Layscock (eds), *Pacific Linguistic Studies in Honor of Arthur Capell*. Pacific Linguistic Series, pp. 757-81.

Harley, H & R. Noyer 1998. 'Licensing in the non-lexicalist Lexicon: Nominalizations, Vocabulary Items and the Encyclopedia'. *MIT Working Papers in Linguistics* 32: 119-137.

Haspelmath, M. 2001. Explaining the Ditransitive Person-Role Constraint: A usage-based approach. Ms., Max-Planck-Institut für evolutionäre Anthropologie.

Holmberg, A. and T. Hróarsdóttir. 2002. Agreement and movement in Icelandic raising constructions. *Working Papers in Scandinavian Syntax* 69: 147-168.

Jelinek, E. 1993. Ergative 'Splits' and Argument Type. *MIT Working Papers in Linguistics* **18**: 15-42.

Johns, A. 1993. Symmetry in Labrador Inuttut. In J. D. Bobaljik and C. Phillips (Eds.), *Papers on Case & Agreement I*, *MIT Working Papers in Linguistics **18**:* 43-57. Cambridge, MA: MIT.

Kayne, R. 1975. *French Syntax.* Cambridge MA: MIT Press.

Kayne, R. 2000. *Parameters and Universals*. Oxford: Oxford University Press.

Kratzer, A. 1994. On External Arguments. In E. Benedicto, & J. Runner (Eds.), *Functional Projections:* 103-130. Amherst: GLSA.

Kuno, S. 1976. Subject, theme and the speaker's empathy - a reexamination of relativization phenomena. In Li, C. (Ed.) *Subject and topic*: 417-44. New York: Academic Press.

Laka, I. 1993. 'Unergatives that assign Ergative'. *MIT Working Papers in Linguistics* 18:149-172.

Legendre, G., W. Raymond and P. Smolensky. 1993. An Optimality-theoretic Typology of Case and Grammatical Voice Systems. *Proceedings of the 19th Annual Meeting of the Berkeley Linguistics Society*: 464-478.

Mahajan, A. 1993. 'The Ergativity Parameter: have-be alternation'. *Proceedings of NELS* 24.

Marantz, A. 1991. Case and licensing. In G. F. Westphal, B. Ao and H.-R. Chae (Eds) *ESCOL `91: Proceedings of the Eighth Eastern States Conference on Linguistics.* Distributed by the ESCOL Publications Committee.

Marantz, A. 1997. No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon. Paper prsented at the 21st Penn Linguistics Colloquium. To appear in the *University of Pennsylvania Working Papers in Linguistics,* 4.2. University of Pennsylvania.

Müller, G. 2004. Argument encoding and the order of elementary operations. Ms. IDS Mannheim. Presented at the 27th GLOW Colloquium in Thessaloniki, Greece.

Murasugi, K. 1992. *Crossing and Nested Paths: NP-movement in accusative and ergative languages*. Ph.D. Diss, MIT.

Nash, L. 1995. *Portée argumentale et marquage casuel dans les langues SOV et dans les langue ergatives: l'exemple du géorgian*. Thèse de Doctorat, Université de Paris VIII.

Nash, L. 1996. 'The Internal Ergative Subject Hypothesis'. *Proceedings of NELS* 26: 195-210.

Ormazabal, J. and J. Romero. 2001. Agreement Restrictions. Ms. University Basque Country (EHU)/Basque Center for Language Research (LEHIA) and U. of Alcalá/U. Autónoma de Madrid.

Perlmutter, D. 1971. *Deep and Surface Structure Constraints in Syntax.* New York: Rinehart & Winston Inc.

Postal, P. 1966. On So-Called "Pronouns" in English. In F.P. Dineen (Ed.), *Report of the 17th Annual Roundtable Meeting on Linguistics and Language Studies:*

177-206. Washington, D.C.: Georgetown University Press. [reprinted in Reibel, D.A. and S.A.Schane (Eds.). 1969. *Modern Studies in English.* Englewood Cliffs, New Jersey: Prentice-Hall.

Richards, N. 1997. What Moves Where When in Which Language*?* Ph.D. Dissertation, MIT.

Ritter, E. 1995. 'On the syntactic Category of Pronouns and Agreement'. *Natural Language and Linguistic Theory* 13: 405-443.

Schütze, C. 1997. Infl in Child and Adult Language: Agreement, Case and Licensing. Ph.D. Dissertation, MIT.

Silverstein, M. 1976. Hierarchy of features and ergativity. In Dixon, R.M.W. (Ed.) *Grammatical categories in Australian languages,* Canberra: Australian Institute of Aboriginal Studies, and New Jersey: Humanities Press: 112-71. Reprinted in P. Muysken and H. van Riemsdijk (Eds.), *Features and Projections*: 163-232. Dordrecht Holland: Foris Publications, 1986.

Taraldsen, T. 1995. On Agreement and Nominative Objects in Icelandic. In H. Haider, S. Olsen and S. Vikner (Eds.), *Studies in Comparative Germanic Syntax*: 307-327. Dordrecht, Holland: Kluwer Academic Publishers.

Ura, H. 1996. Multiple Feature-Checking: A Theory of Grammatical Function Splitting. Ph.D. Dissertation. Cambridge, MA: MIT.

Wierzbicka, A. 1981. Case Marking and Human Nature. *Australian Journal of Linguistics* 1: 43-80.

Wiltschko, M. 2003. Person hierarchy effects without a person hierarchy. Ms. University of British Columbia.

Woolford, E. 1997. Four-Way Case Systems: Ergative, Nominative, Objective and Accusative. *Natural Language and Linguistic Theory* 15: 181-227.