

CHAPTER XX

Aleut case matters

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1 Aleut cases

Aleut shows a remarkable alternation in its case and agreement patterns: roughly put, one pattern appears when a non-subject argument is syntactically unexpressed in a predicate, and the other pattern appears otherwise. This paper is devoted to an attempt to provide a coherent analysis for this alternation: the missing argument is analyzed as a *pro* which must move into a local relation with the highest T; in this position, it triggers additional agreement on the verb, and blocks normal case assignment to the subject (which then gets a different case). This movement is analogous to that of (potentially long) clitic movement, and its effects on the case and agreement patterns is shown to be similar to the *wh*-agreement pattern in Chamorro.

1.1 *The phenomenon*

There are two cases on nominals and two sets of inflections on verbs in Aleut, which are schematized in (1) and (2).²

	‘relative’	‘absolutive’
(1) Two cases on nominals:	-m	-x̂ (sg.) -s (pl.)

‘anaphoric’	‘nonanaphoric’
(A: in the glosses)	(unmarked in glosses)
e.g. -V (A:3s/3s) ³	-x̂ (3s)

An example of the basic alternation is in (3): when all arguments are overt, as in (3a), the ‘absolutive’ case appears on them all and the ‘nonanaphoric’ verb endings (which agree with the subject), while if an argument is missing—as the direct object is in (3b)—the subject is marked with the ‘relative’ and the verb shows an ‘anaphoric’ ending, in this case one which indicates that both the subject and missing element are singular.

- (3) a. Piitra-x̂ Ivaana-x̂ kidu-ku-x̂.
Peter-abs John-abs help-PRES-3s
 ‘Peter is helping John.’ (AASG:32)
- b. Piitra-m _ kidu-ku-u.
Peter-rel help-PRES-A:3s/3s
 ‘Peter is helping him.’ (AASG:32)

This state of affairs is general, and has been dubbed the ‘Aleut Effect’ by Jerry Sadock:

- (4) THE ‘ALEUT EFFECT’ (Sadock 1999, Sadock 2000):
 The relative case is used when there is an NP missing from the predicate

- (5) [if a] 3.p[erson] complement or a subordinate part of it is left out as known from context or the situation there is in general a suffixal reference to it in the final verb and a nominal subject is in the relative case. (Bergsland 1997:126)⁴

Further examples illustrating the Aleut Effect are given in (6)-(8), where the alternation is triggered by a missing object of a preposition and of a possessor, as well as by a hanging topic.

- (6) Missing object of a preposition/locative adverbial:

- a. Ivaana- \hat{x} kanfiixta-s yaasika-m nagan a \hat{g} i-ku- \hat{x} .
John-abs candies-abs box-rel in put-PRES-3s
'John put the candies in the box.' (AASG:98)
- b. Ivaana-m kanfiixta-s _ nagan a \hat{g} i-ku-u.
John-rel candy-abs in put-PRES-A:3s/3s
'John put the candies in it.' (AASG:98)

- (7) Missing possessor of a non-subject:

- a. Piitra- \hat{x} hla-s ada-a kidu-ku- \hat{x} .
Peter-abs boy-pl father-A:3s.abs help-PRES-3s
'Peter is helping the boys' father.' (AG:144)
- b. Piitra-m _ ada-a kidu-ku-u.
Peter-rel father-A:3s.abs help-PRES-A:3s/3s
'Peter is helping the boy's father.' (AG:144)

- (8) Hanging topics:

- a. taya \hat{g} u- \hat{x} qa- \hat{x} qa-ku- \hat{x} .
man-abs fish-abs eat-PRES-3s
'The man is eating the fish.'
- b. qa- \hat{x} taya \hat{g} u-m _ qa-ku-u.
fish-abs man-rel eat-PRES-A:3s/3s
'The fish, the man is eating it.' (Bergsland 1969:27)

This last pair of examples, in (8), is instructive, as it shows that the alternation is governed by the local argument realization properties of the clause—in this case, because the object is not in the local domain, appearing instead in a peripheral topic position. The alternation, in other words, requires reference to the local syntax, not merely to larger discourse properties; that is, in (8b) the object is ‘missing’ only from the local clause, not the larger clause or *a fortiori* the whole discourse context; it need not be inferred or given at all—it is in fact overt, just not local.

Missing *subjects*, however, do not trigger anaphoric inflection (and since they are missing, no relative case arises either):

- (9) Ivaana- \hat{x} kidu-ku- \hat{x} .
Ivan-abs help-PRES-3s
‘He/she is helping Ivan.’ (AG:8)

This fact allows us to address an important analytical question concerning (8b): whether the object *qa- \hat{x}* is in fact a hanging topic (base-generated on the left-periphery and coindexed with a clause-internal null pronominal), or whether it might be analyzed as itself moved. Another way of asking this question is whether what is in the gap in (8b) is a *pro* (as the hanging topic analysis would have it) or a wh-trace (as a fronting analysis would posit). First, there is no evidence that Aleut permits scrambling or any kind of overt A'-movement. Second, allowing such topicalizations would, if nothing further were said, incorrectly permit an unattested alternation on the verb: if the subject is null, then we would have a potential for string-vacuous topicalization triggering

anaphoric inflection. Alternating with (8a), then, we would expect to also find the following, in which the hypothetical fronting of the object over the (null) subject triggers the anaphoric inflection as in (8b):

- (10) * qa- \hat{x} _ qa-ku-u.
fish-abs eat-PRES-A:3s/3s
(intended: ‘The fish, he is eating it.’)

Since this is not possible, it seems that when there is no overt subject, there is no hanging topic possible (perhaps for functional reasons), nor is there scrambling of objects over subjects.

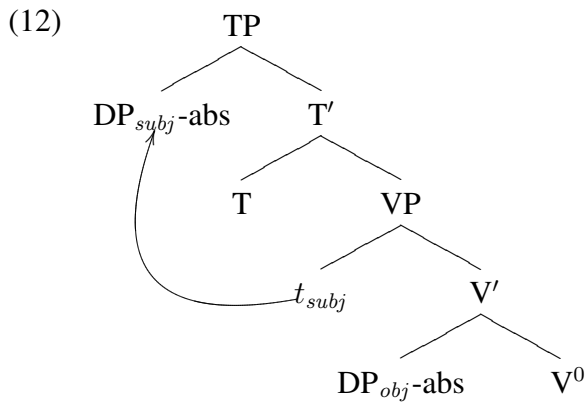
Finally, Aleut shows ‘promiscuous’ number marking in the anaphoric inflections, potentially indexing the person and number of both the subject and of the missing element:

- (11) kidu-ku-ngis.
help-PRES-A[pl]:3/3
‘He/she/they is/are helping them.’
‘They are helping him/her/them.’ (AASG:10)

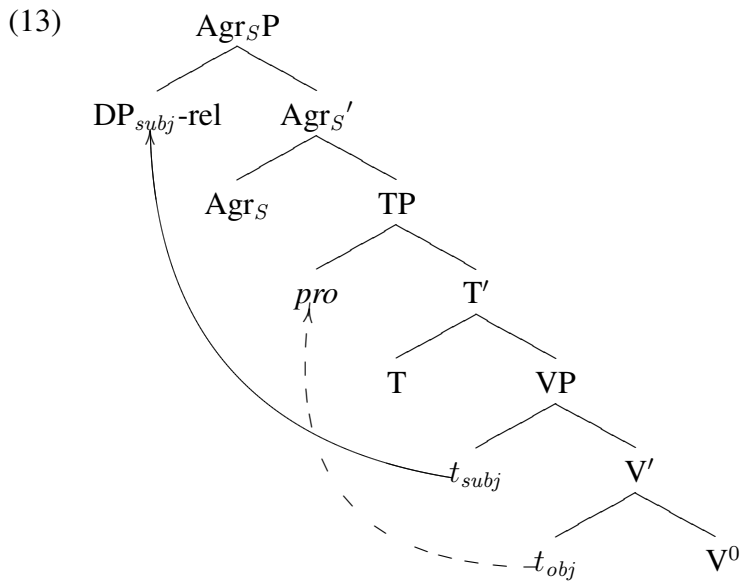
2 A movement approach

Boyle 2000 proposes that missing arguments in Aleut are null *pros*, and that these must be licensed in specTP (from which position they trigger agreement, and to which position they presumably must moved to be licensed, in the sense of Rizzi 1990); he proposes that the Relative Case is assigned by Agr_S in a specially projected specAgr_SP when specTP is thus occupied. That is, in a normal clause with all arguments overtly

specified, an Aleut clause will have the structure given in (12), with absolutive case assigned to all DPs, and only the DP in specTP able to trigger agreement (assumed to be mediated uniformly by T).



In a clause in which the Aleut Effect arises, on the other hand, *pro* occupies specTP and forces the additional projection of Agr_SP, into whose specifier the usual subject is compelled to move (by virtue of *pro* occupying the unique specTP), where it is assigned the relative case.



Alternations of the Aleut sort involving variable case assignment to subjects and varying morphology on the verb do have parallels, of course. The most prominent parallels are from Japanese and Turkish. In Japanese, the alternation known as *ga*→*no* conversion involves an otherwise nominative subject being exceptionally marked with the genitive case in certain environments, typically in clausal arguments or adjuncts to nominals, as in (14), from Miyagawa 1993 and Ochi 2001:

(14) a. Relative clauses

[John-ga/no _ katta] hon
John-NOM/GEN bought book ‘the book John bought’

b. Gapless complement-to-N clauses:

John-ga/no kuru kanousei
John-NOM/GEN come probability

‘the probability that John will come’

In Turkish, a parallel is found in the famous alternations between -An and -DIK⁵ participial morphology (see Cagri 2005 for a recent approach and references), which also involves a genitive subject:

(15) a. [_ divan-da otur-an] bayan
sofa-LOC sit-SR lady
 ‘the lady who is sitting on the sofa’

b. [bayan-in _ otur-duğ-u] divan
lady-GEN sit-NSR-3s sofa
 ‘the sofa that the lady is sitting on’

In both these cases, the case of the subject (when present) can or must appear in a case otherwise present in oblique uses (the genitive in both Japanese and Turkish, the relative in Aleut).

2.1 Tracking dependencies

Aleut shows a fairly intricate system, but one with one goal, as Sadock 1999 points out: to track missing things. While one might suspect that this system has something in common analytically with switch-reference (or subject) tracking systems, I will suggest instead that it is closer in manifestation to the wh-tracking system known as wh-agreement in Austronesian languages, in particular in a language like Chamorro, as analyzed by Chung 1998.

What's unusual about Chamorro (as opposed to Celtic, Coptic, and other non-Austronesian wh-agreement systems) is that the agreement—in Chamorro registered on the verb, not the complementizer—also indexes, roughly, the *case* of the extractee. The basic pattern is summarized in (16), taken from Chung 1998, as are the data illustrating this pattern given in (17) (with page numbers following referring to Chung 1998).

(16) Inflection on verbal and adjectival predicates in wh-questions:

[Nom] *-um-* when the predicate is realis and transitive

[Obj, Obj2] (optional) nominalization, plus *-in-* when the predicate is transitive

[Obl] nominalization, plus (optional) *-in-* when the predicate is unaccusative

Overt realization of wh-agreement replaces regular subject-verb agreement.

(If wh-agreement is not overt, then the predicate has the regular subject-verb agreement.)

(17) a. Ginin hayi na un-chuli' i lepblu? C184 (PPs
from *who?* Comp AGR[2s]-take the book

don't trigger wh-agr)

'From whom did you take the book?'

- b. Hafa malago'-mu? C184
what? WH[obl].want-AGR[2s]
'What do you want?'
- c. Hafa fina'tinas-ñiha i famalao'an? C201
what? WH[obj].make-AGR[3p] the women
'What did the women cook?'
- d. Hayi sinangane-nña si Juan malago'-ña
who? WH[obj2].say.to-agr D_{PN} Juan WH[obl].want-agr
pära u-bisita?
Fut WH[obj].agr-visit
'Who did Juan tell (us) that he wants to visit?' C211

What Chamorro makes clear is that it is possible find a system in which verbs in a local relation with a cyclically moved element agree with features of that element. While in Chamorro this agreement replaces regular subject verb agreement, in Aleut it is supplementary to it.

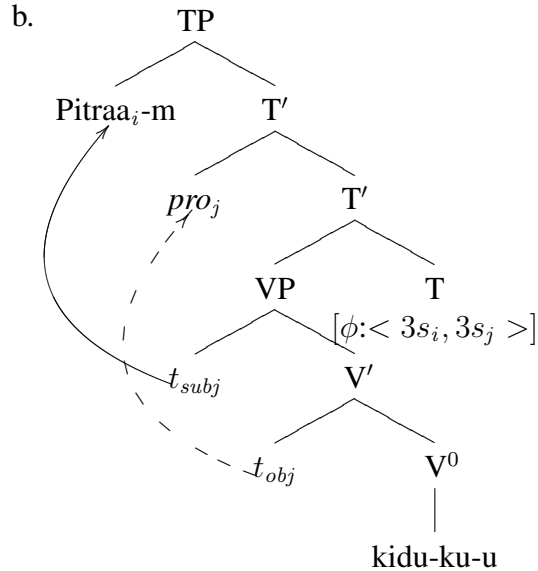
2.2 Back to Aleut

There are two basic ideas that are needed to account for the Aleut patterns. The first is that a null argument *pro* must move to T or the specifier of TP (the latter as in the proposal of Boyle 2000). The second idea is that agreement can be polyvalent: T may agree with more than one agreement trigger, inducing multiple values on T; this idea is simply multiple Agree as proposed in Hiraiwa 2001 and expanded on elsewhere (Merchant 2008, Nevins 2007, et multi alii).

- (18) a. Multiple Agree: T agrees with every DP (or D-element) in its specifier(s) or in specVP (or head-adjoined to it)
- b. Null arguments move to T (if they're clitics) or specTP (as for Chinese argument-drop following Huang 1984; tucking in multiple specifiers: Richards 2001)

Concretely, I'd like to propose that *pro* moves to immediately c-command T, as does the regular subject, and that both elements therefore participate in agreement with T; this is illustrated in the tree in (19b) for the example in (19a).

- (19) a. Piitra-m _ kidu-ku-u.
Peter-rel help-PRES-A:3s/3s
 'Peter is helping him.' (AASG:32)



The value of T's ϕ feature therefore is not a single value, but rather a set of values (strictly speaking, an ordered n-tuple). The details of the

two separate applications of Agree are given in (20). (These feature sets are the product of the definition of Agree given in (35) in the Appendix.)

- (20)
- a. Move *Pitraa* → specTP
 - b. Trigger: *Pitraa*[ϕ :3s]
 - c. Goal: T[ϕ : \emptyset]
 - d. Agree(*Pitraa*,T; ϕ) \rightsquigarrow T[ϕ :{3s}]
 - e. Move *pro* → specTP (tucking in under *Pitraa*)
 - f. Trigger: *pro*[ϕ :3s]
 - g. Goal: T[ϕ :{3s}]
 - h. Agree(*pro*,T; ϕ) \rightsquigarrow T[ϕ :{3s,{3s}}]⁶

Once a complex feature set is present on T (as the set-valued value of its ϕ feature), we are in a position to state the relevant contextually sensitive morphological spell-out rules (Perlmutter 1971, Farkas and Kazazis 1980, Sadock 1991, Ackema and Neeleman 2004, Nevins 2007, Legate 2008, and many others):

- (21) Morphological case rules for singular NPs in Aleut
- a. /-m/ ↔ [Case]/ *_pro*
 - b. / \hat{x} / ↔ [Case] *elsewhere*
- (22) Morphological verbal agreement rules in Aleut
- a. ‘Anaphoric’ inflections (polyvalent)
 - i. /-V/ ↔ T[ϕ :<3s,3s>]
 - ii. /-ng/ ↔ T[ϕ :<1s,3s>]

- iii. /-ngis/ \leftarrow T[ϕ :<3p,3>]
- iv. /-ngis/ \leftarrow T[ϕ :<3,3p>]
- v. /-ngis/ \leftarrow T[ϕ :<3p,3p>]
- ⋮

b. Nonanaphoric inflection (monovalent)

- i. /-x̂/ \leftrightarrow T[ϕ :{3s}]
- ii. /-q/ \leftrightarrow T[ϕ :{1s}]
- ⋮

This system of rules predicts also that if a subject should stay inside the VP, it would trigger regular subject-verb agreement, but not appear in the relative (instead appearing in the elsewhere absolutive). This prediction is correct: Aleut indefinite subjects sometimes appear to stay low, inside the VP, while definite subjects (the ones examined so far), raise to specTP (cf. Diesing's 1992 analysis of similar facts in Germanic). Bergsland and Dirks 1981:32 gives the following pair illustrating this alternation, where the missing object of the postpositional complex *nagaan* triggers the Aleut Effect (and assuming that this PP is inside the VP, or at least under the base position of the indefinite subject):⁷

- (23) a. Tayaġu-m nag-aan hiti-ku-u.
man-rel interior-3s.ABL go.out-PRES-A:3s/3s
 'The man went out of it (e.g., the house).'
- b. Tayaġu-x̂ nag-aan hiti-ku-u.
man-abs interior-3s.ABL go.out-PRES-A:3s/3s
 'A man went out of it (e.g., the house).'

2.3 Remote gaps

The Aleut Effect can be triggered by a missing element inside an embedded clause as well, as shown by the following data. In (24), for example, the matrix verb *una-ku-u* ‘cook’ appears in the anaphoric form triggered by the unexpressed embedded subject meaning ‘he’.⁸

- (24) Qa-â igiim aâs saâa-qa-a
fish-abs dat.3R give.CONJ do.yesterday-PRT-A:3s/3s
una-ku-u.
cook-PRES-A:3s/3s
‘She is cooking [which] the fish he gave her yesterday.’ [AASG
139]

In (25), we also see the polyvalent agreement in the matrix verb, which signals both a first person matrix subject and a missing third person element (in both cases, the missing element is the embedded subject).

- (25) a. sa-â kalu-l angali-i uku-ungan
duck-abs shoot-CONJ did.today-PART.A:s.abs find-ANT.3s
aâta-ku-ng.
be-PRES-A:1s/s
‘I found the duck he had shot.’ (AASG:132-133)
- b. Una-na-ngin qaatuda-ku-ng.
cook-PART-A:3s/3p like.to.eat-PRES-A:1s/s
‘I like to eat what (things) she is cooking.’ [AG 289]

In the last three examples, if we take the English equivalents as indicative, it appears that the Aleut Effect can be triggered from out of a relative clause, which is typically a strong island cross-linguistically.

The mere fact of a relative (or relative-like) structure is not enough to trigger the Aleut Effect in the matrix, however, as the following example shows. In (26), there is no gap in the relative clause—not even one corresponding to the gap of a relative pronoun, as Aleut seems to have internally headed relatives of the sort described in Williamson 1987 and elsewhere. Here, the internal head is *tayaġu* ‘man’:

- (26) *tayaġu-m sa-x̂ kalu-l angali-i*
man-rel duck-abs shoot-CONJ did.today-PART.A:s.abs
aslixta-angan aġta-ku-q.
meet-ANT.3s be-PRES-1s
 ‘I met the man who shot the duck.’ (AASG:132-133)

It is worth noting in passing here that possessors also occur in the relative case (and trigger anaphoric marking on the possessum). Some Aleut relative clauses have something like the form of a possessed clause, with the verb nominalized (in a participial form) and the subject in the relative case. This is why the participial form in (26) is anaphoric and the embedded subject is in the relative case. The situation is entirely parallel to that in Turkish for non-subject relatives, which require the embedded subject to be in the genitive and whose verb appears in a participial form (indexing agreement with ϕ features of the ‘possessor’ subject), as seen in (15b) above.

A simple possessive is given in (27) and again has an analog in languages such as Turkish (though I will have to leave a full account of possessors to another occasion.⁹)

- (27) *tayaġu-m ula-a* *cf. Turkish adam-ın ev-i*
man-rel house-A:s.abs *man-GEN house-3sPOSS*

‘the man’s house’

When a gap is found inside a relative structure which modifies a matrix subject, however, no Aleut Effect is found; this is seen particularly clearly in the following examples, which were kindly elicited, at Jerry Sadock’s request, by Anna Berge in Anchorage (from a speaker of the Pribilovian dialect, not Atkan, the dialect the rest of the data in this paper is from).

- (28) a. uut(a)ka- \hat{x} tumhdaana \hat{x} .
duck-abs shot.3s ‘He shot a duck.’
- b. uut(a)ka- \hat{x} ala \hat{g} u-m ilan kimina \hat{x} .
duck-abs sea-rel into sank.3s
‘The duck sank into the ocean.’
- c. uut(a)ka- \hat{x} tumhda-qa-a ala \hat{g} u-m ilan kimi-na- \hat{x} .
duck-abs shoot-PART-A:s.abs sea-rel into sink-PAST-3s
‘The duck he shot sank into the ocean.’
- d. * uut(a)ka \hat{x} tumhda-qa-a ala \hat{g} um ilan
duck-abs shoot-PART-A:s.abs sea-rel into
kimi-qa-a.
sink-PAST-A:3s/3s

The absence of an Aleut Effect in this environment follows from the general condition on movement that an element always move to a c-commanding position: in this case, *pro* is inside the subject, and hence could never move to the first specifier of T (since lowering is banned).

But if the Aleut Effect is due to the movement of *pro* to a position near the matrix tense head, as in the account above, then it would seem at first glance to be extremely worrisome that we find the Aleut Effect

triggered by missing elements inside what in other languages would be islands, since this would seem to require that *pro* be allowed to move out of an island in Aleut.

For better or for worse, this situation is again reminiscent of facts from Turkish and Japanese. In Turkish, the puzzle has always been that the subject relativization morpheme *-An* is triggered not merely by a missing subject (this would make these relatives fully parallel to reduced subject relatives in English, for example, and amenable to a similar analysis), but that *-An* appears when a subject *or a part of a subject* is missing. In other words, it is triggered also by a relativized possessor inside a subject, as in (29a), or of an argument inside a subject clause, as in (29b) (examples from Cagri 2005:8):

- (29) a. [[_ kız-1 kitab-1 getir-en] adam
 girl-POSS book-ACC bring-SR man
 ‘the man whose daughter brought the book’
- b. [[_ biz-e güven-eceğ-i] şüpheli ol-an] adam
 Ip-DAT trust-FUT-POSS doubtful be-SR man
 ‘the man who that (he) will trust us is doubtful’

Similarly, Ochi 2001 argues that the *-no*-marked subjects in Japanese have raised to a position higher than their nominative marked alternates, giving rise to wide scope readings of *-no*-marked disjunctions, as the following examples illustrate.

- (30) a. [[[Rubii-ka shinju]-ga yasuku-naru] kanousei]-ga
 ruby-or pearl-NOM cheap-become probability-NOM
 50% izyoo da.
 50% over is

- i. ‘The probability that (either) rubies or pearls will become cheap is over 50%.’
 - ii. ≠ ‘(Either) the probability that rubies will become cheap or the probability that pearls will become cheap is over 50%.’
- b. [[[Rubii-ka shinju]-**no** yasuku-naru] kanousei]-ga
ruby-or pearl-GEN cheap-become probability-NOM
 50% izyoo da.
50% over is
- i. ‘The probability that (either) rubies or pearls will become cheap is over 50%.’
 - ii. ‘(Either) the probability that rubies will become cheap or the probability that pearls will become cheap is over 50%.’
- (31) [[[John-ka Mary]-ga/no katta] hon]-o misete.
John-or Mary-NOM/GEN bought book-ACC show.me
- a. ‘Show me the book that (either) John or Mary bought.’ (this is the only reading possible for *ga*-marked subject variant; it is also available for *no*-marked variant)
 - b. ‘Show me (either) the book that John bought or the book that Mary bought.’ (this reading possible only with the *no*-marked variant)

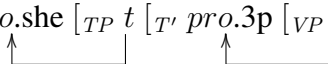
This is not to say that the apparent island-violating nature of all these movements shouldn’t concern us. It should. We should wonder whether positing movement of elements out of islands should even be a possible

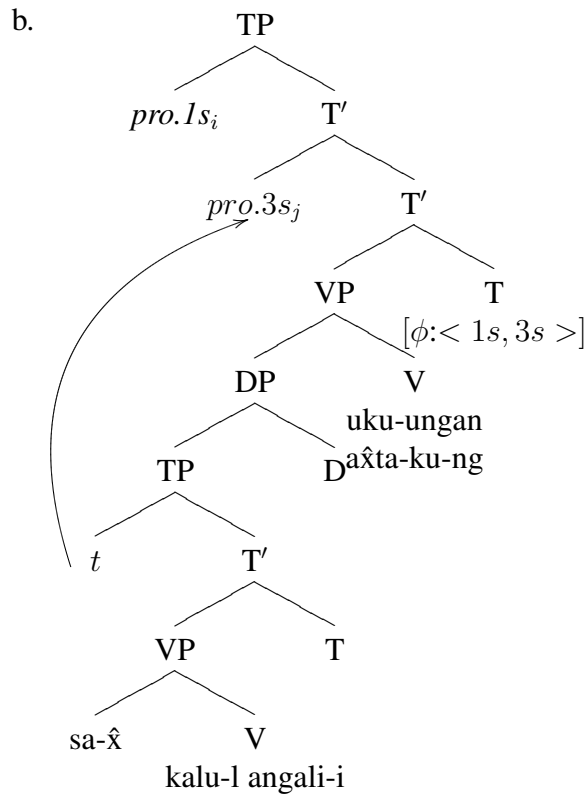
point of cross-linguistic variation, and we should suspect that it should not be.

There are several analytical possibilities at this point. One could investigate the idea that what makes these island violations acceptable has to do with the status of what moves: in Aleut and in Turkish, at least, the moving element lacks any pronunciation, and perhaps it is exactly because there is no pronounced element in the head position of the island-violating dependency that these are somehow overlooked; if this were true, we would have to somehow state island conditions on PF-representations, a move that, while unorthodox, has some precedent in work that looks at islands as PF phenomena (Ross 1969, Merchant 2001, Boeckx 2003, among others). Making this move would require us, however, to find a way to distinguish the moving *pro* and presumptive null operator in Turkish from null operators in languages like English, which do indeed trigger island effects (a thought here would be to vigorously pursue the ‘head-raising’ analysis of relative clause and other ‘null operator’ constructions, eliminating the *Op* entirely: if this is right, the external head—pronounced of course—is (or is part of) the moved element). A second possibility would be simply to claim that islands are a point of cross-linguistic variation, or at least that which nodes will be bounding nodes is (following Rizzi 1982). Finally, one might suspect that what makes the translational equivalents in English islands has to do with a layer or layers of structure which are in fact absent in the Aleut. In other words, while relative clauses are islands in English, and what we translate with relatives appear not to be islands in

Aleut, there is no direct equivalency of structure (only of use) between these elements across the two languages. If Aleut relativization structures do not involve a full CP adjoined to an NP inside a DP (as English ones do), then perhaps movement out of them will fail to violate the (cross-linguistically invariant) island conditions. Specifically, we could propose that movement out of a DP/NP/CP is worse than movement out of a mere DP/TP, and suppose—as seems reasonable given the lack of evidence for an external head N or even a CP layer in Aleut—that Aleut relatives are ‘nominalized’ clauses: that is, they are TPs selected by D directly. This would trace the variation in island sensitivity back to a mundane difference in structure between the two languages of a familiar sort.

If this is on the right track, then the structures of two of the relevant examples above will be the following:

- (32) a. Una-na-ngin qaatuda-ku-ng.
cook-PART-A:3s/3p like.to.eat-PRES-A:1s/s
 ‘I like to eat what (things) she is cooking.’ [AG 289]
- b. *pro.1s pro.she* [_{TP} *t* [_{T'} *pro.3p* [_{VP} *t* una-na-ngin]]] qaatuda-ku-ng

- (33) a. sa-â kalu-l angali-i uku-ungan
duck-abs shoot-CONJ did.today-PART.A:s.abs find-ANT.3s
aâta-ku-ng.
be-PRES-A:1s/s
 ‘I found the duck he had shot.’ (AASG:132-133)



The last remaining questions are why *pro* should move at all, and why, once it does, it continues to move to the matrix clause.

For the first question, I have suggested that Aleut *pro* is something like a clitic; as such, it needs a host, and specifying that host as T is perfectly usual, and finds many parallels in the literature on clitics. As Andrew Nevins points out, the distribution of the anaphoric inflection is close to that for non-subject clitics in Romance, for example. Of course, this ‘clitic’ behavior then triggers a portmanteau inflectional morpheme instead of itself surfacing; but such behavior has a parallel in den Dikken 1999’s reanalysis of the Hungarian *-lak/-lek* suffix (where he suggests that the *-l-* is itself a clitic). A similar analysis of what is

traditionally thought of as inflection as involving clitics is proposed by Arregi and Nevins 2008 for Basque verbal desinences.

The second question is the same as that found in clitic climbing constructions, as in Spanish for example (from den Dikken and Blasco 2002; see also Aissen and Perlmutter 1983):

- (34) a. Puedo ir a ver-lo.
can.I go to see-it
- b. Puedo ir-lo a ver.
can.I go-it to see
- c. Lo puedo ir a ver.
it can.I go to see
(all:) 'I can go to see it.'

Why isn't the clitic's requirement for a host satisfied by the lowest infinitive? Most analyses make this follow from some analysis of 'clause-union' (either by reducing the lower clause in some way, eliminating a T node and hence the host, or by moving the embedded VP up into specTP). Whatever mechanism is adopted in such cases can presumably, *mutatis mutandis*, be applied in the Aleut case as well. The Aleut differs minimally, however, in triggering agreement all along the path of movement, unlike standard clitics, but in line with the morphology of successive-cyclic wh-movement as in Chamorro (the closest parallel with Romance clitics may be the exceptional triggering of the auxiliary *be* by certain clitics, and possibly triggered agreement in past participles; more remotely like the multiple subject agreement on verbs and complementizers in Germanic).

3 Conclusion

The extremely unusual pattern of case and agreement in Aleut indicates the need for a more flexible approach to agreement, countenancing polyvalent agreement, in which more than one trigger can influence the morphological realization of agreement; this in turn requires that we allow sets (or perhaps ordered n-tuples) as values for inflectional features on covarying heads. The ‘relative’ case is analyzed as a special case that appears when the subject is adjacent to a null element. The analysis rests on the supposition that null arguments are present in the syntax, though unpronounced, and that they have properties akin clitics in needing to be syntactically near a T node (either immediately c-commanding as here, or as a clitic attached to T). The strange appearance of the ‘Aleut Effect’ out of islands was argued to be an illusion: the hope is that what seem to be islands are not in fact (due to a reduced structure).

I conclude, however, by admitting that this account merely scratches the surface of the relevant phenomena, since I have not addressed additional intricacies of when the relative case can appear, what kinds of promiscuous agreement are possible, and under what conditions the competition among features leads to ambiguities. These are all issues that a more comprehensive treatment of case and agreement in Aleut should examine, and are phenomena that are treated insightfully in Sadock 1999 and Sadock 2000, upon which works I can make no claim of improvement.

4 Appendix: A grammar fragment

1. A grammar G consists of a pair of a set of lexical elements L and a set of operations O :

$$G = \langle L, O \rangle$$

2. A derivation on a numeration D_N is a pair:

$$D_N = \langle N, \langle PM_1, \dots, PM_n \rangle \rangle, \text{ where}$$

1. N , called the Numeration, is a nonempty set of occurrences of lexical elements drawn from L and a possibly empty set S of occurrences of phrase markers PM (each of which is itself the result of a separate convergent derivation), and
 2. $\langle PM_1, \dots, PM_n \rangle$ is an ordered n -tuple of phrase markers PM .
3. A derivation D_N is said to be *convergent* (or to *converge*) iff
 1. PM_n contains no unvalued ($:__$) features
 2. PM_n contains no unchecked strong (*) features
 3. PM_n contains no unchecked selectional features
 4. All elements in the Numeration have been Merged
 5. For each adjacent pair of phrase markers $\langle PM_k, PM_{k+1} \rangle$ in D_N , there is an operation $\Omega \in O$ such that Ω applied to PM_k yields PM_{k+1} .

4. A phrase P (including a sentence) is *well-formed* iff there is at least one convergent derivation for P .

(35) DEFINITION: AGREE($X, Y; F$)

For any syntactic objects X and Y , where X bears a feature F with value $\text{Val}(F)$ and Y bears a matching unvalued: \pm ¹⁰ inflectional feature F' , and X c-commands Y ¹¹,

$$\text{let Val}(F') = \{ \text{Val}(F), \{ \text{Val}(F') \} \}^{12}$$

Notes

¹It's more than a pleasure to present this in honor of Jerry Sadock. In point of fact, this paper would in no way exist without Jerry, and is essentially preliminary to a more extended version which he will be coauthor of. It was Jerry (and his work) that introduced me to the facts from Aleut in the first place, and who lent me his copy of Bergsland and Dirks and who was persistent about getting me to try to think about these facts. So in addition to being the expert on these matters, he is also the proximate cause and inspiration for this paper. All mistakes are mine, though, of course. Tusind tak og undskyld hvis der er fejl i dataene eller analysen, Jerry!

Thanks also to Karlos Arregi, Sandy Chung, Andrew Nevins, Tony Woodbury, Etsuyo Yuasa, and the reviewers for this volume (not nec-

essarily a disjoint set from the individuals just listed) for helpful comments.

²All data in this paper are from Bergsland 1997 (henceforth AG) and Bergsland and Dirks 1981 (henceforth AASG), mostly as reported in Sadock 1999, Sadock 2000, and Boyle 2000 (see also Fortescue 1985 and Leer 1987).

³The notation x/y will be used to indicate an x -person subject and a y -person *pro*. In general, the original sources use differing, and sometimes confusing, glossing conventions for indicating the anaphoric markings. I have made my own, consistent, system in this paper, but should warn the reader to check the original glosses in case I have missed something. Furthermore, the anaphoric inflection sometimes occurs on nouns (particularly possessives; see below); such cases will not be analyzed here, but are glossed below in a parallel manner.

⁴A reviewer asks whether the Aleut effect is found with 1st and 2nd persons. It is, but only if these are subjects of the verb displaying the anaphoric agreement. First and second persons cannot be objects and trigger the anaphoric agreement; that is, when 1st and 2nd person objects appear, they are regular pronouns, not dropped, and the verb appears with regular subject only agreement. As Karlos Arregi points out to me, this looks like a classic Person-Case Constraint effect.

⁵-An is glossed SR = subject relative, -DIK as NSR = non-subject relative

⁶I will henceforth write recursively embedded sets such as {3s, {1s}} as the more perspicuous $\langle 1s, 3s \rangle$.

⁷When no element is missing, the nonanaphoric verb forms are used, and no case alternation is found. In such cases, the definite/indefinite contrast is marked by a difference in word order when possible:

- (i) a. Tayaġu-ġ ula-m nag-aan hiti-ku-ġ.
 man-abs house-rel interior-3s.ABL go.out-PRES-3s
 ‘The man went out of the house.’
- b. Ula-m nag-aan tayaġu-ġ hiti-ku-ġ.
 house-rel interior-3s.ABL man-abs go.out-PRES-3s
 ‘A man went out of the house.’

Whether a similar word order is also found with dropped elements, as the object of the postpositional complex in (23b), is unknown.

⁸A reviewer rightly asks whether this example might have a simpler parse as $[[the\ fish\ (he)\ gave\ her\ yesterday]_1\ (she)\ t_1-cooks]$, with the matrix anaphoric agreement triggered not from movement of the embedded null subject, but rather as a result of a (here, string-vacuous) fronting (or from a topicalization co-indexed with a *pro*. There are two reasons to believe Bergsland and Dirks’s gloss and structure are correct. First, if a matrix subject were present, it could appear preceding the object and marked with the relative. Second, if such string vacuous topicalizations were possible at all, we’d expect, contrary to fact, that every subject-dropped overt object sentence of the form $(Subj)\ Obj\ V$ should be able to optionally appear with the anaphoric inflection. In

other words, the example in (26) should also allow the matrix verb to appear with anaphoric marking; according to the grammars and to Jerry Sadock, such marking would be impossible.

⁹One possibility is that there is a null possessive head, like *s* in English (or its null counterpart with pronominal possessors), as analyzed in Barker 1995 and others, and that in languages such as Aleut and Turkish, this head undergoes spec-head agreement with the possessor in its specifier, and that this head with agreement features plays the role that *pro* plays in the clausal domain, triggering relative case on the possessor and the anaphoric marking on the possessee.

¹⁰Where the value of this parameter varies by language: English seems to allow agreement only on unvalued heads, so selects *unvalued*:+, while Aleut allows agreement even on heads that already have a value, and so Aleut is *unvalued*:-. Another possibility is that Agreement is uniform across languages, but English simply lacks the morphological means to express this.

¹¹I leave aside a further specification of the relative distance between X and Y, which are presumably constrained by Relativized Minimality conditions or the like.

¹²Recursively enumerated sets as defined here are of course equivalent to ordered n-tuples, so that e.g. $\{c, \{b, \{a\}\}\}$ can be more simply written $\langle a, b, c \rangle$. The morphological rules spelling out person combinations with the syncretic inflectional morphemes in Aleut are sensitive

to the order of agreement.

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