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Possessor ascension phenomena in Altaic languages in a cross-linguistic perspective

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This paper presents evidence in favor of possessor ascension in Altaic languages, in particular, Tungusic and Turkic. I assume a broad view of *possessor ascension*, taking into account all the cases when the possessor and its head are treated alike with regard to some morphosyntactic processes. Next, I contrast Altaic data on possessor ascension with the data from Aleut (Paleosiberian) to gain further evidence for the hypothesis that head-marked possessors cross-linguistically tend to display some of the features of their heads.

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0. Introduction

The goal of this paper is to present evidence in favor of possessor ascension in Altaic languages, drawing the data primarily from Tungusic languages (in particular, Even), and to a lesser degree from Turkic languages (Turkish). In section 1 I consider strategies for possessor relativization in Altaic languages and suggest reinterpreting the Mother Node Principle, as originally proposed by Hankamer & Knecht (1976) for Turkish, as a case of possessor ascension. I assume a broad view of possessor ascension, taking into account all the cases where the possessor displays some of the features of the head of the noun phrase. Section 2 contains a description of different morphosyntactic processes which treat the possessor and its head alike, ranging from “classic cases” of possessor ascension to scopal ambiguities exhibited by case and number markers. I shall further claim that one of the features favoring possessor ascension is the head-marking pattern in possessive NPs, as attested in these languages. In section 3 I contrast Altaic data on possessor ascension with the data from Aleut (Paleosiberian), a radically head-marking

language, to gain further evidence for this proposal. Finally, in section 4 I consider some other features that favor and / or interact with possessor ascension and argue against the disjunctive view of possessor ascension as advocated by formal approaches (e.g. in Relational Grammar).

1. Relativization of possessor NPs in Altaic languages

1.1. “Mother Node Principle” in Turkic (Turkish) relativization

It is well known that relativization of possessors within NPs in Turkic languages (Turkish) follows the same pattern as relativization of their heads. That is, relativization of the possessor within subject NPs involves the use of the participle in *-en* used for relativization of subjects (cf. 1a, b), whereas relativization of the possessor within object NPs involves the use of the participle in *-dik* followed by possessive markers used for relativization of objects or, rather, nonsubject constituents (cf. 2a, b):¹

- (1) a. (*_ okul-a gid-en adam*)
 school-DAT go-en man
 ‘the man who goes to school’
- b. ((*_ kız-ı okul-a gid-en adam*)
 daughter-3SG school-DAT go-en man
 ‘the man whose daughter goes to school’
- (2) a. (*_ tanı-dik-im kadın*)
 know-dik-1SG woman
 ‘the woman who I know’
- b. ((*_ kocas-ı-nı tanı-dik-im kadın*)
 husband-3SG-ACC know-dik-1SG woman
 ‘the woman whose husband I know’

¹ In a number of other Turkic languages (as well as Mongolian languages, see section 1.3) the possessive agreement is attached to the head of the RC instead of the participle (see Schönig 1992 and 1993 for an overview).

In other words, relativization of possessors represents a paradigm case of the “Mother Node Principle” formulated by Hankamer & Knecht (1976: 205) as follows:

“If a subconstituent of the major constituent of the RC is relativized, the participle is chosen which would be appropriate for the relativization of the major constituent itself.”

1.2. Relativization of possessor NPs in Tungusic languages

In the terms of Keenan (1985) (cf. Keenan & Comrie 1977) the primary relativization strategy in Even and other Tungusic languages, as well as in Turkic languages considered above, is a participial prenominal gapping strategy. That is, formation of RCs involves the following morpho-syntactic operations: The restrictive sentence is preposed to the head noun; the verb takes the participle form (the perfect participle in 3); the relativized noun is gapped. In the primary strategy, relativization of subjects (as in 3b) and nonsubjects (as in 3c) differs in that in the latter case the participle takes a subject agreement ending indicating person and number of the participial subject, cf. the third person singular marker on the participle in 3c. (Note, further, that in Even, which in contrast to Turkish lacks a genitive case, the embedded (third person) subject remains in the unmarked (“nominative”) form as in 3c):

- (3) a. *Etiken buju-m maa-n*
 old.man.NOM reindeer-ACC kill-NONFUT-3SG
 ‘The old man killed the (wild) reindeer.’
- b. (*_ buju-m maa-ča*) *etiken*
 reindeer-ACC kill-PERF.PART old.man
 ‘the old man who killed the (wild) reindeer’
- c. (*etiken _ maa-ča-n*) *bujun*
 old.man kill-PERF.PART-3SG reindeer
 ‘the (wild) reindeer that the old man killed’

RCs with relativized possessors are patterned similar to those in Turkic languages; cf. 4b, which shows relativization of the possessor from the subject NP:

- (4) a. *Etiken atika-nga-n hagdan-ni*
 old.man wife-AL.POS-NOM-3SG grow.old-NONFUT-3SG
 ‘The old man’s wife died (lit. grew old).’
- b. ((*_atika-nga-n*) *hagdan-ča*) *etiken*
 wife-AL.POS-3SG grow.old-PERF.PART old.man
 ‘the old man whose wife has died’

As demonstrated by 4, this strategy is also prenominal and participial. However, its qualification as a gapping strategy is somewhat controversial: Although the lexical possessor is missing in possessive RCs, their formation involves the obligatory possessive marking of the possessed (head) noun (cf. the third person singular possessive ending *-n* on the possessed noun in 4b).

Relativization of the possessor noun from a postpositional phrase has the same pattern. Whereas in the restrictive sentence 5a the possessor noun *hiakita* ‘tree’ is the dependent constituent of the postpositional phrase, in RC 5b it is its head:

- (5) a. *Turaaki hiakita öjde-le-n doo-n*
 crow.NOM tree top-LOC-3SG settle-NONFUT:3SG
 ‘The crow settled on (the top of) the tree.’
- b. ((*_öjde-le-n*) *turaaki doo-ča-n*) *hiakita*
 top-LOC-3SG crow settle-PERF.PART-3SG tree
 ‘the tree on (the top of) which the crow settled’

Note that in 5b, unlike 4b, the participle takes the possessive suffix, since relativization applies to (the possessor within) an object NP. Thus, the form of the participle in RCs, formed by the secondary as well as the primary strategy, depends on whether relativization applies to the subject or to a nonsubject NP and thus obeys the Mother Node Principle as attested in Turkish relativization.

The rules of the formation in other Tungusic languages are similar to those in Even (see I. V. Nedjalkov 1977 and references cited there; also Benzing 1985). Since RCs with relativized possessors have been studied less than RCs with relativized arguments, some further examples of RCs (from Evenki and Nanai) involving possessor relativization (out of the subject NP) follow:

- (6) Evenki (Brodskaĵa 1988: 58)
 (_ *Evgide-n*, _ _ *birgida-n* *e-hi*
 this.side-3SG that.side-3SG not.be-PRES.PART

iĉe-v-re *d'uu* *bi-ĉe-n*
 see-PASS-NEG.CONV house.NOM be-PERF-3SG
 'There was a house, both sides of which were not seen.'
- (7) Nanai (L. Ž. Zaksor, personal communication)
 ((_ *asi-ni* *tutuene* *buj-ki-ni* *mapa*
 wife-3SG last.year die-PERF.PART-3SG old.man
 'the old man whose wife died last year')

1.3. Relativization of possessor NPs in Mongolian languages

Those Mongolian languages which developed possessive agreement markers (e.g. Buryat) obey the Mother Node Principle in that relativization of both objects and possessors within object NPs (postpositional phrases) involves possessive marking on the RC head (which indicates person / number of the RC subject).

- (8) Buryat (Skribnik 1988: 164)
 (*Üröohen* _ *türii-n'*
 one.of.the.pair leg-3SG

gald.uul.ša-han *ümde ...*
 burn.CAUS(=PASS).INTENS-PAST.PART trousers
 'the trousers, one leg of which is burned'
- (9) Buryat (Skribnik 1988: 163)
Maanad-aj (_ *doro-n'* *zagaha*
 we-GEN underneath-3SG fish

bari-dag *xüürge-mnaj ...*
 catch-ITER.PART bridge-1PL
 'the bridge (lit. our bridge) under which we are fishing'

On the other hand, those languages that lack possessive morphology (e.g. Khalkha Mongolian) do not distinguish morphologically between

RCs with subject and object relativization and therefore are irrelevant for our discussion.

Thus, all Altaic languages which developed possessive agreement follow the Mother Node Principle, irrespective of the way in which the distinction between subject and object RCs is drawn: That is, it applies both to languages which mark object RCs by attaching agreement endings to the participle (as in Tungusic or Turkish) and to those which mark the head of the RC (as, e.g., in Buryat or Yakut).

1.4. Towards an explanation of the Mother Node Principle

As demonstrated above, in Altaic languages (which display possessive agreement morphology) relativization of possessors follows the same pattern as relativization of heads of NPs. This seems to be a cross-linguistically unusual pattern since it constitutes a violation of the syntactic Accessibility Hierarchy for relativization set up by Keenan & Comrie (1977). According to Keenan & Comrie (1977), (genitive) possessors ranking low on the Accessibility Hierarchy are predicted to follow consistently the relativization strategy chosen for obliques or objects of comparison (occupying adjacent ranks on the Hierarchy), rather than displaying relativization strategy of their heads. For example, European languages cannot use participles (used for subject relativization) to relativize on possessors from subject NPs; cf. the ungrammaticality of 10:

- (10) **his son going to school man*
(Attempted reading: 'The man whose son is going to school')

Thus, the pattern of possessive relativization, as attested in Altaic languages, calls for an explanation. Much of the subsequent research in Turkish linguistics has approached this problem by trying to give an explanation of the Mother Node Principle (along with other principles of RC formation) either in syntactic or in semantic terms. The alternative approaches are well represented by the contributions to the volume *Turkish linguistics today* by Kornfilt (1991) and Nilsson (1991). The generative approach, advocated by Kornfilt (1991), proposes to attribute the use of the Subject Participle (*-en*) for relativization of subjects to the fact that the use of the Object Participle (*-dik*) here would involve an empty category in the embedded subject position. Since this empty category is supported by the agreement morphology on the participle, it must be a *pro* in terms of Chomsky's Government and Binding theory

(GB). Kornfilt (1991) proceeds to argue, extending the notion of A-binding to A¹-binding, that this *pro*, being a [+pro -ana] category, would be too close to its binder (the head of RC coindexed with it). The use of Subject Participle for relativization of possessors of subject NPs is explained in a similar fashion. If the Object Participle were chosen, the empty category in question would again be a *pro* since it would be supported by possessive endings on the head noun, and hence illegally bound by the RC head.

Nevertheless, with regard to possessive RCs, this approach is contradictory, since it is not clear how gaps within subject RCs with relativized possessors can be simultaneously *pros* and variables, i.e. represent simultaneously two different types of empty categories. This is so because under the standard GB analysis, which models gapping strategies (as in Turkish) on relative pronoun strategies (as in English), the gap in the position of the relativized constituent must be a variable.

It seems that the pattern of possessive relativization has no straightforward explanation in the semantic approach either. Thus, according to Nilsson (1991), the choice of Subject and Object Participles depends on referential properties of the embedded subject: Thus, if the subject is weak or nonreferential (or, more generally, nonspecific in terms of Johanson 1977) the Subject Participle is used, the Object Participle being reserved to indicate switch-reference with the referential (specific) subjects. Although this approach works quite well in many cases (e.g. in RCs with so-called subject incorporation), it cannot straightforwardly account for the use of Subject Participle in cases of possessor relativization as in 1b: The possessed nominal is clearly referential in such cases (otherwise it would not be used for purposes of head identification). Thus, formation of RCs with relativized possessors appears to be problematic by any account.

In my view, the Mother Node Principle in relativization should be viewed in the context of other possessor ascension phenomena as attested in these languages. Actually, this possibility has not gone unnoticed in Turkic studies. Thus Barker, Hankamer & Moore (1990), briefly considering such analysis (to be later discarded in favor of a syntactic approach—a reformulation of principles of relativization as proposed in Hankamer & Knecht (1976) in terms of *c*-command), write (footnote 4):

“One might be tempted, looking at examples (5)-(6) in isolation [examples of possessor relativization], to hypothesize that possessor ascension is at work; there is however no evidence from agreement, control or raisability to support the existence of possessor ascension in Turkish. Further, examples (7)-(10) below [examples of object relativization out of sentential subjects] would remain to be accounted for.”

Still, it seems that both objections are not fully convincing. First, relativization of nonsubject constituents out of sentential subjects (to which the authors refer above) is known to be marginal in Turkish (cf. Kornfilt 1991:76) and is altogether impossible in Even (Tungusic). Second, the authors’ contention that “possessor ascension” phenomena are lacking in Turkish originates from a narrow view of this process as developed in the Relational Grammar tradition (cf. Perlmutter & Postal 1983). However, if we assume with Corbett (1993) a prototype approach to the notion of headedness and regard “possessor ascension” as a process assigning some of the head properties in a nominal phrase to the possessor, such evidence for possessor ascension is available both in Turkic and Tungusic languages.

Further, I shall argue that possessor ascension phenomena can be attributed to the fact that possessors are head-marked in these languages (cf. section 4).² Notably, in Turkish, head-marking constitutes a precondition for possessor ascension in RCs (i.e. for the choice of the Subject Participle under relativization from the subject NP). Turkish possessive constructions are normally double-marked—by means of possessive agreement morphology on the head and by genitive marking of the possessor. However, there exists a class of constructions where the possessive head-marking is optional or even dispreferred, as in the case of constructions with a proper name as the possessed constituent:

- (11) *Fatma-nun Ali (Ali-si)*
 Fatma-GEN Ali (Ali-3SG)
 ‘Fatma’s (husband, son, etc.) Ali’

² The term “head-marking”, introduced in Nichols (1986), is used here to refer both to head- and double-marking patterns, i.e. to all cases when the possessor is marked (indexed) on the head.

Now, if the possessor in such constructions should be relativized, the possessed, acting as the embedded subject, must take the possessive agreement morphology in accordance with the general pattern:

- (12) *Ali-si* (**Ali*) *evlen-en* *Fatma* (*intihar et-ti*)
 Ali-3SG (**Ali*) marry-PART *Fatma* (suicide do-PAST)
 ‘Fatma, whose (husband) Ali married (the other one), killed herself.’

In the next section I shall consider further evidence for possessor ascension from the two groups of Altaic languages—Tungusic and Turkic—which consistently exhibit possessive agreement morphology.

2. Evidence for possessor ascension in Altaic languages

2.1. Turkic languages: Scope of the plural marker

It is well known that Turkish (as well as other Turkic languages) lacks the specialized possessive marker of the third person plural. In the latter function, the complex possessive form in *-ler-i*, a combination of the plural marker and the third person singular marker, is used. These forms are, however, ambiguous, as indicated in 13:

- (13) *ev-ler-i* a. ‘(his / her) houses’
 house-PL-3SG b. ‘(their) house’
 c. ‘(their) houses’

In one reading, the plurality is interpreted as pertaining to the stem of the noun itself, in the other reading, as pertaining to the possessor nominal, and in the third, as pertaining both to the head and its possessor. Viewed as a semantic operator,³ the plural marker can be regarded as taking either the stem to the left or the possessive ending (cross-referencing the possessor nominal) to the right in its scope.

2.2 Tungusic: Scope of the designative case marker

In a number of Tungusic languages (Evenki, Nanai, etc.) the DO can be marked, apart from the accusative case (or the reflexive-possessive marker, as in 18a) by the designative case in *-ga-*. The designative case

³ Compare a discussion of scopal properties of nominal morphological categories in Johanson (1992: 189-190; 234-235).

is exceptional morphologically in that it always takes the possessive suffixes. It is exceptional semantically in that marking the DO it simultaneously assigns the Beneficiary function to the possessor in the DO phrase. Cf. the interpretation of the possessor nominal in 14, where the DO is marked with the accusative case and in 15 with the DO in the designative:

- (14) *Bii etiken or-ma-n ga-da-m*
 I.NOM old.man reindeer-ACC-3SG take-NONFUT-1SG
 ‘I took the old man’s reindeer (i.e. the reindeer from the old man).’

- (15) *Bii etiken or-nga-n ga-da-m*
 I.NOM old.man reindeer-AL.POS-DES-3SG take-NONFUT-1SG
 ‘I took the reindeer for the old man.’

In other words, the designative marker has its scope both over the head nominal and its possessor.

2.3. Turkic: Use of same-reference converbs in switch-reference contexts

Turkic languages contain a class of converbs (cf. the Turkish converbs in *-ip*, *-erek* and doubled *-e*) that are normally used under coreferentiality of the embedded (converbial) subject with the matrix subject. Now, it has been noted that in a number of Turkic languages (see Brendemoen & Csató 1986 for Turkish; cf. Bergel’son & Kibrik 1995 for Tuvinian) some of these converbs can also be used in switch-reference contexts. The factors that facilitate this use are, on the one hand,—much like in RCs—referential (nonspecificity) and semantic (nonagentivity) properties of the converbial subject, and, more relevant to our discussion, the possessive relation between the matrix and the embedded subjects:

- (16) (Brendemoen & Csató 1986: 124)
Mehmet, diş-i ağrı-ya ağrı-ya,
 M.(NOM) tooth-3SG ache-CONV ache-CONV

sabah-ı et-ti
 morning-ACC make-PAST-3SG
 ‘Mehmet stayed awake all night with his tooth constantly aching.’

Thus with regard to rules of switch-reference, coreferentiality of the matrix subject with the possessive suffix on the embedded subject apparently suffices for the choice of a same-reference converb.

2.4. Tungusic: Possessor ascension in adversative passive constructions

North Tungusic languages exhibit a special valency-changing category, the adversative(-passive) form in *-w-* / *-m-*, which denotes an action unfavorable for the (surface) subject (cf. indirect or adversity passive in Japanese). Deriving prototypical (valency-reducing) passives as in 17, these forms mark promotion of the DO to the surface subject position; the (optional) underlying subject is marked by the dative case:

- (17) a. *Nugde etike-m maa-n*
 bear.NOM old.man-ACC kill-AD-NONFUT-3SG
 ‘The bear killed the old man.’
- b. *Etiken nugde-du maa-w-ra-n*
 old.man.NOM bear-DAT kill-AD-NONFUT-3SG
 ‘The old man was killed by the bear.’

However, there is also another type of adversative constructions, derivation of which results in a valency increase. For such constructions the surface subject corresponds to the underlying possessor (from the DO NP as in 18):

- (18) a. *Nugde etiken gia-wa-n maa-n*
 bear.NOM old.man friend-ACC-3SG kill-AD-NONFUT-3SG
 ‘The bear killed the old man’s friend.’
- b. *Etiken nugde-du gia-j*
 old.man.NOM bear-DAT friend-NOM-REF.POS
 (**hurke-m*) *maa-w-ra-n*
 (*youth-ACC) kill-AD-NF-3SG
 ‘The bear killed the old man’s friend (the old man was negatively affected).’

Note that in 18b one cannot replace the DO in the reflexive-possessive form *gia-j* with the DO in the nonpossessed (accusative) form *hurke-m*. This demonstrates that the possessor constitutes an obligatory constituent in the underlying structure (cf. 18a) and therefore lends support to the possessor ascension analysis.

The valency-increasing type of adversative constructions can be derived from (certain classes of) intransitive verbs as well. In that case the underlying possessor “ascends” from the underlying subject NP:

- (19) a. *Etiken oron-ni hör-re-n*
 old.man reindeer.NOM-3SG go.away-NONFUT-3SG
 ‘The old man’s reindeer ran away.’
- b. *Etiken or-mi (*oro-m)*
 old.man.NOM reindeer-NOM-REF.POS (*reindeer-ACC)
- höre-w-re-n*
 go.away-AD-NF-3SG
 ‘The (old man’s) reindeer ran away (the old man was negatively affected).’

Although not all types of adversative constructions can be analysed as involving “possessor ascension” (see Malchukov 1995: 21-25), the possessive relation is one of the major factors favoring promotion from a nonargument position.

2.5. Tungusic: Possessor ascension in reciprocal constructions

The verbal reciprocal form in *-mat-* / *-met-* is normally used to denote cross-coreferentiality between the subject and another argument of the base verb (the underlying DO in 20):

- (20) a. *Akan nöö-j*
 brother.NOM younger.brother-NOM-REF.POS
- aw-ra-n*
 wash-NONFUT:3PL
 ‘The brother washed his younger brother.’

- b. *Ak-nil* *aw-mat-ta*
 brother-PL.NOM wash-REC-NONFUT-3PL
 ‘The brothers washed each other.’

The verbal reciprocal regularly also marks cross-coreferentiality between the subject and the possessor within another argument NP (DO in 21):

- (21) a. *Akan* *nöö*
 brother.NOM younger.brother

niri-wa-n *aw-ra-n*
 back-ACC-3SG wash-NONFUT:3PL
 ‘The brother washed his younger brother’s back.’
- b. *Ak-nil* *meer* *niri-l-bur*
 brother-PL.NOM self’s back-PL-NOM-REF.POS.PL

aw-mat-ta
 wash-REC-NONFUT-3PL
 ‘The brothers washed each other’s backs.’

Again, possessors within argument NPs are similar to their heads in that they can be cross-coreferential to the subject of the reciprocal construction.

2.6. Turkic: Subject to subject raising in embedded clauses

As discussed in Mulder (1976), if the impersonal passive construction taking a sentential complement constitutes a “root” clause, the embedded subject cannot undergo raising to the matrix clause subject position. Note that the embedded subject in 22a cannot control the matrix verb agreement, as illustrated by the ungrammaticality of 22b:

- (22) a. *((biz-im) masum ol-duğ-umuz)-a inanul-di*
 (we-GEN) innocent be-PART-1PL-DAT believe-PASS-PAST-3SG
 ‘We were believed to be innocent.’
- b. **((biz-im) masum ol-duğ-umuz)-a inan-ıl-dık*
 we-GEN innocent be-PART-1PL-DAT believe-PASS-PAST-1PL
 (Attempted reading: ‘We were believed to be innocent.’)

If, however, such a complex impersonal construction is in its turn embedded, the most deeply embedded subject can be raised to the position of the subject of the impersonal sentence and exert control over agreement of the erstwhile impersonal predicate:

- c. *(sen) ((biz-im) (masum ol-duğ-umuz)-a*
 (you) (we-GEN) innocent be-PART-1PL-DAT
- inan-ıl-dığ-ımız)-ı* *bil-iyor-sun*
 believe-PASS-PART-1PL-ACC know-PRES-2SG
 ‘You know that we are believed to be innocent.’

This raising phenomenon seems to be important since it is not lexically restricted (to certain types of “raising verbs” and “raising adjectives”; cf. section 4) and depends solely on the syntactic construction involved.

3. Aleut evidence for possessor ascension

3.0. Typological characteristics of Aleut

Our account predicts that “possessor ascension” phenomena would obtain in other languages which cross-reference the possessor on the head nominal. As demonstrated with regard to Aleut, a radically head-marking language, this prediction is borne out.

Aleut is a Paleosiberian language related to Eskimo. It is a highly agglutinating suffixing language showing some polysynthetic features, cf. the use of enclitical subject-object agreement markers on the predicate in the examples in section 3.2. Syntactically, it is an SOV language giving much prominence to the topic relation, the verb agreeing with the topicalized constituent. The major parts of speech (nouns, verbs and adjectives) are not clearly distinguished: The set of possessive suffixes on nouns is similar to the set of subject-object agreement endings on verbs. The data discussed here are primarily drawn from Bergsland & Dirks (1981) based on the Atka Aleut dialect spoken in Alaska.

3.1. Number marking in NPs

Within simplex (nonpossessive) NPs Aleut formally distinguishes (in the unmarked absolutive case) between three grammatical numbers: Singular in *-x'*, dual in *-x* and plural in *-s*:

- (23) a. *hla-x'* b. *hla-x* c. *hla-s*
 boy-SG boy-DU boy-PL
 'the / a boy' '(the) two boys' '(the) boys'

In possessive constructions, however, the possessed noun takes a special set of number agreement markers, indicating its own number and / or person and number of the possessor, whereas the latter (if overt, see below) is in the relative case. The scope of number markers (that is, which NP—the possessor or the head noun—is assigned the number) is determined by a special type of Agentivity Hierarchy, subsuming the following partial hierarchies. (Our formulation is based on observations in Bergsland & Dirks (1981) and proposals in Golovko & Vaxtin (forthcoming); the sign > in 24 means “preferably controls number agreement on the head N”):

- (24) Agentivity hierarchy in number agreement control
- (a) Person hierarchy: 1 / 2 p. > 3p.
 - (b) Number hierarchy (see Golovko & Vaxtin, forthcoming): PL > DU > SG
 - (c) Topicality hierarchy (cf. Golovko & Vaxtin, forthcoming): /+Topic/ > /-Topic/
 - (d) Default principle: Other things being equal, number is assigned to the closest /+referential/ NP.

To see how these principles operate, consider the following examples of possessive NPs (in the unmarked absolutive case):

- (25) a. *ukina-mas* 'our knife or knives'
 knife-1PL
 b. *ukina-dix* 'your (du.) knife or knives'
 knife-2DU
 c. *ukina-chix* 'your knife or knives'
 knife-2PL

In 25 the 1 / 2 person plural (or dual) possessor, ranking high on both Person and Number Hierarchies, controls number agreement on the head noun, whereas the latter's number is disregarded.

Consider next the following examples with the 1 / 2 person singular possessor:

- (26) a. *uikina-ng* 'my knife'
knife-SG / 1SG
b. *ukina-king* 'my two knives'
knife-DU / 1SG
c. *ukina-ning* 'my knives'
knife-PL / 1SG
d. *ukina-an* 'your (sg.) knife'
knife-SG / 2SG
e. *ukina-kin* 'your (sg.) two knives'
knife-DU / 2SG
f. *ukina-t* 'your (sg.) knives'
knife-PL / 2SG

If the possessor is in the 1 / 2 person singular as in 26, thus being somewhat lower on the Number Hierarchy than constructions under 25, the head noun takes cumulative (in many cases unanalysable) agreement markers indicating number of its “host NP” (the head N) as well as number and person of the possessor.

Consider next the following constructions involving the third person possessor, ranking low on the Person Hierarchy. In accordance with the Default Principle as defined in 24d (and leaving for the moment the Topicality Hierarchy aside), the number markers are assigned to its host, the head noun, whereas the possessor carries its own number marking, as illustrated below:

- (27) a. *hla-m ukina-a* '(the) boy's knife'
boy-REL.SG knife-3SG
b. *hla-m ukina-ngis* '(the) boy's knives'
boy-REL.SG knife-3PL
- (28) a. *hla-s ukina-a* '(the) boys' knife'
boy-PL knife-3SG
b. *hla-s ukina-ngis* '(the) boys' knives'
boy-PL knife-3PL

If, however, the possessor is topical and in that case normally omitted, the possessive construction becomes ambiguous as to which constituent is assigned the number, that is which constituent exerts control over number agreement. According to Golovko & Vaxtin (forthcoming), (see

also Bergsland & Dirks 1981), this ambiguity is constrained (albeit not fully resolved) by the Number Hierarchy, the resolution rules taking the following form: The constituent with the higher number controls the number agreement. Thus, the NP in 29a taking the singular marker is unambiguous—both its constituents must be in the singular. Example 29b, by contrast, is ambiguous in that it indicates only that at least one of its constituents (the head noun or its possessor) is in the dual, the other constituent can be either in the dual or in the singular (ranking lower on the Number Hierarchy). As shown by 29c, the NP marked with the plural is open to still more interpretations, since it merely indicates that at least one constituent is in the plural, the other being either in the plural or in lower numbers (dual or singular):⁴

- (29) a. *ukina-a* 'his knife'
knife-3SG
- b. *ukina-kix* 'their (du.) knife', 'their (du.) two knives', 'his two
knife-3DU knives'
- c. *ukina-ngis* 'his knives', 'his two knives', 'their (du.) knife',
knife-3PL 'their (du.) two knives', 'their knife', 'their two
knives', 'their knives'

Thus, the number marking pattern in Aleut possessive phrases is not unlike Turkish, illustrated in section 2.1, the head competing with the possessor for control of number agreement. The Aleut system is however more intricate, since control properties of the possessive phrase constituents depend on their position in a number of hierarchies.⁵

3.2. Possessor ascension: Control of verbal agreement

In clauses with no topicalized constituents, the verb agrees in person and number with its subject, both subject (and object) being in the absolutive

⁴ In the interpretation of 29c I follow Golovko & Vaxtin (forthcoming), assuming that PL outranks DU on the Number Hierarchy. Note, however, that according to Bergsland & Dirks (1981) 24c cannot have a dual interpretation.

⁵ For Turkic languages, topicality (= omission) of the possessor also plays a certain role, since nontopicalized (i.e. overt) possessors cannot control the plural agreement morphology on the head N. Thus, in contrast to 13, *adam-lar-ın ev-ler-i* (man-PL-GEN house-PL-3SG) means '(the) men's houses', but not '(the) men's house'.

case (the absolutive case is formally distinguished from the relative case only in the singular, as in 30a from Bergsland & Dirks (1981: 8):

- (30) a. *Asxinu-x' hla-x' kidu-ku-x'*
 girl-ABS.SG boy-ABS.SG help-PRES-3SG
 'The girl is helping the boy.'
- b. *Asxinu-s hla-x' kidu-ku-s*
 girl-PL boy-ABS.SG help-PRES-3PL
 'The girls are helping the boy.'
- c. *Hla-x' kidu-ku-q*
 boy-ABS.SG help-PRES-1SG
 'I am helping the boy.'

If, however, the object is topicalized and therefore omitted, the verb takes another set of agreement endings, distinguishing the number of the object NP (and for most cases of the subject NP as well). In that case the subject takes the relative case, the structure being sometimes a bit misleadingly referred to as ergative:

- (31) a. *Asxinu-m kidu-ku-u*
 girl-REL.SG help-PRES-3->3SG
 'The girl is helping him.'
- b. *Asxinu-m kidu-ku-ngis*
 girl-REL.SG help-PRES-3->3PL
 'The girl is helping them.'
- c. *Kidu-ku-ng*
 help-PRES-1SG->3SG
 'I am helping him.'

Now, if the possessor of the subject NP is topicalized, this null possessor, rather than the subject (the head N), controls verbal agreement: Cf. 32a with the overt possessor and 32b from Bergsland & Dirks (1981: 21) illustrating ascension of the null possessor from the subject NP:

- (32) a. *Hla-s ada-a awa-ku-x'*
 boy-PL father-ABS.3SG work-PRES-3SG
 'The boys' father is working.'
- b. *Ada-ngis awa-ku-s*
 father-ABS.3P work-PRES-3PL
 'Their father is (lit. are) working.'

In a similar fashion, the possessor within an object NP, if topicalized, controls verbal agreement, as in 33b from Bergsland & Dirks (1981: 22):

- (33) a. *Hla-s ada-a kidu-ku-q*
 boy-PL father-ABS.3SG help-PRES-1SG
 'I am helping the boys' father.'
- b. *Ada-ngis kidu-ku-ning*
 father-ABS.3PL help-PRES-1SG->3PL
 'I am helping their father.'

The comparison of possessor ascension structures in 32b and 33b reveals an important point: The possessor within the subject NP, when topicalized, triggers subject-agreement endings on the verb, whereas ascending from the object NP, it triggers the (cumulative) object agreement endings. Thus, as regards the choice of verbal agreement markers, possessor ascension in Aleut obeys the Mother Node Principle, treating the heads of NPs and their possessors alike.

3.3. Switch-reference in “linking constructions”

One of the major types of complex constructions in Aleut is “linking constructions” (in the terms of Knut Bergsland), displaying features of both subordinate (underspecified adverbial clauses with a vague temporal semantics) and coordinate constructions. The form of the constructions depends largely on referential (switch-reference) relations between NPs in a subordinate (medial) and the matrix (final) clause.

If the embedded subject is nonidentical to the matrix subject, the non-final verb is normally linked by cliticization of the complementizer

(*ng*)*aan* (diachronically a postposition ‘to, for’);⁶ in 34 -*g’aan* < *x’* (3SG) + *ngaan* (COMP):

- (34) (Bergsland & Dirks 1981:105)
- | | | |
|------------------|----------------------|----------------|
| <i>Alitxu-x’</i> | <i>ina-ku-g’-aan</i> | <i>Atx’a-m</i> |
| war-ABS.SG | finish-PRES-3SG+COMP | Atka-REL.SG |
-
- | | |
|--------------|-------------------------|
| <i>hadan</i> | <i>uqitiig’uta-na-s</i> |
| to.3SG | return-PAST-1PL |
- ‘When the war was over, we returned to Atka.’

When the embedded (3rd person) subject is coreferential to the matrix subject, another linking structure is used. In this pattern the subordinate predicate, rather than taking the complementizer *ngaan*, takes the relative case to indicate succession of the events referred to in the subordinate and the matrix clause, or the absolutive case to indicate their simultaneity:

- (35) *Tayagu-x’* *uqiti-ku-m* *ayug-na-x’*
- | | | |
|------------|--------------------|-------------------|
| man-ABS.SG | return-PRES-REL.SG | went.out-PAST-3SG |
|------------|--------------------|-------------------|
- ‘The man returned and (then) went out (in a boat).’

Notably, this same-reference pattern can also be used under coreferentiality between the (3rd person) possessor in the embedded subject NP and the matrix subject as in 36a, or with the possessor of the matrix subject as illustrated in 36b:

⁶ Strictly speaking, this is an oversimplification. First, if the embedded and the matrix subjects are coreferential but in the 1 / 2 person, the switch-reference pattern is used. And conversely, under certain conditions (indication of simultaneity between clauses; coreferentiality of the embedded subject or object to the matrix object) the use of the *ngaan* complementizer becomes optional.

(36) (Bergsland & Dirks 1981:109)

a. *Tayagu-x'* *uqiti-ku-m*
man-ABS.SG return-PRES-REL.SG

hla-a *ayug-na-x'*
son-ABS.3SG went.out-PAST-3SG
'When the man returned, his son went out (in a boat).'

b. *Hla-a* *uqiti-ku-m*
son-ABS:3SG return-PRES-REL.SG

ayaga-a *ayug-na-x'*
wife-ABS:3SG went.out-PAST-3SG
'When his son returned, his wife went out (in a boat).'

4. Conclusions and qualifications

In the present paper I have attempted to demonstrate on the basis of data from Tungusic, Turkic and Aleut languages that head-marking is one of the factors favoring possessor ascension. Data from a number of other head-marking languages (and language families) lend further support to this correlation; cf. e.g. lexically unrestricted raising phenomena in Quechua languages (Lefebvre & Muysken 1988: 141-148) and in Malagasy (Perlmutter & Postal 1983: 43-45), or marking of the possessor on the verb in Santali (a Munda language, see Bhat 1994: 234).

Still, I am not claiming that head-marking is the only factor involved in ascension processes. Generally speaking, ascension (and raising) phenomena constitute a rather heterogeneous class and may be conditioned by different factors. First, in some languages (e.g. Bantu languages, as discussed by Seiler 1983: 45-47), possessor ascension is allowed only for inalienable possessors. Second, existence of possessor ascension can depend on how well the genitive marker is integrated into the case-system of individual languages (i.e., if it is combinable with other case-markers). For example, Quechua languages employing a double-marking pattern of possessive constructions allow for extraction of the genitive possessors (and consequently for their double case-marking), whereas structurally very similar Turkic languages that disallow double case-marking do not. Third, those raising phenomena that are lexically restricted (applying to a particular set of "raising verbs" and "raising adjectives") largely depend, as suggested by Givón (1990:

778), on a (morphologically) trivial property of certain verbs to subcategorize for both a sentential and a nominal object (or subject).

Further, the possibility of possessor ascension may depend on a number of additional factors. A much discussed topic is the interaction between possessor ascension and noun incorporation: It has been argued with regard to a number of languages that the former process is a side-effect of the latter (cf. Baker 1988: 96-105; 268-277; for an early treatment of this topic with regard to Chukchee see V. P. Nedjalkov 1977). Another example is the interaction of possessor ascension with Agentivity Hierarchy, as observed above in Aleut. An additional typological investigation is necessary in order to determine if apparent counter-examples to our proposals, relating possessor ascension to head-marking, can be accounted for in terms of these factors (cf. e.g. agreement of the verb with the possessor in dependent-marking Tangut) (see Kepping 1979: 269-270).

The attested correlation between possessor ascension and head-marking in possessive constructions may have a diachronic explanation. Usually, the head-marking pattern is due to grammaticalization of encliticized pronominals to agreement markers. An intermediate stage in such a grammaticalization process is represented by a concatenation of the lexical noun with the pronoun, often with a (formally) underspecified dependency relation. Also in later stages of the grammaticalization process, the possessive agreement markers may retain residual characteristics of independent syntactic items and reveal certain head properties in competition with the possessed noun.

To conclude: Head-marked possessors, in contrast to dependent-marked possessors, tend to display some head properties and therefore may exhibit a deviant behavior with regard to hierarchies formulated in purely syntactic terms (such as Keenan & Comrie's (1977) Accessibility Hierarchy for relativization). Another conclusion is of a methodological nature. Our data suggest that a narrow, disjunctive view of possessor ascension phenomena (assuming that possessor ascension deprives the erstwhile head of all of its "term" properties), as advocated by formal approaches (e.g. in Relational Grammar), can hardly do justice to all possible redistributions of head properties within possessive NPs as attested in natural languages.⁷

⁷ The common practice of accounting for such splits in Relational Grammar is to assign the "term" status to the possessor and its (semantic) head in different strata

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of derivation. Still, such analysis works well only for certain “classic” cases of Raising processes (cf. e.g. the discussion of Raising in adversative-passive constructions, above), whereas for other cases it is less suitable (cf. the discussion of head properties of possessors in RCs and switch-reference constructions) or altogether impossible (cf. the discussion of scopal properties of plural and case markers in sections 2.1 and 2.2).

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