On an Alternative to Maki *et al*'s (2015) Account on Mongolian NOM-GEN Alternation and its Implication for the Structure of Mongolian Relative Clauses*

Yoichi Miyamoto

1. Introduction

As noted in Murasugi *et al*. (2016), a look at the history of cross-linguistic studies in East Asian languages reveals that the theory has developed in a cycle. In the 80's, Saito (1985) provides detailed analysis of scrambling, resulting in the question of why languages such as English do not allow this operation. Fukui (1986) responds to this question, based on the availability of functional categories, that the absence of functional categories allows Japanese to have scrambling. Fukui's proposal elicits the question of whether Japanese really lacks functional categories such as D and C. Thus, Saito and Murasugi's (1990) proposal that Japanese does have NP-ellipsis, traditionally known as N'-ellipsis, is intriguing, as it suggests the presence of D in the language.

Saito *et al*. (2008) further examine the availability of NP-ellipsis in Chinese and Japanese, broadening the domain of inquiry cross-linguistically. The authors demonstrate that a comparison among the East Asian languages contributes to elucidate a significant difference in nominal architecture involving a relative clause in these languages. Based on this cycle of cross-linguistic research, it is helpful to consider Mongolian to further expand the domain of inquiry. As Maki *et al*. (2015) note, Mongolian is a scarcely investigated East Asian language in generative grammar and, thus, Maki *et al*.'s work provides important insight into deeper understanding of the nature of Universal Grammar cross-linguistically.

This squib shows that Maki *et al*.'s data support the hypothesis that long-distance dependency can be substantiated with a series of clause-bound Op-movement, which is independently argued for in Schneider-Zioga (2009) for Kinande long-distance dependency. Schneider-Zioga's proposal on unbounded dependencies in Kinande, a Bantu language, is based on the fact that *kiwe* 'this' can only refer to *obuli mukolo* 'every student' in (1):[1]

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[1] Abbreviations that are used throughout this paper are as follows:
ACC = accusative, ADN = adnominal, AGR = agreement, CL = classifier, CON = conclusive, DAT = dative, GEN = genitive, NEG = negation, NOM = nominative, PL = plural, PRES = present, Ø = null

(1) ekitabu kiwe$_{1/*2}$ kyo ngalengekanaya [$_{CP}$ nga kyo [obuli mukolo]$_2$
book his wh-AGR I.think that wh-AGR every student
akasoma ___ kangikangi]
read regularly
'(It is) His$_{1/*2}$ book that I think every student$_2$ reads regularly.'

(Schneider-Zioga 2009: 49)

Schneider-Zioga shows that *ekitabu kiwe* cannot be bound by *obuli mukolo*, which indicates that the reconstruction of *ekitabu kiwe* into the embedded clause is not possible. This naturally follows if what appears to be an unbounded dependency has the structure given in (2):

(2) [WH$_1$ wh-AGR [$_{IP}$ … [$_{CP}$ Op$_1$ wh-AGR [$_{IP}$ … ___$_1$ …]]]]

(Schneider-Zioga 2009: 54)

No long-distance movement has taken place and, therefore, reconstruction into the embedded position is not possible.

Section 2 outlines Miyamoto's (2017) proposal on the structure of Japanese relative clauses. The essence of the proposal is that Op-movement takes place only in the highest clause in relative clauses, which is independently motivated for Japanese clefts by Kizu (2005). Section 3 discusses Mongolian relative clauses, and shows that Mongolian relative clauses behave like their Japanese counterparts except for the fact that Mongolian NOM-GEN alternation can occur not only in the highest clause but also in the rest. We suggest that Mongolian relative clauses involve series of clause-bound Op-movement, which is argued for in Schneider-Zioga (2009) for Kinande. The current proposal supports Watanabe's (1996) proposal on NOM-GEN alternation. Finally, Section 4 concludes the current paper.

2. Op-movement in Japanese Relative Clauses: Miyamoto (2017)

Miyamoto (2017) argues that Japanese relative clauses involve Op-movement in the highest clause and that long distance dependency consists of clause-bound Op-movement and *pro*.

The presence of Op-movement in the highest clause is motivated by the following three phenomena.

First, Kizu (2005: 151) shows that anaphor binding is possible only in the highest clause, as shown by the fact that *otagai* cannot be bound by the embedded subject *sensei-gata*:

(3) [Hanako-to-Taroo$_1$ -ga [sensei-gata$_2$-ga e atta]-to omotteiru]
Hanako-and-Taro-NOM teacher-PL-NOM met-that think
otagai$_{1/*2}$-no yuujin
each other-GEN friend
'each other's friend that Hanako and Taro think that the teachers met'

Note that in English, (4), for example, is ambiguous, depending on whether *herself* refers to Mary or Susan.

(4) The picture of herself that Mary said that Susan threw away was on sale.

Second, idiom interpretation is not possible if the idiom is part of the embedded clause, as shown in the contrast between (5a, b), cited from Miyamoto (2017:49):

(5) a. [[Taroo-ga sono ronbun-ni e tsuketa] kechi]-ni tatarareru.
Taro-NOM that paper-DAT attached fault-DAT is haunted
'(Someone) is haunted by the fault that Taro found on that paper'

b. #[[Hanako-ga [Taroo-ga sono ronbun-ni e tsuketa]-to shinjiteiru]
Hanako-NOM Taro-NOM that paper-DAT attached-that believe
kechi]-ni tatarareta.
fault-DAT was haunted
'(Someone) was haunted by the fault that Hanako believes that Taro found on that paper.'

Unsurprisingly, English relative clauses permit idiomatic interpretation not only in short-distance but also in long distance, as shown in (6a, b):

(6) a. The careful track [that she's keeping [e] of her expenses] pleases me.

b. The careful track [that John believes [that she's keeping [e] of her expenses]] pleases me.

The contrast between (5b) and (6b) concerning the availability of idiomatic interpretation thus indicates that long-distance dependency is available in English relative clauses. This is unsurprising given the widely accepted assumption that long-distance Op-movement occurs in English relative clauses (Chomsky 1977, Aoun and Li 2003, among others). These two contribute to show that long distance dependency cannot be made in Japanese relative clauses.

In addition to these two contributions, as originally observed in Watanabe (1996: 390), NOM-GEN alternation is possible only in the highest clause:[2]

(7) a. [[John-ga [e] katta]-to Mary-ga/no omotteiru] hon
John-NOM bought-that Mary-NOM-GEN think book
'the book that Mary thinks that John bought'

b. *[[John-no [e] katta]-to Mary-ga/no omotteiru] hon
John-GEN bought-that Mary-NOM-GEN think book

c. *Mary-ga/no [[John-no [e] katta]-to omotteiru] hon
Mary-NOM-GEN John-GEN bought-that think book

Since Japanese does not permit NOM-marked DPs next to each other, the embedded clause is scrambled before the matrix subject in (7a), and this example is grammatical, irrespective of whether the matrix DP is NOM- or GEN-marked. By way of contrast, (7b, c) show that no matter whether the embedded clause is scrambled or not, the embedded subject cannot be GEN-marked. Watanabe takes this contrast as evidence for the hypothesis that only in the highest clause, WH-agreement occurs.

Given Watanabe's proposal on NOM-GEN alternation, it remains plausible that no movement occurs in the embedded clause. Considering the fact that Japanese relative clauses allow long-distance dependency, we assume with Murasugi (1991) that long-distance dependency becomes possible with *pro*.

3. Op-movement in Mongolian Relative Clauses

In this section, we examine Mongolian relative clauses on the three points discussed in the previous section for Japanese relative clauses. First, we discuss NOM-GEN alternation in Mongolian in Section 3.1, extensively discussed by Maki *et al*. (2015). We turn to deal with anaphoric binding and idiomatic interpretation in Section 3.2.

3.1. Maki *et al*'s (2015) Account on NOM-GEN Alternation

In Chapter 1, Maki *et al*. discuss the NOM-GEN alternation phenomena in (inner) Mongolian, and propose the conditions on genitive subject licensing: (I) a genitive subject must be c-commanded by a nominal element such as the relative head, and (II) a genitive subject must be in a local relation with the adnominal form of the predicate (p.11).[3] In (8), the relative head *nom* c-commands

[2] See also Kizu (2005) for relevant discussion.

[3] Maki *et al*. do not provide the definition of c-command that they adopt. It is thus not immediately clear how the relative head c-commands the genitive subject within the relative clause.

Ulaɣan-u, with the predicate *qudadun-abu-ɣsan* in its adnominal form, and thus, it is grammatical.[4]

(8) Öčügedür bi-Ø **Ulaɣan-u** qudadun-abu-**ɣsan** gejü bodu-ɣsan **nom**
yesterday I-NOM Ulagan-GEN buy-take-PAST.ADN that think-PAST.ADN book
'the book which I thought [that Ulagan bought *t*] yesterday' (p. 8)

In Chapter 2, Maki *et al*. further explore the availability of genitive subjects in gapless prenominal sentential modifiers. Of significance is the fact that (9a), but not (9b), is grammatical with the genitive subject *Ulaɣan-u*, despite the fact that the subject in question is c-commanded by the nominal element *učir* and the embedded predicate is in its adnominal form.

(9) a. [öčügedür Ulaɣan-Ø/-u iniye-gsen gejü] učir
yesterday Ulagan-NOM-GEN laugh-PAST.ADN that fact
'the fact [that Ulagan laughed yesterday]' (p.25)

b. Baɣatur-Ø [öčügedür Ulaɣan-Ø/*-u iniye-gsen gejü]
Bagatur-NOM yesterday Ulagan-NOM-GEN laugh-PAST.ADN that
kele-gsen učir
say-PAST.ADN fact
'the fact [that Bagatur said [that Ulagan laughed yesterday]]' (p.25)

Based on the ungrammaticality of (9b) with the genitive subject, Maki *et al*. restrict the licensing domain for genitive subjects to be the clausal domain where they are generated. With this modification, the requirement that a genitive subject be c-commanded by a nominal element cannot be satisfied in (9b), simply because the matrix clause intervenes between *učir* and the embedded clause.

Maki *et al*. observe that in contrast to (9b), (10) is grammatical despite the genitive subject being located in the embedded clause:

(10) [bi-Ø [Baɣatur-Ø [öčügedür Ulaɣan-Ø/-u pro$_1$ qudaldun-abu-ɣsan
I-NOM Bagatur-NOM yesterday Ulagan-NOM-GEN buy-take-PAST.ADN
gejü] bodu-jai gejü] bodu-ɣsan] nom$_1$
that think-PAST.CON that think-PAST.ADN book
'the book which [I thought [that Bagatur thought [that Ulagan bought *t* yesterday]]]' (p.26)

[4] The data in Maki *et al* (2015) is from inner Mongolian. Yet, I confirm that the same pattern of grammatical judgments is obtained in the outer Mongolian counterparts.

One difference between (9b) and (10), which Maki *et al*. take to be crucial, is the presence of *pro*, co-indexed with the relative head *nom*, in the latter. The authors propose that the nominal feature of the relative head percolates down to the *pro* within the embedded clause. Due to this percolation, the embedded CP, thus the embedded C head also comes to hold the nominal feature of the licensing nominal element. Consequently, the embedded C head with the nominal feature acts as the licensing nominal element for the genitive subject within the embedded clause. Notice that in the embedded clause of (9b), there is no *pro*, co-indexed with the intended licensing nominal element, which means no percolation of the relevant feature taking place. Thus, in this example, the proposed 'indirect' licensing of genitive subjects is unavailable.

We can now interpret Maki *et al*'s data in light of Watanabe's (1996) proposal on NOM-GEN alternation, based on WH-agreement. The fact that Mongolian permits NOM-GEN alternation in the embedded clause, unlike Japanese, can be understood as the presence of WH-agreement in the embedded C. This, in turn, indicates that movement occurs in the embedded clause. Two possibilities arise: long-distance operator (Op) movement and series of clause-bound Op-movement. In the following section, we examine the availability of anaphoric binding and idiomatic interpretation in the Mongolian embedded clause, and show that the latter possibility is more promising than the former.

3.2. Clause-bound Op-movement in Outer Mongolian Relative Clauses

Let us start with anaphoric binding in (11):[5]

(11) Taroo [Hanako-Ø/giin hay-san] tüünii üüriin bugj-iig
Taroo Hanako-NOM-GEN throw.away-PAST-ADN her self ring-ACC
ol-son
pick.up-PAST
'Taro picked up herself's ring that Hanako threw away.'

This example shows that in a relative clause with no embedding, the anaphoric element, constituting a part of the relative head, can be bound by the subject of the relative clause. This indicates that reconstruction is available in Mongolian relative clauses.

With this in mind, let us move to (12):

[5] The data in this section was provided by Nomin Oyunaa, an outer Mongolian speaker.

(12) [Taroo$_1$ [Hanako$_2$-Ø/giin hay-san gej] bod-son]
Taroo Hanako-NOM-GEN throw away-PAST that think-PAST-AND
tüünii üüriin huvtsas$_{1/*2}$ ünetei bai-san
his self clothes expensive be-PAST
'The clothes that Taro thought that Hanako threw away were expensive.'

In (12), which involves one embedding, we now have two candidates for a binder of *tüünii üüriin* 'his/her self': Taroo in the higher clause, and Hanako in the lower clause. Significantly, this example necessarily means that Taro's clothes that he thought Hanako threw away were expensive. If the clothes under consideration are Hanako's, *tüünii üüriin* in (12) must be replaced by *Hanako-giin*, as shown in (13):

(13) [Taroo$_1$ [Hanako$_2$-Ø/giin hay-san gej] bod-son]
Taroo Hanako-NOM-GEN throw away-PAST that think-PAST-ADN
Hanako-giin huvtsas ünetei bai-san
Hanako-GEN clothes expensive be-PAST
'Hanako's clothes that Taro thought that Hanako threw away were expensive.'

Accordingly, the unambiguity of (12) shows that no reconstruction into the embedded clause is possible in Mongolian relative clauses.

The availability of idiomatic interpretation points to the same direction. Note that (14a) can be relativized without losing its idiomatic interpretation:

(14) a. Taroo gal deer tos nem-sen.
Taroo fire to oil add-PAST
'Taro made things worse.'
b. [[Taroo gal deer nem-sen] tos] hereggüi bai-san
Taro fire to add-PAST oil unnecessary be-PAST
'(lit.) The oil that Taro added to the fire was unnecessary.'

The fact that (14b) can have the idiomatic interpretation supports the hypothesis that Mongolian relative clauses exhibit reconstruction effect.

Of significance is the fact that unlike (14b), (15) loses its idiomatic interpretation:

(15) Hanako [[[Taroo gal deer nem-san gej] bod-son] tos] hereggüi
Hanako Taro fire to add-PAST that think-PAST oil unnecessary
bai-san.
be-PAST
'(lit.) The oil that Hanako thought that Taro added to the fire was unnecessary.'

Given the assumption that idiomatic interpretation requires reconstruction, the unavailability of the idiomatic interpretation in (15) supports the hypothesis that long-distance reconstruction is not possible in Mongolian relative clauses.

Accordingly, the difference between Japanese and Mongolian relative clauses is that only in the latter, NOM-GEN alternation is possible in the embedded context. Assuming that Watanabe (1996) is correct in that the availability of the alternation in point means the presence of WH-agreement, we conclude that Mongolian relative clauses involve series of short-distance Op-movement, not long-distance Op-movement, as illustrated in (2), repeated here as (16), for Kinande:[6]

(16) [WH_1 wh-AGR [$_{IP}$ … [$_{CP}$ Op_1 wh-AGR [$_{IP}$ … $\_\_\_{}_1$ …]]]]

(Schneider-Zioga 2009: 54)

In short, Mongolian and Kinande employ the same strategy in establishing long-distance dependency.

Finally, (17) responds to the question of what is raised to the highest CP SPEC in Mongolian relative clauses. Note that the relative head cannot be elided in Mongolian relative clauses, unlike Chinese relative clauses (Saito *et al* (2008)):

(17) Taroo üüriin bagghid handah itgel ikh baikhad
Taro self teacher toward.have reliance big in contrast
Jiroo üüriin bagghid handah *(itgel) ikh bish.
Jiro self teacher toward.have reliance big not
'Taro's reliance on his teacher is substantial, but Jiro's *(reliance) on his teacher is not.'

If Mongolian relative clause formation were of Kaynean (1994) type, the relative clause in (17) should occupy DP SPEC, parallel to Chinese relative clauses. This being the case, the structural requirement for NP-ellipsis; namely, DP SPEC must be filled (see also Saito and Murasugi 1990 and Lobeck 1995), is met, and (17) should be grammatical without the relative head overt, contrary to

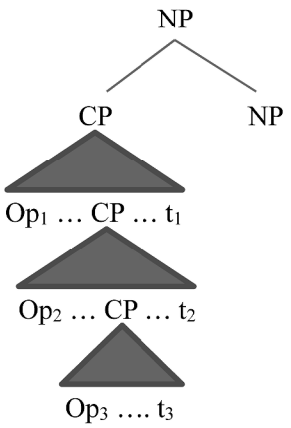
[6] See also Bošković (2008) and Boeckx (2008) on a series of short-distance Op-movement.

fact. The fact that (17) becomes deviant without the relative head overt thus shows that Mongolian relative clauses do not involve Kaynean relative head raising. Accordingly, this indicates that relative clauses are formed via Op-movement, and they are NP-modifiers, being attached to NP. We therefore conclude that Mongolian relative clauses involve a series of short, local steps, namely, clause-bound Op-movement, including the highest clause.

4. Concluding Remarks

This squib clarifies the structure of Mongolian relative clauses, based on examination of anaphoric binding and idiom interpretation, in addition to Maki *et al*'s NOM-GEN alternation, for their 'internal' structure, and concludes that clause-bound Op-movement occurs in relative clauses, as illustrated in (18):

(18)



Due to space limitations, the nature of the clause-bound Op-movement under consideration remains open for future research; but, given that the derivation in (18) is in essence accurate, Maki *et al*'s feature percolation mechanism to account for the NOM-GEN alternation in point can be dispensed with. This is a welcome result since it is not obvious in which part of the grammar, except for the alternation under question, makes use of the percolation mechanism they propose. The data given in this squib can be understood as additional support from outer Mongolian for Watanabe's (1996) hypothesis that NOM-GEN alternation is an instance of WH-agreement.

Maki *et al*.'s contribution to bring Mongolian into comparative study among East Asian languages is obviously a worthy addition to the field. The issue which this current squib deals with would not have come about without their contribution. We hope that Maki *et al*.'s work opens up a broader scope of comparative study among East Asian languages, thereby generating significant predictions, which have the potential to contribute to elucidate the nature of Universal Grammar.

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