Reduced Embedded Questions with Multiple Wh-phrases in Chakhar Mongolian

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Abstract: This paper provides a detailed description of reduced embedded questions with multiple *wh*-phrases in Chakhar Mongolian and proposes to analyze them in terms of a reduced cleft analysis. We argue that reduced questions with multiple *wh*-phrases in Chakhar Mongolian can be directly derived by applying subject ellipsis, which is independently allowed in Chakhar Mongolian, to presuppositional clauses of embedded multiple cleft sentences. Our proposal is supported by observations that reduced questions and multiple cleft construction in Chakhar Mongolian exhibit parallel properties, including case-marked *wh*-phrases and adherence to the clause-mate condition.

Keywords: multiple sluicing; Chakhar Mongolian; multiple cleft construction; case-matching effect; clause-mate condition

1. Introduction

Coined by Ross (1969), the term 'sluicing' is defined as the ellipsis process by which questions, such as (1a), are converted into their reduced forms, such as in (1b).

(1) a. He is writing something, but you can't imagine [what he is writing].
b. He is writing something, but you can't imagine [what].

The embedded clause in (1a), indicated by square brackets, contains a *wh*-question. In (1b), this question is reduced to contain only a *wh*-phrase. The full-fledged *wh*-question and the reduced *wh*-question have the same interpretation (Lasnik 2001; Merchant 2001; Ross 1969). The remaining *wh*-phrase in (1b), namely, *what*, is called a *wh*-remnant, which has a corresponding part in the preceding clause, i.e., *something*, that is called a correlate. The type of sluicing configuration that contains one remnant, as is the case in (1b), is called single sluicing. Sluicing also allows the presence of multiple remnants, which results in another type, called multiple sluicing (Takahashi 1994). Consider (2), which is cited from Merchant 2001:

(2) ?Everybody brought something (different) to the potluck, but I couldn't tell you [who what].

Anteceded by the first clause in (2), the reduced question contains two remnants, *who* and *what*.

The sluicing configurations above are also observed in Chakhar Mongolian (henceforth, CM), the standard dialect of modern Mongolian spoken in the Inner Mongolia Autonomous Region of China (Bai and Takahashi 2023; Bai 2023b). This paper aims to examine reduced embedded questions with multiple *wh*-phrases (henceforth, RQMWs) in CM. RQMWs have been previously studied in many languages (Abels and Dayal 2023; Cortés Rodríguez 2023; Merchant 2001; Takahashi 1994). The relevant phenomenon in CM, however, has not yet

been subject to close examination. This paper intends to add a new set of data from CM to the existing literature on multiple sluicing. The present study also proposes that RQMWs in CM should be analyzed in terms of a reduced cleft analysis.

The remainder of this paper is organized as follows: Section 2 presents properties of RQMWs in CM; Section 3 discusses multiple cleft construction in CM; Section 4 proposes a reduced cleft analysis to account for RQMWs in CM; and Section 5 summarizes the entire discussion.

2. Reduced Embedded Questions with Multiple *Wh*-phrases in Chakhar Mongolian

This section considers RQMWs in CM. A typical case is shown in (3).[1]

(3) a. Nige xüü-Ø nige xeüxen-dü nom-Ø xürge-be,
one boy-NOM one girl-DAT book-ACC give-PST
'A boy gave a book to a girl,'

b. gebečü bi-Ø [ali xüü-Ø ali xeüxen-dü nom-Ø
but I-NOM which boy-NOM which girl-DAT book-ACC
xürge-gsen]-i (ni) mede-xü ügei.
give-PERF-ACC PPC know-INF not
'but I don't know which boy gave a book to which girl.'

c. ? gebečü bi-Ø [ali xüü-Ø ali xeüxen-dü]-yi ni mede-xü ügei.
but I-NOM which boy-NOM which girl-DAT-ACC PPC know-INF not
'but I don't know which boy to which girl.'

d. gebečü bi-Ø [ali xüü-Ø ali xeüxen-dü bol-χu]-yi
but I-NOM which boy-NOM which girl-DAT COP-INF-ACC
ni mede-xü ügei.
PPC know-INF not
'but I don't know which boy to which girl.'

The sentence in (3a) antecedes the full-fledged multiple *wh*-question in (3b) and the corresponding reduced question in (3c). The correlates of the remnants are *nige xüü-Ø* 'one boy-NOM' and *nige xeüxen-dü* 'one girl-DAT.' The reduced question in (3c) contains two argument *wh*-remnants, which are marked nominative and dative, respectively. The reduced question is more acceptable when the copula *bol* appears, as shown in (3d). Notably, the embedded clause in (3b) is a non-finite complement clause containing a non-finite predicate. Non-finite complement clauses in CM are case-marked. The non-finite complement clause in (3b), indicated by square brackets, is accompanied by an accusative marker. The complement clause serves as the object of the matrix verb and, hence, is marked accusative like an NP object (Bao, Maki, and Hasebe 2015; Fong 2019; Gong 2022; Janhunen 2012; Sakamoto 2012; von Heusinger, Klein, and Guntsetseg 2011). The case-marked complement clause in (3b) is followed by a personal possessive clitic (PPC), which functions to indicate the subject of a non-finite complement clause (Bao, Maki, and Hasebe 2015). In the case of (3b), the subject of the embedded clause is a *wh*-phrase, which is in third person. Correspondingly, the third-person PPC *ni* is used. Turning to the reduced questions, they are assigned accusative

case by the matrix predicate *mede* 'know' and then followed by the PPC *ni*.[2]

In addition to argument *wh*-phrases, adjunct *wh*-phrases are allowed to appear as remnants in RQMWs in CM. Consider the following example:

(4) a. Batu-Ø nige γaǰar-ača nige xümün-dü beleg-Ø ilege-be,
Batu-NOM one place-ABL one person-DATpresent-ACC send-PST
'Batu sent a present to a person from a place,'

b. ?gebečü bi-Ø [χamiγa-ača xen-dü]-yi ni mede-xü ügei.
but I-NOM where-ABL who-DAT-ACC PPC know-INF not
'lit. but I don't know to whom from where.'

c. gebečü bi-Ø [χamiγa-ača xen-dü bol-χu]-yi ni mede-xü ügei.
but I-NOM where-ABL who-DAT COP-INF-ACC PPC know-INF not
'lit. but I don't know to whom from where.'

The reduced question in (4b), which is anteceded by (4a), contains an adjunct *wh*-phrase, *χamiγa-ača* 'where-ABL,' and an argument *wh*-phrase, *xen-dü* 'who-DAT.' Note that the reduced question is more acceptable when the copula *bol* is present, as shown in (4c). Moreover, the remnants in the reduced question must be case-marked in the same way as their correlates in (4a). That is, the case-matching effect is observed (Merchant 2001).[3] [4]

RQMWs in CM allow for the presence of more than two remnants, as shown in (5):

(5) a. Batu-Ø nigen čaγ-tu nige γaǰar-ača yaγuma-Ø ǰigele-be,
Batu-NOM one time-DAT one place-ABL thing-ACC borrow-PST
'Batu borrowed a thing from a place at a certain time,'

b.? gebečü bi-Ø [xeǰiye χamiγa-ača yaγu-Ø]-yi ni mede-xü ügei.
but I-NOM when where-ABL what-ACC-ACC PPC know-INF not
'lit. but I don't know what from where when.'

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[2] Note that the PPC following a full-fledged embedded clause like (3b) is optional. Readers may wonder about the optionality or obligatoriness of the PPC in reduced questions like (3c-d). My native CM speaking informants had divergent opinions on the presence of the PPC in reduced questions. Half of the informants said that it was optional, and the other half said that it could not be omitted. I will ultimately argue that reduced questions have clausal structure, and, therefore, expect that the PPC should be optional in (3c-d) just as in (3b), which is borne out by the judgment of half of the informants. I have no clear idea about the reason for this variation in acceptability among speakers and thus must leave it to future research. In this paper, I indicate the PPC as obligatory in cases of reduced questions for the sake of completeness.

[3] An anonymous reviewer inquires whether reduced questions involving structural cases display case-matching effects. Consider the following example:

(i) a. Man-u anggi-yin nige xüü-Ø ni Sarana-du yaγuma-Ø ög-be,
2PL-GEN class-GEN one boy-NOM PPC Sarana-DAT thing-ACC give-PST
'A boy in our class gave a thing to Sarana,'

b. bi-Ø [xen-Ø ni yaγu-Ø bol-χu]-yi ni mede-ye geǰü sana-ǰu bai-na.
I-NOM who-NOM PPC what-ACC COP-INF-ACC PPC know-IMP that hope-ADVL AUX-NPST
'I wonder who what.'

The sentence in (ia) antecedes the reduced question in (ib). In the antecedent sentence, the first correlate is the nominative subject, followed by the PPC, and the second correlate is the accusative object. Correspondingly, in the reduced question in (ib), the first remnant is marked nominative, followed by the PPC, and the second remnant is marked accusative.

[4] An anonymous reviewer notes that case-matching effects are not observed in reduced questions with single remnants in Khalkha Mongolian, as discussed in Sakamoto 2012. Specifically, single remnants are not case-marked. Meanwhile, according to Bai (2023c), single remnants can be optionally case-marked in Chakhar Mongolian. Reduced questions with single remnants differ from those with multiple remnants, as the remnants in the latter case are obligatorily case-marked. This distinction suggests that different sources are involved in reduced questions. In cases with single remnants, the sources may be pseudo-sluiced clauses or cleft sentences. In contrast, for cases with multiple remnants, the sources are likely to be cleft sentences.

c. gebečü bi-Ø [xeǰiye χamiγa-ača yaγu-Ø bol-χu]-yi ni
but I-NOM when where-ABL what-ACC COP-INF-ACC PPC
mede-xü ügei.
know-INF not
'lit. but I don't know what from where when.'

The reduced questions in (5b-c), which are anteceded by (5a), consist of three remnant phrases.

Cases of truncated embedded clauses in (3-5) all contain *wh*-remnants. Importantly, multiple non-*wh*-remnants are not allowed in CM. Consider (6-7):

(6) a. Batu-Ø [Mergen-i očügedür Xöxeχota-du siraγsan χonin miχa-Ø
Batu-NOM Mergen-ACC yesterday Hohhot-DAT roasted sheep meat-ACC
ide-be geǰü] üǰe-jü bai-na,
eat-PST COMP think-ADVL AUX-NPST
'Batu thinks that Mergen ate roasted lamb in Hohhot yesterday,'

b.* gebečü bi-Ø [urǰidur siraγsan üxer-ün miχa
but I-NOM the.day.before.yesterday roasted cow-GEN meat
(bol-una) geǰü] üǰe-jü bai-na.
COP-NPST COMP think-ADVL AUX-NPST
'lit. but I think that roasted beef the day before yesterday.'

(7) a. Batu-Ø [Mergen-i Sarana-du ene nom-i ög-be geǰü]
Batu-NOM Mergen-ACC Sarana-dat this book-ACC give-pst COMP
üǰe-jü bai-na,
think-ADVL AUX-NPST
'Batu thinks that Mergen gave Sarana this book,'

b.* gebečü bi-Ø [Tana-du tere bir-i (bol-una) geǰü] üǰe-jü
but I-NOM Tana-dat that pen-acc COP-NPST COMP think-ADVL
bai-na.
AUX-NPST
'lit. but I think that Tana that pen.'

The sentence in (6a) is the antecedent of the truncated embedded clause in (6b), which is not acceptable with two non-*wh*-remnants, irrespective of the presence of the copula. The same can be observed in the example (7).

Notably, the clause-mate effect is observed in RQMWs in CM. Let us start our discussion with the following data:

(8) a. Tana-Ø [Batu-Ø nige γaǰar-ača nige yaγuma-Ø ǰigele-be] ge-ne,
Tana-NOM Batu-NOM one place-ABL one thing-ACC borrow-PST say-NPST
'Tana says Batu borrowed a thing from a place,'

b. getele Mergen-Ø [χamiγa-ača yaγu-Ø bol-χu]-yi ni
but Mergen-NOM where-ABL what-ACC COP-INF-ACC PPC
čegeǰile-jü ügei.
remember-ADVL not
'lit. but Mergen doesn't remember what from where.'

The sentence in (8a) serves to antecede the reduced question in (8b). The correlates of the two remnants, *χamiγa-ača* 'where-ABL' and *yaγu-Ø* 'what-ACC,' are *nige γaǰar-ača* 'one place-ABL' and *nige yaγuma-Ø* 'one thing-ACC,' both of which originate from the complement clause in

(8a). The reduced question, in which the remnants are clause-mates, is acceptable.

Next, let us examine what happens when the correlates of the remnants originate from different clauses. Consider the data below:

(9) a. Nige xümün-Ø [Batu-yi nige γaǰar-ača nige nom-Ø
one person-NOM Batu-ACC one place-ABL one book-ACC
ǰigele-be] ge-ne,
borrow-PST say-NPST
'Someone says Batu borrowed a book from a place,'

b. getele Mergen-Ø [xen-Ø [Batu-yi χamiγa-ača nige nom-Ø
but Mergen-NOM who-NOM Batu-ACC where-ABL onebook-ACC
ǰigele-be] ge-sen]-i (ni) čegeǰile-jü ügei.
borrow-PST SAY-PERF-ACC PPC remember-ADVL not
'but Mergen doesn't remember who said that Batu borrowed a book from where.'

c.* getele Mergen-Ø [xen-Ø χamiγa-ača bol-χu]-yi ni
but Mergen-NOM who-NOM where-ABL COP-INF-ACC PPC
čegeǰile-jü ügei.
remember-ADVL not
'lit. but Mergen doesn't remember who from where.'

The sentence in (9a) antecedes the full-fledged multiple question in (9b) and the reduced question in (9c). The reduced question consists of two remnants whose correlates are from different clauses. That is, *nige xümün-Ø* 'one person-NOM,' which is the correlate of *xen-Ø* 'who-NOM,' is from the matrix clause, while *nige γaǰar-ača* 'one place-ABL,' which is the correlate of *χamiγa-ača* 'where-ABL,' is from the embedded clause. The full-fledged question in (9b) with two in-situ *wh*-phrases is acceptable. However, the reduced question, in which the two remnants are not clause-mates, is not acceptable. The unacceptability of the reduced question in (9c) demonstrates that RQMWs in CM adhere to the clause-mate condition (e.g., Abels and Dayal 2023).[5]

3. The Multiple Cleft Construction in Chakhar Mongolian

The focus of this section is the multiple cleft construction in CM. Let us first consider the single cleft construction in (10) (Bao 2014; Hashimoto 2006; Sakamoto 2012, 2020):

(10) a. Batu-Ø tere baγsi-ača asaγulta-Ø asaγu-ba.
Batu-NOM that teacher-ABL question-ACC ask-PST
'Batu asked that teacher a question.'

b. [Batu-yin asaγulta-Ø asaγu-γsan] ni (bol) tere baγsi-ača bol-una.

[5] Note that a well-known exception to the clause-mate condition arises when the subject of the embedded clause is bound by the matrix subject (Abels and Dayal 2023; Grano and Lasnik 2018; Nishigauchi 1998). An anonymous reviewer inquires whether this exception occurs in RQMWs in CM. Consider the following example:

(i) a. Xeüxen bolγan-Ø [öber-tegen nige γaǰar-ača nige nom-Ø ǰigele-be] ge-be,
girl every-NOM self-DAT.REF.POSS one place-ABL one book-ACC borrow-PST say-PST
'lit. Every girl said that self borrowed a book from a place,'

b. getele bi-Ø [ali xeüxen-Ø χamiγa-ača bol-χu]-yi ni čegeǰile-jü ügei.
but I-NOM which girl-NOM where-ABL COP-INF-ACC PPC remember-ADVLnot
'lit. but I don't remember which girl from where.'

In (ia), the universal quantifier *every girl* is the matrix subject while the existential quantifier *one place* is in the embedded clause. The subject of the embedded clause (the reflexive *self*) is bound by the matrix subject (*every girl*). Although the correlates are not clause-mates, they can antecede the remnants of the multiply sluiced clause in (ib).

Batu-GEN question-ACC ask-PERF.ADN PPC TOP that teacher-ABL COP-NPST
'It was that teacher that Batu asked a question.'

(11) [$_{CP}$ …e_i…] PPC (TOP) XP_i-case/postposition copula

The sentence in (10a) is a typical declarative sentence, which contains an ablative-marked object and an accusative-marked object. The cleft sentence in (10b) is constructed by clefting the ablative-marked object in (10a). A cleft construction contains a presuppositional clause, which is marked by a PPC and followed by the optional topic marker *bol*. The subject of the presuppositional clause is assigned genitive case. The presuppositional clause precedes a case-marked pivot, which is followed by the copula *bol*, as shown in (10b). A schematic representation of the cleft construction in CM is shown in (11).

The cleft sentence in (10b) contains one pivot. Moreover, the cleft construction in CM allows for the presence of multiple pivots, as illustrated in (12-13).

(12) [Batu-yin beleg-Ø ilege-gsen] ni χamiγa-ača xen-dü bol-χu bui?
Batu-GEN present-ACC send-PERF.ADN PPC where-ABL who-DAT COP-INF Q.PRT
'lit. To whom from where was it that Batu sent a present?'

(13) ?[Beleg-Ø ilege-gsen] ni xen ni χamiγa-ača xen-dü
present-ACC send-PERF.ADN PPC who PPC where-ABL who-DAT
bol-χu bui?
COP-INF Q.PRT
'lit. Who from where to whom was it that sent a present?'

The cleft sentences in (12-13) are acceptable with multiple *wh*-pivots.[6] The multiple cleft sentence in (13), which has three foci, is acceptable in colloquial speech. Moreover, both argument phrases and adjunct phrases can appear as pivots.[7] Since cases like (12-13) are allowed, the multiple cleft construction is allowed in CM.

Interestingly, while cases of multiple cleft sentences with multiple *wh*-pivots are acceptable, cases with multiple non-*wh*-pivots are not acceptable in CM. Consider (14-15):

(14) * [Batu-yin medegde-gsen] ni(bol) Sarana-du tere yabudal-i bol-una.
Batu-GEN inform-PERF.ADN PPC TOP Sarana-DAT that thing-ACC COP-NPST
'lit. It was Sarana of that thing that Batu informed.'

(15) *[Batu-yin tere nom-i xürge-gsen] ni (bol) Sarana-du
Batu-GEN that book-ACC give-PERF.ADN PPC TOP Sarana-DAT
öčügedür bol-una.
yesterday COP-NPST
'lit. It was to Sarana yesterday that Batu gave that book.'

The cleft sentences in (14-15), each of which contains two non-*wh*-pivots, are not acceptable.

Importantly, the multiple cleft construction adheres to the clause-mate condition. See (16) below:

(16) a. Tana-Ø Mergen-dü [Batu-Ø nige γaǰar-ača nige xümün-dü

[6] My native CM speaking informants preferred to omit the topic marker *bol* in the cleft construction, especially in cases where the pivots were *wh*-phrases.

[7] An anonymous reviewer mentions that in the single cleft construction in Khalkha Mongolian, adjunct phrases cannot serve as pivots (Sakamoto 2012). Meanwhile, as discussed in Bai 2023c, both argument and adjunct phrases can serve as pivots in single and multiple cleft constructions in Chakhar Mongolian.

Tana-NOM Mergen-DAT Batu-NOM one place-ABL one person-DAT
beleg-Ø ilege-be geǰü] xele-be.
present-ACC send-PST COMP say-PST
'Tana told Mergen that Batu sent a present to a person from a place.'

b. [Tana-yin Mergen-dü [Batu-Ø e_i e_j beleg-Ø ilege-be geǰü]
Tana-GEN Mergen-DAT Batu-NOM present-ACC send-PST COMP
xele-gsen] ni χamiγa-ača$_i$ xen-dü$_j$ bol-χu bui?
say-PERF.ADN PPC where-ABL who-DAT COP-INF Q.PRT

'lit. To whom from where was it that Tana told Mergen that Batu sent a present?'

The sentence in (16a) contains a complement clause, within which two elements, *nige γaǰar-ača* 'one place-ABL' and *nige xümün-dü* 'one person-DAT,' are questioned and clefted, resulting in (16b). The multiple cleft sentence in (16b), where the two pivots originate from the same complement clause, is considered acceptable.

Next, let us examine what happens when the pivots originate from different clauses. See (17):

(17) a. Tana-Ø nige xümün-dü [Batu-Ø nige γaǰar-ača nige nom-Ø
Tana-NOM one person-DAT Batu-NOM one place-ABL one book-ACC
ǰigele-be geǰü] xele-be.
borrow-PST COMP say-PST
'Tana told one person that Batu borrowed a book from a place.'

b.* [Tana-yin e_i [Batu-Ø e_j nige nom-Ø ǰigele-be geǰü]
Tana-GEN Batu-NOM one book-ACC borrow-PST COMP
xele-gsen] ni xen-dü$_i$ χamiγa-ača$_j$ bol-χu bui?
say-PERF.ADN PPC who-DAT where-ABL COP-INF Q.PRT
'lit. Whom from where was it that Tana told that Batu borrowed a book?'

(17a) is a complex sentence containing a complement clause. In (17a), the object *nige xümün-dü* 'one person-DAT' from the main clause and *nige γaǰar-ača* 'one place-ABL' from the subordinate clause are both questioned and clefted, resulting in (17b). The multiple cleft sentence in (17b) is not acceptable because the two foci are not clause-mates. The comparison between (16b) and (17b) demonstrates that the multiple cleft construction in CM adheres to the clause-mate condition.

4. Analyses

This section consists of two subsections. Section 4.1 discusses a reduced cleft analysis to explain RQMWs in CM. Section 4.2 argues against analyzing RQMWs in CM in terms of the sluicing analysis.

4.1 A Reduced Cleft Analysis

Truncated interrogative questions in some languages can be derived from cleft constructions (e.g., Gribanova 2013; Hiraiwa and Ishihara 2012). As RQMWs in CM share certain properties with the multiple cleft construction, as shown in sections 2 and 3, I propose that RQMWs in CM can be analyzed in terms of a reduced cleft analysis. To begin, refer back to the reduced question in (4), repeated below as (18):

(18) a. Batu-Ø nige γaǰar-ača nige xümün-dü beleg-Ø ilege-be,
Batu-NOM one place-ABL one person-DAT present-ACC send-PST
'Batu sent a present to a person from a place,'

c. gebečü bi-Ø [χamiγa-ača xen-dü bol-χu]-yi ni mede-xü ügei.
but I-NOM where-ABL who-DAT COP-INF-ACC PPC know-INF not
'lit. but I don't know to whom from where.'

d. gebečü bi-Ø [[Batu-yin beleg-Ø ilege-gsen] ni χamiγa-ača
but I-NOM Batu-GEN present-ACC send-PERF.ADN PPC where-ABL
xen-dü bol-χu]-yi (ni) mede-xü ügei.
who-DAT COP-INF-ACC PPC know-INF not
'lit. but I don't know to whom from where it was that Batu sent a present.'

e. gebečü bi-Ø [[Batu-yin beleg-Ø ilege-gsen] ni χamiγa-ača
but I-NOM Batu-GEN present-ACC send-PERF.ADN PPC where-ABL
xen-dü bol-χu]-yi (ni) mede-xü ügei
who-DAT COP-INF-ACC PPC know-INF not

The sentence in (18a) antecedes the reduced question in (18c) and the multiple cleft sentence in (18d). The reduced question in (18c) consists of two case-marked remnants and the copula *bol*. The multiple cleft sentence in (18d) contains two case-marked pivots. When the PPC-marked presuppositional clause in (18d) is elided, as indicated by the grey shading in (18e), the reduced question (18c) is derived. The presuppositional clause, marked by the PPC *ni*, functions as the subject of the embedded clause.[8] As discussed in prior literature (e.g., Sakamoto 2020; Sato 2019; Takahashi 2007), subject ellipsis and clausal ellipsis are independently allowed in Mongolian. Accordingly, ellipsis of presuppositional clauses in cleft sentences should be allowed.

As discussed in section 2, truncated embedded clauses in CM do not allow for the appearance of multiple non-*wh*-remnants. This observation can be explained through the reduced cleft analysis. Consider the previous example (6), repeated below as (19):

(19) a. Batu-Ø [Mergen-i očügedür Xöxeχota-du siraγsan χonin miχa-Ø
Batu-NOM Mergen-ACC yesterday Hohhot-DAT roasted sheep meat-ACC
ide-be geǰü] üǰe-ǰü bai-na,
eat-PST COMP think-ADVL AUX-NPST
'Batu thinks that Mergen ate roasted lamb in Hohhot yesterday,'

b.*gebečü bi-Ø [urǰidur siraγsan üxer-ün miχa
but I-NOM the.day.before.yesterday roasted cow-GEN meat
bol-una geǰü] üǰe-jü bai-na.
COP-NPST COMP think-ADVL AUX-NPST
'lit. but I think that roasted beef the day before yesterday.'

c.*gebečü bi-Ø [[Mergen-ü Xöxeχota-du ide-gsen] ni
but I-NOM Mergen-GEN Hohhot-DAT eat-PERF.ADN PPC
urǰidur siraγsan üxer-ün miχa bol-una geǰü]
the.day.before.yesterday roasted cow-GEN meat COP-NPST COMP

[8] The PPC *ni* in CM is multi-functional (Guntsetseg 2012). For instance, it can be used to nominalize a subject clause and mark it as a subject (Gong 2022), as shown in (i).
(i) [Tere-Ø öber-tegen ire-xü]-Ø ni ǰoxistai.
he-NOM self-DAT.REF.POSS come-INF-NOM 3SG.PPC appropriate
'That he comes here himself is appropriate.'

üǰe-ǰü bai-na.
think-ADVL AUX-NPST
'lit. but I think that it was roasted beef the day before yesterday that Mergen ate in Hohhot.'

d. gebečü bi-Ø [[Mergen-ü Xöxeχota-du ide-gsen] ni
but I-NOM Mergen-GEN Hohhot-DAT eat-PERF.ADN PPC
urǰidur siraγsan üxer-ün miχa bol-una geǰü]
the.day.before.yesterday roasted cow-GEN meat COP-NPST COMP
üǰe-ǰü bai-na
think-ADVL AUX-NPST

The sentence in (19a) serves as the antecedent for the reduced embedded clause in (19b) and the multiple cleft sentence in (19c). The unacceptability of (19b) can be straightforwardly accounted for by the fact that its corresponding multiple cleft sentence contains two non-*wh*-remnants, which is also unacceptable as previously discussed. The reduced clause in (19b) can be derived by applying subject ellipsis to (19c), indicated by the grey shading in (19d).

Further, the adherence of RQMWs to the clause-mate condition can be explicated by the reduced cleft analysis because multiple cleft sentences in CM are also faithful to the clause-mate condition. See the data below.

(20) a. Tana-Ø Mergen-dü [Batu-Ø nige γaǰar-ača nige xümün-dü
Tana-NOM Mergen-DAT Batu-NOM one place-ABL one person-DAT
beleg-Ø ilege-be geǰü] xele-be,
present-ACC send-PST COMP say-PST
'Tana told Mergen that Batu sent a present to a person from a place,'

b. gebečü bi-Ø [χamiγa-ača xen-dü bol-χu]-yi ni mede-xü ügei.
but I-NOM where-ABL who-DAT COP-INF-ACC PPC know-INF not
'lit. but I don't know to whom from where.'

c. gebečü bi-Ø [[Tana-yin Mergen-dü [Batu-Ø beleg-Ø ilege-be geǰü]
but I-NOM Tana-GEN Mergen-DAT Batu-NOM present-ACC send-PST COMP
xele-gsen] ni χamiγa-ača xen-dü bol-χu]-yi (ni) mede-xü ügei.
say-PERF.ADN PPC where-ABL who-DAT COP-INF-ACC PPC know-INF not
'lit. but I don't know it was to whom from where that Tana told Mergen that Batu sent a present.'

d. gebečü bi-Ø [[Tana-yin Mergen-dü [Batu-Ø beleg-Ø ilege-be geǰü]
but I-NOM Tana-GEN Mergen-DAT Batu-NOM present-ACC send-PST COMP
xele-gsen] ni χamiγa-ača xen-dü bol-χu]-yi (ni) mede-xü ügei
say-PERF.ADN PPC where-ABL who-DAT COP-INF-ACC PPC know-INF not

The reduced question in (20b) and the embedded cleft sentence in (20c) take the sentence in (20a) as their antecedent. The correlates of the *wh*-remnants in (20b) and the *wh*-pivots in (20c) are *nige γaǰar-ača* 'one place-ABL' and *nige xümün-dü* 'one person-DAT,' both of which belong to the complement clause in (20a). Both (20b) and (20c) are acceptable. When subject ellipsis is applied to (20c), indicated by the grey shading in (20d), the reduced question in (20b) is obtained.

Finally, this section will examine a case in which the clause-mate condition is not obeyed. Consider (21):

(21) a. Tana-Ø nige xümün-dü [Batu-Ø nige γaǰar-ača nige nom-Ø
Tana-NOM one person-DAT Batu-NOM one place-ABL one book-ACC
ǰigele-be geǰü] xele-be,
borrow-PST COMP say-PST
'Tana told one person that Batu borrowed a book from a place,'

b. *gebečü bi-Ø [xen-dü χamiγa-ača bol-χu]-yi ni mede-xü ügei.
but I-NOM who-DAT where-ABL COP-INF-ACC PPC know-INF not
'lit. but I don't know whom from where.'

c.* gebečü bi-Ø [[Tana-yin [Batu-Ø nige nom-Ø ǰigele-be geǰü]
but I-NOM Tana-GEN Batu-NOM one book-ACC borrow-PST COMP
xele-gsen] ni xen-dü χamiγa-ača bol-χu]-yi (ni) mede-xü ügei.
say-PERF.ADN PPC who-DAT where-ABL COP-INF-ACC PPC know-INF not
'lit. but I don't know it was whom from where that Tana told that Batu borrowed a book.'

d. gebečü bi-Ø [[Tana-yin [Batu-Ø nige nom-Ø ǰigele-be geǰü]
but I-NOM Tana-GEN Batu-NOM one book-ACC borrow-PST COMP
xele-gsen] ni xen-dü χamiγa-ača bol-χu]-yi (ni) mede-xü ügei
say-PERF.ADN PPC who-DAT where-ABL COP-INF-ACC PPC know-INF not

The sentence in (21a) is intended to antecede the reduced question in (21b) and the embedded multiple cleft sentence in (21c). The correlates of the *wh*-remnants and *wh*-pivots do not, however, belong to the same clause. In this example, *nige xümün-dü* 'one person-DAT' is from the matrix clause, and *nige γaǰar-ača* 'one place-ABL' is from the complement clause. Since the *wh*-pivots do not originate from the same clause, the multiple cleft sentence is not acceptable. Considering that (21c) is not acceptable, it is not surprising that the reduced question is also not acceptable. The comparison between (20) and (21) shows that the violation of the clause-mate condition leads to unacceptable reduced questions, which can be captured by the reduced cleft analysis.

This subsection has detailed a reduced cleft analysis, which can account for all the properties of RQMWs discussed in section 2.

4.2 Arguments against a Sluicing Analysis

As shown in section 2, cases of RQMWs that do not include the copula *bol* are marginally acceptable. Readers may, therefore, wonder whether relevant cases could be explained by a sluicing analysis (Merchant 2001; Ross 1969). One argument against the sluicing analysis, however, is that RQMWs in CM contain the copula *bol*, which is difficult to explain under a sluicing analysis. According to the PF deletion analysis of sluicing, *wh*-remnants are moved to the specifier position of CP, followed by IP deletion. Since full-fledged *wh*-questions in CM do not contain the copula *bol*, as seen in (3), the derived reduced questions also do not contain *bol*. RQMWs in CM, however, are more acceptable with the presence of the copula.

For further evidence against the sluicing analysis, consider the data below:

(22) a. Bi-Ø nige γaǰar-ača nige xümün-dü beleg-Ø ilege-be.
I-NOM one place-ABL one person-DAT present-ACC send-PST
'I sent a present to a person from a place.'

b. Či-Ø [(minu) χamiγa-ača xen-dü beleg-Ø ilege-gsen]-i
you-NOM 1SG.GEN where-ABL who-DAT present-ACC send-PERF-ACC

(mini/*ni) mede-ye geǰü sana-ǰu bai-na uu?
1SG.PPC/*3SG.PPC know-IMP that hope-ADVL AUX-NPST Q.PRT
'Do you want to know to whom I sent a present from where?'

c.? Či-Ø [χamiγa-ača xen-dü]-yi **ni/*mini** mede-ye geǰü
you-NOM where-ABL who-DAT -ACC 3SG.PPC/*1SG.PPC know-IMP that
sana-ǰu bai-na uu?
hope-ADVL AUX-NPST Q.PRT
'lit. Do you want to know to whom from where?'

d. či-Ø [$_{CP}$ χamiγa-ača$_i$ xen-dü$_j$ [$_{IP}$ (minu) t_i t_j beleg-Ø
you-NOM where-ABL who-DAT 1SG.GEN present-ACC
ilege-gsen]]-i mini mede-ye geǰü sana-ǰu bai-na uu
send-PERF-ACC 1SG.PPC know-IMP that hope-ADVL AUX-NPST Q.PRT

e. Či-Ø [χamiγa-ača xen-dü bol-χu]-yi **ni/*mini** mede-ye
you-NOM where-ABL who-DAT COP-INF-ACC 3SG.PPC/*1SG.PPC know-IMP
geǰü sana-ǰu bai-na uu?
that hope-ADVL AUX-NPST Q.PRT
'lit. Do you want to know to whom from where?'

f. Či-Ø [[minu beleg-Ø ilege-gsen] ni χamiγa-ača xen-dü
you-NOM 1SG.GEN present-ACC send-PERF.ADN PPC where-ABL who-DAT
bol-χu]-yi (**ni**) mede-ye geǰü sana-ǰu bai-na uu?
COP-INF-ACC 3SG.PPC know-IMP that hope-ADVL AUX-NPST Q.PRT
'lit. Do you want to know to whom from where it was that I sent a present?'

g. Či-Ø [[minu beleg-Ø ilege-gsen] ni χamiγa-ača xen-dü
you-NOM 1SG.GEN present-ACC send-PERF.ADN PPC where-ABL who-DAT
bol-χu]-yi (**ni**) mede-ye geǰü sana-ǰu bai-na uu
COP-INF-ACC 3SG.PPC know-IMP that hope-ADVL AUX-NPST Q.PRT

The sentence in (22a) functions to antecede the full-fledged embedded multiple question in (22b) and the reduced question in (22c). In the full-fledged question, only the first-person PPC *mini* is allowed to appear because the subject of the embedded clause is a first-person pronoun. If the reduced question was analyzed in line with the sluicing analysis, as illustrated in (22d), then the first-person PPC should appear in the reduced question. Contrary to this expectation, however, the reduced question cannot be followed by the first-person *mini*, as shown in (22c). Thus, cases of reduced questions like (22) cannot be explained through the sluicing analysis. Note that the more acceptable counterpart of (22c), i.e., (22e), can be accounted for by the reduced cleft analysis. The full-fledged cleft counterpart of (22e) is (22f). (22e) with the third-person PPC can be derived when subject ellipsis is applied to the multiple cleft sentence in (22f) followed by the third-person PPC, indicated in (22g) by the grey shading. The PPC following a reduced question functions to indicate the subject of the reduced question. In the case of (22), the appearance of the third-person PPC suggests that the underlying subject of the reduced question is also in the third person. As discussed in section 3, the PPC-marked presuppositional clause of a cleft sentence functions as a clausal subject which is in the third person.

5. Conclusion

Cleft constructions have been argued to be a source of reduced embedded questions in some *wh*-in-situ languages such as Japanese (Hiraiwa and Ishihara 2012; Saito 2004), Uzbek (Gribanova 2013), and Uyghur (Bai 2023a). This paper contributes to cross-linguistic

studies on reduced embedded questions by adding a novel set of data from another *wh*-in-situ language, i.e., CM. The present paper also argues against analyzing RQMWs in CM in terms of the sluicing analysis and instead recommends a reduced cleft analysis. This argument is based on the many parallel properties RQMWs share with the cleft construction in CM. RQMWs can be directly derived by applying subject ellipsis to presuppositional clauses of embedded multiple cleft sentences. This analysis is viable also given that CM allows subject ellipsis independently. Future studies on derivational processes of cleft sentences will provide even greater cross-linguistic insights into the sluicing research. I hope that the analyses of RQMWs in CM presented in this paper will lay a foundation for further research on RQMWs in CM and contribute to the study of ellipsis in general.

Acknowledgments

I would like to thank the audience at WAFL 17 for their valuable comments and feedback. I thank Daiko Takahashi for his detailed guidance, constructive comments, and continued support. I thank Prof. Shigeru Miyagawa for his help and efforts in organizing the conference. I would like to thank two anonymous reviewers for the valuable comments and suggestions. I thank my many Chakhar Mongolian informants, who wish to remain anonymous, for sharing their knowledge with me. This work was supported by JST, the establishment of university fellowships towards the creation of science technology innovation, Grant Number JPMJFS2102.

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