



A pseudo-slucing analysis of reduced embedded questions in Chakhar Mongolian

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Abstract This paper provides a detailed description of reduced embedded questions in Chakhar Mongolian and proposes to analyze them in terms of so-called pseudo-slucing. It has been noted in the literature that the comparable construction in Khalkha Mongolian does not exhibit the so-called case-matching effect, a phenomenon in which the case of a remnant interrogative phrase matches that of its correlate in the preceding context. We show that it also holds in Chakhar Mongolian. We argue that reduced embedded questions in the language have a pseudo-slucing structure, which straightforwardly accounts for the absence of the relevant effect. Our proposal is supported by the appearance of a copula and pronominal subjects in those reduced questions and by the fact that reduced questions can be pragmatically controlled.

Keywords Chakhar Mongolian · Khalkha Mongolian · Sluicing · Pseudo-slucing · Case-matching effect

Introduction

The purpose of this paper is twofold. It aims to provide detailed descriptions for reduced embedded questions and related constructions in Chakhar Mongolian (henceforth, CM), which is the standard dialect of modern Mongolian spoken in the Inner Mongolia Autonomous Region, China. Reduction of interrogative clauses, or

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what is widely known as sluicing, has been studied in many languages (Merchant 2001; Merchant and Simpson 2012). As far as we know, however, the relevant phenomenon in CM has not been subject to close examination. This paper aims to add a new set of data from CM to the existing literature on sluicing. The other purpose of the present study is to propose an analysis of reduced embedded questions in CM that can account for the apparent absence of the so-called case-matching effect, first observed by Sakamoto (2012, 2015) for the comparable construction in Khalkha Mongolian (henceforth, KM), the standard dialect of modern Mongolian spoken in Mongolia. We argue that truncated interrogative clauses in CM are best analyzed in terms of what Merchant (2001) calls pseudo-sluicing, a structure consisting of a potentially null pronominal subject and a copula verb. We argue that remnant *wh*-phrases in reduced questions in CM are not case-marked precisely because they are complements of the copula verb.

The remainder of this paper is organized as follows. Section 2 presents brief illustrations of some basic syntactic characteristics of CM, setting the stage for the following discussions about reduced questions in the language. Section 3 succinctly reviews Sakamoto's (2012, 2015) analysis of reduced questions in KM. Section 4 considers truncated interrogative clauses in CM in detail, ultimately pointing out that it is not remnant *wh*-phrases but the interrogative clauses containing them that are case-marked. Section 5 provides an analysis for reduced questions in CM, showing that it directly accounts for the absence of case-matching effect on remnant *wh*-phrases. Section 6 summarizes the entire discussion.

A profile of Chakhar Mongolian syntax

As in other dialects of Mongolian, the basic word order for simple transitive sentences is SOV in CM, as shown below.¹

- (1) Ene xü-Ø ene nom-i ungši-ba.
 this boy-NOM this book-ACC read-PST
 'This boy read this book.'

The subject precedes the object, which in turn precedes the verb. The subject is assumed to bear nominative case, which is assumed to be zero morpheme in the language (Maki et al. 2015). The object is accompanied by the accusative marker *i*, which is alternatively realized as *yī* depending on whether it follows a consonant or a vowel.

¹ The following abbreviations are used in this paper: ABL for ablative; ACC for accusative; ADN for adnominal; ADVL for adverbializer; AUX for auxiliary; CAUS for causative; CL for classifier; CON for conclusive; DAT for dative; GEN for genitive; HBT for habitual; IMP for imperative; INDIC for indicative; INF for infinitive; MOD for modal; NEG for negation; NOM for nominative; NPST for non-past tense; PASS for passive; PERF for perfective; PERM for permissive; POSS for possessive; PPC for personal possessive clitic; PRT for particle; PST for past tense; REF for reflexive; TOP for topic; 1PL for first-person plural; 1SG for first-person singular; 2SG for second-person singular; 3SG for third-person singular.

Let us note that non-human indefinite objects are not marked with the overt accusative marker, according to Maki et al. (2015).² This is illustrated below.

- (2) Ene xü-Ø nom ungši-ba.
 this boy-NOM book read-PST
 ‘This boy read a book.’

When we have objects denoting human entities, they appear with the overt accusative marker irrespective of their definiteness (Maki et al. 2015).

- (3) a. Mergen-Ø nige xümün-i čoxi-ba.
 Mergen-NOM one person-ACC hit-PST
 ‘Mergen hit a person.’
 b. Mergen-Ø tere xümün-i čoxi-ba.
 Mergen-NOM that person-ACC hit-PST
 ‘Mergen hit that person.’

The object in (3a) is indefinite and the object in (3b) is definite. Both are accompanied by the overt accusative marker.

Like other dialects of Mongolian, CM is a *wh*-in-situ language (Janhunen 2012; Maki et al. 2015).

- (4) Ene xeüxen-Ø yaγu uuyγu-γsan bui?
 this girl-NOM what drink-PERF PRT
 ‘What did this girl drink?’

In (4), the object is a *wh*-phrase, which stays in the object position in lieu of moving to the edge of the clause. Note that matrix questions in CM contain the particle *bui*, which appears in the final position.

Another major property of CM is that it is a *pro*-drop language, allowing arguments such as subjects and objects not to be overtly expressed. Consider the following data, where two speakers, A and B, engage in conversation:

- (5) A: Batu-Ø xen-i olju üje-gsen bui?
 Batu-NOM who-ACC AUX see-PERF PRT
 ‘Who did Batu see?’
 B: *e* Suruna-yi olju üje-be.
 Suruna-ACC AUX see-PST
 ‘lit. *e* saw Suruna.’

² The case-marking of non-human indefinite objects in CM is controversial. Maki et al. (2015) assume that they are marked accusative with a zero morpheme. Sechenbaatar (2003) observes that they are marked nominative, which also involves a zero morpheme. On the other hand, Guntsetseg (2016) analyzes cases like (1) and (2) in terms of differential object marking, in which case the object in (2) is not marked for case. In this paper, we simply indicate non-human indefinite objects as bare, though the choice does not affect our main argument.

- (6) A: Xen-Ø Suruna-yi olju üje-gsen bui?
 who-NOM Suruna-ACC AUX see-PERF PRT
 ‘Who saw Suruna?’
 B: Batu-Ø *e* olju üje-be.
 Batu-NOM AUX see-PST
 ‘lit. Batu saw *e*.’
- (7) A: Batu-Ø Suruna-yi olju üje-gsen üü?
 Batu-NOM Suruna-ACC AUX see-PERF PRT
 ‘Did Batu see Suruna?’
 B: *e e* olju üje-be.
 AUX see-PST
 ‘lit. *e* saw *e*.’

The subject in B’s utterance in (5) is not overtly expressed (null arguments are indicated with *e*) though it is clear in the context that it refers to the subject in A’s utterance. Similarly, the object in (6B) and the subject and the object in (7B) are null but the sentences are perfectly acceptable.

Let us turn our attention to complement clauses in CM (Aravind 2021; von Heusinger et al. 2011; Maki et al. 2015; Sakamoto 2012).

- (8) Batu-Ø [Tana-Ø amitan-u xüriyeleng dotura-xi tere bars-ača
 Batu-NOM Tana-NOM animal-GEN garden inside-INDIC that tiger-ABL
 ayu-χu]-yi (ni) mede-ne.
 fear-INF-ACC PPC know-NPST
 ‘Batu knows that Tana fears that tiger in the zoo.’

When complement clauses are selected by certain predicates like *mede* ‘know,’ they are case-marked in CM. The relevant clause in (8), indicated with brackets, is accompanied by the accusative marker. We may say that the complement clause serves as the object of the matrix verb and hence is marked accusative.³

Note that in (8), the case-marked complement clause is optionally followed by the particle *ni*, which is called a personal possessive clitic (PPC) in the literature (Hashimoto 2004; Sakamoto 2012). As PPCs are frequently used with various functions in CM, they deserve some discussion. Consider the following examples:

- (9) a. Öxin degüü-Ø mini Xöxeχota-dü sayu-day.
 girl young-NOM 1SG.PPC Hohhot-DAT live-HBT
 ‘My younger sister lives in Hohhot.’
 b. Öxin degüü-Ø čini χamiya sayu-day bui?
 girl young-NOM 2SG.PPC where live-HBT PRT
 ‘Where does your younger sister live?’

³ While the embedded subject is marked nominative in (8), it can alternatively appear with genitive case or accusative case. For the sake of simplicity, in this paper, we do not consider cases involving non-nominative embedded subjects. Readers are referred to Maki et al. (2015), Peters (2020), and the references therein for related discussions.

- c. *Öxin degüü-Ø ni Xöxeχota-dü sayu-day.*
 girl young-NOM 3SG.PPC Hohhot-DAT live-HBT
 ‘His younger sister lives in Hohhot.’

The PPCs in (9a-b) serve to indicate the first person and the second person possessor, respectively, of the subject noun phrases. The expression *ni* in (9c) is the third person possessive marker.

Some additional functions of the third person PPC are worth noting, as illustrated below (Sechenbaatar 2003; Sakamoto 2012; (10a-b) are cited from Gao 2014).

- (10) a. *Tere-Ø ni neite-yin nom-un sang*
 that-NOM PPC public-GEN book-GEN storeroom
 (bol-una).
 be-NPST
 ‘That is the public reading room.’
- b. [*Tere-Ø öber-tegen ire-xü]-Ø ni joxistai.*
 he-NOM self-DAT.REF.POSS come-INF-NOM PPC appropriate
 ‘That he comes here himself is appropriate.’
- (11) [*Mergen-ü Begejing-dü oči-γsan čay]-Ø ni*
 Mergen-GEN Beijing-DAT go-PERF.ADN time-NOM PPC
öčögedür bol-una.
 yesterday be-NPST
 ‘When Mergen went to Beijing is yesterday.’

The particle *ni* can be used to indicate a third person nominal subject as in (10a) or a clausal subject as in (10b). In (11), which is a case of the pseudo-cleft construction, it is used to indicate the presuppositional clause (Sakamoto 2012).

What is noteworthy for the purpose of this paper is that *ni* appears after subordinate clauses. It is sometimes optional, especially with complement clauses, as in (8). In contrast, it is obligatory when following clausal subjects, as shown below.

- (12) a. [*Tere-Ø kompani-du ire-gsen]-Ø *(ni)*
 he-NOM company-DAT come-PERF-NOM PPC
nama-yi soči-γa-ba.
 me-ACC surprise-CAUS-PST
 ‘That he came to the company surprised me.’
- b. [*Man-u anggi-yin ali nöxöd-Ø*
 1PL-GEN class-GEN which classmate-NOM
*Begejing-dü oči-χu]-Ø *(ni) todorχai*
 Beijing-DAT go-INF-NOM PPC clear
ügei.
 not
 ‘Which classmate in our class will go to Beijing is unclear.’

The bracketed parts here are clausal subjects. Our informants observed that the PPC *ni* is necessary in those cases.⁴

Embedded questions are also accompanied by *ni*.

- (13) a. Tana-Ø yayuma jigele-be.
 Tana-NOM thing borrow-PST
 ‘Tana borrowed a thing.’
- b. Gebečü bi-Ø [Tana-Ø yayu jigele-gsen]-i (ni) mede-xü
 but I-NOM Tana-NOM what borrow-PERF-ACC PPC know-INF
 ügei.
 not
 ‘But I don’t know what Tana borrowed.’
- c. Gebečü bi-Ø yayu-yi ni mede-xü ügei.
 but I-NOM what-ACC PPC know-INF not
 ‘But I don’t know what.’

Anteceded by (13a), (13b) contains an embedded interrogative clause, which is marked accusative and optionally followed by the PPC. In (13c), the embedded question is reduced to consist of the *wh*-phrase alone but is still accompanied by *ni*.⁵

Reduced embedded questions in Khalkha Mongolian

In this section, we look at reduced embedded questions in KM, reviewing Sakamoto’s (2012, 2015) observations and analyses. But before going into discussion about KM, let us note that Ross (1969) observes, based on data involving reduced questions in German and English, that the case of a *wh*-remnant must match the case of its correlate. Let us consider the German example below, cited from Ross 1969.

- (14) Er will jemandem schmeicheln, aber sie wissen nicht
 he wants someone.DAT flatter but they know not
 *wen/wem.
 who.ACC/who.DAT
 ‘He wants to flatter someone, but they don’t know who.’

⁴ We conjecture that the optionality or obligatoriness of *ni* in (8) and (12) may be related to the nature of the case-markers for the clausal subjects and objects. The clausal objects in (8) are accompanied by the overt accusative marker and hence *ni* is not necessary to indicate that it is a subordinate clause. On the other hand, the clausal subjects in (12) are marked nominative with the zero morpheme, so that they need the support of *ni* to have their demarcation shown clearly.

⁵ Our informants had divergent opinions on the presence of the PPC in cases like (13c). We asked six informants about the optionality/obligatoriness of the PPC in cases like (13c). Three of them said that it is optional and the other three said that it cannot be omitted. Sakamoto (2012, 2015) mentions that the PPC is obligatory in comparable data in KM. We will ultimately argue that reduced questions have clausal structure, and hence we expect that the PPC should be optional in (13c) just as in (13b), which is borne out by the judgment of half of the informants. We have no clear idea about the reason for this variation among speakers and thus have to leave it to our future research. In this paper, we indicate the PPC as obligatory in cases of reduced questions just for the sake of completeness.

The second clause here contains a reduced indirect question. The remnant *wh*-phrase must appear in dative case, just like its correlate *jemandem* ‘someone’ in the first clause. Though the main verb in the second clause, *wissen* ‘know,’ has the ability to assign accusative case to its nominal object, the remnant cannot appear in accusative case. This phenomenon is known as the case-matching effect (Merchant 2001; Abels and Dayal 2022).

Sakamoto (2012, 2015) observes that the case-matching effect is not present in reduced embedded questions in KM, based especially on (15) ((15) and (16) are cited from Sakamoto (2015)).

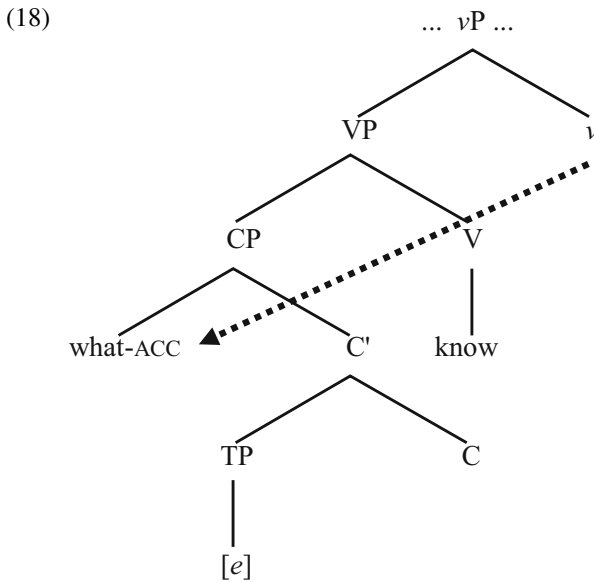
- (15) a. Oyuna-Ø yamar_negen_zuil-ig zeel-sen.
 Oyuna-NOM something-ACC borrow-PERF
 ‘Oyuna borrowed something.’
- b. Gevch, bi-Ø yu-g n’
 but I-NOM what-ACC PPC
 med-eh-gui.
 know-INF-NEG
 ‘But I don’t know what.’
- (16) a. Bat-Ø hen_negen-d ene nom-ig
 Bat-NOM someone-DAT this book-ACC
 ug-sun.
 give-PERF
 ‘Bat gave this book to someone.’
- b. Gevch, bi-Ø *hen-d/hen-ig n’
 but I-NOM who-DAT/who-ACC PPC
 med-eh-gui.
 know-INF-NEG
 ‘But I don’t know to whom.’

In (15), the correlate *yamar_negen_zuil* ‘something’ in (15a) is assigned accusative case, and the remnant *yu* ‘what’ in (15b) is also accompanied by the accusative case marker. This is consistent with the case-matching effect. Once we turn to data involving other cases, however, a different picture emerges. In (16), the correlate *hen_negen* ‘someone’ is assigned dative case in (16a), but the remnant *wh*-phrase appears with accusative case in (16b). If dative case were assigned to the remnant in order to be faithful to the case-matching effect, the result would be unacceptable, as shown above. Based on this and other observations, Sakamoto (2012, 2015) concludes that there is no case-matching effect for reduced embedded questions in KM.

To account for the obligatory presence of accusative case on remnants, Sakamoto (2015) proposes an LF-copying analysis of reduced embedded questions in KM (see Chung et al. 1995 for an elaborate exposition of the copying analysis). Specifically, Sakamoto (2015) proposes that remnant *wh*-phrases are base-generated in the specifier position of CP, the complement TP of which is empty, as illustrated below.

- (17) a. [TP Oyuna-Ø yamar_negen_zuil-ig zeel-sen].
 Oyuna-NOM something-ACC borrow-PERF
 ‘Oyuna borrowed something.’
- b. Gevch, bi-Ø [CP yu-g [TP e]] n’
 but I-NOM what-ACC PPC
 med-eh-gui.
 know-INF-NEG
 ‘But I don’t know what.’
- c. Gevch, bi-Ø [CP yu-g [TP Oyuna-Ø
 but I-NOM what-ACC Oyuna-NOM
 e zeel-sen]] n’ med-eh-gui.
 borrow-PERF PPC know-INF-NEG
 ‘But I don’t know what Oyuna borrowed.’

Anteceded by (17a), (17b) contains a reduced indirect question with the structure indicated. The *wh*-phrase is directly generated in the specifier position of CP and the embedded TP has empty structure. After the corresponding portion of (17a) is copied onto the empty TP, (17c) is obtained as the LF representation. As for the case of the *wh*-phrase in (17b), Sakamoto (2015) assumes that it is assigned accusative case by the matrix *v*, as indicated below (for the purpose of illustration, English glosses are used).



The idea seems to be plausible because the matrix *v* is associated with the transitive verb *know* and hence should have the ability to assign accusative case. It explains the presence of the accusative marker on the remnants in (15b) and especially (16b).

We have so far reviewed Sakamoto's (2015) analysis of reduced *wh*-questions in KM. We will turn to CM in what follows. As will be shown, what Sakamoto (2012, 2015) observes for KM seems to be replicated in CM initially, but upon closer examination, a different analysis is necessary.

Reduced embedded questions in Chakhar Mongolian

Let us move on to consider CM, paying attention to how cases are assigned in reduced embedded questions. Like KM, CM seems to lack case-matching effects. Let us begin with the following data:

- (19) a. Tana-Ø yayuma ĵigele-be,
 Tana-NOM thing borrow-PST
 'Tana borrowed a thing,'
 b. gebečü bi-Ø [Tana-Ø yayu ĵigele-gsen]-i (ni) mede-xü
 but I-NOM Tana-NOM what borrow-PERF-ACC PPC know-INF
 ügei.
 not
 'but I don't know what Tana borrowed.'
 c. gebečü bi-Ø yayu-yi ni mede-xü ügei.
 but I-NOM what-ACC PPC know-INF not
 'but I don't know what.'

The sentence in (19a) is intended to antecede the full-fledged indirect question in (19b) and its reduced counterpart in (19c). The correlate *yayuma* 'thing' in (19a) is an indefinite phrase and is bare (see (2) and note 1). In (19b), the *wh*-phrase *yayu* 'what' is bare similarly. Note in passing that the indirect question is marked accusative with the overt accusative marker in (19b). Turning to (19c), we notice that the embedded question is reduced to consist only of a *wh*-phrase and that the *wh*-phrase is apparently accompanied by the overt accusative marker.⁶ Thus, we have a mismatch in case morphology between the correlate in (19a) and the remnant *wh*-phrase in (19c).

The observation made above is confirmed by another set of data.

- (20) a. Batu-Ø nige xümün-dü ene nom-i ög-be,
 Batu-NOM one person-DAT this book-ACC give-PST
 'Batu gave this book to a person,'
 b. gebečü bi-Ø [tere-Ø xen-dü ene nom-i
 but I-NOM he-NOM who-DAT this book-ACC
 öggü-gsen]-i (ni) mede-xü ügei.
 give-PERF-ACC PPC know-INF not
 'but I don't know to whom he gave this book.'

⁶ Careful readers may wonder why the *wh*-phrase needs to be accompanied by the overt accusative marker though it is an indefinite non-human object. We ultimately argue in Sect. 5 that the accusative marker is not attached to the *wh*-phrase but to the complement clause, which contains the *wh*-phrase.

- c. gebečü bi-Ø xen-i ni mede-xü ügei.
 but I-NOM who-ACC PPC know-INF not
 ‘but I don’t know to whom.’

In (20a), which is intended to antecede (20b-c), the indirect object *nige xümün* ‘one person’ is marked dative. (20b) contains a full-fledged embedded question, where the *wh*-phrase *xen* ‘who,’ which corresponds to the indirect object in (20a), is marked dative as well. Once the embedded question is truncated as in (20c), however, the dative case disappears. Instead, the remnant *wh*-phrase appears to be accompanied by the accusative marker.

Let us add one more set of data, where the correlate is nominative but the remnant *wh*-phrase is marked accusative.

- (21) a. Nige xümün-Ø Tana-yi olju üje-be,
 one person-NOM Tana-ACC AUX see-PST
 ‘A person saw Tana.’
 b. getele bi-Ø [xen-Ø Tana-yi olju üje-gsen]-yi (ni)
 but I-NOM who-NOM Tana-ACC AUX see-PERF-ACC PPC
 mede-xü ügei.
 know-INF not
 ‘but I don’t know who saw Tana.’
 c. getele bi-Ø xen-i ni mede-xü ügei.
 but I-NOM who-ACC PPC know-INF not
 ‘but I don’t know who.’

In (21a), the subject is an indefinite phrase marked nominative, which serves as the correlate of the *wh*-phrases in (21b-c). Note that while the *wh*-phrase in (21b) is nominative as expected, the remnant *wh*-phrase in (21c) is not marked nominative but appears with the accusative marker.

Note that according to Sakamoto (2015), remnant *wh*-phrases in KM are assigned accusative case by the matrix *v* selecting a transitive verb, as illustrated in (18). This leads to the expectation that if the predicates selecting reduced embedded questions are modified so that they can no longer assign accusative case, the remnant *wh*-phrases they contain should not be marked accusative.

One relevant case is obtained by passivizing the main verbs in (19c) and (20c). To examine it, let us first consider the active-passive alternation in CM.

- (22) a. Bi-Ø Tana-yin sine sondur-i (ni) toɣu-ba.
 I-NOM Tana-GEN new necklace-ACC PPC like-PST
 ‘I liked Tana’s new necklace.’
 b. Tana-yin sine sondur-Ø (ni) nada-du toɣu-ɣda-ba.
 Tana-GEN new necklace-NOM PPC me-DAT like-PASS-PST
 ‘Tana’s new necklace was liked by me.’

In (22a), which is a typical active sentence, the agent argument is marked nominative and the theme argument appears with the accusative marker. When it is

passivized, (22b) is obtained: the theme argument is promoted to the subject and marked nominative, optionally followed by the third person PPC, whereas the agent argument is demoted to the oblique (dative) phrase.

The same pattern is obtained in cases including clausal objects.

- (23) a. Bi- \emptyset [Batu- \emptyset ene χ ulayaiči-yi bari- γ san]-i
 I-NOM Batu-NOM this thief-ACC catch-PERF-ACC
 (ni) mede-ne.
 PPC know-NPST
 'I know that Batu caught this thief.'
- b. [Batu- \emptyset ene χ ulayaiči-yi bari- γ san]- \emptyset ni
 Batu-NOM this thief-ACC catch-PERF-NOM PPC
 nada-du mede-gde-be.
 me-DAT know-PASS-PST
 'That Batu caught this thief was known by me.'

In (23a), the matrix verb *mede* 'know' selects two arguments: the external argument is marked nominative and the internal argument, realized as a complement clause, is marked accusative. When the verb is passivized, (23b) is obtained. The complement clause does not bear accusative case but is marked nominative. Moreover, according to our informants, the PPC *ni* becomes obligatory in (23b) with the clausal subject, though it is optional in (23a) with the clausal object.

Bearing this in mind, let us proceed to reduced embedded questions to examine how remnant *wh*-phrases are case-marked when the embedded clauses are promoted to subjects by passivization.

- (24) a. Mergen- \emptyset yamar nigen χ ümün-i toyu-na.
 Mergen-NOM some one person-ACC like-NPST
 'Mergen likes someone.'
- b. Bi- \emptyset [tere- \emptyset xen-i toyu- χ u]-yi (ni)
 I-NOM he-NOM who-ACC like-INF-ACC PPC
 mede-be.
 know-PST
 'I knew who he likes.'
- c. Bi- \emptyset xen-i ni mede-be.
 I-NOM who-ACC PPC know-PST
 'I knew who.'
- d. [Tere- \emptyset xen-i toyu- χ u]- \emptyset ni nada-du
 he-NOM who-ACC like-INF-NOM PPC me-DAT
 mede-gde-be.
 know-PASS-PST
 'Who he likes was known by me.'
- e. [Xen *(bol- χ u)]- \emptyset ni nada-du mede-gde-be.
 who be-INF-NOM PPC me-DAT know-PASS-PST
 'Who was known by me.'

The sentence in (24a) is intended to antecede each of (24b-e). (24b) is an active sentence with an embedded question, which is marked accusative. Reduction of the embedded question in (24b) yields (24c), where the remnant *wh*-phrase is marked accusative. When we passivize the whole sentence in (24b), we obtain (24d), where the embedded question is promoted to the subject and marked nominative. If we truncate the clausal subject in (24d), (24e) is derived. In (24e), the main verb is passivized and hence, according to Sakamoto (2015), the remnant *wh*-phrase should no longer bear accusative case, which is borne out. Additionally, (24e) reveals something important: According to our informants, the reduced question cannot consist of the *wh*-phrase alone in (24e); the copula *bol* needs to be present. Further, they also reported that (24c) can optionally be realized as below.

- (25) Bi-Ø [xen bol-χu]-yi ni mede-be.
 I-NOM who be-INF-ACC PPC know-PST
 'I knew who.'

Here the reduced embedded question consists of the *wh*-phrase with the accusative marker and the copula. The accusative marker follows the copula, which arguably means that the whole reduced clause is case marked. That (24c) can alternate with (25) suggests that they may be able to be analyzed in the following way:

- (26) Bi-Ø [xen (bol-χu)]-yi ni mede-be.
 I-NOM who be-INF-ACC PPC know-PST

The reduced embedded question here is comprised of the *wh*-phrase and the optional copula, and the accusative case is assigned to the clause, rather than to the *wh*-phrase. While it is necessary to account for why the copula is omissible only in clausal objects, the analysis in (26) is parallel to what is observed in (24e).

It is instrumental to look into the copula in CM at this point. The examples below are cited from Gao (2014).

- (27) a. Ene-Ø minu degüü (bol-una).
 this-NOM my younger.brother be-NPST
 'This is my younger brother.'
 b. Tere-Ø ni neite-yin nom-un sang (bol-una).
 that-NOM PPC public-GEN book-GEN storeroom be-NPST
 'That is the public reading room.'

The verb *bol* serves as a copula in (27) and can take nominal predicates. As can be seen in (27), the predicate nominals are not case-marked.⁷

Let us consider another set of data involving indirect questions in object and subject positions. The data in (28) consolidate what we have observed in (24).

⁷ Another possibility would be that they are marked nominative with the zero nominative marker. The choice between the possibility in the text and this is immaterial to our discussion, as what is important is that they are not marked with an overt case marker.

- (28) a. Mergen- \emptyset nige xümün-dü nige-debter nom
 Mergen-NOM one person-DAT one-CL book
 xürge-be.
 give-PST
 'Mergen gave a book to a person.'
- b. Bi- \emptyset [tere- \emptyset xen-dü nige-debter nom
 I-NOM he-NOM who-DAT one-CL book
 xürge-gsen]-i (ni) mede-be.
 give-PERF-ACC PPC know-PST
 'I knew to whom he gave a book.'
- c. Bi- \emptyset [xen (bol-urysan)]-i ni mede-be.
 I-NOM who be-PERF-ACC PPC know-PST
 'I knew who.'
- d. [Tere- \emptyset xen-dü nige-debter nom xürge-gsen]- \emptyset
 he-NOM who-DAT one-CL book give-PERF-NOM
 ni nada-du mede-gde-be.
 PPC me-DAT know-PASS-PST
 'To whom he gave a book was known by me.'
- e. [Xen *(bol-urysan)]- \emptyset ni nada-du mede-gde-be.
 who be-PERF-NOM PPC me-DAT know-PASS-PST
 'Who was known by me.'

The sentence in (28a) serves as the antecedent for each of (28b-e). (28b) contains a full-fledged indirect question, which is assigned accusative case as the entire sentence is active. If the embedded question in (28b) undergoes reduction, (28c) is derived. Here, too, the copula is optional. When the copula is omitted, the remnant *wh*-phrase is immediately followed by the accusative marker, which is assigned to the entire embedded clause. If (28b) is passivized, (28d) is obtained. In (28d), the embedded clause is promoted to the subject and is marked nominative. If it undergoes reduction, it yields (28e), where the copula must be present and the *wh*-phrase is case-less. Comparing (28d) and (28e), we immediately notice that while the *wh*-phrase is marked dative in the former, it is not marked at all in the latter, arguably because it serves as the complement of the copula.

The reduced embedded questions in (24e) and (28e) are passivized subjects. Clausal subjects can appear in the causative construction as well.

- (29) a. Batu- \emptyset nige xümün-dü χ airatai.
 Batu-NOM one person-DAT fond
 'Batu is fond of a person.'
- b. [Tere- \emptyset xen-dü χ airatai]- \emptyset ni nama-yi sonir χ a- γ ulu-na.
 he-NOM who-DAT fond-NOM PPC me-ACC wonder-CAUS-NPST
 'Who he is fond of makes me wonder.'
- c. [Xen *(bol- χ u)]- \emptyset ni nama-yi sonir χ a- γ ulu-na.
 who be-INF-NOM PPC me-ACC wonder-CAUS-NPST
 'Who makes me wonder.'

Anteceded by (29a), (29b-c) contain a full-fledged and a reduced clausal subject, respectively. Those subjects are marked nominative and followed by the PPC. The predicate *χairatai* ‘fond’ assigns dative case to its internal argument, as shown in (29a). The *wh*-phrase is marked dative as well in (29b). In contrast, the remnant *wh*-phrase is bare in (29c) and the copula must be overtly realized.

We have so far considered the cases where embedded questions are marked accusative or nominative. There are examples where they are case-marked differently.

- (30) A: Man-u kompani-yin nige xümün-Ø
 1PL-GEN company-GEN one person-NOM
 Xöxeχota-dü ažil-iyar tomila-γda-na.
 Hohhot-DAT business-ABL assign-PASS-NPST
 ‘A person in our company will be assigned to go on business in Hohhot.’
 B: Bi-Ø [Xen ??(bol-χu)]-du ??(ni)
 I-NOM who be-INF-DAT PPC
 sanal ügei.
 opinion not
 ‘I have no opinion on who.’
- (31) A: Mergen-Ø nige xümün-dü nom
 Mergen-NOM one person-DAT book
 ög-čei.
 give-PST.CON
 ‘Mergen gave a book to a person.’
 B: [Tere-Ø xen-dü nom öggü-gsen]-eče
 he-NOM who-DAT book give-PERF-ABL
 ni aldara-γ.
 PPC fade-MOD.PERM
 ‘I don’t care to whom he gave a book.’
 B’: [Xen *(bol-χu)]-ača ni aldara-γ.
 who be-INF-ABL PPC fade-MOD.PERM
 ‘I don’t care who.’

Here, speaker A’s utterances are intended to antecede speaker B’s utterances, which contain reduced embedded questions. The predicate used in (30B), *sanal ügei* ‘have no opinion,’ selects a dative complement clause, shown above. It is somewhat more difficult to omit the copula in (30B) compared with the cases where the reduced questions are marked accusative (see (28c)).⁸ The predicate *aldara* ‘fade’ in (31B) and (31B’) forms a fixed expression meaning ‘I don’t care’ together with an ablative

⁸ We asked six informants to judge (30B). Half of them accepted the omission of the copula but the other half did not. We indicate this mixed result with the mark ?? in (30B). As for (31B’), our informants uniformly rejected the omission of the copula. We just conjecture that it is more difficult or impossible to omit the copula from oblique reduced questions or lexically case-marked complement clauses in CM, as suggested by an anonymous reviewer. We leave it to future research to investigate the underlying factor (s) in the discrepancies. In addition, the usage of the PPC *ni* in (30B) and (31B’) seems to parallel that of the copula. As for (30B), half of the speakers we consulted accepted the omission of *ni*, but the other half did not. In the case of (31B’), our informants rejected the omission of *ni*. An anonymous reviewer

phrase. While (31B) contains a full-fledged embedded question, (31B') has a truncated clause, where the copula must be retained according to our informants. In (30B) and (31B'), the remnant *wh*-phrases are not case-marked but rather the entire embedded clauses are assigned dative case and ablative case, respectively.

Sakamoto (2012, 2015) does not consider those cases where reduced embedded questions serve as subjects or oblique phrases in KM. The data from CM given in (24e), (28e), (29c), (30B), and (31B') do not seem to be amenable to Sakamoto's (2015) analysis depicted in (18) because the reduced questions there contain the copula and bare remnant *wh*-phrases. According to Sakamoto (2015), truncated indirect questions consist of remnant *wh*-phrases in the specifier position of CP, which are case-marked by higher predicates, and empty TP, which is subject to LF copying. The data in question in CM indicate that case is assigned to the whole reduced interrogative clauses rather than to the remnant *wh*-phrases, because the case-markers actually follow the copula in (24e), (25), (28e), (30B), and (31B'), and that the copula appears obligatorily in some cases and optionally in others in allegedly empty TP. In the next section, we provide an alternative analysis for the phenomenon in question that can account for the presence of the copula and the (apparent) absence of the case-matching effect in CM.

A pseudo-slucing analysis

Let us consider (24e) again. It is repeated as (32b) with its antecedent sentence in (24a), given here as (32a).

- (32) a. Mergen- \emptyset yamar nigen xümün-i toγu-na.
 Mergen-NOM some one person-ACC like-NPST
 'Mergen likes someone.'
- b. [Xen bol-χu]- \emptyset ni nada-du mede-gde-be.
 who be-INF-NOM PPC me-DAT know-PASS-PST
 'Who was known by me.'

The fact that the reduced embedded question in (32b) contains the copula leads us to assume that it has a so-called pseudo-slucing structure (Merchant 2001; Adams and Tomioka 2012), exemplified below with English data.

- (33) a. John bought something.
 b. Guess [what it was].

The embedded question in (33b) contains a copula and a pronominal subject with the *wh*-phrase being the complement of the copula. Because CM is a *pro*-drop language as noted in Sect. 2, the embedded question in (32b) should be able to be analyzed as follows:

Footnote 8 continued

suggested that the PPC *ni* may be regarded as an instance of C head, and thus its obligatory or optional presence parallels *that*-omission in English. See the discussion at the end of Sect. 5.

- (34) [*pro* xen bol-χu]-Ø
 she who be-INF-NOM
 ‘who she is’

Here the subject is a null pronoun referring to the correlate in (32a). The *wh*-phrase is the complement of the copula and hence is not assigned case [see (27)].

This automatically explains why CM apparently lacks the case-matching effect. Let us consider (20), repeated as (35).

- (35) a. Batu-Ø nige xümün-dü ene nom-i ög-be,
 Batu-NOM one person-DAT this book-ACC give-PST
 ‘Batu gave this book to a person,’
 b. gebečü bi-Ø [tere-Ø xen-dü ene nom-i
 but I-NOM he-NOM who-DAT this book-ACC
 öggü-gsen]-i (ni) mede-xü ügei.
 give-PERF-ACC PPC know-INF not
 ‘but I don’t know to whom he gave this book.’
 c. gebečü bi-Ø xen-i ni mede-xü ügei.
 but I-NOM who-ACC PPC know-INF not
 ‘but I don’t know to whom.’

The correlate in (35a) is marked dative, and the corresponding *wh*-phrase in the full-fledged question in (35b) is marked dative as well. Once the question is reduced as in (35c), the *wh*-phrase seems to be assigned accusative case. We propose to analyze the reduced question in (35c) as follows:

- (36) [*pro* xen (bol-uγsan)]-i
 he who be-PERF-ACC
 ‘who he was’

The clause contains a null pronominal subject referring to the correlate in (35a) (that is, the person to whom Batu gave this book) and the copula, which can be dropped because the clause is in the complement position of the verb *mede* ‘know.’ We assume that the accusative marker is attached to the clause, though if the copula is omitted, it turns out to be adjacent to the *wh*-phrase. The *wh*-phrase is the complement of the copula and hence is not case-marked. This explains why it does not show up with the expected dative case. More generally, according to the pseudo-slucing analysis, remnant *wh*-phrases should be bare, which accounts for the lack of the case-matching effect in CM.

Note that the analysis shown in (34) and (36) predicts that null pronominal subjects in reduced questions in CM should be able to alternate with overt pronominal subjects. This prediction is borne out in the following data:

- (37) a. Batu-Ø nige xümün-i sigümjile-be.
 Batu-NOM one person-ACC reprimand-PST
 ‘Batu reprimanded a person.’

- b. Bi-Ø [xen (bol-uγsan)]-i ni mede-ye
 I-NOM who be-PERF-ACC PPC know-1SG.IMP
 geǰü sana-ǰu bai-na.
 that hope-ADVL AUX-NPST
 ‘I hope to know who.’
- c. Bi-Ø [tere-Ø ni xen (bol-uγsan)]-i
 I-NOM he-NOM PPC who be-PERF-ACC
 ni mede-ye geǰü sana-ǰu bai-na.
 PPC know-1SG.IMP that hope-ADVL AUX-NPST
 ‘I hope to know who he was.’
- d. [Xen *(bol-uγsan)]-Ø ni nada-du mede-gde-be.
 who be-PERF-NOM PPC me-DAT know-PASS-PST
 ‘Who was known by me.’
- e. [Tere-Ø ni xen *(bol-uγsan)]-Ø ni
 he-NOM PPC who be-PERF-NOM PPC
 nada-du mede-gde-be.
 me-DAT know-PASS-PST
 ‘Who he was was known by me.’

The sentence in (37a) is intended to antecede each of (37b-e). In (37b), the reduced embedded question is in the complement position of the verb *mede* ‘know’ and hence the copula is optional. Significantly, in (37c), the reduced question contains an overt pronominal subject taking the correlate in (37a) as its antecedent. (37d-e) contain reduced questions as subjects. (37e) indicates that the overt pronominal subject can appear in the interrogative clause.

The pattern observed in (37) can be replicated with other *wh*-phrases.⁹

- (38) a. Batu-Ø maryasi nige γaǰar xödelgegen-dü
 Batu-NOM tomorrow one place event-DAT
 orulča-na.
 attend-NPST
 ‘Batu will attend an event at a place tomorrow.’
- b. Bi-Ø [(tere-Ø ni) χamiγa (bol-χu)]-yi
 I-NOM that-NOM PPC where be-INF-ACC
 ni mede-ne.
 PPC know-NPST
 ‘I know where that is.’
- c. [(Tere-Ø ni) χamiγa *(bol-χu)]-Ø ni
 that-NOM PPC where be-INF-NOM PPC
 nada-du mede-gde-be.
 me-DAT know-PASS-PST
 ‘Where that is was known by me.’

⁹ We are grateful to an anonymous reviewer for pointing this out to us.

- (39) a. Batu-Ø yamar nigen čay-tü bayši-ača
 Batu-NOM some one time-DAT teacher-ABL
 asayulta asayu-ba.
 question ask-PST
 ‘Batu asked a teacher a question at some time.’
- b. Bi-Ø [(tere-Ø ni) xejiye (bol-χu)]-yi
 I-NOM that-NOM PPC when be-INF-ACC
 ni γaiχa-ju bai-na.
 PPC wonder-ADVL AUX-NPST
 ‘I wonder when that is.’
- c. [(Tere-Ø ni) xejiye *(bol-χu)]-Ø ni
 that-NOM PPC when be-INF-NOM PPC
 nama-yi γaiχa-γulu-ju bai-na.
 me-ACC wonder-CAUS-ADVL AUX-NPST
 ‘When that is makes me wonder.’

The sentences in (38a) and (39a) are intended to antecede (38b-c) and (39b-c), respectively. In (38b) and (39b), the reduced indirect questions are in the complement positions of the verb phrases. The *wh*-phrases may optionally be accompanied by the pronominal subjects and the copulas. In (38c) and (39c), the reduced questions are in subject positions. While the pronominal subjects are optional, the copulas cannot be omitted.

Additional evidence for the pseudo-slucing analysis is obtained from the fact that reduced questions in CM can be used felicitously without linguistic antecedents. Before presenting relevant data in CM, we first note the dichotomy observed by Hankamer and Sag (1976) between ellipsis and pronouns (or more precisely, what they call surface and deep anaphora). They point out that while sluicing, which is assumed to involve ellipsis, requires verbally expressed antecedents, pronominal expressions can be used felicitously without such antecedents.

- (40) Hankamer: Someone’s just been shot.
 Sag: Yeah, I wonder who.
- (41) Context: Hankamer produces a gun, points it offstage and fires,
 whereupon a scream is heard.
 Sag: # Jesus, I wonder who.
- (42) Hankamer [observing Sag successfully ripping a phone book in half]:
 I don’t believe it.
- (43) Sag [same circumstance]:
 It’s not easy.

While (40) shows that sluicing is possible with a linguistic antecedent, (41) indicates that the mere presence of a context is not sufficient. In (42) and (43), on the other hand, the pronouns are used felicitously without verbally realized contexts.

Bearing these in mind, let us observe that reduced embedded questions in CM can be felicitously uttered without a linguistic antecedent (see Gribanova and

Manetta 2016 for similar discussions on Uzbek). Consider the following examples (the context for (44) is modeled after Gribanova and Manetta 2016):

- (44) Context: Tana and the speaker are shopping in a boutique. The speaker picks up a mysterious product and says:

Bi-Ø [yaɣu (bol-χu)]-yi ni mede-xü ügei.
 I-NOM what be-INF-ACC PPC know-INF not
 ‘I don’t know what.’

- (45) Context: The speaker hears someone screaming, and says:

Eme e, bi-Ø [xen (bol-χu)]-yi ni mede-ye
 mother PRT I-NOM who be-INF-ACC PPC know-1SG.IMP
 geǰü sana-ǰu bai-na.
 that hope-ADVL AUX-NPST
 ‘Oh my god, I hope to know who.’

Both (44) and (45) contain utterances with reduced indirect questions. Note that they are perfectly felicitous with the contexts given, which are not expressed linguistically. This fact supports our assumption that reduced questions in CM involve pronominal subjects.

It may be useful to mention at this point that reduced questions in CM do not exhibit island effects. As in other languages, relative clauses and adjunct clauses constitute islands for movement in CM (see Aravind 2021; Gong 2022 for related observations).

- (46) a. Mergen-Ø [Tana-du nom xürge-gsen] xümün-i
 Mergen-NOM Tana-DAT book give-PERF.ADN person-ACC
 olǰu üje-be.
 AUX see-PST
 ‘Mergen saw the person who gave Tana a book.’
 b.* Tana-du Mergen-Ø [*t* nom xürge-gsen]
 Tana-DAT Mergen-NOM book give-PERF.ADN
 xümün-i olǰu üje-be.
 person-ACC AUX see-PST
 ‘lit. Tana, Mergen saw the person who gave a book.’
- (47) a. Tana-Ø [Batu-Ø Mergen-i čoxi-γsan] učir-ača]
 Tana-NOM Batu-NOM Mergen-ACC hit-PERF reason-ABL
 uxila-ba.
 cry-PST
 ‘Tana cried because Batu hit Mergen.’
 b.* Mergen-i Tana-Ø [Batu-Ø *t* čoxi-γsan]
 Mergen-ACC Tana-NOM Batu-NOM hit-PERF
 učir-ača] uxila-ba.
 reason-ABL cry-PST
 ‘lit. Mergen, Tana cried because Batu hit.’

The example in (46a) contains a relative clause, shown with brackets. If the indirect object is extracted out of the relative clause by scrambling as in (46b), it results in an unacceptable sentence. The bracketed part in (47a) is an adverbial clause. The unacceptability of (47b), where the object is scrambled out of the adjunct, shows that it functions as an island in CM.

With these in mind, let us consider the following data:

- (48) a. Mergen-Ø [Tana-du yaγuma xürge-gsen] xümün-i olju
 Mergen-NOM Tana-DAT thing give-PERF.ADN person-ACC AUX
 üje-be.
 see-PST
 ‘Mergen saw the person who gave Tana a thing.’
- b. Bi-Ø yaγu-yi ni γaiχa-ju bai-na.
 I-NOM what-ACC PPC wonder-ADVL AUX-NPST
 ‘I wonder what.’
- (49) a. Tana-Ø [Batu-Ø nige xümün-i čoxi-γsan učir-ača]
 Tana-NOM Batu-NOM one person-ACC hit-PERF reason-ABL
 uxila-ba.
 cry-PST
 ‘Tana cried because Batu hit a person.’
- b. Bi-Ø xen-i ni γaiχa-ju bai-na.
 I-NOM who-ACC PPC wonder-ADVL AUX-NPST
 ‘I wonder who.’

The sentences in (48b) and (49b) take (48a) and (49a), respectively, as their antecedents and contain reduced indirect questions. Note that the correlates of the *wh*-phrases occur inside the relative clause in (48a) and the adjunct clause in (49a). Our informants observed that the reduced questions are acceptable in the contexts given. This absence of island effects is compatible with our pseudo-slucing analysis, which does not posit the structure containing islands for reduced questions.¹⁰

As a confirmation of involvement of pseudo-slucing structure, we mention that (48b) and (49b) can optionally have pronominal subjects and copula verbs.

- (50) a. Bi-Ø [(tere-Ø ni) yaγu (bol-χu)]-yi ni γaiχa-ju bai-na.
 I-NOM that-NOM PPC what be-INF-ACC PPC wonder-ADVL AUX-NPST
 ‘I wonder what that is.’
- b. Bi-Ø [(tere-Ø ni) xen (bol-χu)]-yi ni γaiχa-ju bai-na.
 I-NOM that-NOM PPC who be-INF-ACC PPC wonder-ADVL AUX-NPST
 ‘I wonder who that is.’

¹⁰ It is compatible with the pseudo-slucing analysis but does not support it strongly. Even if cases like (48b) and (49b) involved sluicing or TP-ellipsis following *wh*-movement, they should not exhibit island effects, either. This is because sluicing is known to “repair island violations” (see Ross 1969, 1995; Merchant 2001, etc.)

The sentences in (50a-b) can be used after (48a) and (49a), respectively, without any problem.

Our pseudo-slucing analysis would not be complete unless the optionality of the copula in reduced questions in the complement position is explained. Let us consider the following examples:

- (51) a. Bi-Ø [Mergen-Ø suruyči (bol-χu)]-yi (ni)
 I-NOM Mergen-NOM student be-INF-ACC PPC
 mede-ne.
 know-NPST
 ‘I know that Mergen is a student.’
- b. [Mergen-Ø suruyči *(bol-χu)]-Ø ni nada-du
 Mergen-NOM student be-INF-NOM PPC 1SG-DAT
 mede-gde-ne.
 know-PASS-NPST
 ‘That Mergen is a student is known to me.’
- c. [Mergen-Ø suruyči ??(bol-χu)]-yi (ni) bi-Ø
 Mergen-NOM student be-INF-ACC PPC I-NOM
 mede-ne.
 know-NPST
 ‘lit. That Mergen is a student, I know.’

In (51a), the embedded clause is a propositional clause with the copula. Together with the optional PPC, it is adjacent to the verb, indicating that it is in the complement position of the matrix verb. (51a) allows the copula to be dropped optionally. (51b) is derived from (51a) through passivization. The embedded clause is promoted to the subject, and as a result, the copula cannot be omitted (as noted earlier, the PPC cannot be omitted, either). In (51c), the embedded clause in (51a) is dislocated presumably via scrambling, and it is somewhat difficult to omit the copula.¹¹, ¹² These examples show that, independently of reduced questions, the

¹¹ We asked six native speakers to judge (51). While the omission of the copula in (51a-b) was unanimously judged to be acceptable and unacceptable, respectively, their reactions to the copula omission in (51c) were split: half of them accepted it and the other half rejected it. We indicate this judgment using “??” in (51c).

¹² An anonymous reviewer asked us to construct an example where a direct object clause undergoes so-called short scrambling, namely movement to a position between the subject and the indirect object, and to check the possibility of copula omission. The following examples are relevant:

- (i) a. Bi-Ø öčügedür Mergen-dü [Batu-Ø Amerika xümün
 I-NOM yesterday Mergen-DAT Batu-NOM America person
 (bol-χu)]-yi (ni) xe-le-be.
 be-INF-ACC PPC say-PST
 ‘I told Mergen yesterday that Batu was an American.’
- b. Bi-Ø öčügedür [Batu-Ø Amerika xümün ??(bol-χu)]-yi
 I-NOM yesterday Batu-NOM America person be-INF-ACC
 (ni) Mergen-dü xe-le-be.
 PPC Mergen-DAT say-PST
 ‘I told Mergen yesterday that Batu was an American.’

copula can be omitted only in embedded clauses in the complement position of verbs in CM.

The contrast between (51a) and (51b) is reminiscent of the possibility of *that*-omission in English.

- (52) a. Everyone knows [_{CP} (that) John is smart].
 b. [_{CP} *(That) John is smart] is known to everyone.

Stowell (1981) accounts for the impossibility of the empty complementizer in (52b) with the lexical government condition of the Empty Category Principle (Chomsky 1981): the empty complementizer must be governed by a lexical category. In (52a), it is the head of the CP complement of the verb *knows*, whereas in (52b), it is the head of the CP in the specifier position of TP (see Chomsky 1981; Stowell 1981 for more detailed discussions). (51a-b) may be explained similarly if we assume that they also involve omission of complementizers.¹³

Sakamoto and Bao (2019) argue that verbs raise to C via T in Mongolian. It is in part based on the possibility of so-called verb-echo answers like the one in (53B-B').¹⁴

- (53) A: Batu-bol Bayatur-i sigümjile-gsen uu?
 Batu-TOP Bagatur-ACC criticize-PST.ADN Q
 'Did Batu criticize Bagatur?'
 B: Sigümjile-jai.
 criticize-PST.CON
 'lit. Criticized.'
 B': [CP Sigümjile-gsen gejö] bodu-na.
 criticize-PST.ADN C think-NPST.CON
 'lit. I think that criticized.'

Following Holmberg (2016) and Sato and Hayashi (2018), Sakamoto and Bao (2019) argue that verb-echo answers like (53B') have V-to-T-to-C movement and TP-ellipsis, as shown below.

- (54) [_{CP} [_{TP} Batu-bol [_{VP} Bayatur-i *t_V*] *t_T*]
 [_C [sigümjile_V gsen_T] gejö_C]] bodu-na

Footnote 12 continued

In (ia), the complement clause marked accusative directly precedes the main verb and the copula may be omitted. In (ib), the complement clause is placed so as to precede the indirect object. The judgments by our informants were the same as those of (51c): half of them did not accept the omission in question.

¹³ The Empty Category Principle, or the notion of government, is no longer assumed in the current framework of generative syntax. But the fact in (52) still remains. Although we just account for the data in question in CM with lexical government in this paper, we hope that they will ultimately be accounted for by whatever may account for (52). See Pesetsky (1994) and Bošković and Lasnik (2003) for attempts without relying on government.

¹⁴ Sakamoto and Bao (2019) consider data from Khorchin Mongolian. For verb-echo answers, see Holmberg (2016) and Sato and Hayashi (2018).

This shows that inside the embedded clause in (53B'), the verb moves to T and then the complex (the verb and the tense element) moves to C, which is followed by ellipsis of TP (indicated with grey shading). Sakamoto and Bao support this analysis with the possibility of adjunct-including readings and the impossibility of voice mismatch (see Sakamoto and Bao 2019 for details).

Assuming with Sakamoto and Bao (2019) that V-to-C movement indeed occurs in Mongolian, we may posit the following structure for (51a):

(55) Bi- \emptyset [_{CP} [_{TP} Mergen- \emptyset [_{VP} suruyč*ı* *t*_V] *t*_T] [_C [bol_V χ_{uT}] C]-yi (ni) mede-ne

In the complement clause, the copula verb moves to C via T, resulting in a complex complementizer indicated in boldface. Just like the empty complementizer in English, this complex complementizer may be omitted on the condition that the resulting empty category be lexically governed.¹⁵

The impossibility of copula drop in (51b) may be accounted for in the following way:

(56) [_{CP} [_{TP} Mergen- \emptyset [_{VP} suruyč*ı* *t*_V] *t*_T] [_C [bol_V χ_{uT}] C]- \emptyset ni nada-du mede-gde-ne

Here too, V-to-C movement via T takes place inside the subject clause. The complex complementizer may not be omitted, because it is not lexically governed just as the empty complementizer in (52b) is not. As for (51c), on which our informants' reactions were split, it may be that for those who did not allow copula drop or complementizer omission, the lexical government condition applies to the surface representation, where the complement clause is dislocated from the complement position of VP, whereas those who tolerated it apply the condition after the scrambled clause is reconstructed. We leave it to our future research to elaborate on this line of analysis.

Conclusions and open issues

We have considered reduced embedded questions in CM and proposed a pseudo-slucing analysis for them. We have shown that it can directly explain the lack of the case-matching effect, first observed for KM by Sakamoto (2012, 2015). According to our analysis, remnant *wh*-phrases are complements of the copula and hence are not assigned case, which is why they do not match their correlates in case. Our analysis is supported further by the fact that reduced questions can actually contain overt pronominal subjects, which is expected because null pronominal subjects posited by the pseudo-slucing analysis should be able to alternate with their overt counterparts. We have also observed the fact that reduced questions in CM can be

¹⁵ It is also necessary that the omitted verb be semantically vacuous like the copula, as other verbs are not omitted. An anonymous reviewer inquired whether V-to-C movement always occurs in Mongolian or whether it is limited to ellipsis contexts. Given the paradigm shown in (51a-c), we assume that V-to-C movement takes place in Mongolian even without ellipsis.

felicitous without linguistic antecedents, which reinforces our assumption that they do not involve ellipsis but pronominal subjects and the optional copula.

Before ending this paper, we would like to point out that our analysis does not entirely preclude the case-matching effect from emerging in CM. As observed by Sakamoto (2012) for KM, matrix sluicing in CM seems to be faithful to the case-matching effect (see Lasnik 1999 for some discussions on matrix sluicing). Consider the following data:

- (57) A: Batu-Ø nige xümün-dü ene nom-i ög-be.
 Batu-NOM one person-DAT this book-ACC give-PST
 ‘Batu gave this book to a person.’
 B: Xen-dü bui?
 who-DAT PRT
 ‘To whom?’

Taking speaker A’s utterance as its antecedent, speaker B’s utterance consists of a *wh*-phrase and the question marker, though it can have the same interpretation as its full-fledged counterpart (namely, *To whom did Batu give this book?*). Notice that the remnant *wh*-phrase is marked dative just like its correlate in (57A).

In addition, when a reduced embedded question contains more than one remnant *wh*-phrase (namely, when we have a case of multiple sluicing (Takahashi 1994; Lasnik 2014; Abels and Dayal 2017), CM does exhibit the case-matching effect, as indicated below (Sakamoto (2012) observes comparable data in KM).

- (58) a. Batu-Ø nige yaǰar-aça nige xümün-dü beleg
 Batu-NOM one place-ABL one person-DAT present
 ilege-be,
 send-PST
 ‘Batu sent a present to a person from a place,’
 b. gebeçü bi-Ø [tere-Ø χamiya-aça xen-dü beleg
 but I-NOM he-NOM where-ABL who-DAT present
 ilege-gsen]-i (ni) mede-xü ügei.
 send-PERF-ACC PPC know-INF not
 ‘but I don’t know to whom he sent a present from where.’
 c. gebeçü bi-Ø [χamiya-aça xen-dü]-yi ni mede-xü
 but I-NOM where-ABL who-DAT-ACC PPC know-INF
 ügei.
 not
 ‘lit. but I don’t know to whom from where.’

Anteceded by (58a), (58b-c) contain a full-fledged and a reduced embedded question, respectively. In (58c), the two *wh*-phrases are case-marked in the same way as their correlates in (58a). Close considerations of cases like (57) and (58) are left to future research.

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