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Dependent Case for Mongolian: Unifying accusative subjects

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In Modern Mongolian, the subjects of many subordinate clauses, both complements and adjuncts, may be marked with the accusative case (von Heusinger & Klein & Guntsetseg 2011; Guntsetseg 2016). This study argues that the full empirical picture of these marked subjects necessitates an analysis based on Dependent Case Theory (Marantz 1991; Baker & Vinokurova 2010; Baker 2015), which additionally provides an account of case assignment more broadly in the language, including in differential object marking. Prior syntactic analyses (Bao et al. 2015; Fong 2019) rely on Agree-based case-licensing from *v*, resulting in ECM-like accounts. However, the appearance of accusative on subjects of adjoined clauses, as well as in clauses with no canonical accusative-assigning verbs (intransitives, passives) rules out *v* as the case assigner. Instead, following Baker & Vinokurova (2010), this account argues that accusative case is assigned configurationally. Once established that a configurational approach to case-assignment handles subjects, as well as direct objects, the approach is applied to Mongolian-specific issues including voice alternations and converbial adjuncts, showing that the theory predicts case-assignment patterns there. Finally, the study examines data from dative marking and scrambling in ditransitives to refine Baker & Vinokurova’s (2010) original theory, obviating the need for case-stacking by restricting the timing of application of the Dependent Case algorithm.

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1 Introduction

In Modern Mongolian,¹ the subjects of a wide variety of embedded clauses may appear marked with the accusative case (Chinggeltai 1981; von Heusinger & Klein & Guntsetseg 2011; Bao et al. 2015; Guntsetseg 2016; Fong 2019). The appearance of exceptionally-marked subjects would not be surprising if they were limited to complement clauses – as is the case in languages with ECM-like patterns (Rosenbaum (1967); Chomsky (1973) *i.a.*); however in Mongolian accusative subjects appear in a wider range of embedded clauses including adverbial clausal adjuncts (converbs), clauses embedded under postpositions, as well as nominalised complement clauses.

This topic has been approached either from a Differential Case Marking perspective (von Heusinger & Klein & Guntsetseg 2011; Guntsetseg 2016), or an Agree-based case-licensing perspective (Bao et al. 2015; Fong 2019). Fong (2019) in particular offers an analysis wherein the matrix *v* licenses accusative on embedded subjects – although this previous analysis examines only finite clausal complements while this study expands the view to include the subjects of nominalised complement clauses, and adjoined subordinate clauses (converbials, PP-subordinate clauses). The present study aims to provide an account in view of the full range of environments where accusative subjects appear, which is best achieved through a Dependent Case (Baker & Vinokurova 2010; Baker 2015) analysis. Through this examination of accusative subjects, I provide a more complete analysis for accusative case assignment in the language.

In (1) below I present examples² from Guntsetseg (2016) to illustrate at least four environments where accusative subjects are possible: in nominalised complements (1a), in CP complements (1b), in converbial clauses (1c) and in PP's (1d). In all of these environments, the accusative case alternates with the un-marked nominative.

(1) (From Guntsetseg (2016: 139–140))

- a. Tuyaa [**Dorž** $\left\{ \begin{array}{l} -\emptyset \\ -iig \end{array} \right\}$ German-ruu yav-san]-iig med-sen
 Tuyaa Dorž $\left\{ \begin{array}{l} -NOM \\ -ACC \end{array} \right\}$ Germany-ALL go-VRN.PST-ACC know-VRN.PST
 ‘Tuyaa knew Dorž went to Germany.’
- b. Tuyaa [**Dorž** $\left\{ \begin{array}{l} -\emptyset \\ -iig \end{array} \right\}$ German-ruu yav-san gež] med-sen
 Tuyaa Dorž $\left\{ \begin{array}{l} -NOM \\ -ACC \end{array} \right\}$ Germany-ALL go-VRN.PST that know-VRN.PST
 ‘Tuyaa knew that Dorž went to Germany.’

¹ Including Khalkha and standard Southern Mongolian – hereafter just “Mongolian.”

² I provide broad phonemic transcriptions of Mongolian data as follows: a = [a], e = [ɛ] or [e] in diphthongs, i = [i], o = [ɔ], u = [u], ö = [ø], ü = [y], n = [n], ŋ = [ŋ], m = [m], l = [ɮ], b = [p], v = [w], x = [x], g = [g] or [q], s = [s], š = [ʃ], t = [tʰ], d = [t], č = [tʃ] in Khalkha or [tʃ] in Southern Mongolian, ž = [dʒ] in Khalkha, or [dʒ] in Southern Mongolian, y = [j], r = [r], ' = [ʰ]. Long vowels are represented by doubling the vowel.

- c. Tuyaa [**Dorž** $\left\{ \begin{array}{l} -\emptyset \\ -iig \end{array} \right\}$ ir-megč] yav-san
 Tuyaa Dorž $\left\{ \begin{array}{l} -NOM \\ -ACC \end{array} \right\}$ come-CVB go-VRN.PST
 ‘Tuyaa went as soon as Dorž came.’
- d. Tuyaa [**Dorž** $\left\{ \begin{array}{l} -\emptyset \\ -iig \end{array} \right\}$ ir-sen]-ii daraa yav-san
 Tuyaa Dorž $\left\{ \begin{array}{l} -NOM \\ -ACC \end{array} \right\}$ come-VRN.PST-GEN after go-VRN.PST
 ‘Tuyaa went after Dorž came.’

The accusative in Mongolian also participates in Differential Object Marking (Guntsetseg 2016), where case appears contingent on factors like referentiality or specificity, rather than structural status alone (Comrie (1979); Aissen (2003); de Hoop & Malchukov (2008); Kornfilt (2008) *i.a.*).

I will forward a syntactic analysis of case-marking in Mongolian based around a configurational analysis: specifically the formulation of Baker & Vinokurova’s (2010) Dependent Case Theory (DCT). A configurational view of case assignment posits the separation of case assignment from Agree mechanisms, as well as morphological case assignment from nominal licensing, contra the “standard” Chomskyan (2001 etc.) view that assigns case through an Agree relationship between a functional head and an appropriate nominal.

The discussion is structured as follows: Section 2 covers the full range of environments where embedded accusative subjects appear (and do not appear) in Mongolian. In subsection 2.2, I discuss several important conclusions about accusative-subject constructions, including the necessity that embedded subjects move to the upper edge of their phase to receive case. In section 2.3, I argue against matrix ν as case-assigner for embedded subjects. Importantly, I show the availability of the accusative on the subjects of adjoined subordinate clauses, as well as in intransitives and passives.

Section 3 lays out the theory of Dependent Case as presented by Baker & Vinokurova (2010). The section discusses how adopting this configurational view allows us to explain differential object marking patterns. I then apply this approach to embedded accusative subjects arguing that case is assigned to an embedded subject that is C-commanded by a higher nominal (usually the matrix subject) in the same phase.

Section 4 begins by showing how this approach also has the benefit of explaining why accusative subjects are impossible in relative clauses and clausal subjects. Subsection 4.2 discusses how Dependent Case theory can predict case alternations that occur in causative and passive voice constructions. Section 4.3 then discusses where the phase boundary in Mongolian lies. Section 4.4 takes up the issue of the timing of Dependent Case rule application relative to the kinds of movement that feed or bleed its application. Given data from embedded dative arguments and dative goals in ditransitives, I argue that the application of the Dependent Case algorithm should be restricted in terms of timing, and suggest one way of doing so in Mongolian.

While this current discussion focusses on (accusative) case assignment generally, the most recent study on Mongolian accusative subjects – Fong’s (2019) paper – is primarily concerned with the movement of accusative-marked subjects out of CP complement clauses, and their bearing on the A-/A-bar distinction. Fong calls this movement “hyperraising” (Ura 1994), and shows that it shares some characteristics with A-movement, challenging the notion that any given position (in this case, spec,CP) may be considered intrinsically an A- or A-bar position. Gong (2022) takes up this discussion ultimately arriving at the conclusion that some long-distance movement has mixed A/A-bar properties, and that standard tests (such as Condition C reconstruction and other binding tests) are not directly linked to A/A-bar distinctions. Gong (2022) ultimately forwards a Dependent Case analysis similar to the one presented here although her analysis is also limited to objects and the subjects of complement clauses, and also differs from the present account on the matter of dative assignment.

Data in this study is taken from a variety of published sources, in addition to data from fieldwork with speakers of Khalkha Mongolian, as well as from speakers of Standard Southern Mongolian from the Inner Mongolia Autonomous Region (of Northern China). Where possible, data from multiple sources have been presented together, in order to demonstrate consistency of judgements across speakers and varieties of the language. Where a citation does not appear, data comes from the author’s fieldwork with seven individual linguistic consultants from the above mentioned speech communities. These speakers range in ages and occupations from young adults to retired professionals. Data was collected primarily through linguistic judgement and translation tasks.

2 What we know about Mongolian Accusative Subjects

The distribution of accusative subjects in Mongolian extends beyond simple CP complement clauses. The environments where accusative subjects appear include:

- Nominalised complement clauses
- Clauses embedded under the “complementizer” *gež*
- Converbial clauses
- Clauses under subordinating postpositions (e.g. ‘after’)

Nominalised complements

Example (2) from Guntsetseg (2016: 139) and example (3) below show embedded clauses headed by verbal nouns/participial forms, whose subjects are marked with accusative case. The verbal noun suffixes in these clauses and the accusative case markers which follow the entire clause indicate that they are nominalised.

- (2) Tuyaa [**Dorž-iig** German-ruu yav-san]-iig med-sen
 Tuyaa Dorž-ACC Germany-ALL go-VRN.PST-ACC know-VRN.PST
 ‘Tuyaa knew Dorž went to Germany.’ (Guntsetseg 2016: 139)
- (3) Bold [**Has-ig** sogtuu bai-x]-ig mart-san
 Bold [Hasa-ACC drunk be-VRN.NPST]-ACC forget-VRN.PST
 ‘Bold forgot that Hasa was drunk’

CP complements

Examples in (4) from Guntsetseg (2016: 139) and (5) below show clausal complements headed by *gež*. Verbal complements with *gež* are often described as being CPs (Janhunen 2012), although the status of “complementizer” may not be uncontroversial.³

- (4) Tuyaa [**Dorž-iig** German-ruu yav-san gež] med-sen
 Tuyaa Dorž-ACC Germany-all go-VRN.PST that know-VRN.PST
 ‘Tuyaa knew that Dorž went to Germany.’ (Guntsetseg 2016: 139)
- (5) Bold [**Has-ig** övčtei bai-na gež] barxira-na
 Bold [Hasa-ACC sick be-NPST COMP] shout-NPST
 ‘Bold is shouting that Hasa is sick.’

Converbial Adjuncts

Converbs are non-finite adverbial subordinators. Importantly, their syntactic status is that of an adjunct (Haspelmath 1995). Examples (6–8) show accusative case appearing on the subjects of clauses embedded under two different converbs (the immediate converb in 6 & 7, and the successive converb in 8). In the examples below, the converb is used to connect the subordinated and matrix events temporally. Converbs adjoin generally to either the *vP* or *TP* in a clause (cf. König (1995); Haug et al. (2012) *i.a.*).

- (6) Tuyaa [**Dorž-iig** ir-megč] yav-san
 Tuyaa Dorž-ACC come-CVB go-VRN.PST
 ‘Tuyaa went as soon as Dorž came.’ (Guntsetseg 2016: 140)
- (7) [**Dorž-iig** ir-megč] Tuyaa övd-sön
 [Dorž-ACC come-CVB] Tuyaa sicken-VRN.PST
 ‘As soon as Dorž came, Tuyaa fell ill.’

³ This complementizer is formed from a verb of saying *ge-* followed by the converbial suffix *-ž*. It is unclear whether *gež* has fully grammaticalised into an un-analysed complementizer, or whether it retains its syntactic status as a converbial subordinator.

- (8) [Tüün-ig Mongol-d ire-xleer] bi tüün-tei uulž-na
 3SG-ACC Mongolia-DAT come-CVB 1SG.NOM 3SG-COM meet-NPST
 ‘When he comes to Mongolia, I’ll meet him.’ (Kullman & Tserenpil 1996: 165)

Note that the accusative case is available on the embedded subject even when the matrix verb is intransitive – unergative in (6) and unaccusative in (7). Data like these are discouraging for an ECM-style analysis of accusative subjects, as the matrix verb should be unable to assign case; see section 2.3 for discussion.

Subordinate Clauses under Postpositions

Postpositions in Mongolian generally take entire clauses with participials as their complement, assign them a lexical case (e.g. ablative, genitive, etc.) and adjoin to the matrix clause. Examples (9) (from Guntsetseg (2016: 138)), and (10) show clauses embedded under temporal subordinators. The embedded subjects of these clauses may also be accusative-marked.

- (9) Tuyaa [Dorž-iig ir-sen]-ii daraa yav-san
 Tuyaa Dorž-ACC come-VRN.PST-GEN after go-VRN.PST
 ‘Tuyaa went after Dorž came.’ (Guntsetseg 2016: 138)

- (10) Bi [minii egč-iig yav-san]-aas xoiš Xöx Xot-ad amdra-ž bai-san
 I my sister-ACC leave-VRN.PST-ABL since Höhhot-DAT live-CVB be-VRN.PST
 ‘I’ve been living in Hohhot since my sister left.’

From an Agree-based case perspective, the subjects of these adjunct clauses should not be marked: there are no transitive verbs in the sentences, and the subjects subordinate clauses (being embedded within adjoined PP’s) would be out of the reach of a case-assigning matrix verb. Similar data from adjoined subordinate clauses formed part of the basis of argumentation for a related Dependent Case analysis in Gong (2022).

Baker & Vinokurova (2010: 618) use the appearance of accusative subjects in adjunct clauses in Sakha likewise to demonstrate the necessity of an alternative theory to Agree-based case marking. Here, we shall see that Mongolian provides an even more forceful argument from adjunct clauses, as marked subjects appear in an even wider range of environments than in Sakha. In the latter, they appear only in adjuncts headed by the complementizer *dien*,⁴ while in Mongolian sentential adjuncts of all sorts may appear with accusative subjects, without complementizers.

⁴ Major (2020) for one proposes that *dien* and its Uyghur cognate *dep* is verbal and can assign case, complicating the argument for Dependent Case from adjuncts in Turkic. Thanks to an anonymous reviewer for discussion of these points.

2.1 Where Accusative Cannot Appear

While accusative may appear on a wide variety of subjects, there are three types which may not take this case: matrix subjects, the embedded subjects of clausal subjects, and the subjects of relative clauses.

The example in (11a) shows that matrix subjects of active verbs may not be accusative marked. Likewise, the embedded subjects of clausal subjects may not receive accusative, as shown in (11b) and (11c) with both inanimate and animate embedded subjects. The embedded subjects of relative clauses may not be accusative-marked either, as shown in (11d). Any analysis of how accusative case appears on the subjects of embedded complement and adjoined clauses should also rule these structures out.

- (11) a. Hasa-(*ig) tošaal-ig u᠋ᠨᠰᠢ-san.
 Hasa-(*ACC) edict-ACC read-VRN.PST.
 ‘Hasa read an edict.’
- b. Ayga-(*ig) xagara-san gaixaltai bai-san.
 Bowl-(*ACC) break-VRN.PST surprising be-VRN.PST.
 ‘The bowl breaking was surprising.’
- c. Bat $\left\{ \begin{array}{l} \text{-iin} \\ \text{*iig} \end{array} \right\}$ ir-sen gaixaltai bai-san.
 Bat $\left\{ \begin{array}{l} \text{-GEN} \\ \text{*ACC} \end{array} \right\}$ come-VRN.PST surprising be-VRN.PST
 ‘That Bat came was surprising.’
- d. Bold Hasa-(*ig) garga-san tošaal-ig u᠋ᠨᠰᠢ-san.
 Bold Hasa-(*ACC) release-VRN.PST edict-ACC read-VRN.PST.
 ‘Bold read the edict Hasa released.’

With this empirical background in place, let us first turn to a recent account of the phenomenon, provided by Fong (2019).

2.2 Fong (2019) and Accusative Subjects of Clausal Complements

In her 2019 paper Fong proposes that accusative case is assigned across a clausal boundary by the matrix verb to those subjects which have raised to the specifier position of a CP complement. Fong posits that the C head in Mongolian may bear ϕ -features, attracting an embedded subject to its specifier, where it is visible to the matrix ν for Agree. Fong shows that accusative subjects are higher than their nominative counterparts, arguing that the position they have moved into must be the specifier position of the embedded CP. From there, matrix ν may assign accusative across the clausal boundary, if it is able to.

As seen previously, accusative subjects also appear in nominalised complement clauses, as well as various adjoined subordinate clauses, in addition to those embedded under a CP. Adjoined

subordinate clauses of either the PP or converbial type are not generated within the C-command domain of a structural-case assigning v (shown in sections 2.3 and 4.3), and so some version of a Long Distance Agreement analysis would be required to maintain matrix v as the assigner of accusative on embedded subjects in these clauses. More seriously, there is good evidence that the appearance of accusative subjects is not contingent upon the ability of matrix v to assign structural case. Importantly, without matrix v available as a case assigner, we are left wanting for another explanation for accusative embedded subjects.

2.2.1 The Height of Embedded Subjects in Finite Complement Clauses

Fong (2019) provides several binding-based diagnostics to demonstrate that accusative-marked embedded subjects are structurally higher than their nominative counterparts in finite complement clauses. Firstly the analysis demonstrates that accusative subjects which contain an anaphor may be bound as though they are in the matrix clause, unlike nominative embedded subjects.

Mongolian employs a subject-oriented anaphoric suffix called the reflexive-possessive marker (REFL.POSS). The noun that takes this suffix must be possessed by a subject in its local domain. In (12a), REFL.POSS must be bound by the local subject, despite another intervening nominal.

- (12) a. *Sudu nadad nom-oo ög-sön*
 Sudu 1SG.DAT book-REFL.POSS give-VRN.PST
 ‘Sudu gave me her own book.’
- b. *Tuyaa_i [Sudu_j nadad nom-oo_{*i/j} ög-sön gež] mart-san*
 Tuyaa_i [Sudu_j 1SG.DAT book-REFL.POSS_{*i/j} give-VRN.PST COMP] forget-VRN.PST
 ‘Tuyaa forgot that Sudu_j gave me her_j own book.’

Example (12b) demonstrates the locality requirements of this marker: the matrix subject may not bind a subject-oriented anaphor within the embedded clause. Consider then the contrast between nominative and accusative embedded subjects bearing REFL.POSS in the following minimal pair:

- (13) (From (Fong 2019: 11))
- a. **Bat [margaaš egč-ee ir-ne gež] xel-sen*
 Bat [tomorrow sister.NOM-REFL.POSS come-NPST COMP] say-VRN.PST
 (Int.: ‘Bat said that his (own) sister is coming tomorrow.’)
- b. *Bat_i [margaaš egč-iig-ee_{i/*j} ir-ne gež] xel-sen*
 Bat [tomorrow sister-ACC-REFL.POSS come-NPST COMP] say-VRN.PST
 ‘Bat said that his (own) sister is coming tomorrow.’

Example (13a) demonstrates that this is a Condition A anaphoric suffix, and the embedded REFL.POSS in a nominative DP may not be bound by the matrix subject. In (13b) however, we see that the addition of the accusative case allows the embedded subject to be bound as though it were in the matrix clause.

A Binding Condition B contrast can be constructed as well. In (14a), the full pronoun in the embedded clause may take the matrix subject as its antecedent without violating Binding Condition B, so long as it is nominative. However, as soon as the embedded subject is accusative-marked, the matrix subject is no longer available as an antecedent, and the pronominal behaves just as it would if it were within the matrix clause, now subject to Condition B.

(14) (From (Fong 2019: 13))

- a. Odgerel_i [margaaš **ter**_{ij} ir-ne gež] xel-sen
 Odgerel [tomorrow 3SG.NOM come-NPST COMP] say-NPST
 ‘Odgerel said that (s)he (*Odgerel or someone else*) is coming tomorrow.’
- b. Odgerel_i [margaaš **tüün-iig**_{ij} ir-ne gež] xel-sen
 Odgerel [tomorrow 3SG.ACC come-NPST COMP] say-NPST
 ‘Odgerel said that (s)he (*only someone else, not Odgerel*) is coming tomorrow.’

The same binding and adverbial tests employed by Fong can be extended to other constructions with embedded accusative subjects to show that their subjects likewise appear at the upper edge of the embedded domain. Consider the sentence in 15, where the subject of a nominalised complement clause must be marked accusative if it appears to the left of an adverbial *margaaš* ‘tomorrow’.

- (15) Tuyaa [**ax-*(iig)-aa** margaaš irex]-iig mart-san
 Tuyaa brother-ACC-REFLPOSS tomorrow come-ACC forget-VRN.PST
 ‘Tuyaa forgot her brother is coming tomorrow.’

These tests, and their counterparts in adjoined subordinate clauses, are discussed in greater detail in section 3.2, where I outline the proposed Dependent Case analysis for embedded subjects and examine its feasibility for all subordinate clause types.

The above tests demonstrate that accusative embedded subjects, unlike their nominative counterparts, behave for binding purposes as though they are in the matrix clause. Fong argues that this behaviour arises by virtue of having moved to the phase edge. Once here, the exact mechanism of case assignment becomes the next question. Here, I specifically propose a Dependent Case analysis.

2.3 Matrix *v* is not the accusative case assigner

In a basic sense, whenever an embedded subject appears with what is ostensibly objective case – here, accusative – it is important to investigate whatever connection there may be between this embedded subject and the matrix clause, where such case could be assigned. In the literature on Exceptional Case Marking, there are several ways of establishing this connection. First, the embedded subject could potentially raise into the matrix VP (“raising to object”). Otherwise, matrix *v* could assign accusative case across a clausal boundary given certain conditions. Both types of analysis rely on the ability of the matrix verb to assign accusative (see e.g. Chomsky

(1986)). For any material canonically accessible to case-assigning v arguments against an Agree-based account must demonstrate that accusative is available in circumstances where we would not expect v to be able to assign case, such as in passives or intransitives. This is generally the line of argumentation pursued in Baker & Vinokurova (2010), and is also the primary line I pursue here. I will ultimately show that accusative in Mongolian is available independently from the matrix v 's ability to assign case, refuting both a raising-to-object analysis and the cross-clausal Agree account.

In Fong's (2019) account discussed above, accusative may be assigned across the clause boundary by v . Fong's argument that matrix v is the accusative case-assigner for embedded subjects rests on two pieces of data. First, consider (16):

- (16) [Dulmaa(*-g) sain seheetin gež] xeled-gd-sen
 [Dulmaa(*-ACC) good noble COMP] say-PASS-VRN.PST
 'It was said that Dulmaa is good and noble.' (Fong 2019: 9)

The argument from (16) is that if the matrix verb is unable to assign accusative case as a passive, then the fact that accusative is apparently banned indicates that the embedded subject receives case from the matrix verb. However, (16) might be ruled out independently by the fact that Mongolian speakers statistically disprefer (but not ban) accusative on embedded subjects unless they are linearly close to matrix subjects (Guntsetseg 2016: 147), and since there is no other overt nominal in (16), speakers prefer the version *without* the accusative.

Data like (16) is complicated by several factors. First, the traditional passive *-gd* is marginal in modern spoken Mongolian (Janhunen (2012: 246); Kullman & Tserenpil (1996: 124)); not every speaker I consulted accepted data like (16).⁵ However, for those speakers⁶ that did accept (16), the accusative case remains available for both embedded subjects in clauses with *gež* (17a), as well as nominalised clauses that serve as the derived subject (17b), in both cases just so long as there is another argument in the sentence.

- (17) a. čagdaa-d [xulgaič-ig yüm xulgail-san gež] mede-gd-sen
 police-dat thief-ACC thing steal-VRN.PST COMP know-PASS-VRN.PST
 'By the police, it was discovered that the thief stole something.'
- b. surguul-iin jaxirul-d [Tuyaa ir-sen]-*(iig) mede-gd-sen
 School-gen director-DAT [Tuyaa come-VRN.PST]-*(ACC) know-pass-VRN.PST
 'That Tuyaa had come was discovered by the school director.'

⁵ For these speakers, *-gd* passives are restricted to sentences where the derived subject is animate and has a high degree of patientivity.

⁶ The data in (17) was provided by speakers of Southern Mongolian varieties.

This pattern is unexpected if the matrix verb is the case assigner: a traditional view of the passive should prevent it from assigning accusative, and yet we see in (17) that accusative remains available, if other conditions are met.

Fong (2019: 9) also cites data like (18) where ACC is banned on the embedded subjects of clausal subjects. The assertion is that they are out of the C-command domain of v , and cannot receive case, thus affirming that v must be the ACC assigner.

- (18) [Bat(*-iig) čixer id-sen gedeg n'] namaig gaixš-ruul-san
 [Bat(*-ACC) candy eat-VRN.PST COMP POSS.3] 1SG.ACC surprise-CAUS-VRN.PST
 ‘That Bat ate candy surprised me.’ (Fong 2019: 9)

While this is one plausible explanation of why (18) bans accusative case on the embedded subject of a matrix clausal subject, it is not the only one. I will propose that these examples are independently ruled out because there is no higher argument to C-command the embedded subject, as required under a configurational view. This is discussed further in section 4.1.

An even more forceful argument for the fact that the accusative may appear independently of structural-accusative-assigning verbs comes from sentences which lack them entirely. Accusative is available for embedded subjects even when the clause contains only intransitive verbs, as in (19) or in (20). This would be surprising under an Agree-based view of accusative assignment.

- (19) Tuyaa [Dorž-iig ir-megč] övd-sön
 Tuyaa Dorž-ACC come-CVB feel.sick-VRN.PST
 ‘Tuyaa felt sick as soon as Dorž arrived.’

- (20) Bi [minii egč-iig yav-san-aas xoiš] Xöx Xot-ad amdra-ž bai-san
 I [my sister-ACC leave-VRN.PST-ABL since] Hohhot-DAT live-CVB be-VRN.PST
 ‘I’ve been living in Hohhot since my sister left.’

It is also possible to demonstrate that accusative is available on the subjects of embedded clauses which are not C-commanded by v . Specifically, in adjoined clauses such as converbials, the embedded subject may receive accusative even though it is demonstrably outside of the vP domain. This point is demonstrated in section 4.3 using adverbial scope tests and converbial clauses. The same point can also be supported with binding tests.

In (21), an R-expression in a converbial clause known to host accusative subjects (see 8), is co-indexed with a pronominal goal in the matrix predicate. Converbial clauses are transparent for binding (section 3.2), and so if this converbial clause were generated below the position of the indirect object in (21), we would expect a condition-C violation, which we do not observe. Independently, observe that an accusative-marked direct object appears following the indirect object. In section 3.1 below, I demonstrate that the IO-DAT > DO-ACC order is derived, and

accusative is assigned at the upper edge of the *vP*. The fact that we see no condition-C violation between the indirect object and the R-expression within the converbial clause therefore requires that this converbial clause is generated above where the direct object receives ACC, and therefore crucially, outside of the C-command domain of *v*. Now, the availability of accusative subjects in these converbial clauses demands an independent explanation.

- (21) Bi [Bold-iin_i duun-i üg-ig uŋši-xlaar-aa] **tüünd_i** bičleg-ig ög-nö
 I Bold-GEN song-GEN word-ACC read-CVB-REFLPOSS 3SG.DAT recording-ACC give-NPST
 ‘When I read Bold’s lyrics, I’ll give him the recording.’

Finally, sentences may also appear with *two* accusative arguments:

- (22) Tuyaa [namaig or-mogč] en-ni coŋx-iig nee-sen
 Tuyaa 1SG.ACC enter-CVB this-FOC window-ACC open-VRN.PST
 ‘As soon as I entered, Tuyaa opened this window.’

In (22), both the direct object of the matrix verb as well as an embedded subject receive accusative. Under a standard Agree-based account, there would only be a single case-assigner in (22), which (excluding multiple-agree) should not be able to enter into an agree relationship with two DPs. Alternatively a Dependent Case analysis is able to handle such a mismatch between the number of accusative-marked nominals and available case-assigners in a sentence.

3 Dependent Accusative Case

Baker & Vinokurova (2010) (hereafter: B&V) introduce the case system of Sakha a Turkic language of Siberia, itself in contact with several Mongolic languages. Like Mongolian, in addition to participating in DOM, the accusative in Sakha may appear on the subjects of both CP complement clauses, as well as the embedded subjects of participial complement clauses. In addition to the subjects of clausal complements, accusative case may mark subjects of embedded clauses that Baker and Vinokurova analyse as adjuncts, as seen below in the examples in (23) where clauses headed by a complementizer (“*dien*”) appear in absolute-like constructions.

- (23) a. Masha [Misha-ny [kel-ie dien]] dije-ni xomuj-da
 Masha Misha-ACC come-FUT.3SS that house-ACC tidy-PAST.3SS
 ‘Masha tidied up the house (thinking) that Misha would come.’
 (Vinokurova 2005: 368)
- b. Masha Kesh-a-qa [Misha-ny [aaq-ya dien]] kinige-ni bier-de
 Masha Kesh-a-DAT Misha-ACC read-FUT.3SS that book-ACC give-PAST.3SS
 ‘Masha gave Kesh-a the book so that Misha would read it.’
 (Baker & Vinokurova 2010: 618)

Finally, Sakha (also like Mongolian) can produce clauses with accusative-marked subjects even when there are no structural-accusative assigning verbs, as in (24) with two unaccusative verbs, or as in (25) with a matrix passive verb.

(24) Masha [Misha-ny [yaldj-ya dien]] tönün-ne
 Masha [Misha-ACC fall.sick-FUT.3SS that return-PAST.3SS
 ‘Masha returned (for fear) that Misha would fall sick.’

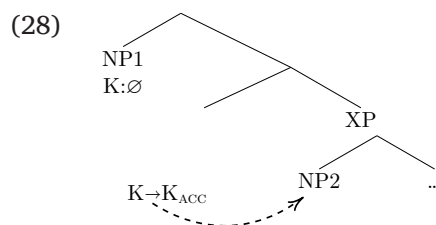
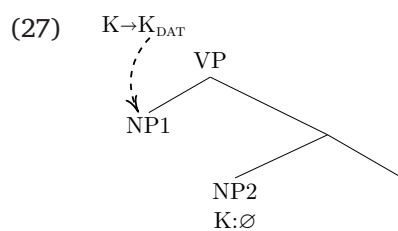
(25) Sargy [kim-i daqany tönn-üm-üö dien] erenner-ilin-ne
 Sargy who-ACC prt return-NEG-FUT.3SS that promise-pass-past.3SS
 ‘Sargy was promised that nobody would return.’

The distribution of accusative case in Sakha is similar to that of Mongolian, if only slightly more restricted. A theory of case assignment that works well for Sakha might fare well for Mongolian. This theory is Baker & Vinokurova’s version of Dependent Case Theory.

B&V formulate two rules for Dependent Case (DC) assignment:

- (26) (Baker and Vinokurova 2010: 595)
- If there are two distinct NPs in the same VP-phase such that NP1 c-commands NP2, then value the case feature of NP1 as dative unless NP2 has already been marked for case.
 - If there are two distinct argumental NPs in the same phase such that NP1 c-commands NP2, then value the case feature of NP2 as accusative unless NP1 has already been marked for case.

The application of these can be visualised as in the structures below:



In the following sub-sections, I will go through the environments where accusative is found in Mongolian, and explain the application of (26b). I demonstrate that Baker & Vinokurova's rules, as formulated, account for variable case assignment in direct objects, as well as the embedded subjects of complement and adjoined clauses. I differ from this analysis, however, in terms of the height of the phase division in the clause (see section 4.3), as well as the nature of Nominative and Genitive assignment (see section 3.3).

3.1 Accusative in Direct Objects

In Mongolian, as in Sakha, direct objects may either appear with accusative, or be unmarked:

- (29) (From Guntsetseg (2016: 78))
- a. Bi neg oxin(-iig) xar-san
I one/a girl(-ACC) see-VRN.PST
'I saw a girl.'
 - b. Bi ene oxin*(-iig) xar-san
I this girl*(-ACC) see-VRN.PST
'I saw this girl.'
 - c. Bi oxin(*-iig) xar-san
I girl(*-ACC) see-VRN.PST
'I saw [a] girl.'

The examples in (29) show a definite object obligatorily receiving ACC-marking (29b), a bare indefinite refusing ACC (29c), and a simple indefinite variably taking acc-marking. Guntsetseg (2016) points out that a number of other factors aside from definiteness are involved here, including DP-type, incorporation, modification, and specificity, which together condition the relative 'referentiality' of the objects.

In rule (26b), B&V state that only an NP (here, an object) which appears in the same phase as another higher, unmarked C-commanding argument (here, the subject) may be accusative marked. This requires objects to shift⁷ to a site at least as high as the lower phase edge – a phenomenon which is well known to occur in DOM languages to specific objects (Diesing (1992); Diesing & Jelinek (1995); López (2012); *i.a.*). While demonstrating that objects have shifted in this way does not preclude analyses other than DCT, it is a pre-requisite for an analysis along the lines of B&V's, and thus must be empirically demonstrated in Mongolian.

One method to show that objects have moved is to insert adverbs of various heights in the sentence, and inspect the linear position of marked and unmarked objects. This is what B&V do

⁷ A higher degree of *referentiality* is generally seen as a trigger for movement. Although the definitions of referentiality and specificity are subjects of much interest in the DOM literature (Comrie 1979; Aissen 2003), they are beyond the scope of this study.

for Sakha, where they show that when objects appear linearly before certain adverbs, they are obligatorily accusative-marked, and when they appear in the immediately pre-verbal position, they may only receive accusative case with contrastive focus. The same facts hold of Mongolian, where a direct object appearing linearly above an adverb in (30) must be accusative-marked:

- (30) Bi xool*(-iig) uurtaigaar id-sen
 I food-ACC angrily eat-VRN.PST
 ‘I ate the food angrily.’

Ditransitive and causative sentences provide further evidence for object movement. The DO in these constructions may appear either before or after the dative-marked IO. The S > IO > DO > V order is the default order, the other is marked (Guntsetseg 2016: 24). We can see this in (31) where the DO of ‘introduce’ may appear on either side of the IO:

- (31) (From Guntsetseg (2016: 24))
 Tuyaa (Sarnai-g) Dorži-d (Sarnai-g) tanilčuul-san
 Tuyaa Sarnai-ACC Dorž-DAT Sarnai-ACC introduce-VRN.PST
 ‘Tuyaa introduced Sarnai to Dorž’

In the IO > DO order, the direct object may be unmarked:

- (32) Bagš surugč-id nom(-iig) ögö-sön
 Teacher student-DAT book-ACC give-VRN.PST
 ‘The teacher gave a book to the student.’

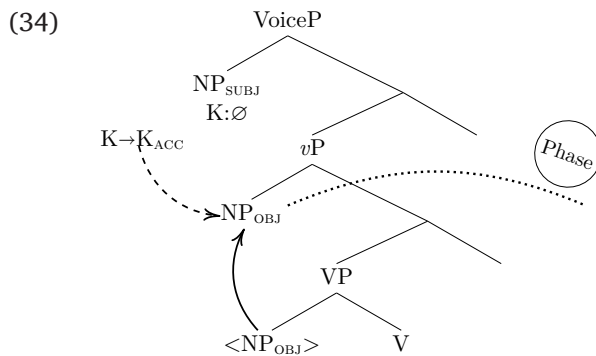
However, in DO > IO order, the direct object must be accusative, and must be interpreted as specific:

- (33) Bagš nom-*(iig) surugč-id ögö-sön
 Teacher book-ACC student-DAT give-VRN.PST
 ‘The teacher gave a [specific] book to the student.’

The DO > IO order is a derived order: Gong (2022: 7) demonstrates that short (A-) scrambling is responsible for deriving the marked word orders. The obligatory accusative-marking that appears in the DO > IO order therefore correlates this case with structural height.

The structure in (34) below illustrates our interpretation of the configuration for accusative marking in direct objects under B&V’s theory, as it should apply to the Mongolian data discussed above. Here I assume an articulated verbal domain, as Mongolian exhibits overt Voice in addition to other verbalizing morphology. Ramifications for the division of the verbal domain on the phase boundaries are discussed in section 4.3.⁸

⁸ For B&V, the VP (as opposed to the vP) constitutes the lower phase of the clause. In section 4.3 I demonstrate that the phase boundary in Mongolian is slightly higher than in Sakha.



So, we have seen that movement of direct objects is correlated with accusative case assignment. However, a caveat from ditransitives: there exist sentences with the canonical IO > DO order, wherein the direct object – despite being below the indirect object – is accusative marked:

- (35) Bagš surugč-id nom-iig ögö-sön
 Teacher student-DAT book-ACC give-VRN.PST
 ‘The teacher gave a book to the student.’

In (35), how do we know that accusative is not assigned to the direct object in its base position, invalidating our correlation between movement and accusative marking? One must demonstrate that word orders as in (35) are generated by further movement of the indirect object over the direct object. To do this, we can apply the same adverbial tests as above.

In (36) and (37) below, although the indirect and direct objects appear in the canonical/base order, they both appear linearly before an agentive adverb, and the DO must be accusative-marked. That is to say, the DO has moved above an adverbial that delineates the lower phase, is obligatorily accusative-marked, and then the canonical IO > DO order is derived by further movement of the IO.

- (36) Bagš surugč-id **nom-*(iig)** uurtaigaar ög-sön
 Teacher student-DAT book-ACC angrily give-VRN.PST
 ‘The teacher angrily gave a book to the student.’

- (37) Ter mördegč-d **töörögdüüle-sen medeelel-*(iig)** sanaataigaar ög-sön
 3SG.NOM detective-DAT mislead-VRN.PST information-*(ACC) deliberately give-VRN.PST
 ‘They deliberately gave misleading information to the detective.’

Next let us consider causative sentences. Causees generally receive instrumental case, and direct objects are variably marked.

- (38) Hasa xün-eer nig jirug-(ig) žur-uul-san
 Hasa person-INST one painting-ACC paint-CAUS-VRN.PST
 ‘Hasa made someone paint a picture.’

As in ditransitives, the direct object of transitive causatives may move above the causee. Accusative marking is then obligatory:

- (39) Hasa **nig žurag-*(iig)** xün-eer žur-uul-san
 Hasa one painting-ACC person-INST paint-CAUS-VRN.PST
 ‘Hasa made someone paint a picture.’

Again, this is a structurally higher position into which direct objects move, in which accusative becomes obligatory.

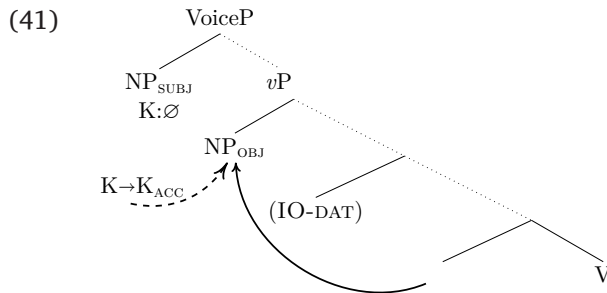
Having established that accusative is assigned to objects which have moved out of their base position, we can also pinpoint the location that this case is assigned. In her (2022) paper (also arguing a DC analysis of accusative in Mongolian) Gong demonstrates that accusative is assigned in a position below the subject, but above upper-VP material (such as indirect objects). The example in (40a) demonstrates⁹ that when a DO-ACC (here scrambled to the upper edge of the clause) takes an indirect object binder, there is an available position *above* the indirect object, but *below* the subject into which it can reconstruct (that is, there is no obligatory reconstruction into its base position inside the VP), bleeding Condition C.¹⁰ This is contrasted with the ungrammatical example in (40b), where the direct object has a subject binder, and exhibits obligatory reconstruction, triggering a Condition C violation.

- (40) An intermediary landing site for accusative objects
 (Presentation adapted from Gong (2022: 3–4))
- a. $\begin{array}{ccccccc} \downarrow & & & & \downarrow & & \\ [\check{C}emeg_1\text{-in nom-ig}] & bag\check{s} & & \underline{\quad\quad} & \underline{\quad\quad} & \underline{\quad\quad} & \underline{\quad\quad} \\ \check{C}emeg\text{-GEN book-ACC} & teacher.NOM & & & \mathbf{t\ddot{u}\ddot{u}n-d_1} & & \ddot{o}g\text{-s}\ddot{o}n \\ & & & & 3SG\text{-DAT} & & give\text{-VRN.PST} \end{array}$
 ‘ $\check{C}emeg_1$ ’s book, (the) teacher gave to her₁.’
- b. * $[\check{C}emeg_1\text{-in nom-ig}]$ ter_1 Bat-ad $\ddot{o}g\text{-s}\ddot{o}n$
 $\check{C}emeg\text{-GEN book-ACC}$ $3SG.NOM$ Bat-DAT give-VRN.PST
 (Int. ‘ $\check{C}emeg_1$ ’s book, she₁ gave to Bat.’)

This situation and our interpretation of the structure appears in (41). Some details, such as the exact landing site of the shifted object above the lower phase, are discussed in section 4.3.

⁹ An anonymous reviewer points out (and Gong (2022: 7) also mentions) that it is conceivable that Mongolian has *two* base-generated structures for ditransitives, in which case (40a) does not alone show failed reconstruction. Like Gong, I cannot currently eliminate this possibility. Nevertheless, I will assume given the movement facts demonstrated above, as well as those from Gong’s work, that the IO > DO order is the only base-generated order.

¹⁰ Gong (2022) in fact uses this minimal pair to demonstrate that late-merger applies at the intermediary case position. I take no stance on the applicability of Wholesale Late Merger but still find this piece of data useful to demonstrate that there is a position above the VP through which accusative direct objects must pass, in which they receive case.

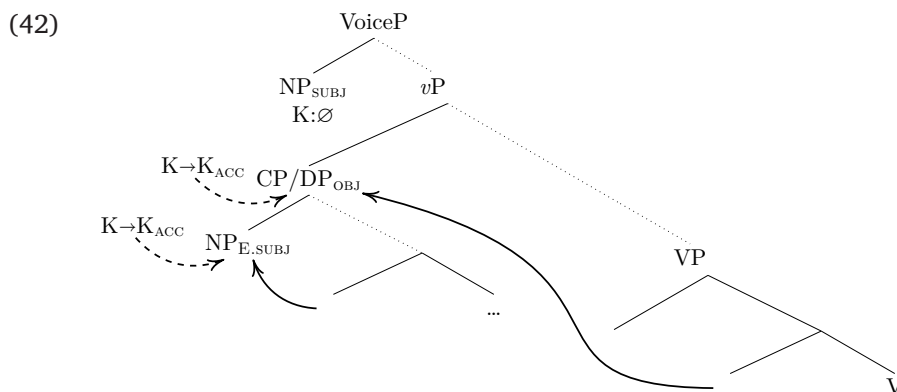


In these configurations, under B&V's theory, accusative case is assigned only to those objects which raise into the same phase as the matrix subject.

Now, let us turn to the issue of embedded accusative subjects, a topic which Baker and Vinokurova characterise as “perhaps the most spectacular evidence for the dependent case account of the accusative...” (Baker & Vinokurova 2010: 615).

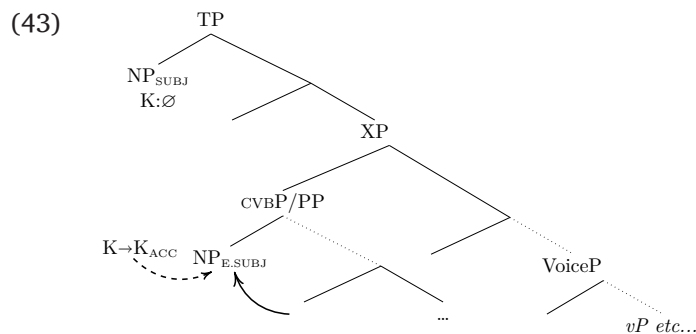
3.2 Embedded accusative subjects

Sakha and Mongolian are alike in permitting accusative embedded subjects. These subjects appear in a variety of clauses, but perhaps the most straightforward cases are those of complement clauses. The analysis goes as follows: a complement clause moves out of the lower phase in much the same way that direct objects do, landing in the same phase as the as-yet-unmarked subject argument, which C-commands it. If the moved complement clause itself is nominal, it will now receive accusative case by the application of rule (26b). Inside this clause, the embedded subject may raise to the upper edge, where it becomes visible to the matrix case calculations. In this position, it may also receive accusative case. Any “optionality” in the appearance of accusative on the subjects is the result of optional movement to the left edge of the embedded clause. This is illustrated below:



In the case of adjunct clauses, the solution is similar: an embedded subject must appear at the upper edge of the subordinated clause in order to be visible to the case algorithm in the matrix

clause. The major difference here is that adjunct clauses do not move from a complement position inside the VP but are instead merged higher, inside the upper phase of the clause, C-commanded by the matrix subject from its position in specTP. This requires that the case algorithm again be triggered once the subject has arrived in specTP; this is discussed in further detail in section 3.3, and 4.4, and the appearance of accusative subjects in adjuncts of differing heights is crucial to the discussion in section 4.3, as well. Figure (43) outlines the configuration for accusative assignment in adjoined subordinate clauses:



Let us examine several instances of embedded accusative subjects to provide explicit examples of the mechanisms described above. In complement clauses there are two relevant movements to consider: the movement of the containing clause, as well as movement of the embedded subject to the upper edge of the containing clause. This generates four possible parses for a sentence with the following word order:

(44) SUBJ_{matrix} [SUBJ_{embed.} VERB_{embed.}] VERB_{matrix}

In two of these parses, the complement clause has moved upward, and in two it hasn't. In section 2.2.1 I correlated movement of embedded subjects in CPs with accusative case on the embedded subject. Here, I will do the same for nominalised complement clauses, and additionally take up the question of clausal movement for both types of complement clauses.

Let us begin discussion of the data with nominalised complement clauses. Examples of these clauses with accusative subjects are found in (45) and (46).

(45) Surguul-iin žaxiral [Tuyaa-g ir-sen]-iig med-sen
 School-GEN director Tuya-ACC come-VRN.PST-ACC know-VRN.PST
 'The chancellor knew that Tuyaa had come.'

(46) Bi [Bold-ig ene deeremčin-iig bari-san]-iig med-sen
 I Bold-ACC this thief-ACC catch-VRN.PST-ACC know-VRN.PST
 'I knew Bold had caught this thief.' (von Heusinger & Klein & Guntsetseg 2011: 51)

It is possible to demonstrate that the accusative subjects of nominal complement clauses have moved to the upper edge through the set of binding and adverbial tests familiar to us from the discussion of CP complements in section 2.2.1. In (47) we see that if the embedded subject (with REFL.POSS bound by the matrix subject) appears at the upper edge of the embedded clause, it must be accusative marked.

- (47) a. Tuyaa [**ax-iig-aa** margaaš irex]-iig mart-san
 Tuyaa brother-ACC-REFLPOSS tomorrow come-ACC forget-VRN.PST
 ‘Tuyaa forgot her brother is coming tomorrow.’
- b. *Tuyaa [**ax-aa** margaaš irex]-iig mart-san
 Tuyaa brother-REFLPOSS tomorrow come-ACC forget-VRN.PST

Let us consider the test from the opposite direction: the presence of accusative case indicates that a subject must be at the upper edge of the containing clause. Recall from section 2.2.1 that finite complement clauses constituted a binding domain separate from their matrix host clauses. Only embedded subjects with accusative case could be licitly bound by the matrix subject; that is, accusative on the embedded subject is correlated with movement to a position in the upper edge of the embedded clause, diagnosed by its inclusion in the upper binding domain. This test can be replicated in nominalised complement clauses. In (48), the upper edge of the complement clause is delimited by an adverb that unambiguously modifies the embedded clause;¹¹ in this configuration only the appearance of accusative case allows this embedded subject to be bound by the matrix subject.

- (48) a. Tuyaa [margaaš **ax-iig-aa** irex]-iig mart-san
 Tuyaa tomorrow brother-ACC-REFLPOSS come-ACC forget-VRN.PST
 ‘Tuyaa forgot her brother is coming tomorrow.’
- b. *Tuyaa [margaaš **ax-aa** irex]-iig mart-san
 Tuyaa tomorrow brother-REFLPOSS come-ACC forget-VRN.PST
 ‘Tuyaa forgot her brother is coming tomorrow.’

This demonstrates movement of the embedded subject within nominal complement clauses. Let’s now consider the second relevant movement: that of the clause itself into a higher position in the matrix clause. Accusative marking of embedded subjects in nominal complement clauses can be linked to the movement of the containing clauses by demonstrating that in these clausal

¹¹ The presence of an adverbial to the left of an accusative subject potentially challenges Aravind (2021)’s claim that DP structures have only one specifier position at their edge where accusative is assigned. Here, it is possible that both the adverbial and the embedded subject have scrambled to a phase edge of the nominalized complement clause that is larger than a single specifier position. Fong (2019: 6) notes similar data in CP complements and acknowledges this could present an issue for Bošković (2016)’s generalization about how much edge material is visible to matrix probes.

complements, the accusative is unavailable on the embedded subject unless the containing clause itself is also marked: in (49), the complement clause is unmarked, and the accusative is impossible on the embedded subject ‘Tuyaa’.

- (49) Bi [Tuyaa(*-g) ir-sen]-∅ med-sen
 I Tuyaa(-ACC) come-VRN.PST know-VRN.PST
 ‘I knew that Tuyaa had come.’

In 49, the lack of marking on the complement clause should indicate that the clause itself has not moved into the upper domain, considering what we have already learned about direct object DP’s and their marking in section 3.1.

Let us now consider CP complement clauses. A sentence like (50) theoretically has two relevant parses, focussing on clausal movement: one where the complement clause remains low within the *vP*, and one where it has moved out.

- (50) Bold [Has-(iig) övčtei bai-na gež] xel-sen
 Bold Has-ACC sick be-NPST COMP many
 ‘Bold said loudly that Hasa was sick.’

As CP’s are not case-marked, we cannot examine the same evidence as in (49) for clausal movement. However, it is possible to disambiguate moved from unmoved structures by the placement of adverbs in the matrix clause, as done for direct objects.

Obligatory accusative marking of the embedded subject is observed when the complement appears above certain adverbials outside of the lower phase of the matrix clause. In (51) an adverbial is added to (50). Now, the CP complement with an obligatorily-marked embedded accusative subject appears to the left of this matrix adverbial.

- (51) Bold [Has-*(iig) övčtei bai-na gež] ix duu-gaar xel-sen
 Bold Has-ACC sick be-NPST COMP many voice-INST say-VRN.PST
 ‘Bold said loudly that Hasa was sick.’

Guntsetseg (2016: 168) has demonstrated that linear adjacency of two subjects is a major factor in conditioning accusative-marking of the embedded subject – yet optionality is still usually observed (see 50). We can account for the obligatory marking in (51) by arguing that the presence of the adverbial makes parses without clausal movement unavailable, and the speaker is only left with a sentence where they must, for functional communicative reasons, differentiate between two unambiguously adjacent subjects by moving and marking the second, embedded one.

Now contrast (51) with (52) from Fong (2019: 3): in the latter, the complement clause appears below a matrix adverbial, and the embedded subject only optionally receives accusative.

Like the direct objects examined in section 3.1, obligatory accusative marking is associated with movement.¹²

- (52) Bat changaar [noxi(-g) gaixal-tai gež] xel-sen
 Bat loudly dog(-ACC) wonder-COM COMP say-VRN.PST
 ‘Bat said loudly that dogs are wonderful.’ (Fong 2019: 3)

Now we turn to subjects of adjoined clauses, i.e. converbial clauses (53), or adverbial subordinate clauses under postpositions (54).

- (53) Tereg [Bold-ig suu-magč] hödöl-sön
 Car Bold-ACC sit-CVB drive.off-VRN.PST
 ‘As soon as Bold sat, the car drove off.’

- (54) Bi [Tuyaa-g bagš-tai uulž-san-i daraa] yav-san
 I Tuya-ACC teacher-COM meet-VRN.PST-GEN after go-VRN.PST
 ‘I left after Tuya met with the teacher.’
 (von Heusinger & Klein & Guntsetseg 2011: 52)

With complement clauses, the NOM/ACC alternation on embedded subjects is accounted for by upwards movement of the containing clauses, as well as movement of their subjects to the upper edge of these clauses. Here, accusative subjects move to a position where they are visible to the case competition domain of the matrix clause, evidenced in part by their ability to be bound by matrix material. This suggests that both anaphor binding and Dependent Case could be correlated, although this correlation becomes less straightforward when we consider adjoined subordinate clauses.

Unlike complement clauses, adjuncts in Mongolian are transparent for binding purposes; they are part of the same binding domain as the rest of the matrix clause. Consider (55a), where the embedded pronominal subject creates a principle-B violation regardless of whether it appears in the nominative or the accusative. Likewise, in (55b) we see that the principle-A obeying possessive-reflexive suffix takes the matrix subject as an antecedent even if the embedded subject is unmarked.

- (55) a. Sudu_i [$\left\{ \begin{array}{l} \text{ter} \\ \text{tüüniig} \end{array} \right\}_{*i/j}$ bos-soor] malgai-gaa av-čai
 Sudu_i $\left\{ \begin{array}{l} \text{3SG.NOM} \\ \text{3SG.ACC} \end{array} \right\}_{*i/j}$ rise-CVB hat-REFLPOSS take-PST
 ‘As he_j rose, Sudu_i removed his_i hat.’

¹² The optional accusative in (52) raises an question of how accusative is possible if the clause has not moved out of the lower phase. This issue arises for DCT accounts with optional accusative on low objects with focus readings as well, and is a known issue where the correlation between case-marking and movement is sometimes observed to be unidirectional. Here, I leave open the possibility that additional work will be needed to demonstrate whether or not CP complements *must* undergo clausal movement to obtain dependent accusative.

- b. Baator_i [egč(-iig)-ee_{i/sj} yav-san-aas xoiš] Xöx Xot-ad
 Baator_i [sister(-ACC)-REFLPOSSI_{/sj} leave-VRN.PST-ABL since Hohhot-DAT
 amdra-ž bai-san
 live-cvb be-VRN.PST
 ‘Baator_i has been living in Hohhot since his_i sister left.’

If binding domains and case competition domains are necessarily phasal in Mongolian, one might like to conclude that these adjuncts are not in fact phasal. We might then expect embedded subjects of these clauses to be universally accusative-marked, which is also not what is observed. A simple solution to account for the NOM/ACC alternation on their subjects asserts that these adjuncts have multiple possible merge positions, both above and below the mid-clause phase edge.

The assumptions that drive this conclusion are not all straightforward, however. First, matrix material may bind anaphors within domains that should be considered phasal: in (56), the matrix subject is the antecedent for the embedded REFLPOSS marker on the embedded subject of an object-gap relative clause modifying a noun that is itself in a locative phrase.

- (56) Bold_i [[naiž-iin-aa_i av-san] ger]-t Hasa-tai uulž-san
 Bold friend-GEN-REFLPOSS buy-VRN.PST home-LOC Hasa-COM meet-VRN.PST
 ‘Bold_i met Hasa in the house [his_i] friend bought.’

Phase theory (Chomsky (2001; 2008) etc.) would predict at least one phase boundary in (56), either at the level of the adjoined locative phrase, the DP level (*ger-*), or at the level of the relative clause itself; this complicates the assertion that binding is phase-bound in Mongolian. Likewise, a simple clause forms a single binding domain, yet two phases. If Mongolian binding is not always phase-bound (or even clause-bound), then we are not compelled to assert that adjuncts are non-phasal simply because they are transparent for binding.

What’s more, it is also possible to demonstrate that accusative subjects of PP-subordinated clauses appear higher than nominative ones, just as in complement clauses. Binding tests are unavailable here, but we can employ adverbials to delineate the edge of the subordinate clause.

In (57) it is possible to disambiguate the height of the embedded subject via the scope of an adverbial which may modify either the matrix or subordinated clause. In (57a), where the embedded subject is nominative, the sentence may describe two situations: if the current year is 2022, I will visit Mongolia in 2023; or alternatively, you will go to Mongolia in 2023 and I will visit some time in the further future (perhaps 2024). The former reading is associated with a matrix position for the adverbial ‘next year’, while in the second reading ‘next year’ modifies the subordinated clause only. However, in (57b), where the subject is accusative, the adverbial

may not be construed as modifying the embedded clause, i.e. its position delineates the edge of the embedded clause.¹³

- (57) a. Bi **irex jil** či Mongol uuls-d oč-san-i daraa
 1SG next year 2SG.NOM Mongol country-DAT visit-VRN.PST-GEN after
 yav-ad oč-na
 go-CVB visit-NPST
 ‘After you have gone to Mongolia, I will go visit next year.’ or ‘After you have gone to Mongolia next year, I will go visit (e.g. in the further future).’
- b. Bi **irex jil** čamaig Mongol uuls-d oč-san-i daraa
 1SG next year 2SG.ACC Mongol country-DAT visit-VRN.PST-GEN after
 yav-ad oč-na
 go-CVB visit-NPST
 ‘After you have gone to Mongolia, I will go visit next year.’

As for converbial adjunct constructions, the picture is once again complicated by the fact that converbs are temporally dependent on their hosts, and resist independent temporal modification of the type employed for PP adjuncts. These clauses also form a single binding domain with their hosts, so binding tests also yield no clear results. Without explicit evidence of subject movement, we may instead rely on the possibility raised for non-phasal subordinate clauses: they adjoin at differing heights. Just as direct objects only receive accusative if they have moved to the upper phase, so too adjuncts must adjoin sufficiently high for the case algorithm to operate.

It is possible, in fact, to find evidence that converb clauses adjoin at different heights: we can test for correlations between case-marking on the embedded subjects of converbials, and their readings relative to matrix adverbials (see also section 4.3 for discussion).

The converbial clause in (58) has two scopes relative to *žarimdan* ‘often’; there is a licit low scope reading like *It is often the case that the teacher would drink tea until a student arrives*, and a high scope reading, which speakers report as illogical: *Until a student arrives, it is the case that the teacher often drinks tea*. When presented the sentence in (58) independently with and without an accusative embedded subject, speakers report that the presence of the accusative forces the semantically odd reading (i.e. high-scope), indicating a high adjunction site for the converbial clause, which I take to be the upper phase.

¹³ This is in contrast to (48), where an adverb is possible to the left of the embedded subject. I am not clear on why there should be a difference between adjuncts and complement clauses in this regard, but the judgements in (57) disambiguate the scope of the adverbial, and thus, the embedded clause. An anonymous reviewer suggests the possibility that the clauses I examine in adjuncts might have a more articulated periphery, thus not providing a structure where the position of adverbials is as informative as in other clauses.

- (58) bagš žarimdan surugč(#-ig) or-ž ir-tel čai uu-dag
 teacher often student(#-ACC) enter-CVB come-CVB tea drink-HABIT
 ‘Often, the teacher would drink tea until a student entered.’

I therefore leave open the possibility that converbial clauses are non-phasal, while accounting for the NOM/ACC alternation on their subjects. On the other hand, one need not conclude that PP’s are non-phasal, as it is possible to demonstrate movement of their subjects to the upper edge of the embedded domain as in complement clauses.

Having accounted for accusative case in objects and subjects through DCT, something must now be said about nominative and genitive cases.

3.3 On Nominative (and Genitive)

B&V’s approach to case is in fact hybrid nature: while they argue for a configurational account of the accusative and dative, they retain an Agree-based procedure for assigning nominative and genitive:

- (59) (Baker & Vinokurova 2010: 596) If a functional head $F \in \{T, D\}$ has unvalued phi-features and an NP X has an unvalued case feature [and certain locality conditions hold], then Agree happens between F and X, resulting in the phi-features of X being assigned to F and the case associated with F (nominative or genitive) being assigned to X.

The basic issue for B&V concerning nominative and genitive assignment is whether they can be treated as fully unmarked cases, or whether they are assigned under Agree (following 59). Their argument for an Agree-based analysis relies on the unavailability of nominative in contexts where one would expect the spellout of default case – specifically inside PP’s where Dependent Case rules could not apply, and in tenseless participial clauses. In both of these environments, they argue (Baker & Vinokurova 2010: 626), *lexical* case is assigned instead, as neither dependent case rules nor φ -agreement can go through. Crucially, nominative (and genitive in DP’s with possessor agreement) is only available when φ -agreement with T or D is possible, requiring a rule as in (3.3).

An alternative view is one where the Case Filter is not active, and whichever nominals reach spell-out without a marked case, will receive the appropriate unmarked case for their domain: genitive within the DP, and nominative elsewhere. A variation of this alternative is proposed by Levin & Preminger (2015), who argue that a fully dependent model is possible for languages like Sakha, just so long as the causal direction between Agree and case licensing is inverted (the former being possible only after a nominal has been case-marked), permitting the case algorithm to assign unmarked to case to whichever nominals arrive at spell-out without having received case in the course of the syntactic derivation.

There are two important differences between Sakha and Mongolian that concern this issue, however: Mongolian does not exhibit overt φ -agreement, and the Mongolian genitive is morphologically visible in all canonically-expected environments.¹⁴ For these reasons, it is not possible to replicate Baker & Vinokurova’s evidence for the Agree-based rule. Let us instead consider a version of the case assignment algorithm in line with Levin and Preminger’s (2015) proposal, wherein the Case Filter is inactive.

Under this analysis, subjects in a standard clause would undergo movement to TP, and then the DC algorithm would apply. At this point, the subject is still caseless, and would receive nominative as the unmarked case for this domain. This ordering is also a departure from B&V’s original formulation: they ask of the reader to note that it ‘does not matter for this whether the subject moves to SpecTP or not’ (Baker & Vinokurova 2010: 601). As we will see in sections 4.3 and 4.4, Mongolian provides evidence that the subject must be able to trigger the case algorithm from its position in specTP, in order to ensure accusative can appear on the subjects of high adjoined clauses, and what’s more, that the algorithm must not simply apply indiscriminately whenever an appropriate configuration is generated; section 4.4 will constrain this behaviour by positing that the case algorithm is triggered from certain positions in the clause. This has a series of further consequences in the formulation of the procedure for case assignment, one of which being that we cannot assign nominative case to a subject immediately upon its arrival in SpecTP, if we are to maintain the caveat for rule (26b) that the upper (C-commanding) nominal must be caseless. This is more easily achieved through Levin and Preminger’s (2015) proposal, although it does not rule out B&V’s rule (59), just so long as the rules are strictly ordered.

As for genitive, it turns out that case alternations in participial clauses provide additional support for Levin and Preminger’s (2015) view. As Aravind (2021), Guntsetseg (2016) and others have described, the subject of nominalised participial clauses may appear in the genitive case.

- (60) Bi [Bat $\left\{ \begin{array}{l} -\emptyset \\ -iin \\ -iig \end{array} \right\}$ sugalaa xož-son]-iig med-ne
 I Bat $\left\{ \begin{array}{l} -NOM \\ -GEN \\ -ACC \end{array} \right\}$ lottery win-VRN.PST-ACC know-NPST
 ‘I know that Bat won the lottery’

(Aravind 2021: 379)

In (60) we see that in a nominalised complement clause, the subject may appear in the genitive, in addition to accusative and nominative. This case is also available in contexts where accusative

¹⁴ Genitive in Sakha is slightly more complicated; it is only differentiated from nominative when the DP is itself possessed (Baker & Vinokurova 2010: 598).

subjects are impossible, including relative clauses and clausal subjects. The crucial ingredient is the nominal nature of the clause.

Aravind (2021) argues that in these nominalised clauses the subject may move upwards cyclically: first, out of the embedded *vP* and into the nominalising *nP* layer (specifically, *SpecnP*), or secondly, if it is to receive the accusative, upwards into the specifier of the maximal DP layer. This behaviour is predictable under an account of the genitive as unmarked case within the nominal domain: if the embedded subject does not move into *SpecDP*, it remains in *SpecnP*, where there is no configuration appropriate to trigger DC marking, leaving it caseless until spell-out, where it will receive default case for the nominal domain: genitive. If no movement into *nP* occurs, then the subject will receive the unmarked case of its base domain: Nominative.

Of course, without evidence of overt agreement or the lexical-genitive data discussed by Baker & Vinokurova, it is hard to fully dismiss the Agree-based analysis for nominative and genitive cases. For further discussion of the status of these cases in Mongolian, I refer to recent work by Lim (2023), who suggests that a fully-configurational account is warranted, given nominative licensing in defective TP's. For the purposes of this investigation however, I will tentatively assume that nominative and genitive are indeed unmarked case, and leave the topic for further research.

4 Extending Dependent Case Theory to Mongolian

In the previous sections, we covered the basics of Dependent Case theory. I showed how Baker & Vinokurova's Dependent Case assignment rules could account for accusative marking in direct objects, as well as on the embedded subjects of complement and adjunct clauses. Presently, I approach several Mongolian-specific problems and show that this analysis accounts for even more of the Mongolian data, albeit with some adjustments.

I will also demonstrate how the two types of environments where embedded accusative subjects are banned – namely in clausal subjects and relative clauses – fall out neatly from the account presented here. It is not clear from Baker & Vinokurova's 2010 discussion whether such environments also ban accusative subjects in Sakha, so the Mongolian data provides novel corroboration of the theory. Finally, I take up some issues where the theory might need adapting, namely where the dividing line between phases in the clause may lie, as well as some discussion of the timing of movement relative to case assignment.

4.1 Where accusative subjects are banned

Recall as discussed in section (2.1) that accusative subjects are not possible in clausal subjects or in relative clauses. Let's consider how these exclusions can be accounted for under a DCT analysis. First, consider clausal subjects (61):

- (61) [Has-(**iig*) ir-sen-güii] asuudal bai-na
 Hasa-(**ACC*) come-VRN.PST-NEG problem be-NPST
 ‘Hasa not coming is a problem.’

The clausal subject “Hasa not coming” is clearly not C-commanded by any higher argument. Even if the embedded subject of this clause were to move to the upper edge, there is nothing to trigger the application of rule (26b) – repeated for convenience in (62) below:

- (62) If there are two distinct argumental NPs in the same phase such that NP1 c-commands NP2, then value the case feature of NP2 as accusative unless NP1 has already been marked for case.

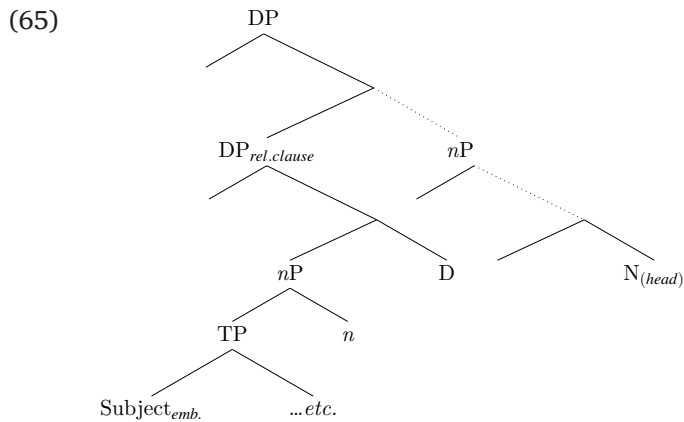
Under an Agree-based analysis, these clausal subjects would be too high for matrix-*v*’s probe. However, this analysis would also rule out accusative subjects of higher adjunct clauses such as converbs. Instead, a more straightforward explanation is that accusative may only be assigned when the DP is C-commanded by some higher argument.

Another place one might expect to never see accusative is on a subject that has no possibility of moving to the edge of its embedded phase. That is to say, if the embedded argument is not visible to the case-assigning algorithm of the matrix clause, it will never receive accusative case regardless of whether it is C-commanded by a higher argument. This is exactly the case of relative clauses, whose subjects may not be accusative-marked:

- (63) Bold Hasa-(**ig*) garga-san tošaal-ig u᠋ᠯᠰi-san.
 Bold Hasa-(**ACC*) release-VRN.PST edict-ACC read-VRN.PST.
 ‘Bold read the edict Hasa released.’
- (64) Bi Bold-(**ig*) av-san ger-t Has-tai uulᠵ-san.
 I Bold-(**ACC*) buy-VRN.PST house-DAT Hasa-COM meet-VRN.PST.
 ‘I met Hasa in the house Bold bought.’

As noted by Aravind (2021: 385), relative clauses in Mongolian are islands for several types of movement. There is therefore no clear mechanism to trigger movement of the subject out of the relative clause and further up to the edge of the head-noun’s maximal DP layer, where it could be visible to the matrix case algorithm. They should not, therefore, ever receive accusative.

This situation is visualised below in figure (65), following roughly the proposal by Aravind (2021: 380). Note that relative clauses in Mongolian are nominalised – this is indicated by the obligatory verbal noun suffixes on their verbs. While the embedded subject of such a clause could move to the upper edge of this phase (as observed in complement clauses), the entire nominal structure for the head noun that the relative clause modifies still remains between it and other matrix material.



The lack of accusative in relative clauses is exactly what would be predicted under DCT, where an embedded nominal that cannot move high enough to be visible to the matrix case algorithm should not be marked.¹⁵

4.2 Voice Alternations and the Accusative

Causative constructions in Mongolian are interesting for a discussion of case assignment, as these permit additional arguments in monoclausal constructions. Mongolian causatives are part of a rich set of voice alternations in the language.

One important use of the causative in Modern Mongolian is actually the formation of *passive*-like constructions. In fact, the use of the causative marker is eclipsing that of the traditional passive marker, which is now used almost exclusively in writing. Example (66a) shows a sentence with ‘normal’ passive morphology, while (66b) is the same sentence, however this time with causative morphology.

- (66) a. Bold en noxoi-d xaža-gda-san
 Bold this dog-DAT bite-PASS-VRN.PST
 ‘Bold was bit by this dog’
- b. Bold en noxoi-gaar xaž-uul-san
 Bold this dog-INST bite-CAUS-VRN.PST
 ‘Bold was bit by this dog.’

When examining these causative-qua-passive constructions, we notice a curious fact: if the patient in a causative construction appears in the accusative, as seen in (67), only a true causative interpretation is available. This is in contrast with (66b) above where only a passive-

¹⁵ Under an Agree-based perspective, wherein the embedded subject would not be sufficiently near the case-assigning functional head, accusative subjects are also ruled out in relative clauses.

like interpretation is available with an un-marked patient.¹⁶ (67) forms a minimal pair with (66b) immediately above.

- (67) Bold-ig en noxoi-gaar xaž-uul-san
 Bold-ACC this dog-INST bite-CAUS-VRN.PST
 ‘Someone made this dog bite Bold.’

There are several possible analyses of this construction, all of which propose an external argument which is in a position to C-command the patient in the true causative constructions only. It is conceivable that this external argument omitted at PF, (as Mongolian is a subject-drop language) – i.e. after the point at which it triggers the DC algorithm to mark accusative on the patient in (67). Alternatively, the passive versions could be related to adversity causatives (discussed e.g. by Pylkkänen (2008: 89–95) and references therein), where the unmarked subject in (66b) is a maleficiary. There is either no higher syntactic argument to trigger Dependent Case (see e.g. Alexiadou & Anagnostopoulou & Schäfer (2015: 29) who analyse the causative/malefactive alternation in these types of constructions as resulting from the type of Voice head), or alternatively a covert causer is merged in an oblique position where it is unable to C-command the patient-subject (which remains unmarked). The exact syntax of these causative-qua-passive constructions will have to await further research, but the fact that a distinct semantic contrast is associated with the lack of accusative on a patientive subject is intriguing.

There is an interesting parallel to this in the passive constructions in Sakha, as well: Baker & Vinokurova (2010) note that in Sakha the derived subjects of passives may in fact receive accusative case. This is perfectly compatible with a DCT analysis of the accusative, so long as one can argue for an implicit external argument in passives (as e.g. Pylkkänen (2008) does) which C-commands the patient argument.

4.3 Moving the Phase Boundary

In section 3.1 above I discussed how the placement of adverbials in a clause could serve to demonstrate that direct objects had moved out of their base position when receiving accusative marking. While in Sakha direct objects become obligatorily marked if they appear higher than *manner* adverbials (see: Baker & Vinokurova (2010: 602)), this is not exactly the case in Mongolian:

- (68) Baatar čai-(g) türgen uu-ž bai-na
 Baatar tea-(ACC) quickly drink-CVB be-NPST
 ‘Baatar is drinking tea quickly.’

¹⁶ This minimal pair was volunteered by a consultant to demonstrate the use of causative-as-passive constructions.

It has been accepted for some time that adverbs of different types occupy different heights in the syntax (Jackendoff (1972); Cinque (1999) etc.). For example manner adverbials are treated as adjoining lower within the verbal domain, while agent-oriented adverbials modify a projection as high as VoiceP. In Mongolian, we see that it is only objects to the left of agent-oriented adverbs that are obligatorily accusative:

- (69) Baatar max-*(**iig**) hinamagai čabči-ž bai-na
 Baatar meat-ACC diligently chop-CVB be-NPST
 ‘Baatar is diligently chopping meat

This of course means that the boundary between phases in Mongolian must be slightly higher than in Sakha. For B&V, the edge of the phase was the VP; I have evidence that in Mongolian, at least the ν P is the phase boundary. This possibility was mentioned briefly by Baker & Vinokurova (2010: 601), who remark in a footnote that there is considerable disagreement in the literature as to the boundary of the lower phase, and some such as Fox & Pesetsky (2004) argue that individual languages may vary in this respect.

A concern with moving the upper boundary of the lower phase to the edge of the ν P,¹⁷ however, is that the subject in its first-merge position now resides in the same phase as the direct (and indirect) object, and ought to trigger accusative case without requiring movement of the object, levelling all marking variation in the language. This solution as it stands clearly overgenerates. In the same footnote, however, B&V note that one could instead implement a more ‘orthodox’ view of phase theory, following Chomsky’s (2000; 2001) view that upon arriving at a phase edge, it is the immediately-lower phrase that is sent to the interfaces: so, when the ν P edge is reached, the VP is shipped off. This, however, would require, as Baker and Vinokurova note, a more strict use of the A/A-bar distinction to ensure that phase-internal scrambling does not affect the required configurations. This more nuanced implementation is not adopted or spelled out in any detail, but we will see in section 4.4, that one must take it more seriously, in order to account for further timing paradoxes.

One further consequence of adopting ν P as the lower phase is that if the subject of a subordinated clause receives accusative, we must be able to demonstrate that this clause appears outside of the ν P. One possible place to examine this issue in Mongolian is in converbs. The converbs of Mongolian are often divided between “specialised” and “general” converbs (Ujiyediin 1998). So far, we have seen the *-magč* and *-saar* converb suffixes, both of which are counted among the ‘specialised’ converbs, contributing specific semantic content about the ordering of events. There is precedence in the literature on converbs in Turkic languages (see e.g. Privoznov (2022))

¹⁷ Throughout this study I have assumed an articulated verbal domain with a discrete Voice projection; this would be equivalent to the ν P in a theory that assumes the specifier of ν P as the base-merge position of the external argument.

arguing for attachment at various levels – including TP and VP – and one might expect the same in Mongolian.

Readings related to adverbs of frequency in the matrix clause can disambiguate the height of different converb classes. I will refer to two readings for these converbs relative to matrix adverbs: *high* readings, where the event described by the converbial is not modified or otherwise within the scope of a matrix adverbial, and *low* readings, where the converbial clause appears along with the matrix predicate, within the scope of the adverbial. General converbs in Mongolian only produce low-scope readings. That is, in (70), a reading like “Sudu often stands, [sometimes] while smiling [sometimes while doing something else]” is unavailable: the adverb of frequency must scope over both events of standing and smiling, together.

- (70) Sudu **olon udaa** ineemsgle-ž bos-son
 Sudu often smile-CVB rise-VRN.PST
 ‘Often, Sudu stood while smiling.’

This is crucially in contrast to the “specialised” converbs which strongly prefer high readings. In (71a), the preferred reading is ‘If I stand on the bus, I sometimes fall’, not ‘Sometimes, I stand on the bus and fall.’ In (71b), the adverb of frequency likewise only applies to the matrix predicate.

- (71) a. [Xervee bi avtobusan-d zogs-**vol**] bi **zarimdaa** una-dag
 If 1SG bus-LOC stand-CVB 1SG sometimes fall-HAB
 ‘If I stand on the bus, I sometimes fall.’
- b. Bi [xevte-ŋgüüt-ee] **zarimdaa** unta-dag
 1SG lie.down-CVB.COM-REFLPOSS sometimes sleep-HAB
 ‘As soon as I lay down, I sometimes sleep’ (sometimes I might do something else)’

Importantly, the unavailability of high-scope readings for the general converbs places them syntactically below such adverbs as “often”, while high scope readings for specialised converbs point to a structurally higher position in the clause.

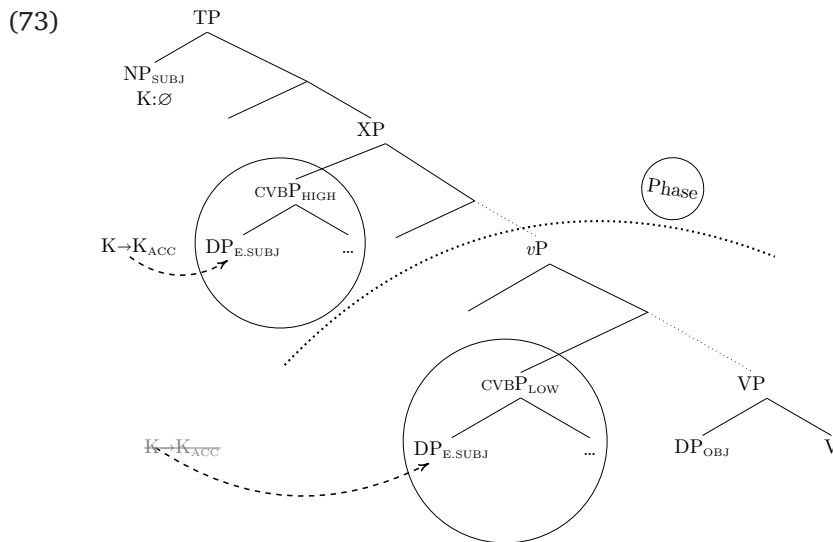
Specialised converbs like *-magč* and *-saar* (and *-xleer* below) are perfectly happy with accusative subjects (72):

- (72) [Tüün-ig Mongolia-d ire-xleer] bi tüün-tei uulž-na
 3SG-ACC Mongolia-DAT come-CVB 1SG.NOM 3SG-COM meet-NPST
 ‘When he comes to Mongolia, I’ll meet him.’ (Kullman & Tserenpil 1996: 165)

By the analysis forwarded here, these converbs would adjoin above the lower phase of the clause. Specialised converb clauses may also never appear to the right of unmarked and un-scrambled matrix objects, and unlike general converbs, they may appear sentence-initially.

This and the scope facts above suggest a higher adjunction position in the clause – outside of the lower phase.¹⁸

The distinction between these two types of converbial clauses can be visualised as follows:



4.4 Timing and Rule Application

So far, I have mentioned two crucial areas of difference between Baker & Vinokurova’s formulation of Dependent Case and the approach I adopt here: first, in section 3.3, I discussed the possibility that nominative and genitive case are unmarked, or default case, assigned at the point of spell-out. Secondly, I argued that the phase edge for Mongolian is the very upper edge of the verbal domain (i.e. Voice or v) instead of VP. Some consequences of these two deviations include: the possibility that even indirect objects may be marked with the accusative, as they would appear in the same phase as the subject in its base position, as well as the necessity that this subject be capable of triggering the case algorithm from a position in specTP. In both of these situations, the critical issue is the timing of rule application relative to the derivation. I will propose in this section a solution to these issues, in that Baker and Vinokurova’s rules, rather than applying “... immediately when the configurations they describe are first created...” (Baker & Vinokurova 2010: 604), only apply when triggered from specific positions.

¹⁸ General converbs on the other hand merge within the lower phase. One should not then expect these converbs to be compatible with accusative subjects, although this is difficult to demonstrate as they do not usually accept independent subjects at all. There is some inconsistencies among speakers about the availability of disjoint subjects, but the speakers I have consulted do not accept accusative subjects for general converbs, exactly as expected under our Dependent Case analysis.

Let us elucidate a conflict in timing by discussing a paradox in dative vs. accusative assignment noted by B&V, wherein their rules would seemingly overgenerate with regards to the marking of indirect objects.

In ditransitives, rule (26a) applies iff an indirect object (e.g. a goal of a ditransitive) is merged in the VP in a position C-commanding the direct object. If the direct object remains in-situ, its immediately-C-commanding nominal is now case-marked, and accusative is *not* assigned in this base position (rule 26b). However, if the direct object moves out of the lower phase (and across the indirect object), it is free to be marked with the accusative if the other conditions of rule (26b) are met. Crucially, these rules must be applied in exactly this order, otherwise one or the other case would never be marked under normal circumstances.

In those languages where the canonical order of ditransitives is S-IO-DO-V, both objects are often marked – that is, the direct object has moved out of the lower phase to receive accusative, yet the dative-marked indirect object appears linearly to the left, and therefore structurally higher as well. In such a sentence, we therefore have a configuration where the dative indirect object is now a potential target for the application of rule (26b): it is in the higher phase, and possibly C-commanded by a unmarked subject nominal. In such cases, why do we not see two accusative-marked objects?

Baker & Vinokurova (2010) consider these configurations, like the one in (74), and argue that the solution is to permit multiple case assignment, or, case-stacking.

- (74) Min Masha-qa/*ny sorujan kinige bier-di-m
 I.NOM Masha-DAT/ACC intentionally book give-PAST-1SS
 ‘I gave Masha books / a book intentionally.’ (Baker & Vinokurova 2010: 603)

B&V contend that in cases like (74), both DAT and ACC are in fact assigned; the speaker however spells out the innermost case. Similar sentences are easily constructed in Mongolian,¹⁹ where the

¹⁹ Gong (2022) proposes that the Dative case in Mongolian is assigned lexically. She provides data from causatives of intransitive bases where dative is available on the causee, which would not be possible to generate with B&V’s dative rule. However, the case of the causee in Mongolian voice alternations seems to be idiosyncratic, and tied to the directedness of causation, the causative morphology employed (there are 4 unique suffixes) and other semantic and pragmatic factors (Ujiyediin 1998: 244). What’s more, I have found that speakers in fact generally do reject dative causees when the construction is formed on unaccusative bases:

- (i) Ter us(*-t) bučal-ga-ba
 3SG water(*-DAT) boil-CAUS-PST
 ‘He boiled some water.’

If dative in causative constructions is lexically assigned, or otherwise idiosyncratic, this does not entail that all instances of the dative are non-structural or non-configurational. Without evidence to the contrary, I will assume that the dative that appears in ditransitive constructions is assigned by B&V’s (a)-rule.

goal remains dative marked despite appearing in the upper phase (observe the placement of the adverbial *sanaataigaar*):

- (75) Bagš surugč-id sanaataigaar nom ög-sön
 Teacher student-DAT intentionally book give-VRN.PST
 ‘The teacher intentionally gave a book to the student.’

It is impossible to tell from sentences like (74) or (75) alone whether the case stacking analysis works. Let us then look to other places where dative appears. Mongolian expresses *need* predicates with dative-marked experiencers. Consider (76), where the the first-person pronoun appears in the dative.

- (76) **Nada-d** en malgai ix xereg-tei.
 1SG-DAT this hat large use-COM
 ‘I need this hat.’

There are several ways to explain the appearance of the dative in (76). The most straightforward analysis under a Dependent Case approach would have both arguments merged within the *vP*, the higher of which being the experiencer, which is dative marked as per rule (26a). However, when these clauses are embedded, this experiencer may be marked with the accusative (77):

- (77) Bold [**namaig** en malgai ix xereg-tei gež] med-ne
 Bold 1SG-ACC this hat large use-COM COMP know-NPST
 ‘Bold knows that I need this hat.’

Under B&V’s case stacking approach, one would not expect to see overt accusative marking on embedded experiencers. This nominal would receive dative first in the embedded domain, and then upon moving to the upper edge of this clause it would be accessible to the cycle of case assignment rules in the matrix clause, where it could receive accusative. Just as in the ditransitive examples, accusative should be “stacked” on dative, which should nevertheless be spelled out, as the innermost case. The appearance of accusative on an originally-dative argument is surprising: if both structures involve case-stacking, why would we spell out the innermost case in ditransitives, but the outermost with embedded experiencers?

An initial solution would be to permit this scrambling in ditransitives to occur after all iterations of the Dependent Case algorithm have applied. However, as Baker & Vinokurova have formulated their approach, these rules must apply whenever an appropriate configuration is generated, all the way up until the end of narrow syntax. One cannot, however, stipulate that these sorts of scrambling occur post-syntactically, as they do appear to have interpretive ramifications: as Guntsetseg (2016: 96) notes, scrambling of this type can affect relative quantifier scope and

thus must have some basis in the syntax.²⁰ Yet: the basic intuition that the application of the DC algorithm must occur at specific points in the derivation (i.e. after some movements, but before others) remains.

We now have conflicting demands on timing in our case assignment algorithm:

- i In the upper phase, scrambling in ditransitives must not trigger accusative-marking of dative indirect objects, but we must still be able to overwrite dative on other types of arguments
- ii As the phase edge is now the upper edge of the VoiceP, we must not allow the subject to trigger accusative marking in its base position, otherwise we will overgenerate in terms of accusative assignment to arguments in the lower phase (see section 4.3)
- iii The subject must remain unmarked until after it arrives in SpecTP, otherwise accusative marking will not be triggered²¹ on the subjects of high adjuncts (see section 4.3 on converbs and section 3.3 on nominative)

As discussed in section 4.3, B&V mention – but choose not to implement – a version of their theory wherein the phase edge is the upper edge of the verbal domain, at νP . They remark that this would require greater use of the A/A-bar distinction in order to prevent scrambling from overgenerating case marking, although they do not elaborate further. I will now spell out a version of this solution in more detail and suggest it as a possibility for Mongolian.

First, we can prevent the subject from triggering accusative in the lower phase in two ways. We could argue that by merging in the specifier of the maximal projection of the lower phase, it does not count for case calculations in the lower domain.²² Alternatively, we could further restrict the application of rule (26b) to the upper phase. Both solutions are not without issue. If the subject is base-merged at the very upper edge of the νP domain, then this leaves no room below it for the object to move into such that it is both outside the lower phase, and still C-commanded by the subject. Adverbial data from the previous section does suggest that direct objects must move rather high to obligatorily receive accusative; however, if we argue that they move into a position *above* the base position of the subject, we must avoid creating a configuration wherein the direct object triggers rule (26b), assigning accusative to the *subject*.

²⁰ An anonymous reviewer also notes that scrambling in Sakha can affect focus possibilities.

²¹ In Baker's (2015) formulation, the caseless NP requirement for triggering the (b) rule may be parameterized. There are some verbs (e.g. *gargax* 'issue'; Guntsetseg (2016: 138)) that optionally assign ablative case to their agents, which also permit accusative objects. However, further evidence is required to determine where Mongolian stands on this parameter.

²² This is excluding the possibility of multiple specifier positions in the νP , for which there is currently no independent evidence.

Instead, we can constrain the timing of the Dependent Case algorithm by arguing that its application is triggered when a nominal merges (first or subsequent) in specific positions creating the requisite configurations – so far we have seen that those positions must be at minimum the indirect object position (to trigger dative assignment), and SpecTP (to trigger accusative assignment on raised objects, and the subjects of adjoined clauses). One possible way to unify these positions notes that they are the specifiers of phrases that appear as complements of phase heads.

Let us outline specifically the conflicts I resolve with this approach. The first theoretical demand I identified above requires that a dative argument which moves to a position in the upper phase, but below a subject in specTP, will not trigger the (26b) rule. If this rule is only triggered once (when the subject moves to specTP), any scrambling such as would move the dative argument upwards, should never trigger accusative marking, so long as this movement occurs after the movement that brought the subject to specTP. Secondly, if the base-merge position of the subject (specVoiceP) is not among those positions which are tied to triggering the dependent case rules, then it does not matter that the subject falls within or on the edge of the lower phase if the boundary is as high as I have proposed: it should not trigger invariable accusative marking on any objects in the lower phase. As for the third concern, we now trigger the (26b) rule exactly when the subject arrives in TP, above all adjuncts like the converbs examined in section 4.3.

The two positions I hypothesise to trigger DC assignment are a subset of the A-positions in the clause, but we cannot use this natural class as the trigger for dependent case rules: if all A positions could trigger the algorithm, one would also expect the base-merge position of the subject to do so as well, which is exactly the situation we want to avoid. Perhaps then this solution is not exactly what Baker and Vinokurova had envisioned in their footnote; although if we are to take Dependent Case seriously, the correlation between A-positions and case becomes more tenuous regardless. This is ultimately the position that Gong (2022) arrives at through investigation of reconstruction: positions where case may be assigned are more relevant, be they A-positions or not. Instead the relevant conditions are more concerned with the timing of phase spell-out.

In any case, some constraint of the Dependent Case algorithm is necessary, and a theoretically-simple way of achieving this is to trigger it from specific positions – perhaps defined by the language in question, or common among many. The exact implementation of this, however, I leave open for further research.

5 Conclusions

The aims of this study have been primarily to describe and account for the appearance of the accusative case in Mongolian, demonstrating the viability of Dependent Case Theory for the language in the process. This was driven by its appearance on embedded subjects of various clauses. Previous studies had approached the issue either from a DCM perspective (von Heusinger & Klein & Guntsetseg 2011; Guntsetseg 2016), or an Agree perspective (Bao et al. 2015; Fong 2019). While

there are no quarrels per-se with DCM analyses, the desire was for a more explanatory account, to contribute to the understanding of case in Mongolian, and to case theory more broadly. As Agree approaches required matrix v to act as case-licenser to embedded accusative subjects, they failed to explain the full empirical range in Mongolian. An alternative was necessary, and the configurational case-licensing approach of Baker & Vinokurova (2010) proved most applicable.

Applying this approach to Mongolian has the benefit of explaining accusative case in objects as well providing a more complete picture of case assignment. What's more, I extended and adjusted the theory to predict variability in the realisation of accusative case in voice alternations, as well as its availability in different classes of converbial clauses. Finally, examining data from dative arguments, I suggested one way in which the timing of rule application in Dependent Case Theory may be constrained.

Some open questions remain, primarily in terms of constraints on applicability of Dependent Case Theory, and on the status of nominative and genitive cases. These should prove to be fruitful avenues of inquiry for future work. These questions aside, we are left with at least a clearer picture about the case assignment mechanism in Mongolian, and a further successful implementation of Dependent Case Theory in a relatively under-described language.

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Competing interests

The author has no competing interests to declare.

References

- Aissen, Judith. 2003. Differential object marking: iconicity vs. economy. *Natural Language and Linguistic Theory* 21(3). 435–483. DOI: <https://doi.org/10.1023/A:1024109008573>
- Alexiadou, Artemis & Anagnostopoulou, Elena & Schäfer, Florian. 2015. *External arguments in transitivity alternations*. Oxford: Oxford University Press. DOI: <https://doi.org/10.1093/acprof:oso/9780199571949.001.0001>
- Aravind, Athulya. 2021. Successive cyclicity in DPs: evidence from Mongolian nominalized clauses. *Linguistic Inquiry* 52(2). 377–392. DOI: https://doi.org/10.1162/ling_a_00373
- Baker, Mark. 2015. *Case: Its principles and its parameters*. Cambridge University Press. DOI: <https://doi.org/10.1017/CBO9781107295186>
- Baker, Mark & Vinokurova, Nadya. 2010. Two modalities of case assignment: case in Sakha. *Natural Language and Linguistic Theory* 28. 593–642. DOI: <https://doi.org/10.1007/s11049-010-9105-1>
- Bao, Lina & Hasebe, Megumi & Bao, Wurigumula & Maki, Hideki. 2015. Accusative subject licensing in Modern Inner Mongolian. In Maki, Hideki & Bao, Lina & Hasebe, Megumi (eds.), *Essays on Mongolian syntax*, 143–162. Kaitakusha.
- Bošković, Željko. 2016. Getting really edgy: on the edge of the edge. *Linguistic Inquiry* 47(1). 1–33. DOI: https://doi.org/10.1162/LING_a_00203
- Chinggeltei. 1981. *Odo üye-yin monggol kelen-ü jüü [Modern Mongolian grammar]*. Kökeqota: Monggol-un arad-un keblel-ün qoriya.

- Chomsky, Noam. 1973. Conditions on transformations. In Anderson, Stephen & Kiparsky, Paul (eds.), *A festschrift for Morris Halle*, 232–286. New York: Holt, Rinehart & Winston.
- Chomsky, Noam. 1986. *Barriers*. MIT Press.
- Chomsky, Noam. 2000. Minimalist inquiries: the framework. In Martin, Roger & Michaels, David & Uriagereka, Juan (eds.), *Step by step*, 89–155. Cambridge, Mass.: MIT Press.
- Chomsky, Noam. 2001. Derivation by phase. In Kenstowicz, Michael (ed.), *Ken Hale: a life in language*, 1–52. Cambridge: MIT Press. DOI: <https://doi.org/10.7551/mitpress/4056.003.0004>
- Chomsky, Noam. 2008. On phases. In Freidin, Robert & Ottero, Carlos P. & Zubizarreta, Maria Luisa (eds.), *Foundational issues in linguistic theory*, 133–166. MIT Press. DOI: <https://doi.org/10.7551/mitpress/7713.003.0009>
- Cinque, Guglielmo. 1999. *Adverbs and functional heads: a cross-linguistic perspective*. Oxford: Oxford University Press. DOI: <https://doi.org/10.1093/oso/9780195115260.001.0001>
- Comrie, Bernard. 1979. Definite and animate direct objects: a natural class. *Linguistica Silesionica* 3. 13–21.
- de Hoop, Helen & Malchukov, Andrej L. 2008. Case marking strategies. *Linguistic Inquiry* 39. 565–587. DOI: <https://doi.org/10.1162/ling.2008.39.4.565>
- Diesing, Molly. 1992. *Indefinites*. Cambridge, Mass.: MIT Press.
- Diesing, Molly & Jelinek, Eloise. 1995. Distributing arguments. *Natural Language Semantics* 3(1). 123–176. DOI: <https://doi.org/10.1007/BF01249836>
- Fong, Suzana. 2019. Proper movement through Spec-CP: an argument from hyperraising in Mongolian. *Glossa: A Journal of General Linguistics* 4(1). 1–42. DOI: <https://doi.org/10.5334/gjgl.667>
- Fox, Danny & Pesetsky, David. 2004. Cyclic linearization of syntactic structure. *Theoretical Linguistics* 31. 1–46. DOI: <https://doi.org/10.1515/thli.2005.31.1-2.235>
- Gong, Zhiyu Mia. 2022. Case in wholesale late merger: evidence from Mongolian scrambling. *Linguistic Inquiry*, 1–66. DOI: https://doi.org/10.1162/ling_a_00494
- Guntsetseg, Dolgor. 2016. *Differential case marking in Mongolian* (Tunguso Siberica 39). Harrassowitz Verlag. DOI: <https://doi.org/10.2307/j.ctvc770sp>
- Haspelmath, Martin. 1995. The converb as a cross-linguistically valid category. In Haspelmath, Martin & König, Ekkehard (eds.), *Converbs in cross-linguistic perspective*, 1–56. De Gruyter. DOI: <https://doi.org/10.1515/9783110884463-003>
- Haug, Dat T. T. & Fabricious-Hansen, Catherine & Behrens, Bergljot & Helland, Hans Petter. 2012. Open adjuncts: degrees of event integration. In Fabricious-Hansen, Catherine & Haug, Dag (eds.), *Big events, small clauses. the grammar of elaboration* (Language, Context and Cognition), 131–178. Berlin: De Gruyter. DOI: <https://doi.org/10.1515/9783110285864.131>
- Jackendoff, Ray. 1972. *Semantic interpretation in generative grammar*. Cambridge: MIT Press.
- Janhunen, Juha. 2012. *Mongolian*. Amsterdam: John Benjamins Publishing Company.

- König, Ekkehard. 1995. The meaning of converb constructions. In Haspelmath, Martin & König, Ekkehard (eds.), *Converbs in cross-linguistic perspective*, 57–96. De Gruyter. DOI: <https://doi.org/10.1515/9783110884463-004>
- Kornfilt, Jaklin. 2008. DOM and two types of DSM in Turkish. In de Hoop, Helen & de Swart, Peter (eds.), *Differential subject marking*, vol. 72 (Natural Language and Linguistic Theory), 79–111. Springer. DOI: https://doi.org/10.1007/978-1-4020-6497-5_5
- Kullman, Rita & Tserenpil, Dandii-Yadamyn. 1996. *Mongolian grammar*. Hong Kong: Jenco Ltd.
- Levin, Theodore & Preminger, Omer. 2015. Case in Sakha: are two modalities really necessary? *Natural Language and Linguistic Theory* 33(1). 231–250. DOI: <https://doi.org/10.1007/s11049-014-9250-z>
- Lim, Jun Jie. 2023. Finiteness, agreement and subject case in two varieties of Mongolian. In *Paper presented at the Workshop on Altaic Formal Linguistics 17*.
- López, Luis. 2012. *Indefinite objects: scrambling, choice functions, and differential marking* (Linguistic Inquiry Monographs). The MIT Press. DOI: <https://doi.org/10.7551/mitpress/9165.001.0001>
- Major, Travis. 2020. Uyghur accusative subjects: is Dependent Case Theory necessary? In *The 94th annual meeting of the linguistic society of America*.
- Marantz, Alec. 1991. Case and licensing. In Westphal, Germán F. & Ao, Benjamin & Chae, Hee-Rahk (eds.), *Proceedings of the eighth eastern states conference on linguistics*, 234–253.
- Privoznov, Dmitry. 2022. Adjunct islands are configurational. *Glossa: A Journal of General Linguistics* 7(1). 1–47. DOI: <https://doi.org/10.16995/glossa.5863>
- Pylkkänen, Liina. 2008. *Introducing arguments*. MIT Press. DOI: <https://doi.org/10.7551/mitpress/9780262162548.001.0001>
- Rosenbaum, Peter. 1967. *The grammar of English predicate complement constructions*. Cambridge, MA: MIT Press.
- Ujiyediin, Chuluu. 1998. *Studies on Mongolian verb morphology*. University of Toronto dissertation.
- Ura, Hiroyuki. 1994. *Varieties of raising and the feature-based bare phrase structure theory*. MIT Working Papers in Linguistics.
- Vinokurova, Nadezhda. 2005. *Lexical categories and argument structure: a study with reference to Sakha*. Utrecht, NL: University of Utrecht dissertation.
- von Heusinger, Klaus & Klein, Udo & Guntsetseg, Dolgor. 2011. The case of accusative embedded subjects in Mongolian. *Lingua* 121(1). 48–59. DOI: <https://doi.org/10.1016/j.lingua.2010.07.006>

