

RESULTATIVES IN MONGOLIAN: BETWEEN JAPANESE AND KOREAN?*

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1. Introduction

Mongolian uses the *-tAl* Converb construction to express resultative interpretations. In this paper we investigate the syntactic structure of Mongolian resultatives, focusing on the status and position of *-tAl* phrases. Washio (2002) noted that the *-tAl* Converb construction looks very much on the surface like the Korean *-key* resultative. Our investigation of Mongolian shows that the *-tAl* resultative phrases take a TP adjunct structure which in fact lines up in important ways with the study of Korean by Sells (1998) and Shim & den Dikken (2007). Canonical Mongolian resultative sentences are shown in (1).

- (1) a. *John ene metal-ig havtgai bol-tol davt-san.*
John this metal-ACC flat(A) become-CVB hammer-PST
“John hammered the metal flat.”
- b. *John ene shal-ig gyalalz-tal ugaa-san.*
John this floor-ACC glitter(V)-CVB wash-PST
“John washed the floor, as a result it became glittering.”

(1a,b) show that there are two strategies to express the resultative interpretation in Mongolian. In (1a) *havgai* ‘flat’ is an adjective, which goes with *bol-tol* ‘become-CVB’ to express the resultant

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state of the sentence. In (1b) *gyalalz-* ‘glitter’ is a verb, which directly combines with *-tAl* ‘CVB’ to express the resultant state of the sentence. Thus, the two strategies for resultatives can be schematically described as “Adj become-*tAl*” and “V-*tAl*”; adjectives always need *bol-* ‘become’ and verbs cannot co-occur with *bol-* ‘become’. The difference between the “Adj become-*tAl*” and “V-*tAl*” is that the former carries a stronger intention than the latter. However, there is no structural difference at all, which we will show in the next section.

By analysing the sentences (1a,b) syntactically and semantically, we will conclude that the Mongolian *-tAl* resultatives take the structure (2). “SP” stands for secondary predicate (it is either “Adj + become” or “V”), and [...] * means the bracketed clause can occur recursively.

- (2) [Syntactic Structure of Mongolian resultative construction]
 SUBJ (NP₁-ACC) [_{TP} (NP₂-NOM) (NP₃-ACC) SP-*tAl*]* V

The structure in (2) means that the resultative phrase “SP-*tAl*” can take optional notional subject and object arguments (NP₂-NOM and NP₃-ACC) inside its clause. The clause which contains the secondary predicate is categorised as TP. This TP clause is an adjunct element, adjoined to VP, which can occur recursively in the sentence.¹ The presence of NP₁-ACC is due to the transitivity of the main verb; an intransitive main verb cannot host NP₁-ACC; a transitive main verb may or may not have NP₁-ACC, for when NP₂-NOM exists, NP₁-ACC does not need to exist. In this case NP₁-ACC seems to be pragmatically reconstructed because NP₁-ACC and NP₂-NOM are always in a whole-part relation. This will also be shown with syntactic tests later on.

Before going into the main argument, let us here explain some terminologies we use in this paper, as some of them are not so common outside the Mongolian context. The term “Converb” (CVB) is originally named by Mongolian grammarians. There are about 20 CVBs. Each of them has some meanings. The CVB which appear in the resultative constructions is *-tAl*, which may be realised as *-tal/-tel/-tol/-töl* because of the vowel harmony. All CVBs, including *-tAl*, attach only with verbs. “Reflexive possessive” (REFL.POSS) marker *-AA* contains both properties of the accusative case marker *-ig* and possessive meaning. A noun with the reflexive possessive marker agrees only with the subject argument. *-AA* can be realised as *-aa/-oo/-ee/-öö* because of the vowel harmony. There are also second person (2.POSS) *chin*’ and third person markers (3.POSS) *n*’. These markers are not morphemes but independent particles. They are both co-referent only with non-subject arguments. The particle *bol* has the meaning of either subject or/and contrastive topic marker (SM/CT). These terms are laid out in table (3).

- (3)
- | | |
|---|---|
| <i>-tAl</i> (<i>-tal/-tel/-tol/-töl</i>): | Converb (CVB); attaches only with verb |
| <i>-AA</i> (<i>-aa/-oo/-ee/-öö</i>): | Reflexive Possessive (REFL.POSS); co-referent only with SUBJ, contains the meaning of accusative case marker, if there is no other case marker. |
| <i>-(i)g</i> : | Accusative case marker (ACC) |
| <i>chin</i> ’: | 2 nd person marker (2.POSS); co-referent only with non-SUBJ |
| <i>n</i> ’: | 3 rd person marker (3.POSS); co-referent only with non-SUBJ |
| <i>bol</i> : | Subject/Contrastive Topic marker (SM/CT) |

¹ The definition of “resultative” construction is not crystal-clear. If one believes that the “resultative” construction has to have a complement structure, then there is no real “resultative” in Mongolian. However as will be shown in section 2, the sentences (1a,b) with the structure of (2) seem to carry the properties which should qualify the constructions (1a,b) as resultative.

We here present the structure of this paper. Section 2 shows the syntactic and semantic tests, which support our proposal illustrated in (2). As there has not been much research on Mongolian secondary predicates, we will show as many language facts as possible in this section. Section 3 briefly shows Japanese and Korean resultatives and discusses whether Mongolian resembles Japanese or Korean. Section 4 summarises the whole paper.

2. Syntactic and Semantic Tests of Mongolian Resultatives

In 2.1 we firstly claim that the Mongolian *-tAl* Converb examples in (1a,b) represent an object-oriented resultative showing that they have the typical characteristics of the resultatives; a) accomplishment interpretation: (1a,b) are compatible with *10 minutin dotor* ‘in 10mins.’ but not with *10 minutin tursh* ‘for 10mins.’; b) the *-tAl* Converb phrases are inside VP, which can be proved by pseudo-clefting and do-so replacement; c) the resultative predicate *havtgai/gyalalz-* ‘flat/glitter’ cannot be replaced with their antonym counterparts. Secondly in 2.2, we will claim that Mongolian *-tAl* phrases take a TP adjunct form rather than a complement structure by showing several tests: a) additional nominative-marked NP in the *-tAl* clause: suggesting that *-tAl* clause always forms an eventive TP clause: b) the *-tAl* resultative clause can even take its notional object argument (NP₃-ACC of (2)) as well as the object argument of the main verb (NP₁-ACC of (2)) at the same time, suggesting that there is an embedded clause: c) there can be more than one resultative clause: d) there seems to be aspect in the clause of the *-tAl* resultative phrase, namely *inchoative*, which is always dependent on T, suggesting that the clause of the *-tAl* resultative phrase is TP.

2.1 Mongolian *-tAl* Resultatives Have Typical Resultative Properties

First, the aspectual structure of the resultative construction is examined. As many linguists including Dowty (1979) have stated, telic verbs or events have been by definition called resultatives. Examples (4) and (5) illustrate the *10 minutin dotor* ‘in 10 minutes’ and *10 minutin tursh* ‘for 10 minutes’ tests. The former is compatible with telic events, but the latter is not. Mongolian *-tAl* Converb constructions seem to be telic and are expected to be compatible only with ‘in 10 minutes’.

- (4) [In & for 10 minutes test with (1a)]
- | | | | | | | |
|----|--|------------|------------------|--------------------|--------------|----------------|
| a. | <i>John</i> | <i>ene</i> | <i>metal-ig</i> | 10 minut-in | <i>dotor</i> | <i>havtgai</i> |
| | John | this | metal-ACC | 10 minute-GEN | within | flat(A) |
| | <i>bol-tol</i> | | <i>davt-san.</i> | | | |
| | become-CVB | | hammer-PST | | | |
| | “John hammered the metal flat in 10 minutes.” | | | | | |
| b. | * <i>John</i> | <i>ene</i> | <i>metal-ig</i> | 10 minut-in | <i>tursh</i> | <i>havtgai</i> |
| | John | this | metal-ACC | 10 minute-GEN | for | flat(A) |
| | <i>bol-tol</i> | | <i>davt-san.</i> | | | |
| | become-CVB | | hammer-PST | | | |
| | “John hammered the metal flat for 10 minutes.” | | | | | |

- (5) [In & for 10 minutes test with (1b)]
- a. *John ene shal-ig 10 minut-in dotor gyalalz-tal uгаа-san.*
 John this floor-ACC 10 minute-GEN within glitter(V)-CVB wash-PST
 “John washed the floor shiny in 10 minutes.”
- b. **John ene shal-ig 10 minut-in tursh gyalalz-tal uгаа-san.*
 John this floor-ACC 10 minute-GEN for glitter(V)-CVB wash-PST
 “John washed the floor shiny for 10 minutes.”

Second, the syntactic position of the *-tal* phrase is investigated. Roberts (1988) showed that the English resultative predicate stays inside VP with such syntactic tests as pseudo-cleft, do-so replacement, tough movement and VP preposing, which are all well-known tests to detect what a VP contains. Here we use pseudo-cleft and do-so replacement, where the former targets the whole VP and the latter the lower elements within VP (pseudo-clefting does not target the adjuncts adjoined to VP). These two tests show that *-tal* phrases are indeed inside VP.

- (6) [Pseudo-cleft with (1a)]
- a. *John-in hii-sen yum bol ene metal-ig havtgai*
 John-GEN do-PST matter SM this metal-ACC flat(A)
bol-tol davt-ah.
 become-CVB hammer-INF
 “What John did was to hammer this metal flat.”
- b. **John-in havtgai bol-tol hii-sen yum bol*
 John-GEN flat(A) become-CVB do-PST matter SM
ene metal-ig davt-ah.
 this metal-ACC hammer-INF
 Int: “What John did flat was to hammer this metal.”
- (7) [Pseudo-cleft with (1b)]
- a. *John-in hii-sen yum bol ene shal-ig gyalalz-tal uгаа-h.*
 John-GEN do-PST matter SM this floor-ACC glitter(V)-CVB wash-INF
 “What John did was to wash the floor glittering.”
- b. **John-in gyalalz-tal hii-sen yum bol ene shal-ig uгаа-h.*
 John-GEN glitter(V)-CVB do-PST matter SM this floor-ACC wash-INF
 Int: “What John did glittering was to wash the floor.”
- (8) [do-so replacement with (1a)]
- a. *John ene metal-ig havtgai bol-tol davt-san ba*
 John this metal-ACC flat(A) become-CVB hammer-PST and
Mary ch bas teg-sen.
 Mary also do.so-PST
 “John hammered this metal flat and Mary also did so.”
- b. **John ene metal-ig havtgai bol-tol davt-san ba*
 John this metal-ACC flat(A) become-CVB hammer-PST and
Mary ch bas nimgen bol-tol teg-sen.
 Mary also thin(A) become-CVB do.so-PST
 “John hammered this metal flat and Mary also did so thin.”

- (9) [do-so replacement with (1b)]
- a. *John ene shal-ig gyalalz-tal uгаа-san ba*
 John this floor-ACC glitter(V)-CVB wash-PST and
Mary ch bas teg-sen.
 Mary also do.so-PST
 “John washed the floor glittering and Mary also did so.”
- b. **John ene shal-ig gyalalz-tal uгаа-san ba*
 John this floor-ACC glitter(V)-CVB wash-PST and
Mary ch bas tsagaan bol-tol teg-sen.
 Mary also white(A) become-CVB do.so-PST
 “John washed the floor glittering and Mary also did so white.”

(8) and (9) above show that the resultative phrases are lower than VP; in other words, inside V'. That is, they are either adjuncts adjoined to V' or complements forming a secondary predication with the accusative marked nouns. In 2.2 we will show evidence that they are actually adjuncts of V'.

Third, as for another typical characteristic of a real resultative construction, we will show that only one of the antonym pairs qualifies as a resultative predicate in a resultative sentence, for the resultative predicate expresses an ending state which is related to the meaning of the main verb. This is shown in (10a,b). And (10c) is not a resultative; it allows both *tight* and *loose*. Not only in Mongolian but in English and Japanese, the (10c) type is not a real resultative because it is not the whole *shoelace* which becomes tight or loose; what is tight or loose is the point where the tie is made. It is similar to the example “John opened the window wide.” It is not the *window* which becomes wide (the size of the window does not change). These fake resultatives, called “spurious resultative” by Washio (2002), typically allow either word of an antonym pair as a resultative predicate in a given example. In Mongolian, there is a morphological difference between the canonical resultative predicate and the spurious resultative predicate; the latter is morphologically adverbial; in (10c), *changa/sul* ‘tight/loose’ is adverb, and there is no *-tAl* phrase in sentence (10).

- (10) a. *John ene zonh-ig zeverhen/*bohir bol-tol arch-san.*
 John this window-ACC clean / dirty become-CVB wipe-PST
 “John wiped this window clean/*dirty.”
- b. *John ene nohoi-g üh-tel / *amid bai-tal zod-son.*
 John this dog-ACC die-CVB / alive be-CVB beat-PST
 “John beat this dog dead/*alive.”
- c. <spurious resultative>
John ene gutl-in üdees-ig changa /sul üdsen.
 John this shoe-GEN laces-ACC tight/loose(Adv) tie-PST
 “John tied this shoelaces tight/loose.”

So far we have observed the syntactic and semantic properties of the *-tAl* resultative phrases; they are the accomplishment type, inside VP, different from morphologically adverbial type shown in (10c) in that they do not allow an antonym counterpart. In the next sub-section 2.2, we will investigate the size of the *-tAl* resultative clause.

nominative construction, the second nominative case is claimed to be assigned not by the local T-head but by the predicate itself as an inherent case (Yoon 1996, Moon 2000); the embedded clause does not need to be TP. In Mongolian, there is no double nominative construction as in (14), and this is why, the second nominative case must be assigned by the local T-head, implying that the embedded clause is TP.

- (14) [No Double Nominative Construction in Mongolian]
- a. **Ene metal helber n' havtgai bai-na.*
 this metal shape 3.POSS flat(A) be-PRS
 Int. "The metal's shape is flat."
- b. **Ene shiree gadarguu n' zeverhen bai-na.*
 this table surface 3.POSS clean be-PRS
 Int. "The table's surface is clean."
- c. **John [ene metal helber n' havtgai bol-tol] davt-san.*
 John this metal:NOM shape:NOM 3.POSS flat(A) become-CVB hammer-PST
 "John hammered the metal, as a result its shape became flat."
- d. **John [ene shal öngö n' gyalalz-tal] uгаа-san.*
 John this floor:NOM colour:NOM 3.POSS glitter(V)-CVB wash-PST
 "John washed the floor, as a result its colour became glittering."
- e. *John ene metal-ig [helber-ig n' havtgai bol-tol] davt-san.*
 John this metal-ACC shape-ACC 3.POSS flat(A) become-CVB hammer-PST
 "John hammered the metal, as a result its form became shape."
- f. *John ene shal-ig [öng-ig n' gyalalz-tal] uгаа-san.*
 John this floor-ACC colour-ACC 3.POSS glitter(V)-CVB wash-PST
 "John washed the floor, as a result its colour became glittering."

(14a,b) simply show that there is no double nominative construction in Mongolian. Hence (14c,d) are also ungrammatical in Mongolian. Interestingly, (14e,f) are grammatical in Mongolian. Mongolian has a Differential Subject Marking (DSM) system, proposed by Guntsetseg (2010) and von Heusinger, Klein and Guntsetseg (2011), which allows the embedded subject to be marked with accusative case. Thus, (14e,f) correspond to (11a',b'), where the case markers of the embedded subject gives the distinction in between them. All the Korean counterparts of (14a-f) are grammatical. Those like (14c,d) are the case of double nominative construction which Korean famously allows. And those of (14e,f) are the case where both nominative-marked NPs of the embedded clause in (14c,d) raised to the matrix clause. This will be briefly reviewed in section 3. Here, we emphasise again that Mongolian does not allow the double nominative construction as seen in (14a-d), and therefore, the nominative case of the NP₂ in (12) has to be assigned by the local T-head, the *-tAl* embedded clause is TP.

The data in (15) shows that the secondary predicate can be verbal in Mongolian but not in English. Guéron & Hoekstra (1995) explained the ungrammaticality of English sentence (15c) as lack of T in the English secondary predicates, for a verb must always be licensed by a local T-head. Shim & den Dikken (2007) also stated that 'for every verb there must be a tense', introducing Korean resultative data with an additional NP-ACC inside the resultative clause like (15a,b). Thus, the grammaticality of (15a,b) also supports that Mongolian *-tAl* clause forms TP.

(15) [Additional NPs to the Canonical Resultative Sentences]

- a. *Ene nohoi ter muur-ig [ene hulgan-ig ald-tal] haz -san.*
 this dog that cat-ACC this mouse-ACC loose-CVB bite-PAST
 “The dog bit that cat so that it lost this mouse.”
- b. *John ene zagdaa-g [ter heregtin-ig ald-tal] tsoh'-son.*
 John this police-ACC that criminal-ACC loose-CVB kick-PAST
 “John kicked this policeman as a result he lost that criminal.”
- c. [English] *The dog bit the cat miss the mouse.

(16) shows that the *-tAl* clause can appear more than twice in a sentence. Note that between the two brackets “[]” of each clause in (16), there is no need of a pause. When these two phrases “[]” are replaced with manner adverbs such as *slowly* and *strongly* (e.g. in (16a) “John hammered the metal slowly strongly.”), native speakers read the two manner adverbs as smoothly as these two phrases “[]” in each of (16a,b). This data suggests that these two clauses are not in a coordinate relationship but each clause is adjoined to VP as an adjunct separately.

(16) [Two *-tAl* clauses in a sentence]

- a. *John ene metal-ig [helber n' havtgai bol-tol]*
 John this metal-acc shape 3.POSS flat(A) become-CVB
[öngö n' aril-tal] davt-san.
 colour 3.POSS delete- CVB hammer-PST
 “John hammered the metal as a result its shape became flat and its colour got deleted.”
- b. *John [hooloi-goo söö-töl] [biy-ee yadar-tal]*
 John throat-REFL.POSS hoarse(V)-CVB body-REFL.POSS tired(V)-CVB
hashgir-san.
 shout-PST
 “John shouted so that his throat became hoarse and his body became tired.”

Further supporting arguments for the TP adjunct analysis can be observed in (17). (1a,b) are repeated in (17a,b). Compare (17a,b) with (17a',b') respectively.

(17) [Case of NPs]

- a. *John ene metal-ig [havtgai bol-tol] davt-san.*
 John this metal-ACC flat(A) become-CVB hammer-PST
 “John hammered the metal flat.”
- a' *John [ene metal havtgai bol-tol] davt-san.*
 John this metal:NOM flat(A) become-CVB hammer-PST
 “John hammered, so that the metal became flat.”
- b. *John ene shal-ig [gyalalz-tal] ugaa-san.*
 John this floor-ACC glitter(V)-CVB wash-PST
 “John washed the floor, as a result it became glittering.”
- b' *John [ene shal gyalalz-tal] ugaa-san.*
 John this floor:NOM glitter(V)-CVB wash-PST
 “John washed, so that the floor became glittering.”

Interestingly, (17a',b') are both grammatical, although the main verbs are transitive and there is no object (accusative marked NP) in (17a',b'). There seem to be two reasons that the (17a', b') are grammatical: first, the embedded *-tAI* clause is TP, so the nominative case is successfully assigned to the nouns *metal/shal* 'metal/floor'; second, the object of the verb can be easily reconstructed in the pragmatic domain, because the object of the main verb and the subject of the embedded clause are in a part-whole relation, as mentioned with the examples in (11). Indeed, in (17a',b') it is possible to have a reading that *John actually hammered/washed something else on/around the metal/floor, so that the metal/floor became flat/glittering*. This fact corresponds with the native speakers' intuition that (17a,b) are more "intentional" than (17a',b'), and they normal use (17a,b) rather than (17a',b'); it is because when they make something flat/clean by hammering/washing, they normally directly hammer/wash the entity they want to make flat/clean.

The next several examples illustrate scrambling. (18a,b) show the clear bi-clausal sentence in Mongolian, showing that scrambling the embedded subject to outside its clause causes ungrammaticality. The data in (20) to (22) support our proposal shown in (2). (2) is repeated in (19).

- (18) [Impossible to Scramble the Embedded Subject to outside its Clause]
- a. *John [geds-ee düür-tel] us uu-san.*
 John stomach-REFL.POSS full(V)-CVB water drink-PST
 "John drank water to make his stomach full."
- b. **John [t_i düür-tel] us geds_i-ee uu-san.*
 John full(V)-CVB water stomach-REFL.POSS drink-PST
- (19) [Syntactic Structure of Mongolian Resultative Construction] (= (2))
 SUBJ (NP₁-ACC) [_{TP} (NP₂-NOM) (NP₃-ACC) SP-tAI]* V
- (20) [Scrambled Sentences of (1a,b)]
- a. *John t_i [havgai bol-tol] metal-aa_i davt-san.*
 John flat(A) become-CVB metal-REFL.POSS hammer-PST
 "John hammered the metal flat."
- b. *John t_i [gyalalz-tal] shal-aa_i ugaa-san.*
 John glitter(V)-CVB floor-REFL.POSS wash-PST
 "John washed the floor, as a result it became glittering."
- (21) [Scrambled Sentences of (14a',b')]
- a. **John [t_i havgai bol-tol] ene metal_i davt-san.*
 John flat(A) become-CVB this metal:NOM hammer-PST
 "John hammered, so that the metal flat."
- b. **John [t_i gyalalz-tal] ene shal ugaa-san.*
 John glitter(V)-CVB this floor:NOM wash-PST
 "John washed, so that this floor became glittering."
- (22) a. *John [hooloi-goo sөө-töl] hashgir-san.*
 John throat-REFL.POSS hoarse(V)-CVB shout-PST
 "John shouted until / (to the degree that) his voice became hoarse."

b. *John	[<i>t_i</i>	<i>söö-töl]</i>	<i>hooloi-goo</i>	<i>hashgir-san.</i>
John		hoarse(V)-CVB	throat-REFL.POSS	shout-PST

The structure of (2)/(19) predicts that NP₁-ACC can be scrambled to the outside the position preceding the main verb but NP₂-NOM or NP₃-ACC cannot. In fact, (20) shows that NP₁-ACC, which is *metal-aa* ‘metal-REFL.POSS’, can be scrambled to the position preceding the main verb.² In (21) the subjects of the embedded clause cannot be scrambled to the position preceding the main verb unlike the case of (20). (22) represents the case of DSM like (14e,f); the NP *hooloi-goo* ‘throat-REFL.POSS’ is the embedded accusative marked subject, for the main verb *hashgir-san* ‘shout-PST’ is intransitive, and thus *hooloi-goo* ‘throat-REFL.POSS’ is not the object of the main verb. This is why the scrambling operation in (22) fails.

The final supporting argument for our TP adjunct analysis comes from the existence of aspect INCHOATIVE expressed with *bol-* ‘become’ in the *-tAl* embedded clause. Look at the example (23).

- (23) [Morphological Structure of *-tAl* Phrase]
*John ene metal-ig {havgai bol-tol/*havgai/*havgai bai-tal} davt-san.*
 John this metal-ACC flat(A) become-CVB/flat/flat be-CVB hammer-PST
 “John hammered the metal flat.”

(23) suggests that when adjective is used as a part of the *-tAl* phrase there has to be *bol-* ‘become’ with it, which implies that there is a projection for aspect immediately outside the lexical projection of the resultative secondary predicate.³ Aspect has a close connection with tense. Guéron & Hoekstra (1995) regarded aspect as a dependent tense. They stated that the aspect is a tensed form not directly bound by a T-operator; its T-node is not deictically interpreted via a T-operator which directly links it to a referential domain, but instead is dependent, relating the event of its verbal base to a non-deictic anchor. Shim & den Dikken (2008) supported this argument with Korean data, claiming that the presence of the Korean aspect *-ci* ‘become/INCHOATIVE’ within the resultative phrase signals the presence of a T-node local to the resultative predicate; not a deictic tense but a dependent tense (dependent on the matrix tense). We here regard that *bol-* ‘become’ plays a double role in Mongolian resultative sentences: first, it makes it possible for an adjective word to connect with the converb *-tAl*, since CVBs can attach only to verbs (however this is not the only reason that *bol-* ‘become’ is obligatory in the resultative sentences, because as seen in (23) *havgai bai-tal* ‘flat be-CVB’ does not fit in this sentence though *bai-* ‘be’ successfully makes the adjective possible to attach with the CVB), and second, it plays the role of the dependent tense of the embedded clause (dependent to the tense of the main verb). Thus the presence of the *bol-* ‘become’ seems to support the claim that the *-tAl* embedded phrase in Mongolian forms a TP clause.

By the way, we strongly believe that true resultatives, which take a complement type structure, do not allow subject oriented resultatives at all. Thus, we assume that English, Japanese, etc. do not have the subject oriented resultative construction, and their resultatives strictly abide the Simpson’s (1983) Double Object Restriction (DOR). However, Mongolian “resultatives” have an adjunct structure as discussed above; they are not the real complement

² As already noted in section 1, “REFL.POSS” can contain the function of -ACC.

³ Washio (1999, 2002) stated that Middle Mongolian allowed a bare adjective to be the resultative secondary predicate, though it was not productive at all. In Modern Mongolian this is completely impossible.

type resultatives (it might be better to call the Mongolian resultatives with another name, but in the previous literature not only Mongolian resultatives but other adjunct resultatives are also simply called “resultatives”.) Anyway, our Mongolian resultatives allow subject oriented resultatives, which is not a counter argument/example against Simpson’s DOR. The examples of subject-oriented resultatives are given in (24).

- (24) [Subject Oriented Resultatives]
- a. *Ene robot [evderhii bol-tol-oo] ene mod-ig tair-san.*
 this robot out.of.order(A) become-CVB-REFL.POSS this tree-ACC cut-PST
 “This robot cut trees so much that it became out of order.”
- b. *Ene robot [evder-tel-ee] ene mod-ig tair-san.*
 this robot break.down(V)-CVB-REFL.POSS this tree-ACC cut-PST
 “This robot cut trees so much and it broken down.”
- c. **John huvtsas-aa_i [zeverhen bol-tol-oo] t_i ugaa-san.*
 John clothes-REFL.POSS clean(A) become-CVB-REFL.POSS wash-PST
 “John washed his clothes as a result he(his hands) became clean.”

The key point in (24) is that all the subject-oriented *-tAl* phrases take the reflexive possessive marker *-AA* which is always co-referent with the subject argument. Thus there are two factors which make the subject-oriented linking possible in Mongolian resultatives: first with the help of the subject-referent marker *-AA*; second, the *-tAl* clause is an (TP) adjunct which can be adjoined to different maximal projections relatively easily. As shown in (24a,b), the subject-oriented linking is possible both with ‘*Adj + become-tAl*’ and ‘*V-tAl*’. The accurate syntactic position of the subject-oriented resultatives is investigate with pseudo-clefting and ‘do-so’ replacement tests in (25) and (26).

- (25) [Pseudo-clefting with Subject-oriented Resultative]
- a. *Ene robot-in hii-sen yum bol [evderhii
 this robot-GEN do-PST matter SM out.of.order
 bol-tol-oo mod tair-ah].*
 become-CVB-REFL.POSS tree cut-INF
 “What this robot_i did was cut this tree broken_i.”
- b. *Ene robot-in evderhii bol-tol-oo hii-sen
 this robot-GEN out.of.order become-CVB-REFL.POSS do-PST
 yum bol [mod tair-ah].*
 matter SM tree cut-INF
 “What this robot_i did broken_i was cut this tree.”
- (26) [‘do-so’ Replacement Test with Subject-oriented Resultative]
- a. *John sogtuu bol-tol-oo piv uu-san ba Mary ch bas
 John drunk become-CVB-REFL.POSS beer drink-PST and Mary also
 teg-sen.*
 do.so-PST
 “John drunk beer drank, Mary also tired did-so.”

- b. *John sogtuu bol-tol-oo piv uu-san ba Mary ch bas*
 John drunk become-CVB-REFL.POSS beer drink-PST and Mary also
yadar-tal-aa teg-sen.
tire-CVB-REFL.POSS do.so-PST
 ‘John drunk beer drank, Mary also tired did-so.’

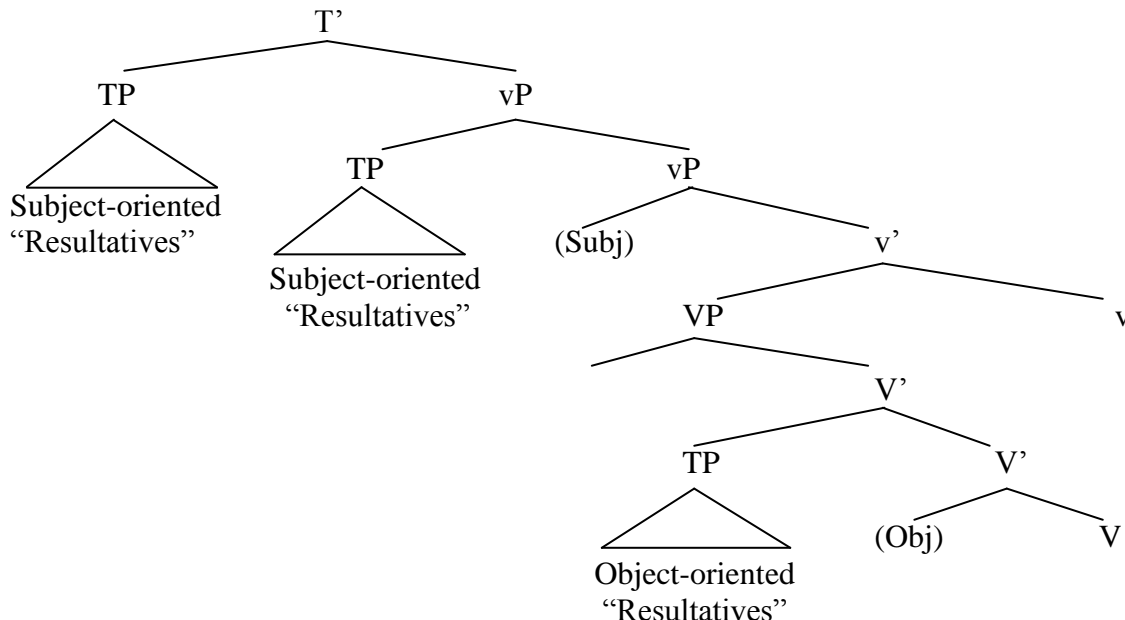
In (25a) the resultative phrase in bold font stays inside the verb phrase, whereas in (25b) the resultative phrase is outside the verb phrase. Unlike the object-oriented resultatives the resultative phrase can be either inside or outside of the verb phrase with the pseudo-cleft construction (see (6) and (7) for the pseudo-cleft construction with the object-oriented resultatives), which suggests that the resultative phrase may be adjoined to VP or higher than that such as T'. This characteristic of the subject-oriented resultative phrase is actually typical to the subject-oriented adjuncts of some SOV languages. Koizumi (1994) stated that in Japanese the subject-oriented depictive predicate may be adjoined to VP or T'. Moreover, Mongolian subject-oriented depictive phrases also seem to behave in the same way. The ‘do-so’ replacement test in (26) also shows the same contrast as in (25). The *teg-sen* ‘did-so’ phrase does not need to replace the subject-oriented resultative phrase as in (26b), unlike the case of the object-oriented resultative phrase as in (8) and (9).

The word order in (24a,b) is canonical; unlike the object oriented resultatives, the objects *mod* ‘tree’ is positioned between the *-tAl* clause and the main verb. Scrambling the object argument to the position between the subject and *-tAl* clause seems to be difficult, which is shown in (27). This is likely to be a pure syntactic issue. As we assume that the subject oriented *-tAl* clause adjoins to the top vP or T' as an adjunct, there seems to be no landing site for the object argument.

- (27) c. ^{???}*John huvtsas-aa; [zeverhen bol-tol-oo] t_i uгаа-san.*
 John clothes-REFL.POSS clean(A) become-CVB-REFL.POSS wash-PST
 ‘John washed his clothes as a result he(his hands) became clean.’

Taking all the discussion into account, we propose the syntactic representation of Mongolian resultatives as in (28). In (28), there are two possible positions for the subject-oriented resultative phrase as discussed above.

(28) [Syntactic Representation of Subject- and Object-oriented “Resultatives”]



3. Comparison with Japanese and Korean

In this section, Mongolian resultatives are briefly compared with Japanese and Korean resultatives, focusing on the syntactic structure of resultative predicate.

First data is Japanese, which seems to take a complement structure like English but unlike Mongolian or Korean.

(29) [Japanese Resultative Construction]

- a. *Taroo-ga* [_{SM} *kuruma-o pikapika-ni*] *migai-ta*
 Taroo-NOM car-ACC shiny-ni polish-PAST
 "Taro polished a car into a brilliant shine."
- b. **Taroo-ga kuruma-o hyoomen-ga pikapika-ni migai-ta*
 Taroo-NOM car-ACC surface-NOM shiny-ni polish-PAST
 "Taro polished a car into a brilliant shine."
- c. *Taroo-ga kuruma-o* [_{TP} *hyoomen-ga pikapika-ni naru-yoo-ni*] *migai-ta*
 Taroo-NOM car-ACC surface-NOM shiny-ni become way-in polish-PAST
 "Taro polished a car into a brilliant shine."

Japanese canonical resultative construction is represented in (29a), which carries all the properties of complement-type resultatives (see Kishimoto and Kikuchi 2008). The data in (29b) also supports this argument; it is impossible to add an NP-NOM between the object and resultative secondary predicate even when the NP-NOM and NP-ACC hold the part-whole relation. This seems to be because the NP-ACC and secondary predicate form a complement structure: a small clause, which is smaller than TP (impossible to assign nominative case to the additional NP). In fact, when *naru yoo-ni* 'become way-in' is added to the resultative predicate, the whole

clause becomes TP, which makes possible to add the NP-NOM, as in (29c). This fact not only suggests that the Japanese resultative construction takes a complement structure, but also implies that Mongolian (and Korean which will be shown later) does look to take the TP adjunct structure as *bol-* ‘become’ in Mongolian is obligatory with the adjective secondary predicate, and NP-nom can be freely added to the resultative sentence.

On the other hand, Korean has an adjunct resultative at least when the “secondary predicate” represents “ $V_{\text{DYNAMIC-key}}$ ” or “ $V_{\text{STATIVE-ci-key}}$ ” (“*-ci*”: ‘become/INCHOATIVE’). We are not ready yet to conclude on the structure of “ $V_{\text{STATIVE-key}}$ ”; it may take the complement structure as Son (2008) suggests, or the adjunct structure as den Dikken (2007) suggests; we do not conclude whether (b) or (b’) is the correct analysis). Two types of Korean “resultatives” are illustrated in (30).

- (30) [Syntactic Structures of Korean “Resultative” Construction]
- a. Subj (NP₁-ACC) [TP (NP₂-NOM) (NP₃-ACC) $V_{\text{DYNAMIC-key}}/V_{\text{STATIVE-ci-key}}$] V
- b. Subj [_{SM} NP₁-ACC $V_{\text{STATIVE-key}}$] V
- OR
- b’. Subj NP₁-ACC [TP $V_{\text{STATIVE-key}}$] V

(30b) supports the facts such as a) *Subj [_{SM} NP₁-NOM $V_{\text{STATIVE-key}}$] V; if the embedded clause is TP, NP₁ should be able to have nominative case, as opposed to the fact, b) the *-key* of (30b) cannot be replaced with *-tolok* which leads to a clear adjunct structure unlike the case of (27a) (in (30a), the *-key* can be replaced with *-tolok*). Supporting arguments for (30b’) are that the *-key* phrase can take the negation *anh* ‘NEG’ which is often associated with the local T-head, and it is possible to have more than two $V_{\text{STATIVE-key}}$ phrases in a sentence as in (30) (cf. Shim & den Dikken (2007)).

Although we do not have enough space to introduce the Korean data in this paper, Mongolian resultatives indeed resemble Korean resultatives of “ $V_{\text{DYNAMIC-key}}/V_{\text{STATIVE-ci-key}}$ ” in many aspects (see for the Korean data; Sells (1998), Shim & den Dikken (2007), Son (2008)). However, there are, of course, differences. We will observe some of the differences here.

- (31) a. [Double Accusative NPs, both Raised from the Embedded Clause]
- Jim-i sikhthak-i-ul phyomeyn-i-ul [t_i t_j kkaykkusha-key] takk-ass-ta*
 Jim-NOM table-ACC surface-ACC clean-KEY wipe-PST-DC
 “Jim wiped the table’s surface clean.”
- b. [Two TP Clauses]
- Jim-i chelphan-ul [moyang-i napcaklha-key]*
 Jim-NOM iron.plate-ACC shape-NOM flat-KEY
[phyomyen-i phanphanha-key] twutulki-ess-ta
 surface-NOM smooth-KEY hammer-PST-DC
 Int. “Jim hammered the iron plate as a result the shape became flat and the surface became smooth.”
- c. [Two *-key* Phrases (Shim & den Dikken (2007))]
- Jim-i patak-ul (phyomeyn-i) hayah-key panccaki-key chilha-ess-ta*
 Jim-NOM floor-ACC surface-NOM white-KEY shiny-KEY paint-PST-DC
 “Jim painted the floor so that its surface became white (and) shiny.”

- (32) [Two *-tAl* Phrases in Mongolian]
 ??/**John ene tol'-ig (gadarguu n')* *zeverhen*
 John this mirror-ACC surface:nom 3.poss clean(A)
bol-tol gyalalz-tal arch-san.
 become-CVB glitter(V)-CVB wipe-PST
 Int. "John polished this mirror clean into a brilliant shine."

(31a) is grammatical in Korean, like the Mongolian counterparts (14e,f), but with a different reason. As briefly mentioned earlier, Korean allows the double nominative construction; those two NPs in (31a) are both originally in the embedded clause with nominative case, then they both rose to the matrix clause. The grammatical acceptability of (31b) is low, as opposed to the Mongolian counterpart (16a,b). In (28b), those two embedded clauses look to form a coordinate structure rather than two adjunct clauses; there has to be a pause in between the two clauses or *-ko* 'and' onto the end of the first embedded clause. In fact, when these two clauses are replaced with two manner adverbs such as *quickly* and *strongly*, the sentence becomes better without a pause between the adverbs. (31c) is grammatical in Korean but its Mongolian counterpart in (32) is ungrammatical. The Korean data (31b) and Mongolian data (16a,b) contradict with the Korean (31c) and Mongolian (32) respectively. More research is certainly needed in this domain. However, at least in Mongolian it can be said that when there are two *-tAl* phrases, each one has to have an overtly expressed subject. The reason is perhaps that, when the embedded subjects are not overtly expressed, they are automatically reconstructed pragmatically using the part-whole relation with the accusative marked NP; the same noun seems to be reconstructed as the subject of both embedded clauses, which causes extremely redundancy. In Mongolian (as well as Korean) it is almost grammatically unacceptable to have the same subject in both embedded clauses because of the strong redundancy. This semantic and pragmatic fact seems to be blocking the construction (32) in Mongolian.

4. Summary

We tried to show as much Mongolian data (and analysis) as possible, since there has not been much work done on Mongolian yet. We proposed that Mongolian object-oriented *-tAl* resultative takes a TP adjunct structure, adjoined to *V'*, which is in a way similar to Korean *-key* resultative, but different from Japanese complement type resultative. The difference/similarity seems to be brought about by the morphemes *-tAl*, *-key* and *-ni*, each of which determine the syntactic and semantic characteristics of "resultative" clauses.

Whether or not Mongolian *-tAl* "resultative" construction represents the true resultative depends upon the definition of the resultative. As we stated in this paper, Mongolian resultative does not take the complement structure, but the *-tAl* resultative phrases are not the mere manner/resultant adverbs which modify the main verb; the *-tAl* resultative phrases are indeed predicated with arguments (their notional subjects) in their embedded TP clauses. Therefore, we used the terminology "resultative" in a loose context, and would therefore like to emphasise again that Mongolian resultatives do not abide some rules discovered with the complement type resultatives.

On the process of investigating Mongolian resultatives, we discussed about varieties of related issues such as case marking system, clausal structure, aspect & tense, adjectives, adverbs, adjuncts, complements and so on. We very much hope that these topics mentioned in this paper are also useful and trigger further research in Mongolian.

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