LANGUAGE AND LINGUISTICS 14.6:1075-1103, 2013
2013-0-014-006-000239-1

The Grammatical Temporal System from Middle Mongolian to Modern Mongolian*

Suying Hsiao
Academia Sinica

The paper traces the development of the Mongolian temporal system from Middle Mongolian to Modern Mongolian, and deals with questions of how and why languages change typologically. It is shown that Mongolian is undergoing analytic-synthetic cyclic changes. On the one hand, Mongolian is getting more analytic, encoding past time with a combination of a perfective verbal noun and the present tensed existential verb. Previously it employed a synthetic inflectional verb to denote past tense. On the other hand, the emergence of modern non-past suffixes *-na*/*-ne* shows that there is also a series of changes making Mongolian more synthetic. Symmetry and economy are two opposing motivations for changes in Mongolian verbal paradigms.

Key words: Mongolian verb, typological change, analytic-synthetic cycle, symmetry & economy

1. Introduction

The history of Mongolian is divided into Old Mongolian (~12th century AD), Middle Mongolian (13th to 16th centuries), Late Mongolian (17th to 19th centuries) and Modern Mongolian (20th century ~).[1] Previous work on the Mongolian temporal system

* I am very grateful to the Graduate Institute of Mongolian Languages and Scripts, Inner Mongolia University for making their Corpus of Modern Mongolian accessible to me. Thanks also go to Academia Sinica for partial financial support for field trips between 2003 to 2007. This study is part of a long-term investigation on the grammatical temporal system of Mongolian from historical and typological perspectives funded by Taiwan's National Science Council to the author (NSC 92-2411-H-001-077, NSC 93-2411-H-001-088, NSC 95-2411-H-001-071, NSC 96-2411-H-001-072). Parts of this paper were presented at the 9th International Congress of Mongolists (August 8-12, 2006, Ulaanbaatar), the 50th Meeting of the Permanent International Altaistic Conference (July 1-6, 2007, Kazan) and an earlier version was presented at the Workshop on the Representation of Time in Asian Languages (Oct. 26-28, 2011, Taipei). Special thanks go to the audience who attended those conferences and two anonymous reviewers of *Language and Linguistics* for their valuable comments.

[1] Poppe (1955:15-16) treats Mongolian from the 17th century as Modern Mongolian based on

have been mainly synchronic. Street (1957, 2008) and Ozawa (1961) tackle indicative endings in Middle Mongolian, while Binnick (1979, 1990), Hashimoto (1993), Wu (1995, 1996), and Song (1997), among others, deal with the tense system in Modern Mongolian. In (2007a), I show that pre-verbal negative adverbs *ülü* and *ese* gradually gave way to the negative predicate *ügei* and the negative verbal suffix *-gui*/*-güi* in Mongolian diachronically. Among typological changes in negative constructions, Mongolian is getting more analytic. Modern Mongolian expresses past time by a perfective verbal noun and a predicate of 'existence' rather than a synthetic indicative verb. I further propose that the competition between these two sets of negators triggered a series of syntactic changes in the temporal system of Mongolian and that there exists a 'synthetic-analytic cycle', as shown in Figure 1, in Mongolian historical syntax.

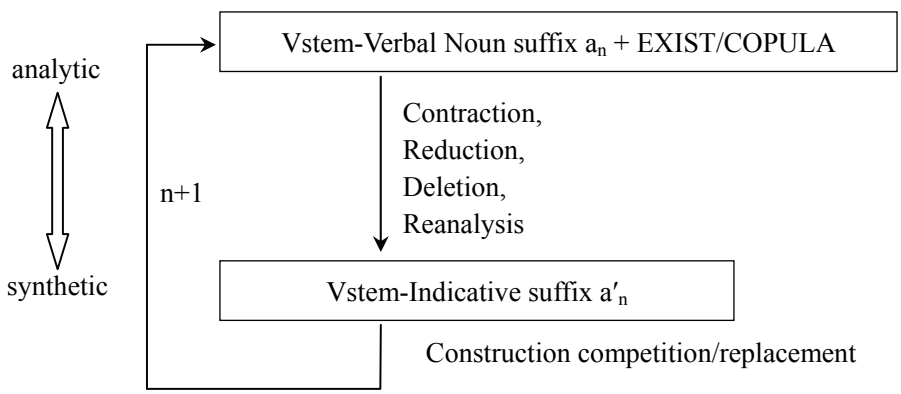


Figure 1: Substitution of sets of verbal suffixes and the Analytic-Synthetic cycle[2]

This paper traces diachronic developments of the temporal system from Middle Mongolian to Modern Mongolian. Data are drawn from the Inner Mongolia University Modern Mongolian Corpus and Mongolian text corpora from 13th to 19th centuries compiled by the author, including *Monggol-un niuča tobča'an* 'the Secret History of the Mongols' (hereafter *SHM*), Mongolian Monuments in Uighur-Mongolian Script from 13th to 16th centuries (Tumurtogoo 2006), Mongolian Monuments in 'Phags-pa Script (Tumurtogoo 2010), *Erdeniyin Tobčiya* 'Precious Summary' (hereafter *ET*), *Mengyu Laoqida* (Korean *Mong-eo Nogeoldae*)[3] 'Mongolian edition of *Laoqida*' (hereafter

phonological changes. Chinggeltei (1991:1-2) names this period Late-Modern Mongolian and divides it into two sub-periods, Late Mongolian (17th century to 1948) and Modern Mongolian (1949~).

[2] Figure 1 is adapted from Figure 4 in Hsiao (2007a).

[3] *Nogeoldae*, Chinese *laoqida* (老乞大). *Lao* (老) means 'old hand, expert', while *qida* (乞大)

MLQD), the 1716 wood-block Mongolian *Geser* published in Beijing (hereafter *Beijing Geser*) and *Yeke Yuwan Ulus-un manduγsan törü-yin Köke Sudur* 'Blue Chronicle' (hereafter *Köke Sudur*). *SHM*, originally written in 1228,[4] is regarded as a representative sample of the Middle Mongolian language. It is the earliest surviving Mongolian text of considerable length. The original in Mongolian script has been lost, but transcriptions of texts in Chinese characters dating from the late-14th to early-15th centuries have been preserved. *ET*, *MLQD*, *Beijing Geser*, and *Köke Sudur* belong to the Late Mongolian period. *ET* was compiled by Saγan Sečen Hungtaiǰi in 1662. *MLQD* was a textbook used in learning Mongolian at the Office of Interpreters in Korea, translated from a Chinese edition by Li et al. in 1741 and revised in 1776 and 1790. *Beijing Geser* tells stories about a hero called *Geser qaγan* 'King Geser' and the language in *Geser* contains some oral features. *Köke Sudur* was written by Inǰannasi (1837-1892), whose works mark the end of Late Mongolian. It will be shown that Mongolian is indeed undergoing analytic-synthetic cyclic changes.

2. Empirical data

Mongolian is an agglutinative language. Verbs are marked by suffixes for the imperative, indicative, verbal noun, and converb forms. Indicative suffixes contain not only temporal but also modal or aspectual meanings. Verbal nouns are nominalized verbs and possess characteristics of both verbs and nouns. Converbs are non-finite and used for connecting clauses. Roles of nouns are marked by a system of grammatical cases including nominative, accusative, genitive, dative, locative, ablative, instrumental, and comitative cases. Mongolian exhibits vowel harmony. Masculine (a, o, u) and feminine (e, ö, ü) vowels do not co-occur in a non-compound word, and neutral vowel (i) is free from the constraint.[5]

---

means *qidan* (契丹) in Chinese. It refers to 'China' in the languages of some nationalities in the north and west of China, e.g. Russian Китай (*Kitáǐ* 'China'), Mongolian *Kitad* 'China, Chinese'. Therefore, the term *laoqida* means 'China Hand'.

[4] There is no consensus among researchers regarding the date of *SHM*. According to the final paragraph (§282) of *SHM*, it was completed in the Year of the Rat, when the Great Assembly was gathered. A generally accepted view is that the Year of the Rat was 1240, one year before Ögödei Khaan's death. Another popular date is 1228, one year after Chinggis Khan's death. De Rachewiltz (2004:xxix-xxxiv) reviews previous proposals and favors the opinion that the original edition of *SHM* was written in the Year of the Rat 1228, while the sections on Ögödei Khaan were added as a supplement in a revised, enlarged edition. We have a preference for de Rachewiltz's opinion.

[5] Masculine vowels are commonly transliterated as back vowels and feminine vowels as front vowels in Mongolian studies. However, modern Mongolic languages exhibit diverse vowel

There are four sets of non-past indicative markings in *SHM*, Uighur Mongolian monuments and 'Phags-pa Mongolian monuments. They are -mU/-mUi, -yU/-yi, -U/-Ui/ -i/-Ai and -d.[6] See (1) to (4).[7]

(1) a. üdür büri man-dur ireǰü esügčileǰü odumu.
day all 1PL-DAT come.CVB drink_yogurt.CVB depart.NONPST
'Every day he comes to us, drinks yogurt and leaves.' (SHM, Vol. 1, 31)

b. Yesügei aqa Temüǰin-i maši mörö:lǰü öre-be:n
Yesügei elder_brother Temüǰin-ACC very think.CVB heart-REFL
ebedümü.
hurt.NONPST
'Elder brother Yesügei misses Temüǰin so much that his own heart hurts.' (SHM, Vol. 2, 69)

c. šibawu:lan abalan yabuqui-dur ǰoboldumui.
falcon.CVB hunt.CVB go.IMPFV-DAT suffer.RECP.NONPST
'At the moment when (I) go falconing and hunting, they are suffering together with (me).' (SHM, Vol. 10, 233)

d. Qorutu moγai-a:ča gemü:d törümüi.
poisonous snake-ABL sin.PL be_born.NONPST
'Sins are born from poisonous snakes.' (Subhāsitaratnanidhi, IV)

---

harmony types. For instance, Oirat and Kalmyk varieties have palatal (front-back) vowel harmony (Quejingzhabu et al. eds. 1986, Svantesson et al. 2005:149), while Khalkha and Inner Mongolian varieties show pharyngeal (RTR, Retracted Tongue Root) vowel harmony (Svantesson 1985, 2005, Hsiao 1995). See Svantesson (1985) and Ko (2011) for opposite hypotheses on the direction of diachronic vowel harmony shift in Mongolian. The status of neutral vowel *i* is debatable. Orthographically there is only one form for the vowel *i*, but it has two phonetic variants, i.e. /i/ and /ɨ/.

[6] Capital letters stand for varieties in concordance with vowel harmony rules. Generally speaking, the difference between -*U* and -*Ui* is number, and -*U* and -*i* gender. -*Ui* forms mark plural subjects, and -*i* forms mark female subjects. See Ozawa (1993:3-22), Garidi (2006:327-330). However, the number and gender concordance between the subject and verb is not obligatory.

[7] List of abbreviations used in glosses in this article: ABL, ablative case; ACC, accusative case; APL, applicative; CAUSE, causative morpheme; COOP, cooperative; CVB, converb; DAT, dative case; EXP, experience; GEN, genitive case; HAB, imperfective habitual; IMP, imperative; IMPFV, imperfective; IND, indicative form; ITER, iterative; LOC, locative case; NEG, negation; NM, nominalizer; NOM, nominative; NONPST, non-past; NSR, non-subject relative; PART, particle; PASS, passive morpheme; PFV, perfective; PL, plural; POSS, possessive; PRON, pronoun; PRS, present; PST, past; Q, question particle; QUOTE, quotation marker; RCM, relative clause marker; RECP, reciprocal; REFL, reflexive; SG, singular; SR, subject relative; TOP, topic marker; VOL, volition.

(2) a. Garudi šibaγu:n qoru-tu moγai-yi alayu. Turaγun
king_of_birds bird poison-COM snake-ACC kill.NONPST crow
ülü čidayu.
NEG be_able.NONPST
'The king of birds kills poisonous snakes; crows cannot.'
(Subhāsitaratnanidhi, I)

b. ökin kö'ü:n manu öngge üǰegdeyü.
girl child(ren) our beauty watch.PASS.NONPST
'Our girls' beauty is beheld.' (SHM, Vol. 1, 65)

c. amin ele činu bö'e:sü öki qatu oluyi ǰe.
life this your exist.CVB girl wife get.NONPST PART
'If your life exists, you shall find a wife.' (SHM, Vol. 1, 55)

(3) a. üdür gege'e:n bolγaǰu üǰe'e:sü qoyi:nača nigen
day light become.CVB see.CVB behind.ABL one
kü'ü:n ayi:su.
man come.NONPST
'At dawn (they) saw a man coming from behind.' (SHM, Vol. 6, 172)

b. Öčügü:ken erdemten omuγtu bolui.
little scholars arrogant exist.NONPST
'Shallow scholars are arrogant.' (Subhāsitaratnanidhi, IV)

c. ama-'a:r alaγsan ači'a:su ülü boli.
mouth-INS kill.PFV load.CVB NEG become.NONPST
'If one (wish to) load the (prey) killed with (one's) mouth, it will not do.'
(SHM, CVol. 1, 255)

d. Naiman kürčü ayi:sai.
Naiman arrive.CVB come.NONPST
'The Naiman are coming.' (SHM, Vol. 7, 195)

(4) a. qubiya:ldu-d ǰe bida.
distribute-NONPST PART we
'We shall distribute (them among us).' (SHM, Vol. 5, 153)

b. Ker-ber keme:rün bida uqad ǰa.
how-INS say.CVB we know.NONPST PART
'We know how to say.' (The Edict of Khubilai Khan 1261)

c. Erdeni-tü quluγan_a ed-iye:n buliγdaǰu
treasure-COM mouse property-REFL.POSS rob.PASS.CVB

qulaγqu küčün inü baγu:raǰuγu:i keme:ldüd.
steal.IMPFV power 3.POSS decline.PST say.RECP.NONPST
‘(People) say that when the mouse with the treasure was robbed of its own properties, its thieving power declined.’ (Subhāsitaratnanidhi, IV)

There are also four sets of past indicative markings in Middle Mongolian. They are: -bA/-bAi/-bi, -ǰUGU/-čUGU/-ǰUGUi/-čUGUi/-ǰigi/-čigi/-ǰiGAi, -lUGA/-lUGAi/-lAGA/-lAGAi/-ligi/-liyi, and -GA/-GAi.

(5) a. te'ü:n-dür Temüǰin uyi:la'a:d γarču yorčiba.
he/she/it-DAT Temüǰin cry.CVB come_out.IMPFV depart.PST
‘At that, Temüǰin cried, went out and departed.’ (SHM, Vol. 2, 73)

b. Büri-bökö ülü ilaγdaqu kü'ü:n unaǰu ögbe.
Büri-bökö NEG overcome.PASS.IMPFV person fall.CVB give.PST
‘Büri-Bökö, a man who is not to be overcome, fell on purpose.’ (SHM, Vol. 4, 140)

c. Toγto'a:-yin esgel qali'u:n-i ǰamuqa anda-da
Toγtoa-GEN yellowish_white_mare-ACC ǰamuqa brother-DAT
unu'u:lbai.
ride.CAUSE.PST
‘(He) made Anda Jamuqa ride Toγtoa’s yellowish white mare.’ (SHM, Vol. 3, 117)

d. Barulas-ača Qubilai Qudus aqa-nar de'ü:-ner
Barulas-ABL Qubilai Qudus elder.brother-PL younger.brother-PL
irebei.
come.PST
‘Qubilai and Qudus brothers came from the Barulas.’ (SHM, Vol. 3, 120)

e. Temülün neretei nigen ökin törebi.
Temülün name.COM one girl be_born.PST
‘One daughter named Temulun was born.’ (SHM, Vol. 1, 60)

(6) a. Odčigin noyan oduγsan irge-be:n γuyi:ra
Odčigin chief go.PFV people-REFL.POSS request.CVB
Soqor neretü elči-ye:n ile:ǰü'ü:i.
Soqor name.COM messenger-REFL.POSS send.PST
‘Chief Odcigin sent his messenger named Soqor to request his people who went (there).’ (SHM, Vol. 10, 245)

b. Bars-un arasun nemlegsen elǰigen tariya:n idegsen-ü
tiger-GEN skin wear.PFV donkey grain eat.PFV-GEN
qoyi:n_a alaγdaǰuγu:i.
afterwards kill.PASS.PST
'The donkey which wore a tiger's skin was killed after eating grains.' (Subhāsitaratnanidhi, V)

c. Gergei inü Gang ši-da Sing qoo gün
wife 3.POSS Gang familyname-DAT Sing guo gung
vusin ner_e ögčigi.
lady name give.PST
'His wife, with the family name Gang, was given the title Lady Sing guo gung.' (Chang Ying-ǰüi 1335)

(7) a. ... Yedi-tubluγ neretü noyan inu qara'u:l yabuǰu
Yedi-tubluγ name.COM chief 3.POSS sentry go.CVB
bidan-u qara'u:l-a hüldegdeǰü a'u:la ö'e:de
we-GEN sentry-DAT chase.PASS.CVB mountain uphill
duta'a:qu bolun olang-niya:n tasuraγdaǰu
flee.IMPFV become.CVB belly_strap-REFL.POSS detach.PASS.CVB
tende bariγdalu'a:.
there catch.PASS.PST
'While his chief named Yedi-tubluγ, being a sentry, was chased by our sentries and fleeing to the mountain, his belly strap was broken and he was caught there.' (SHM, Vol. 5, 158)

b. ǰorγal γu:n-u Hula'a:nu:d Bolda'u:d-ta bida ese 'ü:
ǰorγal γun-GEN Hula'anud Bolda'ud-DAT we NEG Q
ügüleldülü'e:i?
say.RECP.PST
'Didn't we say to each other at the Hula'anud Bolda'ud of the Jorqal Qun?' (SHM, Vol. 6, 177)

c. Tayang-un eke Gürbesü-yi Činggis-qaha:n
Tayang-GEN mother Gürbesü-ACC Činggis-qahan
abčira'u:lǰu .... Činggis-qaha:n abula'a.
catch.CAUSE.IMPFV Činggis-qahan take.PST
'Genghis Khan made someone bring Tayang's mother Gurbesu to him,... and took her (as his wife).' (SHM, Vol. 7, 196)

d. Ene uring-a terigü:leši ügei orčilang-dur-i
this anger-ACC beginningless NEG transmigration_cycle-DAT-ACC

kiǰaγa:lal ügei qour kürgegdelege:i bidan-dur.
limitation NEG harm deliver.PASS.PST we-DAT
'Harms without limitation were delivered to us by the anger, which transmigrates cyclicly since beginning of the material world.'
(Subhāsitaratnanidhi, IX)

e. gergei inü Börte üǰin-ü eke Čotan neretei büliyi.
wife 3.POSS Borte Ujin-GEN mother Cotan name.COM be.PST
'His wife, Borte Ujin's mother, was named Cotan.' (SHM, Vol. 2, 94)

(8) a. ... Šigi-qutuqu ese abu'a.
Sigi-qutuqu NEG take.PST
'Sigi Qutuqu didn't take (them).' (SHM, CVol. 1, 252)

b. Tayiči'u:d aqa de'ü: činü naidamu
Tayiči.PL elder_brother younger_brother 2.POSS expect.NONPST
ke'e:n medeǰü maši herüǰü čökele'e:i.
QUOTE know.CVB very be_troubled.CVB loss_hope.PST
'Knowing that your Tayičiud brothers are jealous, (I) am very troubled and have lost hope.' (SHM, Vol. 2, 94)

Along with a temporal meaning, indicative suffixes might differ in mood or aspectuality, which we shall not discuss in this paper. Besides, aspectual suffixes sometimes occur at the position for indicative endings. The distributions of indicative endings in Middle Mongolian texts *SHM*,[8] Uighur Mongolian monuments and 'Phags-pa Mongolian monuments is shown in Table 1.[9]

[8] Based on the Chinese transcriptions, *γ* and *g* occurring in Past suffixes are generally transcribed with <'> in the literature for *SHM*.

[9] Defective copula verbs *büi*, *bei*, *buyu* and their negative forms *bisi*, *busu* are excluded in our discussion in this paper.

Table 1: The distributions of indicative endings in Middle Mongolian

	Endings	*SHM* (1228)	'Phags-pa Mongolian (XIII-XIV)	Uighur Mongolian (XIII-XVI)	Sum
Nonpast	*-mu/-mü*	64		189	253
	-mui/-müi	64	7	222	293
	-m			2	2
	-yu/-yü	32	12	444	488
	-u/-ü; *-ui/-üi*; *-i*; *-ai/-ei*	43	2	100	145
	-d	12	4	5	21
	-qu/-kü	167	42	354	563
	-qu/-kü {buyu/büi/bei/bisi/ügei}	1		27	28
Past	*-ba/-be*	867	2	217	1,086
	-bai/-bei	254	72	339	665
	-bi	35	1	1	37
	-ǰuγu/-ǰügü; *-čuγu/-čügü*; *-ǰiγu/-čiγu*	164		166	330
	-ǰuγui/-ǰügüi; *-čuγui/-čügüi*; *-ǰigüi*	185	20	67	272
	-ǰigi/-čigi; *-ǰiγai*	2		5	7
	-luγa/-lüge; *-laγa/-lege*	196		36	232
	-luγai/-lügei; *-laγai/-legei*	45		7	52
	-ligi/-liyi	4			4
	-γa; *-γai*	15			15
	-γsan/-gsen	1		3	4
	-γsan/-gsen {buyu/büi/bei/bisi/ügei}			8	8

The distributions of indicative endings in Late Mongolian texts *ET* and *MLQD* is shown in Table 2.

Table 2: The distributions of indicative endings in Late Mongolian

	Endings	*ET* (1662)	*MLQD* (1790)	Sum
Nonpast	*-mu/-mü*	46	15	61
	-mui/-müi	159	59	218
	-m	40	4	44
	-nam/-nem	4	54	58
	-na/-ne		181	181
	-yu/-yü	40	3	43
	-ui/-üi; *-i*; *-ai/-ei*	25	131	156
	-qu/-kü	44	16	61
	-qu/-kü {buyu/büi/bei/bisi/busu/ügei}	23	67	90
Past	*-ba/-be*	95	120	215
	-bai/-bei	612		612
	-bi	1		1
	-ǰuγu/-ǰügü; *-čuγu/-čügü*; *-ǰiγu/-čiγu*	117	1	118
	-ǰuγui/-ǰügüi; *-čuγui/-čügüi*; *-ǰigüi*	145	2	147
	-ǰi		26	26
	-luγa/-lüge; *-laγa/-lege*	95		95
	-luγai/-lügei; *-laγai/-legei*	79		79
	-le/-lu	10	35	45
	-lai	1		1
	-γsan/-gsen	9	2	11
	-γsan/-gsen {buyu/büi/bei/bisi/busu/ügei}	2	22	24

The non-past suffix *-d* and past suffix *-γa* and *-γai* do not occur in *ET* or *MLQD*, while *-nam*/*-nem* and *-na*/*-ne* emerge.

(9) a. yakiǰi sibaγ_a suγulǰu bičig čeǰilemü?
how_to_do lot draw.CVB book memorize.NONPST
'How to draw in a lottery to memorize books?' (MLQD, Vol. 1, 04b, Line 4-5)

b. manaγar tabun jaγun elčis-tür qurim öggümüi.
tomorrow five hundred envoys-DAT feast give.NONPST
'Tomorrow (I) will give a feast for the five hundred envoys.' (ET, 13b22-13b23)

(10) a. tere ber eǰen boγda Temüǰin kemekü endeki
that PART master holy Temujin say.IMPFV being_here
tendeki ulus-i abču yabunam genem.
being_there people-ACC take.CVB go.NONPST say.NONPST
'It is said that holy Temujin, the master, goes here and there to obtain peoples.' (ET, 36a07-36a08)

b. liyoodung qotun dotor saun_a.
Liaodong city inside dwell.NONPST
'(I) live in the Liaodong city.' (MLQD, Vol. 3, 09b, Line4)

(11) tere caγ-tur kümün kemekü ner_e ügei.
that time-DAT person say.IMPFV name NEG
yerüngkei-yin ner_e inu amitan kemen nereiddüyü.
general-GEN name 3.POSS living_being QUOTE name.PASS.NONPST
'At that time, there is no name for "person". Their cover term (with other creatures) is living being.' (ET, 2a04-2a06)

(12) či ali γaǰar-un köbegün bui?
you which place-GEN son be
'Where are you from?' (ET, 8b04-8b05)

(13) a. bi dolon sar_a-yin sine-der mordaba.
I seven month-GEN new-DAT depart.PST
'I departed in early July.' (MLQD, Vol. 5, 4b, Line3-4)

b. tere caγ-ača qoyinaγsida edüged-tür kürtele kümün
that time-ABL hereafter now.DAT-DAT arrive.CVB person
kemen nereidkü bolbai.
QUOTE name.IMPFV become.PST
'Since then (they) are called human beings.' (ET, 3v14-3v16)

c. ... ečige-yin anu čolabar Darqan baγatur kemebi.
father-GEN 3PL.POSS title.INS Darqan baγatur say.PST
'(They) called (him) Darqan-baγatur according to their father's title.' (ET, 84r29-84v12)

(14) a. tedüi tegüni Dobun mergen degüü-degen
thereupon he/she/it.ACC Dobun mergen younger_brother-DAT.REFL.POSS
kelelčeǰü gergei bolγaǰuqu.
say.COOP.CVB wife make.PST
'So (he) discussed (with the girl's family) and made her become his own younger brother Dobun-mergen's wife.' (ET, 25r10-25r11)

b. tere ber Enedkeg-ün Suvandu kemekü baγsi-ača
that PART India-GEN Suvandu say.IMPFV teacher-ABL
uqaγan-u nom-i surčuqui.
intellect-GEN book-ACC study.PST
'(He) learned the Intellect Books from the teacher named Suvandu of India.' (ET, 34r01-34r03)

c. bi temdeg talbiǰi.
I mark put.PST
'I have put the marks.' (MLQD, Vol. 5, 18a-b, Line7-1)

(15) a. tegünü qoyina, ene časutu-yin oron-a dumda
he/she/it.GEN after this snow.COM-GEN territory-DAT middle
bükü čakravard qaγan-u caγ-tur Joγro
be.IMPFV wheel_turning ruler-GEN time-DAT Joγro
klui rjalmsan kemekü kelemüči bolun törölüge.
klui rjalmsan say.IMPFV interpreter become.CVB be_born.PST
'After that, (you) were born to be an interpreter named Joγro klui rjalmsan during Middle Wheel-Turning ruler's era in this Snow country.' (ET, 90r25-90v09)

b. tendeče qaγan tüsimel qoyar-un yosun bülüge kemeǰü,
thence king official two-GEN doctrine be.PST say.CVB
nom-un qaγan Mayidari-yin gegen-eče čoγtu
book-GEN king Mayidari-GEN Serene_Holiness-ABL splendid
včir sadu-yin abisig-i qamtubar sonosuluγai.
diamond good-GEN consecration-ACC together.INS hear.PST
'(They) listened to the Consecration of *čoγtu včir sadu* from the religious king Mayidari Serene Holiness together according to the doctrines of kings and officials respectively.' (ET, 91r24-91r27)

c. nidunun γurban čin-dü niǰeged gin bile.
last_year three čin-DAT each gin be.PST
'(It) was three čin[10] a gin[11] last year.' (MLQD, Vol. 5, 3b, 1-2)

We shall discuss the historical changes of indicative markings in the next section.

[10] *čin*, Chinese *qián* (錢), a unit of currency.
[11] *gin*, Chinese *jīn* (斤), an unit of weight. One *gin* in Qing dynasty (1644-1911) equals to 596.82 grams.

3. The analytic-synthetic cycle and historical changes in paradigms of Mongolian verbs

3.1 Analytic-synthetic continuum

A language is analytic if it shows a low ratio of words to morphemes and syntactic relationships are expressed by word order or individual function words rather than by inflectional affixes. A synthetic language forms words by derivational morphemes; grammatical relationships are expressed by means of inflections.

The analytic-synthetic dichotomy, however, is not a discrete one, but a continuum. There exist highly analytic languages such as Modern Mandarin Chinese and highly synthetic (polysynthetic) languages such as Classical Ainu. See (16) and (17) for examples.

(16) Zhangsan ba shu jie gei le Lisi.
Zhangsan hold book(s) lend give PFV Lisi
'Zhangsan lent (the) book(s) to Lisi.' (Modern Mandarin Chinese)

(17) Usa-opuspe a-e-yay-ko-tuyma-si-ram-suy-pa.
various-rumors 1SG-APL-REFL-APL-far-REFL-heart-sway-ITER
'I wonder about various rumors.' (literally 'I keep swaying my heart afar and toward myself over various rumors.') (Classical Ainu, Shibatani 1990:72)

Typologically analytic languages might exhibit synthetic features, and synthetic languages might display analytic features. Example (18) shows that Japanese is more synthetic in verbal morphology but less synthetic in nominal morphology. Furthermore, English is more analytic than Japanese in causative formation. Causation is expressed by a periphrastic construction '*make…to do*' in English and by a verbal suffix *-ase* in Japanese.

(18) sensei-ga eiko-ni piano-o hikaseta.
teacher-NOM Eiko-DAT piano-ACC play.CAUSE.PST
'(The) teacher made Eiko to play the piano.'

Besides, that a language was synthetic at some historical stage does not mean that it will be synthetic at any other period. For instance, Old Chinese is more synthetic than Modern Mandarin as shown in (19a) and (19b). Compare the verb *yin* 'cause to drink' in (19a) and *rang ma he shui* 'let horse(s) drink water' in (19b).

(19) a. bori deng shan wang fenghuo, huanghun
daytime climb mountain watch warning-flames evening
yin ma bang Jiao he.
drink.CAUSE horse besides Jiao river
'(We) climbed the mountain in the daytime to watch the warning flames, and let horses drink water besides the Jiao River in the evening.' (*Gu Congjun Xing* 'Ancient Army Services' by Liqi)

b. Women huanghun-shi zai Jiao he pang rang
we evening-time at Jiao river beside let
ma he shui.
horse(s) drink water
'We let horses drink water beside the Jiao River in the evening.'

The history of Korean negation illustrates synthetic-analytic cyclic changes, too. There are two types of negation in Korean, which are often called short-form/pre-verbal negation and long-form/post-verbal negation respectively in the literature. It is claimed that these two types of negation are historically related. Kim (1977) argues that Korean negation has drifted from short-form to the long-form type. According to Kim (1977), negative adverb *ani* occurs before the matrix verb *ca-n-ta* 'sleep' in (20a) while it occurs as part of the verb phrase *ani hanta* and take the nominalized clause *ai-ka ca-ci* as object in (20b).

(20) a. ai-ka ani ca-n-ta.
child-NOM NEG sleep-PRS-IND
'The child is not sleeping.' (Kim 1977: ex.(2b))

b. ai-ka ca-ci (rŭl) ani ha-n-ta.
child-NOM sleep-NM ACC NEG do-PRS-IND
'The child is not sleeping.' (Literally 'The child is not doing the activity of sleeping.') (Kim 1977: ex.(2c))

Kim (1977) claims that negator *ani* takes adjunt position in short-form negation, but occupies the sentence-final position with the verb *ha-* 'do' in long-form negation. Though the proposal is insightful, Kim (1977) does not argue explicitly why in the case of long-form negation, *ani* is not an adverb in the so-called 'verb phrase' *ani hanta*. In our analysis, example (20b) shows that Korean gets more analytic in which inflectional markings are suffixed onto a light verb 'do' and actions are expressed by deverbal nouns. The development from negative adverb to negative predicate was not finished at this stage. Negator *ani* in both (20a) and (20b) occur at the same pre-verbal adjunct

position. The only difference is that in (20a) negator *ani* occurs before a lexical verb, but in (20b) it occurs before a light verb 'do'.

There are indeed empirical data supporting Kim's (1977) 'adverb-to-predicate' analysis, however. Both Kim (1995) and Kim (1996) note that the negated predicate *ani* sounds archaic and is barely used in modern Korean. Instead, *an*, presumably a reduced form of *ani*, is used in short-form negation. Besides, *ani ha-* is contracted and turns into a negative verb *anh-* in the long-form negation.[12] We claim that at this stage the 'adverb-to-predicate' development was completed. See (21) and (22).

(21) a. John-un an ka-ass-ta.
John-TOP NEG go-PST-IND
'John did not go.' (Kim 1995:31, ex.(47))

b. John-un ka-ci anh-ass-ta.
John-TOP go-NM NEG-PST-IND
'John did not go.' (Kim 1995:32, ex.(49))

(22) a. Pi-ka an o-n-ta.
rain-NOM NEG come-PRS-IND
'It does not rain.' (Kim 1996:4, ex.(2b))

b. Pi-ka o-ci an-nun-ta.
rain-NOM come-NM NEG-PRS-IND
'It is not the case that it rains.' (Kim 1996:5, ex.(2c))

3.2 Historical changes in paradigms of Mongolian verbs

3.2.1 The emergence of *-na*/*-ne*: an analytic to synthetic change

Table 3 lists the distribution of non-past indicative markings in all finite clauses in *SHM*, Uighur Mongolian monuments, 'Phags-pa Mongolian monuments, *ET*, *MLQD*, and the Inner Mongolia University Modern Mongolian Corpus (2007). It shows the emergence of the non-past indicative suffixes *-na*/*-ne* and the imperfective habitual verbal nominal suffixes *-daγ*/*-deg*, and the declination of the archaic *-mu*, *-yu*, *-u*, *-d* markings. See Figure 2.

[12] The phonetic realization of *anh-* is *an-* in certain environments. See (22b) for example.

Table 3: Non-past verbal indicative endings in all finite clauses in some Middle Mongolian texts (*SHM*, Uighur Mongolian monuments and 'Phags-pa Mongolian monuments), Late Mongolian texts (*ET* and *MLQD*), and Inner Mongolia University's Modern Mongolian Corpus

	Middle Mongolian				Late Mongolian			Modern Mongolian
	SHM (1228)	'Phags-pa Mongolian (XIII-XIV)	Uighur Mongolian (XIII-XVI)	Sum	*ET* (1662)	*MLQD* (1790)	Sum	IMU's MMC (2007)
Sets of markings	Tokens (%)	Tokens (%)	Tokens (%)	Tokens (%)	Tokens (%)	Tokens (%)	Tokens (%)	Tokens (%)
-mu (*-mu*/*-mü*), *-mui* (*-mui*/*-müi*), *-m*	128 (33.4)	7 (10.4)	413 (30.8)	548 (30.6)	245 (64.3)	78 (14.7)	323 (35.4)	593 (1.6)
-yu (*-yu*/*-yü*), *-yi*	32 (8.4)	12 (17.9)	444 (33.1)	488 (27.2)	40 (10.5)	3 (0.6)	43 (4.7)	
-u (*-u*/*-ü*), *-uyi* (*-ui*/*-üi*), *-ai* (*-ai*/*-ei*), *-i*	43 (11.2)	2 (3.0)	100 (7.4)	145 (8.1)	25 (6.6)	131 (24.7)	156 (17.1)	
-d	12 (3.1)	4 (6.0)	5 (0.4)	21 (1.2)				
-na/*-ne*						181 (34.2)	181 (19.8)	18,175 (49.2)
-nam/*-nem*					4 (1.0)	54 (10.2)	58 (6.4)	
-qu/*-kü* {ø, EXIST.Nonpast, Neg (EXIST.Nonpast)}	168 (43.9)	42 (62.7)	381 (28.4)	591 (33.0)	67 (17.6)	83 (15.7)	151 (16.6)	9,131 (24.7)
-day/*-deg* (*Neg*)								9,033 (24.5)
Sum	383 (100.0)	67 (100)	1,343 (100.0)	1,793 (100.0)	381 (100.0)	530 (100.0)	912 (100.0)	36,932 (100.0)

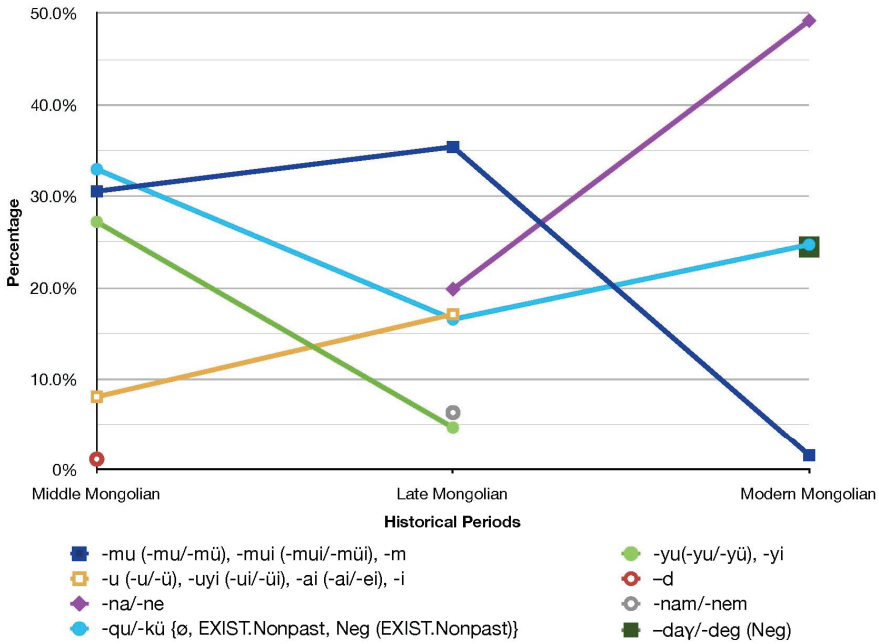


Figure 2: Developments of Non-past verbal indicative endings from Middle Mongolian to Modern Mongolian

The *-nAm* and *-nA* forms emerged in Late Mongolian and *-nA* became the most commonly used forms (49.2%) in Modern Mongolian. As a whole, the frequency of the *-mU* series in Middle Mongolian and Late Mongolian are high (30.6% vs. 35.4%), while the frequency of the *-mU* series in Modern Mongolian is only 1.6%. However, the distributions of indicative endings in Late Mongolian texts are quite different. The frequency of *-mU*/*-mUi*, *-m*, *-nAm*, and *-nA* in Late Mongolian texts varies from text to text. The *-nAm* (> *-nA*) endings appeared and competed with the old *-mU*/*-mUi* and *-m* endings.

The language of historical chronicles such as *ET* and *Köke Sudur* is more conservative than that of a conversation manual like *MLQD* or a legend like *Beijing Geser*, which contain more oral properties. In *ET*, 245 non-past finite clauses take the *-mU*/*-mUi*/*-m* endings, and only 4 clauses take the *-nAm* forms, none takes the *-nA* endings. On the other hand, among 530 non-past finite clauses, 235 clauses are in the *-nA* or *-nAm* forms, while only 78 clauses are in the *-mU*/*-mUi*/*-m* forms in *MLQD*. Besides, *Beijing Geser* contains more *-nAm* endings than *-mU*/*-mUi*/*-m* endings, but *Köke Sudur* contains much more *-mU*/*-mUi*/*-m* endings. See Figure 3.

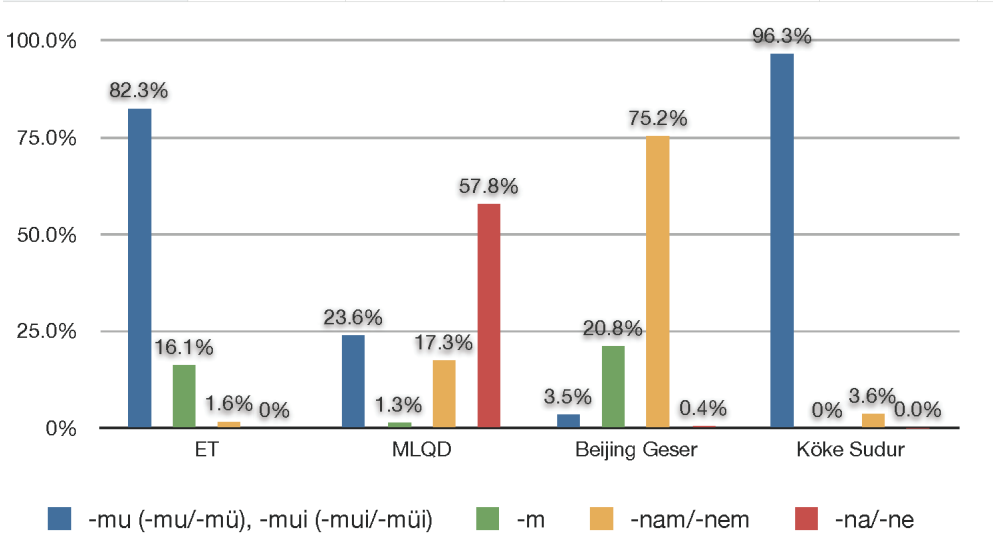


Figure 3: Comparison of tokens of the *-mU*/*-mUi*, *-m*, *-nAm*, and the *-nA* endings in four Late Mongolian texts

We propose that the path of the derivation of *-na* is (23). According to our proposal, an analytic construction '*-n* + EXIST verb' first was contracted into a more synthetic form *-nam*. When *-nam* emerged as an indicative ending, *-nem* was derived by the vowel harmony rule. *-nAm* underwent further attrition, becoming *-nA*.[13]

(23) *-n* {*a-mu*/*a-mui*/*a-mi*} > *-nam* > *-nAm* > *-nA*

Cases of *-n a-mu*(*i*) and *-nAm* are testified in *Erdeni-yin Točiya* (1662), as illustrated by (24), (25) and (26). In *ET*, *-n a-mu* occurs 5 times, *-n a-mui* 21 times, and *-nAm* 4 times.

(24) a. Quuqai dayiu čingsang čola (abura) qurimtai ireǰü,
Quuqai dayiu čingsang title take.CVB feast.COM come.CVB
qaγan-i küličen keger_e saγun amu.
king-ACC wait.CVB steppe sit.CVB exist.NONPST
'Quuqai, who holds the title *dayiu*, coming with a feast, sits in the steppe waiting for the king to ask for the title *čingsang*.' (ET, 51b03-51b04)

[13] *-nA* is phonetically realized as *-n* in some modern Mongolian, e.g. Khalkha and Chakhar dialects.

b. Jüge noyan qaγan-a maγu sedkin amu.
Juge chief king-DAT bad intend.CVB be.NONPST
'Chief Juge has bad intentions toward the King.' (ET, 47v11-47v19)

(25) a. ... öber-ün beye-yin gerel-iyer üǰen amui.
self-GEN body-GEN light-INS see.IMPFV exist.NONPST
'(They) use their own light to see.' (ET, 2r27-2v04)

b. qaγan noyan qoyar namayi yaγun-u tula qaran
king chief two 1SG.ACC what-GEN reason watch.CVB
amui ta?
be.NONPST 2PL
'King and Chief, why are you two staring at me?' (ET, 75r23-75v14)

(26) a. tere ber eǰen boγda Temüǰin kemekü endeki
that PART master holy Temujin say.IMPFV being_here
tendeki ulus-i abču yabunam.
being_there people-ACC take.CVB go.NONPST
'Holy Temujin, the master, goes here and there to obtain peoples.' (ET, 36a07-36a08)

b. či sutu-yin bey_e caγan ger bolusa, bi
you great-GEN body white yurt become.CVB I
sutai-yin ür_e Toγan bayinam.
great-GEN offspring Toγan be.NONPST
'Even if you are the great (Genghis Khan)'s body's (holy) white yurt, I am the great (Genghis Khan)'s offspring Toγan.' (ET, 53v09-54r03)

Besides, *-mU/-mUi/-m*, *-nAm*, and *-nA* might occur with the same verbal stem interchangeably in *MLQD*, showing that these sets of markers are competing. See (27).

(27) a. bi begeǰing-yin ǰüg ečimüi.
I Beijing-GEN direction go.NONPST
'I'm going to Beijing's direction.' (MLQD, Vol. 1, 1a, Line 4-5)

b. bi odo ečine.
I now go.NONPST
'I'm leaving now.' (MLQD, Vol. 8, 1a, Line 6-7)

c. odo qaγačaǰi ečinem.
now separate.CVB go.NONPST
'Now, (I)'m leaving.' (MLD, Vol. 8, 21b, Line 5)

Table 3 and Figure 2 also reveals an unusual trend, i.e., the frequency of 'imperfective future verbal-nominal suffix *-qu*/*-kü* + (EXIST)' as finite endings decreased from Middle Mongolian to Late Mongolian and increased from Late Mongolian to Modern Mongolian. All of the cases of '*-qu*/*-kü* + (EXIST)' in *SHM* occur in quoted clauses. Most of them are interrogative or negative (*SHM* 123/168, 73.2%; 'Phags-pa 35/42, 83.3%).

3.2.2 From synthetic to analytic: the emergence of aspectual suffixes marking time

The emergence of the 'aspectual verbal-nominal suffixes + EXIST verb' construction exemplifies a synthetic to analytic change in Mongolian. In this section we shall illustrate the emergence and development of 'perfective *-γsan*/*-gsen* + EXIST' expressing past time.

Table 4 shows a decline in the frequency of the *-bA* series of endings and an increase of 'perfective plus EXIST' from Middle Mongolian to Modern Mongolian. In Middle Mongolian, main past indicative endings are the *-bA*, *-jUGU*, and *-lUGA* series. *-GA* series are historical residues, and there are relatively few cases of perfective verbal suffixes *-γsan*/*-gsen* expressing past time in Middle Mongolian documents.

Table 4: The distributions of past verbal indicative endings in all finite clauses in Middle Mongolian texts (*SHM*, Uighur Mongolian monuments and 'Phags-pa Mongolian monuments), Late Mongolian texts (*ET* and *MLQD*), and Inner Mongolia University's Modern Mongolian Corpus

	Middle Mongolian	Late Mongolian	IMU's MMC (Accessed in 2007)
Sets of markings	Tokens (%)	Tokens (%)	Tokens (%)
-bA, *-bAi*, ...	1,788 (65.9)	828 (60.3)	10,738 (38.5)
-jUGU , *-čUGU*, ...	609 (22.5)	291 (21.2)	6,362 (22.8)
-lUGA, *-lUGAi*, ...	288 (10.6)	220 (16.0)	5,382 (19.3)
-GA, *-GAi*	15 (0.6)	0 (0.0)	0 (0.0)
-γsan/*-gsen* {ø, EXIST.Nonpast, Neg (EXIST.Nonpast)}	12 (0.4)	35 (2.5)	5,389 (19.3)

Note that the 'Perfective Verbal-nominal suffix + EXIST' construction did occur in *SHM*. But the temporal meaning in those cases are taken by the tensed EXIST verb rather than by the aspectual suffixes. See (29) to (31).

(29) Altan-qan Jungdu-da-ča ɣarurun Jungdu dotora Qada-yi
Altan-king Jungdu-DAT-ABL come_out.CVB Jungdu inside Qada-ACC
Liušiu bolɣan tüšiǰü oduɣsan aǰu'u:.
Liusiu make.CVB depend.CVB go.PFV exist.PST
'King Altan appointed Qada as Liusiu and departed from Jungdu.' (SHM, Vol. 11, 252)

(30) Qači-külüg-ün kö'ü:n Qaidu Nomolun eke-de-če
Qaci-kulug-GEN son Qaidu Nomolun mother-DAT-ABL
töregsen büle'e:.
born.PFV exist.PST
'Qaci Kulug's son Qaidu was born of Mother Nomolun.' (SHM, Vol. 1, 46)

(31) Duwa-soqor manglai dunda ɣaɣča nidü-tü ɣurban ne'ü:rid
Duwa-soqor forehead center only eye-COM three journey
ɣaǰar-a qaraqu büle'e:.
place-DAT watch.IMPFV exist.PST
'With an only eye in the middle of the forehead, Duua Soqor could look unto a place (at a distance) of three journeys.' (SHM, Vol. 1, 4)

This type of construction occurs in *ET* and *MLQD*, too.

(32) ... Esige günǰi-yi Mongɣolǰin-u Čegüd-ün Qoosai
Esige princess-ACC Mongoljin-GEN Čegüd-GEN Qoosai
tabunung-dur öggügsen bülüge.
husband_of_princess-DAT marry.PFV exist.PST
'(He) married Princess Esige to Tabunung Qoosai of Mongoljin's Cegüd.' (ET, 61r29-61v01)

(33) ... manaɣar inu qoyar qabar-ača inu čisun
tomorrow 3.POSS two nose-ABL 3.POSS blood
orkiɣad üküsgen aǰuɣu.
leave.CVB die.PFV exist.PST
'The very next day blood came out from his nose and he died.' (ET, 78v19-78v23)

(34) tegün-če qoyinaɣsi Qara mören-i edüged-te kürtele
it-ABL henceafter Qara river-ACC now.DAT-DAT arrive.CVB
Qatun eke kemegsen buyu.
Qatun mother say.PFV exist.NONPST
'Qara River is called Mother Qatun River since then.' (ET, 40v24-40v25)

(35) erten-nayiki siroi-ber kigsen bile.
earlier-GEN.PRON soil-INS do.PFV exist.PST
'(This bridge) was built of soil before.' (MLQD, Vol. 3, 2a, Line 1)

(36) ene mori-yi usu usulaγsan ügei bile.
the horse-ACC water water.PFV NEG exist.PST
'(We) have not given water for the horses to drink yet.' (MLQD, Vol. 2, 16b, Line 3-4)

The tensed EXIST verb can be omitted and as a result the perfective marker expresses past time, as shown in (37) and (38).

(37) dolon sara-yin arban dolon edür-yin bars
seven month-GEN ten seven day-GEN tiger
čaγ-tu törüsen.
o'clock-DAT born.PFV
'(I) was born at the tiger period[14] on the 17th day of the 7th month.' (MLQD, Vol. 8, 19b)

(38) buda idere iresen ügei.
rice eat.CVB come.PFV NEG
'(He) didn't come to eat the meal.' (MLQD, Vol. 3, 7a, Line 3-5)

Poppe (1955:260-261) claims that all indicative endings are derived from verbal nouns and a zero BE verb in Mongolian, though it is hard to trace the original meanings and usages of these verbal nouns. Our previous research (Hsiao 2007a) further demonstrates that contracted forms of verbal nouns/converbs and the EXIST verb are also possible sources of indicative endings. They are reanalyzed as indicative suffixes when their original meanings are lost and it is impossible to reconstruct their sources. As a result, the language becomes more synthetic. If verbal noun affixes and EXIST replace the function of an indicative ending, it makes the relevant language more analytic.

Thus, there exists an 'analytic-synthetic cycle' in Mongolian historical syntax, shown as Figure 1. Mongolian shows analytic characteristics when a temporal meaning is expressed by verbal-nominal suffixes and a copula/EXIST verb. When the copula/EXIST verb is omitted, or when the verbal suffixes and the copula/EXIST verb are reduced, contracted and lose their original meanings, these reduced/contracted forms are analyzed as indicative suffixes. At this stage, Mongolian exhibits synthetic features.

[14] The tiger period is the time period between three to five o'clock in the morning.

3.3 Motivations for the analytic-synthetic cycle

Symmetry and economy are two opposing motivations for changes in Mongolian verbal paradigms. A symmetric system usually contains redundant information and is not economic. An 'economy' principle prefers synthetic reduced/contracted forms, but it might result in asymmetries in syntax. The language is then readjusted to fulfill a need for symmetry and it leans again toward the analytic side on the analytic-synthetic scale. Furthermore, changes caused by asymmetries in one set of constructions might trigger or speed up other series of changes. Table 5 shows that readjustments to eliminate asymmetries in negative constructions introduced affirmative/negative asymmetries in the temporal system.

Table 5: Historical changes in indicative temporal system in Mongolian (Hsiao 2007a, Table 7)

Historical Stages	Affirmative	Negative
Stage I	V[±Past] Nominals + EXIST	{*ülü*/*ese*} + V[±Past] Nominals + *ügei*
Stage II (Middle Mongolian ~ Late Mongolian)	V[±Past] Nominals + (EXIST)	{*ülü*/*ese*} + V[±Past]/VN[±Perf] VN[±Perf] + *ügei* Nominals + *ügei*
Stage III (Late Mongolian ~ Modern Mongolian)	V[±Past] Nominals + (EXIST)	VN[±Perf] + *ügei* Nominals + *ügei*
Stage IV (Modern Mongolian)	V[-Past] VN[+Perf] + (EXIST) Nominals + (EXIST)	VN[±Perf] + *ügei* Nominals + *ügei*

At the reconstructed Stage I, *ülü*/*ese* and *ügei* were in complementary distribution and there was a verbal-nominal asymmetry in negative constructions. At Stage II (Middle Mongolian ~ Late Mongolian), the functions of *ügei* and *ülü*/*ese* were overlapping. (39) and (40) show that both *ügei* and *ülü* can cooccur with verbal nouns in *SHM*.

(39) qayibasu qa'ul<u>qa inu *ülü* *olqu* či
search.CVB way 3.POS NEG get.IMPFV you
sem boli ke'ejü itqaba.
quietly stop say.CVB soothe.PST
'He soothed her, saying "If you track him, you will not find his way. Calm down!"' (SHM, Vol. 1, 38a, L2-3; Hsiao 2007a: ex.(16))

(40) bodončar be tede irgen-i ya'un irgen ke'en
Bodoncar also those people-ACC what people say.CVB
asa'ulčaqu ügei yabulduba.
ask.COOP.IMPFV NEG go.RECP.PST
'Bodoncar and those people lived together, without asking each other "What people are you?"' (SHM, Vol. 1, 18a, L3-4; Hsiao 2007a: ex.(17))

At Stage III (Late Mongolian ~ Modern Mongolian), *ülü*/*ese* was replaced by *ügei* (*-gui*/*-güi*) and an affirmative-negative asymmetry emerged in the temporal system. In *MLQD*, only 15.9% (77/483) of the non-negative indicative clauses denoting actions use aspect to express time, but 88.5% (69/78) of the negative indicative clauses denoting actions use aspect to express time.

Table 6: Distributions of temporal suffixes in non-negative indicative clauses denoting actions in *MLQD* (Hsiao 2007a, Table 5)

Temporal suffixes	Clause types	Tokens (Percentage)			
Past	Indicative	115 (23.8)	138 (28.6)	406 (84.1)	483 (100)
	Interrogative	23 (4.8)			
Non-past	Indicative	174 (36.0)	268 (55.5)		
	Interrogative	94 (19.5)			
Perfective	Indicative	30 (6.2)	34 (7.0)	77 (15.9)	
	Interrogative	4 (0.8)			
Imperfective	Indicative	37 (7.7)	43 (8.9)		
	Interrogative	6 (1.2)			

Table 7: Distributions of temporal suffixes in negative indicative clauses denoting actions in *MLQD* (Hsiao 2007a, Table 6)

Time	Negators	Clause types	Tokens (Percentage)				
Past	*ese*	Indicative	1 (1.3)	1 (1.3)	9 (11.5)	9 (11.5)	78 (100)
		Interrogative	0 (0.0)				
Non-past	*ülü*	Indicative	5 (6.4)	8 (10.3)			
		Interrogative	3 (3.8)				
Perfective	*ügei*	Indicative	8 (10.3)	13 (16.7)	67 (85.9)	69 (88.5)	
		Interrogative	5 (6.4)				
Imperfective		Indicative	47 (60.3)	54 (69.2)			
		Interrogative	7 (9.0)				
	ülü	Indicative	1 (1.3)	2 (2.6)	2 (2.6)		
		Interrogative	1 (1.3)				

Affirmative-negative asymmetry is also reflected in A-not-A questions in *MLQD*. A tensed verb is used at the affirmative part of a question, while an aspectual verbal noun is used at the negative part of the same question. See (41) and (42).

(41) edüge ǰasabau ǰasaγsan ügei üü?
now repair.PST.Q repair.PFV NEG Q
'Is it repaired or not?' (MLQD, Vol. 2, 9b, L5)

(42) andanar, či γal talbiǰu čidamu čidaqugei uu?
friends you fire put.CVB can.NONPST.Q can.IMPFV.NEG Q
'Dear guests, will you have meals in our place?' (MLQD, Vol. 2, 1a, L2-3)

At Stage IV (Modern Mongolian), past affirmatives tend to be expressed by perfective verbal nouns plus omissible exist verb by analogy with their negative counterparts.

4. Concluding remarks

This paper reports the results of a corpus-based investigation on the temporal system of Mongolian from a diachronic perspective. There are at least two lines of changes in the temporal system from Middle Mongolian to Modern Mongolian. One line is the emergence of *-na*/*-ne*/*-no*/*-nö* as non-past tense markers. The other line is the development of perfective suffixes *-san*/*-sen*/*-son*/*-sön* and the existential verb as past temporal markers. It is shown that Mongolian is indeed undergoing analytic-synthetic cyclic changes. An 'economy' principle prefers synthetic reduced/contracted forms, but it might result in asymmetries in syntax. The language is then readjusted to fulfill a need for symmetry and it leans again toward the analytic side on the analytic-synthetic scale.

References

Binnick, Robert I. 1979. Past and perfect in Modern Mongolian. *Studies on Mongolia: Proceedings of the First North American Conference on Mongolian Studies*, ed. by Henry G. Schwartz, 1-13. Bellingham: Western Washington University.

Binnick, Robert I. 1990. On the pragmatic differentiation of the Mongolian past tenses. *Mongolian Studies: Journal of the Mongolian Society* 13:47-56.

Binnick, Robert I. 1991. *Time and the Verb: A Guide to Tense and Aspect*. Oxford & New York: Oxford University Press.

Chinggeltei. 1991. *Mengguyu Yufa* [*A Grammar of the Mongolian Language*]. Hohhot: Inner Mongolia People's Publishing House.

Choimaa, Sh. 2002. *Qad-un ündüsün quriyangyui altan tobči: Transcription and Index*. Ulaanbaatar: Centre for Mongol Studies, National University of Mongolia.

Comrie, Bernard. 1985. *Tense*. Cambridge & New York: Cambridge University Press.

de Rachewiltz, Igor. 2004. *The Secret History of the Mongols: A Mongolian Epic Chronicle of the Thirteenth Century*. Leiden: Brill.

Garidi. 2006. *Zhonggu Mengguyu Yanjiu* [*Studies on Middle Mongolian*]. Shenyang: Liaoning Nationalities Publishing House.

Hashimoto, Kunihiko. 1993. The domain of past tense: on the meanings of the past tense suffixes in Mongolian. *Gengo Kenkyu* 104:1-20.

Hsiao, Suying. 1995. Zhaluteqi Mengguhua yinyun [The phonological system of the Jarut variety of Mongolian]. *Bulletin of the Institute of History and Philology Academia Sinica* 66.1:107-244.

Hsiao, Suying. 2006. Paradigms of Mongolian verbs: a historical perspective. Paper presented at the 9th International Congress of Mongolists, August 8-12, 2006. Ulaanbaatar, Mongolia.

Hsiao, Suying. 2007a. Cihui jingzheng, bu duicheng yu yufa yanbian: Mengguyu fouding jiegou yu shijian xitong de lishi yanbian [Lexical competition, asymmetries and diachronic syntactic changes: historical changes of negative constructions and temporal systems in Mongolian]. *Language and Linguistics* 8.2:495-517.

Hsiao, Suying. 2007b. Non-past verbal suffixes in Mongolian: a historical perspective. Paper presented at the 50th Meeting of the Permanent International Altaistic Conference (PIAC 50), July 1-6, 2007. Kazan, Russia.

Hsiao, Suying. 2009. The analytic-synthetic cycle and Mongolian historical syntax. *Proceedings of the Second International Conference: Past and Present of the Mongolic Peoples*, ed. by Tokusu Kurebito, 353-362. Tokyo: Research Institute for Languages and Cultures of Asia and Africa, Tokyo University of Foreign Studies.

Kim, Hyun-Oak Alan. 1977. The role of word order in syntactic change: sentence-final prominency in Korean negation. *Berkley Linguistics Society* (*BLS*) 3:670-684. Berkeley: Berkley Linguistics Society.

Kim, Jinkyoung. 1996. *Negation in Korean: A Functional and Discourse Approach*. Gainesville: University of Florida dissertation.

Kim, Jong-Bok. 1995. *The Grammar of Negation: A Lexicalist*, *Constraint-based Perspective*. Stanford: Stanford University dissertation.

Ko, Seongyeon. 2011. Vowel contrast and vowel harmony shift in the Mongolic languages. *Language Research* 47.1:23-43.

Li, Zuida et al. (eds.) 1741[1983]. *Mongolian Lao Kida*. Seoul: Research Institute for Humanities, Sogang University.

Ozawa, Shigeo. 1961. The system of the indicative endings in Middle Mongolian. *Gengo Kenkyu* 40:33-80.

Ozawa, Shigeo. 1993. *A Grammar on the Language of* '*Secret History of Mongols*'. Tokyo: Kazama Shobo.

Poppe, N. 1954. *Grammar of Written Mongolian*. Wiesbaden: Otto Harrassowitz.

Poppe, N. 1955. *Introduction to Mongolian Comparative Studies*. Helsinki: Suomalais-Ugrilainen Seura.

Quejingzhabu et al. (eds.) 1986. *Weilate Fangyan Huayu Cailiao* [*Materials on the Oirat Dialect*]. Hohhot: Inner Mongolia People's Publishing House.

Song, Jae-mog. 1997. *Tense*, *Aspect and Modality in Khalkha Mongolian*. London: University of London dissertation.

Street, John C. 1957. *The Language of the Secret History of the Mongols.* New Haven: American Oriental Society.

Street, John C. 2008. Middle Mongolian past-tense -*BA* in the *Secret History*. *Journal of the American Oriental Society* 128.3:399-422.

Svantesson, Jan-Olof. 1985. Vowel harmony shift in Mongolian. *Lingua* 67.4:283-327.

Svantesson, Jan-Olof, Anna Tsendina, Anastasia Karlsson, and Vivan Franzén. 2005. *The Phonology of Mongolian*. Oxford & New York: Oxford University Press.

Shibatani, Masayoshi. 1990. *The Languages of Japan*. Cambridge & New York: Cambridge University Press.

Tumurtogoo, D. 2006. *Mongolian Monuments in Uighuric-Mongolian Script* (*XIII-XVI Centuries*)*: Introduction*, *Transcription and Bibliography*. Taipei: Institute of Linguistics, Academia Sinica.

Tumurtogoo, D. 2010. *Mongolian Monuments in 'Phags-pa Script: Introduction*, *Transcription and Bibliography.* Taipei: Institute of Linguistics, Academia Sinica.

Wu, Chaolu. 1995. Mongolian past tense markers and their usage. *Mongolian Studies* 18:85-112.

Wu, Chaolu. 1996. A survey of Tense suffixes in Mongolian languages. *Central Asiatic Journal* 40.1:56-86.
Wulan. 2000. *Menggu Yuanliu Yanjiu* [*Studies on Erdenii Tobčiya*]. Shenyang: Liaoning Nationalities Publishing House.

[Received 27 September 2012; revised 21 May 2013; accepted 15 June 2013]

Institute of Linguistics
Academia Sinica
130, Sec. 2, Academia Road
Nankang, Taipei 115, Taiwan
suying@sinica.edu.tw

中古蒙古語至現代蒙古語的時間語法系統

蕭素英
中央研究院

本研究檢視中古蒙古語至現代蒙古語時間語法系統的變化，並探討變化的動因、發展脈絡與方向。本文顯示蒙古語正經歷「分析–合成」的循環變化。一方面，中古蒙古語以動詞「過去時」形式，而現代蒙古語以動詞「完整貌」形式加上「非過去時」形式的存在動詞表示過去時，是蒙古語由合成性變得更具分析性的變化。另一方面，現代蒙古語的動詞「非過去時」詞綴 *-na*/*-ne* 的形成則是蒙古語由分析性變得更具合成性的例證。對稱性與經濟性是蒙古語動詞時間語法系統變化的動因。

關鍵詞：蒙古語，時制，時貌，分析–合成循環，對稱，經濟