

Transeurasian: Can verbal morphology end the controversy?

Martine Robbeets

1 Which end of the controversy?

Recently, both supporters and critics of the hypothesis that the Transeurasian languages are affiliated have claimed to have ended the controversy. Whereas the authors of “Etymological dictionary of the Altaic languages” express their hope (Starostin et al. 2003: 7)

“that this publication will bring an end to this discussion”,

Vovin’s (2005) review, subtitled “The end of the Altaic controversy” claims to put an end to it in the opposite way, while Dybo & Starostin (2008) return to the other end of the controversy in a rebuttal of Vovin’s critique, titled “The end of the Vovin controversy”. In reality the issue seems to be more controversial than it has ever been. And yet, supporters and critics seem to agree on at least one point, namely that shared morphology could substantially help unravel the question. Vovin (2005: 73) begins his critique with the postulation that

“The best way ... is to prove a suggested genetic relationship on the basis of *paradigmatic* morphology ...”.

Dybo & Starostin (2008: 125) agree that

“... regular paradigmatic correspondences in morphology are necessarily indicative of genetic relationship”.

The present paper examines the role of shared verbal morphology in the affiliation question of the Transeurasian languages. The term “Transeurasian” is used in reference to Japanese, Korean, the Tungusic languages, the Mongolic languages and the Turkic languages. In the first section it is explained why, unlike in Indo-European, it is unreasonable to expect the reconstruction of *paradigmatic* verbal morphology and why diathesis is such a fruitful category to begin with. The second section concentrates on the historical comparison of a number of verb roots. In the third section etymologies will be proposed for diathetical markers across the Transeurasian languages. Finally, the shared properties are assessed in terms of form, function and systemic organization. By way of

conclusion code-copying is weighed against genealogical retention as a possible motivation for the shared properties.

2 Morphology: yes. Paradigms: no

Empirically, it is observed that there is a difference in the ease of linguistic borrowing between nouns and verbs, between free and bound morphemes and between derivational and inflectional morphology. The description of copiability as a relative tendency leads to the assumption that bound, verbal morphemes belong to the older strata of a language and provide rather reliable evidence to demonstrate common ancestorship. Although it is reasonable to expect evidence from bound verbal morphology when dealing with the Transeurasian languages, it is unreasonable to expect the reconstruction of *paradigmatic* verbal morphology.

According to Bybee (1985) there is a relation between the meaning of a verbal morpheme and its mode of expression. When the meaning of an affix directly and radically affects the meaning of the verb stem, it is expected to lexicalize easily. Actional and diathetical markers combined with a verb stem describe quite a different action than the verb stem alone (e.g. causative meaning: ‘to die’ vs. ‘to kill’). This can easily lead to a situation in which the products of actional and diathetical marking become semantically unpredictable and therefore lexicalized. When many of the verbs resulting from this process become lexicalized, the process might eventually lose its productivity. New productive verbal markers will then arise through a process of grammaticalization and replace the older markers, that remain traceable in lexicalized verb pairs. Proto-Germanic, for instance, had a **-j-* causative, that was added to the ablaut stem (e.g. **lag-*, **sat-*, **trank-*) of strong verbs (e.g. **lig-* ‘lie’, **sit-* ‘sit’, **trink-* ‘drink’). Although the suffix has lost its productivity and has been replaced by periphrastic causative constructions in the Germanic languages, it still leaves a trace in lexicalized verb pairs such as in the umlaut in German *liegen* ‘lie’ => *legen* ‘lay’, *sitzen* ‘sit’ => *setzen* ‘set’, *trinken* ‘drink’ => *tränken* ‘immerse’ etc.

The situation is different for categories that are more to the right in the suffix chain such as tense, mood and agreement. These markers do not alter the situation described by the verb. In the case of tense suffixes, for instance, the verb is fixed in time with respect to the moment of speech. *Die* and *died* refer to the same event no matter when it happens. Because the combination of tense, mood and agreement markers with a verb stem does not affect the inherent meaning of the verb, they do not give rise to lexicalizations. The inflections will remain productive until they are replaced by new periphrastic constructions. The Latin future marker in Lat. *cantabimus* ‘we will sing’, for instance, developed from a periphrastic construction with Indo-European **bhumos* ‘we are’ (**kanta bhumos* ‘we are singing’). But in the passage from Latin to the Romance languages, the suffix was lost and replaced by a new periphrastic expression Lat. *cantare habemus* (> *cantarabémus* > *cantarémus*) ‘we have to sing’ that developed into the French future marker Fr. *chanterons* ‘we will sing’. Interestingly, French has again renewed its morphological marking by a periphrastic future as in *nous allons chanter* ‘we are going to sing’.

A verbal paradigm is a group of inflectionally related verbs with a common stem that results from such grammatical categories as tense, mood and person-number agreement. Cyclicity of grammaticalization refers to such repetitive processes whereby morphological expressions are replaced by new periphrastic ones, which again tend towards affixation (Givón 1979: 209, Hopper & Traugott 1993: 9-10). The mechanism behind this process is the balance between the communicative gains and losses of grammaticalization, namely between clear, lexically transparent speech and fast, morphologically coded speech. After enough time has elapsed, cyclic grammaticalization will erase evidence from categories as tense, mood and person-number agreement and thus lead to the collapse of entire verbal paradigms.

Starting from Bybee's 1985 observation we do not expect paradigms in Transeurasian contrary to the situation in Indo-European because of the time difference. The unity of Indo-European is usually estimated at a time-depth of ca. 4000 BC, while the split of the Transeurasian languages has probably occurred at least one millennium earlier (Starostin et al. 2003: 235). In the millennium that separates the Romance languages from Classical Latin about half of the verbal paradigms collapsed (Hall 1986: 5). This may serve to give a hint as to how much paradigmatic evidence might be lost in one millennium. And, whereas the unity is at least one millennium earlier, the written sources for the Transeurasian languages emerge roughly more than one millennium later than those for Indo-European. Comparative Indo-European morphology usually does not start from contemporary languages such as Spanish, German, Greek, Russian, Hindi and modern Persian, but it is based on old languages such as Latin (ca. 500 BC), Gothic (ca. 400 AD), Old Greek (ca. 800 BC), Old Church Slavonic (ca. 800 AD), Sanskrit (ca. 1000 BC) and Avestan (ca. 1000 BC), whose morphological systems are more complex and resemble each other more closely than those of the contemporary languages. The written sources that reflect verbal morphology in a rather unambiguous way for the Transeurasian languages are roughly more than one millennium later: Old Japanese (ca. 700 AD), Late Middle Korean (ca. 1400 AD), Manchu (ca. 1600 AD), Middle Mongolian (ca. 1200 AD), and Old Turkic (ca. 700 AD).

That the older stages of the languages preserve more and better morphological evidence does not imply, however, that it is impossible to reconstruct common verbal morphology on the basis of the contemporary languages alone. In many modern languages, for instance, the endings of the present tense paradigm are traceable to Indo-European origins. The person markers in Spanish (*-o* 1sg., *-s* 2sg., *Ø* 3sg., *-mos* 1pl., *-is* 2pl., *-n* 3pl.), German (*-e* 1sg., *-st* 2sg., *-t* 3sg., *-en* 1pl., *-t* 2pl., *-en* 3pl.) and modern Persian (*-æm* 1sg., *-i* 2sg., *-æd* 3sg., *-im* 1pl., *-id* 2pl., *-ænd* 3pl.) are relatable, even without access to Latin (*-ō/-m*, *-s*, *-t*, *-mus*, *-tis*, *-nt*), Old High German (*-u/-m*, *-is*, *-it*, *-mēs*, *-et*, *-ant*) and Avestan (*-am*, *-as*, *-at*, *-āma*, *-ata*, *-an*). However, we expect that due to the time difference the morphological evidence in Transeurasian will be different in nature.

Besides time difference, typological difference can help to explain the expected lack of verbal paradigms in Transeurasian. Unlike the Indo-European languages, the Transeurasian languages lack original person-number inflections. In Turkic, Mongolic and Tungusic person-number endings are transparent grammaticalizations of pronominal forms and in Japanese and Korean there is no person-number agreement on the verb at all. Therefore, person-number agreement is not reconstructable as a verbal category.

Moreover, the Transeurasian languages are agglutinative, while the Indo-European languages tend to be fusional. Since Transeurasian and Indo-European are synthetic languages that mark syntactic relations in the sentence through morphological marking at the stem, we expect common morphology. This is not necessarily the case when establishing genealogical relationships between analytic languages, such as a number of Sino-Tibetan or Thai-Kadai languages that mark syntactic relations in the sentence with independent function words. However, in the Transeurasian languages morphemes are linearly attached and there is a one on one relationship between the morpheme and its meaning. The Indo-European languages, on the other hand, tend to fuse morphemes together so that they are no longer recognizable as separate markers. Depending on whether morphemes are clearly differentiable or not, the evidence will have a different nature.

Through the fusion of form, such as the umlaut as a trace of the Germanic causative above, phonological traces of eroded morphemes are often preserved in the stem in Indo-European, whereas in Transeurasian, a morpheme is not expected to leave a trace in the preceding segment after phonological erosion. Through the fusion of function, we expect to find more polysemy in Indo-European morphemes than in Transeurasian. A single suffix combines three meanings, i.e. first person, plural and perfect in forms such as Skt. *vid-má*, Greek *id-men*, Gothic *wit-um* ‘we have known’ and Latin *vi:d-imus* ‘we have seen’, which increases the reliability of the reconstruction of the suffix in PIE **uid-mé*. Through the fusion of form and function, Indo-European tends to generate shared irregularities such as in the declension of the verb ‘to be’ (Sanskrit *as-mi*, *as-i*, *as-ti*, *s-mas*, *s-tha*, *s-anti* and Latin *s-um*, *es*, *es-t*, *s-umus*, *es-tis*, *s-unt*), whereas the evidence generated by the Transeurasian languages is expected to be in segmented morphemes with a regular form and a distinct function.

Although we do not expect verbal paradigms, we do expect shared verbal morphology for the Transeurasian languages. Whereas over time paradigmatic evidence from categories such as tense, mood and agreement will be reduced to zero, semantically relevant categories such as actionality and diatheses are expected to leave a trace in lexicalization after their replacement. That these categories are particularly diagnostic for genealogical relatedness is not only due to their resistance to full periphrastic replacement, but also due to their resistance to copying. Their relative stability is interrelated with a number of factors such as the low number of applicable units, which increases the frequency of use, variant allomorphy, boundness and the proximity of the suffix vis-à-vis the primary stem. Erdal (1998:67) summarizes:

“Zusammenfassend kann also zum Diathesenbereich gesagt werden, daß kontaktbedingte Erscheinungen hier vollkommen marginal sind...”.

Johanson (1999: 8) finds that

“In the verbal flection, suffixes closest to the primary stem, markers of actionality and diathesis, seem relatively little susceptible to copying. It would be a strong clue to a common origin if this ‘intimate’ part of verbal morphology exhibited systematic correspondences of materially and semantically similar morphemes with congruent combinational patterns”.

Comrie (1995: 394; foreword to Johanson 2002: xi) confirms Johanson’s findings:

“... in particular the extreme resistance to copying of the positions closest to the verbal stem might provide a more reliable tool than many of those used in the past to whether there are indeed shared elements that testify to genetic relatedness, ..., among the groups of languages that constitute Altaic”.

3 Etymologies for verb roots

This section concentrates on the historical comparison of a number of verb roots across the Transeurasian languages. The number of bound verbal morphemes in a language is low compared to the number of independent lexemes. Hence, formal correspondences in bound morphology will not be recurrent enough to establish phonological correspondences. By consequence, a historical morphological study like the one undertaken here is ideally preceded by the establishment of regular sound correspondences on the basis of lexical data. For this purpose we refer to Robbeets (2005). Here we will illustrate a number of consonant correspondences in verb roots that are relevant for the formal comparison of the diathetical suffixes in the next section.

A second motivation for dealing with verb roots first is the fact that the naked insertion of verb stems across multiple linguistic groups is hard to explain within a framework of language contact. If the need for borrowing a verb does arise, languages across the world basically use three different strategies: the light verb strategy, indirect insertion and direct insertion (Muysken 2000: 184-220, Wichmann & Wohlgemuth 2008).

The most common strategy is the light verb strategy. Light verbs are auxiliary verbs with a broad referential scope like ‘do’ or ‘make’ that are used in complex constructions. Rather than inserting a naked verb root, many languages instead borrow a nominal form of the verb and add a light verb. When borrowing English verbs such as ‘to jog’, for instance, many languages show a clear preference for the nominalized form *jogging* to which Japanese adds *suru* ‘to do’ in *J zyogingu suru* ‘to jog’ and Turkish adds *yap-* ‘make’ in *Tk. jogging yap-* ‘jog’.¹ The integration of loanwords through indirect insertion is less frequent than the light verb strategy. Indirect insertion means that a suffix is required to accommodate verbal copies. Most examples of indirect insertion in the Transeurasian languages use a nominal form of the foreign verb. There is a small number of foreign verbs that supply a nominal base for Japanese verb stems derived with the denominal verb suffix *J -r(a)-*. Examples include *J azir-* ‘agitate’ which is a borrowing from English *agitate* over the nominal form *J azi* ‘agitation’, *J demor-* ‘demonstrate’ derived from *J demo* ‘demonstration’ which is a copy from English and *J sabor-* ‘cut class’ derived from the French donor noun *sabotage* from the verb *saboter* (Martin 1987: 673). A number of Russian verbs are indirectly inserted into Tungusic languages in the second person imperative form, which for some conjugation types coincides with the verb stem in Russian. Udehe, for instance, copies *zawoni-la-* ‘ring up’ from Russian *zvoni-* ‘id.’ and

1 Backus (1996: 197-198) discusses the grammaticalization of the light verb *yap-* to allow the borrowing of Dutch verbs in different generations of Turkish-Dutch bilingual speakers.

tancewa-la- from Russian *tancewa-* ‘id.’ (Nikolaeva 1999: 13, 171, Malchukov 2003: 239). Monguor inserts foreign verbs from Chinese or Tibetan with a denominal verb suffix *-la-*, such as in Mgr. *čiu:la-* ‘beg, request’ from Chin. *k’iou* ‘id.’ and *doyla-* ‘pick, pluck’ from Tib. *ɣtog-pa* ‘id.’ (De Smedt & Mostaert 1964: 149). The same observation is true for some Turkic languages such as Yakut that accommodates Russian imperative stems with a denominal verb suffix *-la:-* / *-da:-* as in Yakut *mehay-da:-* ‘interfere’ from Russian *meshaj-* ‘id.’ (Malchukov 2003: 246). The integration of loanverbs in the Transeurasian languages is comparable from a typological perspective because all the languages cited above use the same strategy of indirect insertion with a denominal verb suffix. However, the parallels reach further than only structure: the form and function of the denominal verb suffix corresponds regularly as well (Robbeets 2007a).²

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- 2 In the following etymologies the references between brackets refer to a secondary source or grammar that makes reference to the word or suffix under inspection. The reconstruction of suffixes is supported by verb pairs consisting of a neutral base, along with its derived counterpart. The counterpart is preceded by the symbol ($\Rightarrow$). If there is no neutral base attested, different derivations of the naked base are given. The asterisk * is used for reconstructed forms. Double arrows ($\gg$) indicate the direction of a copy. For the transliteration of linguistic forms, the present paper uses the Yale system for Japanese and Korean. In Old Japanese the use of Chinese characters for phonetic value was such as to indicate two values for later *e*, *i*, *o* in certain syllables. These vowel distinctions are referred to as *i*₁ versus *i*₂, *e*₁ versus *e*₂ and *o*₁ versus *o*₂. The phonological interpretation underlying the distinction is probably preglided for subscript 1 and postglided or neutral for subscript 2, i.e. *yi* vs. *iy*, *ye* vs. *ey* and *wo* vs. *o* respectively. The Middle Korean unrounded vowels [ɔ] and [ɨ] are represented by *o* and *u* respectively, while *wo* and *wu* are used for rounded [o] and [u]. The notation $\tilde{z}$ is used to represent the now obsolete Middle Korean triangle grapheme Δ. Robbeets (2005: 61-62) explains why it is unlikely that the MK Δ grapheme represents a mere voiced /z/ and argues that an extra feature such as palatalization to /ʒ/ is probably involved. The capitals *W* and *G* are used for two other obsolete consonants for which the phonological interpretation is probably [β] and [ɣ] respectively. The dots in the Middle Korean words represent the distinctive pitch of the following syllable: one dot for high, two dots for rising, and unmarked syllables are treated as low. The transliteration rules for transcribing the individual Tungusic languages follow the romanization proposed by Gorelova (2002) for Manchu, Nedjalkov (1997) for Evenki (with the modifications *c*, *j*, *y*, *ñ*, *i* for Nedjalkov’s notations *ch*, *d’*, *j*, *n’*, *y* respectively), Benzing (1955b) for Even (with the modifications *j*, *y*, *ñ*, *i* for Benzing’s notations *Z*, *j*, *n*, *a* respectively), Nikolaeva (1999) for Udehe (with the modifications *j*, *y* for Nikolaeva’s notations *z*, *j* respectively) and a romanization based on Avrorin’s (1961) Cyrillic transcription of Nanai. The logic that underlies the modifications is a consistent use of *c*, *j* for the palatal fricatives, *y* for the palatal glide and *ñ* for the palatal nasal. The transliteration of the Written Mongolian forms follows Poppe’s (1954) conventions with the modifications *c*, *j* for Poppe’s notations *č*, *ǰ*. For Middle Mongolian Rybatzki (2003) is followed with the exception of *š*, *ɣ* for Rybatzki’s notations *sh* and *gh*. The transcription of the Turkic forms follows Johanson & Csátó (1998) except for the probably reduced vowel type *°* for which the notation *X* is used. It represents an Old Turkic vowel type that is not written explicitly in runiform texts. Vowel length is not reconstructed for the Old Turkic forms. Several modern languages such as Yakut, Turkmen, Khaladj reflect original vowel-length in proto-Turkic, but the evidence for Old Turkic is uncertain. For all languages a colon placed after a vowel is used to indicate length.

pTEA *-la- denominal verb suffix

Japanese pJ *-ra- > OJ -r-

denominal verb: OJ *mo₂to₂* ‘root, origin, base’ => J *modor-* ‘return, revert’, OJ *kaki₁* ‘fence, hedge’ => OJ *kagi₁-r-* ‘set limits’, OJ *ipo* ‘hut’ => OJ *ipor-* ‘lodge in a hut’, OJ *ko₂to₂* ‘word, speech, statement’ => OJ *katar-* ‘tell’, OJ *te₂ ~ ta-* ‘hand’ => OJ *to₁-r- ~ to₂-r-* ‘take, hold in hand’ (Unger 1977: 111)

onomatopoetic verb: **pipi* (mimetic for quick, light up and down movement) => OJ *pipir-* ‘flutter up’, OJ *we* (emotional exclamation in e.g. OJ *we-warap*-‘laugh out loud’) => OJ *werak-* ‘laugh with joy’, **soso* (mimetic for nervous motion in e.g. OJ *soso-mek-* ‘move nervously’) => J *sosor-* ‘excite, stir up’

Tungusic pTg *-la:- > Ma. -la-, Evk. -la-, Even -la:-, Ud. -la-, Na. -la- (Benzing 1955a: 1064)

denominal verb: Udehe *aŋa* ‘night shelter’ => *aŋala-* ‘make a night shelter’, Ud. *mamasa* ‘wife’ => *mamasala-* ‘marry, take a wife’, Ud. *cob’o* ‘handful’ => *cob’olo-* ‘scoop with one’s hand’ (Nikolaeva 1999: 170-71)

Mongolic pMo *-la- > WMo. / SH MMo. -la- ~ WMo. -na- after stem final -m-, -ng- (Poppe 1954: 65, Street 1957: 63, 65, 66, Rybatzki 2003: 65)

denominal verb: WMo. *ang* ‘game’ => *angna-* ‘hunt’, WMo. *ger* ‘house’ => *gerle-* ‘marry, found a house of his own’, SH MMo. *kelen* ‘tongue, word, speech, statement’ => *kelele-* ‘say, speak’

onomatopoetic verb: WMo. *qai* (interjection expressive of grief) => *qaila-* ‘weep, cry, shed tears’, *yo yuu* (cry of a rooster) => *yo yuyla-* ‘cackle’

Turkic pTk *-la- > OTk. -la- (Erdal 1991: 429-455)

denominal verb: OTk. *av* ‘wild game’ => *avla-* ‘hunt wild game’, OTk. *adut* ‘palm of one’s hand’ => *adutla-* ‘scoop up with the palm of one’s hand’, OTk. *söz* ‘word, speech, statement’ => *sözlä-* ‘speak, say, talk with somebody’

onomatopoetic verb: OTk. *yigri* (yampering sound) => *yigla-* ‘weep’, OTk. *kakila-* ‘produce cackling sounds (of birds)’

Restricting the comparison of this suffix to Mongolic and Turkic, Schönig (2003: 415, 416) contends that

“Moreover, Turkic and Mongolic share many morphological elements, which earlier were often regarded as evidence of a genetic relationship. With the progress of research it has become increasingly obvious that these elements are also borrowings, representing the various layers of Turko-Mongolic interaction”.

Erdal (1998: 75) makes the necessary differentiation that

“Ein gemeinsamer Ursprung verbbildender denominaler Elemente muß also für das Türkische und das Mongolische ins Auge gefaßt werden. Gleichwohl sind solche Elemente auch von einer Sprachgruppe in die andere übertragen worden. Deswegen können auch anhand von gemeinsamen Elementen wie +la- ... keine eindeutigen Aussagen gemacht werden”.

Granted the fact that it is difficult to distinguish between code-copying and genealogical retention in a binary context, code-copying becomes less likely as a motivation for the shared properties in view of the Japanese and Tungusic parallels.

Indirect insertion, i.e. the copying of naked verb roots is rather rare. It is restricted to situations of extensive contact where copying is favored by a serious degree of bilingualism or by typological similarity. This is reminiscent of the first type of embedding of Turkic verbal stems in Hungarian discussed by Róna-Tas (2009: 40) in this volume, e.g. H *ír-* ‘write’ from OTk. *ir-* ‘make a notch’ that is not found in Hungarian copies of verbal stems from non-Turkic languages with a less intensive contact relationship with Hungarian. This strategy is also observed in extensive contact situations such as Turkic-Mongolic or Mongolic-Tungusic or Turkic-Tungusic, such as in examples (1), (2) and (4). However, I am unable to find examples of direct insertion of loan verbs that crosses more than one linguistic border. I am also unable to find unambiguous examples of direct insertion of loan verbs in Korean and Japanese.³ If a Japanese verb root has formal and semantic correspondences to a verb root in a language to which it stands in a low-contact relationship, such as Turkic, Mongolic or Tungusic languages, the probability that we are dealing with genealogical retention is relatively high. Therefore, I argue that the following verbal cognates are more easily attributable to retention than to contact. The argument is further strengthened by the fact that an intermediary verb root is sometimes absent in Korean and Tungusic, so that the borrowing chain from one language into the other is broken. In etymologies such as (17) and (18), where a root is well-attested in the North Tungusic languages Even, Evenki, Solon and Negidal, while it is absent in the North

3 In his paper held at the workshop in Mainz that inspired the publication of this volume, Unger suggests four cases of Korean verbs, including verbal adjectives, that were borrowed into Old Japanese: K *kiph-* ‘deep’ >> OJ *kippa* ‘brink’, K *cina-* ‘pass through, pass over’ >> OJ *sina* ‘slope, step, level’, MK *polk-* ‘dawn, shine’ >> EMJ (*asa*)*borake* ‘dawn’ and MK *man’ho-* ‘many’ >> OJ *mane-* ‘many; widespread’. The first three examples cannot be considered as verbal borrowings because the Japanese forms are nouns and suggest that the Korean donorword is a deverbal nominal form. The last example is dubious because MK *man* is a nominal adjective borrowed from Ch. *man* ‘myriad’. There is no evidence that the Korean form existed before its attestation in 1447 (Martin 1996: 105), whereas Old Japanese represents the language of the 8th century.

Siberian Turkic languages Yakut and Dolgan, the probability of code-copying is also reduced (Malchukov p.c.).

Table 1: Correspondences pTEA *-r- ~ *-l-

Japanese	Korean	Tungusic	Mongolic	Turkic
OJ <i>sar-</i> 'depart' pJ * <i>sara-</i>	MK <i>so(l)-</i> 'make vanish' pK * <i>solo-</i>	[Ma. <i>sala-</i>] ['hand out'] C?	WMo. <i>sal(u)-</i> 'part with' pMo * <i>sala-</i>	OTk. <i>sal-</i> 'move' pTk * <i>sal-</i>
J <i>tarasu</i> 'deceive' pJ * <i>tara(-)s-</i>	MK <i>talay-</i> 'wheedle' pK * <i>tala(-)y-</i>	[Ma. <i>tala-</i>] ['confiscate'] C?	WMo. <i>tala-</i> 'plunder' pMo * <i>tala-</i>	OTk. <i>tala-</i> 'damage' pTk * <i>tala-</i>
OJ <i>urum-</i> 'get wet' pJ * <i>uru-</i>	MK <i>wuli-</i> 'soak' pK * <i>wuli-</i>	Evk. <i>ula-</i> 'soak, wet' pTg * <i>ula-</i>		
OJ <i>ki₁r-</i> 'cut' pJ * <i>kira-</i>		Evk. <i>gir-</i> 'cut out' pTg * <i>giri-</i>	[WMo. <i>kira-</i>] ['mince'] C?	Karakh. <i>kir-</i> 'scrape' pTk * <i>kir-</i>
OJ <i>ara-</i> 'be fresh' pJ * <i>ara-</i>			MMo. <i>aril-</i> 'be(come) clear' pMo * <i>ari-</i>	OTk. <i>ari-</i> 'be clean' pTk * <i>ari-</i>

pJ *-r- :: pK *-l- :: pTg *-l- :: pMo *-l- :: pTk *-l- (< pTEA *-l-)

(1) 'move away, remove'

J *saru* 'leave, move away, quit', OJ *sar-* 'move forward, depart', J *sarasu* 'bleach, blanch, expose', J *sarau*, OJ *sarap-* 'clean, dredge, drag', pJ **sara-* 'move away'

MK *so(l)-* / *so'l(o)-* 'burn away, make disappear, make vanish', pK **solo-* 'remove'

[Copy: Ma. *sala-* 'distribute, hand out']

WMo. *sal(u)-* '1 separate, branch off, part with, take leave from; 2. be detached, be parted from', MMo. *salqaxda-* 'be separated', Khal. *sala-* '1', Buriat *hala-* '1', Kalm. *sal-* '1', Ordos *sal-* '1', Dag. *sala-* '1', Mgr. *sal-* '1', pMo **salu-* ~ **sala-* 'move away from, remove'

OTk. *sal-* 'move, put in motion', Karakh. *sal-* '1 put in motion, throw, 2 let fall, lower', Tk. *sal-* 'let go, let free, send, throw oneself, ignore', Tat. *sal-* '1', MTk. *sal-* '1', Uz. *sol-* '1', Uig. *sal-* 'insert, put away, remove; let fall, hang', Az. *sal-* '2', Tkm. *sal-* '1', Khak. *sal-* '1', Shor *sal-* '1', Halaj *sal-* '1', Chu. *sol-* '1', Tuva *sal-* '1', Kirg. *sal-* '1', Kaz. *sal-* '1', Nog. *sal-* '1', Bash. *hal-* '1', Gag. *sal-* '1', Karaim *sal-* '1', KKalp. *sal-* '1' pTk **sal-* 'move away, put in motion' (Clauson 1972: 824: "a wide range of extended meanings")

(2) 'harm, deceive'

J *tarasu* 'wheedle, cajole, deceive', pJ **tara(-)s-* 'deceive'

MK *talay-* 'wheedle, cajole; soothe, calm down,', pK **talay-* 'deceive'

[Copy: Ma. *tala-* 'confiscate, seize property as a legal punishment', Evk./ Even *tala:-* 'rob, plunder, take away']

WMo. *tala-* 'take away, confiscate, plunder, ruin', (SH) MMo. *tala-* '1 rob, plunder', Khal. *tala-* 'rob, confiscate', Kalm. *talə-* '1', Ordos *tala-* '1', Dag. *tale-* '1', pMo **tala-* 'plunder, harm'

OTk. *tala-* 'damage, pillage', Karakh. *tala-* '1 pillage, plunder', Tk. *tala-* '1', Tat. *tala-* '1', MTK. *tala-* '1', Uz. *tala-* '1', Uig. *tala-* '1', Az. *tala-* '1', Tkm. *ta:la-* '1', Khak. *tala-* '1', Chu. *tula-* 'harm, slander', Yakut *tala:-* '1', Kirg. *tala-* '1', Kaz. *tala-* '1', Nog. *tala-* '1', Bash. *tala-* '1', Karaim *tala-* '1', KKalp. *tala-* '1' pTk **tala-* 'plunder, harm'

(3) 'be wet'

OJ *urup-* 'get muddy, be wet', OJ *urum-* 'get wet', pJ **uru-* 'be wet'

K *wuli-*, MK *wuli-* 'steep, soak, bleach', pK **wuli-* 'soak'

Evk. *ula-* '1 soak, wet', Evk. *ulap-* '2 become wet', Even *ul-* '1', Even *ulab-* '2 become wet', Ma. *ulga-* ~ *ulha-* 'wet, dampen, dip in a liquid', Orok *ula-* '1', Na. *ulariko:* (dial.) 'wet', Ud. *ula-* '1', Sol. *ulakku:* 'wet', pTg **ula-* 'soak, wet'

WMo. *ulum*, Kalm. *ulm*, pMo **ulum* 'swamp' (deverbal noun?)

pJ *-r- :: pK *-l- :: pTg *-r- :: pMo *-r- :: pTk *-r- (< pTEA *-r-)

(4) 'cut'

J *kiru*, OJ *ki₁r-* 'cut', OJ *ki₁ras-* 'run/ sell out of', J *kireru*, OJ *ki₁re-* 'be sharp, get cut, run out', pJ **kira-* 'cut'

Evk. *gir-*, Even *gir-*, Neg. *gi:-*, *gij-*, Ma. *giri-*, Olč. *giri-*, Orok *giri-*, Na. *giri-*, Oroč. *gi:-*, *giji-*, Ud. *gi:-*, pTg **giri-* 'cut out'

[Copy: WMo. *kira-*, *kiru-*, Khal. *x'ar-*, Kalm. *kur-*, pMo **kira-* 'cut into small pieces, mince']

Karakh. *kir-* 'scrape, strip (hair), pluck out (hair)', Tk. *kir-* '1 break, demolish', Tat. *kir-* '2 scrape, shave', MTK. *kir-* '1, 2, cut off', Uz. *kir-* '2', Uig. *ki(r)-* '2', Az. *gür-*

‘1’, Tkm. *gür-* ‘1, 2’, Khak. *xür-* ‘2, cut’, Halaj *kür-* ‘1’, Chu. *xər-* ‘1’, Yak. *kürj-* ‘shear, cut’, Dolgan *kürj-* ‘shear, cut’, Tuva *kür-* ‘2’, Kirg. *kür-* ‘2’, Kaz. *kür-* ‘2’, Nog. *kür-* ‘2’, Bash. *kür-* ‘1, 2’, Gag. *kür-* ‘1’, Karaim *kür-* ‘1, 2’, Kkalp. *kür-* ‘2’, pTk **kür-* ‘scrape, pluck out (hair), shave, cut’ (Clauson 1972: 643)

(5) ‘be pure’

J *arau* ‘wash’, OJ *arap-* ‘wash’, J *arai* ‘rough, natural, crude’, OJ *ara-* ‘rough, fresh, new’, Yonaguni dialect *ara-* ‘new’, J *ara* ‘new, fresh’, pJ **ara-* ‘be clean, pure’

WMo. *ariy* ‘pure, clear’, *ariyun* ‘1 clean, pure, clear; purity’, *arci-* ‘2 wipe, clean, erase’, MMo. *ariun* 1, *arci-* 2, *aril-* ‘3 be(come) clear, clear up’, *arilqa-* 2, Khal. *ariun* 1, *arci-* 2, *aril-* 3, Bur. *arün* 1, *arša-* 2, Kalm. *ärü:n* 1, *arč-* 2, Ordos *aru:n* 1, *arci-* 2, Dong. *arun* 1, *aci-* 2, Bao. *aruñ* 1, Dag. *aru:n* 1, *arci-* 2, Mgr. *arin* 1, Mgr. *arili-* 3, Mgr. *ariñge* ‘cleanly’, *arire-* ‘become pure’, Mogol *oru:n* 1, pMo **ari-* ‘be clean’

OTk. *arī-* ‘1 be(come) clean, pure’, Karakh. *arī-* ‘1’, Tk. *arī* ‘2 clean, pure’, *art-* ‘3 clean, purify’, Osm. *arīt-* ‘wipe’, MTk. *ariy*, *arī* ‘2’, *arīt-* ‘3’, Uz. (dial.) *ari-* ‘1’, Az. (dial.) *arī* ‘2’, *arīt-* ‘3’, Tkm. *arig* ‘2’, *art-* ‘3’, Halaj *ariy* ‘2’, *arut-* ‘3’, Tuva *ariy* ‘2’, *arīt-* ‘3’, pTk **arī-* ‘be(come) clean’

Verbal adjectives, such as the roots for ‘be(come) clean’ in this etymology and the adjectives under (6) and (8) are treated along with verbs. Mixed encoding of adjectives, whereby the set of property words is split into a subset with verbal encoding and a subset with nominal encoding is a common typological feature of the Transeurasian languages. Verbal adjectives take inflectional morphology and show the same negation as verbs. They do not need to be supported by a copula in the predicative form.

In his review of Robbeets 2005, Kara (2007: 96) suggests to treat the Mongolic forms in this etymology as early copies from Turkic. He does not provide a motivation for the copying scenario but, at the workshop underlying this volume in Mainz Erdal and Nugteren argue that the suffix *-l-* reconstructed in *aril-* is foreign to Mongolic since the commonly attested suffix WMo. *-l-* derives transitive verbs and not intransitives as in this case. However, Poppe (1954: 61, 66 vs. 64) distinguishes two different homophonous suffixes WMo. *-l-*: one is a causative or transitive suffix (e.g. WMo. *uyu-* ‘drink’ => *uyul-* ‘give to drink’), the other is an intensive-iterative suffix (e.g. WMo. *dusu-* ‘fall (of drops)’ => *dusul-* ‘to drip’, see also etymology (15)) that can derive transitive as well as intransitive verbs. The latter suffix also lexicalized in a number of verb pairs granting an inchoative meaning to natural processes, e.g. WMo. *yasi-yun* ‘bitter’ => *yasal-* ‘lament, mourn’, *öte-gü* ‘grey’ => *ötel-* ‘become old’ (Ramstedt 1912: 7-8). It is interesting to observe that although the former suffix practically disappeared in Monguor (De Smedt & Mostaert 1964: 93-94 note), the latter still surfaces as Mgr. *-li-* (De Smedt & Mostaert 1964: 148) in e.g. Mgr. *yasen* ‘bitter’ => *yaseli-* ‘become bitter’, *saci-* ‘sow’ => *sacili-* ‘scatter, disperse’ and *arin* ‘clear, pure’ => *arili-* ‘clear up (intr.)’. The Monguor forms Mgr. *ariñge* ‘cleanly’ and *arire-* ‘become pure’ are relevant because they are segmentable in a root **ari-* ‘be clean’ and native suffixes. The form Mgr. *arire-* ‘become pure’ represents the equipollent

anticausative counterpart of the causative *arci-* ‘wipe, clean’ that is well represented elsewhere in Mongolic.

Table 2: Correspondences *pTEA* *-t- ~ *-d-⁴

Japanese	Korean	Tungusic	Mongolic	Turkic
OJ <i>kata-</i> ‘be hard’ pJ * <i>kata-</i>	MK <i>skatalwop-</i> ‘be hard (met.)’ pK * <i>kata</i>		WMo. <i>qata-</i> ‘become hard’ pMo * <i>kata-</i>	OTk. <i>kat-</i> ‘be hard’ pTk * <i>kat-</i>
J <i>kati</i> ‘walking’ pJ * <i>kat-</i>	MK * <i>keT-</i> ‘walk’ pK * <i>ketu-</i>		MMo. <i>ketül-</i> ‘cross, pass’ pMo * <i>ketü-</i>	OTk. <i>kät-</i> ‘go away’ pTk * <i>kät-</i>
OJ <i>paya-</i> ‘be early, fast’ pJ * <i>paya-</i>	MK <i>polo-</i> ‘be early’ pK * <i>polo-</i>	Ud. <i>baji</i> ‘early’ pTg * <i>badi</i>		
OJ <i>ke₁s-</i> ‘make wear’ pJ * <i>kiya-</i>			WMo. <i>kedür-</i> ‘wear (clothes)’ pMo * <i>kedür-</i>	OTk. <i>käd-</i> ‘wear (clothes)’ pTk <i>käd-</i>

pJ *-t- :: pK *-t- :: pTg *-t- :: pMo *-t- :: pTk *-t- (< pTEA *-t-)

(6) ‘be hard’

J *katai*, OJ *kata-* ‘be hard, solid, tough, rigid’, pJ **kata-* ‘be hard’

K *kkatalop-*, MK *skatalwop-* ‘be hard, difficult, complicated; be harsh, severe’ (adj. n. + MK *-lwop-* ‘be characterized by’; pK **s(u)-* intensive prefix), pK **kata* ‘hard, severe’

WMo. *qata-* ‘1 become hard, dry (intr.)’, *qata-yu* ‘2 hard’, MMo. *qata’u* ‘2’, Khal. *xat-*, *xatu*: ‘2’, Mgr. *xada:-* ‘1’, *xadoŋ* ‘2’, pMo **kata-* ‘become hard’

OTk. *kat-* ‘be hard, firm, tough’, *katïy* ‘2 hard’, Karakh. *kat-* ‘1’, *katïy* ‘2’, Tat. *katï* ‘2’, Uz. *kotik* ‘2’, Uig. *ketik* ‘2’, Az. *gati* ‘2’, Tkm. *gat*, *gati* ‘2’, Khak. *xatïy* ‘2’, Shor *kadiy* ‘2’, Chu. *xïdъ* ‘2’, Yak. *kïta:nax* ‘2’, Dolg. *kïta:nak* ‘2’, Tuva *ka’dïy* ‘2’, Kirg. *katï* ‘2’, Kaz. *kattï* ‘2’, Nog. *kat* ‘2’, Bash. *katï* ‘2’, KKalp. *kattï* ‘2’, pTk **kat-* ‘be hard’

⁴ Robbeets (2005: 374-75) argues that there is no need to reconstruct a three-way opposition voiceless-voiced-aspirated as proposed by Menges (1975:44), Starostin (1992: 21), Vovin (1994: 100) and supported by Miller (1995: 72-73).

(7) ‘go over/away’

J *kati* ‘walking’ (deverbal noun on *-i* from ‘walk’), pJ **kat-* ‘walk’

K *keT-*, MK *ˈkeT-* ‘walk’, pK **ketu-* ‘walk’

(SH) MMo. *ketü-gelje-* ‘cross over’, *ketü-s* ‘crosswise’, *ketü-l-* ‘cross, pass’, WMo. *ketül-* ~ *getül-* ‘traverse, cross, ford; be delivered’, Khal. *getle-* ‘1 cross’, Bur. *getel-* ‘1’, Kalm. *getl-* ‘1’, Ordos *getül-* ‘1’, Dag. *hedele-* ‘1’, *xedelgē-* ‘1’, *xedle-* ‘1’, pMo **ketü-* ‘cross, traverse’

Otk. *kät-*, MTK. *ket-*, Tk. *git-*, Tat. *kit-*, Uz. *kät-*, Uig. *kät-*, Az. *gät-*, Tkm. *git-*, Kirg. *kät-*, Kaz. *kät-*, Nog. *kät-*, Bash. *kit-*, Gag. *gät-*, Karaim *kät-*, Kkalp. *kät-* pTk **kät-* ‘go, go away’

pJ **-y-* :: pK **-l-* :: pTg **-d-(-/ji-)* :: pMo **-d-* :: pTk **-d-* (< pTEA **-d-*)

(8) ‘be early’

J *hayai*, OJ *paya-* ‘be quick, fast, early’, pJ **paya-* ‘be early, fast’

K *pparu-* ‘be quick, fast; early’, MK *polo-* ‘be early’, MK *ˈspolo-* ‘be fast’ (pK **s(u)-* intensive prefix), pK **polo-* ‘be early, fast’

Evk. *baji-kir*, Even *baj*, Neg. *bajiy*, Oroč. *ba:jika*, Ud. *baji*, pTg **baji* < **badi* ‘early’

(9) ‘put on clothing’

J *kiru* ‘wear clothing’, OJ *ki-* ‘put on (clothes), wear’, OJ *keis-* ‘make wear, clothe’, pJ **kiya-* ‘put on (clothes)’

WMo. *kedür-*, Kalm. *ködr-*, Bur. *xeder-*, Ordos *kedür-*, pMo **kedür-* ‘wear a garment’

Otk. *käd-*, Karakh. *käḏ-*, Tk. *giy-*, Tat. *kiy-*, MTK. *käy-*, Uz. *kiy-*, Uig. *käy-*, *kiy-*, Az. *gey-*, Tkm. *gey-*, Khak. *kis-*, Shor *käs-*, Halaj *käd-*, Yak. *kät-*, Dolgan *kät-*, Tuva *kät-*, Kirg. *kiy-*, Nog. *kiy-*, Gag. *gi-*, Karaim *kiy-*, Kkalp. *kiy-*, pTk **käd-* ‘put on, wear (clothing)’

Table 3: Correspondences pTEA **-p-* ~ **-b-*

Japanese	Korean	Tungusic	Mongolic	Turkic
OJ <i>ap-</i> ‘meet’ pJ <i>*apa-</i>	MK <i>awo-</i> ‘join’ pK <i>*apwo-</i>	Ma. <i>afa-</i> ‘encounter’ pTg <i>*apa-</i>	WMo. <i>ayulja-</i> ‘meet, join’ pMo <i>*ayū-</i>	
OJ <i>sup-</i> ‘inhale’ pJ <i>*sup-</i>	MK <i>ˈspol-</i> ‘inhale’ pK <i>*s(o)pol-</i>			Tat. <i>sipir-</i> ‘swallow’ pTk <i>*sip-</i>

Japanese	Korean	Tungusic	Mongolic	Turkic
OJ <i>ko₂p-</i> 'beg' pJ * <i>kop-</i>		Evk. <i>goy-</i> 'hunt' pTg * <i>gob-</i>		Karakh. <i>kov-</i> 'pursue' pTk * <i>kob-</i>
OJ <i>op-</i> 'carry on back' pJ * <i>opu-</i>	MK <i>ep-</i> 'carry on back' pK * <i>ep-</i>	Evk. <i>ewe-</i> 'carry' pTg * <i>ebe-</i>	WMo. <i>e₂üre-</i> 'carry on back' pMo <i>e₂üre-</i>	
OJ <i>sape₂-</i> 'obstruct' pJ * <i>sapa-</i>			WMo. <i>sa₂yara-</i> 'be stopped' pMo * <i>sa₂ya-</i>	Karakh. <i>savra-</i> 'be stopped' pTk * <i>sab-</i>

pJ *-p- :: pK *-p- :: pTg *-p- :: pMo *-γ- :: pTk *-p- (< pTEA *-p-)

(10) 'meet'

J *au* 'meet, encounter', OJ *ap-* 'meet', OJ *ape₂-* 'join', pJ **apa-* 'meet'

MK *awo-*, *a₂ wol-* 'join together', Silla OK 阿火屋 [a] + [pwol ~ pwul] + 'house(s)' = 并屋 'side by side' + 屋 'house(s)', pK **apwo-* 'join'

Ma. *afa-* 'encounter, run into', Ma. *afa-bu-* 'hand over', Ma *afa-ndu-* 'attack each other', Na. *apa-*, *afa-* 'attack', Sol. *apaldi-* 'attack each other' (Ma. *-ndu-*, Sol. *-ldi-* reciprocal, pTg **-ldu-*), pTg **apa-* 'encounter'

WMo. *ayulja-* (*-lja-* multiple actants), Khal. *u:lja-*, Kalm. *u:lja-*, Dag. *aulji-*, pMo **ayu-lja-* 'meet, join'

It is legitimate to posit a formant MMo. *-lja-/ -lje-* in reference to verbs expressing multiple actants such as MMo. *a'ulja-* 'pay one's respects to, meet', *bol-* 'become' => *bolja-* 'make an appointment', verbs expressing multiple objects such as MMo. *si'a* 'bone stone (n.)' (over **si'ala-*?) => *si'alja-* 'play with bone stones', *unji-* 'rest, halt' => *unjlja-* 'hang down (e.g. of feet)', *alhun* 'be missing' => *alja-* 'be in distress', and verbs expressing multiple occurrences in rhythmic motions such as MMo. *sicabalja-* 'crawl', *darbalja-* 'jiggle', *gilba-* 'gleam' => *gilbalja-* 'glimmer'.

(11) 'inhale'

J *suu* 'breathe in, inhale, absorb', OJ *sup-* 'inhale', pJ **sup-* 'inhale'

MK *spo(l)- / spo lo-* 'sip, inhale', pK **s(o)pol-* 'inhale'

MTk. *sipqar-*, Tk. *sip-*, Tat. *sipir-*, Bash. *hipir-*, Az. *sifqar-*, pTk **sip-* 'swallow greedily' (Räsänen 1969: 418, 423)

pJ *-p- :: pK *-p- :: pTg *-b- :: pMo *-b-/-ɣ- :: pTk *-b- (< pTEA *-b-)

(12) ‘chase’

J *kou* ‘ask, request, beg’, OJ *ko₂p-* ‘beg’, pJ **kop-* ‘beg’

Neg. *gobjo-*, Orok *gobdo-*, Evk. *goɣ-*, *govjo-*, Even *gobja-*, Oroč *gobjono-*, pTg **gob-* ‘hunt’

Karakh. *kov-*, MTK. *kov-*, Tk. *kov-*, Gag. *qu:-*, Az. *Gov-*, Tkm. *gov-*, *qaw-*, Uz. *qaw-*, *quw-*, Tat. *quw-*, Kirg. *qu:-*, *qubala-*, Kaz. *quw-*, Chu. *xu-*, *xəv-*, pTk **kob-* ‘follow, pursue, chase’ (Clauson 1972: 580)

(13) ‘carry on the back’

J *ou* ‘bear, carry on the back’, OJ *op-* ‘bear, carry on the back’, Azuma OJ *opuse-*, OJ *opose-*, *ooseru* ‘charge with’, *obuu* ‘carry on the back’, pJ **opu-* ‘carry on the back’

MK *ep-* ‘carry on the back’, pK **ep-* ‘carry on the back’

Na. *iwari-* ‘tunload’, Evk. *ewe-* ‘carry’, Oroč. *ewu-gi-* ‘bring’, *iwa-dala-* ‘to put a person on one’s shoulder’, pTg **ebe-* ‘carry’

WMo. *eyüre-*, *egür-*, *ügür-*, (SH) MMo. *u’ur-* ‘lift on the shoulders, carry’, Khal. *ü:re-* ‘carry on one’s back, bear’, Kalm. *ü:r-*, pMo **eyüre-* ‘carry on the back’

The deep-velar consonant with velar origin WMo. *ɣ* < **g* occurs only in stems with back vowels. In intervocalic position it converged with the deep-velar consonant with bilabial origin WMo. *ɣ* < **β* < **p*/**b* (Poppe 1955: 98). In cases like WMo. *eyüre-*, where we find *ɣ* in stems with front vowels, we can exclude a velar origin.

(14) ‘obstruct’

J *sawaru* ‘interfere with, affect, hinder’, OJ *sape₂-* ‘obstruct, bother’, pJ **sapa-* ‘obstruct, hinder’

MMo. *sa’ara-* (SH), WMo. *sayara-*, *sayata-*, Khal. *sa:r-*, *sa:t-*, Bur. *ha:r-*, *ha:t-*, Ordos *sa:ta-*, Dag. *sa:ta-*, *sa:te-*, SYugh. *sa:d* ‘obstacle’, *sa:du:l-*, pMo **sayā-* ‘to be detained, stopped, linger’

Karakh. *savra-* ‘be stopped, hindered, discontinued’, *sav#l-* ‘decline’, MTK. *sav-* ‘turn off (the road), get rid of’, Tk. *sav-* ‘get rid of’, *savuš-* ‘pass, pass away’, Az. *sovuł-* ‘stop, finish’, Tkm. *sowul-* ‘stop, finish’, Gag. *sauš-* ‘pass, pass away’, Karaim *savuš-* ‘pass, pass away’, pTk **sab-* ‘stop, hinder’ (Clauson 1972: 788-789, 791)

Table 4: Correspondences pTEA *-k- ~ *-g-

Japanese	Korean	Tungusic	Mongolic	Turkic
OJ <i>kake</i> ₂ - ‘break off’ pJ * <i>kaka</i> -		Neg. <i>kaki</i> - ‘cut off’ pTg * <i>xak</i> -	MMo. <i>qaqal</i> - ‘break’ pMo * <i>kaka</i> -	Karakh. <i>kak</i> - ‘strike’ pTk * <i>kak</i> -
OJ <i>pak</i> - ‘slip on’ pJ * <i>paka</i> -	MK <i>pak</i> - ‘insert’ pK * <i>pak</i> -	Evk. <i>haku</i> :- ‘enclose’ pTg * <i>paku</i> :-		
OJ <i>tuk</i> - ‘hit with force’ pJ * <i>tuk</i> -	MK * <i>thi</i> - ‘hit, strike’ pK * <i>t(o)ki</i> -	Evk. <i>duγ</i> - ‘hit’ pTg * <i>dug</i> -		Karakh. <i>tög</i> - ‘pound’ pTk * <i>tög</i> -
OJ <i>oko</i> _{2s} - ‘raise’ pJ * <i>oko</i> -	MK <i>hye</i> - ‘set, stretch’ pK * <i>uki</i> -	Evk. <i>uγ</i> - ‘mount’ pTg * <i>ug</i> -		OTk. <i>ük</i> - ‘heap up’ pTk * <i>üg</i> -

pJ *-k- :: pK *-k-(-h-) :: pTg *-k- :: pMo *-k- :: pTk *-k- (< pTEA *-k-)

(15) ‘break off’

J *kaku*, MJ *kak*- ‘break, lack’, J *kakeru*, OJ *kake*₂- ‘break off, be broken off’, pJ **kaka*- ‘break off’

Neg. *aki*- / *kaki*- ‘1 cut off’, Olč. *xaqpa-lu*- ‘2 tear off’, Orok *xaqpa*- ‘2’, Na. *xa:ga*- ‘1’, *xaqpa*:- ‘2’, Ud. *akpinda*- ‘1’, *kakpaligi*- ‘2’, pTg **xak*- ‘cut off, tear off’

(SH) MMo. *qaqal*- ‘1 break, split, chip’, *qaqaca*- ‘2 separate, break away from (tr./intr.)’, WMo. *qayal*- 1 (WMo. -*l*- intensive-iterative), *qayala*- 1, *qayaca*- ‘2’, Khal. *xaga*- ‘1’, Bur. *xaxa*- ‘1’, Kalm. *xayäl*- ‘1’, Ordos *xagal*- ‘1’, Mogh. *qakara*- ‘1’, Dag. *xagala*:-, *hagere*-, *hagare*-, *hagela*:- ‘1’, pMo **kaka*- ‘break, split’

Karakh. *kak*-, Tk. *kak*-, Gag. *kak*-, Az. *gax*-, Tkm. *kak*-, *kakıl*-, MTk. *kak*-, Uzb. *kək*-, Uig. *kak*-, Krm. *kak*-, Tat. *kak*-, Bash. *kak*- Kirgh. *kak*-, Kaz. *kak*-, KBalk. *kak*-, KKalp. *kak*-, Kum. *kak*-, Nog. *kak*-, Khak. *xax*-, Oyr. *kak*-, Tuva *kak*-, Tof. *ka’k*-, Dolg. *kakriy*- ‘break into small pieces’, pTk **kak*- ‘strike, knock, tap’ (Clauson 1972: 609)

(16) ‘enclose, put into’

J *haku*, OJ *pak*- ‘slip on, put on (shoes, stockings, trousers)’, J *hakeru*, OJ *pake*₂- ‘have/let someone put on’, OJ *pakas*- ‘deign to put on’, pJ **paka*- ‘slip on’

MK *pak*- ‘insert’, pK **pak*- ‘insert’

Even *hak*- ‘1 enclose, fence in, lock up’, Evk. *haku*:- ‘1’, Neg. *xaxu*- ‘1’, Sol. *axu*- ‘1’, pTg **paku*:- ‘enclose’

pJ *-k- :: pK *-k- :: pTg *-g- :: pMo *-g- :: pTk *-g- (< pTEA *-g-)

(17) ‘hit with force’

J *tuku*, OJ *tuk-* ‘pound, husk, beat, hit with force’, pJ **tuk-* ‘pound, hit with force’

MK *thi-* ‘hit, strike’, pK **t(o)hi-* < **t(o)ki-* ‘hit, strike’

Evk. *duy-* ‘1 hit, beat, 2 batter, hit repeatedly’, Even *duy-* ‘1’, *duy-* ‘2’, Neg. *duw-* ~ *duy-* ‘2’, *dukte-* ‘1’, Ma. *du-* ~ *du:-* ‘1, thresh’, Jur. *du-ŋu-mij* ‘1’, Olč. *du:či-* ‘2’, Orok *du:* 1, *du:či-* ‘2’, Na. *du:-* 1, *do:či-* ‘2’, Oroč. *du:-* ‘1, 2’, Ud. *du:-* ‘2’, *dukte-* ‘1’, pTg **dug-* ‘hit with force’

Karakh. *tög-*, MTK. *tüw-*, *tüj-*, Tk. *döv-*, Gag. *dü:-*, Az. *döy-*, Tkm. *döv-*, Krm. *tüy-*, Tat. *töy-*, Bash. *töy-*, Kaz. *tüy-*, KBalk. *tüy-*, KKalp. *tüy-*, Kum. *tüy-*, Nog. *tüy-*, Chu. *tü-* ~ *tə^wv-*, pTk **tüg-* ~ **tög-* ‘pound’

(18) ‘rise, raise’

J *oku*, OJ *ok-* ‘put’, OJ *oki₂-* ‘arise’, *okoru*, OJ *oko₂r-* ‘arise’, *okosu*, OJ *oko₂s-* ‘raise’, pJ **oko-* ‘raise’

K *kye-*, MK *hye-* ‘set fire to, stretch, pluck a musical instrument’, pK **Øhye-* < ? **uki-* ‘raise’

Evk. *uy-*, Even *ū-*, Neg. *okča-la:-*, Solon *ugu-*, Na. *o:-*, Olč. *u:-*, Orok *u:-*, Oroč *u:-*, Ud. *u:-na-* pTg **ug-* ‘mount’

Otk. *ük-*, Karakh. *ük-*, Tat. *üy-*, MTK. *ök-*, Uz. *uy-*, Khak. *üg-*, Kirg. *üy-*, Kaz. *üy-*, Nog. *üy-*, Bash. *üy-*, KKalp. *üy-*, pTk **üg-* ‘heap up, accumulate’ (Clauson 1972: 100)

4 Etymologies for diathetical markers

Japanese holds no exception to the observation that the products of actional and diathetical marking are easily lexicalized. It is possible to reconstruct the following chain of suffixes that lexicalized in Japanese verbs. The chain is slightly modified from the one proposed by Unger (1977) and Martin (1987: 795). The shape of attested strings in verb stems makes it possible to motivate the suffix order. Below it will be explained why the denominal verb suffix *-ra₍₁₎-* is treated separately from the homophonous equipollent anticausative *-ra₍₂₎-*. Robbeets (2007a) discusses the nature and the order of the actional suffixes **-ka₍₁₎-*, **-ma-* and **-ta-*. Contrary to Martin’s analysis, the suffix **-ma-* is in a position before **-ta-* because we find two instances of *-ma-ta-*, i.e. J *ayamatu* ‘err, mistake’, *ugomotu*, *uguromotu* ‘bulge up’, while no instances of *-ta-ma-* are found. The following order

confirms a logical principle in linguistic structuring, namely that actionality is expected to precede diathesis in the suffix chain.

Table 5: Lexicalized suffix chain in Japanese verbs

base	denominal	actional	diathetical
	<i>-ra₍₁₎-</i>	<i>-ka₍₁₎-</i> iconic	<i>-ya-</i> fient. / pass.
	<i>-na-</i>	<i>-ma-</i> inclination	<i>-ta-</i> caus.-pass.
		<i>-ka₍₂₎-</i> inchoative	<i>-pa-</i> anticaus. /fient.
			<i>-ra₍₂₎-</i> anticaus.
			<i>-sa-</i> caus.
			<i>-(k)i-</i> caus.-pass.

Except for the equipollent causative **-sa-*, which is thought to have grammaticalized from an independent verb reflected in OJ *so₂-* *~se-* ‘do, make’ (Whitman 1985: 234-235, Martin 1996: 19), it is possible to provide an external etymology for each of these formants (Robbeets 2007a & b). In the present paper we will restrict ourselves to an overview of diathetical morphology. The reconstruction of the suffixes is based on diagrammatic iconicity in verb pairs.

4.1 pTEA **-da-* auxiliary > fientive > passive

Japanese pJ **-ya-* > OJ *-y-*

auxiliary ‘1. gradually become base, 2. make use of base’: 1. OJ *me₂* ‘sprout, bud’ => OJ *moye-* ‘sprout’, OJ *moyas-* ‘make it sprout’; OJ *pi₁* ‘ice, hail’ => OJ *piye-* ‘get cold (intr.)’, OJ *piyas-* ‘cool, make cold (tr.)’; 2. OJ *ya* ‘arrow’ => OJ *i-* (<**i-ya-*) ‘shoot’, OJ *iye-* (<**i-ya-(C)i-*) ‘get shot’

fientive: OJ *su* ‘vinegar, sour’, OJ *su-* ‘(be) sour, acid, tart’ => OJ *suye-* ‘turn sour, spoil (intr.)’, OJ *suyur-* ~ dial. *suyar-* ‘get sour’; OJ *waka-* ‘(be) young’ => OJ *wakaye-* ‘get younger, be rejuvenated’

passive: OJ *ki₁k-* ‘hear’ => OJ *ki₁ko₂ye-* ‘be heard, be audible’; OJ *mi₁-* ‘see’ => OJ *mi₁yar-* ‘view the distance, overlook, survey’, OJ *mi₁ye-* ‘be seen, seem, be visible’

Tungusic pTg **-dA:-* > Manchu *-dA-*, Evk. *-dA:-*, Even *-dA:-*, Ud. *-dA-*, Na. *-dA-* (Benzing 1955: 1064)

auxiliary ‘1. gradually become base, 2. make use of base’: 1. Ma. *jili* ‘anger’ => *jilida-* ‘get angry’; 2. Ma. *eruwen* ‘drill, auger’ => *eruwede-* ‘drill (a hole), make a hole with an auger’ (Gorelova 2002: 236-37)

fientive: Ma. *bayan* ‘rich’ => *bayanda-* ‘become rich’; Ma. *goho* ‘elegant, dandy’ => *gohodo-* ‘adorn oneself’

Mongolic pMo *-*dA*- > WMo. -*dA*- (Poppe 1954: 64), SH MMo. -*dA*- (Street 1957: 63, Rybatzki 2003: 65)

auxiliary '1. gradually become base, 2. make use of base': 1. WMo. / SH MMo. *cisun* 'blood' => *cisuda*- 'become bloody, be bloodstained'; 2. WMo. *nere* 'name' => *nerede*- 'be known as, give a name'

fientive: WMo. *keyi* 'empty, idle, in vain' => *keyide*- 'become empty'; WMo. *yasiyun* 'bitter(ness), sour (adj./ n.)' > *yasiyuda*- 'grow bitter or rancid, sorrow, mourn'

passive: WMo. *dugul*- 'hear' => WMo. *dugulda*- 'be heard, be audible'; WMo. *ol*- 'find' => WMo. *olda*- 'be found'

Turkic pTk *-(*A*)*d*- > OTk. -(*A*)*d*- (Erdal 1991: 485-492)

auxiliary 'become': OTk. *baş* 'head' => *başad*- 'be or become a leader'; OTk. *kut* 'favour of heaven, good fortune' => *kutad*- 'become a blessing, enjoy divine favour and good fortune'

fientive: OTk. *kirgıl* 'grey haired' => *kirgılad*- 'turn grey haired'; OTk. *yagi* 'enemy, hostile' => *yagıd*- 'be(come) hostile'

passive: OTk. *uya*- 'put to shame' => *uyad*- 'be ashamed'; OTk. *to*- 'close, block' => *tod*- 'be full, satiated'

4.2 pTEA *-*ti*- causative > passive

Japanese pJ *-*ta*- > OJ -*t*- (Unger 1977: 140, Miller 1981: 857, Martin 1987: 665-800).

causative: OJ *ke₂*- 'get extinguished (intr.)' => OJ *ke₂t*- 'make vanish (tr.)'; (Eastern) OJ *panar*- 'get distant, be expelled (intr.)', OJ *pane*- 'exclude (tr.)' => OJ *panat*- 'separate, alienate (tr.)'

passive: pJ **kunta*- 'lower' in OJ *kudas*- 'take down, put down, lower, defeat (tr.)' ~ OJ *kudar*- 'go down, descend (intr.)' => OJ *kutat*- 'come down, end, deteriorate (intr.)'; pJ **wo*- 'exist' in OJ *wor*- 'be, exist (intr.)' ~ OJ *wos*- 'deign to control, deign to rule, deign to eat/drink, deign to wear (tr.)' => OJ *wot*- 'come back to life (intr.)'

Korean pK *-*ti*- > MK -*t*-, -*chi*- (Martin 1992: 450, 623)

K -*chi*-1. causative-passive, 2. intensive < MK -*chi*- < pK *-*ti*-*ki* double causative

causative: K *kulu*-, MK *kulu*- ~ *kulh*- ‘be wrong (intr.)’ => K *kuluchi*-, MK *kulu* -*ch(u)*- ‘ruin (tr.)’; K *sos*-, MK *swos*- ‘tower up, spring up, rise (intr.)’ => K *soschi*- ‘raise, lift up (tr.)’

passive: K *kunh*-, MK *kunh*- ‘cut, break, stop, give up (tr.)’ => K *kuchi*-, MK *kunchi*- ‘stop, discontinue, put an end to (tr.); stop, end, come to an end (intr.)’; K *coch*-, MK *cwos*- ‘follow, go after, pursue (tr.)’ => K *ccochki*-, MK *cwoschi*- ‘be pursued, be driven away (intr.)’

Kulikov (1993: 127-136) studies the semantics of double causative constructions. Next to double causation as in Tk. *öl-dür-t*- (die-caus.-caus.) ‘to have somebody killed’, the most frequent meaning is that of an intensifier to the first causative. The fact that the suffixes K -*chi*- and K -*chu*- are used to derive both causatives and intensives raises the possibility of double causation. Interestingly the suffixes alternate with K -*ki*- and -*kwu*-, suffixes that generate causatives but not intensives. Formally and functionally this leads to the reconstruction of an original causative pK *-*ti*-, which in combination with a second causative *-*ki*- or *-*kwu*- palatalized to K -*chi*- or K -*chu*- respectively. The palatalization is supported by Ramstedt’s (1939: 133) observation that North Korean dialects preserve -*thi*- for the suffix. The formal development involves velar lenition (**k* > **h*) and the loss of *-*i*- leading to the contraction of two syllables into one. Additional support for the reconstruction of an original causative-passive pK *-*ti*- comes from a small number of alternating verb pairs, such as MK *ti*- ‘become, form (aux.)’ => MK *tit*- ‘light (a fire)’; pK *-*a*- ‘exist’ in the infinitive ending K -*e* /*a*, MK -*e*/ -*a* + *-*ti*- causative => MK -*et*- ‘get, receive’; pK *-*mo*- ‘bring together’ in MK -*mwoy*- ‘accompany, escort (someone respected)(tr.)’ (incorporates -*i*- causative), -*mwosi*- ‘accompany (tr.)’, -*mwoy* -*ho*- ‘gather, bring together (tr.)’ => MK *mwot*- ‘come together (intr.)’; MK *na*- ‘grow, come out, become (intr.)’ (causative in MK -*nay*- ‘take out, produce’) => MK *nat*- ‘appear (intr.)’ that may preserve traces of the uncontracted formant.

Tungusic pTg *-*t* ~ -*ti*- > Even -*c*- / -*t*- ~ -*ci*-, Ma. -*tA*- ~ -*cA*-, Evk. -*t*- ~ -*ci*-, Neg. -*c*- / -*t*- ~ -*ci*-, Ud. -*si*-, Na. -*ci*- ~ -*si*- 1. causative, 2. passive, 3. resultative, 4. progressive, 5. iterative/ distributive, 6. intensive (Benzing 1955a: 1067)

causative: Even *oli*:- ‘boil (tr.)’ => *oli:t*- ‘bring to boil (tr.)’; Even *huk*- ‘be hot (intr.)’ => *hukci*- ‘warm, heat up (tr.)’ (Benzing 1955b: 44, Menges 1968: 116)

passive: Even *el*- ‘stand up’ => *elat*- ~ *elac*- ‘stand, be standing’; Even *hor*- ‘fall into a trap (intr.), catch, capture (tr.)’ => *horci*- ‘be caught, be captured’

Mongolic pMo *-*ti*- > WMo. -*ci*- (Poppe 1954: 66; Ramstedt 1912: 5, 1952: 176)

Equipollent causative: WMo. *ebde*- ‘destroy, break (tr.)’, *ebdere*- ‘break down, fall to pieces (intr.)’ => *ebdeci*- ‘break, destroy (tr.)’; WMo. *jadal*- ‘unwrap, undo (tr.)’, *jadara*- ‘unfold, unwrap, loosen (intr.)’ => *jadaci*- ‘untie, undo (tr.)’; WMo. *nuɣul*-

‘fold, bend, curve (tr.)’, *nuɣura-* ‘be folded, bend, stoop (intr.)’ => *nuɣuci-* ‘fold (tr.)’

Poppe (1954: 66) describes WMo *-ci-* as an intensive suffix that derives transitive verbs from adverbs and functions to

“express actions performed energetically or with strength”.

This confirms Ramstedt’s observation (1912: 5):

“ein ‘plötzliches, heftiges machen’ bezeichnender [S]tamm auf *-ci-* (< *-*ti-*)”

and (1952: 176):

“..., dass im Mongolischen die Verba auf *-či-* grösstenteils solche sind, die die Bedeutung ‘schlagen’ einschliessen können”.

Contrary to this description it can be observed that WMo *-ci-* is not an intensive suffix, but rather an equipollent causative suffix that polarizes the causativity of the base. In equipollent anticausative-causative verb pairs, both the anticausative and the causative are derived from a neutral base by means of different markers (Haspelmath 1993: 91). From the verb pairs above it can be understood that WMo *-ci-* derivatives occur as the causative counterpart of verbs derived with the anticausative suffix WMo. *-ra-*, discussed in section 4.4.⁵ The equipollent alternation between WMo. *-ra-* and *-ci-* is reminiscent of the medial-causative alternation between *-ra-* and *-sa-* in Japanese discussed in section 4.4.

Whereas *-ci-* surfaces as the causative counterpart of medial *-ra-*, the causative suffix *-l-* (Poppe 1954: 61) has a wider application. Semantically, both *-l-* and *-ci-* generate causatives, but there is a combinational difference. Since *-l-* puts fewer restrictions on the semantics of the preceding verb, it is more widely applicable than *-ci-* and reaches beyond anticausative-causative pairs. An action like ‘drink’ (e.g. WMo. *uɣu-* ‘drink’ => *uɣul-* ‘give to drink’) that does not express a change of state cannot be the base verb in medial-causative alternations. Moreover, all *-ci-* bases besides lack agent-oriented meaning components.

The intensive connotation of *-ci-*, observed by Ramstedt and Poppe, is based on the natural force that is involved in verbs expressing a spontaneous development. However, some equipollent pairs such as WMo *jadara-* ‘unfold (intr.)’ ~ *jadaci-* ‘untie, undo (tr.)’; WMo. *nuɣura-* ‘be folded (intr.)’ ~ *nuɣuci-* ‘fold (tr.)’, Mgr. *arire-* ‘become pure (intr.)’ ~ WMo. *arci-* ‘wipe, clean (tr.)’ and WMo. *ijara-* ‘thicken (intr.)’ ~ *ijaci-* ‘thicken (tr.)’ lack intensive meaning. Besides, the naked verb base *ebde-* ‘destroy, break, ruin (tr.)’ above has the same intensive meaning as its derived counterparts.

Turkic pTk *-*ti-* > OTk. *-(X)t-* (Ramstedt 1952: 86, Johanson 1975: 111-112, Erdal 1979a: 152-155, 1979b)

causative: OTk. *arī-* ‘be(come) clean, pure (intr.)’ => *arīt-* ‘clean, purify (tr.)’; OTk. *bak-* ‘look at (intr.)’ => OTk. *bakīt-* ‘to make someone look at something (tr.)’

5 For more examples of such verb pairs we refer to Robbeets 2007b: 254.

passive: OTk *kov-* ‘follow, pursue, chase’ => *kovīt-* ‘get chased’; OTk *te-* ‘say (tr.)’ => OTk *tet-* ‘be said to be, be called, be considered (intr.)’

On the basis of internal reconstruction it is legitimate to reconstruct a front vowel in the original causative-passive suffix pTk **-ti-*. Erdal (1979a: 152-155) shows that the converb and aorist of *-(X)t-* changed its vowel from *I* to *U* in the course of the use of Old Turkic. Older texts reflect *-I(r)* aorists, such as the Old Turkish aorist *tetir* ‘it is said, it is called by a particular name’, which appears as a frozen form also in later texts much more frequently than *tetür*. The viewpoint that deleted stem or suffix final vowels, such as the original front vowel of the causative-passive suffix, are recoverable in converbs and aorists is supported by Ramstedt (1952: 86), Johanson (1975: 111-112) and Erdal (1979b).

4.3 pTEA **-pə-* reflexive > anticausative > fientive

Japanese pJ **-pa-* > OJ *-p-*

anticausative: OJ *kate-* ‘join, unite, blend’ => *katap-* ‘become intimate’, OJ *tute-* ‘transmit’ => *tutap-* ‘be transmitted’, OJ *yasum-* ‘rest’ => *yasumop-* ‘be rested’, OJ *um-* ‘give birth’ => *umapar-* ‘be born’

fientive: OJ *ita-* ‘painful’ => *itapar-* ‘fall ill, be pressured’, OJ *yuru-* ‘slack’ => *yurup-* ‘become slack, relax’

There is a homophonous suffix **-pa-* that can be distinguished from the passive marker on the basis of its semantics and its position in the suffix chain. It has an intensive-iterative or reiterative meaning (Unger 1977: 138) and it occurs more to the right in the chain, following the anticausative marker **-ra-*, such as in OJ *nagare₂-* ‘flow’ ~ *nagas-* ‘let flow’ => *nagarape₂-* ‘live on, live long’, OJ *motopos-* ‘make go back’ ~ *motopor-* ‘go back’ => *motoporop-* ‘crawl around’ and *utur-* ‘move, change (intr.)’ ~ *utus-* ‘move, transfer (tr.)’ => *uturop-* ‘change, shift’, whereas the passive precedes **-ra-* (e.g. OJ *itapar-* ‘fall ill, be pressured’, OJ *mazipar-* ‘get mixed’, OJ *umapar-* ‘be born’).

Korean pK **-pu/o-* > MK *-pu/o-* (Ramstedt 1939: 128, 1952: 157-160, Ramsey 1978: 218-220, Martin 1992: 760-761)

anticausative: MK *ceh-* ‘fear’ => MK *cephu-* ‘be fearsome’; MK *ich-* ‘tire, make tired’ => MK *ispu-* ‘be tired’, MK *mit-* ‘believe’ => MK *mit pu-* ‘be credible’; MK *sulh-* ‘grieve over’ => MK *sulphu-* ‘be sad’

Tungusic pTg **-p-* > Evenki *-p-*, Ma. *ø*, Na. *-p-*, Olč *-p-*, Ud. *-p-*, Even *-b-* (Benzing 1955a: 1070: reflexiv?)

reflexive: Even *ma:-* ‘kill’ => *ma:b-* ‘kill oneself’; Even *duk-* ‘write’ => *dukub-* ‘register oneself’ (Benzing 1955b: 48)

anticausative: Evenki *mana-* ‘finish (tr.)’ => *manap-* ‘finish (intr.)’; Evk. *ula-* ‘soak (tr.)’ => *ulap-* ‘soak (intr.)’; Evk. *sol-* ‘mix up’ => *solip-* ‘become mixed up, confused’ (Nedjalkov 1997: 228)

Formally, it is possible to distinguish the reflexive-anticausative pTg **-p-* from the causative-passive pTg **-bu-*, with reflexes Ma. *-bu-*, Na. / Olč. *-o-* / *-u-* (~ *-bo-* / *-bu-*), Ud. *-u-*, Sol. *-u-* ~ *-gu-*, Neg. *-w-*, Evk. *-w-*, Even *-w-* (Benzing 1955a: 1070-1071). Miller (1981: 858-59) tries to relate the latter form to a Japanese formant **-p(a)-* which he labels “causative”. Leaving aside the analysis of the Japanese form, this suggestion is doubtful because pTg **-bu-* is a good candidate for grammaticalization from the Tungusic verb pTg **bu-* ‘give’ with reflexes in Evk. *bu-*, Even *bö-*, Neg. *bu-*, Solon *bu-*, Sibe *bu-*, Ma. *bu-*, Olč. *bu:wu-*, Oroch *bu-*, Na. *bu-*, Oroč *bu-*, Ud. *bu-* (Haspelmath 1990: 48-49).

Mongolic pMo **-pu/a-* in liquid clusters (Ramstedt 1912: 67- 73, 1952: 157-160, Poppe 1972: 128-134)

reflexive-anticausative relic? WMo. *jujul-* ‘pull out, pluck out (tr.)’ => *julbu-* ‘shed skin, lose hair (intr.)’; WMo. *nila-* ‘smear, rub (tr.)’ => *nilbu-* ‘spit, excrete body fluids (tr. /intr.)’; WMo. *ura-* ‘tear, rip (tr.)’ => *urba-* ‘turn back, break away from (intr.)’; WMo. *dele-* ‘wave, flap, fan (tr. / intr.)’ => MMo. *dilbu-* ‘fan (intr.)’, WMo. *delbegene-* ‘move, sway (intr.)’

Turkic pTk **(p)u-* > OTk. *-U-* (Erdal 1991: 474-479)

anticausative: OTk. *säš-* ‘loosen, untie (tr.)’ => *säšü-* ‘loosen oneself, come loose’; OTk. *adür-* ‘separate (tr.)’ => *adru-* ‘be superior to, excel (intr.)’; OTk. *alkin-* ‘bring to an end, wipe out (tr.)’ => *alju-* ‘wane (intr.)’

fientive: OTk. *agür-* ‘heavy, serious, burdensome’ => *agru-* ‘be(come) heavy, become serious (of illness)’; OTk. *boš-* ‘free; empty’ => *bošu-* ‘free oneself, become empty’; OTk. *kalin-* ‘thick, dense’ => *kalnu-* ‘become thick’

The Mongolic and Turkic members of this etymology are rather weak. In Mongolic, the semantic relation between some verb pairs leaves room for interpretation and some derived verbs are not exclusively intransitive. The voiced labial in WMo. *-bu-* is supposed to have developed from an unvoiced labial suffix **-pu-* in a liquid environment. In Turkic, there are only few examples of anticausative derivation, whereas fientives are more widespread. The labial quality of the vowel in the Turkic suffix could support the loss of an original suffix initial **-p-*, but this remains speculative.

4.4 pTEA **-ra-* anticausative > fientive

Japanese pJ **-ra-* > OJ *-r-* (Unger 1977: 140, Martin 1987: 672)

*anticausative in equipollent pairs in *-ra- ~ *-sa-* : OJ *ok-* ‘put’ => *okor-* ‘arise, happen’ ~ *okos-* ‘raise, wake’; OJ *kap-* ‘transfer, exchange, buy’ => *kapar-* ‘change,

be substituted for (intr.)' ~ *kapas-* 'exchange, shift (tr.)'; OJ *oti-* 'fall' (<**oto-ki-*) => *otor-* 'be inferior, fall behind' ~ *otos-* 'drop (tr.)'

fientive: OJ *aka-* '(be) clear, bright, red' => *akar-* 'brighten, redden'; OJ *usu-* '(be) thin' => *usure-* 'get thin'; *pi₁ro₂-* '(be) wide, broad, vast' => OJ *pi₁ro₂r-* 'be widespread'

Based on the following observations, this suffix pJ *-*ra₍₂₎-* can be kept distinct from the homophonous denominal verb suffix pJ *-*ra₍₁₎-* discussed above. The first distinction is that pJ *-*ra₍₁₎-* derives verbs from nominal bases and onomatopoeia while pJ *-*ra₍₂₎-* is a deverbal verb suffix. Second, the meanings differ. Whereas pJ *-*ra₍₁₎-* means '1. attempt to achieve the base, 2. execute an action with effort on the base, 3. make use of the base', pJ *-*ra₍₂₎-* means 'develop spontaneously'. Third, the position in the suffix chain is close to the verb root for pJ *-*ra₍₁₎-* (-*ra₍₁₎-ka-* in e.g. OJ *werak-* 'laugh with joy') and far for pJ *-*ra₍₂₎-* (-*ka-ra₍₂₎-* in e.g. OJ *tir-* 'scatter, get scattered' => MJ *tirakas-* 'scatter (tr.)' vs. MJ *tirakar-* 'get scattered (intr.)'. Fourth, pJ *-*ra₍₁₎-* combines with the causative *-*sa-* (e.g. OJ *tukare-* 'tire, get weary, get used up' => J *tukaras-* 'tire, make one weary, use up', OJ *nar-* 'make a sound, ring' => OJ *naras-* 'sound, ring (tr.)', OJ *ki₂r-* 'fog up, get foggy' => OJ *ki₂ras-* 'cause to fog, make cloudy') whereas pJ *-*ra₍₂₎-* and *-*sa-* are mutually exclusive. Fifth, the valency of the verbs derived with pJ *-*ra₍₁₎-* is either transitive or intransitive (e.g. J *kubir-* 'strangle (tr.)', OJ *simar-* 'bind, restrict, shut tight/ be shut, be tight (tr. / intr.)', OJ *watar-* 'cross over, span, get transferred (tr./intr.)'), whereas those derived with pJ *-*ra₍₂₎-* are exclusively intransitive. Finally, there is a phonological difference since derivation with pJ *-*ra₍₁₎-* sporadically leads to voicing of the preceding voiceless obstruent (J *tuka* 'bundle' => OJ *tugar-* 'attach, connect, join on, chain on (tr.)', OJ *kaki₁* 'fence, hedge' => OJ *kagi₁r-* 'set limits', OJ *saka* 'incline, slope' => OJ *sagar-* 'descend, go down, sink, hang down'). This is not the case for pJ *-*ra₍₂₎-*.

Korean pK *-(*u*)l- > K -(*u*)l- (Ramstedt 1939: 137; Martin 1992: 219)

reflexive-anticausative: K *pes-* 'take off, remove (tr.)' => *pesul-e ci-* 'peel off, come off (intr.)'; K *swuk-* 'be drooping, be bent' => *swukul-e ci-* 'hang down, droop, bend oneself', K *sak-* 'decay, turn bad' => *sakul-e ci-* 'collapse, whither, decompose'; K *wuk-* 'get bent, turn' => *wukul-e ci-* 'curl up, warp, be crushed out of shape'

fientive: K *nwuk-* 'be soft, be loose' => *nwukul-e ci-* 'calm down, loosen up, get milder, become soft', K *nelp-* 'be wide, broad, spacious' => *nelpul-e ci-* 'spread/scatter out widely, become wide'.

In Korean, we find a number of defective infinitives, recognizable by the infinitive ending -*e*/ -*a* and preceded by an element -(*u*)l-. They occur attached to the auxiliary verbs *ci-* 'become', which intensifies their intransitivity and *ttuli-* 'make', which turns them into transitives. This leads to the reconstruction of the suffix pK *-(*u*)l- that can be identified as an anticausative because the derived verb denotes a spontaneous process without an implied agent or as a fientive because it derives a process of becoming from adjectives.

Tungusic pTg *-rA:- (Poppe 1972: 139-140)

anticausative: Evk. *awga-* ‘cure, heal (tr.)’ => *awgara-* ‘recover (intr.)’; Evk. *lamba-* ‘stick, adhere to (tr.)’ => *lambara-* ‘hold on, stick (intr.)’; Evk. *ñekce-le-* ‘to bend, curve (tr.)’ => Evk. *ñekcere-* ‘to bend, bow (intr.)’

Mongolic pMo *-rA- > WMo. -rA- (Poppe 1954: 64; 1972: 139-140)

*anticausative in equipollent pairs in *-rA- ~ *-ci-*: WMo. *ebde-* ‘destroy, break’ => *ebdere-* ‘break down, fall to pieces (intr.)’ ~ *ebdeci-* ‘break, destroy(tr.)’, WMo. *jada-l-* ‘unwrap, undo (tr.)’ => *jadara-* ‘unfold, loosen (intr.)’ ~ *jadaci-* ‘untie, undo (tr.)’; WMo. *nyu-l-* ‘fold, bend, curve (tr.)’ => *nyura-* ‘be folded, stoop (intr.)’ ~ *nyuci-* ‘fold, crumple (tr.)’.

Turkic pTk *-(I)r- > OTk -(I)r- (Erdal 1991: 535-538)

anticausative: OTk *äg-* ~ *äj-* ‘bend (tr.)’ > OTk *ägir-* ~ *äjir-* ‘surround, encircle(tr.)’, **köpi-* ‘to make (sth.) froth/ foam (tr.)’ in *köpik* ‘froth, foam’ => OTk. *köpir-* ‘foam, froth (intr.)’ and **talpī-* ‘make flutter’ in *talpī-n-* / *talpī-š-* ‘flutter (intr.)’ => *talpīr-* ‘flutter (intr.)’

fientive: OTk. *süči-* ‘be sweet’ => OTk. *süči-r-* ‘become sweet’, *yili-* ‘be hot’ > OTk. *yili-r-* ‘become hot’, OTk. *yunči-* ‘be weak, emaciated (intr.)’ > OTk. *yunčir-* ‘worsen (intr.)’

The homophonous fientive suffixes that derive processes of becoming from nominal adjectives such as Manchu *-rA-* in Ma. *ehe* ‘bad, evil’ => *ehere-* ‘become evil or fierce’; Ma. *nitan* ‘weak’ => *nitara-* ‘become weak’ (Gorelova 2002: 235)⁶; Written Mongolian *-rA-* in WMo. *köke* ‘blue’ => *kökere-* ‘become blue’; WMo. *kögšin* ‘old’ => *kögšire-* ‘become old’ and Old Turkic *-(A)r-* in OTk. *bu* ‘steam’ => *bur-* ‘turn into steam, give odour, steam (intr.)’; OTk. *kök* ‘sky, blue, green’ => *kökär-* ‘be(come) blue, green’ (Erdal 1991: 499-507) are kept distinct because the part of speech of the derivational base is nominal and because the suffix has a different vowel reflex in Turkic (OTk. *-(A)r-* instead of *-(I)r-*). Since we are unable to find Japanese or Korean cognates and since the Tungusic reflex is restricted to Manchu, it is not unlikely that we are dealing with code-copying here. Cases like WMo. *kökere-* ‘become blue’ and OTk. *kökär-* ‘be(come) blue, green’ that have the derived form as well as the neutral base in common, further support a copying scenario.

6 The Manchu derivations with *-rA-* have merged with derivations using the denominal verb suffix *-lA-* such as Ma. *gohon* ‘hook’ => *goholo-* ‘hook, put on a hook’ ~ *gohoro-* ‘bend, form the shape of a hook, curl’ and Ma. *taji* ‘naughty, mischievous’ => *tajila-* ~ *tajira-* ‘act naughtily’.

4.5 pTEA **ki-* ‘do, make’ > causative auxiliary

Japanese pJ **(k)i-* > OJ bigrade formation (Unger 1977: 131, Martin 1987: 672, Vovin 2001: 187-189)

causative: OJ *ak-* ‘open (intr.)’ => *ake₂-* ‘open (tr.)’; OJ *ap-* ‘meet, fit, agree (tr.)’ => *ape₂-* ‘join (tr.)’; OJ *pak-* ‘slip (sth.) on, wear (tr.)’ => *pake₂-* ‘have/let (so.) wear (tr.)’

passive: OJ *ok-* ‘put (tr.)’ => *oki₂-* ‘arise (intr.)’; OJ *sak-* ‘rip, split (tr.)’ => *sake₂-* ‘get ripped, split, be kept at a distance (intr.)’; OJ *ar-* ‘be, exist’ => *are-* ‘appear, be born’; OJ *wor-* ‘be’ > *wi-* ‘be at, sit’; OJ *puka-* ‘(be) deep’ => *puke₂-* ‘deepen’

Whereas we reconstruct a causative-passive suffix **(k)i-* as the source of the bigrade conjugation, e.g. *puka-* ‘be deep’ + *-(k)i-* (velar deletion) > *pukay-* (contraction) > *puke₂-* ‘deepen’, Whitman (2007: 159-173) proposes that the source of the bigrade conjugation is the verb *e₍₂₎-* ‘get, obtain, be able to’, e.g. *puka-* ‘be deep’ + *e₍₂₎-* (vowel raising) > *pukay-* (contraction) > *puke₂-* ‘deepen’. Our main objection to this proposal is the direction of the proposed pathway of grammaticalization, namely the development of *e₍₂₎-* ‘become’, a fientive auxiliary after adjectives, to a bound morpheme expressing intransitive change of state after intransitive verbs, to an intransitivizer after transitive verbs by analogy and finally, to a causative / transitive after intransitive verbs. The basic problem is with Whitman’s (2007: 165) assumption that:

“Typological parallels become relevant here: while passives derived from inchoatives and *causatives derived from passives are robustly attested across languages* inchoatives derived from passives or causatives are not” [emphasis added].

This is contradicted by Haspelmath’s (1990: 49) study of the development of passive morphology across the world:

“And note that there is again unidirectionality: a causative can become a passive, but to my knowledge *there is no evidence for a case of a passive becoming a causative*” [emphasis added].

As for the reconstruction pJ **(k)i-*, we use brackets because we lack conclusive internal evidence for a voiceless velar initial. There are no strings of two subsequent vowels in Old Japanese (Martin 1987: 64-65). Japanese *-(C)i-* must go back to a consonant initial suffix, but evidence for the exact nature of the consonant is missing. However, velar elision before a high front vowel is sporadically attested in other stages of Japanese. It occurs word-internally as for instance in *tuitati* ‘first day of the month, new moon’ that is derivable from *tuki* ‘moon’ and a deverbal noun from *tatu* ‘stand’. Velar elision is also found on suffix boundaries as in the adjective attributive OJ *-ki* that developed into contemporary *-i* in for instance the attributive form OJ *taka-ki* for J *taka-i* ‘high’. For reasons explained in Robbeets (2005: 53-55) I do not reconstruct voice distinction in proto-Japanese. Switching back and forth between internal and external evidence, support for the

reconstruction of an initial velar comes from the parallel with the other Transeurasian languages.

Korean pK *-*ki*- > K -*ki*-, -*hi*-, -*i*-, MK -*ki*-, -*Gi*-, -*hi*-, -*i*- (Ramstedt 1939: 133-137, Lewin 1970: 14, Martin 1992: 221-225, 623, Yeon 2003: 142-146)

causative: K *olm*-, MK *wolm*- ‘move (intr.)’ => K *olmki*-, MK *wolm* *ki*- ‘move (tr.)’; K *swum*-, MK *swum*- ‘lie hidden’ => K *swumki*-, MK *swum* *ki*- ‘conceal’; K *ip*-, MK *nip*- ‘wear’ => K *iphi*-, MK *nip* *hi*- ‘cause to wear’

passive: K *ccic*- ‘tear (tr.)’ => K *ccicki*- ‘be torn’; K *ttut*- ‘bite, graze (tr.)’ => K *ttutki*- ‘cause to graze (tr.), get bitten (intr.)’; K *elk*-, MK *elk*- ‘tie (tr.)’ => K *elkhi*-, MK *el* *khi*- ‘get tied (intr.)’

Tungusic pTg *-*ki*:- > Ma. -*gi*-, Evk. -*ki*:- ~ -*gi*:-, Even -*k(i)*- ~ -*g(i)*-, -*Ni*-, -*i*-, Ud. -*gi*-, Na. -(*g*)*i*- (Benzing 1955a: 1070)

causative: Evenki *ulap*- ‘get wet (intr.)’ => *ulapki*:- ‘make wet (tr.)’, *jalup*- ‘get filled (intr.)’ => *jalupki*:- ‘fill (tr.)’, *kese*:- ‘suffer (intr.)’ => *kese:gi*:- ‘torture (tr.)’, *aru*- ‘regain consciousness (intr.)’ => *arugi*:- ‘revive (tr.)’ (Vasilevič 1940: 93, Nedjalkov 1997: 230)

It is inviting to include the denominal creative suffix pTg *-*ki*- ‘make, create’ such as in Evenki (Nedjalkov 1997: 301, Konstantinova 1964: 198) *gule* ‘house’ => *guleŋ*- ‘build a house’, Evk. *a:cin* ‘nonexistent, absent’ => *a:cinŋi*:- ‘liquidate’, in Even (Benzing 1955b: 34) *hulta* ‘fish meal’ => *hultak*- ‘produce fish meal’, Even *hotoran* ‘road, way’ => *hotarag*- ‘pave a way, make a road’ and in Udehe *xokto* ‘road’ => *xoktoŋi*- ‘make a road’, Ud. *aŋa* ‘night shelter’ => *aŋaŋi*- ‘make a night shelter’ in the comparison. Benzing (1955a: 1065, 1070) treats the denominal suffix pTg *-*gi*- ‘machen’ and the deverbial causative suffix pTg *-*gi*- as distinct markers. The present study, however, takes the position that the causative and the auxiliary ‘make’ are internally related through a common process of grammaticalization. As far as the formal reconstruction is concerned, pTg *-*ki*- is preferred to Benzing’s pTg *-*gi*-. The distribution in the Tungusic languages is suggestive of the original variant allomorphy of the suffix. Voiceless *ki*- voices to -*gi*- after the liquid -*r*- or in vocalic environment and assimilates to -*ŋi*- after the dental nasal -*n*-. In longer sequences the suffix vowel can be omitted.

Mongolic pMo *-*ki*- ‘do, make’

SH MMo. *ki*-, WMo. *ki*-, Khal. *xij*-, Bur. *xe*-, Kalm. *ke*-, Ordos *ki*:-, Dong. *kie*-, Bao. *ke*-, *giə*-, Dag. *ki*:-, *xi*:-, *ši*:-, Mgr. *gi*-, *gə*-, Mogh. *ki*-.

Turkic pTk *-*kī*(-)*l*- ‘do, make’

Otk. *kīl*-, Karakhanide *kīl*-, MTK. *qīl*-, Tk. *kīl*-, Tat. *qīl*-, Uzb. *qīl*-, Uigh. *qīl*-, Az. *gīl*-, Tkm. *qīl*-, Khak. *xīl*-, Shor *qīl*-, Chu. *əś-xəl* ‘deed’, Tuva *qīl*-, Kirg. *qīl*-,

Kazakh *qıl-*, Nog. *qıl-*, Bash. *qıl-*, Karaim *qıl-*, Karakalpak *qıl-*, Kumyk *qıl-*, Yak. *kīn-* and Dolg. *gīn-*

Interestingly, Yakut *kīn-* and Dolgan *gīn-* have a different root-final consonant. This could suggest that the original root is **kī-* and that *-l-* and *-n-* are petrified suffixes. The problem with this explanation, however, is that the suffix *-(X)l-* derives passives and that *-(X)n-* derives medial verbs in Turkic. The verb *kīl-*, however, is typically causative.

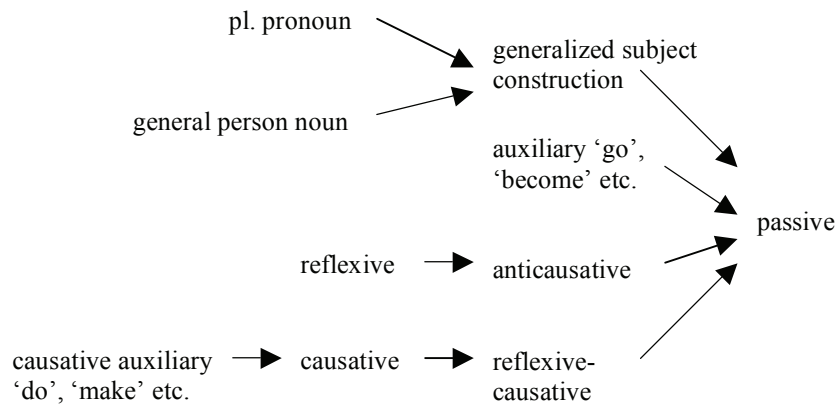
Internal evidence to reconstruct pTk **kī-* as the original root comes from the iconic suffix OTk. *-kl-* (Erdal 1991: 468, Tekin 1982: 508) that is lexicalized in a number of Turkic verbs such as in OTk *o* ‘exclamation in reply to a caller’ (Clauson 1972: 1) => OTk. *okī-* ‘call, call out loud, recite’, OTk. *tok tok* ‘mim. for a knocking sound’ => OTk *tokī-* ‘hit, knock, beat, weave’, **bīr* ‘mim. for a snorting sound’ => OTk. *bīr-kīr-* ‘snort’, OTk. *bīrkīg* ‘snort (of a horse)’ and perhaps in OTk. *sukī-* ‘snap one’s fingers’ and OTk. *okī-* ‘vomit’.

5 Analysis

The etymologies for verbal markers suggested in this paper are regular in form and function, they share combinational properties and they are, to a certain extent, systemic. Formally, the etymologies obey to the sound correspondences established on the basis of the lexicon in Robbeets 2005. The consonant correspondences are illustrated by way of the verbal roots in the third section.

Functionally, the etymologies have comparable meanings that obey to universal pathways of grammaticalization of passive morphology. Haspelmath (1990) finds four different sources of passive morphology across the world, three of which are confirmed by the evidence: the development of auxiliaries such as ‘become’ into fientives and passives, the development of reflexives to anticausatives to passives and the development of causative auxiliaries to causatives to reflexive-causatives into fientives and passives.

Table 6: Sources of passive morphemes and their convergence
(adapted from Haspelmath 1990: 54)



And third, the combinational features are in agreement. Besides loanverb accommodation in all branches of Transeurasian, the formants reflecting pTEA *-la- all derive verbs from nouns and onomatopoeia, except for Tungusic where there is no onomatopoeic derivation. As for the diathetical formants, those reflecting pTEA *-da- derive verbs from nouns, nominal adjectives and verbs, except for Tungusic where there is no deverbal derivation. The reflexes of pTEA *-ti- and *-pə- are all deverbal. The pTEA *-ra- derivatives are based on verbs and verbal adjectives. The etymology of pTEA *-ki- reflects the grammaticalization of an independent verb 'to make' to a causative suffix. The Tungusic reflexes of this formant are suggestive of how the suffix was transferred from nominal to verbal bases.

The transfer of suffixes from nominal bases to verbal bases and vice versa is well-observed across the languages of Trans-Eurasia.⁷ In the etymology for pTEA *-da- it may be triggered by processes of analogy between nominal and verbal adjectives. It can be observed that the mixed encoding of adjectives across the Transeurasian languages is split in most, but not all cases. There are cases of switching in the same lexical item such as OTk. *karī* 'old' vs. *karī-* 'become old' (Erdal 2004: 228), Ud. *bogo* 'fat' vs. *bogo-* 'become fat', Ud. *koŋo* 'thin' vs. *koŋo-* 'become thin' (Nikolaeva 1999: 193), J *ara* 'new, fresh' vs. OJ *ara-* 'be rough, fresh, new', OJ *su* 'sour' vs. OJ *su-* 'be sour' etc. Such instances of

7 For Turkic, for instance, we can refer to the following instances. The -(X)msIn simulative in Old Turkic (Erdal 1991: 531), segmentable into a deverbal noun suffix -(X)m and a denominal simulative -sIn-, is deverbal in origin. Whereas in the majority of examples -(X)msIn- is used following verbs, e.g. OTk. *kīl-imsin-* 'pretend to be doing', there are also some examples of denominal derivation, e.g. OTk. *eš-imsin-* 'behave as if one were equal'. Transference in the opposite direction, from denominal to deverbal derivation, can be observed for the denominal desiderative suffix -sa- (Erdal 1991: 527-529). Probably a grammaticalization of an independent verb meaning 'think, reckon (as), count (on), desire', it is used to form denominal desideratives such as OTk. *suv-sa-* 'be thirsty' from *suv* 'water' and OTk. *kök-sä-* 'want (to rise to) the sky' from OTk. *kök* 'sky'. As its lexical content is further decreasing, the suffix is analogically transferred to the deverbal realm to derive desiderative verbs such as OTk. *kör-sä-* 'wish to see' from *kör-* 'see' or OTk. *ye-sä-* 'wish to eat' from *ye-* 'eat'.

switching may provide the point of departure of analogical transference of suffixes between nominal and verbal bases.

Finally, although we do not find paradigms in the strict sense of inflectionally related verbs with a common stem resulting from categories such as mood, tense, agreement, there is a certain systemicity since a full set of diathetical morphology can be reconstructed for proto-Transeurasian, including causative and passive auxiliaries, one fientive for nominal and one for verbal adjectives, causative, reflexive, anticausative, and passive markers. In addition, we get an impression of the cyclic movements of grammaticalization over time, whereby bound passive morphology such as the causative-passive pTEA **-ti-* is replaced by periphrastic constructions such as the auxiliary pTEA **ki-* ‘do, make’, which again develops into bound a morpheme.

6 Conclusion

The three major objections raised against the affiliation of the Transeurasian languages, namely the un-Indo-European character of the evidence, the lack of common morphology and the importance of language contact cannot be separated from each other. It is true that the evidence is unlike Indo-European because we do not find paradigmatic verbal evidence, but this is not an argument against affiliation. There are other well-established linguistic families where the evidence is unlike Indo-European, such as Sino-Tibetan or Thai-Kadai languages that yield barely any bound morphology to compare. In the second section, the lack of paradigmatic evidence as in Indo-European was accounted for by typological and chronological motivations.

The lack of paradigmatic verbal morphology, however, does not imply that there is no common verbal morphology relating the Transeurasian languages. The etymologies for verb roots and verb formants suggested in the third and fourth section contradict this statement. Especially in a category like diathesis that is known for its stability and archaicism it is possible to find shared formal, functional, combinational and systemic properties.

This very observation is interrelated with the third objection, namely that all the shared properties can be accounted for by copying. Since we have compared, first, naked verb roots and, second, bound inflectional verbal morphology, the probability of copying is relatively low to begin with. Third, diathetical suffixes in particular are resistant to copying and replacement. Fourth, the correspondences are global form-function matches. Formally they obey to sound correspondences established on the basis of the lexicon. Functionally they obey to universal tendencies of grammaticalization. Fifth, we find shared polyfunctionality such as causative and passive or anticausative and fientive.

Sixth, although shared processes of grammaticalization can be the result of universals, this is probably not the case here because the forms of the morphemes represent exact fits as well. It is further unlikely that universal principles in linguistic structuring can account for the correspondences because two of the attested pathways are relatively uncommon: the grammaticalization of reflexives into passives is not very common outside of Europe and

the development of causatives into passives is relatively infrequent across the languages of the world. Johanson (2008: 9) maintains that

“diachronic processes are not copiable”.

His assumption that processes of grammaticalization are not copiable reduce the copying factor considerably.

Finally, the correspondences stretch over five branches. Linguistic and geographic distance can help to rule out copying. If one intends to study Turkic from a genealogical perspective, it is rather risky to engage in a binary comparison with Mongolic. The reason is obvious: both languages are geographically adjacent and stand in a high-copying relationship. Copies are expected to obscure the underlying genetic connections. Hence, they will be mistaken for cognates. If we start from the largest reasonable hypothesis and test a model including languages that stand in a low-copying relationship, such as Japanese and Korean, we reduce the probability that we are dealing with copies in disguise.

Returning to the question in the title of this article, we agree with more moderate positions such as Róna-Tas’ (1991: 17) viewpoint that

“... those linguistic correspondences which have been quoted by Ramstedt, Poppe and their followers as arguments in favor of the genetic affinity of the Altaic languages cannot be accepted as such. They witness early contacts and are loanwords. Nevertheless after having separated these very old layers, the remaining very thin layer may pertain to a common Altaic proto-language”.

We conclude that from a factual and methodological viewpoint, it is difficult to attribute the common verbal morphology discussed here to copying. It seems to belong to the “very thin layer” that indicates that the Transeurasian languages are related in the genealogical sense. We can only hope that our findings will eventually contribute to the line of argumentation, but ending the controversy is up to the joint efforts of linguistic scholarship today.

Abbreviations

Az. Azerbaijani, Bao. Bao’an, Bash. Bashkir, Bur. Buriat, Chu. Chuvash, Dag. Dagur, Dolg. Dolgan, Dong. Dongxiang, Evk. Evenki, J (standard Tokyo) Japanese, K (standard Seoul) Korean, Kalm. Kalmuk, Khal. Khalkha, Khak. Khakas, Kirg. Kirghiz, Ma. Manchu, MK Middle Korean, MMo. Middle Mongolian, Mgr. Monguor, Mogh. Moghol, Na. Nanai, Neg. Negidal, Nog. Noghay, OJ Old Japanese, OTk. Old Turkic, pJ proto-Japanese, pK proto-Korean, pMo proto-Mongolic, pTEA proto-Transeurasian, pTg proto-Tungusic, pTk proto-Turkic, Sol. Solon, Tat. (Volga) Tatar, Tk. Turkish, Tkm. Turkmen, Ud. Udehe, Uigh. Uighur, Uzb. Uzbek, WMo. written Mongolian, Yak. Yakut

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