Altaicization and de-Altaicization of Japonic and Koreanic

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Abstract

This article discusses 40 grammatical features in Japonic and Koreanic in relation to neighbouring languages in Northeast Asia. The data comprise 66 modern language varieties of 13 different linguistic affinities, and 12 historical languages (including Old and Middle Japanese and Old and Middle Korean). The results generated from a computational phylogenetic tool show a significant distance in the typological profiles of three main clades: Northeast Asian, Japonic-Koreanic, and Sinitic spheres. Typologically, the Japonic and Koreanic languages form a common grammatical type by sharing up to 26/40 features. By tracing their attestation in the historical languages we can see that the converged grammars are likely to be results of typological Altaicization and de-Altaicization. The combination of linguistic and historical evidence points to a chronology in which Japonic and Koreanic had mutually converged by Altaicization and de-Altaicization during the 1st millennium BC and AD, respectively, before eventually diverging in the 2nd millennium AD.

Keywords

Japonic – Koreanic – Altaicization – Northeast Asia – areal typology – language contact

1 Introduction

The first proposal to include Japanese and Korean into a single macro-family, later termed "Altaic", dates back to Philipp von Siebold (1832). The idea was later advanced by many linguists in the late 19th and early 20th centuries, including Gustaf John Ramstedt (1952, 1957, 1966). However, the question whether the Altaic macro-family even exists is still being disputed. As an alternative to a genealogical relationship (Miller 1971, Menges 1984, Robbeets 2005), it has been proposed that the similarities are only of an areal and typological nature (Janhunen 2007, Vovin 2009). On the other hand, the existence of a common ancestor between Japanese and Korean has recently gained more support (Whitman 1985, 2012, Francis-Ratte 2016) despite the fact that many reconstructed Proto-Korean-Japanese lexical items and morphemes are not unproblematic (Janhunen 1999: 10, Vovin 2010).

Instead of directly revisiting their (non-)Altaic origin, the present study devotes primary attention to the typological features that distinguish Japonic and Koreanic from the Core Altaic languages (Turkic, Mongolic, and Tungusic) both on the synchronic and the diachronic level. The data treatment utilizes a computational quantitative method which facilitates and maximizes the illustration, analysis and interpretation of the data. Moreover, this approach gives us the freedom to compare the languages of Northeast Asia without necessarily assuming that some or all of these languages are genealogically related with each other (cf. Unger 2013, Francis-Ratte 2016).

2 Typology and chronology of languages in Northeast Asia

The idea of Altaic as a typological unity among languages across Eurasia relates to a number of grammatical features such as polysyllabic root structure, vowel harmony (either palatal or

tongue root harmony), lack of complex initial consonant clusters, agglutinative morphology with predominant suffixation, head-final syntax (e.g. verb-final clause, prenominal relative clause, postpositions), use of converbs rather than conjunctions, and lack of the *habeo* type of possessive construction (Janhunen 2007, 2014, Tranter 2012a, Robbeets 2017). Such a combination of typological features distinguishes the modern Japonic, Koreanic and Core Altaic languages from other languages in Northeast Asia, for instance, the isolating Sinitic languages, the polysynthetic Chukchi-Kamchadal (Kamchukotic) and Eskimo-Aleut (Eskaleutic) languages, or Russian as a fusional Indo-European language.[1]

Taking a starting point from the 1st century AD, a comparative chronology of written Japonic, Koreanic, Sinitic, and Core Altaic languages is given in Table 1.

<table>
<tr><th>C. AD</th><th>Turkic</th><th>Mongolic</th><th>Tungusic</th><th>Korean[2]</th><th>Japanese</th><th>Ryukyuan</th><th>Chinese</th></tr>
<tr><td>1</td><td rowspan="7"></td><td rowspan="6"></td><td rowspan="8"></td><td rowspan="5"></td><td rowspan="7"></td><td rowspan="13"></td><td>Pre-Medieval Chinese</td></tr>
<tr><td>2</td><td rowspan="5">Early Medieval Chinese</td></tr>
<tr><td>3</td></tr>
<tr><td>4</td></tr>
<tr><td>5</td></tr>
<tr><td>6</td><td>Ruan Ruan</td><td rowspan="8">Old Korean</td></tr>
<tr><td>7</td><td rowspan="5"></td><td rowspan="10">Late Medieval Chinese</td></tr>
<tr><td>8</td><td rowspan="6">Old Turkic</td><td>Old Japanese</td></tr>
<tr><td>9</td><td rowspan="2">Early Middle Japanese</td></tr>
<tr><td>10</td><td rowspan="2">Khitan</td></tr>
<tr><td>11</td></tr>
<tr><td>12</td><td>Old Mongolian</td><td rowspan="4">Jurchen</td><td rowspan="4">Late Middle Japanese</td></tr>
<tr><td>13</td><td rowspan="3">Middle Turkic</td><td rowspan="3">Middle Mongolian</td><td rowspan="3">Middle Korean</td><td>Pre-Modern Chinese</td></tr>
<tr><td>14</td><td rowspan="4">Modern Chinese</td></tr>
<tr><td>15</td></tr>
<tr><td>16</td><td rowspan="6">Modern Turkic</td><td rowspan="6">Modern Mongolian</td><td rowspan="3">Early Modern Korean</td><td rowspan="3">Early Modern Japanese</td><td>Old Okinawan</td></tr>
<tr><td>17</td></tr>
<tr><td>18</td><td rowspan="3">Early Modern Okinawan</td></tr>
<tr><td>19</td><td rowspan="3">Manchu</td></tr>
<tr><td>20</td><td rowspan="2">Modern Korean</td><td rowspan="2">Modern Japanese</td><td rowspan="2">Modern Okinawan</td></tr>
<tr><td>21</td><td>Modern Tungusic</td></tr>
</table>

TABLE 1. A comparative chronology of written Japanese, Korean, Chinese, and the Core Altaic languages

As the current study also investigates a number of historical languages of Northeast Asia, the diachronic range covers the period from the 6th to the 21st century.

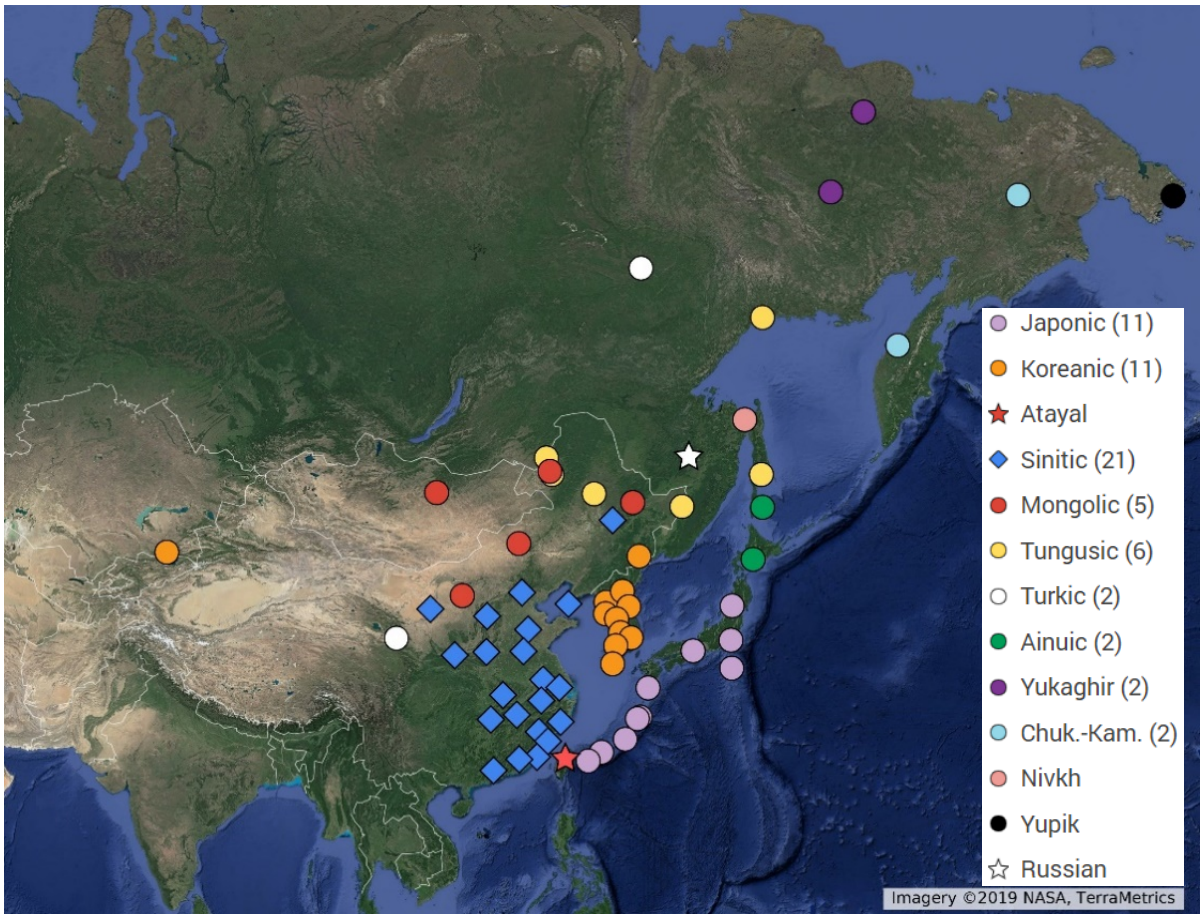
[1] In the current study, we mostly adopt the nomenclatures by Glottolog 4.0 (Hammarström et al. 2019).

[2] We follow the chronology of Nam (2012: 41) who dates the emergence of Middle Korean only to the later 13th century, i.e. the transition period from Koryŏ to Chosŏn dynasty (cf. an earlier date, the 10th century, by Lee & Ramsey 2011).

3 Data and methods

To emphasize family-internal diversity, the present study does not compare standard written languages as in most previous studies (cf. Janhunen 1999, Robbeets 2017), in which each language group is represented only by a single standardized variety. Instead, this typological comparison takes into account various vernacular varieties of Japonic and Koreanic, with the hypothesis that they show signs of mutual convergence, which, at the same time, represent divergence from the Core Altaic languages.

The data include 11 Japonic varieties, comprising 5 Japanese and 6 Ryukyuan, and 11 Koreanic varieties. These Japonic and Koreanic varieties are placed in comparison to 44 other languages spoken in the Northeast Asian neighbourhood (see Map 1), including Sinitic, Mongolic, Tungusic, Turkic, Ainuic, Yukaghir and Chukchi-Kamchadal, as well as Russian (Slavic), Naukan Yupik (Eskaleutic), Nivkh (Amuric, using the term introduced in Janhunen 1996) and Atayal (Formosan). For diachronic comparisons, 12 historical languages are also included: Old Japanese and Middle Japanese, Old Korean and Middle Korean, Old Chinese and Middle Chinese, Ruan Ruan, Old Mongol and Middle Mongol, Jurchen, as well as Old Turkic and Chagatai (cf. a narrower selection of historical languages in Robbeets 2017). A complete list of languages, abbreviations and sources is available in the Appendix.



MAP 1. The selected 66 languages of Northeast Asia

By using a computational-aided quantitative method, the present study investigates 40 typological features in all areas, covering phonology (Features 1–15), lexical semantics

(Features 16–24), morphosyntax (Features 25–37), and grammaticalization path (Features 38–40), as shown in Table 2.

Feature	Grammatical area
1. Inventories with eight or more vowels	Phonology
2. High front vowel /y/	
3. Vowel harmony	
4. Three or more series of stop initials	
5. Distinction between liquids /r/ and /l/	
6. Voiceless alveolar lateral /ɬ/	
7. Velar nasal initials /ŋ-/	
8. Postalveolar fricative initials /ʃ-/, /ʂ-/ or /ɕ-/	
9. Initial consonant clusters C+liquid	
10. Initial consonant clusters obstruent+obstruent	
11. Stop codas /-p, -t, -k, -ʔ/	
12. Lateral coda /-l/	
13. Bilabial nasal coda /-m/	
14. Contrastive level tones	
15. Contrastive contour tones	
16. Distinction between ‘hand’ and ‘arm’	Lexical semantics
17. Distinction between ‘foot’ and ‘leg’	
18. Distinction between human classifier and animal classifier	
19. Three or more distance contrasts in the demonstratives	
20. Polysemy ‘to’ and ‘in’ within a single morpheme	
21. Polysemy ‘from’ and ‘in’ within a single morpheme	
22. Distinction between inclusive and exclusive 1st person pronoun	
23. Split encoding of nominal and locational predication	
24. Distinction between plain and existential negative verb	
25. Morphological case marking	Morphosyntax
26. Overt subject marking on noun	
27. Person indexing on noun	
28. Person indexing on verb	
29. Honorific verb morphemes	
30. Demonstratives as sentence subject	
31. Standard-Adjective order in comparatives	
32. Noun-Numeral-(Classifier) order in quantifier phrase	
33. Preverbal negative morphemes	
34. Topic predicative possession	
35. Locational predicative possession	
36. Serial verb constructions	
37. Sentence-final question particles	
38. Postverbal ‘take/get/acquire’ > capabilitative auxiliary	Grammaticalization paths
39. Postverbal ‘become’ > possibilitative auxiliary	
40. Postverbal ‘see/look’ > attemptive auxiliary	

TABLE 2. Comparative features in different grammatical areas

Some of these features are similar to Robbeets (2017), but, in any case, we redefine them and add more features, which make comparison to typologically different languages like Sinitic, Chukchi-Kamchadal and Russian more efficient. Consequently, our comparison criteria and data also yield notably different results.

In this study, we employ the NeighborNet algorithm (Bryant & Moulton 2004) to generate data-display networks to visualize the overall distance between the typological profiles of the individual languages, without any assumption or implication about their genetic relationships

(see Szeto 2019 for further discussion of this methodology). The phylogenetic tool generates a network diagram (Figure 1), which shows the distance between the typological profiles of 78 datapoints (66 modern and 12 historical languages) under investigation, and the clustering patterns among them.

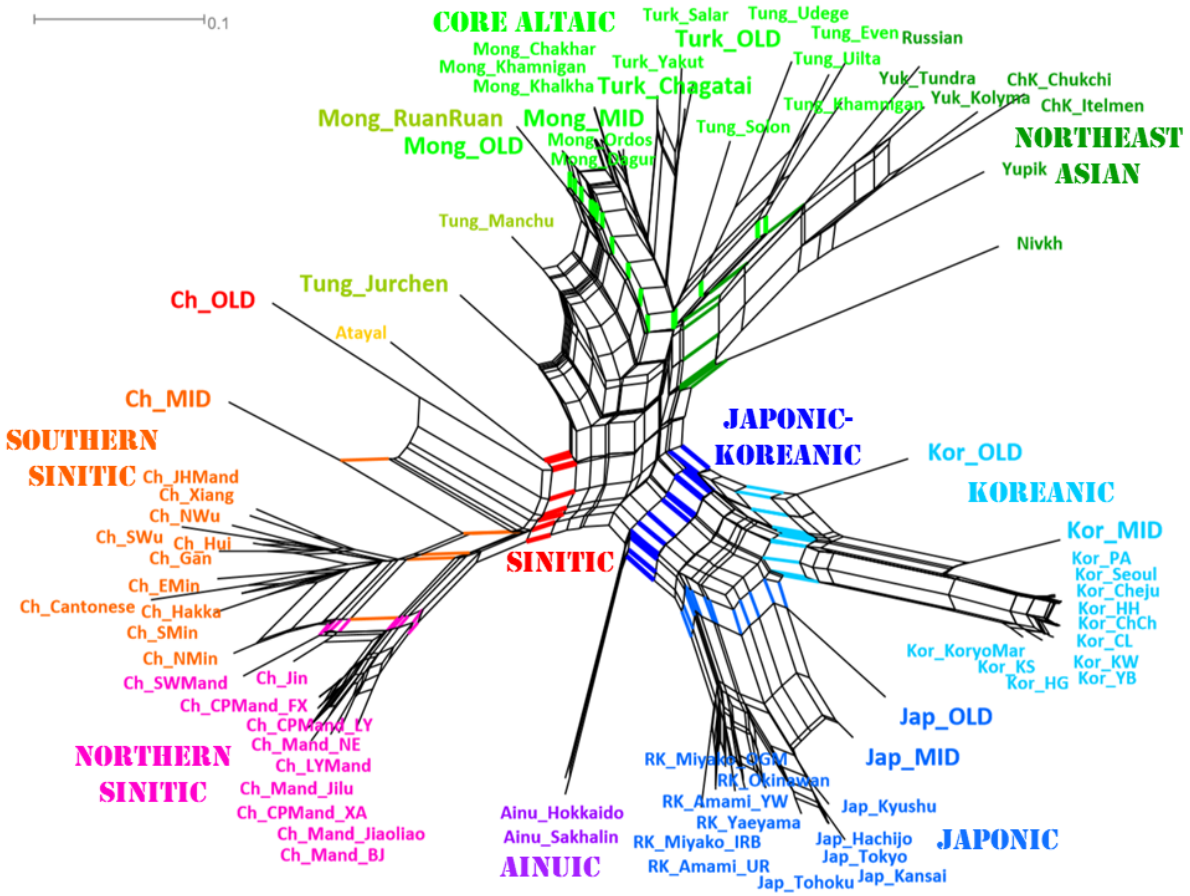


FIGURE 1. Typological distances between languages in Northeast Asia

Figure 1 shows an obvious tripartite typological distinction: Northeast Asian (Core Altaic and other Northeast Asian languages), Japonic-Koreanic (Japonic, Koreanic, and Ainuic) and Sinitic typology (Sinitic and Atayal).

Several initial interpretations concerning the interrelations between the languages of Northeast Asia can be deduced from the diagram afore. First of all, Old Japanese and Old Korean were typologically not too similar to either the modern or the ancient forms of the Core Altaic languages, i.e., Turkic, Mongolic, and Tungusic (see also Vovin 2015a). Instead, Japonic and Koreanic, together with Ainuic, form a cluster, implying a high degree of typological similarities, which have developed under areal diffusion around the Sea of Japan. Secondly, there is a signal of diffusion, suggesting that Koreanic has diverged from the Core Altaic and Northeast Asian clade while converging with Japonic, whereas Japonic has been gradually diverging from Koreanic while converging with Ainuic (see further discussion in Section 6). Another noteworthy point is that the Jurchenic languages (Jurchen and Manchu) show a clear deviation from Core Altaic towards the Sinitic clade.

As the Core Altaic and other Northeast Asian languages have now been shown to be typologically separate from the Japonic-Koreanic clade, we will next discuss features that

speak in favour of the following scenarios: convergence (Section 4) and divergence (Section 5) between the Japonic and Koreanic languages.

4 Convergence between Japonic and Koreanic

Out of the 40 features under investigation, Japonic and Koreanic languages share up to 26 features, displaying a considerably high degree of similarity. To distinguish between areal and specific Japonic-Koreanic features, this section discusses the relation of these 26 features to neighbouring languages in Northeast Asia.

4.1 Common features in the languages of Northeast Asia

Many features are widely shared across languages in Northeast Asia. While some features can be regarded as results of areal diffusion, others are simply typological characteristics of languages in this particular part of the world. Table 3 summarizes the presence of Northeast Asian features in each language group by the values 1 = present and 0 = absent.

Feature	8	9	10	15	25	31	35	36	37	40
Northeast Asian	0.50	0.33	0.33	0	1	0.83	0.67	0	0	0
Turkic	1	0	0	0	1	1	1	1	1	1
Mongolic	1	0	0	0	1	1	1	1	1	1
Tungusic	0.50	0	0	0	1	1	1	1	1	0.17
Nivkh	0	1	1	0	1	1	1	1	1	1
Ainuic	1	0	0	0	1	1	0	1	1	1
Koreanic	1	0	0	0	1	1	1	1	1	1
Japanese	0.80	0	0	0	1	1	1	1	1	1
Ryukyuan	0.67	0	0.33	0	1	1	1	1	1	1
Northern Sinitic	0.90	0	0	1	0	1	0	1	1	0.30
Southern Sinitic	0.55	0	0	1	0	0.77	0	1	1	0.45
Atayal	1	0	0	0	1	0	0	1	1	0

TABLE 3. Common features in the languages of Northeast Asia

Obvious areal features in Northeast Asia can be easily identified through differences between Northern and Southern Sinitic (e.g. Feature 8), the divergence of which is indeed related to areal diffusion with typologically Altaic languages in the north and Mainland Southeast Asian languages in the south (see, e.g. Hashimoto 1986, Szeto et al. 2018, Szeto 2019). Even more obvious cases, however, would be features that differentiate Sinitic languages from the rest of the languages in Northeast Asia (e.g. Features 15, 25 and 35).

The areal similarity of the following features is very evident, each of which has been previously investigated in an empirical fashion well enough that no further discussion is necessary here, as shown in Table 4.

Feature	Status in Northeast Asia	Previous studies
15. Contrastive contour tones	Absent	Szeto (2019: 56–60)
25. Morphological case marking	Present	Iggesen (2013)
31. Standard-Adjective order in comparatives	Present	Ansaldo (2010)
35. Locational predicative possession	Present	Yurayong (2019)
36. Serial verb constructions	Present	Anderson (2006)
37. Sentence-final question particles	Present	Panov (2020)

TABLE 4. Empirically confirmed common features in the languages of Northeast Asia

Apart from the features in Table 4, several other features are worth discussing for the Japonic-Koreanic context.

Feature 8: *Postalveolar fricative initials* /*ʃ*-/, /*ʂ*-/ or /*ɕ*-/
In most Japonic and Koreanic languages, palatalization of /s/ regularly takes place before a palatal phoneme, such as a monophthong /i/ and palatalized vowels with the sequence /ʲV/, e.g. Japanese and Okinawan さ [sa] vs. し [ɕi] and しゃ [ɕʲa], or Korean 사 [sa] vs. 시 [ɕi] and 셔 [ɕʲʌ]. This palatalization rule also applies to Ainuic and Mongolic as well as some Tungusic languages, e.g. Khalkha Mongol <sara> [sar] 'moon' and <sine> [ʃin] 'new'. However, Northern Sinitic, Turkic and several other Northeast Asian languages have really two distinct sibilant phonemes: [s] vs. [ʃ/ʂ/ɕ], although in some languages the latter may have (re-)entered the phonological system recently through Russian borrowings, as in Yakut, where the Proto-Turkic **š* regularly became the plain sibilant *s*, e.g. **baš* > *bas* 'head', and intervocalically *h* (Poppe 1959: 678–679).

Features 9 & 10: *Initial consonant clusters C+liquid and obstruent+obstruent*
The typologically Altaic languages do not tolerate complex initial consonant clusters (Robbeets 2017: 591–592). At most, some of these languages might allow the combination of the initial consonant with a glide, e.g. Manchu ***nj****ama* 'person' and ***tw****a* 'fire'. The only languages in Northeast Asia which phonotactically allow a sequence C+liquid, /Cl, Cr/ and a combination of two obstruents are Russian, Itelmen and Nivkh, as well as Old and Middle Chinese, e.g. Russian ***tr****i* 'three' and ***tk****at'* 'to weave' (syncopated from the Late Proto-Slavic **tъkati*), and Itelmen ***ksxl****itkas* 'to be hungry'. Interestingly, Miyako Ryukyuan also has such sequences, e.g. ***pst****u* 'person' (~ Modern Japanese *hito*), which is, obviously enough, due to the loss of the unstressed vowel in Proto-Ryukyuan **pito*. Similar syncopation and monosyllabification took place in Korean during the transition period from Late Old Korean to Early Middle Korean, giving rise to Middle Korean initial clusters, which later became "reinforced" consonants, e.g. Late Old Korean 菩薩 ****pusar*** > Middle Korean ***psʌr*** > Modern Korean ***ss****al* 'husked rice' (Lee & Ramsey 2011: 67, 89, 131, Vovin 2015b).

Feature 40: *Postverbal 'see/look' > attemptive auxiliary*
Most languages in Northeast Asia have developed an auxiliary expressing attempt from a verb 'to see/look', e.g. Yakut *kör-*, Khalkha Mongol *üz-*, Nivkh *ñu-*, Japonic *mi*(*r*)- and Koreanic *po-* (see also Yoshitake 1929: 533). Chronologically, Narrog et al. (2018: 170–171) date the emergence of this grammaticalization in Japanese to the 10th century and in Korean

to the 15th century. Interestingly, this auxiliation pattern is rare among Northern Sinitic but observed again in Southern Sinitic and Mainland Southeast Asian languages, e.g. Xiang *kʰan*˥, Vietnamese *xem* and Thai *duː*[33] (Szeto 2019: 82–83).

4.2 Common features in Japonic, Koreanic and Core Altaic

A few features that connect Japonic, Koreanic and Core Altaic languages but exclude Sinitic and other Northeast Asian languages can also be identified, as shown in Table 5.

Feature	7	20	39
Northeast Asian	0.50	0	0
Turkic	0	0.5	1
Mongolic	0	1	1
Tungusic	0.50	0.67	0.33
Nivkh	0	0	0
Ainuic	0	1	0
Koreanic	0	1	1
Japanese	0	0.80	1
Ryukyuan	0	0.33	1
Northern Sinitic	0.30	0	0
Southern Sinitic	0.91	0	0
Atayal	0	0	0

TABLE 5. Common features in Japonic, Koreanic and the Core Altaic languages

Feature 7: *Velar nasal initial /ŋ-/*

The initial *ŋ-* is unknown in Japonic, Koreanic and most Core Altaic languages, though it is present in Ewen, Udeghe and Uilta (see also Robbeets 2017: 591). Meanwhile, the majority of Sinitic languages have an initial *ŋ-* with the exception of some deviation in Northern Sinitic (Szeto 2019: 62).

Feature 20: *Polysemy 'to' and 'in' within a single morpheme*

This bifunctional use of locational markers is observed with the dative-locative cases in Japonic *-ni* (also the Tōhoku Japanese allative *-sa*) and Koreanic *-ey*, as well as in most Core Altaic languages, as shown in Examples (1), (2), (3) and (4). This polysemy goes back to Old Japanese and Middle Korean as well as Jurchen and Ancient Mongolic languages (see also Kupchik 2011: 520–524).

Tōhoku Japanese

(1) *hacʲizʲoʀ-zʲima-**sa*** *egi-ɋdɛ!* */ i-ɋdɛ!*
Hachijō-island-**ALL** go-DESID stay-DESID
'I want to go to / stay on Hachijō island.' (based on Matsumori & Onishi 2012)

Hamgyŏng Korean

(2) *ceycwu-do-**ey*** *ka-ki* */ sal-ki* *sip-ta!*
Cheju-island-**DAT** go-NMLZ live-NMLZ want-DECL
'I want to go to / live on Cheju island.' (based on King 1992)

Chakhar Mongol

(3) *altai* *goto-**d*** *yaw-maar* */ ämydar-maar* *bää-n!*
Altay city-**DAT** go-POT live-POT be-IND.PRS
'I want to go to / live in Altay City.' (based on Sechenbaatar 2003)

Yakut

(4) *baaj* *küöl-**ga*** *bar-yax-pyn* */ olor-uox-pyn* *bayara-byn!*
Bai lake-**DAT** go-FUT-1SG live-FUT-1SG want-1SG
'I want to go to / live at Lake Baikal.' (based on Stachowski & Menz 1999)

However, the Japonic and Koreanic locative-dative case markers for the directive context 'to' are sometimes dropped in speech as in Examples (5) and (6).

Kansai Japanese

(5) *ōsaka* *it-te,* *kyōto* *it-te,* *shiga* *it-te,* *honde* *kaet-te* *ki-ten.*
Ōsaka go-GER Kyōto go-GER Shiga go-GER then return- GER come-PST
'I went to Ōsaka, Kyōto, Shiga, then came back.' (Palter & Slotsve 1995: 152)

Cheju

(6) *sonci-rey* *sewel* *ka-n-deyn* *hʌ-ye-ra.*
grandson-NOM Seoul go-PRS-DECL say-DECL-HEARSAY
'I heard that the grandson is going to Seoul.' (Kiaer 2014: 11)

This omission is characteristic of spoken Japonic and Koreanic, which might simply be due, on the one hand, to a general case omission tendency or, on the other hand, to a change in the speaker's perception that began to treat goal as direct object.

Feature 39: *postverbal 'become' > possibilitative auxiliary*
This auxiliation from 'to become' to marking 'to be possible' when used after a gerund is common with Japonic *nar-*, Koreanic *toy-* and Core Altaic such as Yakut *buol-*, Mongolic *bol-* and Solon Evenki *oo-* (see also Yoshitake 1929: 535–539).

4.3 Common features in Japonic, Koreanic and Sinitic

The number of features that Japonic and Koreanic share with Sinitic languages is unexpectedly high, given that Sinitic is generally thought to have affected Koreanic mainly at the lexical and not at the grammatical level (Rhee 2018), while Early Middle Japanese has evidently undergone Sinicization (Frellesvig 2010: Ch. 9). Table 6 summarizes features that are shared among Japonic, Koreanic, and Sinitic.

Feature	5	6	14	16	18	27	28	34
Northeast Asian	1	0.67	0	0.50	0	0.50	1	0
Turkic	1	0.50	0	0	0	1	1	0
Mongolic	1	0.40	0	0	0	1	0	0
Tungusic	1	0.50	0	0.67	0	0.67	0.83	0.17
Nivkh	1	1	0	0	1	0	1	0
Ainuic	0	0	1	0	1	1	1	0
Koreanic	0	0	0.46	1	1	0	0	1
Japanese	0	0	1	1	1	0	0	1
Ryukyuan	0	0	1	0.17	1	0	0	1
Northern Sinitic	0.70	0	0.10	1	0.80	0	0	1
Southern Sinitic	0.18	0	1	0	1	0	0	1
Atayal	0	0	0	1	0	0	0	0

TABLE 6. Common features in Japonic, Koreanic and Sinitic languages

These features concern simplification but also, at the same time, complexification of the phonological system. Lexical semantics and morphosyntax were seemingly also affected by Sinitic languages in the course of the two-millennia-long intense contacts.

Feature 5: *Distinction between liquids /r/ and /l/*
The lack of a distinction between the liquids /r/ and /l/ has previously been regarded as an areal tendency in East Asia, concerning Japonic, Koreanic, Ainuic, and the Sinitic languages (see Vovin 2020, in this volume). However, our Sinitic data show that this distinction is observed in the Modern Northern Sinitic languages, where /r/ (pronounced as retroflex [ɻ]) is the result of a regular sound change from Middle Chinese /ny/, e.g. Middle Chinese 人 ***nyin***^{A} 'person' > Beijing Mandarin ***rén*** vs. Cantonese ***jan***^{4}.

Feature 6: *Voiceless alveolar lateral /ɬ/*
In a large-scale typological survey of phonological inventories across Eurasia, Nikolaev et al. (2015) show that a voiceless alveolar lateral is a common feature in the Greater Himalayan area. On the other hand, it is an extremely rare phoneme in East Asia where Northern Sinitic, Koreanic and Japonic languages are spoken, even though it is sporadically observed in some Turkic, Mongolic (including Modern Khalkha) and Southern Sinitic varieties (see also Cao 2008: P046, Szeto 2019: 63).

Feature 14: *Contrastive level tones*
Contrastive level tones are still present in most modern Japonic languages, but only preserved in Koreanic varieties along the eastern coastline, i.e. Hamgyŏng, Kangwŏn and Kyŏngsang (Yeon 2012: 169–170), as well as Yanbian and Koryŏ Mar (Barnes-Sadler, p.c.). Whether this is due to a preservation-favouring force from Japonic languages across the sea still remains unclear. Despite being observed in Sinitic languages, the adjacent Northern Sinitic languages are known for the lack of contrastive level tones of the type that are present in Southern Sinitic languages (Szeto 2019: 56–60). Therefore, the pitch-accent system emerging in Middle Japonic and Koreanic languages has probably nothing to do with the Sinitic languages, but it rather emerged language-internally through accent shift, which gave rise to a lexical pitch distinction (see also Ramsey 1979, 1991).

Feature 16: *Distinction between 'hand' and 'arm'*
In most Core Altaic and other Northeast Asian languages, there is only one word for both 'hand' and 'arm', e.g. Yakut *xoł*, Khalkha Mongol *gar*, Russian *rukáˊ*, Nivkh *təmk* and Hokkaido Ainu *tek*. This distinction is, however, present in Modern Japonic and Koreanic as well as Northern Sinitic, but absent from Southern Sinitic (Szeto 2019: 84–85). This might imply a mutual reinforcement between Japonic, Koreanic, and Sinitic languages, because Old Japanese still used 手 *te* to denote both 'hand' and 'arm', while two different words are attested in Middle Korean, *son* 'hand' vs. *pʌlh* 'arm'. In Sinitic, such a distinction is already attested in Old Chinese, 手 ***ŋ̊uʔ*** 'hand' vs. 臂 ***pek-s*** 'arm'.

Feature 18: *Distinction between human classifier and animal classifier*
The existence of classifiers can be dated back to Pre-Old-Japanese and Pre-Old-Korean stages, but their use became definitely more robust under contact with Sinitic languages (see also Robbeets 2017: 597–598). Synchronically, it is common for most Northeast Asian languages with a classifier system to make a distinction between human and animal referents, e.g. Miyako Ryukyuan *-nupstu* [human] vs. *-kara* [animal], but interestingly, such a distinction is absent in certain Northern Mandarin dialects, which may be indicative of Altaic influence (Szeto 2019: 85–86).

Feature 27 & 28: *Person indexing on noun and verb*
Personal elements have never been grammaticalized into noun declension (i.e. possessive suffixes) and verb conjugation (i.e. person suffixes) in Japonic and Koreanic, which makes these languages, together with Jurchen and Manchu, remarkably more Sinitic-like.

Feature 34: *Topic predicative possession*
In the Eurasian context, predicative possession with a possessor as clause topic is only observed in Manchu, Koreanic, Japonic, Sinitic, and further to the south, which is often regarded as influence from the Sinitic literary language (Yurayong 2019: 203–204), considering that it was already attested in the Old Chinese Oracle Bone Inscriptions (Chappell & Creissels 2019: 497). However, topic possessor in Japonic and Koreanic seems to be related to another phenomenon not discussed in this study, namely, the presence of a double nominative construction (see Chappell & Creissels 2019: 480–482), which would consequently also tolerate possessor and possessum to be placed sequentially without any non-subject or locational case marking on possessor.

4.4 Features exclusively observed in Japonic and Koreanic
Despite the claim by Tranter (2012: 11) that "…yet there is little that is *unique* to the two languages [Japanese and Korean] in north Asia", we still observe from the data several

grammatical features which are shared only by Japonic and Koreanic languages and which, thus, can be considered to be unique from the areal perspective, as illustrated in Table 7.

Feature	22	26	29	32
Northeast Asian	0	0.33	0	0
Turkic	0	0	0	0.50
Mongolic	1	0	0	0
Tungusic	0.67	0	0	0
Nivkh	1	0	0	0
Ainuic	1	0	0	1
Koreanic	0	1	0.91	1
Japanese	0	0.80	1	1
Ryukyuan	0	1	0.33	1
Northern Sinitic	0.90	0	0	0
Southern Sinitic	0.36	0	0	0
Atayal	1	1	0	0

TABLE 7. Japonic-Koreanic-specific features

Feature 22: *Distinction between inclusive and exclusive 1st person pronoun*
Japonic and Koreanic (as well as Turkic) lack the inclusiveness distinction in 1st person pronouns,. This could perhaps be explained by the productive lexicalization of nouns into personal pronouns in these languages. Meanwhile, such a distinction is observed in Mongolic, Nivkh, Ainuic, and some Tungusic and Sinitic languages, e.g. Hokkaido Ainu *cóka* ‘we [exclusive]’ vs. *aoká* ‘we [inclusive]’.

Feature 26: *Overt subject marking on noun*
Cross-linguistically, the overt subject marking with a nominative case suffix is rare for languages with a nominative-accusative alignment. In Eurasia, apart from the marker *-ga* in Japonic and *-nu* in Ryukyuan (both of which were originally genitive markers), as well as Koreanic *-i*/*-ka* and Atayal *-qu’*, overt subject case marking is observed mainly in flexional nominative-accusative languages like Indo-European and Semitic, while none of the languages around the Japonic and Koreanic spheres possess such case markers. Ultimately, King (1988) also proposes that Korean might have originally been an ergative language (see also Schmalstieg 1981 for a similar argument for Proto-Indo-European), which could explain the existence of agent case marker. This marker was supposedly borrowed from Koreanic

into Japonic, cf. the Old Japanese active marker *-i* and the semantic shift of Old Japanese genitive *-ga* to nominative in Late Middle Japanese (Frellesvig 2010: 366–368). This borrowing scenario is also supported by the fact that an unmarked subject is also attested in Old Japanese (Bentley 2012: 196).

Feature 29: *Honorific verb morphemes*
Japonic and Koreanic can mark honorificity on verb, e.g. Japanese *-(r)are-*, Yaeyama Ryukyuan *-oor-*, and Koreanic *-(u)si-* (replaced by *-k(y)e* in Chŏlla Korean), although this suffix has recently been dropped in Koryŏ Mar (Barnes-Sadler, p.c.). This seems to be a borrowing from Japanese to several Ryukyuan languages, such as Okinawan and Yaeyama. Meanwhile, Turkic, Mongolic and Tungusic languages use 2nd person plural forms as honorific towards the addressee, which is a common semantic shift strategy in Western Eurasia, cf., e.g. *vousvoyer* in French, *Sie geben* in German and *na vy* in Russian.

Feature 32: *Noun-Numeral-*(*Classifier*) *order in quantifier phrase*
There is evidence of postnominal classifier phrase in Old Japanese *kamira pito-**moto*** [leek one-**CLF**] (Bentley 2012: 199), but not in Old Korean, because this constituent order started emerging only in Middle Korean *swul se **mal*** [liquid three mal.**CLF**] (Sohn 2012: 99) and remains in general use in Koreanic till the present-day (Tranter 2012a: 6). In general, Sinitic languages always use a prenominal classifier phrase, despite the fact that a postnominal construction is also attested in Middle Chinese (ECLL: §5), as in Example 7.

(7) **Middle Chinese**

白	羅	壹	段	紫	絁	壹
baek^{D}	*la*^{A}	*ʾjit*^{D}	***twan***^{C}	*ʦi*^{B}	*si*^{A}	*ʾjit*^{D}
white	silk	one	**CLF**	purple	silk	one
緋紬	壹	段	色	物	三	事。
pji^{A}*drjuw*^{A}	*ʾjit*^{D}	***twan***^{C}	*srik*^{D}	*mjut*^{D}	*sam*^{A}	*ʤri*^{A}
silk	one	**CLF**	color	thing	three	**CLF**

‘One item of white silk gauze, one [item] of purple silk fabric, one item of bright red silk, three pieces of colored things.’ (ms. Stein 5804)

Unless this model was borrowed from Middle Chinese to Japonic and Koreanic, this would be a very Japonic-Koreanic-specific feature in the context of Northeast Asia. It may be noted that postnominal classifier phrase is rather common in Mainland Southeast Asian languages.

5 Divergence between Japonic and Koreanic

Out of the 40 features, 12–15 features typologically distinguish Japonic and Koreanic from each other, as summarized in Table 8.

Feature	1	2	3	4	11	12	13	17	19	21	23	24	30	33	38
Northeast Asian	0	0	0.67	0	1	0.83	1	0	0.83	0	0.67	0.33	1	0.83	0
Turkic	1	1	1	0	1	1	1	0	1	0	0.50	1	1	0	1
Mongolic	0.2	0.2	1	0	1	1	1	0	0	0	0	1	1	0.2	0

	0	0												0	
Tungusic	0.67	0.33	1	0	0.67	0.67	0.67	0	0.33	0	0.17	0.17	1	0.83	0.17
Nivkh	0	0	0	1	1	1	0	0	1	1	1	1	1	0	0
Ainuic	0	0	0	0	0.50	0	1	1	1	0	1	1	0	1	0
Koreanic	0.91	0.46	1	1	1	1	1	1	1	1	0	1	0	1	0
Japanese	0	0	0	0	0.20	0	0	0	1	0	1	0	1	0	1
Ryukyuan	0	0	0	0	0	0	0.33	0	0.50	0	1	1	1	0	0
Northern Sinitic	0.70	1	0	0	0.10	0	0	1	0.20	0	1	1	0.90	1	0.20
Southern Sinitic	0.73	0.82	0	0.27	0.73	0	0.36	0	0.27	0.09	0.64	1	0.64	1	0.73
Atayal	0	1	0	0	1	0	1	1	0	0	1	1	1	1	0

TABLE 8. Divergent features between Japonic and Koreanic

Based on the data in Table 8, we will discuss three scenarios for the features that distinguish Japonic and Koreanic, based on similarities with Core Altaic, Ainuic and Nivkh, while also exploring deviations in the individual language groups.

5.1 Common features in Koreanic and Core Altaic languages

Considering the degree of similarity with Core Altaic, we can still say that Koreanic is typologically more Altaic than Japonic (see Figure 1). Given this view, we may identify several features for which Koreanic differs from Japonic by behaving in a more Altaic-like way. Conversely, considering that Japonic and Ainuic share up to 24/40 features, the features that distinguish Japonic from Koreanic often involve similarities to Ainuic. However, as it turns out, such features mainly concern the area of phonology.

Features 1 & 3: *Inventories with eight or more vowels & Vowel harmony*

Our assumption is that languages with vowel harmony like Core Altaic, be it of the palatal or of the tongue-root type, tend to have a higher number of vowel phonemes than languages without vowel harmony. Vowel harmony seems to favour the maintenance of a vowel system with a larger inventory of vowels, though the view of a strict correlation between vowel harmony and an eight-vowel system has also been challenged (Nam 2012: 57). In any case, Maddieson (2013) shows that six or seven seems to be cross-linguistically a minimal number of vowel phonemes in languages with vowel harmony. We therefore assign eight as a standard to classify a language as being rich in vocalism.

Contemporary Japonic and Ainuic languages have mostly only five vowels [i, e, a, o, u/ɯ], while Koreanic languages, except Kyŏngsang Korean, have typically eight or more vowel phonemes (see Figure 2).

Seoul Korean (8 vowels, TRH)

ㅣ *i*	ㅡ *ɨ*	ㅜ *u*
		ㅗ *o*
ㅖ *e*	ㅓ *ʌ*	
ㅐ *ɛ*	ㅏ *a*	

Cheju (9 vowels, TRH)

ㅣ *i*	ㅡ *ɨ*		ㅜ *u*
		ㆍ *ʌ*	ㅗ *o*
ㅖ *e*	ㅓ *ə*		
ㅐ *ɛ*	ㅏ *a*		

Kyŏngsang Korean (6 vowels, TRH)

ㅣ *i*		ㅜ *u*
		ㅗ *o*
ㅖ *e*	ㅓ *ə*	
	ㅏ *a*	

Chŏlla Korean (10 vowels, TRH)

ㅣ *i*	ㅟ *ü*	ㅡ *ɨ*	ㅜ *u*
	ㅚ *ö*		ㅗ *o*
ㅖ *e*		ㅓ *ʌ*	
ㅐ *ɛ*		ㅏ *a*	

FIGURE 2. Vowel inventories in Contemporary Koreanic languages, all with tongue root harmony (THR)

Diachronically, the Old and Middle Korean vowel systems contain seven vowels (Figure 3). Later, the three original diphthongs ᆞㅣ *ʌy*, ㅐ *ay* and ㅖ *ey* have become monophthongs, thus increasing the number of vowel phonemes in Contemporary Koreanic. According to Nam (2012: 57), there is no clear evidence of harmonic distinctions in Old Korean written sources, which is why we adopt the view of Lee and Ramsey (2011: 68) that harmony emerged as a palatal harmony only in Middle Korean.

Mid Old Korean (7 vowels)

ㅣ *i*	ㅜ *ü*	ㅗ *u*
	ㅡ *ɔ̈*	ᆞ *o*
	ㅓ *ä*	ㅏ *a*

Late Middle Korean (7 vowels, PVH)

ㅣ *i*	ㅡ *ɨ*	ㅜ *u*
		ㅗ *o*
	ㅓ *ə*	
	ㅏ *a*	ᆞ *ʌ*

FIGURE 3. Reconstructed vowel inventories in Mid Old Korean, possibly with no harmony, and Late Middle Korean, with palatal (palatal/velar) harmony (PVH)

As far as the Core Altaic languages are concerned, all groups have vowel harmony dating back to the proto-language stage (see Barrere & Janhunen 2019). However, while Ancient and Contemporary Mongolic and Tungusic languages mostly have five to seven vowel phonemes, the inventories of certain Tungusic languages (Ewen, Solon Ewenki, Udeghe and Uilta) have increased to eight or more. Meanwhile, Turkic languages have been rich in vowels throughout the course of their entire history (see Figure 4).

Old Turkic (9 vowels, PVH)

i	*ü*	*ï*	*u*
e	*ö*		*o*
ɛ		*a*	

Yakut (8 vowels, PVH)

i	*ü*	*ï*	*u*
	ö		*o*
e		*a*	

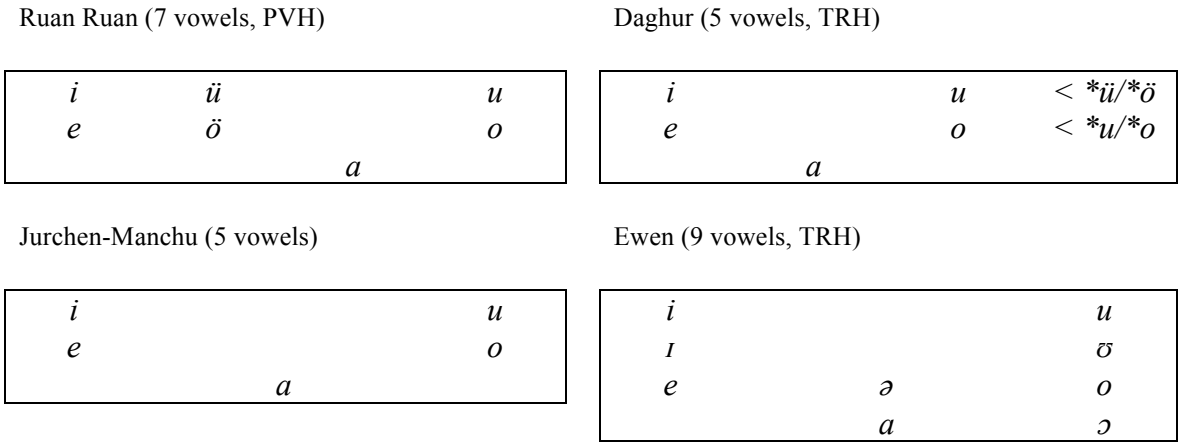


FIGURE 4. Vowel inventories in Core Altaic languages

Features 11–13: *Stop codas /-p, -t, -k, -ʔ/, Lateral coda /-l/ & Bilabial nasal coda /-m/*
Compared with Koreanic and other languages of Northeast Asia, Japonic and Ainuic have more restricted possibilities of final consonants, especially stop codas, as these languages, like also Northern Sinitic, have a strong tendency for open syllables (see Szeto 2019: 60–61). This difference between Japonic and Koreanic languages can be tested by checking the codas of common Sinitic loanwords in Japanese and Korean, e.g. 北 'north' and 法 'law' → Japanese *ho**ku*** and *hō* vs. Korean *pwu**k*** and *pe**p***. Here, Japanese originally solved the consonantal coda by adding the epenthetic vowel *u* (**pok* > *poku* > *hoku*, **pap* > **papu* >> *hoo*). The same solution seems to apply to a lateral coda, as in Japanese 汁 *shiru* 'soup' vs. Korean 酒 *swul* 'rice wine' (Ramstedt 1926 [1951]: 27–28).

As for nasals, many languages in Northeast Asia tend to neutralize the nasal codas. In the Japonic and Ainuic case, there is only one neutral phoneme *-ɴ* for nasals in word-final position, a phenomenon that is also observed in several Tungusic languages (Udeghe and Solon Ewenki). This can, again, be illustrated by word pairs with common etymologies: Koreo-Japonic 島 'island' and Sinitic 三 'three' → Japanese *shi**ma*** and *saɴ* vs. Korean *se**m*** and *sa**m*** (Ramstedt 1926 [1951]). Here, Japanese probably preserves the original final vowel of **sima*, lost in Korean, while the final nasal in **sam* has been neutralized to *-ɴ*. Meanwhile, many Mongolic and Tungusic languages that tolerate a final closed syllable have preserved final *-m*, while most Sinitic languages (apart from Eastern and Southern Min, Hakka and Cantonese) operate on a bipartite system with *-ŋ* and *-n* (see Szeto 2019: 61), the latter of which represents the result of a merger of Middle Chinese **-n* and **-m*.

5.2 Common features in Koreanic and Nivkh

Interestingly, Modern Koreanic languages share 17/40 features with Nivkh, as Table 9 shows. Given that Koreanic languages share the following numbers of features with Core Altaic languages: 20/40 with Turkic, 21/40 with Mongolic and 17/40 with Tungusic, the similar degree of similarity with Nivkh might imply that Nivkh also has undergone Altaicization (for further discussion, see Section 6.3).

Feature	4	7	11	12	15	18	19	21	24	25	27	31	35	36	37	38	40
Old Korean	0	0	1	1	0	1	1	0	1	1	0	1	1	1	1	0	0
Middle	1	0	1	1	0	1	1	1	1	1	0	1	1	1	1	0	1

Korean																	
Modern Koreanic	1	0	1	1	0	1	1	1	1	1	0	1	1	1	1	0	1
Nivkh	1	0	1	1	0	1	1	1	1	1	0	1	1	1	1	0	1

TABLE 9. Shared features in Koreanic and Nivkh

Three features (4, 21 and 40) are diachronically significant, as they involve Middle Korean innovations. Among these, two features (4 and 21), are exclusively observed in Modern Koreanic and Nivkh, and they are therefore worth discussing in more detail.

Feature 4: *Three or more series of stop initials*
A phonological system with three or more series of stop initials is rare in Northeast Asia, but three distinct series are observed in Koreanic languages (*k-kh-kk*) and Nivkh (*k-k^{h}-g*). There are reasons to assume that Proto-Korean had only a bipartite system (Nam 2012). An earlier discussion on Feature 10 (Initial consonant clusters obstruent+obstruent) in Section 4.1 already identified the third or "reinforced" series *kk-tt-pp-ss-cc* in Middle Korean as being due to the simplification of initial clusters with two or three different stops. Therefore, the emergence of this feature may also be understood language-internally without any implication of contact influence.

Feature 21: *Polysemy 'from' and 'in' within a single morpheme*
Modern Koreanic languages possess a dynamic locative-ablative case marker -(*ey*)*se* which can mark both location and source. For a similar bifunctional use, Nivkh employs the locative-ablative case marker -(*u*)*x* (Nedjalkov & Otaina 2013: 54), as may be seen from Examples (8) and (9).

Chŏlla Korean

(8a) *ney* *cip-**ise*** *nol-tulako-ing!*
1SG.GEN home-**LOC** play-HORT-TAG
'Let's play at my house!'

(8b) *ney* *cip-**ise*** *na-ka-so!*
1SG.GEN home-**LOC** exit-go-IMP
'Get out of my house!' (based on Yeon 2012)

Nivkh

(9a) *if* *ño-**x*** *hum-ḍ*
3SG barn-**LOC**/**ABL** be-IND
'(S)he is in the barn.'

(9b) *if* *ño-**x*** *p'um-ḍ*
3SG barn-**LOC**/**ABL** exit-IND
'(S)he went out of the barn.' (Nedjalkov & Otaina 2013: 54)

However, rather than contact-induced development, this similarity is more likely just a coincidence that emerged independently, but with similar results, given that this polysemy is also observed in the use of the Old Turkic locative case marker *-tA* and the Cantonese locational verb *hai*^{2}, marking both location and source.

As we have no data on Nivkh prior to the 19th century, any certain typological argument for Koreanic-Amuric convergence is still hard to make. In any case, the degree of similarity is high enough to allow the assumption of at least some linguistic interaction in the past (see the further discussion on the linguistic and historical evidence in Section 6.3, and also the discussion in Gruzdeva & Janhunen 2020, in the present volume).

5.3 Differences between Japonic and Koreanic

Several features do not have a clear areal pattern within the Japonic-Koreanic context. The occurrence of these features is relatively sporadic, which might imply that they have emerged in different languages independently as a result of semantic change and grammaticalization.

Feature 17: *Distinction between 'foot' and 'leg'*
Across Northeast Asia, only Atayal, Sinitic and Koreanic make a distinction between the two adjacent body parts, e.g. Koreanic *pal* 'foot' vs. *tali* 'leg'. Meanwhile, Core Altaic, Japonic, and most other Northeast Asian languages have only one word that refers to both body parts, e.g. Yakut *atax*, Russian *nogá*, Nivkh *ŋəʈx* and Hokkaido Ainu *cikir* 'foot, leg'. Despite being written with two different Chinese characters, the reading of the Japanese 足 'foot' and 脚 'leg' is identically *ashi*, cf. Old Japanese 安(思) *a*(*shi*) 'foot, leg'.

Feature 19: *Three or more distance contrasts in the demonstratives*
For this feature, there is also no clear pattern across Northeast Asia, and distance contrasts in the demonstratives do not seem to be typologically or genealogically stable. Japonic and Koreanic generally have a tripartite contrast, e.g. Yuwan Amami *ku-* 'this' vs. *u-* 'that' vs. *a-* 'yon'. Nevertheless, several Ryukyuan languages (Ura Amami, Okinawan and Yaeyama) have simplified the system to a two-way contrast, e.g. Yaeyama *u-* 'this' vs. *ku-* 'that'.

Feature 23: *Split encoding of nominal and locational predication*
Nominal and locational predications are marked with different verbs in Japonic: *-da*/*-ya*/*-jya*/Ø 'to be something' vs. *ir-*/*ar-*/*or-* 'to be somewhere'. However, spoken Koreanic varieties use the nominal predicative marker -(*i*)*ta* also in the locational sense, as shown in Example (10), similar to the use of the verb 'to be' in most Mongolic and Tungusic languages, as in Example (11).

Seoul Korean

(10a) *na-nun* *hankwuk* *salam-**ita***.
1SG-TOP Korea person-**COP.DECL**
'I am (South) Korean.'

(10b) *na-nun* *cikum* *yangphyeng-**ita***.
1SG-TOP now Yangp'yŏng-**COP.DECL**
'I am now in Yangp'yŏng.' (p.k.)

Udeghe

(11a) *bi* *udie* ***bi**-mi*
1SG Udeghe be-**1SG**
'I am Udeghe.'

(11b) *bi* *vladivostok* *xoton-du* ***bi**-mi*
1SG Vladivostok city-DAT be-**1SG**

‘I am in Vladivostok.’ (based on Nikolaeva & Tolskaya 2011)

Feature 24: *Distinction between plain and existential negative verb*
The presence of an existential negative verb, or a verb-based nominalized form used as a negative existential nominal predicate, is common among Core Altaic languages, as well as in Ainu, e.g. Yakut *suox*, Khalkha Mongol *ügüi*, Manchu *akū*, Ryukyuan *ne-*, Koreanic *eps-* and Ainuic *isam*. However, Modern Japanese varieties use the negative existential verb *nai-* ‘to not exist’ also as a plain negative suffix *tabe-**nai*** ‘not to eat’, although Old and Middle Japanese still had other negative morphemes -(*a*)*zu* and -(*a*)*n-* for plain and *na-* (a cognate to Ryukyuan *ne-*) for existential negation.

Feature 30: *Demonstrative as sentence subject*
Due to the grammaticalization of Koreanic demonstratives into 3rd person pronouns, *i*/*ku*/*ce* ‘this/that/yon man’, Modern Koreanic languages, unlike most neighbouring languages, always use a general classifier after a demonstrative to form non-human sentence subject, *i*/*ku*/*ce kes* ‘this/that/yon (thing)’, a phenomenon which is also found in Southern Sinitic languages, e.g. Cantonese *ni*¹/*go*² *go*³ ‘this/that thing’ (Szeto 2019: 89–90). However, independent demonstratives as a sentence subject were still possible until the Middle Korean period (Sohn 2012: 97–98).

Feature 33: *Preverbal negative morpheme*
Japonic, Turkic and Mongolic languages typically have a negative marker suffixed onto a verb stem, whereas Koreanic, Tungusic and Sinitic use preverbal negative negation. Diachronically, the Modern Korean negative particle *an* and the negative verb *anh-* can be dated back to Middle and Old Korean as *ani* ‘not’ and *ani ha-* ‘not to do’, respectively (see also Nam 2019).

Feature 38: *Postverbal ‘take/get/acquire’ > capabilitative auxiliary*
The grammaticalization path from a verb meaning ‘take/get/acquire’ into an auxiliary expressing capability or other modal content is very common among Mainland Southeast Asian languages (see Jenny 2015: 185–201). In Northeast Asia, similar patterns are observed in the Core Altaic languages, as well as in Japanese, e.g. Old Turkic *al-*, Old Mongol *ab-* (with their descendants), Japanese 得る *eru*/*uru*. Interestingly, an identical development is also attested in Middle Chinese 得 *dé* ‘to attain’ → ‘to be able to’ (ECLL: §6) and Modern Southern Sinitic languages (Szeto 2019: 72–73). However, there is no evidence of any parallels in Koreanic or Ryukyuan languages.

6 Diachronic perspectives

This chapter brings the data presented in Sections 4 and 5 into the discussion of typological changes in Japonic and Koreanic by combining linguistic (Sections 6.1 and 6.2) with historical arguments (Section 6.3). For the sake of testing hypotheses, we adopt Benedict’s (1990), Janhunen’s (1999) and Vovin’s (2014) speculative idea that (Pre-)Proto-Japonic was originally a Sinitic-like isolating SVO language prior to its contact with Altaic-type languages on the way to the Korean Peninsula and the Japanese Archipelago. At the same time, we operate with the assumption that (Pre-)Proto-Koreanic was originally a language with an Altaic typology (Janhunen 1999). Of course, one could always argue for the postulation of a common Proto-Japonic-Koreanic language (Whitman 2012, Francis-Ratte 2016), or also for a Proto-Altaic origin (Robbeets 2017) for these languages. Our stance is that in the present type of diachronic-typological study, unlike in etymological studies (cf.

Unger 2013, Francis-Ratte 2016), we gain no new results concerning prehistorical grammatical changes if we start from a monogenetic approach. By contrast, treating these languages as separate groups can open up new aspects for discussion.

As there is no attestation of Ryukyuan languages prior to the Old Okinawan collection of poems *Umuru U Sōshi* in the 16th–17th centuries, we, unfortunately, have to delimit our scope to Japanese and Korean(ic), whose attestation goes back as far as the mid first millennium AD.

6.1 Historical Altaicization and de-Altaicization of Japonic and Koreanic

In this section we discuss the features that have changed in Japonic and Koreanic due to convergence with and divergence from the Core Altaic languages. Taking into consideration Old and Middle Japanese, Table 10 illustrates the diffusion of Japanese towards the Altaic typology, i.e. Altaicization.

Feature	11	13	38	39	40
Old Japanese	0	0	0	0	0
Middle Japanese	1	1	1	1	1
Modern Japanese	0.20	0	1	1	1
Modern Core Altaic	0.89	0.89	0.39	0.78	0.72
Jurchen	0	0	0	0	0
Ruan Ruan	1	1	0	0	0
Old Turkic	1	1	1	1	1
Old Korean	1	1	0	1	0
Middle Korean	1	1	0	1	1
Modern Koreanic	1	1	0	1	1

TABLE 10. Altaicizing features in the Japonic languages

The two phonological features (11 and 13) concern the sporadic occurrence of syllable-final stops and *-m* in Late Middle Japanese, which were not long-living phenomena (Martin 1987: 73; Irwin & Narrog 2012: 250). Meanwhile, the remaining three features (38, 39 and 40) mainly concern the grammaticalization of lexical into auxiliary verbs, which are not observed in Old Japanese but from Middle Japanese onwards (see also Tranter 2012a: 10–11).

In contrast, the features that clearly changed from Old Korean towards Middle Korean can be considered examples of de-Altaicization, as illustrated in Table 11.

Feature	2	4	5	8	10	21	30	32
Old Japanese	0	0	0	0.80	0	0	1	1
Middle Japanese	0	0	0	1	0	0	1	1
Modern Japanese	0	0	0	1	0	0	1	1
Modern Core Altaic	0.51	0	1	0.83	0	0	1	0.17
Jurchen	0	0	1	1	0	0	1	0
Ruan Ruan	1	0	1	1	1	0	1	0
Old Turkic	1	0	1	1	0	1	1	0
Old Korean	1	0	1	0	0	0	1	0
Middle Korean	0	1	0	0	1	1	1	1
Modern Koreanic	0.46	1	0	1	0	1	0	1

TABLE 11. De-Altaicizing features in Koreanic languages

In Table 11, the phonological features (2, 4, 5, and 10) and the other grammatical features (21 and 30) illustrate changes that can also be understood as language-internal developments (as discussed in Sections 4 and 5). However, Features 8 and 32, which concern the occurrence of the postalveolar fricative initial /ɕ-/ and the postnominal classifier phrase in Koreanic and also Japonic, could have had something to do with the Core Altaic languages and Middle Chinese, respectively (as discussed in Sections 4.2 and 4.3).

Although the Altaicizing and de-Altaicizing features presented in Tables 10 and 11 can, on the one hand, be viewed as internal changes, their results, on the other hand, still yield a structural convergence between Japonic and Koreanic, as in the case of the pitch-accent system (as discussed in Section 4.3). Thus, the two language groups may be claimed to have mutually built a new Japanese-Korean type of grammar through the processes of Altaicization and de-Altaicization. Meanwhile, the rest of the features, not included in Tables 10 and 11, may either associate Japonic and Koreanic with the Core Altaic languages or distinguish them from the latter, but, at the same time, they have been stable throughout the entire attested history. Therefore, we regard such features as general characteristics of Japonic and Koreanic languages in the historical time, despite the fact that they might ultimately have been consequences of prehistorical Altaicization and de-Altaicization (to be discussed further in Section 6.2).

In terms of language history, the historical Altaicization of the Japonic languages is reflected in Early Middle Japanese (the 9th–12th centuries), while the outcome of the historical de-Altaicization of the Koreanic languages chronologically points to the emergence of Middle Korean (the late 13th century). These two processes can be related to the sociolinguistic situation on the Korean Peninsula and the Japanese Archipelago in the last three millennia (to be discussed in more detail in Section 6.3).

6.2 Prehistorical Altaicization and de-Altaicization of Japonic and Koreanic

Ultimately, the current study cannot verify whether any Altaicization or de-Altaicization had already taken place at the Pre-Old-Japanese and Pre-Old-Korean stage. To make any certain conclusions of this would require reliance on and inclusion of reconstructed prehistorical protolanguages into the data. Even so, we will make an attempt to identify some possible features of prehistorical Altaicisation and de-Altaicization by comparing Old Japanese and Old Korean with Ancient Core Altaic languages.

As no written sources are available for prehistorical languages, we rely on tendencies and likelihoods provided by the framework of areal typology in combination with the working hypothesis that erstwhile Proto-Japonic was Sinitic-like whereas Proto-Koreanic was Altaic-like typologically. First and foremost, the Japonic-Koreanic-specific features, including, for instance, overt subject case marking and honorific verb morphemes, which are typologically rare (as discussed in Section 4.4), could be regarded as prehistorical contact-induced changes in Japonic and Koreanic that took place so early that they were already present in the oldest texts of Japanese and Korean.

Three other features can potentially be examples of Pre-Proto-Japonic Altaicization and convergence with Koreanic. Firstly, considering that an initial *ŋ-* is a common phoneme in many non-Altaic Asian languages (see also Nikolaev et al. 2015), it may also have been present, but later lost, in Pre-Proto-Japonic. Secondly, the bifunctionality of the Japonic dative-locative case *-ni* ‘to’ and ‘in’ might have followed a similar polysemy in Mongolic, Tungusic and Koreanic. Thirdly, morphological case marking in Japonic could have emerged in the Altaicization process, because it would not have existed in Pre-Proto-Japonic if the latter was an isolating language (Benedict 1990, Vovin 2014).

In contrast, some other features could ultimately have involved cases of Proto-Koreanic de-Altaicization and convergence with Japonic. For instance, the lexical distinction of ‘hand’ and ‘arm’, the emergence of the numeral classifier system and the three-distance contrast in the demonstratives are characteristic of the historical Koreanic languages, but they are missing in the Ancient and most Modern Core Altaic languages and generally rare in the Northeast Asian context (as discussed in Section 4).

By applying the aforementioned areal-typological prediction, it seems that the Japonic-Koreanic convergence could definitely have been active already in prehistorical times in the same general way as in historical times. Needless to say, this suggestion is still speculative and we encourage further studies on this matter with more empirical evidence.

6.3 Relating linguistic to historical evidence

As discussed in Sections 6.1 and 6.2, our results imply that the historical Altaicization resulted in the transition from (Pre-)Old Japanese to Middle Japanese, which could have taken place simultaneously with the historical de-Altaicization that turned (Pre-)Old Korean into Middle Korean. Historically, the Altaicization of Japonic could have reached its peak during the intensive Japonic-Koreanic contacts in the early part of the first millennium AD, i.e. in the Three Kingdoms period, on the Korean Peninsula. This marks the period when new technologies and cultural innovations were continuously being imported from the continent to the Japanese Archipelago, especially during the Paekche-Kofun period (see also Janhunen 1999: 5–6, 2010: 290, Vovin 2010: 239–240). The contacts later continued in a less intensive form across the Korea Strait until the mid 2nd millennium AD.

Another key factor reinforcing this historical convergence was obviously the increasingly influential role of the Sinitic civilization and the Chinese literary language over the Korean Peninsula as of the late first century BC (Sohn 1999: 103, Bailblé 2015). This cultural influence is also reflected in a number of linguistic features which Japonic and Koreanic share with Sinitic languages (as discussed in Section 4.3).

However, the Japonic-Koreanic convergence loosened during the second millennium AD and the languages gradually started to diverge (see also Janhunen 1999: 4–5). As discussed in Section 5, most changes involved in this recent divergence were rather results of language-internal development, which can generally be explained without appealing to any external contact influence. In terms of language history, this divergence scenario concerns the transition from Middle to Modern Japanese and Korean.

For Japanese, the divergence period chronologically corresponds to the Late Kamakura, Muromachi, Azuchi-Momoyama and Early Edo periods and the reasons for divergence from Koreanic might be partially connected with the relocation of the capital from Kyōto to Kamakura, i.e. from west to east (see also Bentley 2012: 189–190). As the influence from the neighbouring continental language, Old Korean, was considerably greater in Western Old Japanese (see Vovin 2010), it is expectable that the descendant dialects of Eastern Old Japanese would have geographically fallen outside the Koreanic contact zone.

Sociopolitically, a number of ambitious campaigns of Japan during the last half millennium, from Hideyoshi's intervention in the 16th century till the colonization of Korea in the early 20th century, could also have broken a positive mindset of cultural exchanges and previously stable multilingual practices between the Japonic and Koreanic-speaking populations of the Paekche-Kofun period. This could also, though not necessarily, have led to a predisposition of divergence.

As discussed in Sections 5.1 and 5.2, Japonic shares as many as 24/40 features with Ainuic, while Koreanic shares 17/40 features with Nivkh. For the former case, this might point to prehistorical contacts during the Late Jōmon period (ca. 1500–900/300 BC) when the migration of the Japanese-speaking population to the Japanese Archipelago resulted in early contacts with Ainuic and other extinct indigenous populations (Janhunen 2010: 298). As for the latter case, the linguistic similarities could have emerged in a maritime Siberian network that covered the Koreanic-speaking eastern coastline but did not reach the Japonic-speaking southwestern part of the Korean Peninsula. We can consider archaeological evidence such as the spread of the heating system technology, *ondol*, which is restricted to the east (Kang 2009: 444, Yu 2015, Blackmore 2019). Historically, this suggests that the non-Koreanic-speaking ancient states in the northeast, Okchŏ and East Ye (ca 4th century BC–1st century AD), might have contained an Amuric-speaking population who came into contact with a Koreanic-speaking population in the Proto-Three-Kingdom period.

As the Amuric languages have also been Altaicized to some point (Janhunen 2009: 62, 2016, Gruzdeva 2018), this Altaicization has resulted in a convergence with Koreanic, which may have started as early as the 1st millennum BC. A new proposal by Gruzdeva and Janhunen (2020, in this volume) on a reverse de-Altaicization of the erstwhile Altaicized Amuric languages could be related to later contacts with Koreanic in the second millennium AD, i.e. at a stage when Koreanic had already been established as a language with the new Japanese-Koreanic typology. Similarly, after arriving on the the Japanese Archipelago, Japonic

interacted with Ainuic and other pre-Japonic languages. This interaction may have involved the diffusion of typological features in both directions, contributing, possibly, towards an Altaicization of Ainuic and the continuing de-Altaicization of Japonic.

Table 12 summarizes our estimate concerning the chronology and historical context of Japonic and Koreanic. As may be seen, we argue that the typological development of Japonic and Koreanic in the past was crucially connected with the phenomena of Altaicization and de-Altaicization.

Chronology	**The 1st millennium BC**	**The 1st millennium AD**	**The 2nd millennium AD**
Japanese	Prehistorical Altaicization (> Pre-Old Japanese)	Altaicization (> Old and Middle Japanese)	Internal development (> Modern Japanese)
Koreanic	Prehistorical de-Altaicization (> Old Korean)	De-Altaicization (> Middle Korean)	Internal development (> Modern Koreanic)
Contact relation	Convergence	Convergence	Divergence
Socio-historical context	Japonic-speaking population on the Korean Peninsula; Contacts with Ainuic (Jōmon) and Amuric (Okchŏ & East Ye)	Paekche-Kofun cultural exchanges; Introduction of the Sinitic culture	The capital moved from Kyōto to Kamakura; Less intense Japonic-Koreanic cultural exchanges

TABLE 12. Proposed chronology of the Altaicization and de-Altaicization of Japanese and Koreanic

6 Conclusion

Despite the conventional classification of Japonic and Koreanic languages as examples of the Altaic typology (Janhunen 2007, 2014, Tranter 2012a), these languages, both today and in the past, are still so different from the Core Altaic languages that we can even speak of an independent Japanese-Korean type of grammar (see also Vovin 2015a). Given also that there is neither a strong proof of common Proto-Altaic lexical items nor solid regular sound correspondences (Janhunen 1999: 10, 2010: 296, cf. Robbeets 2005) but, rather, only lexical and structural borrowings between languages of the Altaic typology, our results indirectly speak in favour of a "Paleo-Asiatic" origin of the Japonic and Koreanic languages (see also Janhunen 2010, Vovin 2015a).

However, through later intense language contacts, Japanese and Koreanic converged by the phenomena of Altaicization and de-Altaicization during the first millennium BC and AD, respectively (see also Janhunen 2010: 290, Vovin 2010: 239–240). Later, they have diverged as a result of historical developments (Janhunen 1999: 4–5, cf. Robbeets 2017: 616). Reasons for this divergence may have included the shift of the prestige variety of Japanese from west to east, as well as conflicts between Japonic and Koreanic speakers starting in the 16th century. Similar transformations have taken place in the northern neighbours of Koreanic and Japonic, especially in Amuric (Janhunen 2009: 62, 2016, Gruzdeva 2018, Gruzdeva & Janhunen 2020, this volume), but possibly also in Ainuic.

Nonetheless, the issues regarding prehistorical typological changes in Japonic and Koreanic remain to be solved in future studies. Moreover, in order to refine the dating of the observed

processes of Altaicization and de-Altaicization, the historical languages should also be analysed with a more fine-grained distinction between the earlier and later stages of Old, Middle and Modern Japonic and the corresponding stages of Koreanic.

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Abbreviations

1SG	1st person singular
3SG	3rd person singular
ABL	Ablative
ALL	Allative
CLF	Classifier
COP	Copula
DAT	Dative
DECL	Declarative
DESID	Desiderative
FUT	Future
GEN	Genitive
GER	Gerund
HORT	Hortative
IMP	Imperative
IND	Indicative
INF	Infinitive
LOC	Locative
NMLZ	Nominalizer
NOM	Nominative
POT	Potential
PRS	Present
TOP	Topic

Appendix: List of languages, abbreviations and sources

Affinity	Language	Label (Figure 1)	Source
Core Altaic clade			
Turkic	Old Turkic	Turk_OLD	Erdal 1998
	Chagatay	Turk_Chagatai	Boeschoten & Vandamme 1998
	Yakut	Turk_Yakut	Stachowski & Menz 1998
	Salar	Turk_Salar	Hahn 1998
Mongolic	Ruan Ruan	Mong_RuanRuan	Vovin 2019
	Old Mongol (= Proto-Mongolic)	Mong_OLD	Janhunen 2003
	Middle Mongol	Mong_MID	Rybatzki 2003
	Khalkha	Mong_Khalkha	Svantesson 2003
	Chakhar	Mong_Chakhar	Sechenbaatar 2003

	Khamnigan Mongol	Mong_Khamnigan	Janhunen 1990
	Daghur	Mong_Daghur	Tsumagari 2003
	Ordos	Mong_Ordos	Georg 2003
Tungusic	Jurchen	Tung_Jurchen	Kane 1989
	Manchu	Tung_Manchu	Gorelova 2002
	Ewen	Tung_Ewen	Benzing 1955
	Solon Ewenki	Tung_Solon	Tsumagari 2009a
	Khamnigan Ewenki	Tung_Khamnigan	Janhunen 1991
	Udeghe	Tung_Udeghe	Nikolaeva & Tolskaya 2011
	Uilta	Tung_Uilta	Tsumagari 2009b
Northeast Asian clade			
Slavic	Russian	Russian	The authors, p.k.
Eskaleutic	Naukan Yupik	Yupik	Menovščikov 1975
Yukaghir	Kolyma Yukaghir	Yuk_Kolyma	Maslova 2003a
	Tundra Yukaghir	Yuk_Tundra	Maslova 2003b
Chukchi-	Chukchi	ChK_Chukchi	Dunn 1999
Kamchadal	Itelmen	ChK_Itelmen	Georg & Volodin 1999
Amuric	Nivkh	Nivkh	Nedjalkov & Otaina 2013
Koreanic clade			
Koreanic	Old Korean	Kor_OLD	Lee & Ramsey 2011, Nam 2012
	Middle Korean	Kor_MID	Lee & Ramsey 2011, Sohn 2012
	Koryŏ Mar	Kor_KoryoMar	Barnes-Sadler, p.c.
	Yanbian Korean	Kor_YB	
	Hamgyŏng Korean	Kor_HG	Yeon 2012
	P'yŏngan Korean	Kor_PA	
	Kangwŏn Korean	Kor_KW	
	Hwanghae Korean	Kor_HH	
	Seoul Korean	Kor_Seoul	
	Ch'ungch'ŏng Korean	Kor_ChCh	
	Kyŏngsang Korean	Kor_KS	
	Chŏlla Korean	Kor_CL	
	Cheju	Kor_Cheju	Kiaer 2014
Japonic clade			
Japanese	Old Japanese	Jap_OLD	Miyake 2003, Frellesvig 2010, Kupchik 2011, Bentley 2012
	Middle Japanese	Jap_MID	Frellesvig 2010, Tranter 2012b, Irwin & Narrog 2012
	Hachijō	Jap_Hachijo	Iannucci 2019
	Tōhoku Japanese	Jap_Tohoku	NINJAL, Matsumori & Onishi 2012
	Tōkyō Japanese	Jap_Tokyo	
	Kansai Japanese	Jap_Kansai	
	Kyūshū Japanese	Jap_Kyushu	
Ryukyuan	Amami (Ura)	RK_Amami_UR	Shimoji & Pellard 2010
	Amami (Yuwan)	RK_Amami_YW	
	Okinawan	RK_Okinawan	
	Miyako (Irabu)	RK_Miyako_IRB	
	Miyako (Ogami)	RK_Miyako_OGM	
	Yaeyama	RK_Yaeyama	
Ainuic clade			
Ainuic	Sakhalin Ainu	Ainuic_Sakhalin	Tamura 2000
	Hokkaidō Ainu	Ainuic_Hokkaido	
Sinitic clade			

Northern Sinitic	Old Chinese	Ch_OLD	Aldridge 2013, Baxter & Sagart 2014, ECLL 2016
	Middle Chinese	Ch_MID	Pulleyblank 1991, Aldridge 2013, ECLL 2016
	Northeast Mandarin	Ch_Mand_NE	Li 2002, Cao 2008
	Beijing Mandarin	Ch_Mand_BJ	
	Jiaoliao Mandarin	Ch_Mand_Jiaoliao	
	Jilu Mandarin	Ch_Mand_Jilu	
	Central Plains Mandarin (Fengxian)	Ch_CPMand_FX	
	Central Plains Mandarin (Luoyang)	Ch_CPMand_LY	
	Central Plains Mandarin (Xi'an)	Ch_CPMand_XA	
	Lanyin Mandarin	Ch_LYMand	
	Southwest Mandarin	Ch_SWMand	
	Jin	Ch_Jin	
Southern Sinitic	Jianghuai Mandarin	Ch_JHMand	
	Northern Wu	Ch_NWu	
	Southern Wu	Ch_SWu	
	Hui	Ch_Hui	
	Xiang	Ch_Xiang	
	Gan	Ch_Gan	
	Northern Min	Ch_NMin	
	Eastern Min	Ch_EMin	
	Southern Min	Ch_SMin	
	Hakka	Ch_Hakka	
	Cantonese	Ch_Cantonese	The authors, p.k.
Formosan	Atayal	Atayal	Rau 1992

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