

Chapter 43

The homelands of the individual Transeurasian proto-languages

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Abstract

This chapter is an attempt to identify the individual homelands of the five families making up the Transeurasian grouping, i.e. the Turkic, Mongolic, Tungusic, Koreanic and Japonic families. Combining various linguistic methods and principles such as the diversity hotspot principle, phylolinguistics, cultural reconstruction and contact linguistics, we try to determine the original location and time depth of the families under discussion. We further propose that the individual speech communities were originally familiar with millet agriculture, while terms for pastoralism or wet-rice agriculture entered their vocabularies only at a later stage.

Keywords: Japonic, Koreanic, Tungusic, Mongolic, Turkic, Transeurasian, homeland, time depth, agriculture, cultural reconstruction, contact linguistics

43.1 Introduction

The aim of this chapter is to estimate the location and time depth of the individual families that make up the Transeurasian grouping and to suggest evidence for the presence of agricultural vocabulary in each of the proto-languages. In the present context, farming or agriculture is understood in its restricted sense of economic dependence on the cultivation of crops and does not necessarily include the raising of animals as livestock. By time depth we understand the point in time at which a given

proto-language started to dissolve into its primary branches, by homeland the region where it was spoken before it was dissolved. For each language family, there can exist several homelands at different chronological stages, with each stage corresponding to a different geographical location. Whereas we use the term “immediate homeland” for the most recent location occupied by a given proto-language, we speak of the “ultimate homeland” of a language family when there is evidence allowing us to trace the origins back to a different region at an earlier time. In our chapter, this distinction will be especially relevant for the case of the Japonic and Mongolic families. Whereas we will situate the immediate homeland of Proto-Japonic on Kyushu, we will consider the possibility that Macro-Japonic was spoken on the Liaodong Peninsula and transferred to the Japanese Islands through the Korean Peninsula. Similarly, we will locate the immediate homeland of Proto-Mongolic in present-day northeastern Mongolia and northwestern Manchuria, but we will situate the ultimate origins of Macro-Mongolic in southern Manchuria. We use the term “Macro-” for the ancestral language common to a well-established language family and lesser established sister families. Macro-Mongolic, for instance, is the common ancestor of Proto-Mongolic proper and its para-Mongolic sister branches such as Proto-Khitanic. Macro-Japonic will be used for the ancestor common to Proto-Japonic proper and its para-Japonic sisters that once existed on the Korean Peninsula and around the Liaodong Peninsula.

The present-day distribution of the Transeurasian languages over a huge geographical range, all across Eurasia stands in sharp contrast with the rather condensed location of the homelands of the individual families, as proposed in previous research. Janhunen (1996a, 2010), for instance, situated the ultimate homelands of Turkic, Mongolic, Tungusic, Koreanic and Japonic in a relatively

compact area comprising present-day Eastern Mongolia, Southern Manchuria and Korea, as illustrated in Figure 48.1.

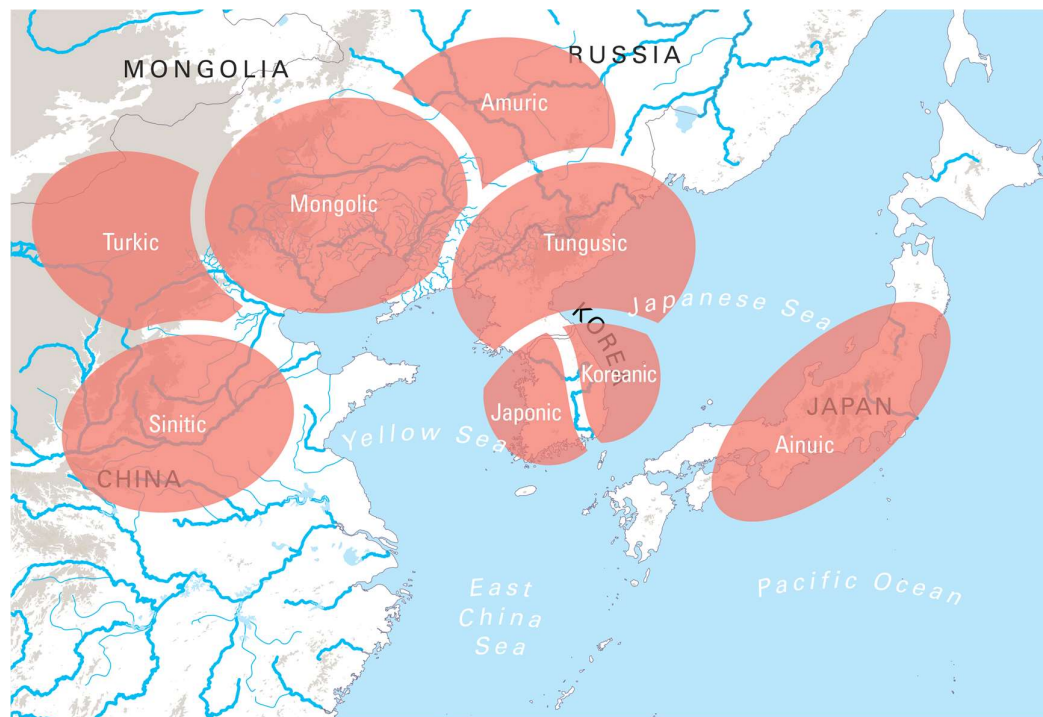


Figure 43.1 The ethnolinguistic groups of prehistorical Manchuria and their approximate homelands in the first millennium BC, adapted from Janhunen (1996a: 216)

In this chapter, we will revisit the arguments in support of the location of the homelands advanced by Janhunen. Moreover, we will bring together recent estimations of the time depth of the individual proto-languages. We will further propose lexical reconstructions in addition to circumstantial evidence that support the assumption that the individual speech communities were, at least to a certain extent, familiar with agriculture. To this end, we will combine various linguistic methods and

principles such as the diversity hotspot principle, phylolinguistics, cultural reconstruction and contact linguistics. For an assessment of the potential and limitations of these techniques, see Robbeets (2017b).

The four authors of this chapter are not in full agreement about certain particularities in dating and locating the individual homelands nor with regard to the overall relatedness of the Transeurasian languages. Except for a possible unity between Mongolic and Tungusic, Janhunen opposes any deeper genealogical connection between two or more language families under consideration, be it as Japano-Koreanic, Mongolo-Turkic, Altaic or Transeurasian, whereas the other authors accept these subgroupings in addition to the overall affiliation of the Transeurasian languages. Occasional disagreement between the authors in estimating the time depth or geographical location of certain homelands will be mentioned in the relevant sections. Collaborating on this chapter required a delicate balance of opinions, but regardless of our differences, there was a strong willingness among the authors to establish some common ground for the purpose of this reference work.

The organization of our chapter is the following. Each section is devoted to the identification of an individual homeland, i.e. Turkic, Mongolic, Tungusic, Koreanic and Japonic, with attention to location, time depth and reconstruction of agricultural vocabulary. By way of conclusion, we will argue that explaining the situation of the individual speech communities would benefit from the assumption of an overarching Transeurasian hypothesis.

43.2 The Turkic homeland

43.2.1 Location

On the basis of early historical evidence, it is generally agreed that the starting point of the Turkic migrations was located somewhere in the eastern part of the Eurasian steppes (see, e.g., Menges 1995: 55). Traditional Chinese historiography connects the early Turkic speakers to the Xiongnu tribes who dominated the area north and northwest of China between approximately the 3rd century BC and the 2nd century AD. Evidence on the Xiongnu language is scarce, comprising only several dozen—and often controversial—attestations in Old Chinese chronicles. Yet the assumption that at least some groups in the multiethnic and multilingual Xiongnu confederation were Turkic-speaking has gained wide acceptance among historical linguists (Ramstedt 1922: 30–31; Bazin 1948; Gabain 1949; Doerfer 1973b). Whereas Dybo (2007: 75–115) suggested associating the dominant language spoken by the Xiongnu confederation with Proto-Turkic, our co-author Janhunen assumes that it should be rather associated with Proto-Bulgharic, a first order subgrouping of Proto-Turkic (Janhunen 1996a: 185–189; 2014a).

The vast area covered by the modern Turkic languages spans from Southern and Eastern Europe in the west and Eastern Siberia and China in the east. In spite of its alleged prehistorical origins in present-day Eastern Mongolia, the Bulgharic branch is historically attested only far to the west, i.e. in Eastern Europe, and its only living representative, Chuvash, survives nowadays in the central-eastern part of European Russia. Therefore, the application of the diversity hot spot principle, using the contemporary location of the Turkic languages would be deceptive in this case, as it would point to the Volga region as the region with the highest linguistic diversity with regard to the primary subgroups. Nevertheless, internal diversity within Common Turkic, the other primary subgrouping, suggests a homeland that is situated more to

the east, because diversity increases as we move towards the northeastern part of Central Asian region (Janhunen 2010: 287, 295).

Moreover, contact linguistics supports an East Asian origin of the Turkic family. Contact situations involving the earliest stages of Turkic including, *inter alia*, steady relations with Old Chinese, resulted in several dozen terms borrowed into Proto-Turkic and primarily related to the domains of war, metal production and written culture (Dybo 2007: 66–115). Linguists have suggested probable interactions with Iranian, most likely East Iranian-speaking pastoralists (Dybo 2007: 115–124), plausible—albeit ambiguous in terms of direction of impact—contact with Tocharian (Reinhart 1990; Lubotsky and Starostin 2003), possible relations with the languages of Siberia, such as Proto-Yeniseian (Stachowski 1996, 1997) and Proto-Samoyedic, and contact with Proto-Mongolic (Helimski 2000) and Proto-Macro-Mongolic (Schönig 2003).

In case of the earliest Turkic lexical influence on Proto-Samoyedic or Proto-Mongolic, there is discussion on whether it is Proto-Turkic or, rather, Proto-Bulgharic that was the donor language. This debate stems primarily from different views on Proto-Turkic phonological reconstruction, including the nature of “rhotacism” and “lambdacism” in the Bulgharic branch (see Róna-Tas 1998; Dybo 2007; Janhunen 2010; Savelyev 2017 for different interpretations).

As indicated in Figure 43.2, we assume that the Proto-Turkic homeland in the period immediately preceding the family’s split covered a territory stretching from the Sayan-Altai Mountain region (South Siberia) in the west to present-day Inner Mongolia and Shanxi in the east. It is likely that the speakers of Proto-Turkic were neighbored by the Proto-Macro-Mongolic speakers in the east, the Chinese speakers

in the southwest, the Indo-European (Tocharian) speakers in the west, and the Uralic (Proto-Samoyedic) speakers in the northwest. Such a localization of the immediate Proto-Turkic homeland seems to be plausible in view of the association of late Proto-Turkic speakers with nomadic expansions.

Moreover, this location can be verified by the cultural reconstruction of Proto-Turkic. Fragments of Proto-Turkic vocabulary related to landscape, flora and fauna include lexemes pointing both to the mountain environment of southern taiga zone and steppe landscapes (for an attempt of localization of the Proto-Turkic homeland based on “linguistic palaeontology” and palaeobotanical evidence, see Tenišev et al. 2001, 2006).

It is very likely that in an earlier period, prior to the spread of nomadic pastoralism to Northeast Asia in the first millenium BC (Robbeets 2017: 34–36), the Proto-Turkic speakers populated a much more compact area. Based on linguistic evidence such as the amount of similarities between Proto-Turkic and Proto-Macro-Mongolic and between Proto-Macro-Mongolic and Proto-Tungusic, Janhunen (2010) placed the ultimate Proto-Macro-Turkic homeland in Eastern Inner Mongolia, to the west of the Proto-Macro-Mongolic homeland in southwestern Manchuria; see Figure 43.2. It can be noted that this is the area where millet agriculture was practiced within the context of the Hongshan culture until 2200 BC, when the desertification of the Hunshandake Sandy Lands abruptly made an end to the farming activities (Yang et al. 2015).

Figure 43.2 The speech communities of Proto-Macro-Turkic and Proto-Turkic (ca. 500 BC–500 AD) and their approximate homelands

43.2.2 Time depth

Dating of the emergence of the Proto-Turkic language is rarely discussed in the literature. On the basis of general historical considerations, Golden (1998) and Róna-Tas (1998) pointed to the period around 3000 BC as a probable upper limit of Proto-Turkic. Interestingly, a similar figure was obtained by the recent Bayesian phylogenetic analysis of the Transeurasian languages: Robbeets (2017) dated the split of Proto-Turkic from the earlier Proto-Turko-Mongolic language approximately to 2800 BC. Based on evidence from contact linguistics, the earliest split between the two principal branches of Turkic, i.e. Bulgharic and Common Turkic, is usually dated to between the middle of the first millennium BC and the turn of the eras (Janhunen 2010). Turkic phylogenies relying on quantitative methods basically support the lower estimate. The following dates are obtained by lexicostatistic calculations: the 3rd century BC (Tenišev et al. 2001), around 120 BC (Mudrak 2009), the beginning of the 1st century AD (Dybo 2007). A preliminary Bayesian analysis of the Turkic family (Savelyev, this volume: Chapter 9) dates the split of Proto-Turkic into Common Turkic and Bulgharic branches approximately to 200 BC, with a highest posterior density interval between 2000 BC and 400 AD. As this time depth coincides with the beginning of the Xiongnu empire (209 BC–100 AD), the association of Xiongnu with Proto-Bulgharic does not seem unreasonable. However, given the relatively large credible interval involved in the Bayesian dating, the break-up of Proto-Turkic may also be connected with the first disintegration of the Xiongnu confederation under influence of the military successes of the Chinese in 127–119 BC (Mudrak 2009).

43.2.3 Agricultural vocabulary

The reconstructed vocabulary of Proto-Turkic reflects material culture typical of a nomadic pastoralist society. It includes terms for stationary dwellings used at winter and mobile dwellings at summer sites; terms pointing to well-developed handcraft, including pottery, tanning and felt production, and numerous terms related to warfare and metallurgy (the latter with probable Old Chinese etymological connections).

Proto-Turkic has an extensive pastoralist vocabulary, with at least several dozen names for domestic animals and pastoralist products. The sophisticated system of names for domestic animals includes various terms for horses, cattle, pigs, goats and sheep, distinguishing age and sex (e.g. PTK **at* '(riding) horse', **adgır* 'stallion', **kulum* 'foal', **beye* 'mare', etc.). At least some of the Proto-Turkic pastoralist terms are borrowed, cf. loanwords of probable East Iranian origin: PTK **dɑːna* 'heifer' << Elr **dainu-ka*: 'cow', PTK **dora-k* 'a kind of cheese' << Mlr **tura-ka* 'curdled milk, cheese'. Many of the native pastoralist terms in Proto-Turkic seem to be internally coined based on non-pastoralist roots, e.g. PTK **oglak* 'kid' < **ogul* 'son, child'. In general, a large part of the Proto-Turkic pastoralist vocabulary is likely to be of secondary origin, which would be consistent with archaeological evidence on late introduction of pastoralism in Northeast Asia: horse-ridden herders appear only between 1200 and 700 BC on the eastern steppes (Taylor et al. 2017; Janz et al. 2017).

The Proto-Turkic agricultural vocabulary is much smaller than the pastoralist one but still significant. As shown in Table 43.1, words for millets can be derived from agricultural verbs, e.g. (2) PTK **tari-* 'to cultivate (the ground)' → CTK **tari-g*

‘broomcorn millet (*Panicum miliaceum*)’; (3) PTk **ko:n-* ‘to be planted’ → CTK

**konak* ‘foxtail millet (*Setaria italica*)’ and (4) PTk **tög-* ‘to husk, thresh (cereals)’

→ CTK **tögi* ‘husked millet; husked rice’. This is also the case for words for

agricultural facilities and instruments, e.g. (1) PTk **ek-* ‘to sprinkle with the hand; to

sow’ → PTk **ek-eg* ‘plough’. This observation indicates that the reconstructions for

millet do not refer to the wild variety of the plant. It thus follows that the speakers of

the ancestral language were familiar with millet cultivation. In contrast with the

derivation of pastoralist vocabulary from non-pastoralist terms, the underlying roots

are inherently agricultural verbs. This may indicate that Proto-Turkic speakers were

familiar with millet agriculture in an early stage, before the bulk of pastoral

vocabulary was introduced.

Words for cereals such as barley and wheat that are known to have been imported

over an eastward trajectory starting from the Fertile Crescent and entering Central

Asia after 2000 BC can be unmasked as borrowings because there are plausible donor

words in the surrounding languages families, e.g., (6) PTk **arba* ‘barley’ of possible

East Iranian origin (Robbeets 2017d).

The reconstruction of agricultural vocabulary to Proto-Turkic is compatible with

the affiliation of its speakers with Xiongnu. Old Chinese chronicles portray the

Xiongnu as nomadic pastoralists that bred different kinds of domestic ungulates. At

the same time, there is archaeological evidence for Xiongnu agriculture including

agricultural tools, millet grains, and some isotopic evidence for millet consumption

(Machicek 2011; Spengler et al. 2016).

Table 43.1 Agricultural vocabulary in Common Turkic and Proto-Turkic

<p>(1) Proto-Turkic</p> <p><i>*ek-</i> ‘to sprinkle with the hand; sow’</p> <p>→ <i>*ek-eg</i> ‘plough’</p>	<p>Chu. <i>ak-</i> ‘to sow, sow (a field), to throw about (money), do unnecessary efforts’, <i>aka</i> ‘plowed field ready for sowing; ancient wooden plough with two wheels’; Proto-Bulgharic</p> <p><i>*ek-</i> ‘to sow’ → <i>*ek-eg</i> ‘plough’ >> Hungarian <i>eke</i> ‘plough’ (Róna-Tas and Berta 2011: 313–317); OTk <i>ek-</i> ‘to spread (e.g. powder), to sow’, <i>ekim</i> ‘amount of land that can be sown at one time’, <i>äkin</i> ‘sown land’; MTk. (Chagatay) <i>ek-</i> ‘to sprinkle (e.g. with salt, sugar), to sow (a field), to cultivate (land)’; Khalaj <i>hāk-</i> ‘to sow, plant’, <i>hāküm</i> ‘sowing, agriculture’; Tk. <i>ek-</i> ‘to sprinkle (salt), scatter; to drop; to sow, to cultivate (land)’; Gag. <i>ek-</i> ‘to sow’; Az. <i>ek-</i> ‘to sprinkle (salt), scatter; to drop; to leave behind; to throw about (money); to sow, plant; to plow; to give birth (to a male baby)’; Tkm. <i>ek-</i> ‘to sow, plant’; Tat. <i>ik-</i> ‘to sow, plant, cultivate ground’; Kirg. <i>ek-</i> ‘to sow, plant, cultivate ground; to till; to inoculate, vaccinate’; Nog. <i>ek-</i> ‘to dissolve; to sow, plant’; KKalp. <i>ek-</i> ‘to sow, plant’; Kaz. ‘to sow, plant; to engraft’; Bash. <i>ik-</i> ‘to sow’; Salar <i>eχ-</i>, <i>iχ-</i> ‘to sow, cultivate ground; to plow’</p>
<p>(2) Proto-Turkic</p>	<p>Chu. <i>tirǎ</i> ‘cereals (growing in the field); cereal grains (for</p>

<p><i>*tari-</i> ‘to cultivate (the ground)’</p> <p>→ <i>*tari-g</i> ‘what is cultivated; crops, main crop, cultivated land’</p>	<p>sowing); main crop; land cultivation’; Proto-Bulgharic <i>*tari</i> ~ <i>dari</i> ‘cereals’ >> Hungarian <i>dara</i> ‘grist, groats, soft hail’ (Róna-Tas and Berta 2011: 287–291); OTk <i>tari-</i> ‘to disperse, to cultivate (a field), <i>tariḡ</i> ‘seed; cereal crops (generic); millet; cultivated field’, <i>tarik</i> ‘field’; MTk. (Chagatay) <i>tar-</i>, <i>tari-</i> ‘to scatter seeds, to sow’, <i>tariḡ</i> ‘millet’, <i>tarik</i> ‘cultivated field’; Tk. <i>dari</i> ‘broomcorn millet (<i>Panicum miliaceum</i>); maize’; Gag. <i>dari</i> ‘(broomcorn) millet’; Az. <i>dari</i> ‘(broomcorn) millet; millet groat’; Tkm. <i>dari</i> ‘(broomcorn) millet’; Kirg. <i>tari-</i> ‘to sow, cultivate ground, plow’, <i>taru:</i> ‘millet’; Kaz. <i>tari</i> ‘broomcorn millet (<i>Panicum miliaceum</i>); a dish prepared from millet (fried millet)’; Karaim <i>tari</i>, <i>dari</i>; KBalk. <i>tari</i>; Tat. <i>tari</i> ‘(broomcorn) millet’; Bash. <i>tari-</i> ‘to sow’, <i>tari</i> ‘(broomcorn) millet’; Nog. <i>Tari</i> ‘millet’, <i>tari-law</i> ‘wild millet (growing on arable land)’; KKalp. <i>tari</i> ‘millet’; Kumyk <i>tari</i> ‘millet’; Alt. <i>tari-</i> ‘to sow, to cultivate’, <i>taru</i>, <i>taru:</i> ‘millet’; Uzb. <i>tarik</i> ‘millet’; Uig. <i>dar-</i>, <i>tar-</i> ‘to sow’, <i>tari-</i>, <i>taru-</i> ‘to cultivate ground’, <i>tariḡ</i>, <i>darix</i>, <i>tarix</i> ‘millet’; S-Yug. <i>tari-</i> ‘to sow’; Khak. <i>tari-</i> ‘to sow’, <i>tariḡ</i> ‘sowing’; Tuv. <i>tari-</i> ‘to plow, cultivate ground, sow, plant’; Tofa. <i>tari-</i> ‘to sow, plant’, <i>tariḡ</i> ‘cereals sown by a person, harvest’</p>
<p>(3) Proto-Turkic</p>	<p>OTk/ Karakhanid <i>kon-</i> ‘to settle (of animals), to take up</p>

<p>*<i>ko-</i> ‘to put’</p> <p>→ *<i>ko:n-</i> ‘to settle down (of animals), to take up residence (of people), to be planted (of plants)’</p>	<p>residence (of people); MTK. (Chag.) <i>kon-</i> ‘to settle down (of people)’, Khalaj <i>kon-dar-</i> ‘to settle (tr.)’ (-dar CAUS), Tk. <i>kon-</i> ‘to stop for the night, to take up residence; to settle’; Gag. <i>kon-</i> ‘to settle (of dust); to settle down’, Az. <i>gon-</i> ‘to settle down (of a bird, an insect); to settle (of dust)’; Tkm. <i>gon-</i> ‘to settle on sth (of a bird), land (of a plane); to stop for a rest; to settle (of people), take up residence, stay somewhere’; Salar <i>kon-</i> ‘to settle down (of a bird)’; Karaim/ KBalk. / Kumyk/ Nog./ KKalp./Kaz./Kirg. <i>kon-</i>; Tat. <i>kun-</i> ‘to settle (of birds, people, dust etc.)’; Uz./Uig. <i>kon-</i> ‘to settle down, descend, land (of a bird, a plane); to stay somewhere, take up residence; to spend the night’; Alt. <i>kon-</i>; Khak. <i>χon-</i>; Tuv. <i>χon-</i>; Tof. <i>kon-</i> ‘to descend (of sun/moon); to settle on sth (of a bird); to stay somewhere, take up residence; to spend the night’, Shor <i>kon-</i>, SYugh. <i>kon-</i>, <i>χon-</i> ‘to spend the night’; Yak. <i>χon-</i>; Dolg. <i>kon-</i> ‘to spend the night; to linger (of snow)’</p>
<p>→ *<i>konak</i> ‘foxtail millet (<i>Setaria italica</i>)’</p>	<p>OTk <i>konak</i>; Karakhanid <i>konak</i>; MTK. <i>konak</i>, <i>konag</i> ‘millet’; Nog. <i>konak-ay</i> ‘foxtail millet (<i>Setaria italica</i>)’; KKalp. <i>konak</i> ‘a particular kind of millet’; Kaz. <i>konak-ot</i> ‘bluegrass (<i>Poa</i> species)’ (<i>ot</i> ‘grass’); Kirg. <i>konok</i> ‘foxtail millet (<i>Setaria italica</i>)’, <i>it konok</i> ‘foxtail millet soup (dial.)’; a kind of weed of the <i>Setaria</i> species’ (<i>it</i> ‘dog’), dial. (<i>kömbö</i>) <i>konok</i> ‘maize’, <i>ak</i></p>

	<p><i>konok</i>, dial. <i>belbol konok</i> ‘sorghum’ (<i>ak</i> ‘white’), <i>kītay konok</i> ‘a kind of sorghum (gaoliang)’ (<i>kītay</i> ‘Chinese’); Uzb. <i>kānok</i> ‘millet’; Uig. <i>konak</i> ‘broomcorn millet (<i>Panicum miliaceum</i>), sorghum, maize’; Tuv. <i>xonak</i> ‘a kind of weed of the <i>Setaria</i> species’</p>
<p>(4) Proto-Turkic</p> <p><i>*tög-</i> ‘to hit, beat; to pound, crush (food in a mortar); to husk, thresh (cereals)’</p>	<p>Chu. <i>tü-</i> ‘to pound, crush (e.g. grain); to comb (e.g. flax, hemp); to shred (cabbage); to crumble (tr.); to hit, beat (sb)’; Karakhanid <i>tög-</i> ‘to pound, crush, grind’; Tk. <i>döv-</i> ‘to bit, heat (sb); to pound, crush (e.g. pepper, coffee, salt); to whist (eggs); to stamp’; Gag. <i>düg-</i> ‘to hit, beat sb; to win; to whisk (eggs); to knock, knock down (nuts); to pound; to husk; to thresh’; Az. <i>döy-</i> ‘to beat sb; to pound, crush (e.g. pepper, sugar, garlic); to grind; to forge; to stamp; to knock; to thresh (grain); to vaccinate’; Tkm. <i>döv-</i> ‘to break; to hack; to thresh; to hit, beat’; Salar <i>tüy-, töy-</i> ‘to hit, beat’; Tat. <i>töy-</i> ‘to pound, crush (in a mortar); to tramp down (soil); to hit, beat’; Bash. <i>töy</i> ‘to pound (in a mortar, e.g. pepper, salt); to bray seeds in a mortar; to tramp down (soil); to hit, strike; to eat greedily’; Kaz. <i>tüy-</i> ‘to crush, pound (e.g. millet); to hit’; Nog. <i>tüy-</i> ‘to pound, crush (in a mortar); to husk (e.g. millet, barley, oats); to hit, beat, punch’; KKalp. <i>tüy-</i> ‘to pound; to crush; to tighten, squeeze; to push; to punch’; Karaim <i>tüy-</i> ‘to crush, grind, pound’; KBalk. <i>tüy-</i> ‘to hit, beat sb; to forge; to thresh (grain);</p>

→ * <i>tögi</i> ‘husked millet; husked rice’	to pound (e.g. garlic)’; Kumyk <i>tüy-</i> ‘to hack (e.g. meat); to hit, beat (sb)’; Uigh. <i>tüy-</i> ; Uzb. <i>tuy-</i> ‘to crush, pound’ OTk <i>tögö, tügi</i> ‘husked (broomcorn or foxtail) millet; hulled rice’; Middle Kypchak <i>tüwi, tügü</i> ‘crushed millet, husked millet; millet flour; maize’; Tk. <i>dügü</i> ‘millet groat; (dial.) husked rice’; Az. <i>düyü</i> ‘rice’; Kaz. <i>tüy-tari</i> ‘millet groat’ (<i>tari</i> ‘millet’); Nog. <i>tüy</i> ; KBalk. <i>tüy</i> ‘millet groat’; Kumyk <i>tüy-ül-gen tari</i> ‘millet groat’ (<i>tüyül-</i> ‘to be hacked, hit’, <i>tari</i> ‘millet’)
(5) Proto-Turkic * <i>ügür</i> ‘(broomcorn) millet’	Chu. <i>vir</i> ‘(broomcorn) millet’; Otk <i>üyür</i> ‘millet, some kind of small seed’; Karakhanid <i>ügür, yügür, üyür</i> ‘millet, some kind of small seed’; Tuv. <i>ü:rgene</i> ‘a kind of buckwheat’; MChul. <i>ü:re</i> ‘(groat) soup’
(6) Proto-Turkic * <i>arpa</i> ‘barley (<i>Hordeum vulgare</i>)’ << ? Proto-Iranian * <i>arbusā</i> ‘barley’	Chu. <i>urba</i> ‘barley (<i>Hordeum vulgare</i>)’; stye (on the eye)’; Proto-Bulgharic * <i>arpa</i> ‘barley (<i>Hordeum vulgare</i>)’ >>> Hungarian <i>árpa</i> ‘barley (Róna-Tas and Berta 2011: 77–79); Otk <i>arpa</i> ; Karakhanid <i>arpa</i> ; MTk. (Chagatay) <i>arpa</i> ‘barley (<i>Hordeum vulgare</i>)’; Khalaj <i>arpa</i> ‘ ‘barley (<i>Hordeum vulgare</i> / <i>distinctum</i>)’; Tk. <i>arpa</i> ; Gag. <i>arpa</i> ‘barley (<i>Hordeum vulgare</i>)’; Az. <i>arpa</i> ‘barley (<i>Hordeum vulgare</i>)’; women’s jewelry resembling barley’; Tkm. <i>arpa</i> ; Karaim <i>arpa</i> ; Crimean Tatar

	<p><i>arpa</i>; KBalk. <i>arpa</i>; Kumyk <i>arpa</i> ‘barley (<i>Hordeum vulgare</i>)’; Tat. <i>arpa</i>; Bash. <i>arpa</i> ‘barley (<i>Hordeum vulgare</i>); sty (on the eye)’; Nog. <i>arpa</i>; KKalp. <i>arpa</i>; Kaz. <i>arpa</i>; Kirg. <i>arpa</i>; Alt. <i>arba</i>; MChul. <i>arβa</i> ‘barley (<i>Hordeum vulgare</i>)’; Khak. <i>arba</i> ‘barley (<i>Hordeum vulgare</i>); roasted barley’; Uzb. <i>arpa</i>; Uigh. <i>arpa</i> ‘barley (<i>Hordeum vulgare</i>)’</p>
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43.3 The Mongolic homeland

43.3.1 Location

The Mongolic language family, as we know it today from the synchronically attested Mongolic languages, represents the result of the diversification of Proto-Mongolic, which was the language spoken by the historical Mongols around the time of the Mongol Empire (1206–1368). The source region of Mongolic can be reliably located on the basis of historical information, and, not surprisingly, it was the very region at the junction of northeastern Mongolia and northwestern Manchuria from where the historical Mongols rose, that is, the region roughly defined by the basins of the rivers Onon and Argun and their tributaries. From this region, the Mongols, under Chinggis Khan, started their political expansion in all directions, but especially towards the west, that is, Mongolia and, later, Jungaria. In the course of this expansion, the historical Mongols not only absorbed the earlier, mainly Turkic speaking population of these regions, but also extinguished whatever regional variation there may have been within Proto-Mongolic itself. As a result, the *koine* of the historical Mongols

emerged as a relatively uniform language, which only later diversified again into the modern Mongolic languages (Janhunen 2008).

Synchronically, the Mongolic family is centered around a large conglomeration of closely related and areally transitional languages and dialects collectively termed Common Mongolic, extending from the Caspian region (Kalmuck) in the west through Jungaria (Oirat) and Outer Mongolia (Khalkha) to the Khingan region in the east (the Inner Mongolian dialects), and from the Baikal region (Buryat) in the north to the Yellow River (Ordos) in the south. This central conglomeration is surrounded by three more distantly related satellites, which represent the earliest branches of the family and are located in the Amur basin (Dagur), the Kuku Nor region (Shirongolic), and Afghanistan (Moghol), respectively. Historical information suggests that these branches represent remnants from the time of the Mongol Empire, though the expansion to the Amur region may also have been connected with the Jin Empire of the Jurchen (1115–1234).

This general picture has been placed in a larger context by the more recently revealed fact that there were historical languages related to Mongolic spoken also in southwestern Manchuria, and perhaps even further south. The most unambiguous evidence comes from Khitan, the dynastic language of the Liao Empire (907–1125), but there are indications that Khitan was only one of several members of a group of related languages that may be collectively termed Khitanic. The Khitan lineage may be extended backwards to several historical and protohistorical ethnopolitical formations in the region, including Tabghach (Tuoba) of the Northern Wei (386–534), the Xianbei or “Serbi” (208 BC–235 AD), the Donghu (the first millennium BC), and obviously also the “Chinese” state of Yan (until 222 BC) (Janhunen 1996a: 182–193).

The historical Khitan were geographically centered in the basin of the river Shira Muren and its tributaries, but as an ethnic group they seem to have covered the entire region of Liaoxi, that is, the territory located to the west of the river Liao in southwestern Manchuria. From this region they extended their political power both to the east (Liaodong and northern Korea), north (central Manchuria), west (eastern Mongolia) and south (northern China). Some of their regional predecessors, notably the Tabghach, had extended their influence even further south and southwest, including the Shandong Peninsula and the Yellow River basin.

Recent progress in the analysis of the extant materials on Khitan and the other Khitanic languages has shown that these languages, though related to the lineage represented by Proto-Mongolic and its descendants, are only relatively distant relatives of the latter. They cannot, therefore, be classified as Mongolic languages in the proper sense, but are better covered by the term Para-Mongolic, implying that they represented an extinct branch, or perhaps several branches, parallel to the Proto-Mongolic lineage. Although we do not know in detail what the mutual relations of the Para-Mongolic languages were, we may for the time being assume that they ultimately derived from a single common ancestor, which may also be termed Proto-Khitanic. Thus, Proto-Mongolic and Proto-Khitanic were sister lineages (Janhunen 2014a: 107–132).

It remains a matter of terminological choice how we should call the language family comprising the Mongolic and Khitanic (or Para-Mongolic) branches. Possible alternatives include Mongol(o)-Khitanic and Khitan(o)-Mongolic (Robbeets 2015), though “Serbi-Mongolic” has also been proposed (Shimunek 2017). We will, however, prefer the term Macro-Mongolic, which may be conveniently contrasted

with Micro-Mongolic or Mongolic proper. The common ancestor of Mongolic and Khitanic should then, by definition, be called Proto-Macro-Mongolic.

Since Mongolic and Khitanic occupied historically separate regions, the former northwestern and the latter southwestern Manchuria, there must have been a linguistic expansion that took the early Macro-Mongolic language from the one region to the other, unless both entered their historical locations from some third source region. There are several reasons to assume that the expansion took place from south to north, that is, from southwestern to northwestern Manchuria, meaning that the Mongolic branch of Macro-Mongolic was a northern offshoot of the original Macro-Mongolic speech community. The borderline between the two branches was initially transitional, and intermediate groups may have existed to historical times, one example being the “original” Tatar in the border zone between the Khitan and the historical Mongols.

The principal argument supporting the assumption that the linguistic expansion of Macro-Mongolic took place from south to north is that this was the general direction of ethnic and linguistic expansions all over northeastern Asia. A close parallel to the Macro-Mongolic expansion is offered by the Tungusic expansion, which started from southeastern Manchuria and northern Korea and initially divided the Proto-Tungusic speech community into a southern and a northern branch.¹ It is very possible that the expansion of Proto-Macro-Mongolic and Proto-Tungusic took place in tandem and was triggered by similar historical factors, among which the growing power of China may have been one.

The demise of Khitan and the other Khitanic languages was conditioned by the double pressure, to which the Khitan were exposed from the side of the Chinese (in

the south) and the Jurchen (in the east). A considerable part of Khitan speakers may have been absorbed into the northward-expanding Chinese speech community, while the political power of the Khitan ended with the conquest of the Liao Empire by the Tungusic Jurchen. At the time of the rise of the historical Mongols, the Khitan lived as subjects of the Jin Empire of the Jurchen (1115–1234) and had few possibilities, or even reasons, to resist the Mongol conquest, which ultimately led to the annexation of the whole of continental East Asia to the Mongol Empire.

As indicated in Figure 43.3, it may be concluded that the ultimate homeland of the Mongolic languages was located in southwestern Manchuria, where the language was maintained for more than a millennium in the context of a succession of ethnopolitical formations ending with the Liao Empire of the Khitan. This was the location where the Khitanic branch of Macro-Mongolic underwent internal differentiation, and from where the immediate ancestor of the Mongolic branch moved towards its historical location in northwestern Manchuria. Any attempts at expansion towards the south were stopped by the pressure of Chinese, but in the contact zone Macro-Mongolic must have made a significant contribution to the “Altaicization” of Mandarin (Hashimoto 1986: 76–97).

Figure 43.3 The speech communities of Proto-Macro-Mongolic (ca. 208 BC–235 AD) and Proto-Mongolic (ca. 1000–1300 AD) and their approximate homelands

43.3.2 Time depth

Proto-Mongolic is nearly equivalent with the language spoken by the historical Mongols around the time of the Mongol Empire, which is documented in historical sources, written in several different scripts and collectively termed Middle Mongol. Some of the written varieties of Middle Mongol contain features that reflect dialectal forms slightly different from, or even earlier than the stage of Proto-Mongolic. Even so, the depth of the Mongolic family, as measured on the basis of both written documents and living languages is no more than 700 to 1000 years (Rybatzki 2003a). This shallow date for the break-up of Proto-Mongolic is confirmed by a Bayesian estimate of xx AD (Nugteren, this volume: Chapter 7), although the Automated Similarity Judgement Program (ASJP) yields a date as early as 267 BC (Holman et al. 2011: 854).²

We do not know when exactly the Khitan language became extinct, but it must have survived at least for several generations after the fall of the Liao Empire. The language was still widely used locally during the Jin period, as is confirmed by extant documents from the time (Wu and Janhunen 2011: 25–30). It also survived for some time in Central Asia, where a diaspora community of Khitan, also known as the Kara (Qara) Khitai, maintained the successor state of Xi Liao (1124–1218), which, then, was also conquered by the Mongols (Biran 2005). In the Mongol Empire, some Khitan-speaking individuals are known to have occupied important roles. Finally, however, those Khitan speakers who had not gone over to Jurchen or Chinese, were assimilated by the Mongols. As a result, the core territory of the Khitan is today inhabited by speakers of several dialects of regular Mongolian, notably Baarin.

Although the information on Khitan and the other Khitanic languages is still very scarce, we may confidently date the breakup of Proto-Macro-Mongolic to a time level

preceding Proto-Mongolic by at least several centuries, most probably to the very period of the protohistorical Xianbei (“Serbi”), i.e. in the period between 208 BC and 235 AD.

We will, of course, never know how long the Macro-Mongolic lineage had been present in southwestern Manchuria before its breakup into the Khitanic and Mongolic branches. It can be speculated that the northward movement of the family had begun already earlier, perhaps from the Lower Yellow River basin, where, in any case, Chinese arrived only in the Zhou period (early 1st millennium BC). On the other hand, Mongolic may well have had a more local source in the context of the Hongshan culture, the principal Neolithic tradition of Manchuria (4500–2900 BC), which was centered in the core region of the historical Khitan and which certainly had a population potential to start a linguistic expansion (Guo 1995: 21–64).

Further insights into the prehistory of the Mongolic homeland can be achieved by comparisons with neighboring languages and their homelands. Mongolic—in the sense of Proto-Macro-Mongolic—was a member of an entire network of ancient languages, which also comprised the early forms of Turkic in the west, Tungusic in the east, Japonic and Koreanic in the southeast, and Chinese in the southwest. In addition, there must have been neighbors in the north, a good candidate being Amuric, a family, which also seems to have undergone a northward expansion and relocation from Central Manchuria to the Lower Amur and Sakhalin (Janhunen 2016: 3–27).

Linguistic criteria show that intensive contacts between Turkic and Mongolic started only after the breakup of Proto-Turkic into the Bulgharic and Common Turkic branches. The ethnic and political background for these contacts was created by the

interaction of the Xiongnu (Bulgharic) of Mongolia with the Donghu and Xianbei (Mongolic) of Manchuria, a situation that prevailed towards the end of the 1st millennium BC. It was mainly a question of lexical elements flowing from pre-Proto-Bulgharic to pre-Proto-Macro-Mongolic, though the presence of Bulgharic loans in Khitanic will still have to be verified in more detail. Later, of course, the Turkic and Mongolic languages have interacted in both directions and in many regional contexts.

By contrast, the contacts between Mongolic and Tungusic may have begun even earlier, as the two language families seem to have coexisted since ancient times in adjacent regions in southern Manchuria, separated only by the Liao basin. Apart from a large number of lexical elements transmitted mainly from Mongolic to Tungusic there is a small residual corpus of items and features, which may imply a deeper connection (Janhunen 1996b: 209–218). This corpus has been tentatively called “Khinganic”, and although it does not prove a genetic connection between the two families, it shows that the coexistence of Mongolic and Tungusic in southern Manchuria has very ancient roots, perhaps dating back as far as the Hongshan culture.

43.3.3 Agriculture

It is important to understand that the Khitan were not nomads of the type represented by the historical Mongols. Rather, the Khitan, like the neighbouring Jurchen—later Manchu, were a semi-settled and, at most, semi-nomadic population engaged in a complex economy comprising small-scale agriculture and cattle breeding with hunting and fishing. Such a way of living had allowed the Macro-Mongolic-speaking population to grow to a size numerically much superior to those occupying the more northerly zones of Manchuria. Population growth as well as increasing political

power, were also the likely reasons why the language spread northwards, ultimately yielding the separate northern lineage leading to Proto-Mongolic.

The later fates of the Mongolic and Khitanic branches were determined by a number of historical circumstances. The Mongols, although originally a minor outlying group, managed to grow as a speech community mainly because they successfully entered the steppe and adopted full-scale pastoral nomadism, which substantially increased their mobility, stimulated their population growth, and allowed them to start absorbing and linguistically assimilating the previous populations of Mongolia and adjacent regions. By the time of the founding of the Mongol Empire, the Mongolic speech community had reached the size of almost one million people (Munkuev 1970: 352–381), roughly equal to the contemporary Khitan ethnic group (Whittfogel and Fêng 1947: 56–57).

Given the fragmentary nature of the Khitan linguistic material, only a single word with a possible connection to plant cultivation is conserved, notably the frequently attested Khitan graphic word *p.úr:s*, which, judging by the context, may have meant ‘descendants’. It is the Khitan cognate of PMo **püre* ‘seed, grain > descendant’, plural **püre-s* (Wu and Janhunen 2011: 170–171 et passim). It is thus likely that the term for ‘seed, grain’ can be reconstructed to Proto-Macro-Mongolic. Table 43.2 lists some agricultural vocabulary that can be reconstructed to Proto-Mongolic.

Table 43.2 Agricultural vocabulary in Proto-Macro-Mongolic and Proto-Mongolic

(1) Proto-Mongolic <i>*amun</i> ‘cereals;	MMo. <i>amu(n)</i> ‘millet’; WMo. <i>amu(n)</i> ‘grain, cereals’, <i>amusun</i> ‘cooked cereal, porridge; food offering made to
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<p>broomcorn millet (<i>Panicum miliaceum</i>)' (Nugteren 2007: 268)</p>	<p>spirits'; Khalkha <i>amuu</i> 'millet; millet groat; groat; cereal; grain', <i>lianguu amuu</i> 'white millet', <i>mongol amuu</i> 'Monghol millet', <i>tutarga amuu</i> 'rice, rice groat', <i>xonog amuu</i> 'fine millet'; Ordos <i>a(:)mu</i> 'broomcorn millet (<i>Panicum miliaceum</i>)'; Dag. <i>am</i> 'grain, cereal; (in compounds only), <i>am budaa</i> 'grain, groat, food'; EYu. <i>amən</i> 'grain, cereal'; Mgr. <i>a(:)mu</i>; Bao. <i>amuŋ</i>; Kgj. <i>amu</i> 'millet'; Dgx. <i>aməŋ</i> 'rice gruel'</p>
<p>(2) Proto-Mongolic <i>*konag</i> 'foxtail millet' << PTK <i>*konak</i> 'foxtail millet (<i>Setaria italica</i>)'</p>	<p>MMo. <i>qonoq, qonaq</i> 'millet'; WMo. <i>qonoŋ</i> 'millet', <i>qonuy amuu</i> 'millet', <i>zerlig qonuy</i> 'wild millet'; Khalkha <i>xonog</i> 'millet' in compounds only: <i>xonog budaa</i> 'foxtail millet', <i>xonog amuu</i> 'fine millet', <i>eerleg xonog</i> 'wild millet', <i>lianguu amuu</i> 'white millet', <i>ulaan xonog</i> 'red millet, broomcorn millet (<i>Panicum miliaceum</i>)', <i>usan xonog</i> 'a kind of weed (<i>Panicum</i> species); Ordos <i>χonok</i> 'foxtail millet (<i>Setaria italica</i>)'; Kalm. <i>χonōg</i>; Kgj. <i>gūnəg</i>; Dgx. <i>gonau, gono</i> 'millet'</p>
<p>(3) Proto-Mongolic <i>*budaga</i> 'cooked cereals; porridge; meal'</p>	<p>MMo. <i>buda'an, buda:n</i> 'grain, groats; porridge; meal'; WMo. <i>budaya(n)</i> 'grain; cereals; millet; porridge; gruel; groats; dinner, meal'; Khalaj <i>budaa</i> 'groat; meal, dinner; porridge; food'; Ordos <i>buda:</i> 'cooked millet; husked millet; cooked rice; food; meal'; Bur. <i>buda:</i> 'groat', <i>ulaan budaa</i> 'millet' (<i>ulaan</i> 'red'), <i>šara budaa</i> 'millet groat' (<i>šara</i></p>

	<p>‘black’); Kalm. <i>budan</i> ‘flour soup’; Dag. <i>buda:</i>, <i>bada:</i> ‘meal; rice’; EYu. <i>bada:n</i>, <i>buda:n</i> ‘grain, groats; porridge; meal’; Mgr. <i>buda:</i> ‘thick porridge, meal’; Bao. <i>badan</i>; Kangjia <i>budo</i>; Dgx. <i>budan</i> ‘grain, groats; porridge; meal’</p>
<p>(4) Proto-Mongolic *<i>tari</i>- ‘to sow, plant’ (Nugteren 2011: 512–513)</p>	<p>MMo. <i>tari</i>- ‘to sow, plant’; WMo. <i>tari</i>- ‘to sow, plant; to plough; to inoculate against infection, vaccinate’; Khalaj <i>tari</i>- ‘to sow; to plant; to infect; to perform a deed; to inject; to vaccinate’; Ordos <i>tari</i>- ‘to sow; to plant; to plow; to inoculate (smallpox)’; Bur. <i>tari</i>-; Kalm. <i>tär</i>-; Eastern Yughur <i>tarə</i>- ‘to sow, plant’; Mgr. <i>tarə</i> ~ <i>tari</i>- ‘to sow; to cultivate land’; Bao. <i>tarə</i> ~ <i>tar</i>-; Kgj. <i>tari</i>-; Dgx. <i>tari</i>- ‘to sow, plant’</p>
<p>(5) Proto-Macro-Mongolic *<i>püre</i> ‘seed; descendants’</p>	<p>MMo. <i>hüre(n)</i> ‘seed; pip; fruit’; WMo. <i>üre</i> ‘seed, grain, fruit; result, product, offspring, posterity, descendant(s)’; Khalkha <i>ür</i> ‘fruit; seed; grain; child, descendant; result, outcome; consequence; reward, retribution; content(s)’; Ordos <i>ure</i> ‘descendant, offspring; retribution’; Bur. <i>üre</i> ‘fruit; seed; grain; result, outcome, product; child, baby’; Kalm. <i>ürn</i> ‘child, baby’; Dag. <i>xur</i> ‘seed, grain; male/female germ cells’; EYu. <i>hüre</i>, <i>hure</i> ‘seed; pip; fruit’; Mgr. <i>fure(·)</i>, <i>furie</i>: ‘seed, fruit; posterity, descendant’; Bao. <i>furə</i>, <i>fure</i>; Kgj. <i>fure</i> ~ <i>furi</i>; Dgx. <i>furə</i> ‘seed; pip; fruit’</p>

43.4 The Tungusic homeland

43.4.1 Location

Today the Tungusic languages are spread all over Siberia, from the Okhotsk Sea in the east to the Yenisei basin in the west, and from the Bohai Sea in the South to the Arctic Ocean in the North. In Chapter 6 of this volume, Whaley and Oskolskaya suggest that the Proto-Tungusic speech community first dissolved into a Manchuric and a Tungusic Proper branch, which in its turn divided into a Northern and a Southern Tungusic branch. Our co-author Janhunen (2012c: 6, 16) divides the Tungusic family into two principal branches, i.e. Northern Tungusic and Southern Tungusic. Northern Tungusic comprises Evenki-Even-Negidal and Udehe-Oroch-Kilen, while the Southern Tungusic branch comprises both Nanai-Ulcha-Orok-Kili and Jurchen-Manchu-Sibe. Either way, the greatest linguistic diversity with regard to the primary subgroups in the Tungusic family is found in the Amur, Sungari, and Ussuri basins, where Manchuric and southern Tungusic languages are found. Therefore, we locate the Tungusic homeland in this region, more precisely in the area around Lake Khanka, as indicated by the full red line in Figure 43.4. Our co-author Janhunen (2012c) considers this location as the immediate homeland and situates the ultimate homeland more to the South, on the border between Liaodong and Northern Korea, while our co-author Korovina (2011) supports a wider homeland including the Ussuri region as well as the lower part of the upper Amur region, between Khabarovsk and Komsomolsk-on-Amur. The latter area is indicated by the dotted red lines in Figure 43.4.



Figure 43.4 The speech communities of Proto-Macro-Tungusic (ca. 3200–1300 BC) and Proto-Tungusic (ca. 600 BC–200 AD) and their approximate homelands

The three different locations of the homelands may be easily reconciled if we consider them as chronologically subsequent stages, reflecting a general south to north direction of ethnic and linguistic expansions in the region: Macro-Tungusic, the ancestor of Proto-Tungusic and some extinct sister lineages may have been situated on the border with Northern Korea and around Vladivostok, while Proto-Tungusic, the ancestor of Manchuric and Tungusic Proper, moved to the area around lake Khanka and, leaving the Manchuric speakers behind, further northward towards the Middle Amur region. Whereas the Southern Tungusic speakers settled in the Sungari

basin, Northern Tungusic moved to the Middle Amur Zeya basin and—triggered by the expansion of the Mongols starting in the 11th century—expanded all over Siberia.

An argument for locating the homeland of Macro-Tungusic in the Southern Primorye and on the border with Northern Korea is the possibility that Macro-Mongolic and Macro-Tungusic derive from the same Neolithic context, notably the Hongshan culture (4500–2900 BC). It is inviting to associate the Macro-Tungusic speech community with the people of the Zaisanovskaya culture (3200–1300 BC) in the Southern Primorye and on the border with Northern Korea, who brought millet agriculture from its center in the West Liao River basin to the Russian Far East (Sergusheva and Vostretsov 2009; Kuzmin 2013).

The location of Proto-Tungusic in the area around lake Khanka is supported by the continuity of political formations in the region such as the Mohe (5th–10th AD) in the area around Lake Khanka, the Bohai state (698–925 AD) southwards from lake Khanka into present-day North Korea, the Jin Empire of the Jurchen (115–1234 AD) to the west of Lake Khanka in the Sungari/ Nonni/Middle Amur region and the Eastern Xia (1215–1233 AD) to the southeast of Lake Khanka. Since Neolithic times, the cultural edge in Manchuria was always in the south, not in the north. The location of the Proto-Tungusic homeland in the Southern Primorye is corroborated by the reconstruction of agricultural vocabulary in Section 43.4.3.

The reconstruction of a few words relating to the natural environment of the speakers of Proto-Tungusic has led some authors, including our co-author Korovina, to propose that the nucleus of the Proto-Tungusic homeland was situated to the north of the Primorye, in the upper part of the Lower Amur region north of Khabarovsk (Korovina 2011) or in the basin of the Zeya River in the Priamurye (Pevnov 2012).

Korovina refers to PTg **in'ŋamu-hta* 'cloudberry (*Rubus chamaemorus*)', **bolgi-hta* 'creeping pine (*Pinus pumila*)', **koldon* 'Korean pine (*Pinus koraiensis*)', **jagda* 'pine tree', **xailah-n* 'ash tree (*Fraxinus mandshurica*)', **kilden* 'linden (*Tilia amurensis*)' **xami-gda* 'poplar (*Populus maximowiczii*)' and **molon* 'maple (*Acer ukurunduense*)' as typical northern species. However, all these plants occur in the Primorye as well. Some plants such as 'Cloudberry (*Rubus chamaemorus*)' and 'Creeping pine (*Pinus pumila*)' are limited to the northern part of the Primorye, while all others are widely distributed across the Primorye (Sergusheva p.c.). Pevnov (2012: 26) argued that *jagda* 'pine tree' is particularly relevant for the location of the Proto-Tungusic homeland because "[t]he most significant continuous tracts of pine forest grow in the Amur Province, mainly in the basin of the Zeya River and the northwest thereof". However, Korean pine (*Pinus koraiensis*) is distributed widely in both Primorye and Priamurye. Among the plant names mentioned here, it is the only one for which we have archaeobotanical evidence. The nutshells of this pine were found in pit-dwelling deposits in the Primorye, namely in the Ol'ga-10 site (1400 BC) and the Chernyatino-5 site (Mohe culture, 700–800 AD) (Sergusheva p.c.; Sergusheva and Vostretsov 2009: 213). In sum, reconstructions of the natural environment do not contradict locating the homeland of Proto-Tungusic in the Primorye.

43.4.2 Time depth

Chronologically Proto-Tungusic is a relatively shallow entity. Applying Starostin's lexicostatistic methods, Korovina (2011) dated Proto-Tungusic to the sixth century BC, but other computational methods such as Bayesian inference and the Automated Similarity Judgment Program (ASJP) yield much younger dates, notably 668 AD

(Whaley and Oskolskaya, this volume: Chapter 6) and 681 AD (Holman et al. 2011: 854), respectively. Referring to the name change in Chinese dynastic chronicles of the Tungusic ethnonym “Yilou” to “Wuji”, Robbeets (2015: 16–18) situated the break-up of Proto-Tungusic at the end of the Han period (206 BC–220 AD). Pevnov (2012: 32) estimated that Proto-Tungusic could not be younger than two thousand years on the basis of a rough measure of mutual intelligibility. A chronological interval roughly between 500 BC and 500 AD was supported by Janhunen (2012c: 8), who placed the break-up of Proto-Tungusic in the Iron Age, in line with the diversification of other language families in the area.

An Iron Age dating of Proto-Tungusic is corroborated by contact linguistics and cultural reconstruction. The term for ‘barley and similar crops’, PTg **murgi*, for instance is probably borrowed from an Old Chinese donor word Old Chinese 來 **mǎ.rʰək* > **mǎ.rʰə* ‘a kind of wheat’ (Robbeets 2017d: 28–29). The linguistic reconstruction can be correlated to the archaeological evidence for barley being first imported through Chinese contact at the time of the Krounovskaya culture (600 BC–200 AD), situated in the Southern Primorye south of Lake Khanka (Sergusheva and Vostretsov 2009: 214–215). Further support for the association of Proto-Tungusic with this culture comes from the reconstruction of PTg **sele* ‘iron’, reflected in Evk. *sele*, Even *hel*, Neg. *sele*, Sol. *sele*, Sibe *selə*, Ma. *sele*, Jur. *sele*, Olcha *sele*, Orok *sele*, Na. *sele*, Oroch *sele* and Ud. *sele*.

The Krounovskaya culture marks the beginning of the Early Iron Age in the Russian Far East with the first uncontested finds of iron. Iron spread northwards, to the northern Primorye and the Priamurye during the ensuing period of the Pol’tse and

Ol'ga cultures (200 BC–500 AD). For the geographical distribution of these cultures, see Figure 43.5. In sum, the break-up of Proto-Tungusic can probably be dated to the period between 600 BC and 200 AD.

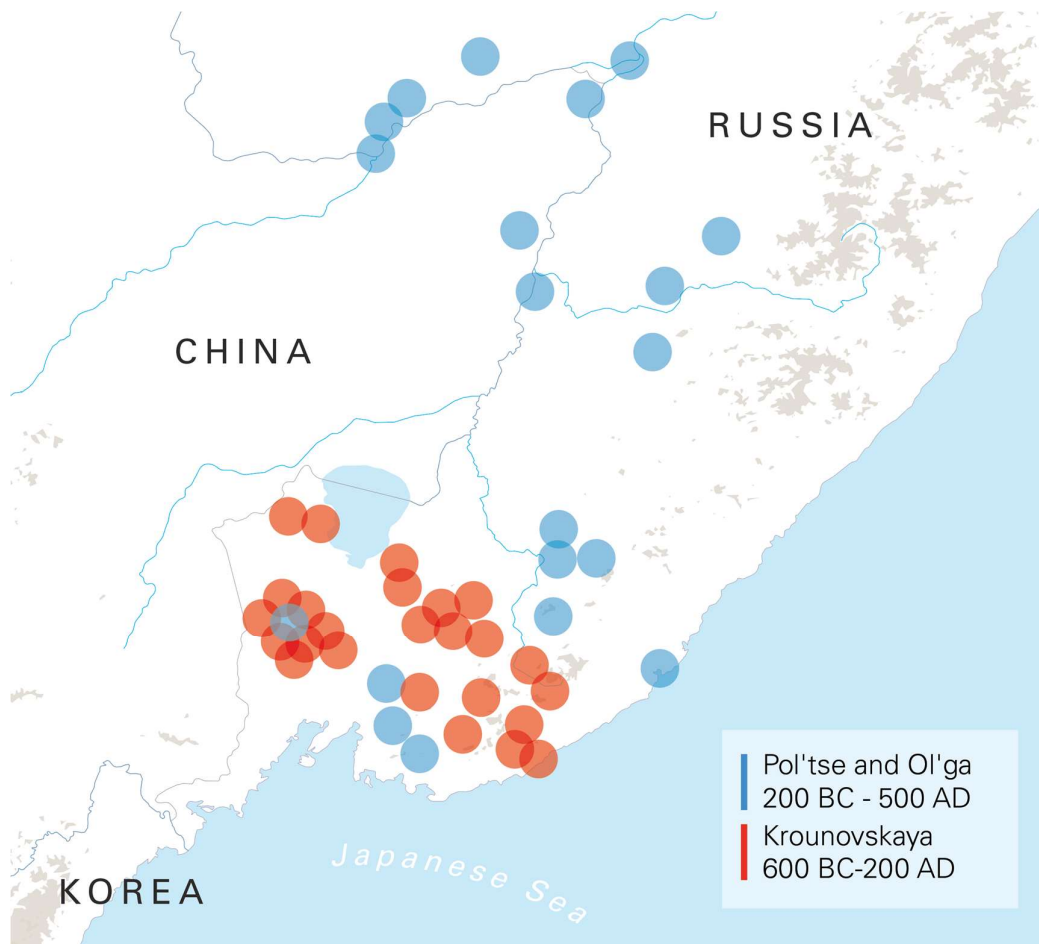


Figure 43.5 The location of early Iron Age cultures in the Primorye and Priamurye: Krounovskaya (600 BC–200 AD) marked with red dots, Pol'tse and Ol'ga cultures (200 BC–500 AD) marked with blue dots (adapted from Sergusheva 2017)

43.4.3 Agriculture

Table 43.3 lists a few reconstructions of agricultural vocabulary in Proto-Tungusic, including the word for ‘barley’ discussed above. In addition to the reconstruction of the verbs ‘to sow’ and ‘to plant’, there are a number of other reasons to assume that the speakers of Proto-Tungusic were familiar with agriculture.

First, for some crop names such as ‘barley’ and ‘broomcorn millet’, we can argue that the word refers to the domesticated crop rather than to the wild variety of the plant because both crops are not native to the region and have been imported as domesticated crops. Although the wild variant of foxtail millet is native to the Russian Far East, the wild variant of broomcorn millet is not. Nevertheless it was broomcorn millet that was found most abundantly in Neolithic sites. It is commonly assumed that broomcorn millet has been brought from the West Liao River region by the people who introduced the Zaisanovskaya culture to the Primorye (Sergusheva and Vostretsov 2009). Domesticated barley was introduced much later from China to the Russian Far East, at the time of the Krounovskaya culture.

Second, the derivation of the Proto-Tungusic word **üse ~ üsi* ‘seed, seedling’ as a deverbal noun from the verb **üse- ~ üsi-* ‘to plant’ further indicates that the speakers of Proto-Tungusic were familiar with agriculture because it suggests that seeds were not just collected for consumption but that they were planted as part of a cultivation process.

Third, the familiarity of the speakers of Proto-Tungusic with iron further indicates that they can be associated with agriculture because the iron-producing cultures in the region such as the Early Iron Age Krounovskaya culture, the Iron Age Poltse and Ol’ga cultures and the Early Middle Ages Mohe culture were all practicing

agriculture. An agricultural package combining barley, foxtail millet and broomcorn millet in addition to the consumption of Korean pine is in accordance with the subsistence strategies in the early Iron Age of the Primorye (Sergusheva and Vostretsov 2009: 214).

At the end of the third century AD, there was a sharp cooling of climate, which led to a worsening of the conditions for agriculture. This provided the impetus for a gradual migration of some Krounovskaya groups to coastal regions across most of the Primorye. Based on archaeobotanical data (Yanuševič et al. 1990), it appears that the coastal groups ceased to cultivate wheat and returned to a subsistence strategy of hunting and fishing. If this event can be associated with the break-up of Proto-Tungusic, it would explain why southern Tungusic populations settled on the Lower Amur such as the Nanai, Oroch and Udehe people were traditionally predominantly fishers and gatherers, rather than farmers.

Table 43.3 Agricultural vocabulary in Proto-Tungusic

(1) Proto-Tungusic <i>*pisi-ke</i> ‘broomcorn millet (<i>Panicum miliaceum</i>)’	Ma. <i>fisihe</i> ~ <i>fisike</i> ‘glutinous millet, broomcorn millet (<i>Panicum miliaceum</i>)’, <i>fisitun</i> ‘a ritual vessel for offering millet; bowl for grinding millet, carved out from a piece of wood’ (< <i>fisi</i> + <i>tetun</i> ‘utensil’); Olcha <i>pikse</i> ; Na. <i>pikse</i> ‘millet’; Kur-Urmi dialect <i>fisxe</i> ‘broomcorn millet (<i>Panicum miliaceum</i>)’; Jurchen <i>fise bele</i> ‘yellow rice; coarse rice’ (<i>bele</i> ‘hulled rice, edible grain’)
(2) Proto-Tungusic	Neg. <i>ja:kta</i> ‘foxtail millet (<i>Setaria italica</i>), small millet;’

<p>*<i>jiya</i>- ‘foxtail millet (<i>Setaria italica</i>)’</p>	<p>cleaned grain; oats flour’; Solon <i>jakta</i> ‘porridge, food’; Sibe <i>je, je: belə</i> ‘foxtail millet (<i>Setaria italica</i>)’ (<i>belə</i> ‘grain’); Ma. <i>je</i> ‘foxtail millet (<i>Setaria Italica</i>); grain in general’, <i>je bele</i> ‘foxtail millet’ (<i>bele</i> ‘hulled rice, edible grain’), <i>je falan</i> ‘threshing floor’; Jur. <i>je bele</i> ‘millet’; Na. <i>jiekte</i> ‘foxtail millet (<i>Setaria Italica</i>)’; Oroch <i>jiekte, jekte, jiekta</i> ‘millet’, <i>ma:nju jiekteni</i> ‘Chinese millet, foxtail millet (<i>Setaria Italica</i>)’, <i>jakta</i> ‘Chinese millet, grits’; Ud. <i>jakta</i> ‘foxtail millet (<i>Setaria Italica</i>), porridge’</p>
<p>(3) Proto-Tungusic *<i>murgi</i> ‘barley (<i>Hordeum vulgare</i>)’</p>	<p>Solon <i>murgil</i> ‘spring crops; spring-sown field; barley (<i>Hordeum vulgare</i>)’; Jurchen <i>miryei</i> ‘product of agriculture’; Ma. <i>muji</i> ‘barley (<i>Hordeum vulgare</i>)’; Olcha <i>muji</i>; Nanai <i>muji</i> ‘oats’; Ud. <i>muji, muju</i> ‘barley (<i>Hordeum vulgare</i>)’; Oroch <i>muji</i> ‘barley (<i>Hordeum vulgare</i>), Russian flour’</p>
<p>(4) Proto-Tungusic *<i>üse</i>- ~ <i>üsi</i>- ‘to plant’ → <i>üse</i> ~ <i>üsi</i> ‘seed, seedling’, <i>üsi-n</i> ‘field for cultivation’</p>	<p>Evk. <i>ihəw</i>- ‘to grow (of people)’; Even <i>isu:-</i> ~ <i>esu:-</i> ‘to sprout, come out (of plants), blossom, grow’, <i>isu:ce:</i> ‘young sowings, seedling, sprout’, <i>isuwken</i> ‘the planting’, <i>isuwken-</i> ‘to plant’, <i>isulmən</i> ‘sprouting’, <i>isumə</i> ‘sprout; teenager’, <i>isun</i> ‘growth’; Neg. <i>isew</i>- ‘to grow, become acclimatized (about plants); mature, grow up (about people)’; Sibe <i>use-</i> ‘to sow seeds’, <i>use</i> ‘seed, grain’, <i>usin</i> ‘field, farmland’; Ma. <i>use-</i> ‘to plant, seed (tr.)’, <i>use</i> ‘seed; insect egg’, <i>use tari-</i> ‘to sow seed’, <i>use use-</i></p>

	<p>‘to plant seed’, <i>usin</i> ‘field for cultivation’, <i>usisi</i> ‘farmer’; Jur. <i>use</i> ‘seedling’ (<i>t’éh-léh-t’ün-méi wúh-séh-t’iēn</i> ‘particular species’), <i>usi-in</i> ‘field’ (<i>wúh-ših-yīn</i> ‘field’), <i>usi</i> ‘field’; Olcha <i>use</i> ‘seed’, <i>usun</i> ‘field, garden’; Na. <i>use</i> ‘seed’, <i>usī</i> ‘arable field for cultivation; private garden for cultivating vegetables’, <i>usiŋku</i> ‘person who possesses such a garden’; <i>usilə-</i> ‘to labor a land for cultivating plants’; Orok <i>usi</i> ‘field (farm), garden’, <i>usi-</i> ‘cultivate, till; hunt a bear’; Oroch <i>usi</i> ‘seeds, grains’, <i>usin</i> ‘garden for cultivating vegetables and plants’, <i>usin-</i> ‘to sow, to plant in a garden’; Ud. <i>jehu-</i> ~ <i>jiu-</i> ‘to grow (about plants, people); to grow (about the moon)’, <i>uhi-</i> ‘to sow, to plant a garden’, <i>uhi</i> ‘garden for cultivating plants’</p>
<p>(5) Proto-Tungusic *<i>tari-</i> ‘to sow, to plant’</p>	<p>Evk. <i>tari-</i> ~ <i>tare-</i> ~ <i>tale-</i> ‘to sow’; Solon <i>tari-</i> ‘to sow seeds; to plant; to cultivate; to grow; to disseminate; to inject; to infect, to catch a disease’, <i>tariŋko</i> ‘injector’; Ma. <i>tari-</i> ‘to cultivate, farm; to plow’; Jurchen <i>tali-</i> ~ <i>tari-</i> ‘to sow, to plant, to cultivate’; Ulcha <i>tari-</i> ‘to sow, to plant’; Na. <i>tari-</i> ‘to sow seeds’, <i>tariko</i> ‘sowing machine’, <i>tarici-</i> ‘to sow (seeds) regularly’; Ud. <i>tali-</i> ‘to plant a garden’, <i>tali</i> ‘garden for cultivating plants’</p>

43.5 The Koreanic homeland

43.5.1 Location

In Robbeets' interpretation (Robbeets, this volume: Chapter 44), the ancestral speakers of Japonic-Koreanic may have been located along the Bohai coast and on the Liaodong peninsula in the fourth millennium BC.³ Bayesian inference estimates that Japonic and Koreanic separated around 1847 BC (Robbeets and Bouckaert 2018), while lexicostatistic methods yield the 4th millennium BC (Starostin et al. 2003: 236).

As millet agriculture is known to have spread from the Liaodong area to the Korean peninsula around this time, Robbeets (2017f) associated the separation of Koreanic with the dispersal of millet agriculture, which reached the southern tip of the Korean peninsula in 3500 BC (Ahn 2010; Ahn et al. 2015: 2; Crawford and Lee 2003: 2; Lee 2011). We do not have any information about the languages spoken in this area until the 3th century AD. Around that time, the Chinese dynastic chronicles *Sanguo Zhi* ('Records of the Three States' 284) and *Hou Han Shu* ('History of the Later Han' 5th. C.) give us a picture of linguistic diversity among three related groups of people, namely the Samhan 'Three Han' in the southern part of the Korean peninsula. In the ensuing Three Kingdoms period (300–668), the Mahan in the west became Paekche, the Pyonhan in the Nakdong River valley in the center became Kaya, and the Chinhan in the east became Silla, each with their individual languages. The Pyonhan people consisted of 12 small polities and spoke a language that was different from that of the Chinhan, according to the *Hou Han Shu* (HHS 85: 2820), although the *Sanguo Zhi* claims the opposite is true (SZ 30: 853). The *Houhanshu* further states that the

Pyonhan people are close to Wa, the ethonym for the inhabitants of the Japanese Islands. Philologically, the alleged presence of Para-Japonic languages in Korea is confirmed by the historical Japonic toponyms, documented especially in the Mahan and Pyonhan region (Bentley 1998) and by a small number of words in the Nihon Shoki that might be of Kaya origin (Kōno 1987b). Therefore it seems likely that there were at least some Para-Japonic languages among the Pyonhan and Mahan languages; see Whitman 2011 for a similar view.

However, the Silla kingdom unified the Korean Peninsula politically and linguistically in 668, erasing all previous linguistic diversity. It is believed that the language of Silla was the direct ancestor of Middle and Contemporary Korean. Figure 43.6 shows that the center of Samhan linguistic diversity roughly coincides with the location of the earliest millet cultivators, millennia earlier. This supports the location of the Proto-Koreanic homeland in the area indicated on the map. Assuming that the Mahan region was predominantly Para-Japonic speaking, our co-author Janhunen situates the Koreanic homeland more to the east, notably in the area covered by the Chinha.

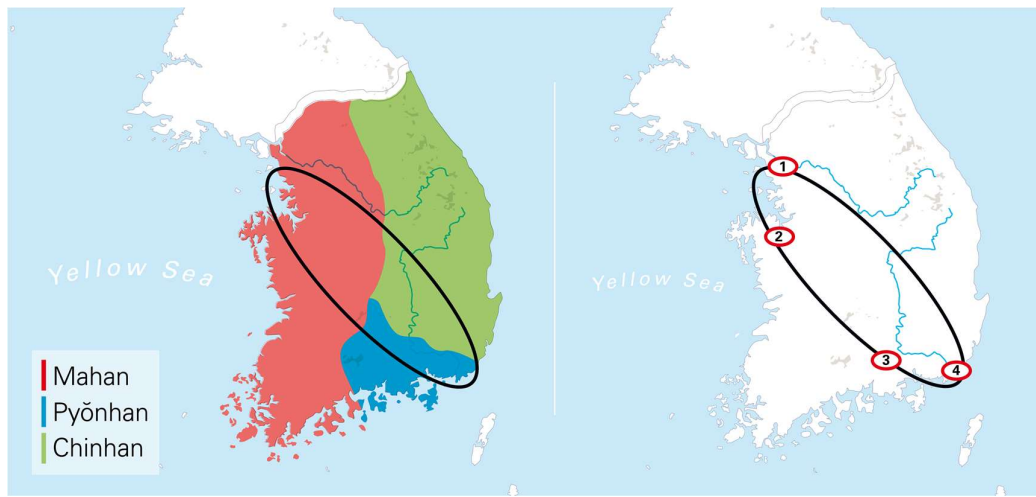


Figure 43.6 Centre of ethno-linguistic diversity among the Samhan 'Three Han' in 300 AD compared with the centre of the earliest broomcorn/foxtail millet cultivation consisting of the following Middle-Late Chulmun Sites (3500-2000BC): 1 Nŭnggŏk, 2 Anganggol, 3 Pyŏnggŏdong and 4 Tongsamdong (adapted from Lee 2011: 312)

43.5.2 Time depth

According to this scenario, Proto-Macro-Koreanic, the ancestor of the Koreanic Samhan languages was probably spoken after the arrival of millet cultivators on the Korean peninsula and before the separation of the Samhan languages, i.e. after 3500 BC and before 300 AD. However, due to the Silla unification, the contemporary Korean dialects cannot be traced back any deeper in time than the first part of the second millennium AD. Therefore, Proto-Koreanic is roughly corresponding to the time of the break-up of Silla Old Korean; see Sohn (this volume: Chapter 15). This estimation seems to be realistic, given that some varieties spoken in marginal areas, such as Jeju Island are mutually unintelligible; see Shin et al. (this volume: Chapter 16).

43.5.3 Agriculture

It is possible to reconstruct agricultural vocabulary to Proto-Koreanic. A part of this vocabulary, notably some words relating to dry-crop agriculture, has been traced back by supporters of external affiliation to a Proto-Japono-Koreanic or even a Proto-Transeurasian stage, as illustrated in Table 43.4.

Table 43.4 Proto-Koreanic vocabulary relating to dry-crop agriculture

<p>(1) Proto-Koreanic <i>*pisi</i> ‘seed’ ~ <i>*pihi</i> ‘barnyard millet’</p> <p>< PTEA <i>*pisi-i</i> (sow-NMLZ) ‘seed’ ~ <i>*pisi-ke</i> (sow-RES.NMLZ) ‘what is sown, major crop’ (Robbeets, this volume: Chapter 44)</p>	<p>MK <i>·psi</i>, K <i>ssi</i> ‘seed, kernel; lineage, descent, breed’, K <i>pye-pssi</i> ‘rice seed’</p> <p>MK <i>·phi</i>, K <i>phi</i> ‘(Japanese) barnyard millet (<i>Echinochloa esculenta</i>)’</p>
<p>(2) Proto-Koreanic <i>*pata-k</i> ‘dry field’ < PJK <i>*pata</i> ‘dry field’</p> <p>< PTEA <i>*pata</i> ‘field for cultivation’ (Robbeets, this volume: Chapter 44)</p>	<p>K <i>path</i>, MK <i>path</i> ‘(dry) field, farm, patch, garden, position on a game board’</p>
<p>(3) Proto-Koreanic <i>*muta-k</i> ‘dry land’ < PJK <i>*muta</i> ‘land’</p>	<p>K <i>muth</i>, MK <i>muth</i> ‘land, dry land’</p>

<p>< PTEA *<i>mudu</i> ‘uncultivated land’</p> <p>(Robbeets, this volume: Chapter 44)</p> <p>K <i>muth</i>, MK <i>muth</i> ‘land, dry land’</p>	
<p>(4) Proto-Koreanic *<i>mat-ak</i> ‘garden plot’</p> <p>< PJK *<i>mat</i> ‘plot of land for cultivation’</p> <p>(Robbeets 2005: 682; Whitman 1985: 171, 237, 2011: 156; Francis-Ratte 2016: 345–346)</p>	<p>K <i>math</i> ‘yard’, MK <i>math</i> ‘yard, plot of land for agricultural’</p> <p>J <i>mati</i> ‘field (sector/measure), quarters, town, market’, OJ <i>mati</i> ‘garden, plot of land for agricultural proposes’</p>

However, despite the importance of rice in historical and contemporary Korean culture, Proto-Koreanic at its earliest stage probably lacked specialized vocabulary dedicated to rice. This can be inferred from a number of observations with regard to the datasets in Table 43.5. First, in line with Francis-Ratte’s (2017) suggestion that a pattern of “lexical recycling” can be detected in the Korean lexicon, whereby pre-rice words from a Proto-Koreano-Japonic stratum have been repurposed as post-rice words in Proto-Korean, some rice-agriculture terms indeed seem to derive from earlier non-rice-agricultural terms, such as in Table 43.5 (1) Koreanic ‘rice field’, which may go back to a more general Japonic-Korean word for ‘field’.

Second, we observe a gradual semantic specialization from ‘grain of any type’ to ‘rice’ in Korean rice vocabulary, whereby the broader meaning is restricted to a few

covert or petrified forms, whereas the specialized meaning has generalized. This is, for instance the case for the development from ‘any boiled cereal’ into ‘boiled rice’ in Table 43.5 (2), whereby covert derivations from *co* ‘millet’ and *mey mil* ‘nonglutinous wheat, buckwheat’ such as K *co pap* ‘boiled millet’, K *mey mil pap* ‘boiled buckwheat’ suggests that PK **pap* originally indicated ‘any boiled cereal’. Similarly, there is a gradual specialization of ‘hulled (of any grain)’ over ‘hulled corn of grain’ into ‘hulled rice’ in Table 43.5 (3), whereby combinations such as *ssal poli* ‘hulled barley’ with *poli* ‘barley’ indicate an originally proposed, adnominal status of *ssal* ‘hulled’, while compounds such as *poli ssal* ‘a grain of barley, a barley corn’ and *copssal* ‘millet grain’ witness to the general substantivized meaning ‘hulled corn of grain’.

Third, some Koreanic rice terms seem to be borrowed from a Proto-Japonic word. The direction of the borrowing can be determined on the basis of the morphological segmentability of the Japonic form as opposed to the lack of segmentability in Koreanic. For Proto-Koreanic **pasal* ‘hulled (of any grain); hulled corn of grain; hulled rice’ in Table 43.5 (3), for instance, we have a probable donor word in PJ **wasa-ra* ~ **wasə-rə* ‘early ripening (of any grain); early ripening variety of grain; early ripening rice’ (Vovin 2015b; Robbeets 2017a).⁴ In addition to the morphological segmentability of the Japonic form, the direction of the borrowing from Japonic into Koreanic is supported by the phonological observation that PJ **w-* was borrowed as PK **p-*, given that Japonic had both **w-* and **p-*, while Koreanic had only **p-*. However, the fact that the Japonic word is not reflected in the Ryukyuan languages weakens its reconstruction to Proto-Japonic.

Another candidate for being borrowed from Proto-Japonic into Proto-Koreanic is PK **pye* ‘(unhusked) rice’. If we consider a process of *i*-breaking in Proto-Korean, which gave rise to alternations such as MK *khi-* ~ *khye-* ~ *hhye-* ‘to kindle’ or MK *ni-* ‘go’ ~ *nye-* ‘to go around’, we can reconstruct PK **pi*, which may have in turn developed by initial vowel loss from **ipi* ‘(unhusked) rice’. Proto-Japonic **ip-i* ‘steamed rice, cooked millet’, which is probably derived as a deverbal noun in PJ **-i* from a verb ancestral to MJ *if-* ‘to eat’ appears to be a plausible donor word (Vovin 1998b: 371–372; Robbeets, 2017a).

Taken together, the above observations indicate that the speakers of Proto-Koreanic were familiar with dry-crop agriculture, but developed a specialized vocabulary dedicated to wet-rice agriculture at a relatively early stage during their prehistory. The Japonic influence on the Proto-Koreanic rice vocabulary should probably be understood in a context in which Para-Japonic speakers importing rice-agriculture from the Liaodong-Shandong interaction sphere after 1500 BC transferred their knowledge to the Proto-Koreanic hunter-gatherers and millet farmers already living on the Korean Peninsula.

Table 43.5 Proto-Koreanic vocabulary relating to wet-rice agriculture

<p>(1) Proto-Koreanic <i>*non</i> ‘rice paddy field’</p> <p>< PJK <i>*non</i> ‘field’ (Martin 1966: 247–248; Whitman 1985: 242, 2011: 156;</p>	<p>K <i>non kali</i> ‘plowing a rice field’, MK <i>nwon</i> ‘paddy field’</p> <p>J <i>no</i> ‘field’, OJ <i>no</i>, ‘field’, Hirara <i>nu</i>; Igarashi <i>nu</i>;; Yonaguni <i>nu</i>: ‘field’, pJ <i>*no</i></p>
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Starostin et al. 2003: 988; Robbeets 2005: 735; Francis-Ratte 2016: 429) ⁵	
(2) Proto-Koreanic <i>*pap</i> ‘any boiled preparation of cereal; boiled rice’	K <i>pap</i> , MK <i>·pap</i> ‘boiled rice, any boiled cereal’, e.g., K <i>co-pap</i> ‘boiled millet’, K <i>mey mil pap</i> ‘boiled buckwheat’
(3) Proto-Koreanic <i>*pasal</i> ‘hulled (of any grain); hulled corn of grain; hulled rice’ << Proto-Japonic <i>*wasa-ra</i> ‘early ripening (of any grain)’ (< <i>*wasa-</i> ~ <i>*wasə-</i> ‘to be early ripening’ + <i>*-ra</i> ~ <i>-ra</i> suffix deriving property nouns from verbs); See Table 43.6 (4)	K <i>ssal</i> , MK <i>·psol</i> ‘any hulled grain, (uncooked) rice’, LOK 菩薩 <i>*pasal</i> (Kyeyrim #183; LMC 菩薩 <i>pfiuǎ sar</i>), e.g. K <i>ssal poli</i> ‘hulled barley’; <i>poli ssal</i> ‘a grain of barley, a barley corn’, <i>copssal</i> ‘millet grain’ etc.
(4) Proto-Koreanic <i>*ipi</i> > <i>*pi</i> > <i>*pye</i> ‘(unhusked) rice’ << Proto-Japonic <i>*ip-i</i> (eat-NMLZ) ‘cooked millet, steamed rice’; See Table 43.6 (3)	K <i>pey</i> ~ K <i>pye</i> , MK <i>pye</i> ‘rice plant, kernel of rice (unhusked)’

43.6 The Japonic homeland

43.6.1 Location

We assume that Macro-Japonic remained in the area of the Liaodong Peninsula and Bohai coast after the speakers of Proto-Macro-Koreanic left to the Korean Peninsula in the fourth millennium BC. From archaeological studies (Xu 1995: 78–79, 85), we know that there was intensive cultural contact between the Liaodong and Shandong Peninsula already from the fifth millennium BC onwards. As a result, speakers of Macro-Japonic may have spread over the larger area of the Liaodong-Shandong interaction sphere and been in contact with the people of the Dawenkou (4100–2600 BC) culture on the Shandong Peninsula. Some archeologists proposed that this culture was connected to the early Austronesian culture on Taiwan, based on various kinds of evidence such as the use of tripod pottery, house structure, myths on the sun burials, rituals such as the use of slab tombs (Zhang 2009), the shared ritual of the extraction of healthy upper lateral incisors as a puberty rite (Han and Nakahasi 1996: 47–48; Pietrusewsky et al. 2014) and the integrated millet-rice agricultural assemblage (Stevens and Fuller 2017).⁶ In terms of influence, the Dawenkou and Longshan cultures of Shandong had more impact upon the archaeological cultures in Liaodong than the other way around, which is witnessed, for example, by findings of typical Dawenkou tripod footed basins, jars and boat-shaped vessels on Liaodong. This archaeological setting may provide the background against which the prehistorical borrowing of Para-Austronesian rice vocabulary into Macro-Japonic took place (Robbeets 2017a).

With the transmission of rice agriculture from the Liaodong and Shandong Peninsulas to the Korean Peninsula and its spread to the southern tip of the Korean Peninsula after 1500 BC (Miyamoto 2009; Ahn 2010), the Macro-Japonic language

arrived in the southwestern part of the Korean Peninsula. From there, Proto-Japonic expanded to Kyushu and the other Japanese Islands in the first millennium BC with the spread of the Yayoi culture (900 BC–300 AD) (Crawford and Shen 1998; Crawford and Lee 2003).

Although the diversity hotspot principle would indicate that the Southern Ryukyus are the homeland from which both Ryukyuan and Mainland Japanese expanded, such a location is in contradiction with a homeland in North East Kyushu, as most linguists would suggest. The observation that Sino-Japanese loanwords can be reconstructed back to Proto-Ryukyuan implies extensive contacts between Mainland Japanese and Ryukyuan and it thus seems likely that both of them were initially located in geographically neighboring areas until the 9th century (Pellard 2015). Moreover, there are parallels between Ryukyuan and some Japanese dialects of North East Kyushu, which suggest the existence of a Ryukyuan substratum there (Serafim 2003). Even if there is no agreement about the question whether the linguistic settlement of the Ryukyus was achieved by different waves of migration of different Ryukyuan languages at different times (Unger 2009, 2011; de Boer, this volume: Chapter 4) or whether all Ryukyuan languages form a single branch, which expanded at one time to the Ryukyus (Serafim 2003; Pellard 2015), there seems to be a relative consensus about locating the homeland of proto-Ryukyuan on North East Kyushu.



Figure 43.7 Speech communities of Para-Austronesian (ca. 4300–2600 BC), Proto-Macro-Japonic (ca. 3500–1500 BC), Para-Japonic (ca. 1500 BC–668 AD) and Proto-Japonic (ca. 900–182 BC) and their approximate homelands. The green arrow indicates the spread of the agricultural package including rice

43.6.2 Time depth

We assume that Proto-Macro-Japonic was spoken after the transmission of millet farming from the Liaodong Peninsula to the Korean Peninsula and before the transmission of rice farming from the Shandong-Liaodong interaction sphere to the Korean Peninsula, i.e. between 3500 and 1500 BC. Para-Japonic dispersed across the southwestern part of the Korean Peninsula after 1500 BC until the Para-Japonic languages were erased by the Silla unification in 668 AD. The speakers of Proto-Japonic separated from their Para-Japonic sister communities on the Korean Peninsula to arrive on Kyushu with the Yayoi culture around 900 BC. It was there

that Proto-Japonic, the ancestor of Mainland Japanese and the Ryukyuan languages, separated when Yayoi culture started to spread northeastwards over the Japanese Islands in the early centuries BC. This chronological estimation based on the archaeological framework is in line with Lee and Hasegawa's (2011) Bayesian phylogenetic analysis, dating Proto-Japonic at 182 BC. Lexicostatistic approaches such as Hattori's (1976: 43) estimate the break-up between 0 and 500 AD, while the Automated Similarity Judgement Program (ASJP) yields 436 AD, be it with a margin of error of 29% (Holman et al. 2011). The ancestor of the languages now spoken in the Ryukyuan Islands is thought to have remained in northeastern Kyushu until around 900 AD, when full-scale agriculture was introduced to the Ryukyus. The derivation of Ryukyuan from an early Kyushu dialect is consistent with the distribution of the main accent types over Japan and across the Ryūkyū Islands and may reflect different waves of founder populations to different islands in the Ryukyu chain at slightly different times (Unger 2009: 105–106, 2011; de Boer, this volume: Chapter 4).

43.6.3 Agriculture

As indicated in Table 43.3, we can reconstruct words relating to dry-crop agriculture in Proto-Japonic, some of which supporters of the affiliation hypothesis would trace back to Japonic or even Transeurasian ancestry. However, similar to what is the case for Proto-Koreanic, Proto-Japonic at its earliest stage appears to have lacked specialized vocabulary dedicated to rice.⁷ This assumption is based on a number of observations with regard to the datasets in Table 43.6.

First, many Japonic words relating to rice agriculture can be derived language-internally. For instance, in Table 43.6 (1–3), OJ *nuka* ‘rice bran’, OJ *mom*i ‘hulled rice,’ OJ *ipi*₁ ‘cooked millet, steamed rice’ all seem to be petrified deverbal nouns, originally derived from the ancestral verbs underlying OJ *mom*- ‘rub’, MJ *if*- ‘to eat’ and OJ *nuk*- ‘remove’ respectively (see Robbeets, 2017f/b).

Second, we observe a gradual semantic specialization from ‘food’ to ‘any crop’ to ‘rice’ in the Japonic rice vocabulary, for instance in Table 43.6 (2) and (4). The deverbal nature of PJ **ip-i* ‘things you eat, food’ suggests that the general meaning ‘food’, covertly attested in compounds such as *iiue* ‘hunger, being starved’ (< *PJ **ipi-uwaCi-i* (food-starve-NMLZ)) is the original one. Subsequently, we see a specialization to ‘cereals such as millet and rice’ as reflected in the polysemy in OJ *ipi*₁ ‘cooked millet, steamed rice’. Finally, in Contemporary Japanese *ii* is commonly restricted to the meaning ‘cooked rice’, which is also reflected in compounds such as *iibo* ‘rice grain’, and *iine* ‘cooked rice’. Similarly, given the attestation of some petrified Old Japanese compounds with a meaning that is not limited to rice, such as OJ *wase* ‘an early ripening variety; ripening early, precocious; early-ripening variety of rice plant,’ OJ *was*a-*po*₁ ‘early ears of grain/rice’ and J *was*a-*mono* ‘early produce’ in Table 43.6 (4), it is likely that the original form meant ‘early ripening variety of any crop’.

Finally, some Proto-Japonic rice terms have parallels in Proto-Austronesian, which makes Robbeets (2017a) suspect Para-Austronesian influence. Para-Austronesian is a sister lineage of Proto-Austronesian, which was probably left on the Chinese coast after the break-up and spread of Proto-Austronesian to Taiwan. For some Proto-Japonic rice terms such as PJ **usu* ‘(rice and grain) mortar’, and **kəmai* ‘dehusked

rice', there are candidates for donor words in Austronesian, notably PAN **lusuy* 'rice' and PAN **Semay* 'cooked rice'; see Table 43.6 (5–6). The attestation of Ryukyuan cognates to the Japanese words suggests that the borrowing of these words must date back to a time preceding the break-up of Proto-Japonic.

In addition to global borrowing including form and function, there may also be selective borrowing from Para-Austronesian and ultimately from Sino-Tibetan, i.e. restricted transfer of certain—formal, functional, or combinational—properties only. The occurrence of parallel formations, such the use of a deverbal noun from 'to eat' for the most common dietary product in Table 43.6 (3), may obviously be due to universal principles in linguistic structuring. However, given the relative concentration of this formation in Sino-Tibetan, Austronesian, Japanese and Korean, we cannot exclude diffusion of the combinational pattern across these languages.⁸ If this were indeed the case, the recurrent character of the formation in Sino-Tibetan would indicate Sinitic as the most probable source of diffusion.

In sum, these observations suggest that although dry-crop agriculture was primary, rice agriculture was transmitted to the speakers of Proto-Macro-Japonic at a later stage, probably through intermediary of speakers of a sister language of Proto-Austronesian.

Table 43.6 Proto-Japonic vocabulary relating to wet-rice agriculture

(1) Proto-Japonic <i>*nuka</i> 'rice bran' < PJ <i>*nuka-</i> (remove.NMLZ)	OJ <i>nuka</i> 'rice bran', OJ <i>nuk-</i> 'to remove'
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<p>(2) Proto-Japonic <i>*məmi</i> ‘hulled rice’ < PJ <i>*məm-i</i> (move.back.and.forth.with.force-NMLZ)</p>	<p>OJ <i>momi</i> ‘hulled rice’, OJ <i>mom-</i> ‘to rub (with both hands), massage, shove and push (e.g. a <i>mikoshi</i> shrine), knock around (e.g. a ship)’</p>
<p>(3) Proto-Japonic <i>*ipi</i> ‘cooked millet, steamed rice’ < <i>*ip-i</i> (eat-NML)</p> <p>>> PK <i>*me(k)i</i> ‘rice offered to a higher rank’ < <i>*mek-i</i> (eat-NMLZ) ‘what you eat, food’</p> <p><< Proto-Austronesian <i>*ka-en</i> eat-OBJ.NMLZ (Sagart 2003: 130)</p> <p><< Old Chinese 飯 <i>*bonʔs</i> ‘cooked rice or millet’ < <i>*bonʔ-s</i> eat-NMLZ (Baxter and Sagart 2011)</p> <p><< Proto-Sino-Tibetan <i>*ka-n</i> ‘cooked rice’ < <i>*ka-n</i> (eat-NMLZ) (Sagart 2003: 129–130)</p>	<p>J <i>ii</i> ‘cooked rice’, OJ <i>ipi</i> ‘cooked millet, steamed rice’, MJ <i>if-</i> ‘to eat’</p> <p>K <i>mey</i>, MK <i>mey</i> ‘rice offered to the gods or to departed spirits, courtly rice’</p> <p>Yami of Orchid Island <i>kanen</i> ‘cooked rice’</p> <p>Old Chinese 𩚑 <i>*C.qʰan</i> ‘thick gruel of rice’, Proto-Tamang ^B<i>kan</i> ‘cooked rice’</p>
<p>(4) Proto-Japonic <i>*wasa-</i> ~ <i>*wəsə-</i> ‘to be early ripening (of crops); an early</p>	<p>J <i>wase</i>, OJ <i>wase</i> ‘ripening early, precocious; an early ripening variety;</p>

ripening variety (of any crop); early-ripening rice plant'	early-ripening rice plant', J <i>wasā-mono</i> 'early produce', OJ <i>wasā-ipi</i> ₁ 'rice cooked from early rice', <i>wasā-po</i> ₁ 'early ears of grain/rice', <i>wasā-ki</i> ₂ 'rice wine made from early rice', OJ <i>woso</i> ₂ 'precocious, early ripening' → OJ <i>woso</i> ₂ <i>ro</i> ₂ 'precocious, early ripening'
(5) Proto-Japonic * <i>usu</i> '(rice and grain) mortar' << Para-Austronesian * <i>lusuŋ</i> '(rice) mortar'; cf. PAN * <i>lusuŋ</i> '(rice) mortar' (Blust 2015)	OJ <i>usu</i> 'mortar for grain, rice cakes and making purified alcohol,' Shuri <i>quuši</i> , Yonaguni <i>uci</i> 'mortar'
(6) Proto-Japonic * <i>kəmai</i> 'dehusked rice' << Para-Austronesian * <i>hemay</i> < Proto-Macro-Austronesian * <i>Semay</i> 'cooked rice'; cf. PAN * <i>Semay</i> 'cooked rice' (Blust, 2015)	OJ <i>kome</i> ₂ 'dehusked rice,' Nakazoto <i>mee</i> , Miyako <i>maz</i> , Yonaguni <i>mai</i>

43.7 Conclusion

Figure 43.8 displays the alleged homelands of the individual Transeurasian groupings before the first millennium BC: Proto-Macro-Turkic in Eastern Inner Mongolia, Proto-Macro-Mongolic in the West Liao River Basin, Proto-Tungusic on the present-day border of Northern Korea, Macro-Japonic in the Liaodong-Shandong interaction sphere and Para-Japonic in Southeastern Korea. This map largely confirms the locations proposed in Janhunen (1996a: 216).

Figure 43.8 The speech communities of Proto-Macro-Turkic, Proto-Macro-Mongolic, Proto-Macro-Tungusic, Proto-Macro-Japonic, Para-Japonic, Proto-Koreanic and their approximate homelands in the beginning of the first millennium BC

Table 43.7 lists the individual families along with their respective homelands and the approximate time of their primary split. The final column indicates whether the ancestral speakers were believed to be familiar with millet agriculture, wet-rice agriculture and/or pastoralism, given their location, dating and reconstructed vocabulary. It is likely that all ancestral speech communities were familiar with millet agriculture at their earliest stages. However, the presence of pastoral vocabulary in Turkic and Mongolic as well as wet-rice vocabulary in Japonic and Koreanic is probably due to a secondary development, be it through internal coining, lexical recycling or borrowing.

Table 43.7 Overview of the language families discussed in this chapter, along with the proposed location of their homelands, the estimated time of their primary split and their familiarity with agriculture

Family	Homeland	Primary split	Agriculture
Proto-Macro-Turkic	Eastern Inner Mongolia	?	Millet agriculture?
Proto-Turkic	Eastern Mongolia	500 BC–100 AD	1 Millet agriculture 2 Pastoralism
Proto-Macro-Mongolic	West Liao River Basin, southwestern Manchuria	200 BC–200 AD	Millet agriculture
Proto-Mongolic	northwestern Manchuria	1000–1300 AD	1 Millet agriculture 2 Pastoralism
Proto-Macro-Tungusic	Present-day border with North Korea	?	Millet agriculture?
Proto-Tungusic	Amur-Sungari-Ussuri Basin	500 BC–500 AD	Millet agriculture
Proto-Macro-Koreanic	South-central Korea	pre–300 AD	1 Millet agriculture 2 Wet-rice agriculture
Proto-Koreanic	Korean Peninsula	post–1000 AD	Millet/rice agriculture
Proto-Macro-Japonic	Liaodong-Shandong Peninsulas	1500 BC	1 Millet agriculture 2 Wet-rice

			agriculture
Para-Japonic	Southeastern Korea	1500 BC–669 AD	Millet/rice agriculture
Proto-Japonic	Kyushu	900–200 BC	Millet/rice agriculture

This broad overview of the location, time-depth and agricultural nature of the language families concerned raises three questions. The first question concerns the high family density ratio in Southern Manchuria. All families have their earliest recoverable homelands in a very compact area centered in Southern Manchuria. Without overarching Transeurasian affiliation hypothesis, it is difficult to understand why this region attracted an exceptionally large number of distinct language families, even though it offers no striking regional advantages, compared to other regions in Eurasia such as the Yellow River Basin.

The second issue is why the separation dates of the individual families are so shallow. Proto-Turkic, Proto-Macro-Mongolic, Proto-Tungusic, Proto-Koreanic and Proto-Japonic all dissolved into the earliest recoverable daughter languages between 500 BC and 300 AD. Obviously, the shallow ceilings do not imply that there were no earlier splits in the family, but merely indicate that all other pre-existing sister lineages became extinct. In comparison with the earliest differentiation of other agricultural language families in East Asia, such as Sino-Tibetan (5000–4500 BC), Austronesian (3500 BC), Austroasiatic (5000–4000 BC), we would expect that the

earliest differentiations in the families started much earlier in the Neolithic period, but that the evidence for this became extinct.

Third, agricultural vocabulary can be reconstructed to all individual Proto-languages. However, there is only one unified Neolithic culture in the region, namely the Hongshan culture, which is associated with Proto-Macro-Mongolic by our co-author Juha Janhunen. If this is correct, then it is difficult to understand why the contemporary ancestors of the Turkic, Tungusic, Japanese and Koreanic speech communities each held their own agricultural complexes, but did not leave any distinct trace in the archaeological record.

In sum, without an overarching Transeurasian affiliation hypothesis, it is difficult to account for the location, time depth and agricultural vocabulary of the individual Transeurasian languages. Therefore, it seems that Janhunen's (1996a: 238) statement is still valid today: "If it only could be proven to be correct, the Altaic Hypothesis would fundamentally deepen our understanding of the prehistorical ethnic situation in Manchuria".

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¹ According to co-author Janhunen, Proto-Tungusic was dissolved into a southern Jurchenic and a northern Ewenic branch, while the other authors view the north-south separation as a split between a Manchuric branch in the South and a Tungusic branch in the North, whereby Tungusic in its turn divided into a Northern and a Southern Tungusic branch; see Section 49.4.2.

² Gruntov and Mazo (2015) provided a lexicostatistical classification of the Mongolic family, but they did not provide an estimation of the time-depth because of calibration problems.

³ Our co-author Janhunen does not accept a genealogical unity between the Japonic and Koreanic languages.

⁴ Vovin (2015b) reconstructed PJ **wasay* ‘early rice’ and proposed that the Proto-Japonic form was borrowed into Proto-Koreanic **pasal* ‘rice’. However, he recognized that his reconstruction is problematic “[i]f PK **pasar* is a loan from PJ **wasay*, one has to explain how Proto-Koreanic has got its final **-r* from PJ **-y*” (Vovin 2015b: 234). This issue can be solved by taking into consideration the vowel alternation between OJ *was-* and *woso₂* ‘precocious, early ripening’ in addition to the fact that *woso₂* ‘precocious, early ripening’ is attested next to its derivation OJ *woso₂ ro₂* ‘precocious, early ripening’ with a suffix deriving property nouns from verbal adjectives; see Robbeets (2015: 339–346). The vowel alternation between PJ **wasara* and **wasəra* may be due to labial assimilation of the initial vowel, followed by a restriction on the shape of Old Japanese root morphemes whereby the vowel *o₂* cannot occur in a root together with the vowels

u, *o*₁ or *a*, a phenomenon known as Arisaka's law. Robbeets reconstruction further differs from Vovin's proposal in that Vovin reconstructed PK **pasar* for 'rice', but she takes the Late Old Korean reconstruction **pasal* 'rice' and Ramsey's law on minimal vowel reduction to indicate the reconstruction PK **pasal* with a minimal vowel.

⁵ In contrast with his earlier proposal, Whitman (2011: 156) proposed to relate the Korean word to PJ **nuu* 'marsh'.

⁶ Research comparing the ritual tooth ablation in the people of the Yayoi period, such as the Doigahama Yayoi with that of Neolithic people of the Shandong region in northern China, such as the Dawenkou shows basic similarities in the age at commencement of ablation, in early adolescence, at approximately 12–15 years of age and in the prevalence of the extraction of the upper lateral incisors. A common interpretation is that the practice of ablation was related to a "coming of-age ceremony" (Han and Nakahasi 1996: 49–50).

⁷ Francis-Ratté (2017) reconstructs PJK **yə* '(dry) rice', suggesting that Japanese and Korean may have diverged at a time when field rice was already being cultivated in Northeast Asia while paddy rice was not introduced yet. However, there is only a single cognate set relating to rice and it is rather dubious as the participating cognates are based on a morphological segmentation of MK *(p-)yé* 'rice plant, kernel of rice (unhusked)' and OJ *yo(-ne)* 'uncooked rice'.

⁸ Note that the Korean loan morpheme corresponding to OC **C.m^{ijj}ʔ* 米 ‘rice grains, dehusked and polished’ (Baxter and Sagart 2011) is K *-mi* and not *mey*, e.g. *hyen-mi* ‘brown rice’, *payk-mi* ‘polished rice’, etc.