

Working and Eating Together

— Some aspects of the life of Early Bronze Age peoples in Contacts in post-Seima-Turbino-Transcultural-Complex Community

Yoko Yamazaki



RIKSBANKENS
JUBILEUMSFOND
FOR THE ADVANCEMENT OF
THE HUMANITIES AND SOCIAL SCIENCES

S W E D I S H
COLLEGIUM
for ADVANCED STUDY



10th December 2024

Background

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PBS **tolkā*, PB
**talkā*

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Aiming at an interdisciplinary research I

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Piecing together

Loanword study in Indo-European and (West) Uralic families

Historical Linguistics

&

Cultural exchanges

Archaeology

&

aDNA analysis / Admixture of peoples

Paleogenomics

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- ▶ **Balto-Slavic=(West) Uralic (dialect continuum)?**
 - ▶ a Baltic word **talkā* 'a working community which is treated with a feast after the completion of work' (which might have been at the Balto-Slavic stage....)
borrowed into Finnic and Saamic
- ▶ The implication of this loan-item for the life and activities of those peoples in contact.
- ▶ Ideally, the results will be contextualized in a multidisciplinary scholarly discourse going on in the relevant areas....

Indo-European Languages I

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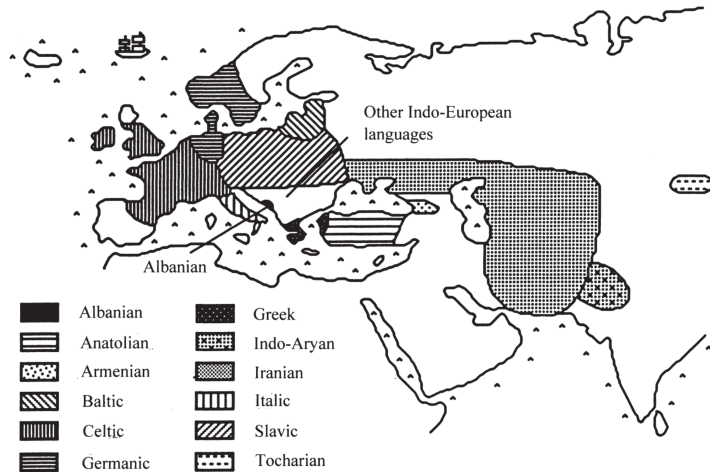
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Approximate geographical distribution of Indo-European languages (ca. 1000 BC)

Hock & Joseph (2019: 37)

IE Family Trees I

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- ▶ Family Tree: a tree that depicts the phylogenetic relationship or the branching-out processes of the daughter branches / languages.
- ▶ Branching-out is defined based on “shared innovations”.
 - ▶ Sound law
 - ▶ Analogy

	Latin	Greek	Skt.	Ave.	Goth.	OHG	Lith.	Latv.	(O)CS
‘100’	* <i>centum</i>	ἑκατόν	śatá-	sata-	<i>hund</i>	<i>hunt</i>	šim̃tas	<i>simts</i>	sъto
‘who’	<i>quis</i>	τί	kás	kō	<i>hvas</i>	<i>hwer</i>	kàs	<i>kas</i>	kъ-
/what’									
‘pig(let)’	<i>porcus</i>	—	—	pərəsa-	—	<i>farh</i>	pařšas	—	prasę
‘foot’	<i>ped-</i>	ποδ-	pad-	pada-	<i>fotus</i>	<i>fuoz</i>	pèdà	pêda	—

PIE **ḱm̥tom* ‘100’, **k^wi-/k^wo-* ‘who/what’, **porḱo-s* ‘pig’, **ped-/pod-* ‘foot’,

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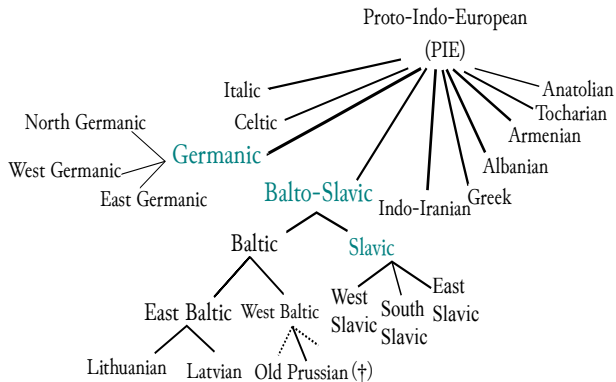
Bibliography

IE Family Trees II

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“Everyone has their own tree”..... (by our Anatolianist colleague)



A tree based on Fortson (2010: 10)

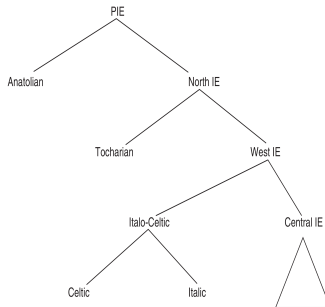


FIG. 2.1

Ringe (2006: 5)

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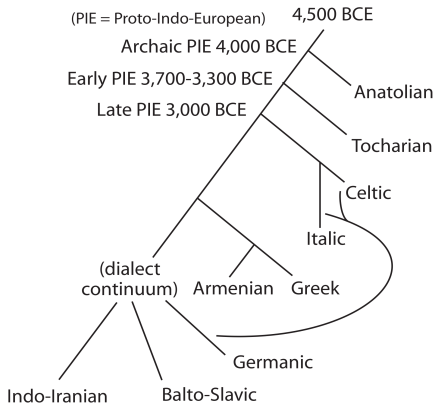
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Anthony (2007: 57) based on Ringe, Warnow & Taylor (2002)

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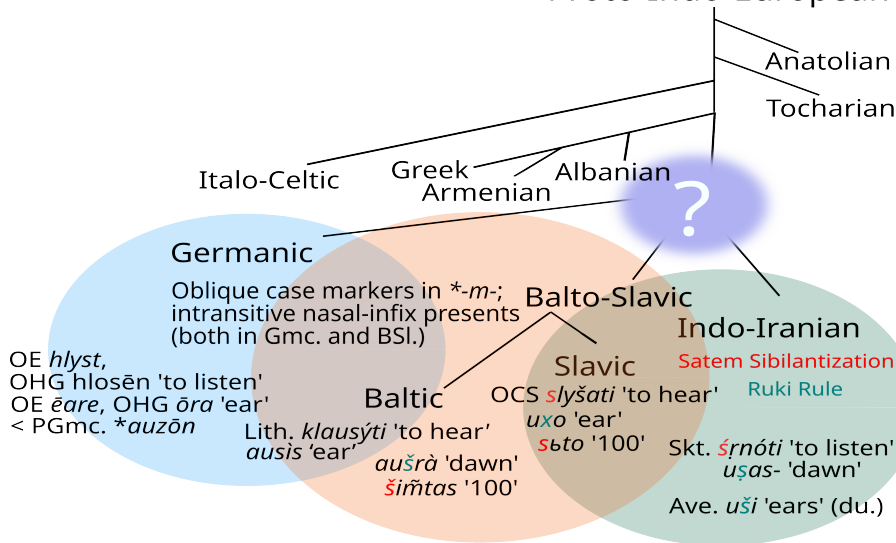
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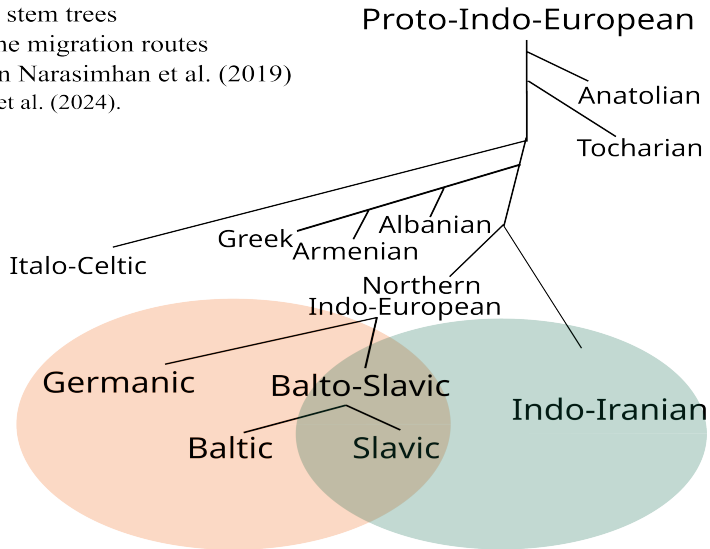
There are good reasons....

Proto-Indo-European



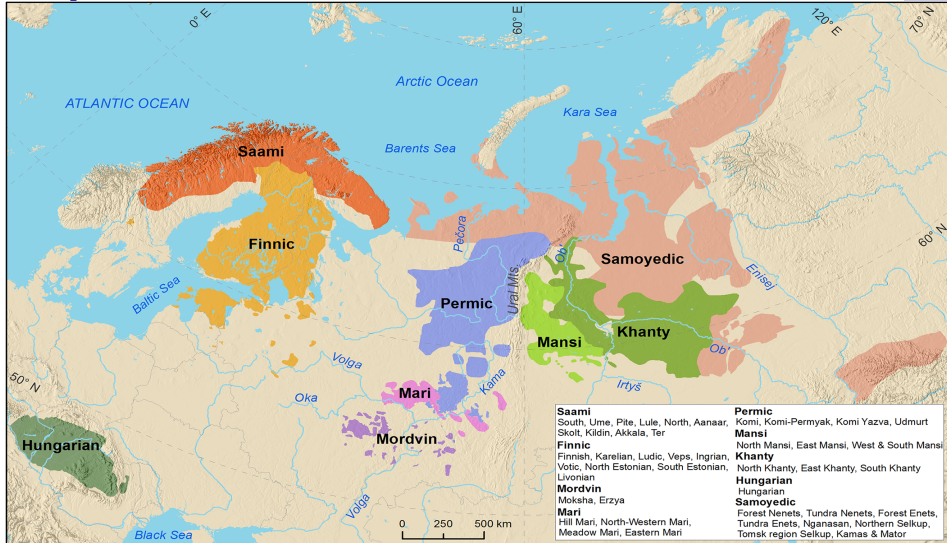
With a recent update....

Provisional stem trees
reflecting the migration routes
suggested in Narasimhan et al. (2019)
and McColl et al. (2024).



Uralic Family I

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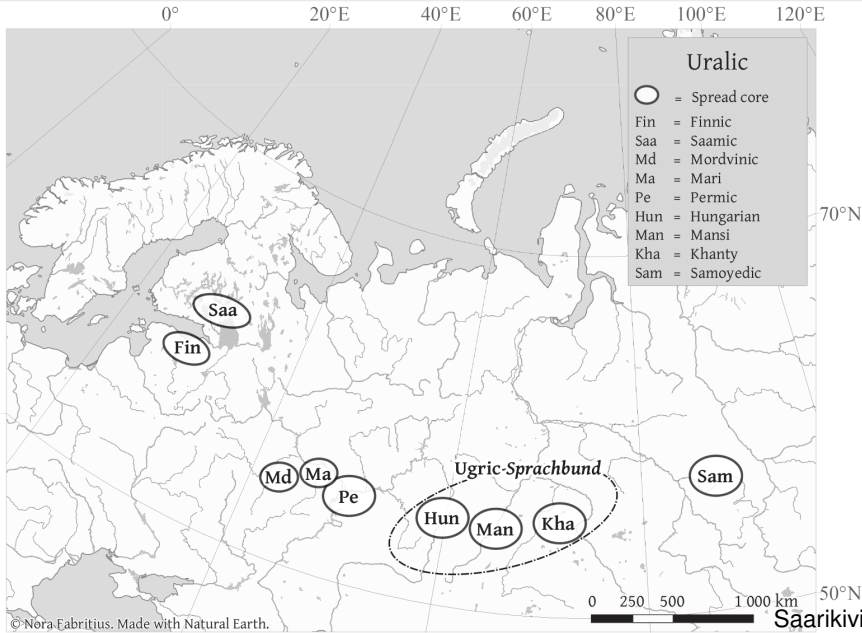


Rantanen et al. 2022

Uralic Family II

Abbreviations

- ▶ Saami → Saa.
- ▶ Proto-Saami → PSaa.
 - ▶ North Saami → NSaa.
 - ▶ South Saami → SSaa.
 - ▶ Inari (= Aanaar) Saami → ISaa.
- ▶ Finnic → Fi.
 - ▶ Proto-Finnic → PFi.
 - ▶ Finnish → Finn.
 - ▶ Karelian → Kar.
 - ▶ Estonian → Est.
 - ▶ Livonian → Liv.
- ▶ Mordvin → Mord.; Proto-Mordvin → PMord.
- ▶ Permian → Perm.; Proto-Permian → PPerm.
- ▶ Proto-Mansi → PMansi
- ▶ Proto-Khanty → PKhanti
- ▶ Hungarian → Hu.



Saarikivi 2022: 55

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Map 2.8 The areas of intermediate Uralic protolanguages

Tree Problems also with the Uralic Family

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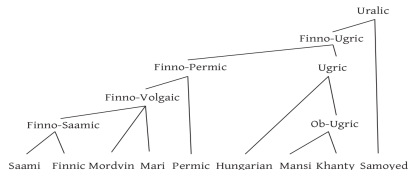
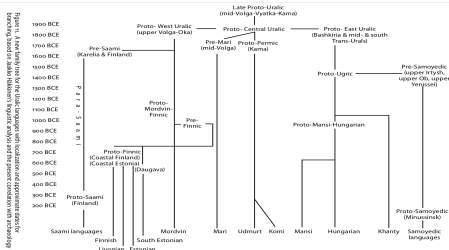
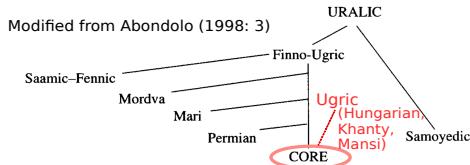


Figure 1.2 The taxonomical structure of the Uralic language family according to the view commonly held until the 1980s, but now widely contested

Parpola 2017: 169

Aikio 2022: 4

Linguistic Evidence for Indo-European = Uralic contacts I

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► Indo-Iranian = Proto-Uralic contact

- 'price, value' PI-Ir. **argʰá-* >> PU **arwV ~ *jrwV?* > Finn. *arvo* 'value, price', Hu. *ár* 'price'
- 'wealth' PI **ma(n)dza-* (cf. Ol *maṁh*, Ave. *mąz*) >> West U. **maksa-* > Finn. *maksa-* 'to pay'
- 'grain, barley, wheat' Pre-PI-Ir. **yewo-* >> Pre-Fi./PU **jewä* > Finn. *jyvä* 'grain'
- 'mead, honeywine' Pre-PI-Ir./PIE **médʰu-* >> PU **meti* 'honey, nectar' > Finn. *mesi* 'nectar', Mord. *med'*, Hu. *méz* 'honey'
- '100' PI-Ir. **catá-m* >> PU **šíta* > Finn. *sata*, NSaa. *čuohti*, etc.... '100'

Holopainen (2019)

► Balto-Slavic = Uralic contact

- 'frost' PBS **šarmas* >> Pre-PSaa. **čuormēs* > NSaa. *čurpmas* 'hail'
- 'comb' PBS **šukā* >> PFinno-Saamic **šuka* > PSaa. **cokō* > NSaa. *čohkut* 'to comb'

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- ▶ 'pig' PBS **porso-* (or Pl-Ir. **parcas?*) >> Pre-PFi./PU **porcas* ~ **poršas* 'pig' > Finn. *porsas* 'piglet', Udmurt *parś, pariś*, Komi *porś* 'pig'

Kallio (2009), Holopainen (2019).

- ▶ Baltic = Finnic contact: ca. 200 loanwords (Kallio 2008: 265)
 - ▶ 'pea' PB **žirnis* (Lith. *žirnis*, Latv. *zirnis*, OPru. *syrne* 'grain') >> Finn. *herne*, Tver Kar./Livvi Karelian / Veps. *herneh*, Est. *hernes*
 - ▶ 'porridge' PB **putrā* (Lith. *putrā*, Latv. *putra*) >> Fi. *purro*
 - ▶ 'sister' PB **seser-* (Lith. *sesuõ*, OPru. *swestro*) >> Finn. *sisar*, Tver Kar. *sizar*, Veps *sisar*, Est. *sõzat*
 - ▶ 'son-in-law' Lith. *žéntas*, Latv. *znuõts* >> Fi. *nuode* 'sister's husband'
 - ▶ 'bride' PB **martiā-* (Lith. *martì*, OPru. *martin* 'bride', Latv. *mārša* 'brother's wife') >> Fi. *morsian*, Tver Kar. *maršien* 'bride'

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Linguistic Evidence for Indo-European = Uralic contacts III

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- ▶ Baltic = Saamic contact: 32 loanwords (Aikio 2017: 73)
 - ▶ Lith. *vìngis* 'curve' >> NSaa. *faggi* 'hook'
 - ▶ Lith. *lāšis*, Latv. *lasis*, OPru. *lasasso* >> PSaa. **lōse* > NSaa./Lule Saa. *luossa* 'salmon' ISaa. *luosa*
 - ▶ Lith. *šerdė*, Latv. *serde* 'core' >> SSaa. *saertie* 'reindeer heart (as food)'
- ▶ Germanic = Finnic and/or Saamic contact
 - ▶ 'hoof' Paleo-Gmc. **kāpa-* >> Pre-PFi. **kapa* + suffix **-ja(w)* > Finn. *kavio* 'hoof'
 - ▶ 'to forge' PGmc. **asjōn* >> Mid.-PFi. **ašjo* > Finn. *ahjo* 'to forge'
 - ▶ 'red' PGmc. **rauða* >> PFi. **rauta* 'iron'
 - ▶ 'red' Proto NGmc. (ON *rauðr*) >> PSaa. **ruovtē* 'iron'
 - ▶ king PGmc. **kuninga-z* >> PFi. *kuninkas*, PSaa. **konękēs* 'king'
 - ▶ 'cattle' PGmc. **nauta* >> PFi. **nauta* 'cow'
 - ▶ 'cow' Proto NGmc. (ON *kussi*) >> PSaa. **kuse* 'cow'

Saarikivi (2022: 34ff.)

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Linguistic Evidence for Indo-European = Uralic contacts IV

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► Slavic = Finnic contact

- ‘yoke’ PS **jižes-* (*sic*) (oblique case of **jьgo*; CS *igo*) >> PFi. **iskese-* (Fi. *ies*, pl. *ikeet* ‘yoke’)
- ‘bar’ PS **žirdi-* (ORu. *žьrdь*) >> PFi **širti* > **hirsi* (Finn. *hirsi* ‘beam’)
- [a river name] PS **dvainā* (> **dvæinā*; Ru. *Dvina*) >> PFi. **väina* (Finn. *Väinä*)

Kallio (2006)

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► Archaeology

- Yamna Culture (one of “Kurgan Cultures”; mid 4 – 3 Mill. BCE, Danube ~ Ural) → Spread of Corded Ware Cultures ca. 3 Mill. BCE in Europe (Gimbutas 1963).
- Spread of metallurgy / trading network called **Seima-Turbino Transcultural Complex** in the ranges of Corded Ware Cultures in Eastern Europe ~ Northern forest-steppe zone ca. 2200 – 1900 BCE, cf. Chernykh (1992).
- Overlapping the secondary homelands of Uralic languages...
 - Were they Uralic speaking people?
 - Language/Cultural contacts with IE speakers.

Piecing together the fragments of evidence II

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► Paleogenomics

- Haak et al. (2015), Narasimhan et al. (2019): a massive migration from the Eurasian steppes into Europe and South Asia in the 3 Mill. BCE (cf. Anthony 2007: 83ff.);
- Siberian gene flow
 - Uralic speaking populations of the Volga-Ural region show high frequency of Y-Haplogroup N (→ connection to Uralic speaking populations)
 - Y-Haplogroup N spread from Siberia to Fennoscandia later than 3000 BCE and reached the Baltic region 500 BCE (cf. Mitnik et al. 2018, Saag et al. 2019).
 - Admixture of the steppe ancestry and Siberian gene flow in the Seima-Turbino sites, cf. Childebayeva, Fricke, Rohrlach, et al. (2024).

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Migration Routes of Indo-Europeans I



Figure modified from Narasimhan et al. (2019) based on Fortson (2010: map 1.1, p. 12), Hock & Joseph (2019: 37).

Migration Routes of Indo-Europeans II

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What the analysis of ancient DNA tells us about the migration routes:

- ▶ Migration routes particular populations (e.g., of Yamna-ancestry, Siberian gene flow).
- ▶ NB: genetic information itself does not tell anything about the language that its carrier spoke.
- ▶ But the spread of a language was surely caused by the migration / move of its speakers.

Seima-Turbino Transcultural Complex I

A “**metallurgical network**”: “The region is linked through comparable artifact types, by closeness to ores, and by shared metallurgical technologies not easily transmitted without movement of craft workers or even groups of travelers.” (Linduff 2016: 1607).

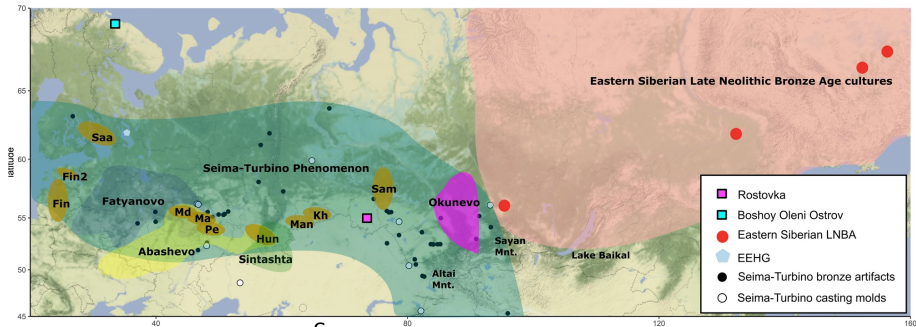
When: 2200 – 1900/1600 BCE

Where: Northern Eurasia (Eurasian Metallurgical Province)

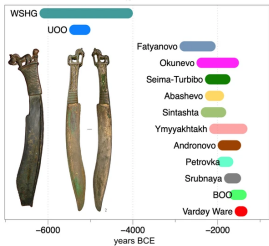
What is found:

- ▶ bronze products (rings, bracelets, headdress, etc.); tools (fish hooks, awls, socketed axe); weapons (socketed spear, knife, etc.)
- ▶ moulds for casting metals (axe, sickle, knife, etc.)
- ▶ workshops (e.g., Mosolovka, where crucible fragments spattered with drops of copper congealed run-off from cracks of moulds alongside dozens of lumps of copper were found. The copper came from the eastern Ural region, cf. Chernykh 1992: 208)

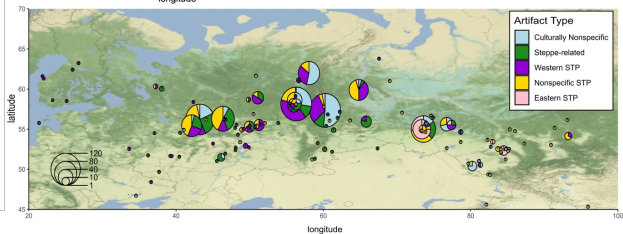
a



b



c



Childebayeva, Fricke, Rohrlach, et al. (2024: 2)

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Seima-Turbino Transcultural

Uralic expansion: a rapid expansion with Seima-Turbino network along the rivers:

- ▶ No IBD (*isolation by distance*) effects on Uralic vocabulary and I-Ir. loanwords → rapid spread
- ▶ no substratum effects
- ▶ a number of separate innovations in the individual branches

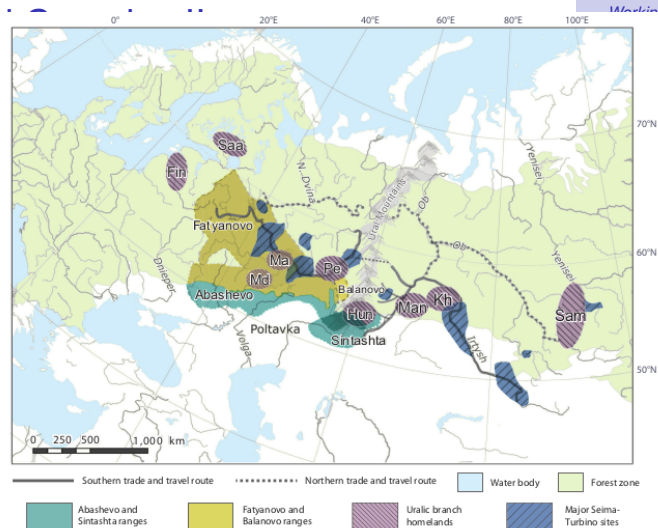
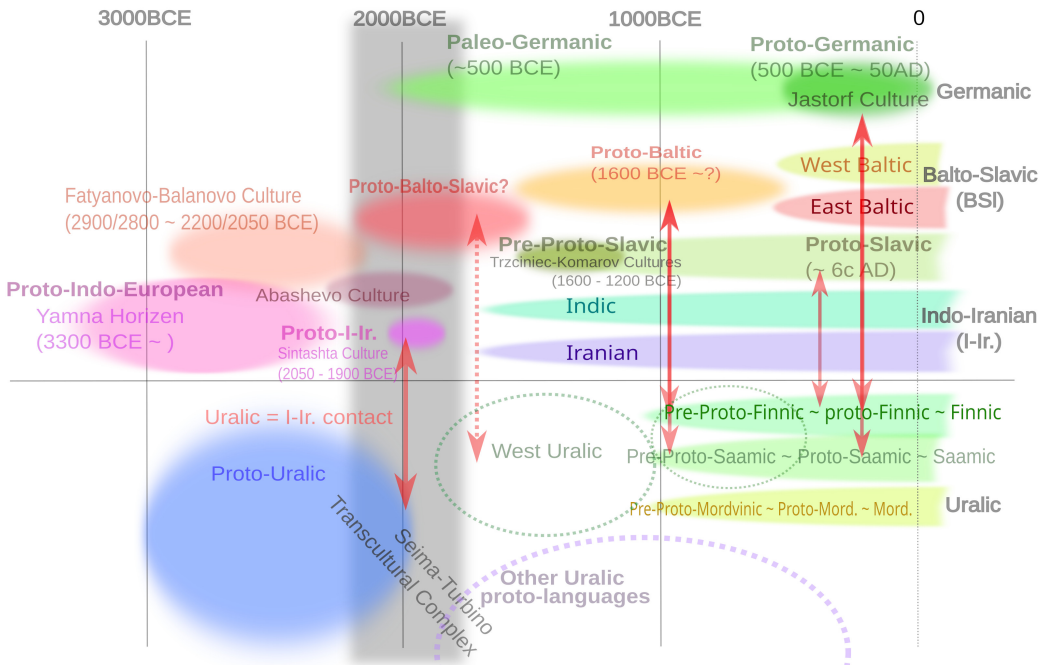


Figure 1

Linguistic and archaeological distributions c. 4200-4000 BP. The light green band across the entire area indicates the recent and

Grünthal, Heyd, et al. (2022).

Figure: Nichols (2021: 359)



Proto-Balto-Slavic **tolkā* or Proto-Baltic **talkā* I

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- ▶ Thomsen (1890: 226): Baltic **talkā* ‘a community of workers that was treated with a feast after work’ >> Finnic, e.g., Finnish *talko*, pl. *talkoot* ‘id.’, Tver Kar. *talkohuš* ‘holding a feast for workers’, Votic *talko* ‘id.’, Livonian *talk* ‘id.’, etc.
- ▶ Also borrowed in Proto-Saamic **tuolkō* ‘bribe’ (> Ume Saa. *duol’goo*, NSaa. *duolgu*, Lule Saa. *duolggo*, s. Kuokkala 2018: 31)

Proto-Balto-Slavic **tolkā* or Proto-Baltic **talkā* II

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Sorting the data on the IE side:

(cf. Trautmann (1923: 321), Vasmer (1953-1958: III, 116), LEW (1053), ME (III, 127), LKŽe)

► Nominal data:

► Baltic

- Lith. *talkà* (AP4) ‘collective labor of the whole or a part of the village; a feast for helpers’
- Latv. *tālka* ‘evening feast for workers assigned to a heavy field work’
tālks ‘a crowd of workers of both genders together that one efficiently hosts for a referred work’
- OPru. *tallokinikis* (voc. sg.) ‘a free man’
- Proto-Baltic **talkā* ‘a community of workers that was treated with a feast after work; or the feast itself’

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Proto-Balto-Slavic **tolkā* or Proto-Baltic **talkā* III

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- ▶ Slavic
 - ▶ Bulg. *tláka* 'serfdom; a free-will work for mutual help'
 - OPol. *łłoka* 'serfdom, agricultural communal labor'
 - Ru. *toloká*, Ukr. *toloká* 'construction work of the community'
 - ▶ Ru. *tolokno* 'crushed oatmeal'
 - Belarus. *tolokno* 'a dish prepared from oatmeal in cold water'
 - >> borrowed to Lith. *talaknà* (4) 'bad porridge, thin puree'
 - ▶ PS **tolká*, acc. **tōlkq* 'a communal labor; workers' (AP c, cf. Dybo 1981: 24)
**tolk-no-* 'crushed oatmeal; oatmeal porridge'
- ▶ Proto-Balto-Slavic **tolkā* 'a community of workers that was treated with a feast after work; or the feast itself'
- ▶ Celtic(!?)
 - ▶ Old Welsh *talch* (m.) 'bran'
 - Welsch *talch* (m.) 'ground grain, oatmeal'
 - (< **talko-* < **tlk-sko-* (?) cf. Matasović 2009: 367)

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Proto-Balto-Slavic **tolkā* or Proto-Baltic **talkā* IV

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- ▶ Verbal data:
 - ▶ Baltic
 - ▶ Lith. *aptĩlkti*, *-sta*, *-o* ‘to become silent, tamed’? According to LEW (1094), the verb belongs to *tĩlti* ‘to become quiet’ with a *-k-* formant.
 - ▶ Slavic
 - ▶ Old Church Slavonic **tlěšti*, *tlbkq* ‘to beat, strike’
- ▶ as if derived from an IE verbal root **telk-* ‘to beat, crush’ (cf. LIV² 623)

Proto-Balto-Slavic **tolkā̃* or Proto-Baltic **talkā̃* V

Reconstructible Derivational History on the IE Side

late PIE verbal root **telk-* ‘to crush, beat’



Nominal formation: **tolk-ó-* ‘something crushed’

→ ‘crushed grain’ → ‘porridge’

[cf. R(o)-ó-type formation, cf. Nussbaum 2017]



Collective: **tolk-éh₂-* ‘meal, food’

> PBS **tolkā̃* ‘feast (for workers)’

(oxytone)



PS **tolká̃* (AP c)

‘group of workers/labor’



PB **talkā̃* (oxytone, non-acute root)

‘group of workers/feast for workers’

Proto-Balto-Slavic **tolkā* or Proto-Baltic **talkā* VI

Working and
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- ▶ PBS **tolkā* ‘feast (for workers)’ >> West Uralic dialect continuum?
- ▶ The possibility that PBS **tolkā* / PB **talkā* gained a derivational suffix **-j* (diminutive?) when it entered the dialect continuum.
 - ▶ Phonologically, the suffixes **-j* and **-w* had an effect to labialize their preceding vowels (cf. Holopainen 2019: 252).
 - ▶ Pre-PSaa./WU **tolkā* / **talkā* + **-j* > PSaa. **tuolkōj*
 - ▶ Root vocalism
cf. core PIE **ǵʰalgʰo-* / **ǵʰalgʰeh₂* (rather **ǵʰolgʰo-* / **ǵʰolgʰeh₂*)
>> PU **ćelkaw* ‘pole, rod’ → **ćelka-j* > PSaa. **ćuolkōj* > NSaa. *čuolggū*
‘rod for pushing nets under ice’, ISaa. *čuolguu* ‘darning needle’;
 - ▶ Regular reflexes of PU **ćelkaw* > PSaa. **ćuolke* > SSaa. *tjoelke*, *tjoeltje*, *tjåaltje* ‘rod for pushing nets under ice’; PFi. *salko* > Finn. *salko* ‘long pole or rod’ (cf. UEW (460ff.), Holopainen 2019: 250, Aikio 2020: 122)

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Proto-Balto-Slavic **tolkā̃* or Proto-Baltic **talkā̃* VII

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- ▶ ‘frost’ PBS **śarmas* (rather **śormos*) >> Proto-Finno-Saa. **śormeš* (Álgu) > Pre-PSaa. **ćuormēs* > NSaa. *çuorpmas* ‘hail’; Finn. *härmä* ‘hoar frost’

Implications for the life of Balt(o-Slavic) and Uralic speakers in contact I

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- ▶ A Proto-Baltic loanword resulting from Uralic = Baltic contact brought about by Seima-Trubino transcultural network.
- ▶ The etymology of PB **talkā* has a particular connection with agricultural context, cf. PBS **tolk-ó-* 'porridge ← *crushed grain'.
- ▶ It is possible that the feast after work meant by PB **talkā* developed out of an agricultural labor (e.g., crushing grains using threshers), which is in general depends on social relationships (cf. Ofstehage 2023 [2020]), such as community labor.
- ▶ Seima-Turbino as metallurgy networks: employer = Uralic (incl. Finnic) speakers (hunter-gatherers, cf. Grünthal, Heyd, et al. 2022: 492⁶)

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Implications for the life of Balt(o-Slavic) and Uralic speakers in contact II

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- ▶ The loanword **talkā* was motivated by an unfamiliar concept?
 - ▶ Uralic people were hunter-gatherers, while Baltic people were familiar with agriculture and related concept (although archaeological evidence lacks, linguistic evidence exists)
 - ▶ Uralic people were not familiar with the feast after work that Proto-Baltic people practiced. That motivated them to loan PB **talkā*.
- ▶ **talkā* in the context of genetic admixture in at least two Seima-Turbino sites (Childebayeva, Fricke, Rohrlach, et al. 2024) & of Uralic expansion into some IE population territory & loanwords:
 - ▶ IE and Uralic-speaking peoples working together in the workshops of metallurgy;
 - ▶ loaning of **talkā* must have happened as a part of their cultural exchange of (eating) habits, also as supported by food-related loanwords.

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Thank you.

Abbreviations



LEW Fraenkel, Ernst (1962–1965).

LIV² Rix, Helmut & Martin Kümmel (2001).

LKŽe *Lietuvių Kalbos Žodynas*. (www.lkz.lt)

ME Mīlenbachs, Kārlis and Jānis Endzelīns, eds. (1923–32).

UEW Rédei, Károly (1988).

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