INDO-EUROPEAN COURSE · MODULE 5

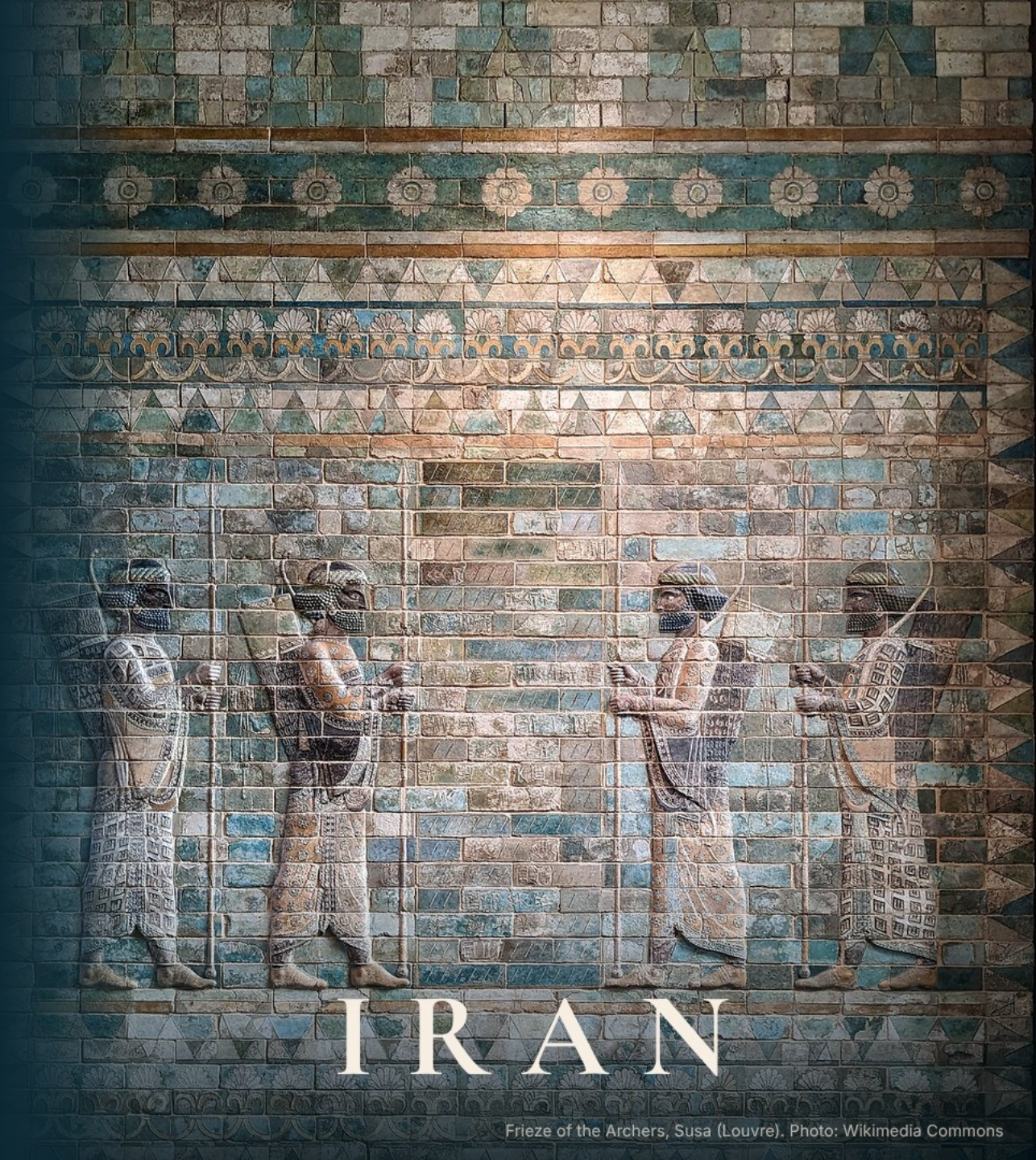
05

The Indo-Iranians and the Persian Language

From Proto-Indo-Iranian to Persian: shared words, sound laws and religion

YSATIS

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Frieze of the Archers, Susa (Louvre). Photo: Wikimedia Commons

What this module covers

1. **The Aryan name**
   Where "Aryan" and "Iran" come from

2. **The branch**
   Indo-Iranian: what unites it and where it lived

3. **The languages**
   Avestan, Old Persian, Middle and New Persian

4. **Sound laws**
   How Persian words changed

5. **Shared words**
   Cognates with Sanskrit, Greek, Latin and English

6. **Religion and loans**
   Gods, ritual terms, and Persian words in English

PART 1

01

The Aryan name

Where “Aryan” and “Iran” come from, and what the term does and does not mean



Persian: an old language with a long record

Old Persian

Cuneiform inscriptions of the Achaemenid kings, about 520–330 BCE (Behistun, Persepolis).

Middle Persian

Language of the Sasanian empire and Zoroastrian books, about 3rd–9th century CE.

New Persian

Written from the 9th century CE: Farsi in Iran, Dari in Afghanistan, Tajik in Tajikistan.

One language, followed for 2,500 years: the same words (for "father", "door", "seven") can be traced through all three stages.

The word "Aryan" and the name "Iran"



- The word was the self-name of the Indo-Aryan and Iranian peoples, set against non-Aryans (an-ārya-, an-airiia-).
- "Aryan" is a linguistic term for the Indo-Iranian branch only.
- Its 19th-century use for the whole Indo-European family rested on a mistake: that Sanskrit was the oldest language.

Source: Schmitt 1987, "Aryans", Encyclopaedia Iranica.

PART 2

02

The Indo-Iranian branch

Where it sits in the family, what is secure, and the Mitanni evidence



Where Indo-Iranian sits in the family



- All ten main subgroups are returned with 100% posterior support, including Indo-Iranic (Heggarty et al. 2023).
- The order of the deepest branches is weakly supported, so branches are shown side by side.

Sources: Heggarty et al. 2023; Schmitt 1987. Schematic, not a resolved family tree.

Indo-Iranian: secure branch, contested history

Secure (A)

Indo-Iranian is a real branch: exclusive sound changes, shared vocabulary and poetic formulas, and 100% posterior support in the 2023 language trees.

Contested (C)

When it split from the rest, and when Indo-Aryan and Iranian separated: about 6,980 BP and 5,520 BP in the 2023 trees (≈ 4980 and 3520 BCE); the critics call the tree weak.

Open question

How and when the branch reached Iran and South Asia: a steppe-belt spread in the 2nd millennium BCE, or earlier movements from the south?

Four sound changes that define the branch

1

a-merger

IE *a, *e, *o become Indo-Iranian *a (and long vowels become *ā).

2

schwa to i

IE *ə becomes Indo-Iranian *i.

3

RUKI rule

IE *s after i, u, r, k becomes *š (Iranian š, Sanskrit ṣ).

4

Genitive plural

The ending *-nām in vowel-stem nouns.

Source: Schmitt 1987, "Aryans", Encyclopaedia Iranica.

Vedic and Avestan: the same phrase

Rigveda 1.61.2

hṛdā́ mánasā

Gathic Avestan, Yasna 31.12

zərədā-čā manaŋhā-čā

"with heart and mind"

- hṛd- / zərəd- "heart" (Persian del) and manas- / manah- "mind" are the same words; only the sound changes differ.
- Such shared phrases show a common poetic tradition, not only shared vocabulary.

Source: Schmitt 1987, Encyclopaedia Iranica (the phrase pair and its gloss).

Shared words for rule, army, land and class

Meaning	Sanskrit	Avestan	Old Persian
rule, sovereignty	kṣatrá-	xšaθra-	xšaça-
(hostile) army	sénā-	haēnā-	hainā-
landed property; homestead	kṣétra-	šōiθra-	—
priest	brāhmaṇá-; hótar-	āθrauuan-; zaotar-	—
warrior	kṣatríya-	raθaēštā-; nar- (Gathic)	—
herder / clansman	vaíśya-	vāstriia-; vāstar- (Gathic)	—

Source: Schmitt 1987, Encyclopaedia Iranica. Persian descendants to be verified.

Shared with Balto-Slavic

Meaning	Slavic / Baltic	Sanskrit	Iranian
green	Slavic *zel-en-; Baltic *žal-ya-	hárita-	*ʒar-i-
hair	Slavic *vals-u	(replaced)	*warc-a-
to swim	Slavic *plō-, *pluv-	plav-	*fraw-
cold	Baltic *šal-t-a-	(śītá-)	*car-ta-

The 2019 genetic study found the steppe ancestry in South Asia matches that of Bronze Age Eastern Europe, a movement that "likely spread" the features shared by Indo-Iranian and Balto-Slavic (Narasimhan et al. 2019).

Sources: Kassian and Starostin 2023 (citing Kassian et al. 2021); Narasimhan et al. 2019. Reconstructions are the authors' own.

The oldest written Indo-Aryan: Mitanni

Names

Royal names such as Artatama, Tušratta and Šattiwaza are Indo-Aryan, in a Hurrian-speaking state.

Gods

Mitra, Varuṇa, Indra and the Nāsatyas are invoked in treaties found at Boğazköy (Hittite capital).

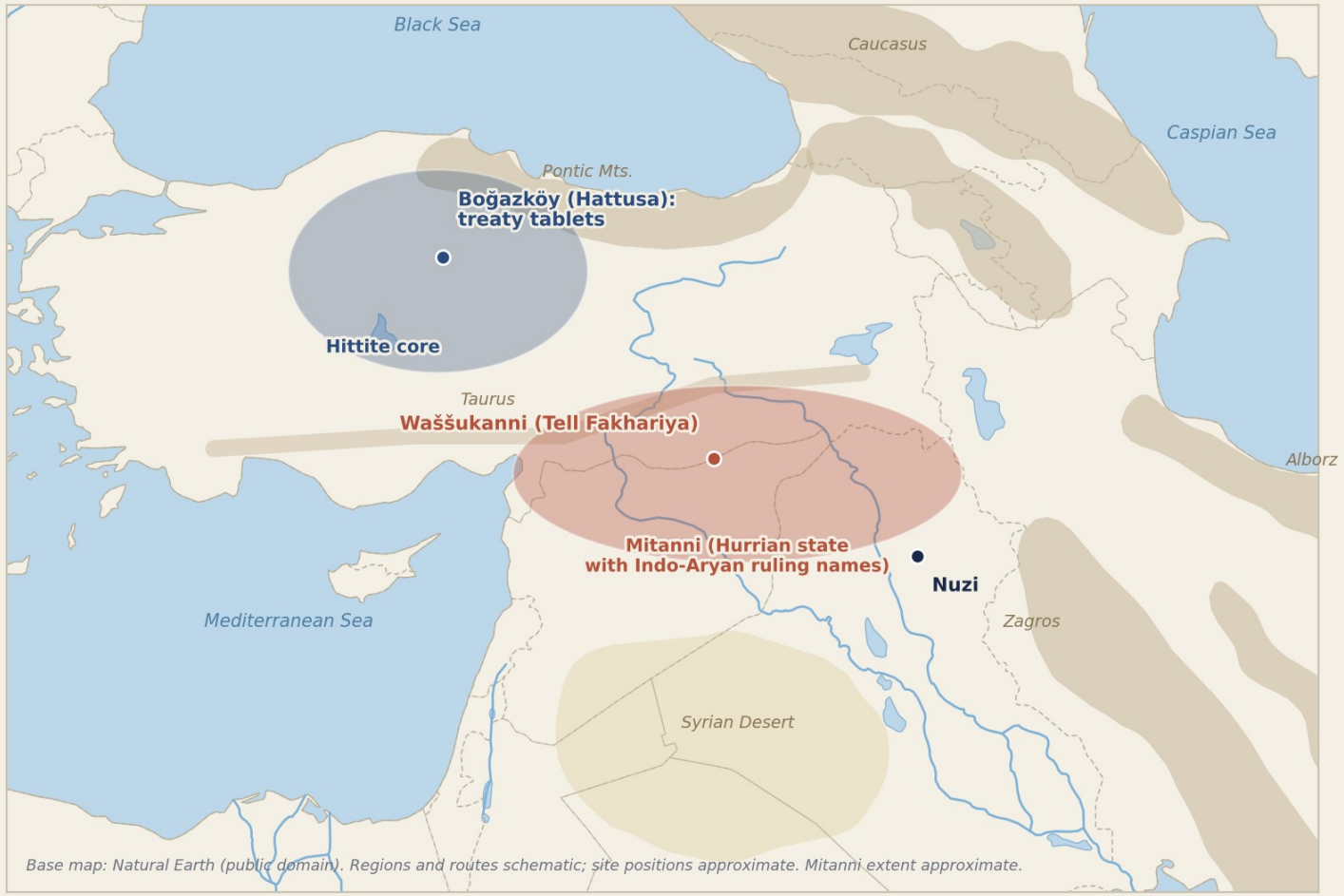
Horse words

Technical terms for horse-training survive in cuneiform records of the 15th–14th centuries BCE.

Caution: Indo-Aryans in northern Mesopotamia do not prove that Indian Indo-Aryans came by the same route (Schmitt 1987).

Sources: Schmitt 1987; Gnoli 2004, Encyclopaedia Iranica.

Mitanni and the Hittite archives



- Mitanni lay in northern Mesopotamia; its rulers had Indo-Aryan names (Schmitt 1987).
- Treaty tablets found at Boğazköy, the Hittite capital, invoke Mitra, Varuṇa, Indra and the Nāsatyas (Gnoli 2004).
- Caution: this does not show that Indian Indo-Aryans travelled this way.

Base map: Natural Earth (public domain). Overlays drawn for this course; Mitanni extent approximate. Sources: Schmitt 1987; Gnoli 2004.

Kikkuli's horse manual: numbers in Indo-Aryan form

Meaning	Mitanni (Kikkuli)	Sanskrit	Persian
one	aika-	éka-	yek (different word)
three	tera-	tri-	se
five	panza-	páñca	panj
seven	satta-	saptá	haft
nine	na-	náva	noh

"Turn" (round of exercise) is vartanna in the manual, matching Sanskrit vartana-. The numbers show an Indo-Aryan, not Iranian, form (satta keeps the s that Persian turned into h).

Tier B. Source: Mayrhofer 1966 (cited in Gnoli 2004); Schmitt 1987 on Mitanni horse terms. To verify.

Where did the Indo-Iranians live?

Philology (1987)

Most scholars: Central Asian steppes of Sogdiana, Chorasmia and Bactria, and the area north of them (Schmitt).

Ancient DNA

Steppe ancestry reaches the Swat Valley in the 2nd millennium BCE; the BMAC shows none in its main population (Narasimhan 2019; Damgaard 2018).

Challenge

No Andronovo artefacts in Iran or northern India; the signal is small and late (Heggarty 2025, quoting Lamberg-Karlovsky).

Present the language facts as firm and the route as a hypothesis.

Sources: Schmitt 1987; Narasimhan et al. 2019; Damgaard et al. 2018; Heggarty 2025.

Three positions on the map



- Steppe-belt view: steppe ancestry reaches the Swat Valley in the first half of the 2nd millennium BCE (Narasimhan 2019; Damgaard 2018).
- The main BMAC population carried no steppe ancestry; outliers appear about 2100–1700 BCE.
- Challenge: no Andronovo artefacts in Iran or northern India (Heggarty 2025, quoting Lamberg-Karlovsky).

Base map: Natural Earth (public domain). Overlays drawn for this course. Positions: Narasimhan et al. 2019; Damgaard et al. 2018; Heggarty 2025.

PART 3

03

The Iranian languages

Old Avestan and Old Persian to Middle and New Persian



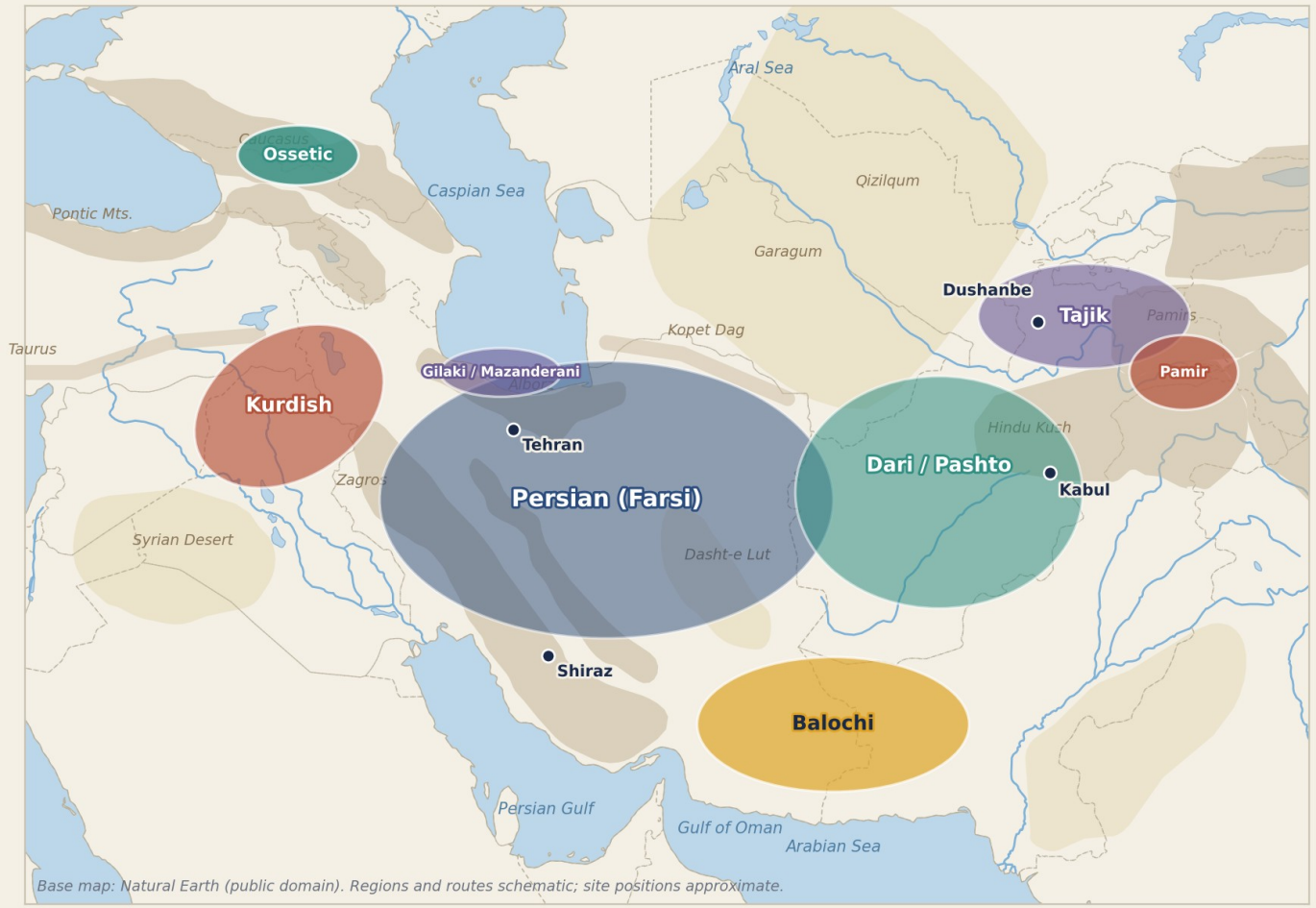
Old, Middle and New Iranian

Old Iranian	Middle Iranian	New Iranian
to c. 330 BCE	c. 330 BCE – 900 CE	c. 900 CE – today
Avestan Old Persian (Median)	Middle Persian (Pahlavi) Parthian, Sogdian Bactrian, Khotanese	Persian · Kurdish · Pashto Balochi · Ossetic Pamir languages

Persian is the one language you can follow through all three stages.

Periodisation: standard textbook values, to be verified (Skjærvø; Windfuhr 2009; Kent 1953).

Iranian languages today (schematic)



- Western: Persian (Farsi, Dari, Tajik), Kurdish, Balochi, Gilaki, Mazanderani.
- Eastern: Pashto, Pamir languages, Yaghnobi, Ossetic.
- Ossetic descends from Alanic, whose name keeps the old "Aryan" self-designation (Schmitt 1987).

Base map: Natural Earth (public domain). Language areas drawn for this course; approximate. Grouping: standard overview (Windfuhr 2009), to verify.

Avestan and Old Persian

Avestan

Language of the Zoroastrian scriptures. The Gāthās, its oldest part, are the closest Iranian text to the Rigveda (Schmitt 1987). Written in a script made for the Avesta; read in transliteration.

Old Persian

Language of the Achaemenid inscriptions, about 520–330 BCE, in a cuneiform script introduced about 520 BCE. Ancestor of Middle and New Persian.

Median

Known only from names and loanwords, such as spāka "dog" (Persian sag).

Sources: Schmitt 1987; textbook-level dates to be verified.

The Avesta: texts and layers

Old Avestan

The Gāthās: 17 hymns, the oldest part of the Avesta and closest to the Rigveda in language (Schmitt 1987).

Younger Avestan

Most of the rest: Yasna, Yashts to the gods (for example Yasht 10 to Mithra), Vendidad, Visperad.

The record

Oral for centuries. An alphabet made from the Pahlavi script recorded the texts as pronounced, perhaps in the early 7th century CE; the earliest manuscripts are about 1000 CE (Skjærvø).

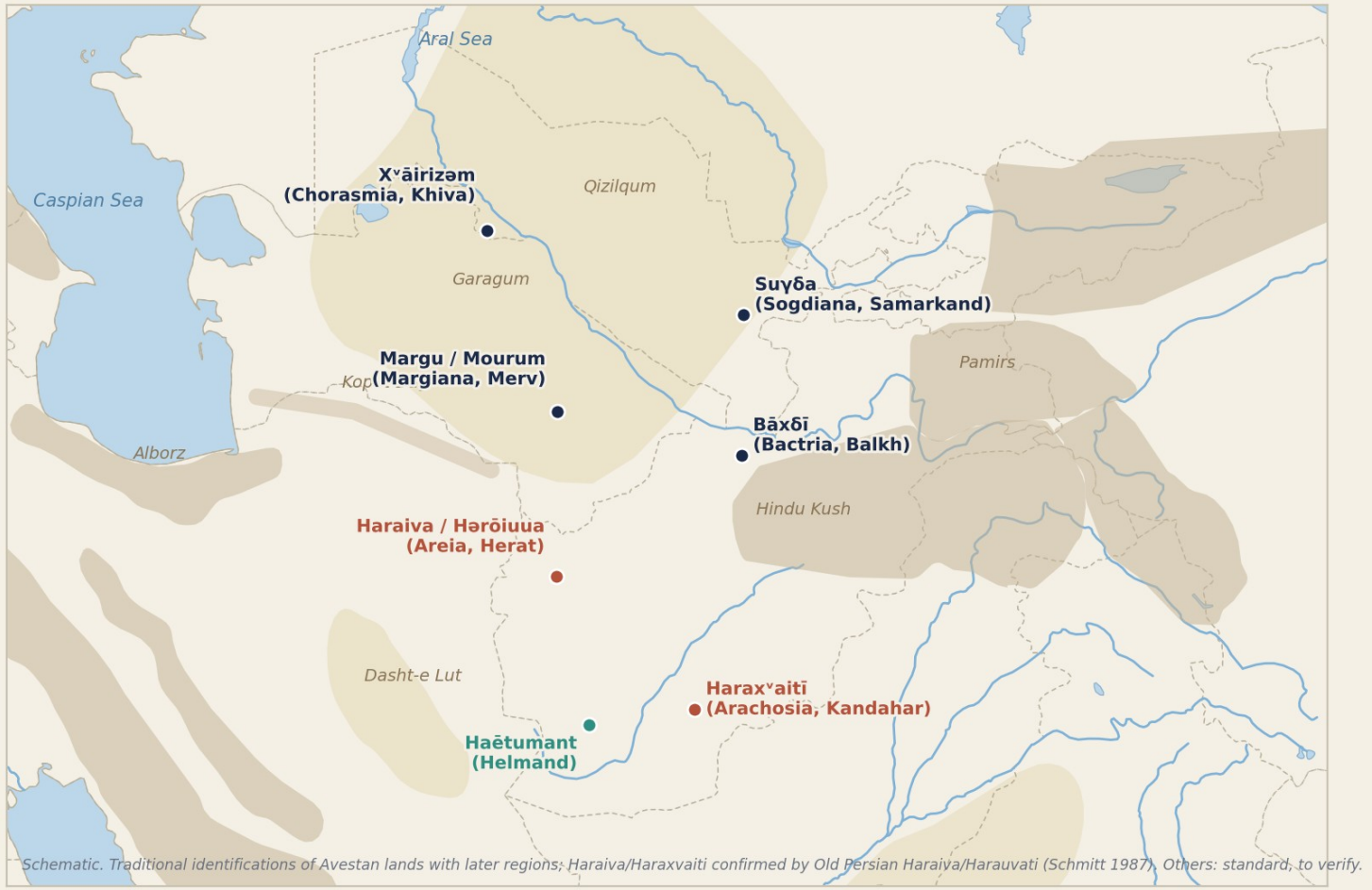
Sources: Schmitt 1987; Gnoli 2004; Skjærvø, "Iran vi (3) Writing Systems" (script, manuscripts). Verified.

Reading Avestan: a pronunciation guide

Letter	Approximate sound	Example	Meaning
ā, ī, ū	long vowels	mātar-	mother
ə	weak vowel, like the "a" in "about"	zərəd-	heart
ŋ	"ng" as in "sing"	manaŋhā	by the mind
θ, δ	"th" in "thin"; "th" in "this"	θri; pāδa-	three; foot
š, x, xᵛ	"sh"; "ch" in "Bach"; "kw" with the x	ašta; xᵛaŋhar-	eight; sister
uu, ii	the glides "w" and "y"	nauua-; airiia-	new; Aryan
ae, ao	diphthongs	daēva-; haoma-	demon; a ritual plant

Approximate values (transliteration); reconstructed pronunciation. To verify in Skjærvø.

The lands of the Avesta (traditional identifications)



- Avestan place names are traditionally tied to eastern Iran and Central Asia.
- Firm link: Avestan Haraiva / Haraxᵛaitī match Old Persian Haraiva "Areia" and Harauvatī "Arachosia" (Schmitt 1987).
- Others (Margiana, Bactria, Sogdiana, Chorasmia, Helmand) are standard identifications to verify.

Base map: Natural Earth (public domain). Overlays drawn for this course. Firm pairs from Schmitt 1987; other identifications are standard and should be verified.

Old Persian: a script made for kings

A new script

Old Persian cuneiform has few signs and differs from Mesopotamian cuneiform. It was probably invented under Darius I to record his deeds (Skjærvø) and appears about 520 BCE, after the relief (Luschey).

Three languages

Behistun is trilingual. The Elamite text is the oldest; the Babylonian and Old Persian versions were added later (Luschey).

Not ideal for the language

Vowel length is mostly not shown, and some sounds (h before u, n before a consonant) are not written. There was no standard spelling (Skjærvø).

Sources: Skjærvø, "Iran vi (3) Writing Systems"; Luschey, "Bisotun ii" (both Encyclopaedia Iranica). Verified.

An Old Persian inscription



- Old Persian cuneiform is a script of its own, different from the Mesopotamian systems, with few signs (Skjærvø).
- Vowel length is mostly not shown, and some sounds are not written.
- There was no standard spelling: the same word could be spelled differently under Darius and Xerxes.

Inscription in Old Persian cuneiform, photograph by Luigi Pesce, 1848. Metropolitan Museum of Art (DP203048), CC0.

Photo: Luigi Pesce, 1848, Metropolitan Museum of Art, CC0 (sources.csv). Script facts: Skjærvø, Iran vi (3) Writing Systems, Encyclopaedia Iranica.

Two Old Persian sentences

adam akunavam

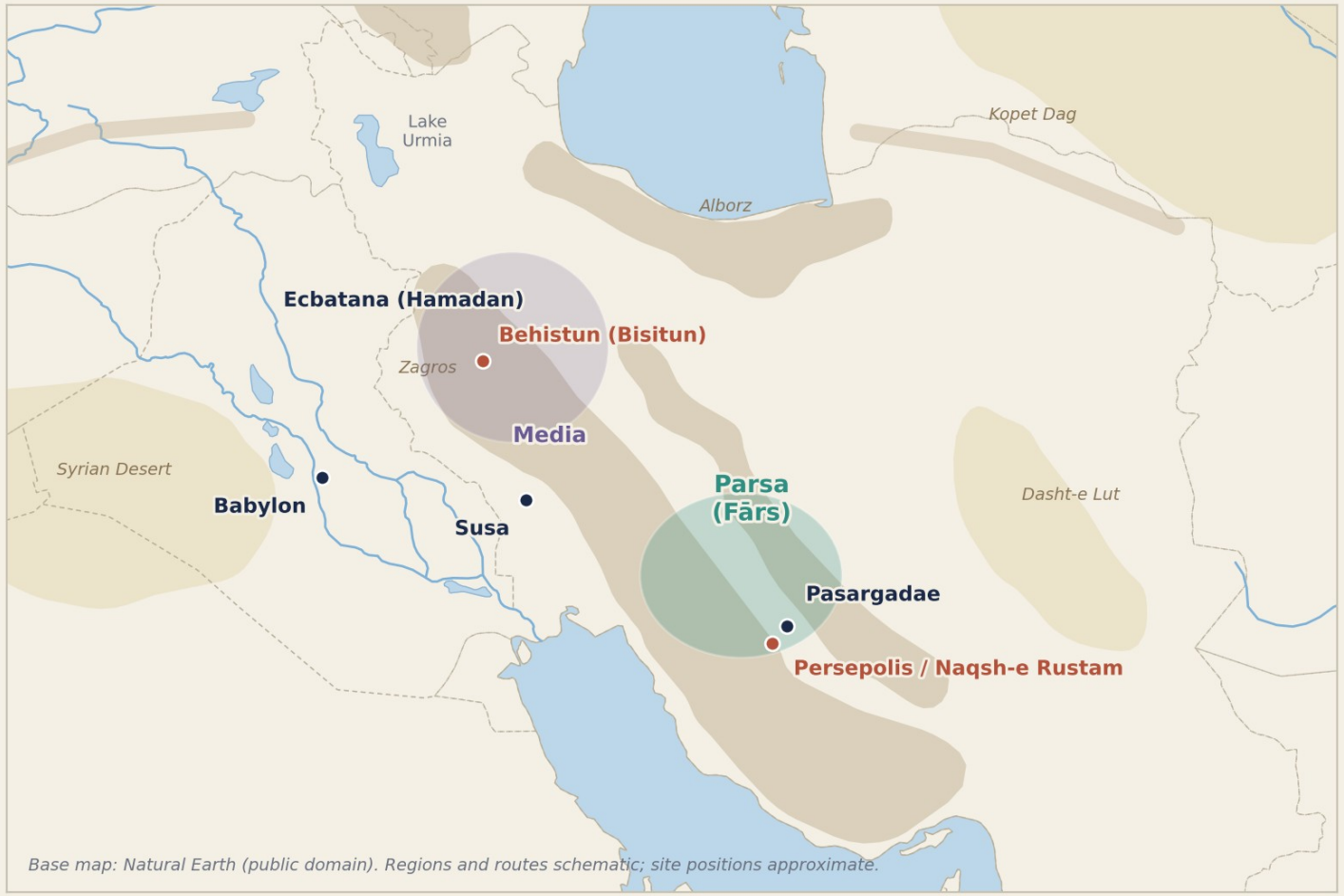
"I made" · adam "I" + akunavam "I made" (stem kun-; Persian kardan, present stem kon-)

Auramazdā-maiy upastām abara

"Ahuramazda bore me aid" · abara "bore" from bar- (Persian bordan; Sanskrit abharat); Auramazdā → Hormozd

Tier B. Text and glosses to verify in Kent 1953 and Schmitt 2009.

Where Old Persian was written



- Behistun (Bisotun, from Old Persian *Bagastāna "place of the god(s)"): the trilingual rock inscription and relief of Darius, about 520 BCE.
- Persepolis and Naqsh-e Rustam: royal inscriptions in the Persian heartland, Parsa (Fārs).
- Susa and Ecbatana: Achaemenid centres in Elam and Media.

Base map: Natural Earth (public domain). Overlays drawn for this course; site positions approximate.

Persepolis: the Apadana stairway



Apadana, eastern stairway, Persepolis, photograph by Luigi Pesce, 1848. Metropolitan Museum of Art (DP203044), CC0.

- Persepolis lies in Parsa (Fārs), the Persian heartland; by 639 BCE the Persians had almost reached it (Schmitt 1987).
- Royal inscriptions and reliefs here carry the Old Persian language into stone.
- Photograph by Luigi Pesce, 1848, held by the Metropolitan Museum of Art.

Photo: Luigi Pesce, 1848, Metropolitan Museum of Art, CC0 (sources.csv). Persians reaching Fārs: Schmitt 1987, Encyclopaedia Iranica.

Middle and New Iranian languages

Group	Languages	Notes
Middle western	Middle Persian (Pahlavi), Parthian	Sasanian inscriptions and Zoroastrian books; Parthian in the Arsacid era
Middle eastern	Sogdian, Bactrian, Khwarezmian, Khotanese (Saka)	Silk-road languages, mostly 1st millennium CE texts
Steppe	Scythian, Sarmatian, Alanic	Names and glosses; Ossetic descends from Alanic
New western	Persian (Farsi, Dari, Tajik), Kurdish, Balochi, Gilaki, Mazanderani	Persian is the standard language of Iran, Afghanistan and Tajikistan
New eastern	Pashto, Pamir languages, Yaghnobi, Ossetic	Yaghnobi continues a Sogdian dialect

Standard overview; to be verified in Windfuhr (ed.) 2009, The Iranian Languages.

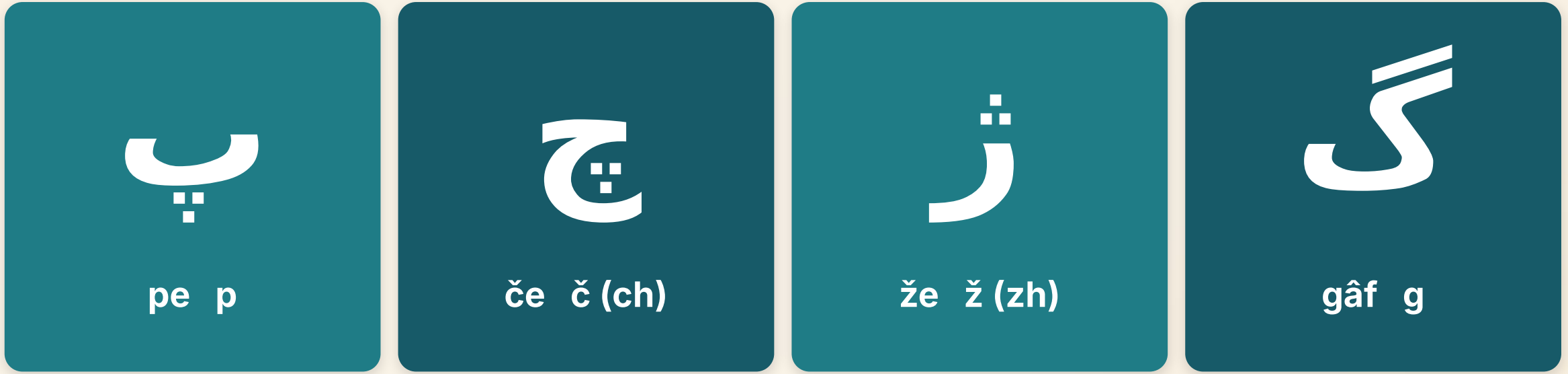
Middle Persian: the language of the Sasanians

Middle Persian	Meaning	New Persian
Ērānšahr	"domain of the Aryans"	Irān (shahr "city")
šahr	"realm, city"	šahr "city"
Pārsīg	"Persian"	Fârsi (via Arabic)
wuzurg	"great"	bozorg
dil	"heart"	del

The name of the empire and of the language both come from Old Iranian words for "Aryan" and "Persian".

Tier B. Middle Persian forms approximate; verify (MacKenzie, Concise Pahlavi Dictionary). Aryan self-name: Schmitt 1987.

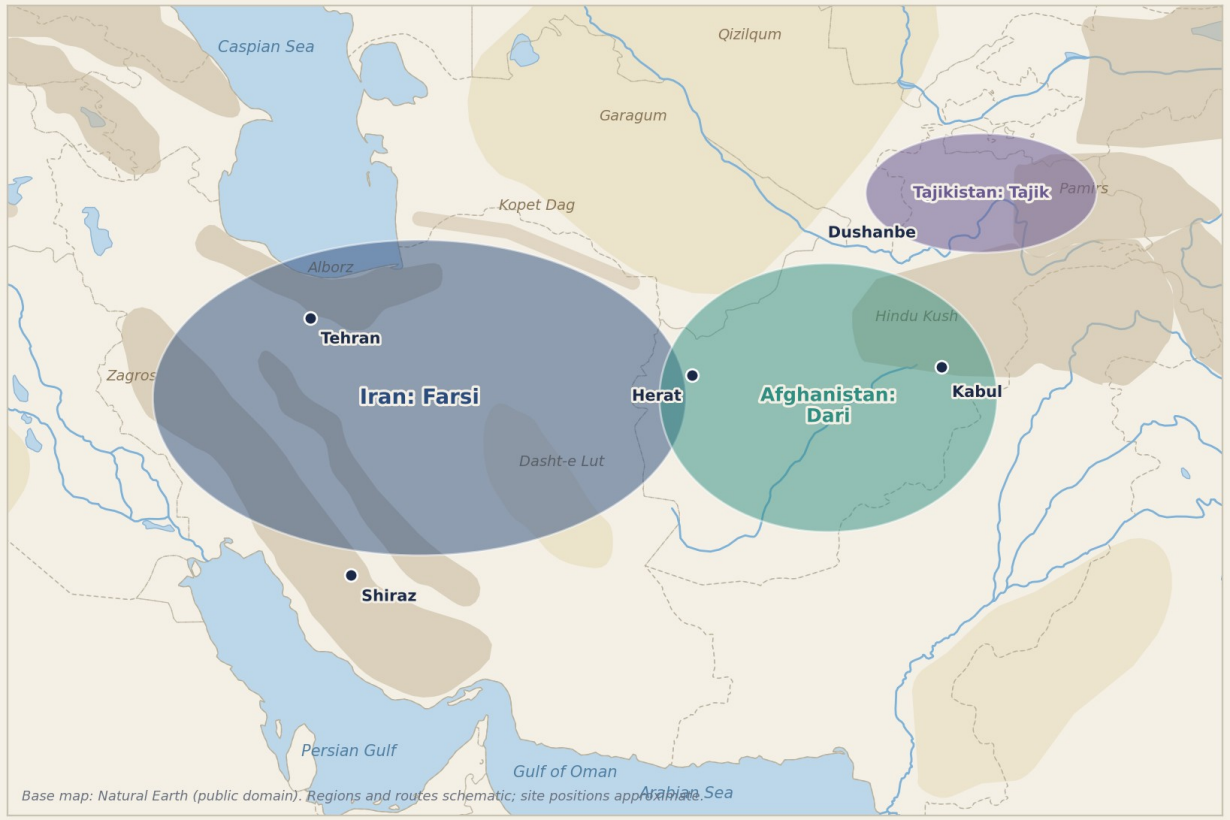
New Persian: Arabic script, four new letters



- Four letters were added to the Arabic alphabet for the sounds of Persian.
- The classical age: Rudaki (10th century), Ferdowsi's Shāhnāme (about 1010 CE).
- Tajik, in Tajikistan, is written in Cyrillic.

Standard facts; to verify in Windfuhr (2009) and a history of Persian literature.

One language, three countries



Word	Iran	Afghan. (Dari)	Tajik
book	ketâb	kitāb	китоб (kitob)
water	âb	āb	об (ob)
house	xâne	xāna	хона (xona)

Dari and Tajik keep the long vowels ī / ē and ū / ō apart; Tehran Persian has merged them.

Base map: Natural Earth (public domain). Overlays drawn for this course. Words: standard forms (tier B, to verify).

Other Iranian languages

Language	Where	Note
Kurdish (Kurmanji, Sorani)	Kurdistan region	Western Iranian
Balochi	Balochistan (Iran, Pakistan, Afghanistan)	Western Iranian
Pashto	Afghanistan, Pakistan	Eastern Iranian
Ossetic	Central Caucasus	Descends from Alanic (Scythian-Sarmatian world)
Pamir languages (Shughni, Wakhi…)	Pamir mountains	Eastern Iranian, many small languages
Yaghnobi	Tajikistan	Continues a Sogdian dialect

Check: "seven" in Persian haft, Kurmanji heft, Balochi hapt, Pashto owə, Ossetic avd (tier B: verify).

Standard overview; to verify in Windfuhr (ed.) 2009, The Iranian Languages.

How Iranian languages were written

Script	Used for
Old Persian cuneiform (its own script)	Old Persian royal inscriptions
Avestan alphabet (made from Pahlavi)	the Avesta, as pronounced about 1000 CE
Scripts from Imperial Aramaic	Middle Persian (Pahlavi), Parthian, Sogdian, Chorasmian
Arabic script	Persian (Farsi, Dari), Kurdish, Pashto, Balochi
Greek script (with one added letter)	Bactrian
Brāhmī	Khotanese, Tumshuqese
Cyrillic; Latin	Tajik and Ossetic; Kurmanji Kurdish

Source: Skjærvø, "Iran vi (3) Writing Systems", Encyclopaedia Iranica. Verified.

When the Iranians enter history

843 BCE

Persians as Parsuaš, south-west of Lake Urmia

836 BCE

Medes named in an Assyrian inscription of Shalmaneser III

691 BCE

Persians near the Bakhtiari mountains, allies of Elam

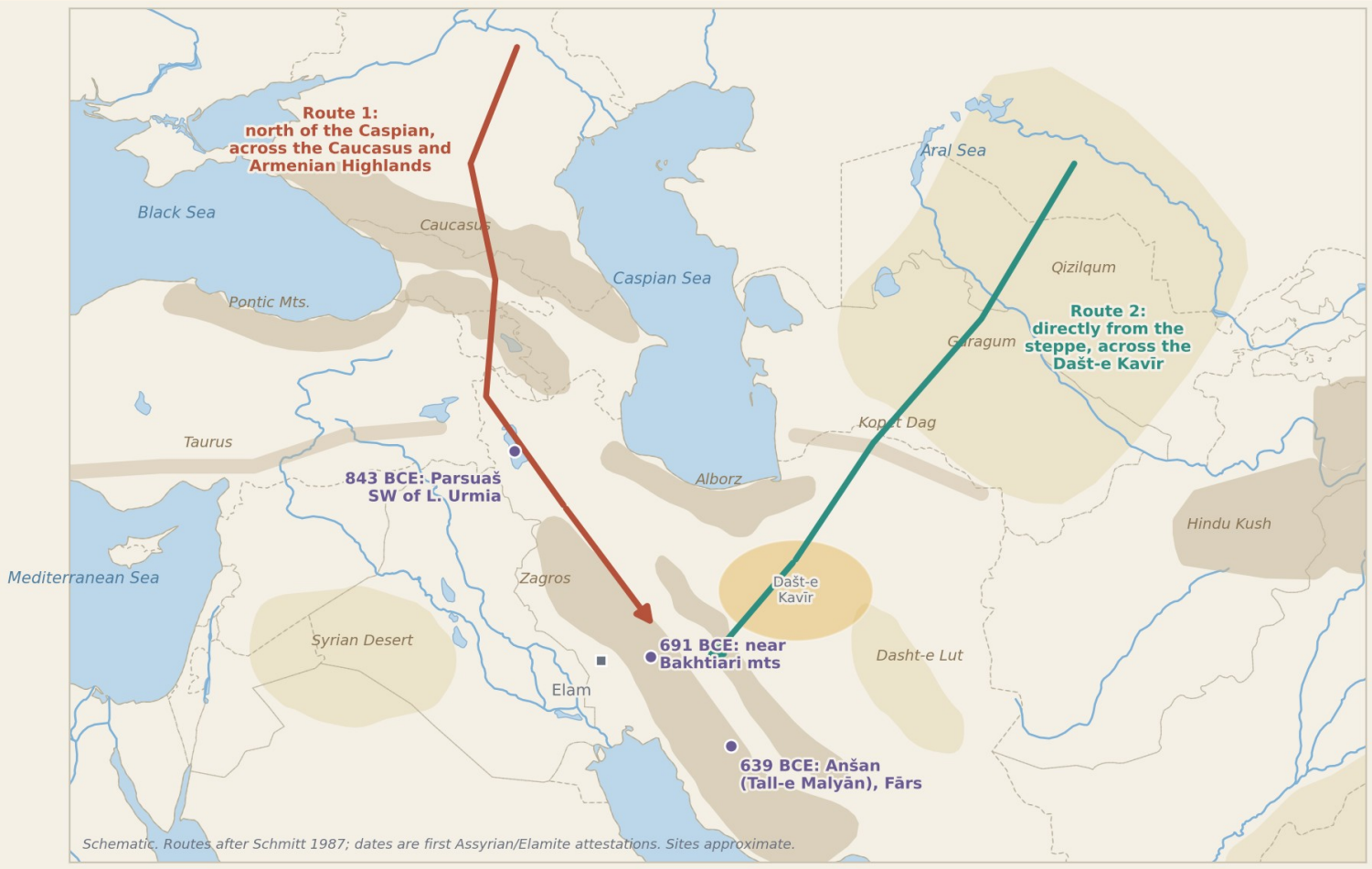
639 BCE

Cyrus I rules Parsumaš and Anšan: Persians almost in Fārs

- Two possible routes into Iran: north of the Caspian and across the Caucasus; or straight from the steppes across the Dašt-e Kavīr.
- The Iranians arrived considerably later than the Indo-Aryans reached the Near East and India (Schmitt 1987).

Source: Schmitt 1987, Encyclopaedia Iranica (Assyrian records).

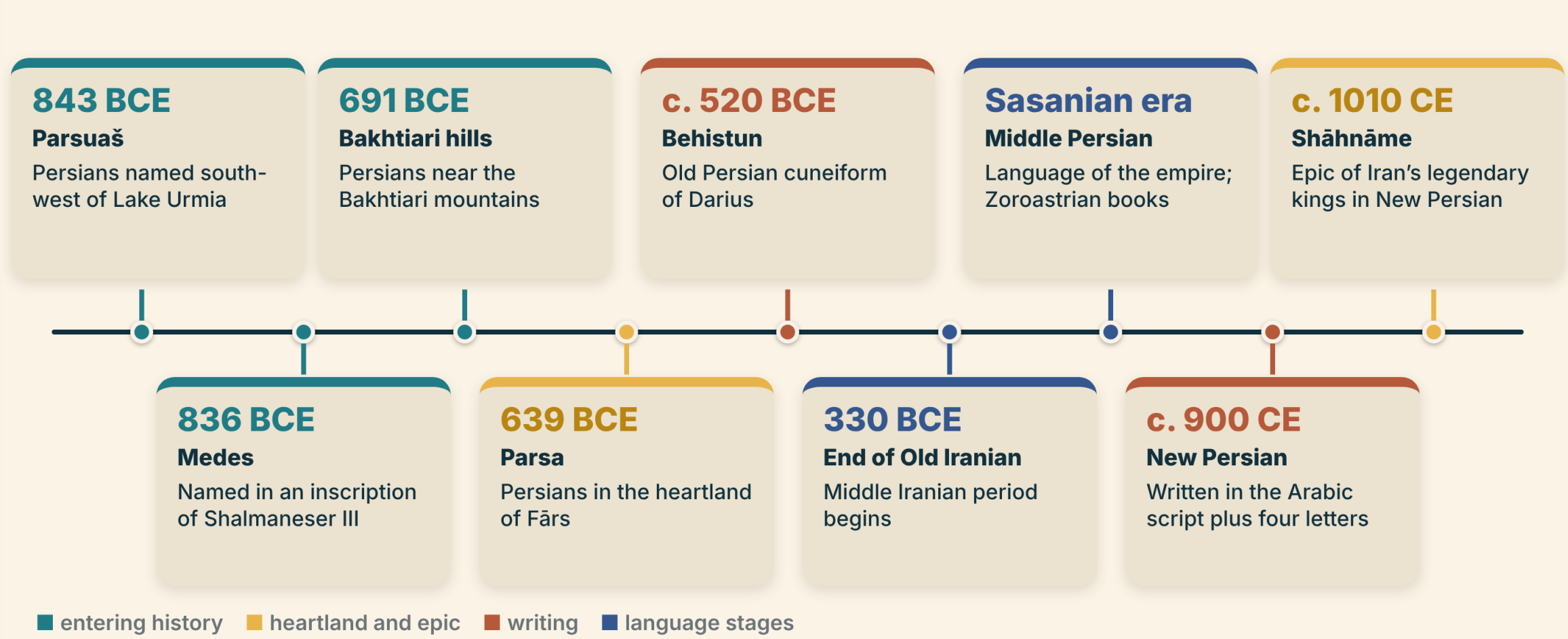
The Persians move south-east



- Two possible routes into Iran (Schmitt 1987): north of the Caspian and across the Caucasus; or straight from the steppes across the Dašt-e Kavīr.
- Assyrian records place the Persians south-west of Lake Urmia (843 BCE), then near the Bakhtiari mountains (691 BCE), then in Fārs at Anšan (639 BCE).

Base map: Natural Earth (public domain). Overlays drawn for this course. Routes and dates: Schmitt 1987; site positions approximate.

Persian across 2,800 years



Tier A/B: dates as on slides 16, 17, 22 to 24, 27 to 34 and 64 (Schmitt; Windfuhr 2009).

PART 4

04

Sound laws and corridors

How Indo-European sounds became Indo-Iranian and Persian



How to read the Persian words

Written	Sound	Example
â	long a, like "a" in "all"	mâdar "mother" /mɒːdær/
a	short a, like "a" in "cat"	dast "hand" /dæst/
e, o	short e and o	pedar "father"; do "two"
x	like "ch" in German "Bach"	xâhar "sister" /xɒːhær/
č, j	"ch" in "church"; "j" in "judge"	čahâr "four"; panj "five"
š, ž	"sh" in "ship"; "s" in "measure"	šeš "six"
ʔ (glottal)	a brief stop before a vowel	ʔâb "water"

Standard Tehran Persian; values approximate. Full key in dossier Part 6.2.

From PIE to Persian: the main sound corridors

PIE	Persian	English	Example
***p**	p	f	*ph₂tḗr: Persian pedar; English father
***bʰ**	b	b	*bʰréh₂tēr: Persian barâdar; English brother
***dʰ**	d	d	*dʰwer-: Persian dar; English door
***ḱ (palatovelar)**	s (via Av. s)	h	*ḱm̥tóm: Persian sad; Latin centum; English hundred
***ǵ**	d (via Av. z)	k	*ǵneh₃-: Persian dân-; Latin (g)nōscere; English know
***e, *o, *a**	a / e / o	e, o, a	Merged into *a in Proto-Indo-Iranian (Schmitt 1987)

Simplified; checked against the innovations in Schmitt 1987. Reconstructions to be verified (Mayrhofer; Beekes; de Vaan).

Iranian versus Indo-Aryan

Feature	Sanskrit	Avestan / Old Persian	Persian
s → h	saptá "seven"	hapta	haft
s → h	sóma-; asura-	haoma-; ahura-	hom; Hormozd
bh → b	bhrā́tar- "brother"	brātar-	barâdar
j/h → z → d	hṛd- "heart"	zərəd-	del
j/h → z → d	hásta- "hand"	zasta-	dast
meaning shift	devá- "god"	daēva- "demon"	dīv "demon"

Sources: Schmitt 1987; Gnoli 2004; standard correspondences to be verified.

The s → h shift: seven, soma, and India

seven	*Sanskrit saptá*	s → h	*Avestan hapta*	→	*Persian haft*
ritual plant	*Sanskrit sóma*	s → h	*Avestan haoma*	→	*Persian hom*
"lord, god"	*Sanskrit ásura*	s → h	*Avestan ahura*	→	*Persian Hormozd*

Sources: Schmitt 1987; Gnoli 2004. Persian forms are standard; verify.

From Old Persian to Persian: sound ladders

Old Iranian	Middle Persian (approx.)	Persian	Change shown
OP vazraka- "great"	wuzurg	bozorg	v → b; k → g
Av. vāta- "wind"	wād	bâd	v → b; t → d
Av. zasta- "hand"	dast	dast	z → d
Av. zərəd- "heart"	dil	del	z → d; vowel changes
Av. ātar- (nom. ātarš) "fire"	ātaxš	âtaš	keeps the old nominative -š
OP ariyānām "of the Aryans"	ērān	Irān	a country name from a people name
OP dahyu- "country"	deh	deh	meaning narrows to "village"

Old Iranian forms: Schmitt 1987 and standard grammars. Middle Persian forms approximate; verify.

Persian versus English: Grimm's Law in action

PIE sound	Persian keeps	English shows	Example pairs
***p**	p	f	pedar ~ father; pâ ~ foot
***t**	t	th	to ~ thou
***d**	d	t	dah ~ ten; dandân ~ tooth
***g^w**	g	k (c)	gâv ~ cow
***b^h**	b	b	barâdar ~ brother

Persian kept the older stops. English shifted them, so the same word looks different.

Tier A, standard comparative linguistics. Pairs to verify in Mayrhofer; Beekes; de Vaan.

"Hundred": satem and centum

Satem

Indo-Iranian · Balto-Slavic · Armenian · Albanian

Avestan satəm · Sanskrit śatám · Persian sad · Lithuanian šimtas

Centum

Italic · Celtic · Germanic · Greek · Tocharian · Anatolian

Latin centum · Greek (he)katón · Old Irish cét · English hundred

The split is now read as an areal pattern, not a family tree.

Tier A for the word sets; tier B for the interpretation. To verify in Fortson and Mallory and Adams.

Persian verbs: two stems from old forms

Infinitive	Past stem	Old participle	Sanskrit	Present stem
kardan "do, make"	kard	*kṛta-	kṛtá-	kon-
mordan "die"	mord	*mṛta-	mṛtá-	mir-
bordan "carry"	bord	*bṛta-	bhṛtá-	bar-

Persian past tenses grew out of the old "-ta" participle; the same suffix gives Sanskrit forms such as kṛtá- "done".

Tier B: Old Iranian participle forms to verify (Cheung 2007; Skjærvø).

Verified chains: Old Persian to Persian

Persian	Middle Persian	Old Persian / Avestan	Meaning
mâdar, pedar	mādar, pidar	mātā, pitā	mother, father
barâdar, xâhar	brād(ar), xwāhar	brātā; *swásā (PII)	brother, sister
nâm, now	nām, nōg	nāma, nava	name, new
asb, gâv, gorg	asp, gāw, gurg	aspa, gāuš, varka	horse, cow, wolf
mâh, âb	māh, āb	māha, ap-	moon, water
bâd, bozorg	wād, wuzurg	vātah, vazr̥ka	wind, great
man, mard	man, mard	manā, martiya	I, man
âtaš	ātaxš	Av. ātarš (nom.)	fire

Source: Wiktionary etymology lines (CC BY-SA), collected in C_summary.csv; secondary source, to cross-check in Bartholomae and Steingass.

PART 5

05

Shared words

Cognate tables from kinship to numbers, and the Rigveda



How to read a cognate table

Same source

Cognates descend from one ancestor word; the match is in regular sound correspondences, not in looks alone.

Three or more branches

A secure set shows the same pattern in at least three branches (here Persian, Sanskrit, Greek/Latin, English).

No borrowing

If a word looks borrowed or has a cultural stamp, it is treated as a loanword, not a cognate.

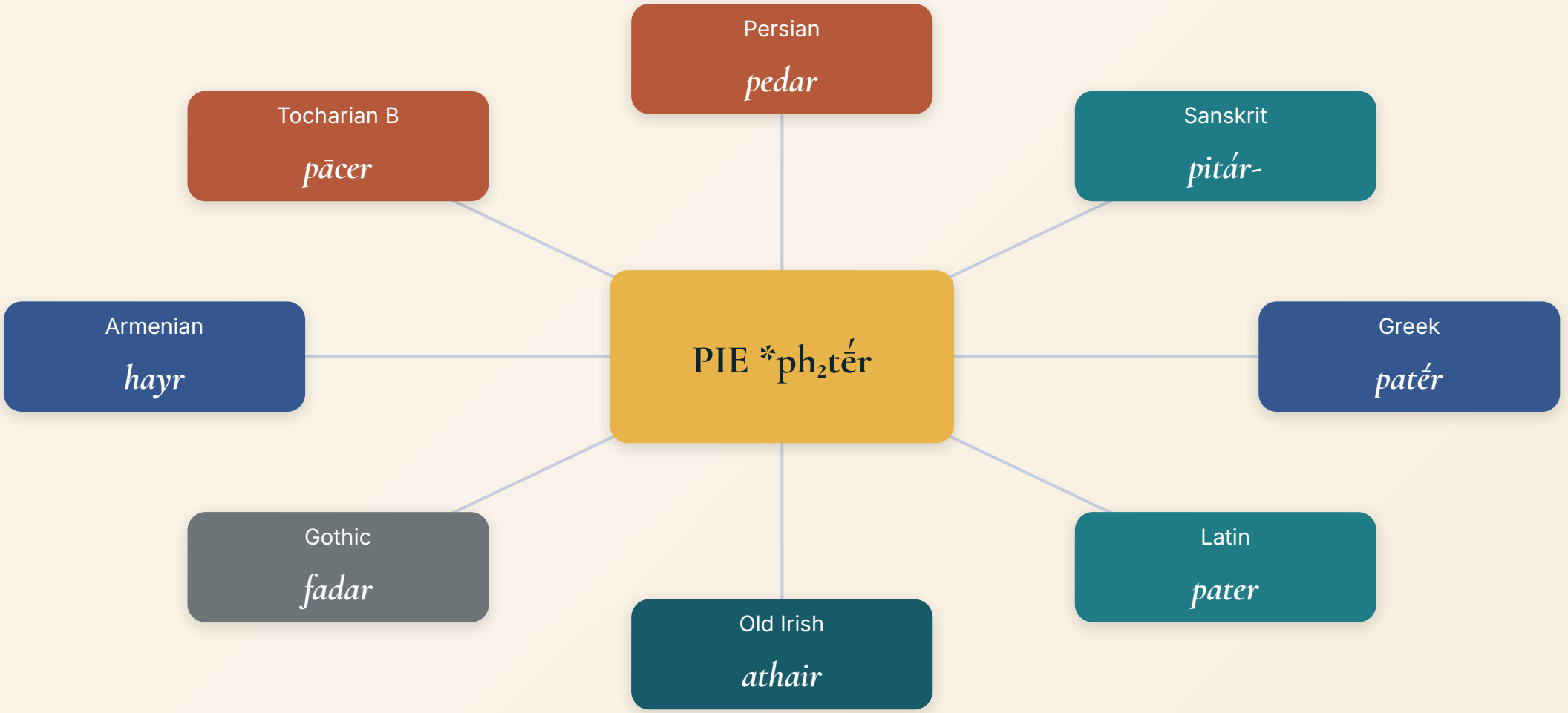
All rows in the following tables are tier A (textbook-secure). Items that need dictionary checks are listed on the "still to verify" slide.

Kinship words

Meaning	Persian	IPA	Old Iranian	Sanskrit	Greek / Latin	English
mother	مادر *mâdar*	/mɒːdær/	mātar-	mātár-	Gk. mḗtēr; Lat. māter	mother
father	پدر *pedar*	/pedær/	pitar-	pitár-	Gk. patḗr; Lat. pater	father
brother	برادر *barâdar*	/bærɒːdær/	brātar-	bhrā́tar-	Lat. frāter; Gk. phrā́tēr	brother
sister	خواهر *xâhar*	/xɒːhær/	xᵛaŋhar-	svásar-	Lat. soror	sister
daughter	دختر *doxtar*	/doxtær/	dugədar-	duhitár-	Gk. thugátēr	daughter
widow	بیوه *bive*	/biːve/	viδauuā	vidhávā	Lat. vidua	widow

*Tier A. PIE: *méh₂tēr, *ph₂tḗr, *bʰréh₂tēr, *swésōr, *dʰugh₂tḗr, *h₁widʰéwh₂. To be verified (Mayrhofer; Beekes; de Vaan).*

One word for "father", eight branches



Tier A. Armenian loses the initial p; Old Irish too; Gothic shows Grimm's Law (p → f). To verify in Beekes; Fortson.

Numbers 2 to 5

Meaning	Persian	IPA	Old Iranian	Sanskrit	Greek / Latin	English
two	دو *do*	/do/	dva	dvá	Gk. dúo; Lat. duo	two
three	سه *se*	/se/	θri	tráyas	Gk. treîs; Lat. trēs	three
four	چهار *čahâr*	/tʃæhɒːr/	caθwārō	catvā́raḥ	Gk. téttares; Lat. quattuor	four
five	پنج *panj*	/pændʒ/	panca	páñca	Gk. pénte; Lat. quīnque	five

Tier A. "One" is omitted: the word for one differs across the branches.

Numbers 6 to 100

Meaning	Persian	IPA	Old Iranian	Sanskrit	Greek / Latin	English
six	شش *šeš*	/ʃeʃ/	xšvaš	ṣáṭ	Gk. héx; Lat. sex	six
seven	هفت *haft*	/hæft/	hapta	saptá	Gk. heptá; Lat. septem	seven
eight	هشت *hašt*	/hæʃt/	ašta	aṣṭá	Gk. oktṓ; Lat. octō	eight
nine	نه *noh*	/noh/	nauua	náva	Gk. ennéa; Lat. novem	nine
ten	ده *dah*	/dæh/	dasa	dáśa	Gk. déka; Lat. decem	ten
hundred	صد *sad*	/sæd/	satəm	śatám	Gk. (he)katón; Lat. centum	hundred

Tier A. Persian haft ~ Sanskrit sapta shows s → h; Persian sad ~ Latin centum shows satem vs centum.

"Seven" across six languages

English	Latin	Greek	Sanskrit	Avestan	Persian
seven	*septem*	*heptá*	*saptá*	*hapta*	*haft* هفت

PIE *septm̥

Greek and Iranian both changed initial s to h, but independently. Sanskrit, Latin and English kept s.

Tier A. Illustrative cognate strip; the s → h changes in Greek and Iranian are independent.

Body and everyday words

Meaning	Persian	IPA	Old Iranian	Sanskrit	Greek / Latin	English
heart	دل *del*	/del/	zərəd-	hṛ́d-	Gk. kardíā; Lat. cor	heart
tooth	دندان *dandân*	/dændɒːn/	dantan-	dánt-	Gk. odṓn; Lat. dēns	tooth
foot	پا *pâ*	/pɒː/	pāδa-	pā́d-	Gk. poús; Lat. pēs	foot
tongue	زبان *zabân*	/zæbɒːn/	hizuuā	jihvā́	Lat. lingua	tongue
name	نام *nâm*	/nɒːm/	nāman-	nā́man-	Gk. ónoma; Lat. nōmen	name
new	نو *now*	/now/	nauua-	náva-	Gk. néos; Lat. novus	new

*Tier A. PIE: *kérd, *h₃dónts, *pṓds, *dn̥ǵʰwéh₂s, *h₁néh₃mn̥, *néwos.*

Animals

Meaning	Persian	IPA	Old Iranian	Sanskrit	Greek / Latin	English
horse	اسب *asb*	/æsb/	aspa-	áśva-	Lat. equus; Gk. híppos	(OE eoh)
cow	گاو *gâv*	/gɒːv/	gāuš	gáuḥ	Gk. boûs; Lat. bōs	cow
dog	سگ *sag*	/sæg/	spā; Median spāka-	śvá	Gk. kúōn; Lat. canis	hound
wolf	گرگ *gorg*	/gorg/	vəhrka-	vṛ́ka-	Gk. lúkos; Lat. lupus	wolf
bear	خرس *xers*	/xers/	arəša-	ṛ́kṣa-	Gk. árktos; Lat. ursus	(none)
mouse	موش *muš*	/muːʃ/	mūš-	mū́ṣ-	Gk. mûs; Lat. mūs	mouse

*Tier A. Persian sag continues OP *sakah, a variant of the Iranian dog-word seen in Median spāka- (Wiktionary). PIE: *h₁éḱwos, *gʷṓws, *ḱwṓ, *wl̥kʷos, *h₂r̥tkos, *muh₂s.*

Nature and objects

Meaning	Persian	IPA	Old Iranian	Sanskrit	Greek / Latin	English
moon, month	ماه *mâh*	/mɒːh/	māh-	mā́s-	Gk. mḗn; Lat. mēnsis	moon, month
star	ستاره *setâre*	/setɒːre/	star-	stṛ́-, tārā-	Gk. astḗr; Lat. stella	star
wind	باد *bâd*	/bɒːd/	vāta-	vā́ta-	Lat. ventus	wind
door	در *dar*	/dær/	dvar- (OP duvara-)	dvā́r-	Gk. thúrā; Lat. forēs	door
wheel	چرخ *čarx*	/tʃærx/	čaxra-	cakrá-	Gk. kúklos	wheel

*Tier A. PIE: *méh₁n̥s, *h₂stḗr, *h₂wéh₁n̥tos, *dʰwer-, *kʷékʷlos.*

Verbs and pronouns

Meaning	Persian	IPA	Old Iranian	Sanskrit	Greek / Latin	English
carry	بردن *bordan (bar-)*	/bordæn/	bar-	bhár-	Lat. ferō; Gk. phérō	bear
be, become	بودن *budan*	/buːdæn/	bū-	bhū́-	Lat. fuī; Gk. phúō	be
is	است *ast*	/æst/	asti	ásti	Lat. est; Gk. esti	is
give	دادن *dâdan (deh-)*	/dɒːdæn/	dā-	dā́-	Lat. dare; Gk. dídōmi	—
stand	ایستادن *istâdan*	/ʔiːstɒːdæn/	hištaiti	tíṣṭhati	Lat. stāre; Gk. hístēmi	stand
know	دانستن *dânestan (dân-)*	/dɒːnestæn/	zan-	jñā-	Lat. (g)nōscere; Gk. gignṓskō	know
you (sg.)	تو *to*	/to/	tū	tvám	Lat. tū	thou

*Tier A. PIE: *bʰer-, *bʰuh₂-, *h₁ésti, *deh₃-, *steh₂-, *ǵneh₃-, *túh₂.*

A case form that became "I"

Old Persian

adam "I" (nominative)
manā "my" (genitive)

Cognates of adam

Sanskrit ahám; Avestan azəm; Latin ego; English I.

Persian

man "I" comes from the genitive manā; the old nominative was lost.

Tier A: Middle Persian man meant "me" early and "I" later; it comes from Old Persian manā (Wiktionary etymology, cites references).

Cognate or look-alike?

Pair	Verdict	Why
pâ / foot	cognate	Both from *pṓds; regular p → f (Grimm's Law)
mordan / murder, mortal	cognate	Both from PIE *mer- "die"
bad / bad	unrelated (chance)	Persian bad continues Middle Persian wad; English bad has an obscure Germanic origin

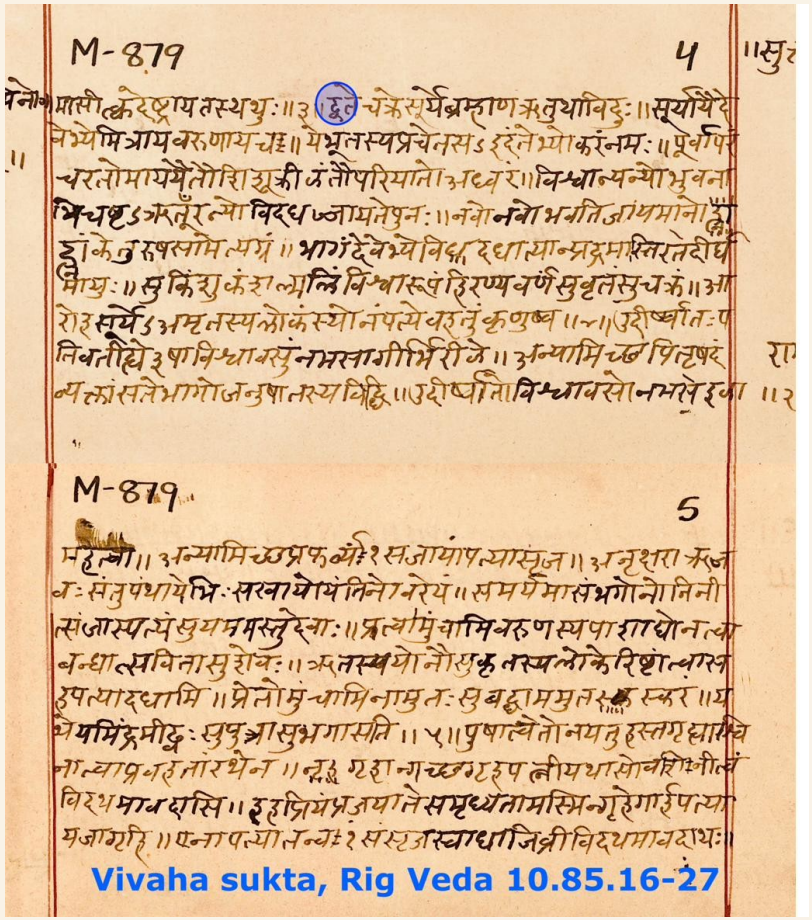
Teaching decision path; examples to be verified in specialist dictionaries.

The first verse of the Rigveda

Rigveda word	Meaning	Avestan counterpart	Persian
agní-	fire; the fire-god	ātar- (a different word)	âtaš
yajñá-	sacrifice	yasna-	jašn "feast" (verify)
devá-	god	daēva- "demon"	dīv "demon"
hótar-	priest	zaotar-	(Middle Persian zōt)

Translation: Griffith 1896 (public domain), from the supplied PDF. Word links: Schmitt 1987; Gnoli 2004. Sanskrit wording to verify (Jamison and Brereton 2014).

A Rigveda manuscript page



- A Devanāgarī manuscript page (M-879) with Rigveda 10.85, the "Vivāha sūkta", the wedding hymn.
- The Rigveda is the oldest Indo-Aryan text and the closest relative of the Gāthās of the Avesta (Schmitt 1987).
- Griffith's 1896 translation is public domain and is in the project files.

Rigveda 10.85.16–27, Vivāha sūkta, Devanāgarī manuscript page. Photo: Ms Sarah Welch, CC BY-SA 4.0 (Wikimedia Commons).

Image: Ms Sarah Welch, CC BY-SA 4.0 (sources.csv). Rigveda and Gāthās: Schmitt 1987, Encyclopaedia Iranica.

PART 6

06

Religion, cosmos and calendar

Gods, rites, burial, months and Persian words in English



Gods and demons: a word that flipped

devá- / daēva-

India: "god"
Iran (after Zoroaster): "demon, false god"
Old Persian daiva-; Persian dīv

ásura- / ahura-

Iran: "lord"; Ahura Mazdā, the supreme god
India: divine beings, later often opposed to the devas
Persian Hormozd (from Ahura Mazdā)

The two words traded places in the two traditions: a good example of religious change inside inherited vocabulary.

Sources: Gnoli 2004; Schmitt 1987, Encyclopaedia Iranica.

Truth, order, and sacrifice

Concept	Vedic	Avestan / Old Persian
truth, cosmic order	ṛtá-	aša-; Old Persian ṛta-
sacrifice	yajñá-	yasna-
sacred utterance	mántra-	mąθra-
sacrificial priest	hótar-	zaotar-
fire priest	átharvan-	āθrauuan-

Zoroaster kept the old vocabulary and gave it new ethical meaning (Gnoli 2004).

Sources: Gnoli 2004; Schmitt 1987.

Fire and soma / haoma

Fire

Agní- in India, Ātar- in Iran: the central ritual fire. Zoroastrian tradition keeps three ritual fires (priests, warriors, farmers).

Soma / Haoma

A ritual plant, a drink and a deity in both traditions. Same word with the Iranian s → h shift: sóma / haoma (Persian hom).

Ritual words

yajñá- / yasna- "sacrifice"; hótar- / zaotar- "priest": the same ritual vocabulary in both.

Sources: Gnoli 2004; Schmitt 1987. The botanical identity of soma/haoma is debated and is not claimed here.

Mitra, Mithra and Persian Mehr

*Indo-Iranian *mitra-*	*Vedic Mitrá-*	*Avestan Miθra-*	*Persian mehr*
"pact, treaty"	a vaguer god	god of treaties (Yasht 10)	friendship, sun, month name

- Mitra is also named in the Mitanni treaties (Gnoli 2004).
- The same god gave rise to the Mithraic mysteries in Anatolian and Mesopotamian circles.



Sources: Gnoli 2004; Schmitt 1987. Persian descent standard; verify.

Victory, Indra and Bahrām

India

Indra, the god whose epithet vṛtrahan "smiter of resistance" marks him as the great warrior-god.

Iran

Vərəθraγna "smiting of resistance", the personified victory, kept in Zoroastrianism; Persian Bahrām. Indra himself is listed among the demons.

Mitanni

Indra, Mitra, Varuṇa and the Nāsatyas appear in treaty tablets from Boğazköy.

Source: Gnoli 2004. Scholars do not agree on how Vərəθraγna and Indra relate.

The first man and the dragon

Figure	India	Iran
first man / king	Yamá-, son of Vivásvant	Yima-, son of Vīuuaŋhvant
ruler of the dead	Yama (underground realm)	Yima (golden-age king)
dragon-slayer story	Indra and the dragon Viśvarūpa	Aži Dahāka (Persian Zahhāk)

Open question (Schmitt 1987): how much of the myth belongs to Proto-Aryan times.

Sources: Gnoli 2004; Schmitt 1987.

One word, three languages: Vedic, Avestan, Persian

Vedic Sanskrit	Avestan	Persian
mitrá- “pact”	Miθra- god of treaties	mehr “friendship, sun”
saptá	hapta	haft “seven”
sóma	haoma	hom “ritual plant”
devá- “god”	daēva- “false god”	dī “demon”
ásura- “lord”	ahura- “lord”	Ahura Mazdā
Indra vṛtrahan	Vərəθraγna “victory”	Bahrām
agní-	ātar-	sacred fire

Tier A: as on slides 58 to 63 (Gnoli 2004; Skjaervo; Kent 1953). Individual Persian forms: verify in Windfuhr 2009.

Persian epic keeps the old stories



- The Shāhnāme (about 1010 CE) retells Iran's legendary kings and heroes in New Persian.
- Its early dynasties belong to the mythical history that Gnoli ties to the haoma sacrifice and the dragon fight (Gnoli 2004; Yarshater).
- Persian Jam / Jamshid and Zahhāk continue Yima and Aži Dahāka (standard; to verify).

"Haftvad and the Worm", folio from the Shahnama of Shah Tahmasp, attributed to Dust Muhammad, about 1540. Public domain.

Image: attributed to Dust Muhammad, c. 1540 (public domain; sources.csv). Epic dates: standard. Myth links: Gnoli 2004; verify Persian continuations.

The cosmos: seven regions and a world mountain

Feature	India	Iran
seven regions	dvīpa-	karšvar- (Persian kešvar "country")
central region	Jambūdvīpa	Xʸaniraθa
world mountain	Meru (Sumeru)	Harā bərəzaitī (Alborz)
miraculous tree	Jambū Tree	Tree of All Seeds

Source: Gnoli 2004. Persian kešvar and Alborz are standard continuations; verify.

Burial and the dead

India

Cremation of the corpse, then burial of the bones.

Iran

Exposure to vultures (later the towers of silence), then burial of the bones.

Shared origin

Both probably grew from an original inhumation. The Avestan word daxma may come from a root "to bury".

Source: Gnoli 2004 (a likely reconstruction, not proven).

The Persian year keeps Avestan names

Month	Avestan source	Month	Avestan source
Farvardin	Fravašis	**Mehr**	Miθra
Ordibehešt	Aša Vahišta	**Ābān**	Āpō
Khordād	Haurvatāt	**Āzar**	Ātar
Tir	Tištriia	**Dey**	Dadvah (verify)
Mordād	Amərətāt	**Bahman**	Vohu Manah
Šahrivar	Xšaθra Vairiia	**Esfand**	Spəntā Ārmaiti

Zoroastrian calendar: 12 months of 30 days; Avestan sources name only seven of the twelve months, and the day names are Old Iranian (Panaino, Calendars i). Etymologies of the names: standard, to verify (Boyce).

Older and sideways: other Iranian month names

Calendar	Month name	Meaning
Old Persian	Garmapada	"heat-station" month
Old Persian	Θāigraciš	"garlic-collecting" month
Old Persian	Bāgayādiš	"worship of baga (Mithra)" (probably)
Old Persian	Āçiyādiya	"worship of the fire"
Armenian	Mehekan	"month of Mithra", from *Miθrakāna-
Armenian	Trē	from Middle Persian tīr

The Persian month names we use today belong to the later Zoroastrian calendar, not to the Achaemenid one.

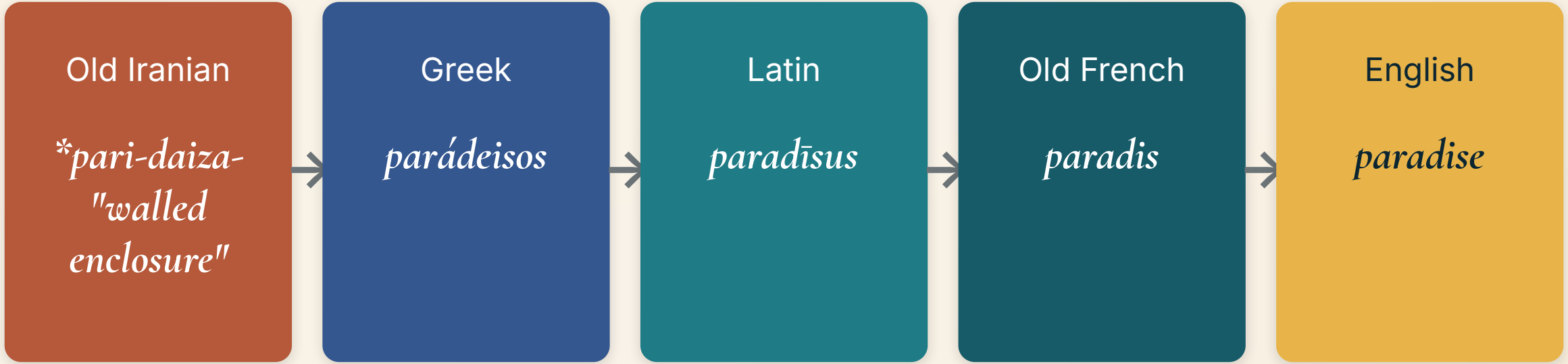
Source: Panaino, "Calendars i. Pre-Islamic calendars", Encyclopaedia Iranica. Verified.

Persian words in English

English	Persian / Old Iranian source	Route
paradise	Old Iranian *pari-daiza- "walled enclosure"	Greek → Latin → Old French → English
bazaar	bâzâr	Persian → Italian/Turkish → English
caravan	kârvân	Persian → Italian/French → English
khaki	xâki "dusty" (from xâk "dust")	Persian → Urdu → British India → English
pajamas	pây "leg" + jâme "garment"	Persian → Hindi/Urdu → English
magic	Old Persian maguš	Greek mágos → Latin → English
satrap	Old Persian xšaçapāvan- "protector of the realm"	Greek satrápēs → Latin → English
peach	Latin Persicum "Persian"	Latin → Old French → English

Tier A. To be confirmed in the OED and etymological dictionaries.

The path of "paradise"



A word for a walled royal park became the word for heaven.

Standard etymology; verify in the OED.

Case study: the opening of the Behistun inscription

Old Persian	Meaning	Persian continuation
adam	I	(replaced by man; cognate: Latin ego, English I)
Dārayavauš	Darius	Dâryuš, Dârâ
xšāyaθiya-	king	šâh (šâhanšâh "king of kings")
vazraka-	great	bozorg
dahyu-	country	deh "village"

Text (Old Persian): adam Dārayavauš xšāyaθiya vazraka xšāyaθiya xšāyaθiyānām xšāyaθiya Pārsiy xšāyaθiya dahyūnām. "I am Darius, the great king, king of kings, king in Persia, king of countries."

Text and glosses: Kent 1953; Schmitt 2009 (to be verified). Persian continuations standard.

Module 5 in numbers

17
hymns in the Gāthās, the oldest layer of the Avesta

4
sound changes define the Indo-Iranian branch

3
languages in the Behistun inscription

520–330
BCE: Old Persian inscriptions of the Achaemenids

330 BCE–900 CE
Middle Iranian period

c. 900 CE
New Persian begins, in Arabic script

4
letters added to the Arabic alphabet for Persian

12 × 30
months and days of the Zoroastrian calendar

7 of 12
month names found in Avestan sources

843 BCE
first Persians named in Assyrian records

639 BCE
Persians in the heartland of Fārs

1010 CE
about when the Shāhnāme was completed

Tier A/B: values as on slides 16 to 34, 64 and 68 (Schmitt; Panaino; Windfuhr 2009).

Who's who in Indo-Iranian studies

Rüdiger Schmitt

"Aryans", Encyclopaedia Iranica (1987); Old Persian grammar and inscriptions

Gherardo Gnoli

"Indo-Iranian religion" (2004): shared gods, ritual and myth

Prods Oktor Skjærvø

Avestan and Iranian writing systems; reading guides

Roland Kent

Old Persian: Grammar, Texts, Lexicon (1953)

Manfred Mayrhofer

Indo-Aryan in the Mitanni and Kikkuli material (1966)

Gernot Windfuhr (ed.)

The Iranian Languages (2009): the standard overview

Antonio Panaino

Pre-Islamic calendars and the Persian month names

Kassian & Starostin

An informal review of Heggarty et al. 2023

Narasimhan et al.

2019: steppe ancestry in South Asia and the BMAC

Tier B: titles and years as in Sources; verify details before citing (see Words to verify).

Takeaways

1

A branch you can hear

Persian, Sanskrit and Avestan share sounds, words and phrases that follow regular laws.

2

The name travels

"Aryan" became "Irān": an old self-name carried in a country's name.

3

Religion in the words

Gods, ritual and myth are visible in shared vocabulary, even when meanings flip.

Next: Module 4 (comparative method and the whole family), then Avestan and Old Persian texts in more depth.

Check your understanding

1. Which four sound changes define Indo-Iranian?
2. What does “Aryan” mean in the ancient sources?
3. Name the three languages of the Behistun inscription.
4. Give the date range of Old Persian inscriptions.
5. What is the Avesta, and what are the Gāthās?
6. How do Vedic deva and Avestan daēva differ?
7. What does Mitanni show about Indo-Aryan?
8. Which letters did Persian add to the Arabic alphabet, and how many?
9. How many months does the Persian calendar have, and how long?
10. What is the Shāhnāme?

Questions drawn from slides 4 to 71.

Check your understanding: answers

1 **a-merger, ə→i, RUKI, -nām**
Vowel merger; schwa to i; s→š after i, u, r, k; genitive plural -nām.

2 **A self-name**
Ārya-, airiia-, ariya-: set against non-Aryans; source of Irān.

3 **Old Persian, Elamite, Akkadian**
A trilingual inscription of Darius.

4 **c. 520–330 BCE**
Achaemenid royal inscriptions.

5 **Zoroastrian scripture**
The Gāthās are its 17 oldest hymns.

6 **God vs false god**
Vedic deva is a god; Avestan daēva is a false god.

7 **Early Indo-Aryan words**
Names, gods and horse terms in a Hurrian-speaking state.

8 **Four letters**
Added to the Arabic alphabet for Persian sounds.

9 **12 months of 30 days**
Avestan sources name only seven of the twelve.

10 **Epic of kings**
New Persian national epic, about 1010 CE.

As above.

Key terms

Aryan
Ancient self-name “noble”; not a racial term.

Iranian
The branch to which Avestan, Old Persian and Persian belong.

Indo-Aryan
The Indo-Iranian branch of Vedic Sanskrit and its descendants.

Avestan
The language of the Avesta, in two layers: Old and Young.

Gāthās
The 17 oldest hymns of the Avesta.

Old Persian
The Achaemenid inscriptional language, c. 520–330 BCE.

Middle Persian
The Sasanian-period language, 330 BCE–900 CE stage.

New Persian
The language from about 900 CE, in Arabic script.

Cuneiform
Wedge-shaped script; Old Persian used a simplified form.

Cognate
A word that descends from a shared ancestor.

Satem
A group of branches with sibilants in place of velars.

Behistun
The trilingual rock inscription of Darius.

Definitions summarised from this module.

Words still to verify

Item	Status
Persian word list (kinship, numbers, body, animals, nature, verbs)	Confirmed in Wiktionary etymology lines; cross-check in Bartholomae and Steingass
Old Persian script; Avestan script; Behistun texts	Verified (Skjærvø; Luschey; Schmitt)
nine (noh); Middle Persian dast, deh, Ērānšahr, Pārsīg	Still to verify
Persian month etymologies; Hormozd, Jam, Zahhāk, Mehr	Standard; need Boyce and a Persian etymological source
Kikkuli numbers; Avestan pronunciation; Avestan text dates	Still to verify (Mayrhofer; Hoffmann; Skjærvø)

Verification log: dossier Part 6.13. Wiktionary is a secondary source: cross-check in Bartholomae, Steingass and Cheung.

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- To obtain and verify: Cheung 2007; Mayrhofer 1992–2001; Kent 1953; Schmitt 2009; Windfuhr (ed.) 2009; Beekes 2010; de Vaan 2008.