



# GOALS FOR TODAY

- from PIE to Proto-Indo-Iranian III: what happens to the dorsals!
- introduction to Vedic ritual
- terminology for Vedic poets
- Reading *Rigveda* 1.1.2–5 (yet again!)

# FROM PIE TO INDO- IRANIAN (PHONOLOGY III)



# WHAT HAPPENS TO THE PIE DORSAL CONSONANTS

An underwater photograph of a diver in a cave. The diver is positioned on the right side of the frame, swimming away from the viewer into a narrow passage between large, dark rock formations. The water is a deep, dark blue, and the lighting is dim, creating a mysterious and somewhat claustrophobic atmosphere. The rock walls are textured and jagged, with some light reflecting off their surfaces. The overall scene is dark and moody, emphasizing the depth and isolation of the environment.

# DEEP DIVE: CENTUM VS. SATEM

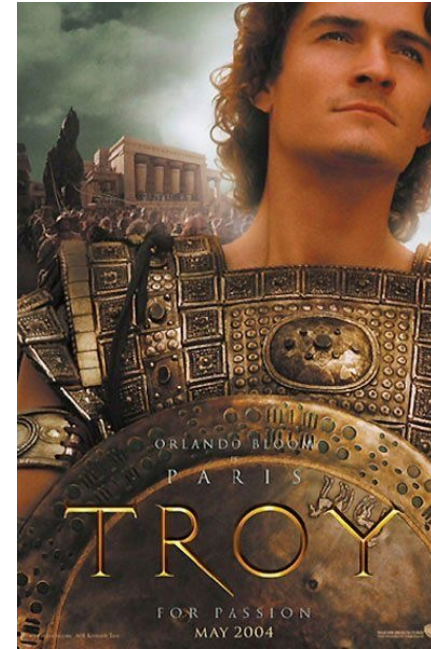
# CENTUM VS. SATEM LANGUAGES

- We usually reconstruct **3 series of dorsal consonants for PIE.**
- BUT almost all IE languages have only 2 series of dorsal consonants
- In some languages, velars merge with palatals (and labiovelars remain separate): Like Greek and Latin.
- In some languages, velars and labiovelars merge (and palatals remain separate): Like Sanskrit and Avestan
- The PIE word for "100" begins with a palatal velar \**k̑*:
  - **Latin:** *centum* [kentum]
  - **Avestan:** *satəm*

centum	PIE	satem
* <i>k̑</i> {	* <i>k̑</i>	* <i>k̑</i>
* <i>k<sup>w</sup></i>	* <i>k</i>	} * <i>k</i>
	* <i>k<sup>w</sup></i>	

# LUVIAN TO THE RESCUE

- Luv. *ziyari* ‘lies’ < PIE *\*keyor*
- Luv. *kīšammi-* ‘combed’ < PIE *\*kes-*
- Luv. *kuiš* ‘who’ < PIE *\*k<sup>w</sup>is*



Luvian (Anatolian, II millennium BC) may have been the language spoken by the Trojans!



Hieroglyphic seal E9.573, found in Troy VIIIb (12cent BCE), drawing from Hawkins/Easton (1996) text: BONUS<sup>2</sup>.FEMINA [.] -pa-tá-[.]

Luvian has separate (conditioned) reflexes for every kind of voiceless dorsal plosive!

# IS CENTUM VS. SATEM A WEST VS. EAST THING?



We thought so at first,  
at least until we  
discovered...



# IS CENTUM VS. SATEM A WEST VS. EAST THING?



The easternmost IE language: Tocharian!

- Documents discovered during archaeological expeditions in the 19th century.
- Two variants: Tocharian A (religious language) and Tocharian B (spoken language), 6-10 CE.
- Important trade zone (Silk Road)
- Widespread language contact: Tocharian, Middle Iranian, Old Chinese, Old Turkic.

Now this just looks like an innovation that spread from the center outwards

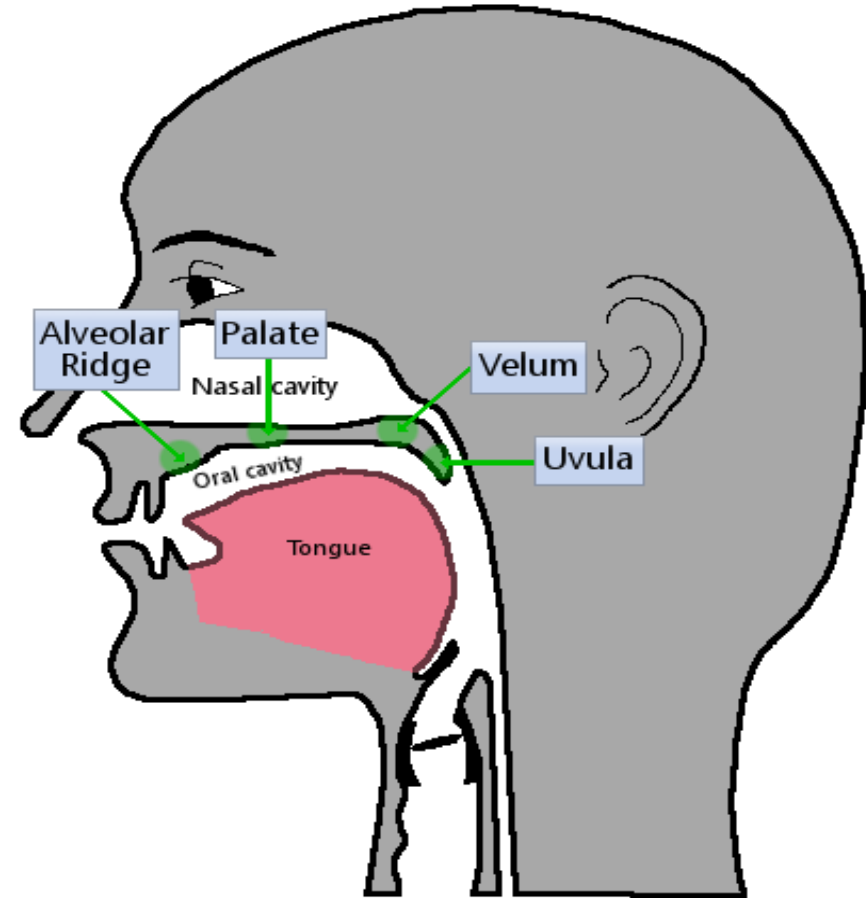
# END OF DEEP DIVE



# PALATALIZATION: A SPECIAL KIND OF ASSIMILATION

- Partial assimilation of a consonant to a neighboring front vocalic segment or to the palatal approximant [j]
- Through **palatalization**, velar stops may become palatal stops or affricates.
- Often a further development for palatalized segments is to become sibilants (through **lenition**).

- Latin: caelum [k<sup>h</sup>aelum]
- Italian: cielo [t<sup>h</sup>ʃelo]
- French: ciel [s<sup>h</sup>yɛl]



# THERE IS A LOT OF PALATALIZATION HAPPENING IN PROTO-INDO-IRANIAN





- PIIR is a **satem branch**:
  - PIE palatovelars are kept separate.
  - PIE labiovelars are delabialized and merge with the plain velars.
- PIE palatovelars develop into **PIIR affricates** and (later, in some cases) fricatives.
- **Law of Palatals**: PIIR velars (<PIE velars + PIE labiovelars) are palatalized and become affricates when followed by the PIE front vowels \*/e/ \*/i/ or the glide \*/j/.
- the Law of Palatals happens **before** non-high vowel merger (since *non-high vowel merger would have bled the law of palatals*)

PRIMARY PALATALS

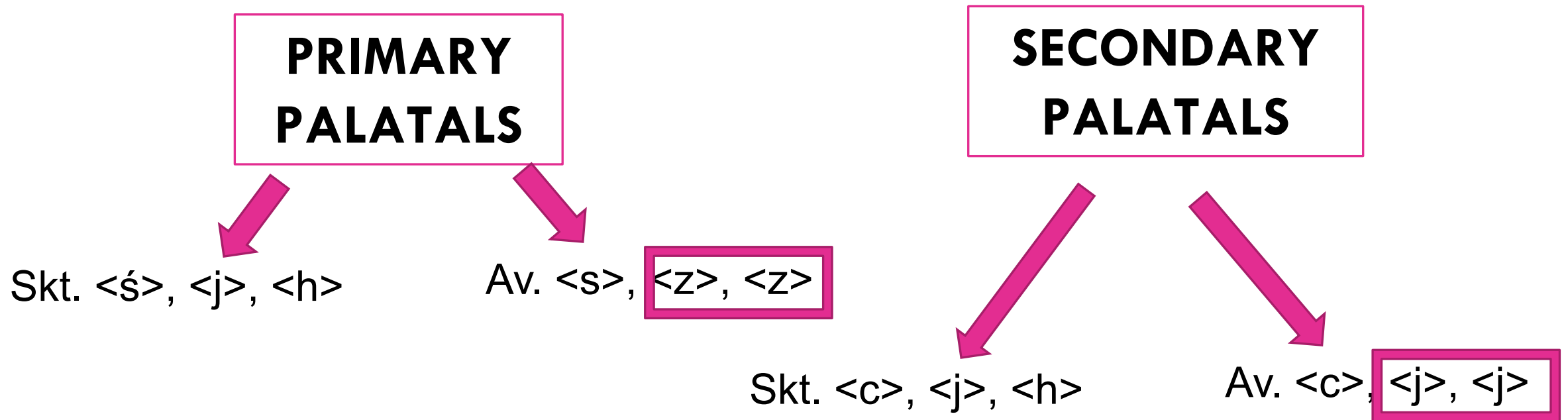
SECONDARY PALATALS

# TERMS FOR PHONOLOGICAL RULE ORDERINGS

- if we conceive of sound change/phonological change as resulting from the sequential application of a **series of rules** (as opposed to the simultaneous application of ranked constraints, like in Optimality Theory)
- the order in which rules apply can make a difference to the final result
- in this case, we talk about **critical rule orderings**
- specifically FEEDING, BLEEDING, COUNTERFEEDING, and COUNTERBLEEDING

- FEEDING -	- COUNTER FEEDING -
 <p>1. SCREAM LIKE A MANIAC 2. SCARE THE JELLIES</p>	 <p>1. SCARE THE JELLIES 2. SCREAM LIKE A MANIAC</p>
- BLEEDING -	- COUNTER BLEEDING -
 <p>1. SHRIVEL UP AND DIE 2. DO THE ROBOT</p>	 <p>1. DO THE ROBOT 2. SHRIVEL UP AND DIE</p>

# OVERVIEW OF OUTCOMES



How can you tell which? In Skt., a primary voiceless palatal stop will come out as <ś>. A secondary voiceless palatal stop as <c>. For voiced and voiced aspirate outcomes, Skt. won't distinguish between primary and secondary palatals, and you have to look at Avestan (if Avestan has a sibilant, it's a primary palatal).

# PRACTICE: PRIMARY OR SECONDARY PALATALS?

- |                                    |                         |   |
|------------------------------------|-------------------------|---|
| 1. Skt. <i>carman</i> 'hide, skin' | Yav. <i>carəman</i>     | PIE <i>*(s)ker-men</i>                    |
| 2. Skt. <i>jáni</i> 'woman'        | Av. <i>jaini</i>        | PIE <i>*g<sup>w</sup>en-h<sub>2</sub></i> |
| 3. Skt. <i>hanti</i> 's/he slays'  | Av. <i>jaiti</i>        | PIE <i>*g<sup>wh</sup>en-ti</i>           |
| 4. Skt. <i>daśa</i> '10'           | Av. <i>dasa</i> '10'    | PIE <i>*dekm̥</i>                         |
| 5. Skt. <i>juṣ</i> 'enjoy'         | Av. <i>zuš</i> 'enjoy'  | PIE <i>*ǵeus</i>                          |
| 6. Skt. <i>hásta</i> 'hand'        | Av. <i>zásta</i> 'hand' | PIE <i>*ǵ<sup>h</sup>estos</i>            |

# IN DETAIL: DORSAL UNROUNDING

22. The labiovelars of PIE ( $*[K^w]$ ) were subject to unconditioned delabialization and merger with the plain velars ( $*[K]$ ).

23. DORSAL UNROUNDING:  $* \left[ \begin{array}{c} +\text{consonantal} \\ +\text{dorsal} \end{array} \right] > [-\text{labial}]$  (UNCONDITIONED)  
Mergers PIE labiovelars with plain velars.

PIE  $*-k^we$  'and' > Lat. *-que*, Gk.  $\tau\epsilon$ , Ved. *ca*



# IN DETAIL: PALATAL AFFRICATION

24. Under the assumption that the PIE palatovelars ( $*[\hat{k}]$ ,  $*[\hat{g}]$ ,  $*[\hat{g}^h]$ ) were in fact palatalized velars (i.e.,  $[k^j]$ ,  $[g^j]$ ,  $[g^{hj}]$ ), these segments must have unconditionally developed to (alveopalatal or palatoalveolar) affricates. These give the Proto-Indo-Iranian “primary” palatals.

25. PALATAL AFFRICATION:  $* \begin{bmatrix} +\text{dorsal} \\ +\text{front} \end{bmatrix} > \begin{bmatrix} +\text{coronal} \\ +\text{anterior} \\ +\text{distributed} \\ +\text{strident} \end{bmatrix}$  (UNCONDITIONED)

Creates the PIr. “primary” palatals  $*\acute{c}$ ,  $*j$ ,  $*j^h$  out of PIE  $*[\hat{k}]$ ,  $*[\hat{g}]$ ,  $*[\hat{g}^h]$

Phonetics not entirely certain: [+anterior] alveopalatals like  $[\text{t}\text{c}]$  or palatoalveolars like  $[\text{t}\text{j}]$ ?

- These primary palatals consistently yield coronal fricatives in Avestan:  $s$  and  $z$ .
- These primary palatals yield a palatal fricative in Sanskrit ( $\acute{s}$   $[\text{ç}] < \text{PIr. } *[\acute{c}] < \text{PIE } *[\hat{k}]$ ), but harden to a palatal stop (Skt.  $j$   $[\text{j}] < \text{PIr. } [j] < \text{PIE } *[\hat{g}]$ ) or undergo debuccalization (Skt.  $h$   $< \text{PIr. } *[\text{j}^h] < \text{PIE } *[\hat{g}^h]$ )

# IN DETAIL: VELAR PALATALIZATION

26. PALATAL AFFICATION necessarily precedes the palatalization of velars, which, as a first step, probably simply made them [+front]. It is for this reason that the PIE palatovelars must first have developed to other sounds (creating a “pull” chain shift).

(19) VELAR PALATALIZATION: [+dorsal] >  $\begin{bmatrix} +\text{front} \\ -\text{back} \end{bmatrix}$  / —  $\begin{bmatrix} -\text{consonantal} \\ +\text{front} \end{bmatrix}$   
Creates the PIr. “secondary” palatals \*č, \*j, \*jʰ out of PIE \*[k<sup>(w)</sup>], \*[g<sup>(w)</sup>], \*[g<sup>(w)</sup>h].

- These “secondary palatals” may have already been [+coronal], i.e., palatal stops, in Proto-Indo-Iranian.
- In Sanskrit, the secondary palatals appear as palatal stops [c] and [j] (so [Allen 1953](#): 52), though the aspirate is debuccalized to [ɸ]. (In later Sanskrit, they are probably alveopalatal affricates).
- In Avestan, the secondary palatals perhaps represent palatoalveolar affricates, but alveopalatal affricates or palatal stops cannot be conclusively excluded.

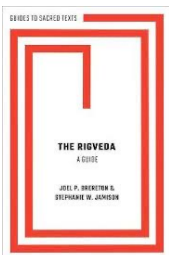
# VEDIC RITUAL

# RITUAL HYMNS

- The Ṛgveda is primarily a **liturgical text**
- the individual hymns collected in it were composed to be recited as the verbal (or, more accurately, *a verbal*) **portion of a ritual performance** that also involved the physical offering of foodstuffs.
- some of its hymns, especially in the X<sup>th</sup> Maṇḍala, do not appear to have tight connections to ritual performance (for example, the hymns speculating on the origins of the cosmos or of human beings) → *but we can't be sure they were NOT used in ritual*
- almost all the hymns in the Ṛgveda were destined for the **Soma Sacrifice**, the multipart ritual in which a **deified drink** known as soma was offered to the gods.



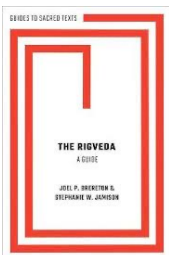
Aspects of a soma sacrifice in Pune (Poona), India (Britannica.com)



From Brereton and Jamison 2020 - The Rigveda, A Guide, p.43-48

# WHAT IS SOMA?

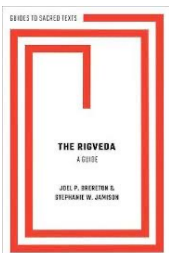
- the **Soma Sacrifice** was the most solemn and elaborate of the non-royal rituals
- What soma the substance was is **much disputed**.
- already in the middle Vedic period, and indeed perhaps in the Ṛgvedic period, **substitutes were employed**, possibly because the original substance was difficult to obtain
- It was made from a **dried plant**, which was first **soaked in water** and then **pressed to produce a yellowish juice**, which was then **mixed with water** and often also **with milk**.
- Unadorned it was apparently **quite bitter**.



From Brereton and Jamison 2020 - The Rigveda, A Guide, p.43-48

# WHAT DID RIGVEDIC RITUAL LOOK LIKE?

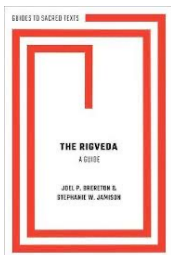
- the *brāhmaṇas* (prose exegetical texts, some of which are not too much younger than the late Ṛgveda) and the *śrauta sūtras* (manuals that codified ritual practice toward the end of the Vedic period) describe the *śrauta rituals* of the middle Vedic period
- The rituals described by these later texts contain **much that can also be found in the Ṛgveda**: names of priests, names of offerings, the layout of the ritual ground, and particular procedures employed in praise and offering.
- Much of what has been written about Ṛgvedic ritual **starts with the later material and backprojects it** by locating correlates in the Ṛgveda.



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# THE SOMA SACRIFICE IN LATER VEDIC TEXTS

- There were Soma Sacrifices of various lengths.
- The simplest form was a **one-day sacrifice** called the **Agniṣṭoma**, the “Praise of Agni.”
- The soma rite of whatever form began with **three fires** that were used in the daily Agnihotra rites and in monthly rites at the new and full moon.

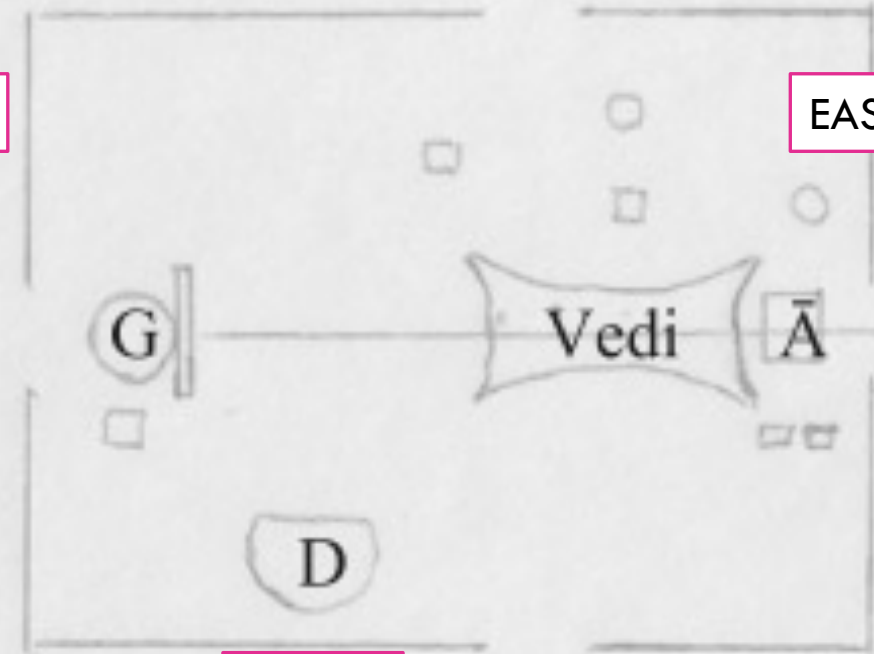


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# THE LAYOUT

- To the west was the round **Gārhapatya Fire**, or “Householder’s Fire,” which was used especially in the preparation of the sacrificial offerings.
- To the southeast of the Gārhapatya was the half-moon shaped **Dakṣiṇāgni Fire**, the “Southern Fire,” which was apotropaic, keeping at bay evil forces—typically conceived as coming from the south—and which also received offerings to the ancestors.
- to the east was the square **Āhavanīya Fire**, the “Oblation Fire,” into which most offerings were poured.
- Between the Gārhapatya and Āhavanīya Fires was the **Vedi**, which was a depression or elevation covered with grass in which sacrificial implements and oblations were laid.

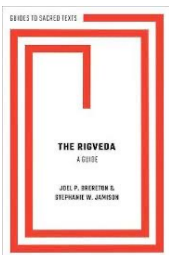
WEST



EAST

SOUTH

Ā = Āhavanīya Fire  
D = Dakṣiṇāgni Fire  
G = Gārhapatya Fire

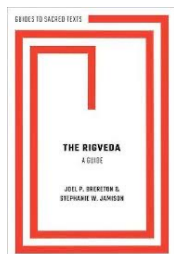
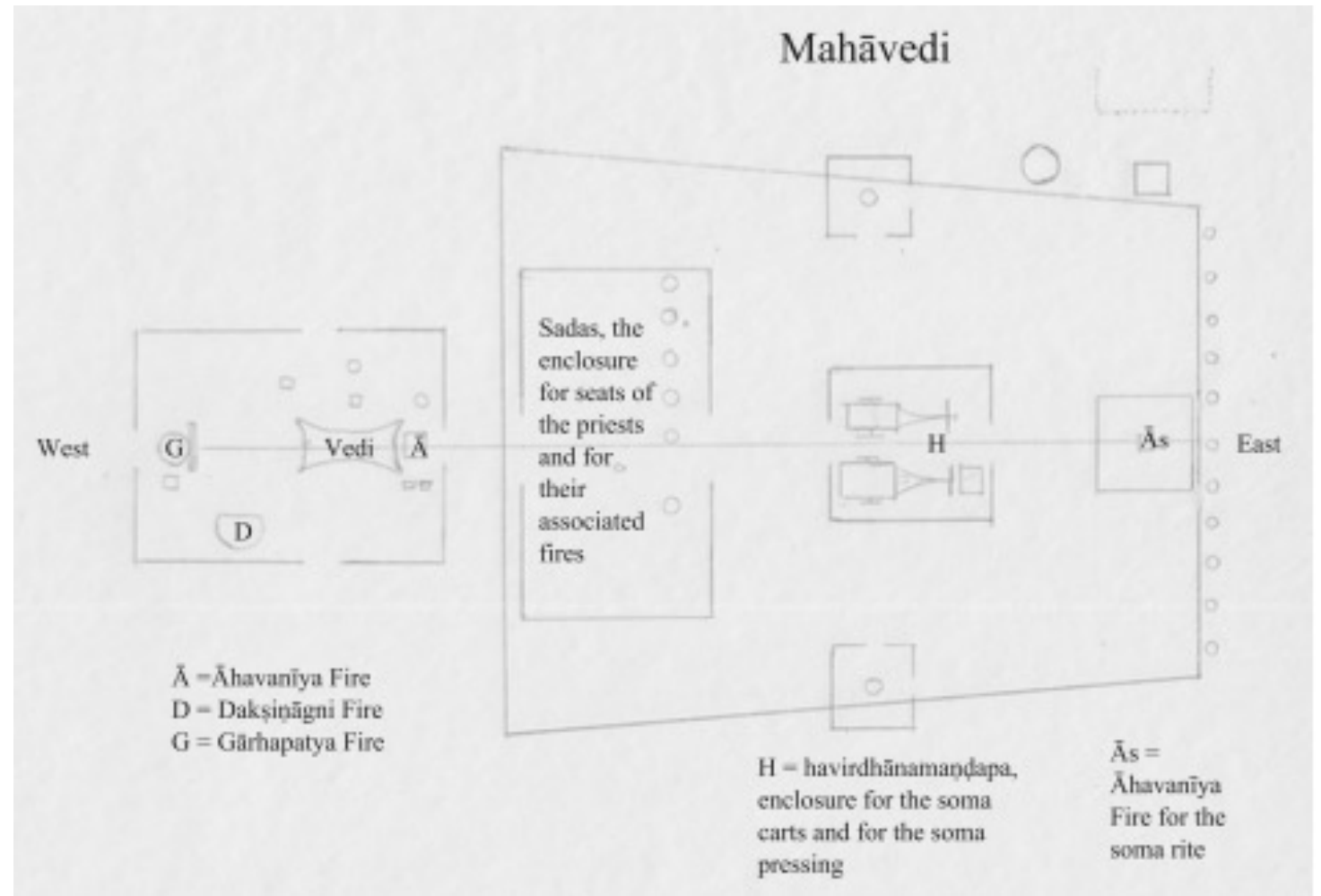


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# THE MAHAVEDI

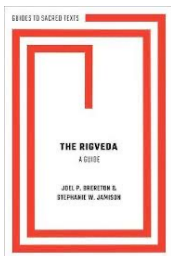
- In the Soma Sacrifice and in other more elaborate rites, a **Mahāvedi**, or “Great Vedi,” was constructed to the east of this sacrificial ground.
- The Mahāvedi then became the **place to which the soma plant was brought and the soma prepared** and the location of a new **Āhavanīya Fire** into which the soma oblations were poured.



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# RITUAL TIMELINE

- Before the principal day of the Soma Sacrifice, there are **several days of preliminary rites** such as the consecration of the Sacrificer, offerings of ghee (clarified butter) and rice cooked in milk, the formal purchase of the soma plant, and the laying out of the new Vedi.
- The actual soma oblations takes place **on the last day** of the Soma Sacrifice.
- That final sacrificial day centers on **three “soma pressings,”** in which the soma juice is extracted and offered in the **morning, at midday, and in the evening.**



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# THE PREPARATION OF SOMA

- In the first two soma pressings (**morning and midday**), the preparation of the soma juice begins when the priests pour water on the stalks of the soma plant and crush the stalks.
- After **several rounds of crushing** the stalks, collecting them, and crushing them again, the stalks and their juice are placed in a vessel from which the soma juice and water are **poured across a woolen filter** to remove any debris.
- The soma is then offered at various points in the order of rites. Some oblations just use the filtered soma; in others the soma is mixed with milk or grain.
- **In the Evening Pressing**, the preparation of the soma distinctly and interestingly differs. Instead of pounding fresh soma stalks, **the priests use left-over soma juice** prepared in the other two pressings and soma extracted from already crushed stalks, **to which milk is added to increase the volume.**

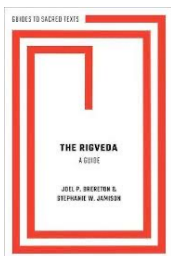
**SOAKING**

**CRUSHING**

**STRAINING**

**(MIXING)**

**OFFERING**



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# STRUCTURE OF A PRESSING SEQUENCE

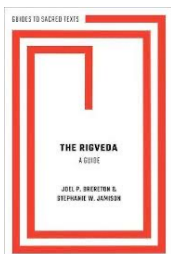
- In each of these sequences, after the soma juice is pressed, **priests first fill the cups** from which the soma will be offered with soma juice.
- then there is a **chant, or *stotra***, whose texts are taken from the **Sāmaveda** but which originate in the Ṛgveda,
- and a **recitation, or *śastra***, essentially an anthology of Ṛgvedic verses.
- **The oblation of the soma into the fire** follows the recitation, and the ritual sequence concludes in the priests' **drinking the soma that remains** in the cups after the offering.
- In the Morning and Midday Pressings there are five such sequences of **chant, recitation, offering, and consumption**; in the Evening Pressing, two.

**CHANT**

**RECITATION**

**OFFERING**

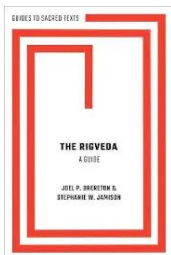
**CONSUMPTION**



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# OFFERINGS BY PRESSING

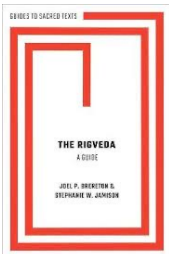
- In the Morning Pressing the sequences are dedicated to **Indra and Agni**, to the **Viśve Devāḥ** (the “All Gods”), to **Mitra and Varuṇa**, to **Indra**, and to **Indra and Agni**. In addition to these, there are soma oblations to **Indra and Vāyu**, to **Mitra and Varuṇa**, and to the two **Aśvins**.
- In the Midday Pressing there are **single sequences for Indra together with the Maruts and for Great Indra**, which are followed by **three sequences for Indra**.
- Finally, in the Evening Pressing the **first sequence is dedicated to the All Gods and the second to Agni together with the Maruts**.
- The Evening Pressing also includes soma oblations to the **Ādityas, Savitar, and Agni together with the Wives of the Gods**.



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# PRIESTLY STAFF

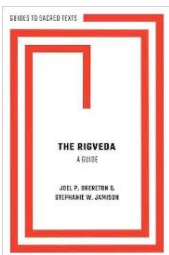
- There is a great deal of other ritual activity surrounding these sequences and oblations. In each of the pressings, **offerings of butter and other foodstuffs** and various other rituals are interwoven throughout the pressings.
- Naturally enough, these many rites require many priests. **The śrauta texts call for 16 or 17 priests (*ṛtvījs*)** for the performance of even the simplest Soma Sacrifice.
- These priests are divided into four groups:
  1. priests led by the **Hotar**, who are responsible for the Ṛgvedic recitations;
  2. priests led by the **Adhvaryu**, who carry out the ritual actions;
  3. priests led by the **Udgātar**, who perform the ritual chants;
  4. and the **Brahman priest**, who oversees the rite and rectifies any ritual deficiencies that might occur.



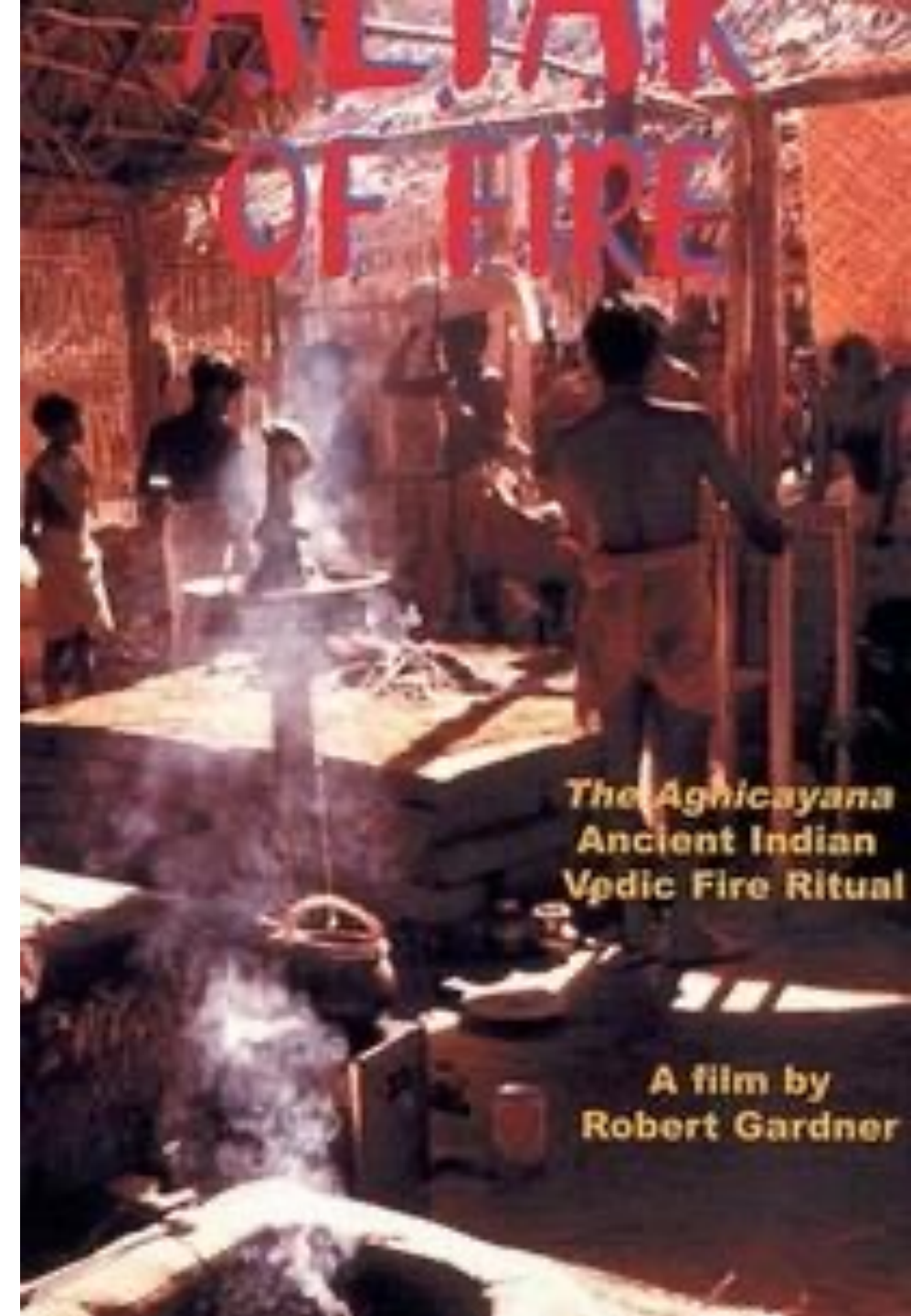
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# ALTAR OF FIRE (1975)

- There are now a number of documentaries and films dealing with Vedic sacrifice and with the Soma Sacrifice in particular.
- the most informative of these films remains *Altar of Fire*, which is available at <https://www.youtube.com/watch?v=RYvkYk7GvJo>
- The rite in this film, which was performed in 1975, was an *Atirātra* or “Overnight” Soma Sacrifice with an *Agnicayana*.
- The “Overnight” Soma Sacrifice, in which the pressing day begins early in the morning and continues until the morning of the following day, is also known to the Ṛgveda.
- the *Agnicayana* is a variant of the Soma Sacrifice that requires the construction of a brick altar on which the *Āhavanīya* Fire is placed. This form of the Soma rite is attested in the middle Veda but not in the Ṛgveda.



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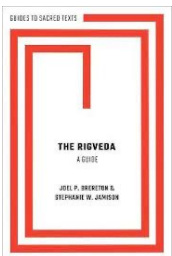
# PREVIEW: VEDIC POETICS



# WORDS FOR POETS IN THE RIGVEDA

- *brahmán* 'possessor of the formulation (*bráhman*)'
  - a *bráhman* is a verbal encapsulation of some aspect of *ṛtá*, and this verbal encapsulation is made by a sage poet, who uses his insight to penetrate to the hidden truth.
  - The word *brāhmaṇa* which comes to mean a priest and member of the highest social class (*várṇa*), is derived from these terms.
- *kaví* 'sage'
  - In later Sanskrit of course, the *kavi* is the poet par excellence and a derivative of this word, *kāvya*, is the term used for the most elaborate styles of verbal art in Classical Sanskrit.
  - The association with intricate forms of poetry is certainly found in the Ṛgveda as well, but more prominent is the *kavi*'s wisdom.
  - He has access to esoteric knowledge; he is a sage, who transforms into words his insight into the enigmas of reality.

*ṛtá*: '(cosmic) order insofar as it can be expressed in words', 'both "truth" in verbal terms and the "reality" that it expresses'

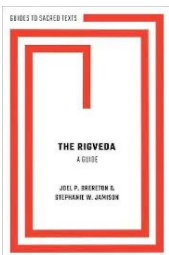


From Brereton and Jamison 2020 - The Rigveda, A Guide, p.114-116

# WORDS FOR POETS IN THE RIGVEDA

- *vípra* 'trembling'
  - derived from a verbal root that means “tremble,” and this designation highlights the inspiration of the poet,
  - the “trembling” caused by a state of imaginative frenzy, as in IX.71.3=X.11.6 “he trembles with his thought.”
- *ṛṣi* generally rendered 'seer'
  - characterized by knowledge and insight, but the word is especially used of legendary seers of the past and of current poets who aspire to that status.
  - This connection across the generations highlights the role of tradition in shaping the poet and his practice.

These different words do not name different classes or types of poets, but simply focus on one or the other of the many qualities a successful poet must have. The various terms can be applied to the same poet, often in the very same passage.



From Brereton and Jamison 2020 - The Rigveda, A Guide, p.114-16

**NOW,  
LET'S READ SOME VEDIC!**

THANK YOU AND SEE YOU NEXT WEEK!

