

ASPECTS OF
ANATOLIAN
LINGUISTICS
AND HISTORY

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Segmental Phonemes of Proto-Anatolian

/p/	/t/	/k/	/k ^w /	
/b/	/d/	/g/	/g ^w /	
	[t ^s]			
	/s/		/χ/	/χ ^w /
			/ʁ/	/ʁ ^w /
/m/	/n/			
	/r/, /l/			
[w]		[j]		
	/i/, /i:/	/u/, /u:/		
	/e/, /e:/	/o/, /o:/	(NB: refers to <i>inherited</i> *o and *ō)	
	/a/, /a:/			

Segmental Phonemes of Palaic

/p:/	/t:/	/k:/	/k: ^w /
/p/	/t/	/k/	
	/t ^s :/		
/f/	/s/		/χ:/, /χ: ^w /
		/ʒ/	/χ/ /χ ^w /
/m/	/n/		
	/r/, /l/		
/w/		/y/	
	/i/, /i:/	/u/, /u:/	
	/e/, /e:/	/o/?/, /o:/	
	/a/, /a:/		

Segmental Phonemes of Luvian

/p:/	/t:/	/k:/	/k: ^w /
/p/	/t/	/k/	/k ^w /
	/t ^s :/		
	/s/		/χ:/ /χ: ^w /
			/χ/ /χ ^w /
/m/	/n/		
	/r/, /l/		
/w/		/y/	
	/i/, /i:/	/u/, /u:/	
	/a/, /a:/	/o/, /o:/	

Segmental Phonemes of Lycian (« » = Lycian only; { } = Milyan only)

/p/	/t/	«/c/»	/<k/	/>k/	/k ^w /	{[q/g ²]}
		<τ>	<k>	<x>	<q>	<κ>
	/t ^s /					
	«/θ/», /s/					«/h/»
/β/	/ð/			/γ/		
/m/	/n/					
	/r/, /l/					
/w/			/y/			
	/i/, (/ĩ/)	/u/, (/ũ/)				
	/e/, /ẽ/	/a/, /ã/				

Segmental Phonemes of Lydian

/p/	/t/		/k/	/q/
	/t ^s / <τ>	/t ^ç / <ç>		
		[d ^h]		
/ϕ/ <f>	/s/, /θ/ <d>	/ç/ <š>		
[β] <w>	[ð]			
/m/	/n/		/v/ (i.e. <i>nu</i> ; value uncertain)	
	/r/			
	/l/	/λ/ <λ>		
	/i/		/u/	
	/e/,	/ē/	/o/	
		/a/, /ã/		

Segmental Phonemes of Carian (very tentative!!)

/p/	/t/	/c/ <x>	/k/	/q/
/ ^(m) b/	/ ⁽ⁿ⁾ d/			/ ^(ŋ) g/
	/t/			
	/s/	/ś/, /š/		
/m/	/n/			
	/r/			
	/l/,	/λ/(?)		
	/i/			/u/
		/e/		/o/
			/a/	

PROTO-ANATOLIAN NOUN INFLECTION

Voc.Sg.	*-∅ *(-?)	OHitt. passim, CLuv. few exx. No evidence; Hitt. <i>-i</i> prob. < dative			
Anim.Nom.Sg.	*-s	Hitt.,Pal.,Luv.,Lyd; Lyc./Mil. <i>Trqqas/Trqqiz</i> < *-nts; stems in *-r asigmatic; status of stems in *-ā, *-ō, *-ē(n) unclear	Anim.Nom.Pl.	*-es *(-os)	Pal. <i>-nteš</i> ; 2ary <i>-ikeš</i> ; all others renewed Pal. <i>mārhaš</i> , 2ary pronominal <i>-aš</i> ; traces in Hittite; all others renewed
	*(-os)	Hitt.,Pal.,Luv.,Lyd.			
Anim.Acc.Sg.	*-Vm/-Cṡ *(-om)	*-Vm in all; *-Cṡ sure in Lyc. <i>-ā</i> all	Anim.Acc.Pl.	*-Vms/-Cṡs *(-oms)	*-Vms in Luv.,Lyc.; no sure -Cṡs, but probably in Hitt. <i>-Cuš</i> Lyc.; Hittite uncertain
Nt.Nom-Acc.Sg.	*-∅	Hitt.;Pal.;CLuv.;HLuv. (+-sa), some Lyc., Lyd. (+-d)	Nt.Nom.-Acc.Pl.	*-Ṫ *-ōR	OHitt.; Pal. (elsewhere renewed by <i>-a</i>) Hitt.;CLuv. (<i>n</i> -stem *-ō > Hitt. <i>-a</i>)
	*(-om)	Hitt.,Luv.,Lyc.		*(-a)	all (spread to other stems in PA unclear)
Genitive Sg.	*-s/-os *-so *(-os) *(-e/oso) *(-osyo)?	Hitt. <i>nekuz</i> , <i>-waš</i> < *-wen-s/Hitt.,Pal.,HLuv. Lyc. (PNN in <i>-ah(e)</i> & <i>-ihe</i> , after *-e/oso), Car. <i>-s</i> Hitt., Lyc. (personal names in <i>-e</i>) Lyc. (some names in <i>-eh(e)</i>), Car. <i>-s</i> (some) probably HLuv. <i>-asi</i> ; Car. <i>-š</i>	Genitive Pl.	*-om (*-om)	OHitt.,Lyc.,Lyd. (> dat.-loc.pl.) OHitt., Lyc.
Dative Sg.	*-ē(?) *(-?)	perhaps CLuv. <i>-ī</i> no assured reflexes;	Dat.-Loc. Pl.	*-os *(-os)	Hitt.,Pal.,Lyc. Hitt.,Lyc.
Locative Sg.	*-i	Hitt. <i>-i</i>			
	*-∅ *(-?)	Hitt. <i>šiwat</i> , few others no assured reflexes			
Allative Sg.	*-a (*-o)	Hitt. <i>arḫa</i> , Pal. & Luv. infin. in <i>-una</i> & Lyc. in <i>-na</i> ; prob. Pal. loc. Hitt.,Pal. (loc.), Lyc. 2ary infin. in <i>-ne</i>			
		Ablative-Instrumental	*-ti (*-od/ti) *-(a)d	Hitt. <i>nepišz(a)</i> , <i>pērz(a)</i> , Lyc. <i>xahadi</i> Hitt. <i>-az(zi)</i> , Luv. <i>-ati/-ari</i> , Lyc. <i>-edi</i> (spread to all stems) Hitt. <i>-(i)t</i>	
		“Ergative”	*-nts	Hitt. <i>-anz(a)</i> , Luv. <i>-antiš</i> , Lyc. <i>-ēti</i>	

PROTO-ANATOLIAN PRONOUNS

First Singular

Subject	* <i>úg</i>	Hitt. <i>ūg</i>
Oblique	* <i>h₁ḡmú</i>	Hitt. <i>ammug</i> , HLuv. <i>amu</i> , Lyd. <i>amu</i>
Enclitic	*- <i>mu</i> *- <i>me/oi</i>	Hitt., Pal., HLuv. Lyd. <i>-(i)m</i> ambiguous CLuv./HLuv. reflexive <i>-mi</i>

Relative/Interrogative

NSgC	* <i>k^wis</i>	all	NPIC	* <i>k^weyes</i>	Hitt. <i>kuēš(?)</i>
ASgC	* <i>k^win</i>	all	APIC	* <i>k^wims</i>	CLuv. <i>kwınza*</i>
N-ASgNt	* <i>k^wid</i>	all	N-APINt	* <i>k^woy</i>	Hitt. <i>kue</i> , Lyd. <i>qed(?)</i>

Second Singular

Subject	* <i>tí</i>	Hitt., Pal., HLuv.
Oblique	* <i>tú-</i>	Hitt., Pal., HLuv.
Enclitic	*- <i>te/-tu</i> *- <i>te/oi</i>	Hitt. <i>-tta</i> /Hitt. <i>-ttu</i> (in <i>nu=ddu=za</i>) < Luvian Pal. <i>-ti</i> ; HLuv. reflexive <i>-ti</i>

Oblique forms unclear, but **k^wo-* allomorph assured by exx. like **k^wod* > Hitt. *kuwat* 'why?', Pal. *-kuwat* = Lyd. *-kod* 'anyhow'.

NB also interr. **mo-* in Hitt. *maši-* 'how/as many', prob. Pal. *maš* 'how/as much', & originally masc. acc. sg. **móm* > Lyc. *mē* 'as; likewise'; unclear **mām* > *mān* (Hitt., Pal., Luv.) 'how, as; when/if'

First Plural

Subject	* <i>wéy(e)s</i>	Hitt. <i>wēš</i>
Oblique	* <i>ḡs-wé-</i>	Hitt. <i>anzāš</i> , CLuv. <i>anza(š)</i> , HLuv. <i>a(n)za(n)za</i> (renewed)
Enclitic	*- <i>nos</i>	Hitt. <i>-nnaš</i>

Anaphoric/Deictic

* <i>obó/i-</i>	'he, she, it'	Pal., Hitt. & Luv. (& 'iste'), Lyc. (& 'hic'); Lyd. <i>bi-</i>
* <i>é/ó-</i>	'he, she, it'	Hitt. & CLuv. * 'ille'; Lyd. 'this'
* <i>é/óno-</i>	'he, she, it'	Hitt. 'this'; Pal. 'that'; HLuv. * 'that'
* <i>ḡó/i-</i>	'this'	Hitt., Pal., Luv., Car.
* <i>é/ów(o)-</i>	'ille'(?)	Lyd. <i>oš-</i> 'iste', Car. <i>u-</i> 'iste'

Second Plural

Subject	?	Hitt. <i>šumēš</i> after obl. <i>šumāš</i> < * <i>us-we-</i>
Oblique	* <i>ḡs-wé-</i>	CLuv. <i>ūnza</i> , prob. HLuv. <i>u(n)zu(n)za</i> (renewed)
Enclitic	*- <i>sm-os(?)</i>	Hitt. <i>-šmaš</i> , HLuv. <i>-m(m)anz(a)</i> (< 3rdPIDative?)

Inflection

NSgC	*- <i>os</i>	Hitt., Pal., Luv., Lyc.
ASgC	*- <i>om</i>	all
N-ASgNt	*- <i>od</i>	Hitt., Pal., Luv., Lyc., but Hitt. <i>kī</i> !
NPIC	*- <i>oi</i>	Hitt.; others renewed
APIC	*- <i>oms</i>	Hitt.; others renewed
N-APINt	*- <i>oi</i>	Hitt. <i>-e</i>

Third Person Enclitic

NSgC	*- <i>os</i>	all but Lyc.	NPIC	*- <i>oi</i>	OHitt. <i>-e</i>
ASgC	*- <i>om</i>	all	APIC	*- <i>oms</i>	CLuv. <i>-aš</i> , Hitt. <i>-uš</i> (?)
N-ASgNt	*- <i>od</i>	all (Luv.-Lyc. + * <i>-o</i>)	N-APINt	*- <i>oi</i>	Hitt., Pal.
DSg	*- <i>soi</i>	Hitt.; Pal. (reflexive in latter)	DPI	*- <i>sm-os</i>	Hitt. <i>-šmaš</i> ; CLuv. <i>-mmaš</i> , HLuv. <i>-mmanza</i> , Lyc. <i>-ñne(?)</i> , Lyd. <i>-mš</i>

NB Hitt. *i-*stem *kī* prob. orig. substantival **kí*.

Oblique forms very uncertain, but note *-d-* element (< **-dh-*): OHitt. *kēdi*, Luv. *zāti*. Also in interr./rel.: Luv. *kuwati*, Lyd. *tdi*, Mil. *kudi*. HLuv. abl.-inst. *-in* < **-im*.

Reflexive *-*ti* Hitt., Luv., Lyc., Lyd. (**not** yet PA; 2ary as per Yakubovich 2009); Palaic has rather *-ši* < **-soi*. Also late HLuvian!

PROTO-ANATOLIAN VERBAL INFLECTION

Present Indicative Active

mi-conjugation

1Sg	*- <i>mi</i>	Hitt.
2Sg	*- <i>si</i>	Hitt.,Pal.,Luv.,Lyd.
3Sg	*- <i>ti</i>	all

1Pl	*- <i>weni</i>	Hitt.,Pal.,CLuv.
2Pl	*- <i>teni</i>	Hitt.,Pal.,Luv.
3Pl	*- <i>énti/</i> *- <i>onti/-nti</i>	Hitt.,Pal.,Luv.,Lyc.

hi-conjugation

*- <i>Hay/-Hwi</i>	OHitt. - <i>hhe</i> /Luv. - <i>wi</i> , Lyc. - <i>u</i> , Lyd. - <i>u/w</i>
*- <i>tay</i>	Hitt.,CLuv.; indirect HLuv. - <i>tis(a)</i> , CLuv. - <i>tiš</i>
*- <i>ey</i>	OHitt. - <i>e</i> ; renewed Hitt./Pal./Luv. - <i>āi</i> , Lyc. - <i>e</i>

as at left

Present Indicative Medio-Passive

1Sg	*- <i>Ha</i>	Hitt. - <i>hha</i> (indirect)
2Sg	*- <i>to</i>	Hitt. - <i>tta</i> (indirect)
3Sg	*- <i>óri/-o/-to</i>	Hitt. - <i>āri/-a/-tta</i> ; Pal. - <i>āri</i>

1Pl	*- <i>westo(?)</i>	Hitt. - <i>wašta</i>
2Pl	*- <i>two/-tumo</i>	Luv.,Pal. - <i>ttuwar(i)</i> /Hitt. - <i>ttuma</i>
3Pl	*- <i>onto/</i> *- <i>nto</i>	Hitt.,Pal. (indirect)

Preterite Indicative Active

mi-conjugation

1Sg	*- <i>m/-m̄</i>	Hitt. - <i>an(un)/-un</i> , Lyd.
2Sg	*- <i>s</i>	Hitt.
3Sg	*- <i>d/-t</i>	Hitt. - <i>Vt/-Cta</i> , Pal.; Luv.,Lyc. - <i>t/dV</i> < *- <i>to</i>

1Pl	*- <i>wen</i>	Hitt., Luv. (renewed) Lyd.
2Pl	*- <i>ten</i>	Hitt.,Pal.,Luv.
3Pl	*- <i>end/</i> *- <i>nd</i>	Pal. (probably!)

hi-conjugation

*- <i>Ha/-Hu</i>	Pal.,Luv.,Lyc./Hitt. - <i>h̄hun</i> (renewed)
*- <i>ta</i>	Hitt.
*- <i>s(t)</i>	Hitt.

*- <i>wen</i>	Hitt., Luv. (renewed)
*- <i>(s)ten</i>	Hitt.
*- <i>ér/-r/</i>	Hitt.
*- <i>rs</i>	Lyd.

Preterite Indicative Medio-Passive

= *r*-less forms of present

Various Renewals

- (1) Hitt. *-*di* (< HLuvian)
- (2) HLuv. -*si* (< *-*soi*)
- (3) *-*N* Lyc., HLuv. (-*han*)

Imperative Active

2Sg	*- <i>Ø/-di</i>	Hitt.,Pal.,Luv./Hitt.
3Sg	*- <i>tu/-u</i>	all but Lyd./Hitt., CLuv. (Istanuvian)
2Pl	*- <i>ten</i>	Hitt.,Pal.,Luv.
3Pl	*- <i>ntu</i>	all but Lyd.

Imperative Medio-Passive

Insufficient evidence for PA

Anatolian Historical Grammar: Main Points

I. Phonology

A. Proto-Anatolian

1. Stops

- a. In absence of compelling evidence to contrary, assume voiced aspirates and voiced stops merged as voiced.
- b. “Lenition” rules of Eichner (1973) to be combined into one with Adiego (2001). Apply also after $*éh_2$ against Melchert (1994).
- c. On other hand, neutralization of word-final stops in favor of voiced after voiced segment and voiceless after voiced is probably already PIE, not innovation of PA.
- d. Ad hoc claim (Melchert 1994: 61 et alibi) of PA “weakening” of medial $*k^w$ is false, also false Kloekhorst 2006b that Čop’s Law includes accented short $*ó$!
- e. “limited Čop’s Law” in PA non-existent (contra Melchert 1994: 62).
- e. $*t > [ts]$ before yod in PA, but remains mere allophone of $*t/$.
- f. At least in voiceless series, PIE $*k$ still distinct from $*k$ in PA, given evidence in Luvo-Lycian for **conditioned** palatalization only of first in fronting environments, not second. Evidence for voiced (and voiced aspirate) series compatible with this.

2. Fricatives

- a. $*V́RHV > VRRV$ vs. $*VRh_{2/3}V́ > VRHV$ (thus with Oettinger 1979: 549 contra Melchert 1994: 79).
- b. $*Vh_{1/3}sV > VssV$ (NB contra Melchert 1994 **not** $*Vh_2sV$, given Hittite *paḥša-* ‘protect’ $< *péh_2so-$).
- c. Initial $*h_3V-$ preserved, given Luvo-Hittite *hV-* (assuming that $*h_3rV- > arV-$), but question not definitively settled.
- d. $*h_2 >$ generally preserved (see Luvo-Hittite *-hḥ-*), but “lenited” to *-h-* by same rule as for stops above. Simplicity suggests merger with regular reflex of $*h_3$.
- e. Except for 2.b, tautosyllabic $*VH > V:$ ($*Vh_1 > *ā >$ Palaic & Hittite $ē$, but Western Anatolian $ā$). Ordered **before** “lenition” rule above, contra Melchert 1994.
- f. $*Vh_2y > V:y$ (most notably in verbs in $*-eh_2ye/o-$).
- g. In absence of counterevidence, change $*h_2w > *χ^w$ (Kloekhorst) and $*h_3w > *B^w$ (Melchert) probably PA. Lowering effect on $*u/ū > o/ō$ argues for uvular fricatives.

3. Sonorants

- a. NB assimilation rule under 2.a above.
- b. Syllabic sonorants almost certainly preserved in PA.

4. Vowels

- a. Original unaccented long vowels shortened (as per Eichner 1986a).
- b. On evidence of Lycian all five vowels preserved (no PA merger of $*o$ and $*a$).
- c. NB 2.f by which tautosyllabic $*Vh_1 > *ā$.
- d. Contra Melchert 1994: 56, result of $*ei$ **not** distinct from inherited $*ē$. Dating of monophthongization to PA uncertain.

B. Hittite

1. Stops

- a. Merger of front and back velar series as velars.
- b. Devoicing of voiced word-initial stops (*pace* Kloekhorst 2010 and 2016)
- c. Phonemicization of **ts* as /t^s/.
- d. Assibilation of **t* > t^s before syllabic **i*. Initial **dy-* appears as *sy-*. Fate of **di* word-initially and medially indeterminate (affrication to d^f as per Yoshida not assured).

2. Fricatives

- a. In addition to PA rule 2.b, geminate *-ss-* also due to gemination at syllable boundary (i.e. /-s.C-/ > [-s.sC-] and /-C.s-/ > [-Cs.s-]), then often generalized by analogy to intervocalic position. **No** solid evidence for gemination due to accent!
- b. Word-initial **B-* < **h₃-* almost certainly > χ- by same rule as for stops B.1.b above.
- c. Contra Melchert 1994: 72 et al., medial PA *B* < **h₃* likely preserved after sonorant as in Luvian, but *wal(a)h₂h-* ‘strike’ (sic!) < **welh₂₋*, not †*welh₃₋*, so direct evidence lacking.
- d. PA word-final **-Vh₂* > PA **-VB* > **-V*: (preserved only marginally) > *-V*.

3. Sonorants

- a. Word-final **-m* > *-n* (probably not already PA, but hard to prove).
- b. Unmarked result of **R* is *aR* via **oR*, but **wR* > **wo(:)R* (/o(:)R/, i.e. *-(u)-uR*) and **K^wR* > *Ko(:)R* **except** in **K^wRCC*, which leads to *KwaRC* (Kloekhorst 2007).
- c. At least **-VmrV-* > *-Vm.mrV-* (cf. B.2.a above). Result of other sequences of sonorants far from determined.
- d. **y* lost intervocalically.
- e. **w* > *m* before or after *u*.

4. Vowels

- a. Clearly lengthening of all accented short vowels in **open** syllable. High vowels otherwise stable.
- b. Per me, lengthening only of accented short **o* and **e* in closed syllables (and latter is limited!). But entire topic remains very controversial.
- c. General merger of **o(:)* with *a(:)*, but **probably** after various conditioned lengthenings.
- d. Treatment of short **e* most difficult question of Hittite vocalism. Definitely raised to *i* in pretonic position and almost certainly in posttonic **closed** syllables. Probably lowered to *a* in posttonic **open** syllables. Outcome of short **e* before sequences of two or more consonants remains very unclear. No simple conditioning.
- e. Short diphthongs **ai* and **oi* preserved as *ai* before coronals, monophthongized to *e* (surely originally **ē*) elsewhere. Similar conditioning for **au* and **ou* (i.e. /o:/ spelled with <u>): Kimball 1994. As per Kloekhorst, **eu* **probably** instead > /u:/, spelled with *ú*, but not all issues settled. Note also conditioned lowering of **u* > new /o/ next to **h₂/h₃*.
- f. **ēi* > *ē(i)*, but **ēu* **probably** > /u:/ (but evidence is essentially *š*i*-i-u-* < **dyé(:)u-*, where result could reflect only **eu*).
- g. Definitely anaptyxis of vowel identified with /e/ (then > *i* because in posttonic closed syllable, as per B.4.d.) in word-final sequence of non-coronal stop plus **s*. Definite

anaptyxis in initial **TrV-* sequences in at least Luvo-Hittite with default initial accent leading to **TérV-*, but lack of lengthening in Hittite suggests [ə], which would also account for Čop's Law result in CLuvian *tarri-* 'three'. Anaptyctic vowel colored to *a* next to **h₂* and to *u* when adjacent syllable contains *u*. Other prehistoric anaptyxis controversial.

C. Palaic

In general matches Hittite, except no assibilation of **t > t^s* before syllabic *i*. NB must include same **basic** contrast of /u(:)/ and /o(:)/. NB special change of **h₂y* to some kind of weak palatal approximant. *Pace* Watkins, (1982) et al., **no** preservation of final laryngeal **-h₂* as consonant!

D. Luvian

1. Stops

- a. Devoicing of word-initial voiced stops.
- b. **Conditioned** palatalization of **k' > ts* in fronting environments **vs.** preserved *k < *k*. Parallel development for voiced series unprovable due to more general loss of **g/ǵ(h)* in medial position, whose details remain unclear. See updated and revised treatment in Melchert 2012c.
- c. By "Čop's Law" voiced stops appear as geminate voiceless stops following an original accented short **e*.
- d. Voiced labiovelar **g^w > w* except after nasal (NB does **not** include PIE medial **k^w!*).
- e. Intervocalic reflexes of **d* and **l* merge into some coronal continuant in Iron Age HLuvian. Result alternates with *r* in Iron Age HLuvian.

2. Fricatives

- a. By "Čop's Law" **s* appear as *ss* following an original accented short **e*.
- b. Tendency for PA **s^w > /w/* alongside /χ^w/ (-*hw*-).

3. Sonorants

- a. By "Čop's Law" **R* appears as *RR* following an original accented short **e*.
- b. Result of intervocalic **l* alternates with *r* in Iron Age HLuvian.
- c. Regular result of **R* is *aR*, but also a few undeniable examples of *uR* (i.e. [or]).

4. Vowels

- a. Merger of short **e* with *a*, except after yod, where it merges with *i*.
- b. Long **ē* and **ey > ī*, but PA **ā > ā*.
- c. Merger of **o(:) > *a(:)*.
- d. **Basically** same contrast of /u(:)/ and /o(:)/ as Hittite, but details differ.

E. Lycian

1. Stops

- a. Devoicing of word-initial voiced stops.
- b. Voicing of voiceless stops after nasal.

c. Change of intervocalic voiced stops to something other than stops. Fricatives most likely result. Combination of b. and c. leads to reanalysis of voiced stops after nasals as allophones of voiceless stops.

d. **Conditioned** palatalization of $*k̄ > \text{Proto-Lycian } *ts$ ($> \text{Lycian and Milyan } s$) in fronting environments **vs.** preserved $k < *k$. Parallel development for voiced series unprovable due to more general loss of $*g/\acute{g}(h)$ in medial position, whose details remain unclear.

e. $*dw- > kb-$ ([cβ]) in Lycian (A) only (preserved as $tb-$ in Milyan).

f. $*k^w > t$ in Lycian (A) via [c] (spelled τ) before front vowels ($> k$ in Milyan). Result of voiceless labiovelar in non-front environments not assured, but $qā(n)-$ ‘to kill’ suggests preservation.

g. Voiced labiovelar $*g^w > w$ except next to nasal.

2. Fricatives

a. $*s > h$ in Lycian (A) only. Preserved in Milyan.

b. Reflexes of $*h_2$ “harden” into dorsal stops; appears as k [c] before $*e$, as x [k] in back environments. PA $*χ^w > q$ ([k^w]). Likely originates in postnasal position (see above) and distribution analogical to other points of articulation.

c. Word-initial $*h_3$ is lost.

3. Sonorants

a. $*w > [v/β]$ (spelled b) after consonant. Fate of $*y$ entirely unclear.

b. $*VnT > \acute{V}D$ (spelled $\acute{V}T$). I.e., tendency already in Hittite has been completed.

c. $*N > \tilde{a}$. Due to massive syncope, fate of syllabic liquids cannot be determined.

4. Vowels

a. $*o > e$, versus other Anatolian languages.

b. Long $*ē$ and $*ey > \tilde{i}$, but PA $*ā > \bar{a}$ (just like Luvian).

c. Two umlaut rules (probably distinct with Hajnal, contra Melchert 1994): $e > a$ before back vowel in next syllable; $a > e$ before front vowel in next syllable.

d. Massive syncope. Details remain to be determined.

F. Lydian

1. Stops

a. Devoicing of word-initial voiced stops.

b. Voicing of voiceless stops after nasal. Cf. 3.a below.

c. With Kloekhorst (2023), several Lydian fricatives and affricates probably have voiceless and voiced allophones.

d. PA $*d > \text{palatal } [dz^i]$ before $*i$ and $*u$, with Kloekhorst (2023: 129) likely voiceless word-initially, but affricate, not stop. Elsewhere medial and final $*d > [\delta]$, but with Kloekhorst (2023: 126) likely $[\theta]$ in $edš$ and edt . Conditioning for $*p > [\phi/\beta]$ not entirely clear.

e. Unrounding of $*k^w$ to k before rounded vowel.

2. Affricate

PA $*[t^s]$ becomes phonemic with loss of yod (in suffix $-ta- < *-tyo-$); also result of $t+s$ and $t+\acute{s}$ (thus palatalized allophone also possible).

3. Fricatives

- a. **Progressive** palatalization of *s after *i* and regressive before *e(:) and *i* (NB spelled *s* in older orthography, while preserved /s/ is *s*! Recent publications use *š* and *s*!).
- b. Against previous claims, **h*₂ preserved as dorsal stop /k/ at least intervocalically and word-initially before vowel (Melchert 2004: 140–42, Yakubovich 2019b: 402, and Oettinger 2021: 119–20) and probably **h*₃ initially before vowel (Oettinger 2016/17: 255–6).

3. Sonorants

- a. **VnT* > *VD* (spelled *VT*). NB means [d] is allophone of /t/. Likely also for other points of articulation.
- b. Original final *-*m/-n* > *v* (actual phonetics unknown, but **not** palatal).
- c. **l* palatalized at least before yod, probably in other front environments (spelled *λ*).
- d. Outcome of syllabic sonorants unknown.
- e. **y* > <d> (definitely not a stop; for fricative (likely but not certainly [ð]) see Eska 2018-19: 21–6. Not credible Oreshko 2019).
- f. **w* > [β] and devoiced to [ϕ] (but now transliterated *w* to avoid confusion with “nu” nasal above). Against Kloekhorst (2023: 126) no justification for separate /w/.

4. Vowels

- a. **a/e/oN* > <*ã*> in open syllable, > <*ẽ*> in closed syllable (synchronic contrast probably not length, contra Melchert 1994: 43, but arguments for mid-front *ẽ* (Gérard 2005: 36 with refs.) also false (see Kloekhorst 2023: 117–8). More likely [ã]).
- b. Long **ē* and **ey* > *i*, but PA **ē* > *a* (like Luvian and Lycian).
- c. Conditioning for **o*(:) and **a*(:) appearing as <o> or <a> quite unclear.
- d. Massive syncope **and** apocope!

II. Nominal Morphology

1. Number

- a. OH preserves contrast of count vs. “collective” (*recte* set) plural in animate nouns. Traces elsewhere. Lost by NH.
- b. Handful of credible reflexes of dual.

2. Gender

Presence of at least *-*eh*₂ in function of forming **animate** nouns with individuating semantics with both male and female referents but no evidence for use as agreement marker on adjectives argues that feminine grammatical gender is post-Anatolian innovation. Likewise *-*iH* in Hitt. *nakkī-* has “pre-feminine” function.

3. Case

- a. Traces of standard PIE eight cases in singular, but formal exponent of ablative and instrumental renewed. Allative case for PIE very doubtful, rather innovation of PA.

b. Nominative, accusative, genitive and dative-locative inherited for plural. Further elaboration of plural cases probably post-Anatolian, along with filling out of dual beyond nom.acc.

4. Inflectional Classes

a. Thematic inflection fully developed (NB presence of **-o-s*, **-osyo* and **-e/oso* in GSg and **-os* < **-ōs* in NPIC in Hittite and Palaic).

b. **In general terms**, Anatolian shows the expected inflectional classes of PIE and attendant derivational suffixes. Differences in productivity and in the type of formal renewal some undergo are also of a typical kind. Two points deserve emphasis: (1) the Anatolian use of **-e/ont-* as a past participle and (2) the near-total absence of primary **-tó-* vs. reasonable productivity of secondary (denominative) **-tó-* renews question of ultimate diachronic relationship of the two. See on both Melchert 2017, but also the important corrective by Fellner and Grestenberger (2018: 64–72)!

III. Pronouns

1. Personal Pronouns

a. Spread of *u*-vocalism from the 2Sg to the 1Sg is a defining innovation of PA. Attempts to take PA 2Sg subject **tī* as archaism not credible.

b. The very limited inflection of the personal pronouns is surely an archaism, but the extent to which further elaboration is a **shared** innovation of Core IE is quite unclear.

2. Demonstrative, Anaphoric, Interrogative/Relative Pronouns

a. Inflection of the nominative and accusative is inherited, that of the other cases innovative, but based on PIE material.

b. Anatolian uses **k^wi-/k^wo-* for relative and interrogative. There is **no** trace of **Hyō-*.

c. Creation of a new anaphoric and non-first-person deictic **o-bhó/i-* is a defining innovation of PA. In anaphoric use it has ousted **so-/to-*, but **e/o-* is attested.

d. Inherited **k^oe/i-* was the first-person deictic in PA. The new **o-bhó/i-* clearly also had deictic force, but whether second-person or third-person or merely distal is unclear.

IV. Verbal Morphology

1. Person: nothing unusual.

2. Number: **no trace** of first plural endings in **-me+*. Generalization of **-we+* reflects either generalization of dual or reflex of old first plural inclusive vs. exclusive type.

3. Voice

a. PA clearly inherited active and medio-passive, but inner-Hittite trajectory argues that core of latter consisted of media tantum, some of which are unexpectedly transitive, mostly(!) those with Pres3Sg ending **-or*.

b. PA clearly inherited forms where **-r* marked at least the third persons of the present medio-passive. Use of the reflexive particle **-ti* to mark other persons of the present and the preterite clearly is not PA. NB competition of using **-s(e/o)i* instead in HLuvian.

4. Tense: PA clearly inherited present and preterite, distinguished by **-i* in the active, originally by **-r* in the medio-passive. Where preserved, latter renewed to *-ri*.

5. Aspect

- a. All well-known Core IE formal exponents of imperfective aspect (“present”) attested in Anatolian.
- b. Arguments for PA having inherited contrast of perfective vs. imperfective **aspect** are weak. Facts also compatible with “pre-aspectual” system where later exponents of imperfect aspect still marked Aktionsarten.
- c. Reflexes cognate with the Core IE root aorist also assured for Anatolian. Any traces of sigmatic aorist disputed. No credible reflexes of thematic aorist.
- d. For arguments against stative-resultative perfect in Anatolian and thus PIE(PIA) see Jasanoff 2018.

6. Stem Formation

- a. Besides cognates of Core IE “present” and root aorist formations, all inflected in Anatolian with “*mi*-endings”, Anatolian also shows formations inflected with “*hi*-endings” formally similar to those of medio-passive and Core IE “perfect”.
- b. At least a core of these continue PIE type of root present with original **ó/é* ablaut (usually renewed to **ó/zero*), including “*i*-presents” (see Melchert 2022a). Both types appear in Core IE either as presents in *-*e*-/-*o*- or *-*ye*-/-*yo*-.
- c. Also corresponding **ó/é* “aorist”, but *o*-grade generalized in pre-Hittite.

7. Mood

- a. Indicative and Imperative clearly inherited.
- b. No clear trace of optative, but could easily have been lost.
- c. No clear trace of subjunctive, but likewise loss would have been trivial, given Anatolian sound changes. For indirect evidence from *-i* imperatives see Jasanoff 2012.

V. Syntax

1. Nothing unusual in terms of use of nominal cases or verbal categories. NB **no evidence for alleged archaic “absolute case”**. See Hittite Syntax I.1.
2. Prohibition on grammatically neuter nouns as subjects of transitive verbs likely inherited. “Split ergativity” as response is Anatolian innovation vs. loss of prohibition in Core IE. See under Hittite nominal morphology 2.C.1.
3. Anatolian often shows agreement with nearer antecedent in case of coordinated NP referents.
4. Anatolian does **not** show overt wh-movement, and enclitic anaphoric pronouns stand to the left of wh-words, unlike Vedic Sanskrit and Homeric Greek (see Goedegebuure 2009[#33] and Huggard 2011[#46]). New account needed for contrast of “determinate” and “indeterminate” preposed relatives in Hittite.
5. Hittite pattern of parataxis with conjunctions *nu*, *šu*, and *ta* represents an innovation even from PA and is **not** an archaism shared with Celtic. See H. Craig Melchert, *News from the Lands of the Hittites* 5–6 (2021–2002) 26 with refs.
6. “Left-dislocation” and “extraposition” **probably** inherited from PIE. PIE status of “fronting” and “hyperbaton” as shown by Hittite entirely indeterminate. “right-dislocation” is attested only in “translationese” as device to imitate Hattic and Hurrian word order.

Notes: