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Hittite

Phonology – Part 1: Segments

Roadmap

- Segments inventory
- Vowels
- Stops
- Fricatives
- Affricate
- Sonorants

Segments inventory: Vowels

	Front	Central	Back
High	i / i:		u / u:
Mid	e / e:		
Low		a / a:	

Secondary /o/ spelled as <u> vs. /u/ spelled as <ú>?

Vowels

<e> and <i> may alternate in writing

- Stable <e>: *ešzi* 's/he is', *šer* 'above', *udne* 'land'
- Stable <i>: *iškiš* 'back', *išiyahḫ-* 'to trace'
- Minimal pairs: *et* 'eat!' vs. *it* 'go!'
- Fluctuation: *ekuna / ikuna* 'cold', *tešummiuš / tišummiuš* 'cups'

Segments inventory: Consonants

Manner of articulation	Place of articulation				
	Labial	Dental	Palatal	Velar	Labiovelar
Stop	/b/ (pp, bb)	/d/ (tt, dd)		/g/ (kk, gg, qq)	/g ^w / (kku, ggu)
	/p/ (p, b)	/t/ (t, d)		/k/ (k, g, q)	/k ^w / (ku, gu)
Fricative		/s:/ (šš)		/h:/ (ḥḥ)	/h ^w :/ (ḥḥu)
		/s/ (š)		/h/ (ḥ)	/h ^w / (ḥu)
Affricate	/t:s/ (zz)				
	/ts/ (z) ?				
Nasal	/m:/ (mm)	/n:/ (nn)			
	/m/ (m)	/n/ (n)			
Lateral		/l:/ (ll)			
		/l/ (l)			
Trill		/r:/ (rr)			
		/r/ (r)			
Approximant	/w/ (u)		/j/ (i)		

Graphic issues

- Word initial and word final consonants always **C**
- Word internal consonants may be **C** or **CC**

- Alternation between signs with voiced and voiceless stops inconsistent in initial and word-internal position
 - *dankuwai* vs. *tankuwai* ‘black (DAT.SG)’
 - *atanzi* vs. *adanzi* ‘they eat’
 - *arnuttu* vs. *arnuddu* ‘let him carry!’

Stops

- **Two-way** contrast
 - Opposition indicated graphically as CC / C
 - Quality (fortis/lenis, voiceless/voiced, tense/relaxed)
 - Most likely limited to word internal position
- Possible **three-way** contrast? (Kloekhorst)
 - fortis /t:/ → <tt>
 - ejective /tʰ/ → <dd>
 - lenis /t/ → <t>, <d>
 - possible distinction in word initial/final position?

Segment inventory: stops

- /b/: *appa* ‘back’; *suppi-* ‘pure’
- /p/: *apaš* ‘that one’
- #/P/: *pir* ‘house’; *para* ‘forwards’
- /P/# *ep* ‘take!’ (imperative)
- /d/: *katta* ‘downwards’; *atta* ‘father’
- /t/: *edi* ‘on this side’; *watar* ‘water’
- #/T/: *taru* ‘wood’, ‘tree’; *tarna-* ‘to leave’
- /T/#: *keššarit* ‘hand’ (instrumental)
- /g/: *tuekka* ‘body’
- /k/: *šagaḥḥi* ‘I know’
- #/K/: *katta* ‘downwards’; *keššara* ‘hand’
- /K/#: *lak* ‘turn!’ (imperative)
- /g^w/: *akkušk-* ‘to drink’
- /k^w/: *šakuwa* ‘eyes’
- #/K^w/: *kuiš* ‘who’; *kuen-* ‘to kill’
- /K^w/#: *takku* ‘if’

Fricatives /s/, /h/ and /h^w/

- Phonetic realization of <š> → due to restrictions connected with the cuneiform syllabary, Hittite uses the sign for the palatal for its only fricative, whose phonetic realization was likely [s]
- ‘Laryngeals’ → <ḫ> and <ḫḫ> represent the outcome of PIE *h₂ and *h₃, phonetically likely uvular fricatives [χ]
 - *ḫarki* ‘white’ (Lat. *argentum*)
 - *ḫastai* ‘bone’ (Gr. *ostéon*)
 - *newaḫḫ-* ‘renew’ (Lat. *nouāre*) < **neweh*₂-
- Labialized uvular fricative <ḫu> and <ḫḫu> → [χ^w]
 - *tarḫu-/taruḫ-* ‘overcome’ = /Tarhw/

Fricatives

- /s/: *šer* ‘over’; *ešanzi* ‘they sit’
- /s:/: *eššanzi* ‘they make’; *aššu-* ‘good’
- /h/: *meḥur* ‘time’
- /h:/: *paḥḥur* ‘fire’; *teḥḥi* ‘I put’
- #/H/: *ḥaštai* ‘bones’; *ḥaraniš* ‘eagle’
- /H/#: *šuppiyaḥ* ‘purify’ (imperative)

Affricate

- /t:s/ (possibly [tts]):
 - *zahḫiya-* ‘to fight’
 - *uizzi* ‘(s)he comes’, *panzi* ‘they go’
 - *ammedaz* ‘me’, ‘mine’ (abl.)

Sonorants

- Nasals
 - /m/, /n/; intervocalic /m/ ~ /m:/, /n/ ~ /n:/
- Liquids
 - /l/; intervocalic /l/ ~ /l:/, /r/ ~ /r:/ (never word initial)
- Approximants
 - /j/, /w/

Sonorants

- /m/: *maḥḥan* ‘when’; *laman* ‘name’
- /m:/: *lammar* ‘hour’
- /n/: *anda* ‘into’; *nai-* ‘to turn’; *kunan* ‘killed’ (part. neuter)
- /n:/: *kunnan* ‘on the right’
- /l/: *lahḥa-* ‘war campaign’; *lalan* ‘tongue’; *malai* ‘(s)he agrees’
- /l:/: *mallai* ‘(s)he grinds’
- /r/: *arnu-* ‘to carry’; *tarmiš* ‘nail’; *ara-* ‘fellow’
- /r:/: *arra-* ‘to wash’
- /j/: *iukan* ‘yoke’; *šiuš* ‘god’
- /w/: *newa-* ‘new’; *watar* ‘water’