

# “Prothetic *h-*” in Khotanese and the reconstruction of Proto-Iranic

## 1. Introduction: Khotanese

Khotanese or Kh. Saka = Eastern Middle Iranian language from Khotan/Hotan, Uyghur خوتەن *Hotən*,

Chin. 和田 *Hétíán*, southern Tarim Basin; native name *Hvatanai*

Written in South Turkestan Brahmi, over 2300 mainly Buddhist texts, 4th-11th century CE

Closest relative: Tumshuqese Saka in NW Tarim Basin (close to Tocharian B);

scanty remains (15 texts) in N Turkestan Brahmi, slightly more archaic

Next surviving relative (but rather remote): Wakhi in S Pamir region (~420-720 km W of Hotan)

common Old Iranian isoglosses: PIIr. \*čw > \*ś(ś) (vs. old \*š > š); PIr. \*čy not simplified to \*śy

lexical: Khot. *daha-* ‘man’ = W. *day*

Wakhi did not participate in many innovations (no lenition of voiceless obstruents)

## 2a. Some Khotanese etymologies

### 1) *haḍa-* ‘dress’

Bailey 1979: 447 “From \**arta-* with the frequent prothetic *h-* to base *ar-* ‘to fit’”

### 2) *hays-* ‘to drive, conduct, send’

Emmerick 1968: 148 “< O.Ir. \**az-* (with prothetic *h-*)”; Bailey 1979: 465 “*az-* ‘drive, conduct’, without *h-* in *hīnāysa-* ‘commander of a troop’ (\**hainā-āza-*)”; Cheung 2007: 172 (“with sec. *h-*?”)

### 3) *hīs-* ‘to come’

Emmerick 1968: 148 “*hīs-/āta-* suppletive like Man. Sogd. *ys-/ʾyt-* ... < \**ā-isa-* ... Khot. *hīs-* ... likely the same origin (with prothetic *h-*) ... *īs-* ‘to return’ ... < *ā-isa-* ... inch. < \**aiš-* and *hīs-* < \**ā-isa-* ... inch. < \**ay-* ‘go’ ..., the prothetic *h-* developing to enable the two verbs to be distinguished”; Cheung 2007: 155 “with sec. *h-*” (only continuant of *i-* ‘to go’)

### 4) *huṣṣ-* ‘to grow’

Emmerick 1968: 154 “< \**uxša-* < \**vaxš-*”; Bailey 1979: 494 “From base *vaxš-* : *uxš-* with prothetic *h-*, Av. *vaxš-*, *uxš-*”

Implication: Vowel-initial words can (but need not) have “prothetic” *h-* in Khotanese

„Mehrfalls kommt ein ‘cockney’ *h* vor anfangendes *a*, während altes *h* wegfallen kann“ (Konow 1941: 15)

“More common is the addition of *h-* (Bailey 1953: 538)

“Prothetic *h-* is frequent in Khotanese” (Bailey 1959: 74); cf. Herzenberg 1965: 53; 1981: 247

Vowel-initial words = words beginning with a vowel in other Iranian languages, most importantly the oldest one, i.e. Avestan, and Sanskrit as the best attested early IIr. language

## 2b. Typological background

Prothetic = secondary *h-* typical for “Cockney situations”, i.e. languages with variation between (original) *h-* and (innovative) loss of *h-* ⇒ hypercorrection

E.g., (Archaic and written) Latin vs. spoken and Vulgar Latin, resulting in:

- Lost *h-* in *ānser* for \**hāns*<sup>o</sup> < \**g<sup>h</sup>ans-* (Weiss 2009: 153), *arēna*, *aedus*, *ircus*;  
*h* irrelevant for metre and rhotacism; general loss in Romance
- Hypercorrect *h-* in *haurīre*, *humerus*; *ahēnus* (Weiss 2009: 152f.)

Applicable to Khotanese?

Khotanese *h-* is a phoneme, cf. minimal pairs:

*hīs-* ‘to come’ : *īs-* ‘to return’; *ha-* ‘forth’ : *a-* ‘un-’; *hāna-* ‘vessel’ : *āna-* ‘sitting’ ...

## 3a. The usual correspondences

1. Khotanese *h*-

Khotanese		Avestan	Sanskrit	(Middle) Persian	other
<i>haṃ-</i>	together	<i>hṃm-, hṃm-</i>	<i>sam</i>	<i>(h)an-</i>	
<i>hama-</i>	same	<i>hama-</i>	<i>samá-</i>	<i>ham</i>	
<i>hamāna-</i>	summer	<i>ham-</i>	<i>sámā-</i>	<i>hāmīn</i>	
<i>hastama-</i>	best	<i>hastāma-</i>		--	Bactr. <i>υασταμο hastam</i>
<i>hī</i>	bridge	<i>haētu-</i>	<i>sētu-</i>	--	Oss. D. <i>xed</i>
<i>hīnā-</i>	army	<i>haēnā-</i>	<i>sēnā-</i>	<i>hēn</i>	
<i>hu-</i>	good	<i>hu-</i>	<i>su-</i>	<i>hu-</i>	
<i>huška-</i>	dry	<i>huška-</i>	<i>śúška-</i>	<i>hušk</i>	
<i>hūš-</i>	to dry	<i>haōša-</i>	<i>śoša-</i>	<i>hōš-</i>	
<i>hauda</i>	seven	<i>hapta</i>	<i>saptá</i>	<i>haft</i>	
<i>ha-</i>	for-, forth-	<i>fra-</i>	<i>pra-</i>	<i>fra-</i>	also in many compounds

⇒ Khot. *h*- < \**h*- < \**s*-; < pretonic \**fr*- < \**pr*- (vs. regular *br*- < \**βr*- < \**fr*-, cf. *briya*-, *braṣṭa*-)

Even intervocalic *h* is at least partly preserved, cf. *saha*- ‘hare’

2. Khotanese  $\emptyset$ -

Khotanese		Avestan	Sanskrit	(Middle) Persian	other
<i>aysu</i>	I	<i>azəm</i>	<i>ahám</i>	<i>an</i>	Parth. <i>az</i>
<i>aštā</i>	is	<i>asti</i>	<i>ásti</i>	<i>ast</i>	
<i>aśśa-</i>	horse	<i>aspa-</i>	<i>ásva-</i>	<i>as- (asp)</i>	
<i>āljs-</i>	to sing	--	<i>árca-</i>	--	
<i>āska-</i>	fast, deer	<i>āsu-</i>	<i>āsú-</i>	<i>āhūg</i>	
<i>ula-</i>	upright	<i>arəδβa-</i>	<i>ūrdhvá-</i>	<i>ul</i>	
<i>ustama-</i>	highest		<i>uttamá-</i>	--	
<i>ūri</i>	belly	<i>udara-</i>	<i>udára-</i>	--	Khwar. <i>ʾwδȳr</i>
<i>ora-</i>	cloud	<i>aβra-</i>	<i>abhrá-</i>	<i>abr</i>	
<i>ī</i>	his, her	<i>hōi/hē ~ šē</i>	--	<i>(-š)</i>	Khwar. <i>-h(i)</i>
<i>īndā</i>	they are	<i>həṅti</i>	<i>sánti</i>	<i>(hēnd)</i>	
<i>ajs-</i>	to pursue	--	<i>saj-</i>	OP <i>haj-</i>	

⇒ Khot.  $\emptyset$ - < \* $\emptyset$ -; exceptionally (mostly in clitics):  $\emptyset$ - < \**h*- < \**s*-

Only one good non-clitic example of lost *h*-: Late Khot. *ajsām* ‘we pursue’ (?) < \**ajsāmā* < \**hajāmah*  
cf. Bailey 1953: 537 with the remark “This is to accept loss of initial *h*-”

but his second example *ārā* < \**harra*- must be rejected (see Emmerick & Skjærvø 1987: 165f.)

## 3b. A third set of correspondences

Khotanese		Avestan	Sanskrit	(Middle) Persian	other
<i>haṃgušta-</i>	finger	<i>aṅgušta-</i>	<i>aṅguṣṭhá-</i>	<i>angust</i>	
<i>haḍa-</i>	dress	--	--	--	Arm. <i>arta-</i>
<i>hana-</i>	blind	<i>aṅda-</i>	<i>andhá-</i>	--	Parth. <i>hand</i>
<i>handara-</i>	interior	<i>aṅtara-</i>	<i>ántara-</i>	<i>(andar)</i>	
<i>handāra-</i>	other	<i>aṅtara-</i>	<i>ántara-</i>	--	Bactr. <i>ανδαρο andar</i>
<i>hays-</i>	drive	<i>aza-</i>	<i>ája-</i>	--	
<i>harraa-</i>	saw	--	--	* <i>arrag</i> > NP <i>arra</i> <sup>h</sup>	
<i>hala-, hālaa-</i>	side, half	<i>arəδa-</i>	<i>árdhá-</i>	<i>ārag</i> (Fars <i>hal</i> )	
<i>haṣṭa</i>	eight	<i>ašta</i>	<i>aṣṭá</i>	<i>hašt</i>	analogy to ‘7’?
<i>haṣṭa-</i>	vast < reached	--	<i>aṣṭá-</i>	--	
<i>haska-</i>	tusk	<i>-asūra-</i>	<i>(aṃśú-?)</i>	--	Oss. D. <i>ænsur(æ)</i>
<i>hāma-</i>	raw	--	<i>āmá-</i>	<i>xām</i>	Pashto <i>um</i> , Sogd. <i>xām</i>

<i>häysä</i>	hide, leather	<i>izaēna-</i>	--	<i>xīg</i>	Oss. D. <i>xizæ</i>
<i>hāra-</i>	thing; wealth	--	--	<i>xīr</i>	Parth. <i>īr</i>
<i>hālštā</i>	spear	<i>aršti-</i>	<i>rštī-</i>	<i>*xišt</i>	Armen. <i>ašteay</i>
<i>hīššana-</i>	iron	--	--	<i>āhun</i>	Parth. <i>āsun</i>
<i>hīs-</i>	to come	<i>(i-)</i>	<i>(i-)</i>	<i>(āy-)</i>	Sogd. <i>ʿys-</i> , Parth. <i>ās-</i>
<i>hīha-</i>	hearth smoke	<i>aēsma-</i> ‘fuel’	<i>édha-</i>	<i>hēsm/ēsm</i> <i>ēmāg/*hēmāg</i>	
<i>hurā</i>	thigh	<i>-uru-</i>	<i>ūrú-</i>	--	
<i>hulga-</i>	soft, mild	--	<i>rdu-</i>	--	
<i>hušš-</i>	to grow	<i>uxš-</i>	<i>ukš-</i>	--	Sogd. <i>ax<sup>wš</sup>-</i>
		<i>Uxšiiat.ər<sup>a</sup>ta-</i>		<i>Hušīdar</i>	
<i>hū-dva-</i>	both	<i>uba-/uua-</i>	<i>ubhá-</i>	--	
<i>hau</i>	word	<i>ad-</i>	<i>a(d)h-</i>	--	
<i>hau’</i>	oats (?)	--	<i>óšadhi-?</i>	<i>hōšag, *xōšag</i> ‘ear’	Kurd. <i>úšf</i>
<i>h(u)ve’</i>	mortal, man	<i>aōšaŋ<sup>v</sup>hā</i>	<i>oša-</i>	<i>hōš, oš</i>	Parth. <i>oš</i>
<i>hva’nd-</i>		<i>aōšaŋ<sup>v</sup>haŋt-</i>			

Correlation with Persian (“prothetic”) *h-*, *x-*?

### 3c. A similar phenomenon in Persian

Khotanese		Avestan	Sanskrit	(Middle) Persian	other
--	narrow		<i>aṃhú-</i>	<i>hanzūg</i>	Parthian <i>anzug</i>
--	thill, plough	<i>aēš(a)-</i>	<i>īšá-</i>	<i>hēš, *xēš, ēš</i>	
--	ashes	--	<i>áša-</i>	<i>xāk</i>	Kurd. <i>ax</i>
<i>āha-</i>	egg	<i>aēm</i>	--	<i>xāyag</i>	Oss. D. <i>ajkæ</i>
--	brick	<i>ištiia-</i>	<i>īštakā-</i>	<i>xišt</i>	OP <i>išti-</i>
<i>arrā</i>	bear	<i>arša-</i>	<i>ṛkša-</i>	<i>xirs</i>	Khwar. <i>hls</i>
--	anger	<i>aēšma-</i>	<i>(ešá-)</i>	<i>xēšm, ēšm</i>	Parth. <i>ēšmag</i>

Middle and New Persian but not Old Persian

= dialectal difference, cf. OP *u-*, *uv-* vs. MP *hu-*, *x<sup>w</sup>-* < *\*hu-*, *hw-* < *\*su-*, *\*sw-*

### 3d. Correspondences in a dataset of Khotanese words

	Khot.	MP	elsewhere	PIr.	Skt.	min.	max.
1	<i>h</i>	<i>h</i>	<i>h</i>	<i>*h</i> < <i>*s</i>	<i>s</i>	37	
2	<i>h</i>	<i>h/x</i>	∅	<i>*h</i>	∅	10	21
	<i>h</i>	∅	∅	<i>*h?</i>	∅	4	15
	<i>h</i>	?	∅	<i>*h?</i>	∅	11	
	<i>h</i>		∅	<i>*h?</i>	∅	25	
	∅	<i>h/x</i>	∅	<i>*h?</i>	∅	5	12
	?	<i>h/x</i>	∅	<i>*h?</i>	∅	6	
		<i>h/x</i>	∅	<i>*h?</i>	∅	21	
3	∅	∅	∅	<i>*∅</i>	∅	21	38
	∅	?	∅	<i>*∅</i>	∅	17	

Type 2 points to different PIr. consonant *\*h-*

### 4a. The source of *\*h*

MP/NP *h-/x-* < PIE *\*h<sub>2</sub>* [χ] Cf. Kümmel 2016: 83; 2018: 166

Independent evidence for segmental *\*h* (< *\*h<sub>2</sub>*) in Proto-Iranic: Devoicing of voiced obstruents (not in IA)

YAv. *mas-* ~ *mazā-* < *\*matsh-* ~ *\*madzah-* < *\*maj-h-* ~ *\*maj-ah-* < *\*meġ-h<sub>2</sub>-* ~ *\*meġ-a/oh<sub>2</sub>-*

Av. *nāf-* ~ *nabā-* < *\*nāph(i)-* ~ *\*nabah-* < *\*náb-h(i)-* ~ *\*nab-ah-* < *\*h<sub>3</sub>nób<sup>h</sup>-h<sub>2</sub>-* ~ *\*h<sub>3</sub>neb<sup>h</sup>-ah<sub>2</sub>-*

CIr. *\*θaiwar-* < *\*thaiwar-* < *\*dhaiwar-* < *\*dahiwar-* = ved. *devár-* < *\*dahiwár-* < *\*dah<sub>2</sub>iwér-*

CIr. *\*θau-* < *\*thau-* < *\*dhau-* < *\*dahu-/duh-* = ved. *dav<sup>i</sup>-/dū-* < *\*dah<sub>2</sub>u-*

Cf. Kümmel 2016: 82f.; 2018: 165f.

⇒ Hypothesis: Khot. *h-* < Plr. = Plr. \**h-* < PIE \**h<sub>2-</sub>* with preservation in marginal varieties elsewhere lost before \**s* > *h*

Marginal	Central	Plr.	Skt.	PIE	Hittite
<i>h</i>	<i>h</i>	* <i>h</i> < * <i>s</i>	<i>s</i>	* <i>s</i>	<i>s</i>
<i>h/x</i>	∅	* <i>h</i>	∅	* <i>h<sub>2</sub></i>	<i>h</i>
∅	∅	*∅	∅	* <i>h<sub>3</sub></i>	<i>h</i>
∅	∅	*∅	∅	* <i>h<sub>1</sub></i> , *∅	∅

#### 4b. Evaluation data 1: etymological overview of \**h*-words

Khotanese		(Middle) Persian	Plr.	Hittite	Western IE	PIE
<i>haḍa-</i>	dress	--	* <i>harta-</i>	--	* <i>ar-</i>	* <i>h<sub>2</sub>ar-?</i>
<i>hana-</i>	blind	(Parth. <i>hand</i> )	* <i>handa-</i>	--	* <i>and<sup>h</sup>-</i>	* <i>h<sub>2</sub>and<sup>h</sup>-</i>
<i>handāra-</i>	other	--	* <i>hantara-</i>	--	* <i>antero-</i>	* <i>h<sub>2</sub>an-tero-</i>
<i>handara-</i>	interior	<i>andar</i>	* <i>h?antara-</i>	<i>an-</i>	* <i>en-</i>	* <i>(h<sub>1</sub>)entero-</i>
<i>hamguṣṭa-</i>	finger	<i>angust</i>	* <i>hangu-šta-</i>	--	* <i>ang-</i>	* <i>h<sub>2</sub>ang-</i>
<i>hays-</i>	drive	--	* <i>hadza-</i>	--	* <i>ag-</i>	* <i>h<sub>2</sub>aġ-</i>
<i>harraa-</i>	saw	* <i>arrag</i> > NP <i>arra<sup>h</sup></i>	* <i>harnaka-</i>	--	--	* <i>Hrno-</i>
<i>hala-, hālaa-</i>	side, half	<i>ārag</i>	* <i>harda-</i>	--	--	* <i>Herd<sup>h</sup>o-</i>
<i>haṣṭa</i>	eight	<i>hašt</i>	* <i>haštā</i>	--	* <i>októ</i>	* <i>HoġtóH</i>
<i>haṣṭa-</i>	vast	--	* <i>hašta-</i>	( <i>henk-?</i> )	* <i>anek-</i>	* <i>h<sub>2</sub>neġ-</i>
<i>haska-</i>	tusk	--	* <i>ha(n)tsuka-</i>	--	?	* <i>Hanġ-?</i>
<i>hāma-</i>	raw	<i>xām</i>	* <i>hāma-</i>	--	* <i>ōmo-</i>	* <i>HoHmó-</i>
<i>hāra-</i>	thing	<i>xīr</i>	* <i>hārya-</i>	--	* <i>ar-</i>	* <i>h<sub>2</sub>r-jo-</i>
<i>hālštā</i>	spear	* <i>xišt</i>	* <i>hāršti-</i>	<i>hars-</i>	--	* <i>h<sub>2</sub>rš-</i>
<i>hāysā</i>	hide, leather	<i>xīg</i>	* <i>hidza-</i>	--	* <i>aig-</i>	* <i>h<sub>2</sub>aīġ-</i>
<i>hīššana-</i>	iron	<i>āhun</i>	* <i>hatswan-</i>	--	* <i>ak-</i>	* <i>h<sub>2</sub>aġ-</i>
<i>hīs-</i>	to come	--	* <i>(fr)ā-isca-?</i>	( <i>i-</i> )	(* <i>ej-?</i> )	* <i>HoH+*h<sub>1</sub>ej-</i>
<i>hīha-</i>	hearth smoke	<i>hēsm/ēsm</i> <i>ēmag/*hēmag</i>	* <i>haid-ħa-</i> * <i>haidzma-</i>	--	* <i>aid<sup>h</sup>-</i>	* <i>h<sub>2</sub>aīd<sup>h</sup>-</i>
<i>hurā</i>	thigh	--	* <i>huHru-</i>	--	--	?
<i>hulga-</i>	soft, mild	--	* <i>harduka-</i>	--	--	* <i>Hrdu-</i>
<i>huṣṣ-</i>	to grow	<i>Huṣīdar</i>	* <i>huxš-</i>	--	* <i>auks-</i>	* <i>h<sub>2</sub>uks-</i>
<i>hū-dva-</i>	both	--	* <i>huba-</i>	<i>hu-</i>	--	* <i>h<sub>2</sub>u-b<sup>h</sup>ó-</i>
<i>hau</i>	word	--	* <i>hadu-</i>	--	--	* <i>HEd<sup>h</sup>-?</i>
<i>hau'</i>	oats (?)	<i>hōšag</i> 'ear'?	* <i>hawiš-</i>	( <i>hawi-?</i> )	--	* <i>HEw(?)-</i>
<i>h(u)ve'</i>	mortal, man	<i>hōš</i>	* <i>haušas-</i>	--	* <i>e/ows-</i>	* <i>h<sub>1</sub>ews-</i>
--	thill, plough	<i>hēš, *xēš, ēš</i>	* <i>haiš(a)-</i>	<i>hissā-</i>	* <i>a/oj-es-</i>	* <i>h<sub>2</sub>(a)is-</i>
--	ashes	<i>xāk</i>	* <i>hās-</i>	<i>hass-</i>	* <i>ās-</i>	* <i>h<sub>2</sub>aHs-</i>
--	narrow	<i>hanzūg</i>	* <i>handzu-</i>	<i>hamank-</i>	* <i>ang<sup>h</sup>u-</i>	* <i>h<sub>2</sub>amġ<sup>h</sup>-</i>
--	brick	<i>xišt</i>	* <i>hišti-</i>	--	--	?
<i>āha-</i>	egg	<i>xāyag</i>	* <i>hāwya-</i>	--	* <i>ōwjo-</i>	* <i>h<sub>2</sub>ō(H)ujo-</i>
<i>arrā</i>	bear	<i>xīrs</i>	* <i>hārča-</i>	<i>hartakka-</i>	* <i>artko-</i>	* <i>h<sub>2</sub>rtġko-</i>
--	anger	<i>xēšm, ēšm</i>	* <i>haišma-</i>	--	* <i>isa-, *eis-</i>	* <i>h<sub>1</sub>ejsh<sub>2</sub>-</i>

⇒ Very few unexpected *h-/x-*: Plr. \**hauša-* 'death', \**hayšma-* 'anger' + Khot. *handara-* 'interior', *hīs-* 'to come'

#### 4b. Evaluation data 2: counterexamples: Khotanese + MP ∅- < \**h<sub>2-</sub>*

Khotanese		Avestan	Sanskrit	(Middle) Persian	
<i>aña-</i>	other	<i>añia-</i>	<i>anyá-</i>	<i>any</i>	* <i>(h<sub>2</sub>)anjó-?</i>
<i>aḍāra-</i>	other	--	--	--	* <i>(h<sub>2</sub>)al-tero-</i>
<i>āce</i>	duck	--	<i>āti-</i>	--	* <i>h<sub>2</sub>(a)nh<sub>2</sub>t-</i>
<i>āḍa-</i>	flour	<i>aša-</i>	* <i>ārta-</i>	<i>ārd</i>	* <i>h<sub>2</sub>ālh<sub>1</sub>-to-?</i>
<i>āysda</i>	assured	<i>azdā</i>	<i>addhā</i>	<i>azd</i>	* <i>HEd<sup>h</sup>-?</i>

<i>āra-</i>	worth	<i>ar<sup>ə</sup>ya-</i>	<i>arghá-</i>	<i>arz(ān)</i>	<i>*h<sub>2</sub>a/olg<sup>w</sup>ó-</i>
<i>ārr-</i>	grind	--	--	(Gur. <i>harš-</i> )	<i>*h<sub>2</sub>l<sup>h</sup>nh<sub>1</sub>-</i>
<i>ārra-</i>	arm	<i>ar<sup>ə</sup>ma-</i>	<i>īrmá-</i>	<i>*arm</i>	<i>*h<sub>2</sub>arH-m-</i>
<i>ālsata-</i>	silver	<i>ar<sup>ə</sup>zata-</i>	( <i>rajatá-</i> )	OP <i>ar<sup>ə</sup>data-</i>	<i>*h<sub>2</sub>rgnt-</i>
<i>āška-</i>	tear	<i>asru-</i>	<i>ásru-</i>	[ <i>ars</i> ] (Lari <i>xars</i> )	<i>*h<sub>2</sub>ákru-</i>
<i>āstaa-</i>	bone	<i>ast-</i>	<i>ást<sup>h</sup>i</i>	<i>ast(ag), *xastag</i>	<i>*h<sub>2</sub>óst-/h<sub>2</sub>ast-</i>
<i>āhāra-</i>	ashes, fire	<i>āθr-/ātər-</i>	--	<i>ādur</i>	<i>*h<sub>2</sub>aHtr-</i>
<i>u</i>	and	<i>utā</i>	<i>utá</i>	<i>ud</i>	<i>*h<sub>2</sub>u-te</i>
<i>uṛ</i>	intelligence < *ears	<i>uš</i>	--	<i>uš, *huš/hōš</i>	<i>*h<sub>2</sub>(o)us-</i>
<i>oṇa-</i>	strong	<i>aōjah-</i>	<i>ójas-</i>	<i>ōz</i>	<i>*h<sub>2</sub>áwg(e)s-</i>
<i>oṣ-ku</i>	always < lifetime	<i>āiū, yaōš</i>	<i>áyū-</i>	--	<i>*h<sub>2</sub>óju</i>

## 4c. Evaluation of the conflicting evidence

Khot.	MP	PIr.	*h <sub>2</sub> /H	%	*h <sub>2</sub>	%	*H	%	*h <sub>1</sub> /∅	%	*H/h <sub>1</sub> /∅	%	Σ
h-	h-/x-		9	<b>90</b>	6	<b>60</b>	3	30	1	<b>10</b>	4	40	10
h-	∅		3	<b>75</b>	2	<b>50</b>	1	25	1	<b>25</b>	2	50	4
h-	?		11	<b>100</b>	5	<b>45</b>	6	55	0	<b>0</b>	6	55	11
h-			23	<b>92</b>	13	<b>52</b>	10	40	2	<b>8</b>	12	48	25
?	h-/x-		6	100	5	83	1	17	0	0	1	17	6
∅-	h-/x-		4	80	3	60	1	20	1	20	2	40	5
		*h	33	<b>92</b>	21	<b>58</b>	12	33	3	<b>8</b>	15	42	36
		%	<b>62</b>		<b>62</b>		63		<b>14</b>		38		49
∅-	∅-		13	62	10	48	3	14	8	38	11	52	21
∅-	?		7	41	3	<b>18</b>	4	24	10	<b>59</b>	14	<b>82</b>	17
		*∅?	20	53	13	<b>34</b>	7	18	18	47	25	<b>66</b>	38
		%	38		38		37		<b>86</b>		<b>63</b>		51
Σ			53	72	34	46	19	26	21	28	40	54	74

⇒ Clear correlation of PIr. \*h- and (potential) PIE \*h<sub>2</sub>- vs. PIr. \*∅- and PIE \*h<sub>1</sub>/∅-

First type of counterevidence (unexpected h-) could even be reduced:

- Persian *xēšm* from *\*h<sub>1</sub>ejsh<sub>2</sub>-* possibly via assimilation *\*hajsχ- > \*χajsχ- > \*hays(h)-* or transposition *\*aysḥ- > \*ḥays-*
- Khot. *huve*<sup>ʔ</sup>, *hva*<sup>ʔ</sup>nd- < *\*ōzahw*<sup>o</sup> and Persian *hōš* might have secondary h- from *\*aušah- > \*hauša(h)-*

Only Khot. *handara-* ‘interior’, contradicted by Persian *andar*

and *hīs-* ‘to come’, if < *\*ā-isa-*, contradicted by Khot. Pers. *ā-* elsewhere

Second type of counterevidence (unexpected ∅) mostly remains. Explanations:

1. Different etymologies:

*aḍāra-* < *\*ar-tāra-*: *\*(h<sub>1</sub>)al-* instead of *\*h<sub>2</sub>al-* if connected to Anatolian *al-* ‘far’

*āḍa-*, *ārr-* < *\*ā-ḥarta-*, *\*ā-ḥarn*<sup>o</sup>: would explain *\*ārta-* rather than *\*arta-*

2. Conditioned loss not yet understood?

Often with *ā* (but Kortlandt’s loss before *\*o* would not help much); possibly clitic: *u*

3. Borrowing from Iranian neighbours (well-attested in Persian):

Khot. *arrä* ‘bear’ (hap. leg.); official terms, trading: *āysda*, *ālsata-*, *āra-*

## 4d. What about Wakhi?

General loss of h- (as in most of East Iranian), except *\*hw > x<sup>w</sup> > ǰ [x]*:

cf. *uβ* ‘seven’ < *\*āb* < *\*abd* < *\*haβda* < *\*hafta*; (with prothetic w-:) *wəsk* ‘dry’ < *\*usk* < *\*huška-*;

(with prothetic y-:) *yir* ‘sun’ < *\*ūr* < *\*hūr-*, *yuǰd* ‘groin, perineum’ < *\*ayd* < *\*haxt-*

Likewise, no *h-* < *\*h-*, cf. *yangl* ‘finger’ < *\*hanguri-*; *yišn* ‘iron’ < *\*hacwanya-*

⇒ ambiguous

## 5. Conclusion

Khotanese “prothetic” *h-* may in fact go back to preserved “laryngeal”, parallel to Persian *h-/x-*

⇒ reconstruction of Proto-Iranic *\*h* lost in most branches but retained in marginal varieties

Corroborating other evidence for long preservation of *\*h*

Khot. *h-* (=  $\emptyset$ -) good predictor for PIE *\*h<sub>2</sub>-* (vs. *\*h<sub>1</sub>/h<sub>3</sub>/ $\emptyset$* )

but Khot.  $\emptyset$ - no good predictor against *\*h<sub>2</sub>-*

## References

- Bailey, Harold Walter. 1953. Ariaca. *Bulletin of the School of Oriental and African Studies* 15/3, 530-540.
- . 1954. Indo-Iranian studies II. *Transactions of the Philological Society* 58, 141.
- . 1959. Iranian *arya-* and *daha-*. *Transactions of the Philological Society* 58, 71-115.
- . 1960. Indagatio indo-iranica. *Transactions of the Philological Society* 58, 62-86.
- . 1979. *Dictionary of Khotan Saka*. Cambridge: Cambridge University Press.
- Dunkel, George E. 2014. *Lexikon der indogermanischen Partikeln und Pronominalstämme*. Band 2: Lexikon. Heidelberg: Winter.
- Emmerick, Ronald E. 1968. *Saka Grammatical Studies*. London: Oxford University Press.
- . 1980. *r/n*-stems in Khotanese. In: Manfred Mayrhofer (ed.), *Lautgeschichte und Etymologie. Akten der VI. Fachtagung der Indogermanischen Gesellschaft, Wien, 24.-29. Sept. 1978*. Wiesbaden: Reichert, 166-172.
- . 1989. Khotanese and Tumšūqese. In: Rüdiger Schmitt (ed.), *Compendium Linguarum Iranicarum*. Wiesbaden: Reichert, 204-229.
- Emmerick, Ronald E. & Skjærvø, Prods Okto. 1982. *Studies in the vocabulary of Khotanese I*. Wien: Verlag der Österreichischen Akademie der Wissenschaften.
- . 1987. *Studies in the vocabulary of Khotanese II*. Wien: Verlag der Österreichischen Akademie der Wissenschaften.
- Herzenberg = Gercenberg, L. G. 1965. *Chotanosakskij jazyk*. Moscow: Nauka.
- . 1981. Chotanosakskij jazyk. In: Vera S. Rastorgueva et al., *Osnovy iranskogo jazykoznanija. Sredneiranskyje jazyki*. Moscow: Nauka, 233-313.
- Klingenschmitt, Gert. 1980. Zu den Rechtsverhältnissen in der indogermanischen Frühzeit. *Studia Indo-Iranica* 5/6, 137-152. [= 2005: 181-196]
- . 2005. *Kleine Schriften*, ed. M. Janda, R. Lühr, J. Matzinger, St. Schaffner. Hamburg: Dr. Kovač.
- Kölligan, Daniel. 2003. Gr. ἄνθραξ „Stück Kohle“. *Münchener Studien zur Sprachwissenschaft* 63, 45-51.
- Konow, Sten. 1941. *Khotansakische Grammatik. Mit Bibliographie, Lesestücken und Wörterverzeichnis*. Leipzig: Harrassowitz.
- Kümmel, Martin Joachim. 2016. Is ancient old and modern new? Fallacies of attestation and reconstruction (with special focus on Indo-Iranian). In: David M. Goldstein, Stephanie W. Jamison, Brent Vine (eds.), *Proceedings of the 27th Annual UCLA Indo-European Conference, Los Angeles, October 23<sup>rd</sup> and 24<sup>th</sup>, 2015*. Bremen: Hempen, 79-96.
- . 2018. The survival of laryngeals in Iranian. In: Lucien van Beek, Alwin Kloekhorst, Guus Kroonen, Michaël Peyrot, Tijmen Pronk (eds.), *Farnah. Indo-Iranian and Indo-European studies in honor of Sasha Lubotsky*. Ann Arbor: Beech Stave, 162-172.
- Lipp, Reiner. 2009. *Die indogermanischen und einzelsprachlichen Palatale im Indoiranischen*. Band I: Neurekonstruktion, Nuristan-Sprachen, Genese der indoarischen Retroflexe, Indoarisch von Mitanni. Band II: Thorn-Problem, indoiranische Laryngalvokalisation. Heidelberg: Winter.
- Mayrhofer, Manfred. 1992. *Etymologisches Wörterbuch des Altindoarischen*. Bd. I. Heidelberg: Winter.
- Remmer, Ulla. 2006. *Frauenamen im Rigveda und im Avesta. Studien zur Onomastik des ältesten Indischen und Iranischen*. Wien: Verlag der Österreichischen Akademie der Wissenschaften.
- Weiss, Michael. 2009. *Outline of the historical and comparative grammar of Latin*. Ann Arbor: Beech Stave Press.
- Zair, Nicholas. 2011. PIE ‘bird’ and ‘egg’ after Schindler. *Münchener Studien zur Sprachwissenschaft* 65, 287-310.