

Aryan loanwords in Burushaski as a data source for the reconstruction of language contact in the Upper Indus basin

The article attempts to reconstruct certain essential features of language situation in the Upper Indus region before the Tibetan conquest of the 8th century CE. Recent research has found that in pre-Tibetan times this area was inhabited by speakers of Burushaski, as well as of some now extinct Indo-Iranian (most probably, Dardic) lect. Intensive contact and mutual influence of these two languages seem likely but specific evidence on this point was almost unavailable to scholars until now. The author scrutinizes a large group of Aryan loans in Burushaski and concludes that a significant number of them must have been borrowed from an Indo-Iranian dialect of pre-Tibetan Ladakh. Some important historical-phonological peculiarities of such loan vocabulary are determined.

Keywords: language contact; lexical borrowing; Burushaski language; Indo-Iranian languages; Dardic languages; Ladakhi language; Balti language; Purik language.

The mountainous region along the uppermost course of the Indus and some of its tributaries, nowadays being divided politically between three countries, i.e. China, India and Pakistan,¹ is to a great extent homogeneous linguistically, forming a part of the Tibetan-speaking area. This homogeneity results from ethnic and linguistic processes triggered by the Tibetan conquest of the 7th–8th centuries CE. Very little direct information is available on the linguistic composition of the Upper Indus basin in pre-Tibetan times. We possess written specimens of only one language spoken in this period: this is the Zhangzhung language of the Sino-Tibetan family, which is commonly believed to have been a vernacular in the southeast of the area, adjacent to the source of the Indus. Dialects used by the population residing further down the river are unknown to us, though a hypothesis on this subject has been put forward recently, according to which, the inhabitants of what is now Ladakh and Baltistan spoke an Indo-Iranian lect probably belonging to the Dardic branch, and some early form of Burushaski (Kogan 2019; 2021). The geographical distribution of these two languages in the region under study can be tentatively inferred from etymological stratification of borrowed vocabulary in the local Tibetan varieties. As was found out, the majority of loanwords peculiar to the dialects current in the greater part of Ladakh are of Aryan (Dardic) origin, whereas in the dialects of Baltistan and adjoining areas of Ladakh,² the main source of early borrowings is Burushaski (Kogan 2019). These facts give us reasons to believe that the language of pre-Tibetan Ladakh (without Kargil) was probably Indo-Iranian, while that of pre-Tibetan Baltistan and, at least partly, Kargil must have been Burushaski.

It seems certain that the three above-mentioned languages were not insulated from each other, but coexisted in fairly close contact. Such a conclusion follows, in part, from etymological analysis of their lexicon. In the Zhangzhung language one can find Indo-Iranian loanwords showing historical-phonological peculiarities similar to those of Aryan loans in Northwestern

¹ More specifically, between the Tibet Autonomous Region of China, the Ladakh union territory of India, and the Gilgit-Baltistan territory of Pakistan.

² Nowadays these adjoining areas form a part of Kargil district of Ladakh.

Tibetan dialects (Kogan 2021). Indo-Iranian lexical influence on Zhangzhung appears to be quite deep and far-reaching, because among borrowed vocables we even find some words belonging to the Swadesh list.

In Ladakhi and Balti we have detected a lexeme with a root of Burushaski origin and an Aryan formant suffixed to it (Kogan 2020). This suggests that a Burushaski word must have been first borrowed into the Aryan language of pre-Tibetan Ladakh and later on (after it had taken a productive derivational suffix in this language) adopted by Northwestern Tibetan.

Facts like the above clearly show that the process of lexical borrowing must have been, at least sometimes, fairly intensive in the region before the Tibetan conquest. This, however, begs the question: was this process unidirectional or reciprocal? In other words, could there have been Zhangzhung lexical influence on the Aryan language of Ladakh, and could the latter have influenced Burushaski?

Admittedly, lexical borrowing from Zhangzhung to neighboring lects can hardly be detected with certainty at the current state of our knowledge, because the Zhangzhung data available to us are extremely scarce. By contrast, the issue of lexical contact between Burushaski and the language of pre-Tibetan Ladakh can apparently be studied based on more or less substantial data. The presence of a very significant Indo-Iranian etymological stratum in Burushaski was noted by scholars a long time ago (Lorimer 1935, 1937; Morgenstierne 1945). Recent research has shown that this stratum is far from homogeneous. Along with borrowings from Persian and Urdu, as well as from neighboring Dardic and East Iranian languages (Shina, Khowar, Wakhi, Ishkashimi) it contains loanwords that cannot be derived from any of these sources (Kogan 2024). Such loanwords are mostly common for both Burushaski dialects, i.e. the Yasin dialect (also called Werchikwar) and the Burushaski proper (subdivided into the Hunza and Nager subdialects),³ and must have been adopted before the split of the Proto-Burushaski state. This group of borrowings includes words with divergent historical phonology, some of them showing a very archaic stage of phonological development, while others appear more innovative (Kogan 2024).⁴ A number of these pan-Burushaski Indo-Iranian loans could theoretically stem from the pre-Tibetan language of Ladakh. Such a hypothesis does not seem to conflict with any known facts, although, naturally, it needs to be tested. To test it, we have conducted an additional scrutiny of the list of probable early Aryan loanwords in Burushaski, originally published in Kogan 2024. This list apparently contains a few words that have etymological parallels in Northwestern Tibetan dialects and in Zhangzhung.⁵ These words are listed below in alphabetical order,⁶ sometimes with more detailed etymological comments.

List I: Early Aryan loans in Burushaski possessing cognates in Northwestern Tibetan dialects

1. Hunza *bérić*, Nager *béđić*, Yasin *béđec* ‘Angehöriger der Schmiede- und Musikerkaste in der Gilgit Agency, Zigeuner, “Dom”, Schmied, Musiker’ (Berger 1998b: 48). Cf. Balti *bekar* ‘court singer

³ For this reason, in our recent work (Kogan 2024) this group of borrowings was called “pan-Burushaski”.

⁴ The first to point out the existence of phonologically more archaic and more innovative Indo-Iranian loanwords in Burushaski seems to have been Georg Morgenstierne; see, e.g., his work on Burushaski phonology (Morgenstierne 1945).

⁵ The existence of such words was pointed out in Kogan 2024.

⁶ After each entry word, its Northwestern Tibetan, Zhangzhung and Aryan parallels are specified. For some Burushaski lexical items on the list, cognates in Northwestern Tibetan dialects were not mentioned in Kogan 2024 and are given in the present article for the first time.

and dancer who improvises poems and songs’ (Sprigg 2002: 28), Ladakhi *beda* ‘member of the caste that used to be itinerant musicians’ (Norman 2010: 640–641). The element *-iç/-eç* in the Burushaski words can hardly be separated from the Hunza suffix *-iç* used to form names of persons representing local, ethnic and professional communities.⁷ The root thus appears to be *ber-* in the Hunza form and *beḍ-* in the Nager and Yasin forms. These roots, as well as the Ladakhi word, may reflect some derivative of PII **uād-* ‘to play a musical instrument’, **uād(i)ya-* ‘music, musical instrument’. Cf. OIA *vādayati* ‘plays a musical instrument’, *vādita-*, *vādya-* ‘music’, *vādyakara-*, *vādaka-*, *vādakarṭṭ-* ‘musician’, Punjabi *vajjā* ‘musical instrument’, Hindi *bājā* ‘music’, Kashmiri *waz-* ‘to sound (of bell, clock etc.)’, *wāy-* ‘to play a musical instrument’, Shina (Guresi) *baž-* ‘to strike (of a gong etc.)’, Ossetic *wadynz* ‘flute, panpipe’. An exact cognate of OIA *vādyakara-* seems to be the prototype of the Balti word.

2. Hunza-Nager *čarí*, *čirí* ‘Heimchen, Grille’ (Berger 1998b: 86, 89). Cf. Balti *ceri*, Ladakhi *ca-ri* ‘bedbug’ (Sprigg 2002: 41; Norman 2010: 266), OIA, Pali *cīrī* ‘cricket’, Khowar *čari* ‘bedbug’.

3. Hunza-Nager, Yasin *gaṭ* ‘Knoten (auch im Stengel von Pflanzen), Knorren (im Holz); Knöchel (des Fingers); Zyklus, Ablauf’ (Berger 1998b: 150). Cf. Balti, Purik *gaṭ* ‘knot, joint of body’ (Sprigg 2002: 58; Zemp 2018: 64), Ladakhi (Leh dialect) *chang-gat* ‘knee-joint’ (Norman 2010: 313), OIA *grantha-*, *granthi-*, Hindi, Bengali, Marathi, Gujarati *gāṭh*, Punjabi, Lahnda *gaṇḍh*, Sindhi *g’andhi*, Kalasha *ghreṇ*, Palula *grhēṇḍ*, Indus Kohistani *gār*, Brokskat *gaṭhi*, Kashmiri *gaṇḍ*, Middle Persian *grih*, Persian *giriḥ*, Khotanese *grratha-*, Sogdian *γr’nš*, Ishkashimi *γureṣ*, Ossetic *ælxync* ‘knot’. For details see Kogan 2019, 2024.

4. Hunza *muc*, Yasin *-muṣṭ* ‘Faust, Handvoll’, Hunza *múci*, Nager, Yasin *muṣṭi* ‘Pflugsterz’ (Berger 1998b: 292), Yasin *muṣṭák* ‘geballte Faust’ (Berger 1974: 166). Cf. Balti, Purik, Ladakhi *multuk*, *muṭuk* ‘fist’ (Norman 2010: 705; Sprigg 2002: 118),⁸ OIA *muṣṭi-* ‘clenched hand, fist; handful’, Av. *muṣti-*, Khotanese *muṣṭu*, Sindhi *muṭhi*, Lahnda, Punjabi *muṭṭh*, Hindi, Gujarati, Marathi *mūṭh*, Nepali *muṭhi*, Kashmiri *mōṭh*, Palula, Kalasha, Khowar *muṣṭi*, Pashai *muṣṭi* ‘fist’, Gawar-Bati *muṣṭák* ‘fist’, *muṣṭ* ‘handle of plough’, Shina *muṣṭi* ‘handle of plough’, Classical Persian *muṣt*, Shughni *mut*, Wakhi *māst* ‘fist’.

5. Hunza-Nager *pháqo* ‘Art Brot...; Brot überhaupt’, Yasin *páqu* ‘Brot’ (Berger 1998b: 323). Cf. Balti (Turtuk dialect) *paba*, Ladakhi (Nubra dialect) *pa-a* ‘bread’, Ladakhi (Leh dialect) *paba*, (Shamskat dialect) *papa* ‘a polenta-like dish of boiled mixed flours, including barley, wheat, buckwheat, and/or pea flour (a traditional staple food)’ (Norman 2010: 530), OIA *pakva-* ‘cooked, ripe; cooked food; ripe corn’, Khotanese *paha-* ‘boiled, cooked; ripe; glowing’, Pashto *pōḥ* ‘ripe’, Ossetic *fīḥ* ‘boiled, baked’, Kashmiri *pop* ‘ripe’. The Indo-Iranian source of Balti and Ladakhi forms with intervocalic *p* and *b* may have contained a labial consonant reflecting PII **kū*.

6. Hunza-Nager, Yasin *sar* ‘gedrehter Wollfaden, Garn, Kammgarn’ (Berger 1998b: 375). Cf. Balti (Skardu dialect) *syar*, Purik, Ladakhi *sar* ‘wick’ (Norman 2010: 1007), OIA *sara-* ‘string’, *sarikā-* ‘string of pearls’.

7. Hunza-Nager *sel* ‘Nadel, Stecknadel’ (Berger 1998b: 377). Cf. Ladakhi *sale* ‘knitting needle’ (Norman 2010: 1005), OIA *sīvyati* ‘sews’, Phalura *silēni* ‘needle’.

8. Hunza-Nager, Yasin *šan* ‘wach, aufmerksam; Aufmerksamkeit’ (Berger 1998b: 390). Cf. Balti *shang* ‘wisdom, sense’ (Sprigg 2002: 151), Purik *šan* ‘consciousness’ (Zemp 2018: 931), Ladakhi *shang* ‘alertness, awareness, caution, prudence’ (Norman 2010: 553), Zhangzhung *shan* ‘consciousness’ (Martin 2010: 219), OIA *śāṅkā-* ‘fear, distrust’, *śāṅkate* ‘is afraid, distrusts’, Shina *šōṅ* ‘care, anxiety; awake, alert’, Khowar *šanḡ* ‘fear, suspicion’. For details see Kogan 2019, 2021.

9. Nager *zaq* ‘(plötzliches, rasch vergehendes) Kopfwieh; adj. verwundet, verletzt, zerstoßen’ (Berger 1998b: 483). Cf. Balti *tshak* ‘rheumatism’ (Sprigg 2002: 169), Purik *tshaq* ‘pain with difficulty

⁷ For more on this suffix see e.g. Berger 1998a: 208.

⁸ Balti, Purik, Ladakhi *lt*, *lṭ* < **ṣṭ* (Kogan 2019).

of breathing’, *tshak yong* ‘to ache’, Ladakhi *tshak* ‘sprain, pulled muscle, sudden cramp, sudden sharp pain’ (Norman 2010: 759–760). The Burushaski word has probably developed from **chaq* with the sonorization of the initial consonant (Kogan 2024). This earlier form in turn may reflect some continuant of Proto-Dardic **čhataka-* ‘wound, pain’ (> Khowar *čhek* ‘illness, pain’), cognate with OIA *kṣataka-* ‘wound’, *kṣaṇoti* ‘injures, hurts’ < PIE **tkʷen-* ‘*ein Schlag versetzen, verletzen*’ (LIV: 645). On the etymology of the Northwestern Tibetan words see also Kogan 2019.

10. Hunza-Nager *zuṭú*, Yasin *zeṭú* ‘*unrein durch Pollution, Menstruation, oder wenn man nach dem Koitus nicht gebadet hat*’ (Berger 1998b: 486). Cf. Ladakhi *tshiṭu*, *tshitu* ‘contamination, causing dirtiness or violation in a way that will cause illness or spiritual pollution; menstruation’ (Norman 2010: 766), Purik *tshe(r)ṭu* ‘dirty’ (Zemp 2018: 932). In Burushaski initial sonorization seems to have taken place. Cf. also Kashmiri *chēṭun* ‘to become impure, to become unclean, to become refuse and untouchable’, *chēṭarun* ‘to render impure, to cause something previously pure to become impure, to defile’, *cheṭh* ‘remnants of food, leavings of a meal’ (Grierson 1915–1932: 1063, 1064). Perhaps, finally < PII **sčrtta-*, the perfect participle of the verb **sčard-* ‘to leave, eject, vomit’ (> OIA *chr̥ṇatti* ‘leaves, vomits’, *chardayati* ‘vomits’, *chardi-* ‘sickness, nausea, vomiting’, Pali *chadḍeti* ‘spits out, vomits, leaves, abandons’, Romany *čhad-* ‘to spit out, vomit’, Sindhi *chadḍanu*, Punjabi *chadḍṇā* ‘to abandon’, Nepali *chāḍnu* ‘to vomit’, Bengali *chārā* ‘to let go, leave’, Dameli, Palula *čhaḍ-*, Pashai *čar-* ‘to vomit’, Kashmiri *čharun* (< **čharun* < **čharun?*) ‘to evacuate, go to stool’). As a typological parallel to the semantic development in Burushaski and Northwestern Tibetan, cf. Purik *χamloq* ‘dirty, vomiting’.

Several Indo-Iranian loans in Burushaski have probable Northwestern Tibetan parallels showing certain semantic differences:

11. Hunza-Nager, Yasin *čápi* ‘*Pinzette, Zange*’ (Berger 1998b: 69). Cf. Ladakhi *tsapik* ‘a little, a bit, a little while’ (Norman 2010: 731). Probably < PII **kap-/čap-* ‘to catch, snatch, pick, pinch’ (> Shina *čap-*, Indus Kohistani *cap-*, Gawar-Bati *cep-* ‘to bite’, Pashai *čip-* ‘to bite off’, Kashmiri *cop* ‘a bite’, Munji *cab-* ‘to pinch’, Wakhi *čap-* ‘to pick, pluck’). For the semantic development see Kogan 2019; 2024.

12. Hunza-Nager *čar -t-* ‘(*Flüssigkeit, Pulver*) *gießen*’ (Berger 1998b: 85). Cf. Balti, Purik *chal* ‘overflow, spill over’, Ladakhi (Leh and Shamskat dialects) *chal-ces* ‘to splash, to spill over’ (Sprigg 2002: 41; Norman 2010: 297), OIA *kṣarati*, *kṣalati* ‘flows, trickles’, *kṣārayati* ‘causes to flow’, *kṣālayati* ‘washes’, Proto-Iranian **xšar-* ‘to flow’ (> Persian *šārīdan* ‘to trickle’, (*āb*)*šār* ‘waterfall’, Ossetic *äxsärdzän* ‘waterfall’), Kashmiri *čhalun* ‘to wash’, *čhar* ‘a sprinkle of water etc. from the fingers’, Gawar-Bati *čhār* ‘rapids in a stream’, Palula, Indus Kohistani *čhār*, Bashkarik, Kalasha *uḥār*, Shina *čhar* ‘waterfall’. Phonological differences between the Burushaski and Northwestern Tibetan forms may stem from the coexistence of the r- and l-variants of the root in the donor language.⁹

The above-listed Aryan loanwords in Burushaski are of great interest not only because they find evident parallels in Northwestern Tibetan dialects. Importantly, some of them display historical-phonological features common with their Balti, Purik and Ladakhi cognates. At least three such isoglosses can be named, i.e. the change **ɥ > b* in word-initial position (cf. etymology 1 on the above list), the dentalization of earlier palatal affricates (cf. etymologies 9, 10, 11),¹⁰ and the drop of intervocalic dental obstruents (cf. etymology 9). The second of the

⁹ Cf. the situation in Old Indo-Aryan and Kashmiri.

¹⁰ The related process of palatalization of earlier retroflex affricates may also have taken place. Such a hypothesis seems to account best for the initial palatal *č* in Hunza-Nager *čar -t-* (see etymology 12). This type of phonological change is assumed for the source language of Aryan loans in Northwestern Tibetan dialects as well (Kogan 2020).

above sound laws seems to have an exception. The Aryan source of Burushaski *čarí*, *čirí* ‘cricket’ (see etymology 2) appears to have preserved the old palatal affricate unchanged. This irregularity may well be attributed to the onomatopoeic nature of the root.¹¹

The loss of an intervocalic dental stop may be hypothetically postulated for the source-word of Burushaski *bérič*, *béđič*, *béđec* ‘musician’ (see etymology 1). An alternative hypothesis is the change of PII **d* to *r* and *ḍ*. Such a change, however, seems less probable, and not just because no other examples of it are found in the extant data: the assumption that *ḍ* and *r* both reflect the voiced dental of PII **ṛād-*, fails to explain the development of the first syllable vowel in the cited Burushaski forms. The Burushaski suffix *-ič* is not noted to trigger umlaut-like processes, and the change **ā > e* must thus have taken place independently of it. Perhaps, the most plausible scenario of this transformation may be proposed if we assume that Proto-Indo-Iranian **d* has been dropped. In a number of Aryan (e.g., in many Indo-Aryan) languages the drop of intervocalic consonants was often accompanied by the insertion of epenthetic *i* to preclude hiatus. New sequences containing this sonorant subsequently contracted to front vowels, usually *ē* or *ī*.¹² This kind of phonological development cannot be ruled out for the donor form of the Burushaski words in question. Its Indo-Iranian prototype was probably **ṛāḍakarṭṛ-*, **ṛāḍakartā* (cf. OIA *vāḍakarṭṛ-*, Nom Sg *vāḍakartā* ‘musician’). The change of the intervocalic cluster *rt* to a retroflex stop (*ṭ* or *ḍ*) is a widespread phenomenon in the region, and the regular reflex of the cited protoform seems to have been **bēḍā*. This form is the likely source of Ladakhi *beda*,¹³ as well as of the Burushaski lexemes. In the latter, the final long *ā* must have been dropped before the vowel-initial suffix *-ič*.

Some of the above isoglosses can be found in certain Dardic languages but none of these languages share the whole bundle.¹⁴ Another remarkable fact is that all the aforementioned historical-phonological features characterize the innovative layer of Aryan borrowings in Burushaski as opposed to the archaic one. Loanwords belonging to the latter show neither initial betacism (cf. Hunza-Nager *wáar-* ‘bedecken mit, als Deckel benützen, drauflegen (um es zu bedecken)’, *wáariš* ‘Deckel’ (Berger 1998b: 462), OIA *vṛṇoti* ‘covers’, Av. *aīβi-vṛənuuaiti* ‘conceals’¹⁵), nor the dentalization of the palatal affricates (cf. Hunza-Nager, Yasin *ćódo* ‘Verhöhnung, Stichelei, Beschimpfung’ (Berger 1998b: 90), OIA *cōḍa-* ‘goad’, *cōḍayati* ‘impels; importunes, asks’, Pali *cōḍaka-* ‘one who rebukes’, Classical Persian *čust* ‘agile’; Hunza-Nager *jīi*, Yasin *ji* ‘Leben, Seele, Selbst; Geliebter, Liebling; lieb (wie das eigene Leben)’ (Berger 1998b: 226), OIA *jīva-* ‘living, living being, vital breath, life’, Old Persian *jīva-*, Av. *juua-* ‘living, alive’, Kashmiri *zuw* ‘soul, living creature’, Punjabi *jīu*, Hindi *jī*, Kumauni *jyū* ‘life, soul’, Nepali *jiu* ‘body, life’) or the drop of intervocalic dentals (cf. Hunza-Nager, Yasin *ástán* ‘Pferdeknecht’ (Berger 1998b: 23) < **aśuatāna-*

¹¹ This view is held, e.g., by Manfred Mayrhofer (1956: 392; 2001: 192). A piece of indirect evidence in its support may be, inter alia, the fact that probable Iranian parallels to OIA *cīrī-* (cf. Persian *jīrjīrak*, Tajik *čirčirak* ‘cricket’) neither regularly correspond to the Old Indian form nor to each other.

¹² Cf., e.g. Hindi *kelā*, Nepali *kero*, Gujarati *keḷū*, Marathi *keḷē* ‘banana’ < MIA *kayala-* < OIA *kadala-*, Lahnda *pēr* ‘foot’ < OIA **padara-* (Turner 1966: 438), Gujarati *mīṇo* ‘intoxicating element in certain nuts’ < MIA *mayāṇa-* < OIA *madana-* ‘intoxicating’.

¹³ Since retroflex stops did not exist in most Tibetan dialects of Ladakh until relatively recently, the intervocalic dental in the Ladakhi word must be the substitute for the retroflex *ḍ* of the donor language.

¹⁴ E.g., in Kashmiri the dentalization of the palatal affricates has taken place but the Indo-Iranian initial bilabial sonorant, as well as the intervocalic dental *t*, are usually preserved unchanged. In Shina and Khowar word-initial betacism is attested but old palatal affricates are not dentalized.

¹⁵ In the Yasin dialect there is a possible example of an Aryan loan with the word-initial prevocalic change **ṛ > u*: *ūrunas* ‘Morgenstern, Venus’ (Berger 1974: 184) if connected with Vedic *vāruṇaḥ* ‘Varuna, god of the sky, oceans and water’.

(Kogan 2024);¹⁶ Hunza-Nager *badá* ‘Schritt, Sohle (von Stiefel, Fuß)’ (Berger 1998b: 29), OIA *pada-* ‘foot, footprint, step’¹⁷).

For a number of Aryan loanwords possessing the above-mentioned historical-phonological traits, no cognates in Northwestern Tibetan varieties are attested. This fact seems to be quite understandable. If the three isoglosses identified in the present work indeed characterize a real, albeit now extinct, Indo-Iranian tongue, supposed to have influenced both Burushaski and Tibetan dialects, it is only natural that in the wake of this influence some lexical items of this tongue were borrowed into both the contacting languages, whereas others into only one of them, e.g. Burushaski. The fact that such loans have no Ladakhi, Purik or Balti parallels, does not make them less important for our research, because they are also likely to represent the vocabulary of the lect this article studies. For this reason, we deem it necessary to cite them here. Below they are listed in alphabetical order with some remarks concerning etymology and historical phonology.

**List II: Aryan loans in Burushaski lacking cognates in Nothwestern Tibetan dialects
but sharing diagnostic historical-phonological isoglosses
with the loans of the List I**

1. Hunza, Yasin *balán* ‘Waagebalken; Querbalken oder Leine zum Wascheaufhängen’, Nager *balón* ‘Leiste, die den Trichter zur Mühle stützt; Leiste um den Webstuhl; Geländer’ (Berger 1998b: 33). According to Berger, connected with OIA *vilagna-* ‘hanging to’. Cf. also Shina *balón*, *balvñ* ‘stick to hang clothes on, perch (for a bird)’. Note the change of PII **u* to *b*.

2. Hunza-Nager, Yasin *bas-* ‘(Schnee, Tau) fallen, sich setzen, sich niederlassen’ (Berger 1998b: 41), Hunza-Nager *basá* ‘Übernachtung, Ort zum Übernachten, Bleibe, Herberge’. Cf. OIA *vasati* ‘dwells, stays’, *vāsa-* ‘abode’, Av. *vanhaiti* ‘dwells’, Hindi *basnā* ‘to dwell’, *bās(ā)* ‘a dwelling’, Nepali *basnu* ‘to remain, inhabit, sit’, *bās* ‘resting-place’, *bāsā* ‘lodging’, Gujarati *vasvū*, Marathi *vasñē* ‘to settle’, Kashmiri *wasun* ‘to descend, to land from a boat’, Shina *bas* ‘halt, stage’, Khowar *bas* ‘halting place’. For the etymology of the Burushaski verb, see also (Kogan 2024). Note the change **u* > *b*.

3. Hunza-Nager, Yasin *bat* ‘flacher Stein, Steinplatte, Schieferplatte’ (Berger 1998b: 43), Srinagar Burushaski¹⁸ *baṭ* ‘stone’ (Munshi 2019: 110). Cf. Ashkun, Waigali *wāṭ*, Kati *woṭ*, Tirahi *baṭ* ‘stone’, Gawar-Bati *wāṭ* ‘stone, millstone’; Kalasha *bat*, Kho. *bort*, Bshk. *baṭ*, Tor. *bāṭ*, Maiyā *bhāt*, Palula *bāṭ*, Shina *bāṭ* ‘stone’, Kashmiri *wāṭh* ‘round stone’, Romani *barr*, Lahnda, Punjabi *vaṭṭā* ‘stone’, Khotanese *ūdāra-* ‘crystal’, Wakhi *wārt* ‘marble, millstone, stone’, Kurdish *bar(d)* ‘stone’ < Proto-Aryan **uarta-* ‘round stone’. For etymologies see also Turner 1966; Bailey 1979; Steblin-Kamensky 1999; Tsabolov 2001. Note the change **u* > *b*. The coexistence of dialect forms with final dental and retroflex in Burushaski is yet to be explained.

4. Hunza-Nager *biík*, Yasin *behék* ‘Weide (Baum)’ (Berger 1998b: 51). Cf. Pashai *wēu*, Kalasha *ber*, *beu*, Shina *bēu*, Classical Persian *bēd*, Av. *vaēiti* ‘willow’, OIA *vēta-* ‘cane, reed’ < PII **uaita-*, **uaiti-*. In Burushaski the prototype with the suffix *-k-* (**uaitaka-* or **uaitikā-*) seems to be reflected. Like in Indo-Iranian loanwords in Northwestern Tibetan dialects, this suffix is pre-

¹⁶ Cf. OIA *aśva-* ‘horse’, *tanati*, *tānayati* ‘helps, assists, aids’. For the latter Old Indian verb see, e.g. (Apte 1957-1959: 757).

¹⁷ For the retention of intervocalic *d* cf. also Hunza-Nager, Yasin *códo* cited above.

¹⁸ The dialect of Burushaski spoken in Srinagar (Jammu and Kashmir, India) is believed to be closely related to the dialect of Nager (Munshi 2019).

served phonologically unchanged, whereas non-suffixal intervocalic *k* is, most probably, dropped.¹⁹ Note the change $*\underline{u} > b$ and dropping of the old intervocalic *t*.

5. Hunza-Nager, Yasin *čar* ‘*Wachtposten, Wächter, pl. Wachleute, Wache*’ (Berger 1998b: 69). Cf. OIA *cara-*, Kashmiri *car* ‘spy’. Note the dentalization of the old palatal affricate.

6. Hunza-Nager *čar -t-* ‘*zerreißen, zerspalten, aufschneiden, herunterreißen*’, *čir man-* ‘(Kleider) in Stücke gehen, zerreißen’ (Berger 1998b: 69). Cf. OIA *cīra-* ‘strip (of bark or cloth)’, Hindi, Punjabi *cīrnā* ‘to tear, split’. Note the dentalization of the old palatal affricate.

7. Hunza-Nager *zan -t-* ‘*zerstoßen, zerstampfen, (Kern) aufschlagen, (Menschen) verletzen*’ (Berger 1998b: 482). Cf. OIA *hanti* ‘beats, kills’, *hana-* ‘killing, slaying’, Av. *ǰainti* ‘beats, strikes; kills’ < PII $*\underline{j}hanti$, $*\underline{j}hana-$. Note the dentalization of the old palatal affricate.

It must be noted that certain historical-phonological innovations peculiar for Indo-Iranian loanwords in Northwestern Tibetan dialects and Zhangzhung are not shared by, or at least not attested in Aryan borrowings in Burushaski. In my previous paper I have briefly mentioned two such innovations, i.e. the change $*a > o, u$ before a prevocalic nasal, and the change of intervocalic $*ś$ to *y* and *o* (Kogan 2024). To these one may add the loss of the initial nasal in the historical cluster $*\underline{n}g(h)$.²⁰ For the latter two processes, we have no diagnostic evidence for or against their existence,²¹ and the question of whether they took place in the source language of the analyzed Indo-Iranian loanwords in Burushaski should be left open. The reflection of the earlier *a* before the prevocalic *n*, however, may be illustrated by the last etymology in List II. If the donor form of the element *zan* in Burushaski *zan -t-* ‘to pound, crush, injure’ reflects the same prototype as that of OIA *hana-* ‘killing, slaying’, the old first-syllable vowel in this form must have been preserved unchanged. This fact gives us some reason to believe that the change $*a > o, u$ took place after the word in question had been borrowed into Burushaski.

There are some other probable loanwords whose historical-phonological peculiarities allow us to hypothesize about the relative chronology of the three above-mentioned innovations. Hunza-Nager *baščár*, Yasin *bačár* ‘*Guckloch, Schießscharte*’ (Berger 1998b: 43) were compared by Berger with OIA *vikṣāra-* ‘a lucky hit on the target’. If this etymology is correct, we have here an example of word-initial betacism in a word where the Proto-Indo-Iranian cluster $*kš$ is reflected as a retroflex affricate²² unaffected by the process of palatalization. Since this process is presumably synchronic with and related to dentalization of old palatal affricates, the latter change should probably be dated to a later period than the change $*\underline{u} > b$. Hunza-Nager *čhe*, Yasin *čéi* ‘*Einschnitt (mit der Axt)*’ (Berger 1998b: 99) can hardly be separated from OIA *chēda-* ‘section, piece; incision’²³, and the drop of an intervocalic dental stop must be postulated for the donor form. If the initial affricate of the Burushaski words reflects Proto-Dardic

¹⁹ On the reflexes of old intervocalic stops in the source language of Aryan loans in Northwestern Tibetan dialects see Kogan 2020. For the dropping of non-suffixal intervocalic *k* in Burushaski words of Indo-Iranian origin, cf. the reflexes of PII $*\underline{u}ādakartā$ ‘musician’ (etymology 1 of List I).

²⁰ On this phonological change in Aryan loan vocabulary of Northwestern Tibetan dialects and Zhangzhung see (Kogan 2020; 2021).

²¹ As one can see, the above data feature not a single word with reflexes of the old intervocalic $*ś$ nor of the old $*\underline{n}g$ or $*\underline{n}gh$. The source form of Burushaski *šan* ‘awake, attentive’ (see etymology 8 in List I) reflects the prototype with PII $*\underline{n}k$, not $*\underline{n}g$.

²² According to Turner (1966: 678), the Old Indian word is a derivative of the root *kṣar-* ‘to flow’. It thus appears to be etymologically related to Burushaski *čar -t-* ‘to pour’ (see etymology 12 in List I).

²³ This comparison was put forth by Berger (1998b: 99). Cf. also Kalasha *chēla* ‘piece’, Shina *čhe* ‘cross cut with an axe’, Sindhi *chehu* ‘incision, end’, Hindi *cheu* ‘cut, stroke, mark, chip’.

*sč < PIE *sk',²⁴ we must assume that the loss of the dental obstruent in intervocalic position predates the dentalization of earlier *č. Both conclusions made above are of course purely hypothetical and must, if possible, be tested in future against a richer dataset.

In general, however, despite all the aforementioned unsolved issues there is good reason to believe that one of the sources of Aryan loanwords in Burushaski must have been an Indo-Iranian lect spoken in the present-day Ladakh before the Tibetan conquest.²⁵ Loans adopted from this lect are for the most part pan-Burushaski and belong to the innovative stratum of Aryan loan vocabulary. The historical phonology of the two words discussed in the previous paragraph shows that this stratum may in fact include several groups of words characterized by different chronology of borrowing. This in turn suggests that the contact between Burushaski and the Indo-Iranian language under study was not short-lived and must have lasted for a considerable time.

Abbreviations for language names

Av. — Avestan; MIA — Middle Indo-Aryan; OIA — Old Indo-Aryan; PIE — Proto-Indo-European; PII — Proto-Indo-Iranian.

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²⁴ The word is no doubt a derivative of PIE *sk'eid- 'to split'. On the reflexes of PIE *sk' in Dardic see Kogan 2005: 94-117.

²⁵ We have also detected some possible loanwords common for Burushaski and Muslim Northwestern Tibetan dialects (Balti and Purik) but not attested in Ladakhi. Cf. Hunza, Nager, Yasin *darí* 'Fenster' (Berger 1998b: 115), Balti *barban* 'window (in a wall), glass-pane window' (Sprigg 2002: 26), Purik *barban* 'window' (Zemp 2018: 945), OIA *dvār*- 'door, gate', Av. *duuar*- 'gate', Brokskat *barban*, Pashai *darī*, Gawar-Bati *derī*, Indus Kohistani *darī*, Shina *darī*, Kashmiri *dār* 'window' (the element *-ban* in the Balti, Purik and Brokskat words is probably related to OIA *bandha*- 'border, framework, damming', see Kogan 2019); Hunza-Nager, Yasin *gamūn* 'Unterteil; (am Baum) Wurzel, Stumpf' (Berger 1998b: 145), Balti *gam-pa* 'lower step', *gam-pa-ing* 'downstairs' (Sprigg 2002: 57), OIA *gambhan*- 'depth', Shina *gabūn* 'foot of mountain, bottom, tree-trunk' (for the possible Aryan source of the Burushaski word see also Morgenstierne 1945: 92); Hunza-Nager, Yasin *phal* '(Getreide-)Korn' (Berger 1998b:320), Balti *phalu* 'fruit; necklace, bead' (Sprigg 2002: 127), OIA *phala*- 'fruit, seed of a fruit, spot on dice', Ashkun *pol*, Kati *pul*, *pyuŕ*, Tirahi *phallī* 'grain', Pashai *phal* 'fruit, seed', Kalasha *phālak*, Khowar *pholok*, Palula *phalūrī*, Shina *phal*, Kashmiri *phol* 'grain', Sindhi *pharu*, Lahnda, Punjabi, Hindi, Kumauni, Nepali *phal* 'fruit'. The immediate source of these words in Burushaski and Northwestern Tibetan is yet to be determined.

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А. И. Коган. Арийские заимствования в языке бурушаски как источник данных для реконструкции языковых контактов в верхней части бассейна Инда

В статье делается попытка реконструировать некоторые важные характеристики языковой ситуации в регионе верховьев Инда до тибетского завоевания VIII в. н.э. Недавние исследования показали, что в дотибетскую эпоху данный регион был населен носителями языка бурушаски, а также некоего ныне исчезнувшего индоиранского (по всей видимости, дардского) идиома. Представляется вероятным, что два указанных языка существовали в ситуации тесных контактов и взаимного влияния, однако конкретных сведений на данный счет в распоряжении исследователей вплоть до настоящего времени практически не было. Автор рассматривает большую группу арийских заимствований в языке бурушаски и приходит к выводу, что значительная их часть была усвоена из индоиранского диалекта, распространенного среди дотибетского населения нынешнего Ладакха. Также выявляются некоторые существенные историко-фонетические черты подобного рода заимствований.

Ключевые слова: языковые контакты; лексические заимствования; язык бурушаски; индоиранские языки; дардские языки; язык ладакхи; язык балти; язык пурик.