Correlation of the Burushaski Pronominal System with Indo-European and Phonological and Grammatical Evidence for a Genetic Relationship

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The Burushaski personal and demonstrative pronominal system is correlated in its entirety with Indo-European. This close correlation, together with the extensive grammatical correspondences in the nominal and verbal systems (given as an addendum), advances significantly the hypothesis of the genetic affiliation of Burushaski with Indo-European. The article includes a comprehensive discussion of the Burushaski-Indo-European phonological and lexical correspondences. It proposes that Burushaski is an Indo-European language which at some stage of its development was in contact with an agglutinative system.

1. Introduction
1.1. Brief overview of sources and previous studies
Being a language with undetermined genetic affiliation, Burushaski has attracted considerable interest, especially in the last twenty years, but also earlier. There have been many attempts to relate it to languages as diverse as Basque, Nubian, Dravidian, various Caucasic as well as Yeniseian languages, Sino-Tibetan and Sumerian (for a brief overview, see Bashir 2000:1-3). These endeavors have failed mostly because of unsystematic or inconsistent correspondences, incorrect internal reconstruction, excessive semantic latitude and incoherent semantic fields, root etymologizing and especially lack of grammatical and derivational evidence.

Burushaski is spoken by around 90,000 people (Berger 1990:567) in the Karakoram area in North-West Pakistan at the junction of three linguistic families — the Indo-European (Indo-Aryan and Iranian), the Sino-Tibetan and the Turkic. Its dialectal differentiation is minor. There are
three very closely related dialects: Hunza and Nager with minimal differences, and the Yasin dialect, which exhibits differential traits, but is still mutually intelligible with the former two.

The earliest, mostly sketchy, material for Burushaski is from the mid to late 19th century (e.g. Cunningham 1854, Hayward 1871, Biddulph 1880, Leitner 1889). The limited dialectal differentiation and the lack of older attestations make the internal historical reconstruction extremely difficult.


Very important in establishing aspects of the historical phonology and morphology of Burushaski and its internal reconstruction is Berger’s (2008) posthumously published synthesis.

Typologically, Burushaski is a nominative-ergative language, with the predominance of nominativity and with rudimentary characteristics of an active structure. It is essentially a language of an inflectional-agglutinative type, with elements of analytism in the noun and the verb. The constituent order is SOV. The predicate-verb agrees by the addition of postfixes with the subject and with prefixes with the direct or the indirect object. The noun in the
subject function is used in the absolutive case (nominative construction) or the oblique (genitive-ergative, i.e. an ergative construction) depending on the semantics and the aspect-tense form of the verb. (This typological description is directly based on Edel’man (1997:2.3.0 and 2.5.3). Burushaski also makes use of postpositions. Burushaski nouns are traditionally grouped in four classes: $h$-class ‘human beings’, subdivided in $m$ (masc.) and $f$ (fem.) (for case marking and verb agreement distinct in the singular but neutralised in the plural); $x$-class ‘non-human animate beings and individually conceived objects’; $y$-class ‘amorphous substances and abstract ideas’, and a $z$-form used for counting (newer analyses posit four or more classes (Anderson 2007). In essence it distinguishes the categories: human (fem. and masc.) vs. non-human, and countable vs. uncountable. It has the category of inalienable possession (in names of body parts, kinship terms, etc.) expressed by pronominal forms prefixed to the noun. Berger (B I: 63) distinguishes in Burushaski five general grammatical cases — casus absolutus, genitive, ergative, dative-allative and general ablative, and a number of lexicalised ‘specific’ composite (e.g. instrumental, locative etc.) and fixed (e.g. locative) cases. It has a large number of noun plural endings (some 40) for which there is an array of possible explanations (refer to our full analysis in 8.1.1). The typological similarity of the Burushaski verbal system with Indo-European was noted first by Morgenstierne (1935 XI) who remarked that the Burushaski verbal system “resembles to some extent the Latin one”. This assessment was reaffirmed by Tiffou and Pesot (T-P 33-34): “The Burushaski [verbal] system seems comparable with the system of ancient Greek: two aspects, one used in three tenses, the other in two tenses, and a third aspect without any particular tense value”. For the close correspondence of the Burushaski verbal system with Indo-European, refer to 8.2. and Čašule (2003b: 8.2).

In Čašule (1998, 2003a, 2003b, 2004, 2009a, 2009b, 2010), we have correlated Burushaski with Indo-European, outside of Indic and Iranian, and in our etymological analyses we have uncovered consistent and systematic lexical, phonological and most importantly, extensive and fundamental grammatical correspondences (the latter are
outlined in Čašule (2003b: 69-79) and significantly expanded in the Addendum (8.) of this article. On the basis of the analysis of over 500 etymologies (with well over 1000 derivatives) and the highly significant correspondences in the grammatical and derivational system (noun stems, nominal case endings, nominal plural endings, the verbal system and prefixes, suffixes and endings, the complete non-finite verbal system, all of the adjectival suffixes, the entire system of demonstratives, personal pronouns, postpositions, adverbs, etc.), we conclude that Burushaski displays characteristics of a language which could have had an early relationship or contact in its history with the Southern (Aegean) branch of Indo-European on the one hand (see esp. Čašule (2004) on the possible correlation with Phrygian1) and with the Northern/Western IE group on the other. The correspondences (over 70 of them) in the core vocabulary of names of body parts and functions can be found in Čašule (2003a). Eight new correspondences in this semantic field, put forward in Čašule (2009b) bring the total to ~80.

For a recent appraisal of this evidence, see Alonso de la Fuente (2006).

The Burushaski numeral system is correlated with Indo-European in Čašule (2009b). In an extensive analysis and comparison of the Burushaski shepherd vocabulary with Indo-European Čašule (2009a) identifies some 30 pastoral terms that are of Indo-European (non-Indo-Iranian) origin in Burushaski, one third of which show direct and specific correspondences with the ancient Balkan substratal layer of shepherd terms in Albanian, Romanian and Aromanian.

1More recently the eminent Russian archaeologist L. S. Klein (2007, 2010) has published two major studies on Indo-European ancient migrations. He devotes an entire chapter (Klein 2007: 108-120) specifically to the migrations of the Phrygians/Bryges from the Balkans. On the basis of archaeological evidence, historical sources, some linguistic aspects and mythical and religious comparisons he traces their movement from Macedonia via Asia Minor, Central Asia and most importantly all the way to Swat in North-West Pakistan, very close to the Burushaski speaking areas. He argues for an early contact between Phrygian and Sanskrit.

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Çaşule (2010) focuses specifically on the original Burushaski Indo-European (non-Indo-Iranian) vocabulary that contains the reflexes of the Indo-European gutturals. It provides a full etymological analysis of some 150 autochthonous Burushaski stems (with many derivatives) and establishes correlations with various Indo-European branches.

The extensive and full correspondence of the Burushaski kinship terms (32 terms) with Indo-European is analysed in Çaşule (2012b).

The correlations between Burushaski and substratal and archaic Modern Macedonian and Balkan Slavic vocabulary are discussed in Çaşule (2012a). Eric P. Hamp (R), in the review of this article, based on the full body of evidence, and in support of our work, states: “Burushaski is at bottom Indo-European [italics EH] — more correctly in relation to IE or IH, maybe (needs more proof) IB[uru]” and further conjectures: “I have wondered if Burushaski is a creolized derivative; now I ask (Çaşule 2009a) is it a shepherd creole ? (as in ancient Britain)”. This statement goes hand in hand with the tentative conclusion that Burushaski might be “a language that has been transformed typologically at some stage of its development through language contact.” (Çaşule 2010: 70).

1.2. Burushaski phonological system and internal variation

For easier reference, we reproduce Berger’s table of the phonological system of Hz Ng Burushaski, which is essentially valid for the Ys dialect as well. Yasin Burushaski does not have the phoneme çh — for Ys Burushaski, see Tiffou-Pesot (1989:7-9):

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<th>qh</th>
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Table 1. Phonological system of Burushaski (Berger 1998 I: 13).
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(Notes:
1. All five vowels can be phonetically long, but for phonological and prosodical reasons Berger marks them as double (two component) vowels, in order to mark the position of the stress. This notation system was developed by Buddruss and Berger to indicate the pitch contours, which they consider as a result of first- or second-mora stress (Bashir p.c.).
2. Retroflex consonants are marked with an underdot.
3. w and y are allophones of u and i.
5. g = γ in Lorimer and Tiffou-Pesot (1989). It is a voiced fricative velar /γ/. See further Čašule (2010:14-18) on the extensive variation between g and γ.
6. ñ = [ŋ] or [NK] [nk].
7. The posterior q is similar to the Arabic qâf. “q ist ein stimmloser dorsaler Verschlußlaut, der weiter hinten als k gebildet wird” (Berger I: 2.26).
8. The aspirated posterior qh is found only in Hz Ng. In Yasin to the latter corresponds a voiceless velar fricative x, similar to the German ch, as in Bach (Tiffou 2004b: 10).
9. y is a retroflex, articulated somewhere between a “r grasséeyé and a g or rather a fricative r with the tongue in a retroflex position” (Morgenstierne 1945: 68-9).
10. A hyphen before a word indicates that it is used only with the pronominal prefixes.

We outline some of the phonological processes, alternations, changes, adaptations (in borrowings) and internal variation that have been identified synchronically and diachronically for Burushaski. For copious examples and discussion refer to Čašule (2003b: 24-29), Čašule (2004: 52-55), Berger (2008) and especially Čašule (2010: 5-11, 14-18).

[1] Hz Ng í : Ys é. (Berger 2008: 8-10.)
[3] e > a in unstressed position (in Hz Ng) (B 1: 2.5).
[4] o : u. There is a scarcity of minimal pairs for the opposition of o and u and they coalesce/alternate in various environments (esp. in unstressed position) (Berger...)

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2008: 2.1, also B I: 2.18).

[6] Variation -we- : -wa-.
[8] Voiced consonants are devoiced in word-final position.

[9] In many cases, voiceless stops are voiced in the anlaut or have both voiced and voiceless allophones — p- > b- k- > g-, t- > d-. See the examples and discussion of this alternation/change in Berger (2008:3.11.).

[9b] Change/alternation t- > d- and t- > d- (Čašule 2010: 9), with the direction of change sometimes unclear as e.g. in Bur tasmuzá < Pers dast műzah (Berger 2008: 23) which reflects a d > t change, see Berger (2008: 3.11-3.12).


[12] Alternation m : b (B I:82) (also Berger 2008: 3.21, who points out that the direction of change cannot be determined).

[14] Variation Ys ny > Hz Ng y.
[15] Alternation ēh, ē : s (in anlaut also z-).

[17] “The intervocalic stop of disyllabic roots is rarely a media.” (…) There are no roots with medial d, ĭ or b.” (Morgenstierne 1945: 73).

[18] Alternation in a few cases of j : ĭ.

[19] Alternation y, y : j : Ys yótes : Hz Ng jōtis (B 228); Bur yahú < Turk jakki (B 472); Bur jú- (present stem) : d-ya(a)- (B 235); ğayamišo : ğajámišo (B 166).

[22] Extensive variation of ĭ and ĭ (L 176).
[23] Dialectal alternation q : ĭ in intervocalic position (Varma (1941: 141) and Morgenstierne (1945)).


Summary of phonological correspondences between Indo-European and Burushaski

| IE a | > | Bur a |
| IE e | > | Bur e : Hz, Ng i |
| IE e (unstr.) | > | Bur a |
| IE ē | > | Bur ēe, i |
| IE o | > | Bur ó |
| IE o (unstr.) | > | Bur a, u |
| IE ō | > | Bur óó, óo |
| IE i | > | Bur i |
| IE u | > | Bur u |
| IE ai, ei, oi; eu | > | Bur a |
| IE au, ou | > | Bur u |
| PIE h₁ | > | Bur h- |
| PIE h₁e- | > | Bur he- |
| PIE h₁yer- | > | Bur har- : -war- : her- |
| PIE h₂ | > | Bur h- |
| PIE h₂e- | > | Bur ha- |
| PIE h₂ue- | > | Bur -we- : -wa- |
| PIE h₂ | > | Bur h- |
| PIE h₂e- > h₂a- | > | Bur ha- |
| PIE h₂r- | > | Bur h- |
| PIE h₂e- > h₂a- | > | Bur ha- |
| PIE h₁/₂i- | > | Bur i- |
| IE l, m, n, r | > | Bur l, m, n, r |
| IE u | > | Bur -w/-u |
| IE ū- | > | Bur b-, also m- (rare) |
| IE y | > | Bur y/i |
| IE ṭ | > | Bur –um, am |
| IE ŋ | > | Bur -un, -an |
| IE r | > | Bur -ur, -ar |
| IE l | > | Bur –ul, -al |
| IE p | > | Bur p, ph, also b- |
IE b  >  Bur b, also m (rare)
IE bh >  Bur b, also m (rare)
IE t  >  Bur t : th (rare) : t , also d-
IE d  >  Bur d
IE dh- >  Bur d-
IE VdhV >  Bur -t-, -t-
IE k  >  Bur k : kh, k : q²
IE kʰ >  Bur k
IE ḫ >  Bur k : kh, k : q
IE ḡ >  Bur ḡ
IE gh >  Bur ġ
IE gʰ >  Bur ġ
IE gʰh >  Bur ġ
IE ġ >  Bur g, ġ
IE ġh- >  Bur g, ġ
IE s  >  Bur s or s : ĺ , Čh
IE ks >  Bur š

Table 2. Summary of Burushaski—Indo-European phonological correspondences.

1.4. Phonological correspondences between Burushaski and Indo-European

In order to make it possible to see the analysis of the demonstrative and personal pronouns in a wider frame, we give an overview of the phonological and some of the lexical³ correspondences between Burushaski and Indo-European. For reasons of space, and because they are well known, the Indo-European stems are given without their distribution in the various branches. Such a brief exposition is extrapolated from our fully etymologically analysed entries, with some inevitable loss of detail especially in the semantic correlations. Its summary character has also meant omitting some of the analysis of secondary phonetic processes (assimilation, dissimilation, analogy, alternation (e.g. i:u, e:i), secondary retroflexion or aspiration, effects of nasals on preceding vowels, etc.)

²For a detailed description and analysis of the alternations of k (k:kh, k:q, k:qh, kh:q, q:qh) and g:ġ in Burushaski, see Čašule (2010: 14-18).
³There are ~150 additional lexical correspondences not included here because of reasons of space.
which would have required additional exemplification and elaboration.

Apart from the precise and consistent preservation of the IE laryngeals, some of the salient features of the Burushaski phonological system are the velarisation of the palatovelars (i.e. the palatovelars, labiovelars and velars have coalesced), the monophthongisation of the diphthongs, the conservative nature of its vocalic system in general, the alternation s : č, čh, the rare voicing of voiceless stops in the anlaut, devoicing of -dh- in the inlaut, betacism (u > b), etc.

Most of the Burushaski correspondences selected here correlate with widespread and old stems and formations in Indo-European. We have also included some of those that are more localized and sparsely distributed, which could turn out to be archaisms wherever they occur.

Semantically, the correspondences are in basic semantic fields, for example: body parts and functions (over 70 stems), kinship terms (~30), shepherd vocabulary (~30), natural phenomena and geographical features (~50), flora (~10), agriculture (~10), mind, emotion and sense perception (~25), insects (~10), house and construction (~12), adjectives (~40), basic non-periphrastic verbs (~60), periphrastic verbal expressions (~50) etc.

Berger (1998) gives a very careful account of words that may be of Indo-Aryan (including “Sanskritisms”) or Iranian origin in Burushaski. His methodology in this respect, apart from his own fieldwork and of others, like Lorimer, Morgenstierne etc, is to look up and check very carefully against the index to Turner’s (1966) A Comparative Dictionary of the Indo-Aryan Languages. Wherever there is a match, regardless whether the word is found in Shina, Khowar or anywhere in Indo-Aryan, Berger indicates the lemma number in Turner. Interestingly, 45 Indo-Aryan stems indicated by Berger are not found in Shina or Khowar, but appear in Burushaski and could be in some cases an overlap. They are not taken into account in our Indo-European comparisons. Thus almost all words marked as T in Berger are excluded from the comparisons with Burushaski, as well as all Urdu matches. Any possible Iranian loanwords have been checked by Berger against Steblin-Kamenskij’s (1999, possibly an earlier version)
Wakhi etymological dictionary, earlier also by the eminent Iranist, Edel’man. Thus, Berger’s indications as to which words and forms are indigenous in Burushaski are highly accurate and exhaustive.

Furthermore, the Burushaski material has already been sifted carefully for Persian, Urdu and Indo-Aryan loanwords by Berger, Lorimer, Morgenstierne, Zarubin, Edel’man, Klimov, Varma, Tiffou, Buddrus, Tikkanen and other scholars who have studied the language — their findings are conveniently mostly incorporated in Berger (1998). The main source I have used for further comparison with Indo-Aryan is Turner (1966) and with Persian, Steingass (1999) [1892].

To be even more certain, in addition, the Kalasha, Khowar, Dardic, Burushaski and Urdu specialist Elena Bashir of the University of Chicago has looked carefully at all of our material in order to sift again the etymologies for any Indo-Aryan loanwords.

1.4.1. Vowels

IE a > Bur a
-IE *kar- ‘reprove, scold, revile; praise’ (IEW 530) : Bur du-khár- ‘deny, repudiate, reject, refuse compliance’ (B 252), ėal-kharás ‘violent dispute’ (B 83).
-IE *gár- ‘shout, call’ (IEW 352) : Bur ĝar- ‘speak, scold; to sound’ (B 170).
-IE *lap- and a nasalised form *la-m-p- ‘to shine’ (IEW 652) : Bur Ys lap, laláp, Hz Ng lam, lálam man- ‘shine, burn, light up; to beam’ (B 261).
-IE *mar- ‘hand; grasp’ < *h1em-, *meh1- ‘take, lay one’s hands on, grasp, receive in hand’ (IEW 310-311, 740-741): Bur d-mar- ‘take s-thing from s-one’s hands; receive, pick up, take load’, d-mar- Ng ‘offer hand to be kissed’ (B 280-281), Bur marmúk ‘handful’ (B 282) < Ys d-hemia- ‘gather, collect, obtain, get; harvest (fruit)’.
-IE *kat-h2ē ‘down, with’ (Hitt katta ‘down, with, by, under’) (M-A 169) : Bur Ys khat, Hz Ng qhat (in L 239, also kat) ‘down’ (B 348) and the postposition -káat, and adverb

4I note here with gratitude the early support for my work by Dz. Edel’man and G.A. Klimov.
káat, (in LYs 155, also -kát and -khát) ‘with, along with’ (B 238).

—IE *pák-, *pák- and *pák-, *pák- ‘fasten; strengthen; parts to drive in, peg, post’ (IEW 787-8) (M-A 64: IE *pehák- ~ *pehak-) (Wat 61) : Bur -phágo ‘stick, staff’ (B 320), and phán man- ‘push, press forward’ (B 322) < IE *pa-n-g-, *pa-n-k- (Lat pangō ‘drive in’).

—IE *(bh)sa- (in words for ‘sand’), *bhs-amadho- (Gk psámathos ‘sand’), *(bh)sa-dhlo- (Lat sabulum ‘coarse sand’) < *bhes- ‘to rub’ (Wat 11) : Bur Hz Ng sáó (Ys sáú) pl. -o and -u are pl. endings), double pl. sáomín ‘sand’ (B 374) (also Bur bastáo ‘a type of flour’ and perhaps baspúr ‘fodder for horses’) (B 42-43).

IE e > Bur e

—IE *k*e ‘and’ (e.g. Lat -que) (IEW 635) : Bur ke ‘also, too, and’, emphasizing particle; indef. particle after interrogative pronouns; conditional particle (B 244).

—IE *ser-2 ‘protect’ (‘keep, nourish, feed’) (IEW 910) : Bur Ys -ser- and -sir- Hz Ng -sir- ‘feed, make eat; make drink; serve food to a guest’ (B 379).

—IE *ghyem-, *ghiem- ‘winter, snow’ (Wat 28) : Bur ge, L also gye and Cunn. gye ‘snow’, Ys ge, gye (L 165) (B 151), which could go back to forms with -m, as the Ng pl. ending is -min, i.e. the pl. form is g(y)émin < a sg. *gyem.

—IE *del- ‘to split, carve, cut’ (M-A2 373) : Bur dél- ‘beat, strike, smite, hit, shoot; kill, slay; cut down; bite, sting’ (L 123-125) (Will 36).

—IE *bhergh- ‘high’ (Wat 11): Bur Ys bérkat ‘summit, peak, crest, height’ (BYs 133). (For -rk- instead of the expected -rg-, note Berger (2008: 4.17) who states that after r media are (generally) voiceless.)

—IE *ne ‘not’ (M-A 395) (IEW 756-758: *ne, *né, *nei, neg. particle) : Bur ne.....ne ‘neither’ as opposed to Bur na ‘neither…nor’ which is a borrowing from U nah (B 298), and further Bur níi ‘not’ (B 303) which can be derived < IE *né.

—IE *pen-1 ‘to feed, fatten; food, nourishment’ (IEW 257) : Bur d–pipin-, Ys d–pepen- ‘to swell (from eating a lot)’, d–spipin- ‘make swell up, to fatten; make angry’ (B 315).

—IE *uel-, *uelə- ‘to deceive’ (Lith vilti ‘to deceive’) (IEW
1140): Bur Ys -wélji, Hz Ng -úlji sg. and pl. ‘dream, in dream’ (loc. in -či) (B 454).
—IE *urenk-, *uronkā- ‘bend, curve’ (> Balt-Sl ‘hand’): Bur Ys -rén, Hz Ng -riin ‘hand’ (B 364).
—IE *mend-, *mand- (*md-) ‘suckle, (feed) young animals’ (IEW 729) (e.g. Rom mînzare ‘female sheep (for milking)’, mînzar ‘one year old lamb’ (Balkan substratal) Brâncuş (97-100) : Bur meénis ‘female sheep over one year old which has not had young’ (B 285) : *mendis > meénis, with loss of -d- and compensatory lengthening of -e-. Also Bur munpāq ‘grown big, developed (of a child or young animal)’ (L 270), (LYs 174 ‘a youth, lad’), possibly from IE *md- + *-ko. Perhaps also Bur núndas, Ys bûndas ‘tick’ (B 294) (as a ‘blood-sucking insect’).

IE e (unstressed) > Bur a
—IE *bhel-g- or *bhel-k- ‘beam, plank’: (M-A 431) : Bur balk ‘plank, board’ (B 34-5).
—IE *bherag- ‘yeast bread’ (WP II 165): Bur barğúndo ‘yeast, leavened bread’ (B 30).
—IE *(s)ker- ‘turn, bend’: Bur d–karan-, d–skaran-, Ys d–kharan- ‘to surround, to gather around, to enclose’ (obsoleto) (B 242).
—IE *les-, *las- ‘weak’ (IEW 680) : Bur las ‘without consequence, insignificant, without influence’ e.g. lasalás guçárd ‘walk weakly, toddle weakly’ (guçár- ‘go’) (B 264).
—IE *melh₂-, *mel- ‘grind, crush’, ext. *meldh- ‘soft’ (IEW 716) (M-A 247) : Bur máltas ‘butter’ (B 276) < *maltar-š i.e. máltar-š ‘(ointment) apply, rub’, du-máltar- ‘rubbed’ (< *meldh-ro-). From IE *melh₂- ‘grain, millet’: Bur maláo in gur maláo ‘type of wheat’ (B 275) (gur ‘wheat’). Bur máltako ‘mixture of ground walnut and apricot kernels and dried mulberries’ (B 276) correlates closely with Gk máltha ‘mixture of wax and pitch’, perhaps as IE *mldʰ-ŋ-kο (W-I-S 485), cp. to Gk malthakós ‘soft, tender, mild’, also Bur mul ‘form of food, sort of gruel, flour is stirred into cooking water’ (B 293) (< IE *ml-).
—IE *mer-agh- a guttural extended stem < *mer- ‘tie, wind up, roll, twist’ (not found in Ind or Irn) (IEW 733) : Bur marāq ‘bend, twist, circuit’, marāq man– ‘make a curve, take a roundabout way; turn, turn back’, Bur márğul ‘curl, curly’
IE ē > Bur éé, i
—IE *ghabh-ē- ‘give or receive’ (M-A 563) : Bur gámi- ‘pay, refund, reimburse’ (B 145).
—IE *kʷyeh₁-, variant metathesised form < *kʷeih₁- > *kʷyē- ‘rest, be quiet’, in words for ‘time’ in IE: esp. with an -n extension, e.g. ORuss čin ‘time, period’ (Wat 45) (IEW 638) : Bur kéen Ys khen (Ys L khyen) (B 254), kēn, kyēn (L 232-233) ‘time, space of time, period, season’, NH also ‘celebration’.
—IE *rēk- or *rēk- ‘arrange, prepare’, (OlInd racayati ‘produce, fashion, form, make ready’, Goth rahnjan ‘work out, reckon’ (IEW 863) : Bur rīk maṇ- ‘be absolutely ready’, rīk ṭ- ‘draw (sword, knife)’, rīrik maṇ- ‘be ready to strike’ (B 365).

IE o > Bur o
—IE *smokur- ‘chin, beard’ (M-A 107) : Bur -móqiș (Hz), -móqus (Ng) ‘cheek’ -móqiș (Ys) ‘face’, -móqot (Ys) ‘cheek’ (B 291).
—IE *dhogʷh-eyo- ‘to burn, warm’ suffixed o-grade (caus.) form < IE *dhegʷh-: (note esp. PGrmc *dagaz ‘day’ (< ‘heat of the day’), Goth dags ‘day’ (M-A 124) : Bur Ys doğói, Hz dgúi ‘noon’, e.g. sa doğúi maṇim ‘the sun is in its zenith’ (sa ‘sun’) (B 124).
— IE *gʷer-, *gʷor- (IEW 477), *gʷerh₃- (Wat 34) ‘mountain’ (Alb gur ‘stone): Bur Ys goró, Hz Ng guro ‘stones’ (B 181).
—IE suffix -ko, secondary suffix, forming adj. (Wat 36) : Bur suffix -ko, also -kus, e.g. datū ‘autumn’, datū-ko adj. ‘autumn-’, datū-kus ‘autumn season’ (B I: 207);
—IE *h₂ol- ‘beyond; from that side’ (Wat 2-3) or *h₂éljos ‘other’: Bur hółe, hólo ‘out, out of’ and hólum ‘outside, other, foreign, strange’ (B 201-202) and most likely the stem in the numeral ‘2’: altó zyć Ys (Zarubin) haltó, altán h, altá, altáč x (Berger 2008: 10.4).
— IE *gónh₁- ‘beget; bear; produce; be born’, e.g. Gk gónos ‘sperm, semen’ and Bur gůnó, Ys gônó ‘seed (not of cereals); sperm, semen’ (B 180), Ng gono (L 186).
IE ő > Bur ō
—IE *dhō-mo- ‘pile’ (IEW 238) (*dhoh₁-mo-) : Bur dúuman ‘pile, heap’ (B 127) (with prev.).
—IE *uodō(r)- ‘water’ (Wat 95): Bur budóo ‘rinsing water’ (B 61).
—IE *jōs-to-s (< *joh₂s-to-s < *iēh₃s-to-s) (Wat 103) ‘belted; girdle’ (IEW 513) : Bur -ōścum, Ys -ōśtum ‘waistcloth, waistbelt’ (B 308) (role of stress and pron. prefixes > o).
—IE *mō-s- < *mō- : *mē.₅ (Wat 51: < *meh₁-) ‘have a strong will; be intent on’ (esp. Goth mōps (d-) ‘courage, anger’) (IEW 704-705) : Bur -móos ‘anger, rage, temper, annoyance’, -móoskiš ‘prone to anger, wrathful, violent tempered’ (B 291).

IE i > Bur i
—IE *dhh₁ileh₁- ‘teat, breast’ (M-A 82) : Bur Ys -dīl, Hz Ng -ndīl ‘breast, chest’ (B 302), and with i : u / ₁ : Ys dúlas ‘boy, young lad’ (BYs 142), (cp. with Lett dēls ‘son’, Alb djalē ‘boy, young man, son’).
—IE (h₁)ih₁-ni- (h₁eih₁-) ‘ice’ (e.g. Lith ýnis ‘glazed frost’) (M-A 287) : Bur hio x pl ‘hail’ (-o is the pl. suffix) (B 200), Hz hiōn ‘hail’ (Varma 153).
—IE *gh₁- (M-A 245), *ghh₁-i- (M-A 537) ‘throw’ : Bur Ys gi-, Hz Ng giy-, imp. gi ‘to throw or cast down, fling; throw in; to attack’ (B 155).
—IE *pitus ‘food’ (< *peih₁- ‘be fat, swollen, overflowing’) (M-A 208) : Bur phítí ‘sourdough bread in thick round cakes; food in general’ (B 332).
—IE *sē(i)-, *si- ‘to tie, bind’ (Buck 546) : Bur d-či-, Ng d-čh₁- ‘to tie, tighten’ (B 76).

IE u > Bur u
—IE *bhu₂gos, *bhu₂gnó ‘buck, he-goat’ (M-A 229) : Bur buqhëni NH ‘goat with certain distinctive features on the head’ (B 63).
—IE bhāghus ‘(fore)arm’ (M-A2 180) : Bur bağú ‘double
armful’, bağúç ‘small double armful’ (B 30).

—IE *bhrúhx-s ‘eyebrow’ (M-A 2 175) : Bur bur (also bûr) ‘a single hair’, *lpur ‘eyelash’, *lpurkiš ‘with thick eyebrows’ (B 268).

—IE *sunk-, *suenk- ‘heavy’ (IEW 1048) : Bur chuúm, Leit tshung, Cunn chung ‘heavy, overweight, burdensome, slow’ (Will 118).

—IE *seug/k- ‘to suck(le)’ (with zero-grade *sûg-, *sûk-) (G 570) : Bur suk ∼t- ‘to slurp, lick up, lap, sip’, also šik ∼t- ‘to slurp’ (B 411) (with expressive š).


1.4.2. Diphthongs

IE ai > Bur a

—IE *ghais-os-, *ghais-es- ‘a stick, spear’ from IE *ghi- ‘throw’ (M-A 537) : Bur ġasîl ‘individual stick or sticks’ (B 173). From *gas-i-lo (cf. -díl ‘breast, chest’ < *dhi-lo), and this from Bur Ys gi-, Hz Ng giy-, ‘throw or cast down, fling; throw in; attack’ (B 155) (sos > ss > š).

—IE *baiteh2- ‘goatskin, cloak’ (M-A 109-110) : Bur bat ‘goatskin, sheepskin’ (B 44).

—IE *(s)tái-no- ‘stone’ (IEW 1010) : Bur dan ‘stone’ (B 113).

IE ei > Bur a

—IE *ghheim- ‘winter’ (IEW 426) : Bur ġamú ‘ice, frost; glacier’ (B 168).

—IE *gheia-, *g-hi- ‘sinew, thread’ (IEW 489): Bur ġay ‘thread in a warp’ (B 175).

—IE *geis ‘used of the emotion of fear or amazement’ (IEW 427) : Bur gusú in ‘heart’ gusú ‘to be afraid’ (L 175), also ‘s gusu ‘to frighten, intimidate s-one’ (B 162).

—IE *h₁eis- (in words denoting passion, any strong feeling) (M-A 22): Bur has-mán- NH ‘astonished, amazed, bewildered, embarrassed’ (B 195).


—IE *mei-, *mē[i]t- - ‘strengthen; pole’, *meith : *mit :
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OInd mít- f. ‘column, post’, OIcl méiðr ‘tree, beam, pole’, Lith miétas ‘stake, post’ (IEW 709) : Bur Ys mátas (< IE *meitech-s) ‘beam (medium-sized)’ (BYs 164), ‘rafter, which rests on the main roof beams’ (LYs 180).

IE eu > Bur a
—IE *bheu- ‘come into being, be’ (Wat 11-12) : Bur bá- / b- ‘be, exist; copula’ (B 25).
—IE *keu- ‘curve, bend’ (Wat 31) : Bur Ys d-ka- ‘/to bend, to curve’ (B 253).
—IE *ieudh- ‘set in motion, make excited, stir up’ (> ‘incite’) (M-A 507) : Bur yat ‘wound, annoyance, pestering, argument’ (B 475).
—IE *meut- < *meu- ‘wet, dirt; wash’ (e.g. Arm mut ‘dark, blackness’) (IEW 741-3) : Bur matúm ‘black’ (B 284). IE *meu-r(o)- ‘wash’ : Bur marú ét- ‘wash (for gold)’ (B 282).

IE au > Bur u
—IE *pau-kos ‘little, few; small’ (M-A 200) : Bur phúko adj. ‘small, tiny’ (B 334).
—IE *h₂eulos ‘pipe, elongated hollow’ (Lat ‘belly’) (M-A 96) > (*h₂aulos) : Bur -úl ‘belly, abdomen’ (with h/u a weak position after pron. prefixes) (B 453).
—IE *h₂éuh₂- , *h₂euhi/os ‘father’s father, ancestor on father’s side’ (M-A 609) : Bur -u and -uy ‘father, father’s brother’, in pl. ‘forefather’ (for loss of -h- note previous ex.).

IE ou > Bur u
—IE *h₂óuis (gen. *h₂óuios) ‘sheep’: (M-A 510) (IEW 784 - *óui-s) : Bur huyés (sg and pl) ‘small cattle (sheep and goats)’ (B 209), Ys also: huís (T-P 140).
—IE *gōur-, (gen. *gunós) (IEW 397 *geuro-s) ‘body hair, lock of hair’ (M-A 252) : Bur guyán pl ‘hair of one’s head’ (B 183) (< *gour-yo- or *gun-yo-).
—IE *dthroughos ‘phantom’ (M-A 538) : Bur dúrgas ‘ghost of the deceased’ (B 126).

1.4.3. Laryngeals

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5 In Čašule (2003b), we provide an in-depth analysis of the Burushaski laryngeals and their direct correspondence with the Indo-European...
IE $h_1 >$ Bur $h$ IE $h_1 e >$ Bur $h e$

—IE $*h_1 em$ ‘take, gather; distribute’, e.g. OSl imati ‘catch, hunt, gather, take’, Lat emō ‘take, buy’, distribution in northwest IE (M-A 564): Bur $d-\text{mi}$-, Ys de-hémia- ‘gather, collect, obtain, get; harvest (fruit)’, $d-\text{ée-mi}$-, Ys de-hémia- ‘gather together’ (B 287).

—IE $*h_1 néu$ ‘nine’, and more specifically the ordinal form $*h_1 néu-(e)tos$ ‘ninth’ (M-A 403). Beekes (1995: 216) states that the Gk form énatos ‘ninth’ points to a proto-form $*h_1 n ṭ o$. : Bur húntí, Ys hūtí $z$, hunčó, Ys hućó $hxy$ ‘nine’ (B 205).

—IE $*h_1 erh$- ‘quiet, at rest’ (M-A 474) : Bur her ‘attentive, careful’ (B 197).

—IE $*h_1 erh_s$- ‘be well disposed to someone’ (> ‘be deferential, respectful’) (M-A 197-198) : Bur hēṣ ‘accustomed, tame(d), acquainted with’ (L 199: hēṣ) ($rṣ > s$) (B 197).

—IE $*h_1uers_s$, $*h_1uer$- ‘rain, drip’ (IEW 81: ‘to flow, to wet; water’) (>‘urinate’) (M-A 477) (e.g. Gk ourō ‘urinate’): Bur hará-, Ys hariá-, Hz $-\text{wara}$ ‘pissen lassen’, harás ‘urine’, harált ‘rain’ (B 191-192) (unstressed $e > a$) and with -e-: héř- ‘to weep, cry’ (B 197) (Čašule 2003b: 46), perhaps also di-āa-č ‘to rain’ (B 141). From the zero-grade: Bur hur (in L (208) Hz hūr) ‘conduit for water’ and húrchil, ‘the water that flows off at the lower side of a field’ (B 206), and other derivatives, such as hurōgo ‘perspiration’ (B 206), hurtá ‘wet’ (cp. with ON aurigr ‘wet’, aurr ‘wetness, water’), hurú ‘juice’, hurúš ‘become damp’ (B 207).

—IE $*h_1empis$ ‘gnat, stinging insect’ (M-A 312) : Bur

laryngeals. We follow the approach by Adams and the editorial board of Mallory-Adams (1997: 462) where four PIE laryngeals are assumed: $h_1$, $h_2$, $h_3$ and $h_4$. In this set, $h_2$ and $h_4$ color an adjacent *e to *a and $h_3$ colors an adjacent *e to *o, and are considered to have been pharyngeal and/or laryngeal continuants (fricatives). The first laryngeal $h_1$ does not cause coloring and has been assumed to be a glottal stop. Adams uses the symbol $h_5$ when, because there are no Hittite and Albanian forms, it is impossible to determine whether the laryngeal is $h_2$ or $h_4$. A generic $h_5$ is used when there is evidence for a laryngeal, but its exact nature cannot be determined. Most Indo-Europeanists, if not all, accept the existence of at least one laryngeal confirmed by its attestation in Hittite and other evidence, but the three-laryngeal theory also enjoys wide acceptance, whereas the fourth laryngeal has been more often disputed than not.

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hamíso ‘a small insect’ (B 189).

—IE *h₁eu(h₁)- ‘leave, abandon, lacking, empty’: Gk eúnis ‘deprived’, Skt ūná ‘lacking’ (M-A2 319) (Wat 25: *h₁eu(h₂)-, zero-grade *h₁uh₂ > *ū-) : Bur ho man- ‘be deprived of, forfeit’ (B 201). ho could go back to hu or hū as e.g. in borrowings from Urdu: Bur hojará < U hujrah (B 201), or in alternating autochthonous forms: Hz Ng mon, Ys mun (B 290), Hz suğón : Ng şuğûn : Ys şoğón (B 398). Berger notes the scarcity of minimal pairs for the opposition of o and u and their coalescence/variation in various environments (esp. in unstressed position) (Berger 2008: 2.1, also B I: 2.18).

—IE *h₁óuhxdh- (< *h₁euhxh- ‘to swell (with fluid)’ (M-A 82), esp. PSl *udū- ‘limb, penis’ (throughout Sl e.g. Blg ud ‘extremity; leg; membrum virile’) (Jakobson in Vasmer IV: 148) (G 671) : Bur Ys -hútes, Hz Ng -út and -útis ‘foot, lower leg’ (B 459) (*hou- > u, *-dhr- > *-tr- > -t-), and with the common u : o alternation also Bur hôti ‘artificial penis’ (B 203).

IE h₂ > Bur h, IE h₂e- > Bur ha-

—IE *h₂en- ‘to draw liquids, draw water’ (M-A 169) (in Wat 4 *an-) : Bur háncil also áńchil ‘water that flows from a wound’, as adj. ‘watery’ (čil ‘water’) (B 19).

—IE *h₂eh₃-s- ‘burn, glow’ (> ‘star, ember’) (M-A 87) : Bur háas ‘glowing embers’ (B 184), hasúman (Ys) ‘star’ (B 21).

—IE *h₂erg₃-nt-om ‘white metal, silver’ (M-A 518) in a word for ‘dragon’, derived from this stem, e.g. Phrygian gloss argwitas ‘dragon, Lamia’, in Hesychius (Neroznak 136). In antiquity a Lamia was a mythological woman-snake and there is an exact match with Bur hargin ‘dragon which comes into being from a snake’ (B 193). (See Çašule 2004.)

—IE *h₂erdus ‘high, lofty’ (> ‘rise out, stand out’) (M-A 269) : Bur hart man- ‘spring up, get up, rise abruptly’, hart -t- ‘lift, raise, hold up, stand up’ (B 195).

—IE *h₂eluos, *h₂eulos ‘elongated cavity, hollow’ (Lat alvus ‘belly, womb; hold of a ship’) (M-A 96) : Bur halkíš ‘womb’, and from zero-grade: Ys -úkis (Hz Ng -úlgis) ‘nest; sheath; burrow, hole, den’, and esp. Bur -úl ‘belly, abdomen’ in pl. -úlišo, -úlin ‘bellies, innards’ (B 453-454). Bur -úlkiš ‘greedy’ could however be a separate form from IE *h₁elk- ‘hungry,
ill’ (e.g. Cz lakomý (also SSl) ‘greedy’).
—IE *h₂é̞rju-s ‘cavity’ (e.g. Hitt hariya ‘valley, vale, dale’ (M-A 96) : Bur har ‘small nullah, ravine’ (B 191).
—IE *h₂óu-i-s (gen. *h₂óu-i-jo-s) ‘sheep’: (M-A 510) : Bur huyés (sg and pl) ‘small cattle (sheep and goats)’ (B 209), Ys also: huís (T-P 140).
—IE *h₂erh₂- ‘destroy, fall apart; lose’ (M-A 158), o-grade *h₂órh₂-: Bur Ys: do-hór, Hz Ng do-ór- ‘to fall down (of cliff, stones, house)’, d-ur- ‘pull down, knock down (a house), (a person) to hit the ground’, N also ‘ruin, wreck (work)’ (Ys d'-hor-) (B 308).

IE hₐ > Bur h, IE *hₐ-e- > Bur ha-
—IE *hₐérhₐ/e/-o- ‘to plough’ (M-A 434) : Bur har- ‘to plough’ (BYs 150).
—IE *hₐer(hₐ)- ‘fit together, attach’ (> ‘frame, joint, arm’) (M-A 26) : Bur harán ‘among, between, in the middle; jointly owned, in partnership, joint’ (B 192). (And further: áran ‘wooden frame of door; of basket’ (B 20) (I: 25, gives examples of loss of h-/a, u).
—IE *hₐeğ-, *hₐeğh₁/lu- (in B-K 534: IE *heg[ʰ]-) (M-A 477), which B-K (388) trace to a Proto-Nostratic *hag-/*heg- ‘cover over, hide, overshadow; mist, darkness, cloudy weather’ : Bur hağúm ‘damp, moist, wet’ (B 185), and hak₂ ‘vapour, steam’, which Berger links with hak¹ ‘silver or gold plating’ [‘covering’] (B 186).
—IE *hₐeğ- ‘drive’ (pres. *hₐeğ/e/-o-) (M-A 170): Bur hağuc (Ys hağós) ‘pass, mountain-pass’ (B 185), a deverbal noun with sem. development as in IE *hₐeğmen : OInd ájman- ‘career, passage, battle’ and IE *hₐeğro- ‘field’ < ‘place where cattle are driven’, e.g. OEng æcer ‘field, acre’ (‘as much as a pair of oxen can plough in one day’) and IE *hₐeğ-ro ‘driving, pursuing, grabbing’ : Bur ġark- /-ğārk- Hz Ng ‘drive oxen in ploughing, plough with oxen; catch, seize’ (L 11: -ağárkas, 180: -półkás) (B 171-172), (with -k-extension, as e.g. IE *kₐeu-k- ‘to shine, glow; burn’ < IE *kₐeu₂ ‘to light, to burn’ (IEW 594-595, 597) : Bur d'-kukun- ‘light up (firewood, cigarette)’ (B 254).
—IE *hₐel- ‘grow’ (pres. *hₐeł/e/-o-) ‘grow, nourish’ (M-A 248) : Bur halés-t- ‘to raise, rear, nourish’ (BYs 150).
—IE *hₐeug- ‘grow’, (e.g. Lat augeō ‘augment, increase’, TochA ok- ‘grow, increase’) (M-A 248) (Buck 876: IE
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—IE *h₃en'ghus ‘narrow’ (Wat 4: ‘tight, painfully constricted’, e.g. Grmc *ang- ‘compressed, hard, painful’, ON ongr ‘narrow’ (M-A 391), PSI *ōzīlū ‘knot’ (G 638) : Bur hanarāt ‘(wood) hard, knotty, (meat) tough; self-willed, refractory (—narrow-minded)’ (B 190) (< *hang-aro-to).

—[in auslaut] IE *dhel- ‘curve, hollow’, *dholh₁os ‘valley, vault’ [(OHG tal ‘valley’ (< Grmc *dalám ‘valley’), ON ðaþla ‘wooden gutter on a ship’, OHG tol(a) ‘channel, ditch, pipe’ (M-A 618: < *dhλh₂o/eh₃-)] (not in IA) : Bur ðał₃₁ ‘larger irrigation channel’ (B 111) (< IE *dh₃h₂o/eh₃-).

IE h₃₃ > Bur h, IE *h₃e- > Bur ho-

—IE *h₃o- dem. pron., e.g. Lat hodié ‘today’ (M-A 594) : Bur hó ‘then, just then; so; there, thereafter’ (L 204) (Will 65).


—IE *hx₁₃(?)ehx- ‘trust in, believe’, e.g. Lat ōmen ‘sign, omen’ (explained as < ‘declaration of truth’ (M-A 61) (GI 706 as *Ho-) (Wat 59: ō < *(h₂)oh₃-) : Bur hoóm ‘sign, secret advice, secret notice’, also hoóm-ːt- ‘to give a sign’ (B 202).

—IE *h₂/₃sis- ‘large (offensive) knife, dagger’ (M-A 561) : Bur hunč pl. hunzé ‘arrow’ (for the sem. shift ‘dagger’ > ‘arrow’, cp. Arm slak ‘pike, spear, dagger, arrow’).

—IE *h₂/₃uerg- ‘turn’ (M-A 640) : Bur hurūginas ‘wave, stream, whirlpool’ (B 207).

IE h₄ > Bur h, IE *h₄e > Bur ha

—IE *h₄el-, *hel-, *hal- ‘of a light color, white’, esp. AncMed áliza ‘white leprosy of the trees’ or ‘inner bark of tree’ (Katičić 110) (M-A 641) : Bur hali ‘birchbark’ (B 188), ‘inner bark of the birch tree’ (Will 63).

—IE *h₄erós, *h₄erjos ‘member of one’s own (ethnic) group, peer, freeman’ (M-A 213) : Bur haráay ‘a free and
independent tribe, owing allegiance to no one’ (B 192).
—IE *h₁órghei ‘mounts’ (in B-K 564: ‘climb up; to rise, to become puffed up’), e.g. Hitt a-ar-ki ‘to mount’ : Bur hurgó, in Ys: horgó ‘ascent, slope up; uphill’ (B 206).

IE h₁ > Bur h
—IE *peh₁(i)- ‘misfortune’, *pih₁- ‘revile’, e.g. OInd pámán- ‘skin disease’, piyati ‘insults’ (M-A 313): Ys bihái, Hz Ng biái ‘illness, disease’ (B 50).
—IE *uih₁rós ‘man, husband’ (Wat 101 *wiar) (M-A 202) : Bur Ys -yúhar, Hz Ng -úyar pl. -úyarišo ‘husband, married man’ (B 460).
—IE *h₁ónd- / *h₁nd- ‘stone, rock’: Bur handó ‘stone’ (B 189).
—IE *h₁óngl or *h₁éngl ‘charcoal’ (M-A 104) : Bur hanjíl ‘charcoal’ (B 189).
—IE *h₁óiuo/eh₁- ‘+/- fruit, berry’ (M-A 2 160) : Bur hói ‘vegetables; greens’ (Will 65).

1.4.4. Sonorants
IE l, m, n, r > Bur l, m, n, r (see examples under other headings).
IE u > -w/-u
—IE *uegʷ- ‘wet’ (M-A 639) : Bur du-wáq-, d̩-waq- ‘to become wet’ (B 464).
—IE *uel-7 ‘to turn, wind; round’ (IEW 1441-1444) : (from the zero-grade *u₁-) Bur du-úl- ‘to wind, (of a ball of thread) to become wound up’ (B 454).
—IE *uora- < *uor- ‘faintness, giddiness’ (e.g. Eng weary) (IEW 1180) : Bur -wár- ‘to become tired’ (pple n-war) (B 464-465).
—IE *uer₃ ‘to turn, bend’ and zero-grade IE *ur- (IEW 1152) : Bur -wáre or -wára ‘around’ (B 465) and du-úr- ‘to turn’ (B 457).
—IE *h₁ues- ‘dwell, pass the night, stay’ (M-A 171) : Bur du-wáas-, d̩-was- (L: d̩-uesas) ‘remain over; stay behind; to exist, survive’ (B 462) (L 140).
—IE *uer₂ ‘raise, high place, top, high’ (IEW 1150), Specht (q in ibid) gives here also Gk uránios ‘in the sky, as high as the sky’, also Phrg uranios ‘celestial’ (D-N 140) : Bur úrunas ‘morning star, Venus’ (BYs 184).
—IE *uél- ‘see’ (IEW 1136-1137 : OIr fili ‘seer’, Wels
gweled ‘see’, Toch yel (< *uēl-) ‘examine, investigate’) : Bur Ys (< *u-bal-) wal- mãn- ‘keep guard over, stand guard, watch (plus dat. of object), wal - t- ‘be under guard’ (BYs 185).

IE u- > Bur b- ³

—IE *ūer- ‘high raised spot or other bodily infirmity’, zero-grade form *ūer- (W 99) > Bur buūri ‘crest of hill, peak’ and Bur -ūri and -ūris ‘crest, ridge, mountain peak; prong; fingernail’ (B 66) (possibly in Burūšaski (< *burīšaski) ~ ‘highlanders’).

—IE *ueis- ‘to sprout, to grow’ (semantics in IE also ‘fruit’, e.g. OPrus wēisin ‘fruit’) (IEW 1133) > Bur basí ‘a garden with fruit trees; an orchard’ (Will 21).

—IE *uēl- ‘to tear, pull’ (a common sem. development, e.g. in PSI *ob-velktí ‘put on clothes’) (IEW 1144-1145) > Bur bél- : Ys wēl- ‘put sth on, don, wear’ (B 47).

—IE *ūer-(e)-š ‘perceive, watch out for’ (IEW 1164) : Bur barén-, baré- ‘look, look at; look, search for; look after, look about’ (B 40), d- waran- ‘require, be in need of’ (B 465).

—IE *uetero- or *uēt-ru or *uēt-ru ‘wether; one year old lamb’ (Wat 101) : Bur butár ‘male kid, under one year old’ (B 65) analysed fully in Čašule (2009a: 171-172).


—IE *uēr-š ‘to talk, speak’ (IEW 1162) : Bur bar ‘saying, speech, word; promise’, bar ét- ‘to speak’ (B 38).

IE u- > Bur b- : m-

—IE *suēks-, *sēks, *kseks and esp. *ueks- ( : *uks- ) ‘six’ (the latter forms are considered to be the original ones, with the s- of ‘seven’ taken over (Beekes 1995:213): Bur Ys biśindu, Hz Ng miśindo hxy, Ys biśinde, Hz Ng miśindi z ‘six’ (B 289).

—IE *uēs- ‘to clothe’ (Wat 101) : Bur -wāsī- ‘put s-thing in or on’, (for y-sg objects biśá- ) ‘put on; wear; don (clothing); fix, attach; fit; suspend, hang’ (Will 121) + -k(a): bešké, Hz

It has been suggested cautiously by one of the anonymous reviewers that this process in Burushaski could shed some light on the fate of IE *b-, i.e. we could be dealing historically with a change b > w, rather than w > b in Burushaski (or of w and b as positional variants). This is an interesting proposition which requires further investigation.
Ng biśké ‘hair (of animals), fur’ and Ys beskáreţ, etc. ‘wether, ram (over 2 years old, castrated)’ (B 42). Compare with Alb bashkë ‘sheep’s wool’, Rum bască ‘same’, of substratal Paleobalkanic origin (from Thracian) (Brâncuș 1983:40-1), and with an identical etymology. B (296) links the Bur words further with -múški ‘pubic hair’.


—IE *uoh₁- ‘you two’(*ues-) or more precisely semantically from *uos, the enclitic and oblique form of *juh₁s ‘y’, (Schmidt 1978: nom. *yu-H-s, obl. stem *wos-) : Bur ma, Ys also wa ‘you (pl.)’ (T-M 151).

IE i > Bur y/i

—IE *yá- ‘go, come’, i.e. *ieh₁- ‘go, travel’ (M-A 228) : Bur d⁻y(a)- / d⁻y(a)- (conative of jú- which is the present stem) ‘come, come along, approach’ (B 235-236).

—IE *uih₂əs ‘man, husband’ (Wat 101 *wiaro) (M-A2 202) : Bur Ys -yúhar, Hz Ng -úyar pl. -úyarišə (L 57 also -uyer) ‘husband, married man’ (B 460).

—IE *ieudh- ‘set in motion, make excited, stir up’ (> ‘incite’) (M-A 507) : Bur yat ‘wound, annoyance, pester, argument’ (B 475).

—IE *h₁jeu- ‘young’ (M-A 655) : Hz Ng -i, Ys -yê, pl. -yú also -yúə ‘son’, pl. also ‘children’ (B 210) (L 41, 386, also with -ú-).

—IE *el- or *iel- ‘empty, vain’ (e.g. Gk hálios ‘vain, empty, useless’, PSl *(j)alû- ‘sterile, infertile, vain’ (ESSJ I: 67-68) : Bur yálo ‘without state or dignity’ (B 471).

—IE *io- formations, the most important and productive present suffix of late PIE (Fortson 2004:89-90) : Bur present stem involves yodation of the consonants of the past tense stem — with a formative y (Morgenstierne (L: I XX).


1.4.5. Syllabic sonorants

IE n > Bur -un, -an

—IE *gû- in words for ‘beget’, ‘bear’, ‘be born’ (> ‘semen’) (IEW 273) : Bur ġunó ‘seed; sperm’ (B 180), to which B
relates also ġunón ‘newly obtained land, in which only grass will be sown’, and the verb du-ğûn- ‘ripen; mature’, also d-squn- ‘cause to mature (of sun, of people); have an idea, make a suggestion, give a stimulus’ (B 179), also Bur gûni ‘part, quarter (of room), corner, angle; group, society of people’ (B 161).

—IE *duḡhu₃- ‘tongue’ (M-A2 175) (IEW 223) : Bur Ys -yûngus (BYs 187), Hz Ng -ûmus ‘tongue’ Hay. “unas” (according to B for *u-ûmus) (B 455-6).

—IE *mə₃- (*me₃n-; *mŏ₃n-) ‘think, remember’ (IEW 726) (> ‘gravestone, mound’ e.g. Phrg manka ‘gravestone, memorial’): Bur man ‘earth or cement platform in house for sitting and sleeping; dais on which the elite used to sit at public functions; a cement slab or dirt mound placed over grave’ (Willson 85) and from *me₃n- > Bur menas ‘tale’ (LYs 174) (sem. as in Lett).

—IE *mə₃-, *me₃n- ‘remain, stay’ (> ‘be, become’) (IEW 729) : Bur man- ‘be, become, turn into; become (absolute) > come into existence, occur, take place; belong to; proceed to, be about to; be necessary to do s-thing or for s-thing to be done’, also used in forming periphrastic verbal constructions (B 278)7.

—IE *h₁₃ond- / *h₁₃nd- ‘stone, rock’: Bur handó ‘stone’ (B 189).

IE m > Bur -um, -am

—IE *sem-s ~ *sem ~ *sm-ih₄- and esp. zero-grade *sm- ‘one, united as one, one together’ (Wat 75) : Bur -

7Bur man- is a very productive verb. Within developments from IE *me₃n- ‘remain, stay’ (a widespread and old IE stem), semantically the correspondence is direct with TochAB màsk- (< *m₃-skë/o-) ‘be, become’, and further Gk ménō ‘stand fast, remain; await’, Lat maneō ‘remain’, Arm mnam ‘remain, expect’ and with other semantic developments Orl aîmne ‘duty’, Wels amynedd ‘duty’ (note above the Burushaski meaning ‘to be necessary to do s-thing’), also OInd man- ‘delay, stand still’ and Hitt mimma ‘refuse’, which is a widespread and old stem in IE (M-A 482).

Note here also the earliest Hittite names (XVIII century BC) of the type Harsumn-uman ‘of Harsumna’, considered to have the same IE element - in this sense the possessive meaning in Burushaski (‘belong to’) corresponds very well.

The detailed semantic correspondence as well as the periphrastic uses of and suffixed forms with the Burushaski verb argue for a very strong and significant correspondence with IE (see further in 8.2.1).
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čámanum (L 47 -samanum) (B 73) Hz Ng ‘first-born (son, daughter, young animal)’ (in Ys -c). Bur also has sum ‘(of animals) female’ (L 317) (B 384) and sumán ‘(of animals) male’ (B 385), which parallels the sem. development from the above IE stem in Slavic, i.e. from PSI *samŭ ‘alone’ we have e.g. Russ samec ‘the male animal’, and Russ samka ‘the female animal’ (Buck 139-140).

—IE *dhmbhos- or *tmbhos ‘swelling, mound’ (> Gk tûmbos ‘barrow, tomb’ of “Pelagian” origin, also Arm damban ‘grave’, Rom dimb ‘hill, elevation’ (Georgiev 1981: 100) (Katić 1976: 71-72): Bur dambálum ‘slight ascent, easy ascent’ (B 113).

IE ḳ > Bur al, ul

—IE *ml-s- suffixed zero-grade from *mel- ‘false, bad, wrong’ (e.g. Gk blasphēmos ‘blasphemous’) (Wat 53) : Bur malć- ‘to abuse, revile, vituperate against’ (B 276).

—IE *g*-el-, *g*olv- ‘strike, sting; pain; death’ (IEW 470-471) (M-A 282) : From IE *g*-l- or *g*olv- : Bur 1gulís ‘long red tick, whose bite causes thirst’ (B 178), (cp. Lith geluó ‘stinger’, Gk déllithes ‘wasps’) (M-A 150), and from *g*olv- (OEng cwellan ‘kill, destroy’) : Bur -qhól- -j- Hz Ng and -qhólan-, L -qholin- ‘to pain, to hurt, to ache’, also -qulan- ‘jdm. Schmerz bereiten’ (B 357) and (trans.) qhuúl -t- ‘hurt’ (NH) (B 360).

— IE *bhel- ‘pot’, zero grade *bh- (Wat 9) (M-A 444) : Bur i-stem < the zero-grade: báli ‘wine container made of clay; wine measure’ (B 34), L (68) also ‘earthenware pot’.

—IE *pel(i)-s-, gen. *plsós ‘stone’ (M-A 548) : Bur balóos ‘a kind of stone’ (Will 20) < *balsós (ss > ś).

—IE *kel-d- suffixed form of *kel- or *kl- ‘to be prominent, hill’ (e.g. Lat excellere ‘to raise up, elevate, to be eminent’ (Wat 39) : Bur khaldár ‘tall, slender and robust’ (B 251).

—IE *mel- ‘dull or brownish black’, e.g. Gk mittos ‘red dye; red-brown of plants’, also used to designate ‘blood’ as an euphemism or linguistic taboo, attested in Myc Gk (Tomashchek (1980 II:16 [1893-1894] gives it as a Thracian word), and militárion ‘blood’ (Chantraine III: 702), Lat mülleus ‘reddish purple’ (IEW 720-721), from a zero-grade *ml-to- : Bur multán ‘blood’ (B 293).

IE ḳ > Bur ar, ur
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—IE *kert- ‘plait, twine’ (e.g. Lat crātis (< *krat-i-) ‘wickerwork, hurdle, honeycomb’, OEng hyrdel (< *krt-i-) ‘hurdle, frame’) (Wat 41) (M-A2 233) : Bur kharéti ‘small wicker basket’ (L also k-) (B 252). In Bur either from *krt-i- or *krat-i-.

—IE *der- with the zero-grade *dr- ‘to sleep’ (M-A2 324) : Bur dur ‘sleep’ (B 125).

—IE *primo- ‘earlier, former, first’ (M-A 399) : Bur púrme ‘before the time’ (B 318).

—IE *gher- ‘to scratch, scrape’ (IEW 441), *gher- ‘stroke roughly, rub’ (IEW 439) : > an ext. zero-grade form *ghr(ɔ)-k- (Wat 30, 32). In IEW 460, also *ghru- and an ext. stem *ghreuğ(h?)- : Bur gurgín-, -úrgin- ‘grind on a stone, rub’ and Bur du-úrgas- ‘rub’ (B 456) (< *gurgas-).

And further: Bur gark ‘peas’ (B 148) and girgin ‘lentils’ (B 154) (for the reduplicated form, cp. with Gk keghkros ‘millet’).

1.4.6. Stops

IE p > Bur ph, also p

—IE *petha- or *pat- ‘stretch, spread’ (> ‘unfurl; open, extended’) (< *pe-, *pa-), (*petha-, pres *petnéhati) (Wat 67) : Bur phatán ‘open’ (L 288), phatán -t- ‘open, uncover; remove (a blanket), lift (cap, veil)’, phat -t- ‘release, let go, set loose, leave; allow’ (B 326) and du-phátar- ‘sit wide and give very little space to the other’ (B 326) also -pat, Ng: -phat ‘side, flank of body, part under the shoulder’ (B 313) and Ys pétal ‘apricot petal’ (BYs 169).

—IE *pelh₁- with variant form *pleh₁-’to fill’ (Wat 64) or *plh₁- with derivatives referring to abundance and multitude’ (e.g. Gk polús ‘much, many’ (Wat 64): Bur pháalis, pháalisa ‘a lot of, in abundance’ (B 320).

—IE *peʊr, *pũr ‘fire’, (gen. sg.) *pu-n-ės < older *peHu- (M-A 201) : Bur phu ‘fire’ (B 334), phu ét- ‘make a fire’ (B 335), Ys phureš -t- ‘cook; slander’ (BYs 171).

—IE *polo-, *polo- ‘swollen, thick, big’ (> ‘thumb’ (e.g. Lat pollex ‘thumb, big toe’) (IEW 840-841) : Bur phulúte -miṣ ‘thumb’ (‘miṣ ‘finger’) (BYs 174) (LYs phalot miṣ).

—IE *(s)p(h)el-t- ‘to split [break in two], cut off, tear off’ (IEW 985-7) : Bur -palt- ‘cause to break’, -phált- ‘break, break up, hoe, dig a hole, burst in the air’ (B 322).
—IE *kerp- or *krep- ‘body, stomach’ (also ‘diaphragm’) (IEW 620) : Bur -qhúrpat ‘lungs’ (B 359) (sem. like IE *h₁eh₁tr- ‘interior of body’, ‘lung’).

IE b (?) > Bur b

—IE *b(h)ō(u)-n- ‘to swell, to rise’ (< *b(h)eu) (IEW 98) (e.g. Gk bounós ‘hill, mound, mountain’): Bur bun ‘mountain-, mountain wilderness; rocky; mountain grazing ground; big boulder’ (B 63). From IE *bu-k-: Lat bucca ‘mouth’ (Wat 7) : Bur buk ‘throat, front part of neck, neck’ (B 61) and buk ‘horn (musical instrument)’ (BYs 135).

—IE *b[h]el- : *b[h]ol- *b[h]l- ‘swell, puff up, inflate, expand, bubble up, overflow’ (B-K 10) : Bur 1bul ‘spring (of water)’ and 2bul ‘a mild wind’ (B 62).

—IE (?) *kab- in Lat cabō, caballus ‘gelding, working horse, horse’, OSl kobyla ‘mare’, Phrg kubela ‘horse’, Gk kabállēs ‘working horse’ (Buck 168, considers the words of Anatolian or Balkan origin), also derivatives like PSl *kobylūka ‘pole for carrying loads’ (ESSJ X: 100) : Bur kabút ‘white horse’ (T-M 33), esp. Bur kabulék ‘roof-posts’ (B 239).

—IE *baiteh₂- ‘goatskin, cloak’ (M-A 109-110) : Bur bat ‘goatskin, sheepskin’ (B 44).

IE bh > Bur b

—IE *bheu- ‘come into being, be; grow’ (Wat 11-12) : Bur bá-/ b- ‘be, exist, verb copula’ (B 25).

—IE *bhâgh- ‘sludge, slime; bog, mire’ (IEW 161). Bur bagéïn y pl. (Ng y sg.) ‘cow dung’, Ng also ‘horse manure’ (B 30) (Will 19 also ‘manure’).

—IE *bhēnghus- ‘thick, abundant’ (M-A 3) (Wat 10, zero-grade *bhŋghu-) : Bur baï, ys baï ‘resin, gum (of fruit trees)’ (L 60) (B 35) (Will 20, also ‘manufactured glue’).

—IE *bher-, *bhour- ‘storm, blow’ (G 157) : Bur burpúriaï ‘strong wind’ (in Sh búrui ‘strong storm’?) (B 64).

—IE *bheru-, *bhreu-, *bhrū- ‘to boil, ferment’ (IEW 143-144) : Bur bíri ‘boiling (of liquids and anger), simmering, bringing to the boil, to boil up, to bubble up’ (B 55).

—IE *bherem-¹ ‘to stick out; edge, hem’ and *bhorm- : *bhrem- (IEW 142), (e.g. OCl barmr ‘edge, seam’) : Bur bír ‘seam, hem’, bír ét- ‘to stitch, hem’ (Sh bíren ‘close-sewn hem’) (B 64).

—IE *bhelg- < *bhel- ‘shine’, (e.g. PSl *bolgo, OChSl

IE bh > Bur m (rare)
—IE *ghabh-ē- ‘give or receive’ (M-A 563) : Bur gāmi- ‘pay, refund, reimburse’ (B 145).
—IE *dhrebh- ‘crush, grind’ (IEW 272-273) > AncMcd drámis ‘a type of bread’ (N 172) : Bur dirām ‘special kind of flour’, dirām phīti ‘a type of bread’ (B 120).
—IE *busk ‘bush, thicket’, Gk boské ‘fodder, pasture’, (Late) Latin buscus ‘forest’ (Buck 47) (Wat 14) : Bur mušk ‘forest, thicket’ and mušqu ‘foliage (for sheep)’ (B 296).
—IE *dhabh-2 ‘proper, suitable; to fit/put together’ (ON dafna ‘competent, good’, gedæftan ‘put in order’ (Gmc *gadafta- ‘fitting, becoming’) (M-A 139) (IEW 233) : Bur dámší ‘excellence, exquisiteness’, dámšie, Ng also dámší ‘excellent, exquisite’, dámši -t- Hz Ng (also in Sh) ‘to approve, choose, select, prefer’ (B 113). (< -i < -ći loc. ending).

IE t > Bur t, also th (rare)
—IE *stá- > *stō-ja or *stō-ē ‘stay, stand, set up’ (IEW 1010) : Bur d-stay- ‘prop up, stay; protect from; hold up an enemy, withstand; assist a person; reinforce (troops); fix (a stone in a dry stone wall)’ (B 469), d-sta- ‘put up and prop up’ (BYs 176).
—IE *terh- “rub, turn; with some derivatives referring to twisting, boring, drilling and piercing; and others (…) to threshing” (Wat 91) (also ‘hit’) : Bur tar ‘hit with open hand’ (B 421) from the variant form of the IE root *teru-, *treu-, as in Cymr taraw ‘hit’ (IEW 1071-1074), also Bur táriş ‘gap, (big) hole’ (B 422) (‘bored through’). From IE *ter-ē- ‘threshing’ > Bur dař ‘cut crops, threshing floor’ (B 115) (t- > d-).
—IE *treugh- (e.g. OIr trōgh, truag ‘miserable, poor’) (IEW 1071-1074) : Bur tarāq ‘poor’ (B 421) and Bur tarğāato ‘tasteless meat from a skinny animal’ related by B to turğōt Hz Ng ‘tasteless, insipid; slack, weak’ (Ys terğēt, tirğiṭ) (B 433).
—IE *ter6- ‘noxious insects’ (related in IEW 1076 to *terh₁-‘rub, pierce’) : e.g. Lat. tarmes (termes) ‘wood worm’ (from an o-stem *tɛrmo-s) : Bur tāro pl. tāromuc and tóro, pl. tóromuc ‘cowdung beetle’ (B 445), túranas ‘a kind of large black beetle’ (B 433) and the first component in Ys turmúkutes ‘long insect’ (B 182).
—IE *ter-, *teru- ‘feeble, fragile, weak’ (e.g. Lat tardus ‘slow, tardy’ (IEW 1070-1071: from *terh₁- ‘to rub’) : Bur tará∂o Ng ‘lazy, casual, inefficient, cowardly’ (L also ‘slack, feeble’) (B 421).
—IE *tem- ‘cut’ (Sl) ‘pound, to beat’, esp. the nasalised form *t(e)m-n-ə, e.g Gk témnō ‘I cut’ (Wat 90) : Bur tan-, tái- ‘pound, crush something, to mash, to hammer’ (B 419).
—IE *teng- ‘to moisten, to soak’ (M-A 639: “attested sparsely in IE, possibly late IE”): Bur tam dél- ‘bathe, swim, wash o-self’, tátam ꞌ ‘to soak, immerse in water’ (B 418).
—IE *treb- (zero-grade *tṛb-) ‘construction of planks, dwelling’ (Wat 93) (IEW 1090) : Bur tharbái ‘pile of stones for fencing or walling off or as a monument’ (B 438).
—IE *tenk- 2 ‘thrive, flourish’ (> ‘king’) (from ‘thicken, clot, become firm, curdle’ (IEW 1068) (OSax ðengel ‘prince, master’, MLG dege ‘thriving, flourishing; progress’, MCymr brenhin teithiawc ‘rex legitimus’): Bur tham ‘prince, king’ (B 436-437), thámku, Ys thánus, ‘kingship, sovereignty’ (B 435), tháa ‘residence of the king, palace’ (DC Ys thâni) (B 435), also tháa ‘success, good reputation’ (B 437).
IE d > Bur d
—IE *k(o)nid- ‘nit, louse egg’ (M-A 357) : Bur khándas ‘a tick’ (B 251).
—IE *der- with zero-grade *dr- ‘to sleep’ (M-A 324): Bur dur ‘to sleep’ (B 125).
—IE *derh₂-, *drā- (Wat 16), with zero-grade *dhr₂- ‘to work’: Bur duró (L also daro) ‘work, affair’, duroō -é-, duróyas ‘to work’ (B 126).
—IE *der- ‘to run, walk, step’ (also ‘trap, snare’) (Wat 16): Bur darú ‘hunting’ (B 116).
—IE *kel-d- suffixed form of *kel- or *k₁- ‘to be prominent, hill’ (e.g. Lat excellere ‘to raise up, elevate, be eminent’ (Wat 39) : Bur khaldár ‘tall, slender and robust’ (B 251).

IE dh- > Bur d-
—IE *dthroughos ‘phantom’ (M-A 538) : Bur dúrgas ‘ghost of the deceased’ (B 126).
—IE *dher- ‘defecate, make dirty’ (IEW 256) : Bur dart ‘dirty, impure’ (BYs 141).
—IE *dherbh- ‘crush, grind’ (> PSl *drobûthu ‘crumb, small piece’) (IEW 272-273): Bur darbát ‘a small piece, a little’ (BYs 141).
—IE *dhál- ‘to sprout, to bloom’ (> ‘flourish, rise, grow’) (IEW 254) : Bur dal ‘up’, dal -t- ‘take up, send up’ and daltás ‘good, fine’, sem. as Hitt talles ‘be favourable’ (B 112).

IE -dh- > Bur -t-, -t-
—IE *dhē- ‘do, make, set, put’ with a zero-grade form *dhr- (IEW 235): Bur -t- ‘do; make, build; make happen; put, put on; say’ (B 413).
—IE *bhe-dho-lo < *bhedh- ‘to prick, dig’ (PSl *bodůlu ‘thistle, thorn’) (G 142) : Bur batúl ‘a thorny plant’ (BYs 133).
—IE *g*eid(h)- ‘mud’ (IEW 469): Bur ġiṭ ‘mud (wet or dry)’ (B 177).
—IE *g*e₂dh- > *g*a₂dh- > *g*ādh- ‘to sink’ (> ‘deep’)
(IEW 465): Bur ǧáat man— ‘to submerge, to sink’ (B 164), also Bur ǧutúm ‘deep’ (B 183).
—IE *h₂erđ(h)us ‘high, lofty’ (> ‘rise out, stand out’) (M-A 269) : Bur hart man— ‘get up, rise abruptly’, hart ːt- ‘lift, raise, hold up, stand up’ (B 195).
—IE *dh(o)ngu- ‘dark’ (Hitt dankuis ‘dark’) (M-A 147) (GI 173: *dʰ'ŋ-k'-) : Bur Ys tán (LYs 230-231), NH: tután ‘dark’, Hz Ng tután, Ys tuntáñ, and tutaánkus, Ng tutáńkus ‘darkness’ (B 448) (maybe also Bur dañ ‘sleep (n.)’ (B 114).

IE k > Bur k (with alternation with kh and q)
—IE *(s)ker-(s)- ‘cut apart, cut off’ (M-A 143) : Bur :skaré- ‘cut off, cut down, separate’ (B 141), Ys kaří, khařén ‘cut up, chop up’ (BYs 158) and 18 derivatives (e.g. Bur askúr, asqúr, Ys asqór ‘blossom, flower; small pox, rash’ (B 22), which can be correlated with the Paleobalkanic word askúron ‘a type of plant’ (Hesychius), also here Alb shkurre ‘bushes, undergrowth’, shkorre ‘place overgrown with bushes’ (Neroznak 1978: 180), and further Bur kharúu ‘louse’ (B 252) < IE *kóris ‘biting insect’ (M-A 312) (Čašule 2010: 23-24).
—IE *trek- ‘move, run’ (IEW 1092) : Bur trak dél-, Ng trak(iın) dél- ‘to skip, to hop’, also trátrak dél- (same) (B 430).

(Refer to the previous entries for numerous other examples.)

IE g > Bur ǧ (also g)
—IE *g(e)u-lo- ‘glowing coal’ (Wat 27) : Bur ǧulú- ‘be burnt up’ (B 178-179).
—IE *gū-, *goua- ‘hand; to grab’ (IEW 403-404) : Bur diːgun- ‘make people seize, lay hold of’, given by B together with du-úń- ‘seize, lay hold of, catch, arrest, grasp, hold on to’ (with the loss of -g- after the pronominal prefixes) (B 456).
—IE *preu-g- ‘to jump’ (IEW 845) : Bur prik(iın) dél- ‘leap, jump, buck’ (L 293, Ng also prig) (B 317). In Bur from a zero-grade *prug- with alternation i : u > prig, prik.
—IE *gouʀ-, (gen. *gunős) (IEW 397 *geuro-s) ‘body hair, lock of hair’ (M-A 252) : Bur ġuyán ʰpt ‘hair of one’s head’
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(B 183) (< *gour-yo- or *gun-yo-).

IE gh > Bur g

—IE *d'hrō(hos) ‘phantom’ (M-A 538) : Bur dūrgas ‘ghost of the deceased’ (B 126).

—IE *ghabh-ē- ‘give or receive’ (M-A 563) : Bur gāmī ‘pay, refund’ (B 145).

—IE *suerh,k- (IEW 1051: *suergh- ‘to take care of’) ‘watch over, be concerned about’ (M-A 636) : Bur sarkē ‘visible, place from which one can see (watch)’ (B 376)

—IE *gheis- ‘used of the emotion of fear or amazement’ (IEW 427) : Bur gusú in -s [‘heart’] gusú ‘to be afraid’ (B 162) (gusú < *gasú through assimilation).

—IE *augh-, *ugh- ‘nape’ (e.g. Gk aukhēn, -énos m. ‘back of the neck, neck; strait’) (< *aukh-en-). OInd usnihā ‘nape’ (only pl.), (IEW 87) (in M-A2 176: *həen-gh(ə)en- ‘neck’, < *həen-gh- ‘narrow’) : Bur –qún (pl. only) ‘breastbone’, Ng also ‘neck (of humans)’ (B 358). The Bur word could derive from *uqh-un- by assimilation from *uqh-in. The initial u- would have been lost to avoid confusion with the pron. prefix for the 3. p. pl ú, ú-. as in Hz Ng –úlgis ‘nest’ : Ys –ilikş (B 454). Lorimer (LYs 11-12) gives for Yasin also –úlikş and states that the -u could be the Ys 3 p. sg. and 3 p. pl. pron. pref. forms. Note also Ys oštum ‘waist-cloth, waist-belt’, which has a pron. prefixed form -stīn ‘back of waist, loins, small of back’ (B 308). See also guncē, gon, ġark-, ġusánus, gusú- (Cašule 2010: 39, 52, 61) (the apheresis occurs mostly before g or ġ).

IE ḱ > Bur k

—IE *kʷe ‘and’ (e.g. Lat -que) (IEW 635) : Bur ke ‘also, too, and’, emphasizing particle; enclitic indef. particle after interrogative pronouns; conditional particle (B 244).


—IE *kʷyeh₁r, variant metathesised form < *kʷeih₁- > *kʷyē- ‘to rest, be quiet’, found in words for ‘time’ in IE:
esp. with an -n extension, e.g. ORuss činů ‘time, period’ (Wat 45) (IEW 638) : Bur khéen Ys khen (Ys L khyen) (B 254), kēn, kyēn (L 232-233) ‘time, space of time, period, season’, NH also ‘celebration’.

—IE *yékʷt(ṇ) (heteroclitic -r/-n stem) ‘liver’ (M-A 356) : Bur Hz Ng -kin, ‘liver’ (B 245). Morgenstierne (L XXIII) noted a parallel with Skt yākṇ ‘liver’ but dismissed it as a coincidence. See Čašule (2003a: 18-19).

IE *gʷ > Bur ġ

—IE *gʷě(u)dh-, *gʷō(u)dh-, ‘dung, dirt; gross, disgusting’ (IEW 483-5), e.g. OSl gaditi ‘detestari, vituperare, reprove, condemn’, OSl gadu ‘Kriechtier, Gewürm’ (G 224): Bur gutó ‘stinky worm; stinking person’ (B 182), also Bur dĪ-ġatīn-, dĪ-ġati- ‘be filled with wrath against s-one, envy s-one for s-thing, (be)grudge s-body s-thing’ (B 174), Bur ġaṭ ‘enmity, wrath, malice, hatred’, ġaṭguīn ‘bad, spiteful, hateful’ (B 150).

— IE *gʷer-, *gʷor- (IEW 477), *gʷerh₃- (Wat 34) ‘mountain’ (Alb ġur ‘stone’): Bur Ys ġoró, Hz Ng ġuró ‘stones’ (B 181).

—IE *gʷer(h₃)- ‘swallow, eat up, drink’ > (IEW 474-476) : Hz Ng ġirīt : t- ‘swallow up, devour’ (B 176).

—IE *gʷet-us ‘stomach, intestine; womb’ (in derivatives more generally ‘innards, entrails’) (IEW 481) : Bur Ng ġit ‘anus, vulva; entrails’ and also ġitiīti ‘the part under the armpit; the groove between the thigh and the stomach’, Ng ‘the underside of the knees; the flat soft part under the hip-bone’ (B 176-177).

—IE *gʷén-i- ‘woman’ (> Eng queen) (Wat 34) : Bur ġeniš ‘queen, Mir’s wife’ (B 175).

IE *gʰ > Bur ġ

—IE *gʰen- ‘to strike, smite, kill’ (M-A 548): Bur -gán- ‘become wounded’, du-gán-, dĪ-gan- ‘be worn out, exhausted; be finished, come to an end’ (B 168-169), 1ⁿ-sqan-, sqai- ‘kill, slay, murder’, dĪ-sqan- ‘use up, get worn out’ (B 169). And further Bur gināni ‘harvest festival; small sheaf of barley’ (B 153) and Bur Hopar gāni, Hz Ng gāni ‘axe’ and gantī (≪ IE *gʰntī-s ‘Schlagen’) ‘europäische Spitzhakke’ (B 146).

—IE *gʰer- ‘to heat, warm’, zero-grade *gʰhr- (Wat 34) :
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Bur garú ‘spring’, Hz Ng garúmo, garúkimo ‘spring-’, also Ng, Ys garúm, Hz garúrum ‘hot, warm; friendly’ (as a noun ‘heat’) (B 148-149) and Bur garí ‘lamp, light; pupil of eye’ (B 147-148).

—IE *gʰhei-‘, *gʰhi-‘sinew, thread’ (IEW 489): Bur ĝay ‘thread in a warp’ (B 175).


IE k > Bur k (with alternations)


—IE *k(o)nid- ‘nit, louse egg’ (M-A 357) : Bur khándas ‘a tick’ (B 251).

—IE *kóuh-r- ‘hole, opening’ (M-A 96): Bur kur ‘small open tank; iron drain’ (B 247).

—IE *ker-h,k- ‘branch’ (M-A 249) : Bur karkós ‘young sapling (that is being grafted); stem of flower, just sprouted’ (B 242).

—IE *ker-äh,hr- ‘horned’, *ker-, *kerh₂(s) ‘horn’ (M-A2 137) (IEW 574): Bur karéelo ‘ram’ (B 242), krízi and krózo (<*kors-) ‘sheep and goats’ (BYs 157), kíro NH ‘sheep’ (B 245) káru ‘ibex’ (BYs 157).


—IE *keudh- ‘to hide’ : InIEW 952: *(s)keudh-, also *(s)keut-t-; Wat 78: *(s)keu- ‘to cover, conceal’; in M-A 134 and 268 we find two stems: *keudh- ‘hide’ and *(s)keu(h₄)- ‘cover, wrap’ : Bur du-khát- / Bur d-kat- ‘to be stopped, closed, impeded; to get caught, get stuck, entangled’, also dǐ-skat- : dǐ-skhát- ‘stop, prevent, hold up, block’ (B 253), which Berger considers related to du-kháci- ē- ‘enclose (men, animals)’ and -kháci -ē- ‘to shut up, enclose animals’ (with -ty- > ē) and -kači- ‘to keep s-body enclosed’.

IE ĝ > Bur g, ĝ
—IE *ǵehbʰ- ‘branch, stick’ (only in Baltic and Germanic) (e.g. OIcl kafi ‘a cut off stick’, kefli ‘cable; stick; gag’) (IEW 353) : Bur ǵ̆abí pl. gabenc ‘reed, tube, hollow stalk’ (B 141), gabí ten ‘collarbone’ (BYs 144) and ǵ̆abí, pl. gábímuč ‘horse’s bit’ (B 141).

—IE *ǵePʰ- ‘/+ eat, masticate (usu. of animals)’ (Wat 26: *ǵep(h)- or *ǵehbʰ- ‘jaw, mouth’) (IEW 382: *ǵep(h)- : Bur ǵ̆ipGIS t- ‘(calf, suckling) to suck (milk)’ (B 176).

—IE *ǵena-, *ǵenh₃-, *ǵneh₃- ‘know, be(come) acquainted with, perceive’ (> ‘appear’) (M-A 336-337) : Bur ǵan̆- ‘to appear, seem, be visible’ (B 168) Ys also -ǵán- ‘see, view’ and ǵen ‘visible’ (B 20) and the neg. akhén- ‘not to know, not to understand’ (B 196).

—IE *ǵn - in words for ‘beget’, ‘bear’, ‘be born’ (> ‘semen’) (IEW 273) : Bur ǵunó ‘seed; sperm’ (B 180), to which B relates also ǵunón ‘newly obtained land, in which only grass will be sown’, and the verb du-ǵun-, ‘ripen; mature’, also d-squen- ‘cause to mature (of sun, of people); have an idea, make a suggestion, give a stimulus’ (B 179).

—IE *ǵar- ‘shout, call’ (IEW 352) : Bur ǵar̆- ‘speak, scold; to sound’ (B 170).

—IE *ǵerh₃- ‘grow, age, mature; grain’ : (M-A2 190): Bur ǵirgār man̆- and ǵagār ni- ‘(of corn, walnuts) ripen in great quantities’ (B 176), also gur ‘wheat’ (B 161).

—IE *ǵonu- (gen. *ǵenus) ‘knee, also angle’ (M-A2 183, note esp. Alb ǵju (< *ǵlu-no- < *ǵnu-no) ‘knee’ (M-A 336) : Bur Ys - númanus, Hz Ng - dúmanus ‘knee, hock’ (B 125), also - núngus ‘corner’ (B 294). The Bur forms < *gnun-g/kus < *ǵnu-no.

IE ǵh > Bur g, ǵ

—IE *ǵhupios ‘gaping hole’ and (NE) *ǵhéh₃(u)-mr- ‘interior (of mouth)’ (M-A 96): Bur -ǵumór, Ys -ǵomór ‘hole (small, in strap, etc)’, linked by B with Bur -ǵúmar ‘bowels, (the “inside” body); entrails’ (B 179) and ǵamór Ng ‘ear-hole’ (Varma 154).

—IE *ǵhul- ‘be crooked, bent’ : esp. sem. of OSI zūlū ‘evil, malicious’, Gk phalós ‘bad, evil’ (G 692) : Bur ǵul ‘grudge, enmity’ (L 185) (B 177) (in E-K 98: ‘malice’).

—IE *ǵhleh₃dh-ro- ‘shiny’ (> ‘smooth’), considered a NW development of the root *ǵhel- ‘shine’ (e.g. Eng glitter) (M-A 529), and in words denoting color ‘green; greenish
yellow; yellow’ : Bur ǧiltīr-, Ng ǧultīr- ’be extravagant in regard to dress and food, do o-self well, show off, make a display’ (B 176) and Bur giltīr ‘pod, legume’ (B 153).

—IE *dheigh- ‘work clay, smear; build up; to form’ (> ‘dough’) (M-A2 371) : Bur dağóan ‘flour’, dağuí ‘unprocessed, raw (not baked)’, dağú ‘glue’. Bur dağánun ‘thick; large in circumference; robust, stout’, dağánus ‘pig (taboo name)’ (B 110) match ON digr ‘thick’ and OIr digen ‘solid, sturdy’ from the same IE stem (IEW 244-245).

—IE *gheim- ‘winter’ (IEW 426) : Bur ǧamú ‘ice, frost; glacier’ (B 168).

—IE *dʒhuh₂- ‘tongue’ (M-A2 175) (IEW 223) : Bur Ys -yúngus (BYs 187), Hz Ng -úmus ‘tongue’ Hay. “unas” (according to B for *u-úmus) (B 455-6).

—IE *dhereǵh- (*dhreǵh-ná-) ‘to wind, turn; spin’ (IEW 258) : Bur d’-rgin- (L 127: dērginas) ‘to spin’, Ys dórgin-, Hz Ng d-ú-rgin- (L 146: dūrginas) ‘swarm round, hang about, surround; scuffle’ (B 364).

—IE *bheǵh- : *bhóghg- ‘to quarrel, dispute’ (Rix 68: *bʰe že g-) (e.g. MIr bāgach ‘warlike’, Russ bazgala ‘evil-doing’, TochB pakwär ‘wicked’, OIcl bāgr ‘difficult, morose, awkward’) (IEW 115) : Bur bağırk ‘evil, evil-doing, quarrelsome’ (B 30) (Wil 19: 1. ‘bad-tempered; fierce, violent; evil; wicked; naughty, mischievous; disobedient, immoral; unchaste’ 2. ‘naughty person, brat’), bağırkkuş ‘evil, bad, damage’.

—IE *gheń (je/o) ‘desire’ (M-A 158) (Wat 30: *ğher- ‘like, want’, and suffixed zero-grade form *ğhr-jo) (IEW 440) : Bur guru- in -s ‘heart’ + guru- ‘to love, be fond of s-one, like; look after s-one’ (B 161-162) possibly from *ğhr-jo > *guro and by assimilation guru-, (or alternation o : u).

1.4.7. Voicing of voiceless stops in the anlaut (rare)

IE p > Bur b

—IE *pel- ‘to burn’ (e.g. PSI *paliti, *polëti ‘to kindle, to light’, also IE *(s)pel- : OInd sphulingah ‘spark’, Arm p’ail ‘shine, flash’ (IEW 805) : Bur bal- (in Wil 19: balas) ‘1. burn; for a fire to start; 2. for a gun to explode; 3. to light, to shine’ (tran. éspalas).

—IE *ped-, *pod- (nom. root) ‘foot’ (Wat 62) : Bur badá ‘sole of foot; step, pace’ (B 29) (? < OInd padá ‘footstep,
track, pace’) yet a newer form in Ys bayá ‘same’ < (?) Pkt paya- ‘footstep, foot’).
—IE *ped-, *pod- (verbal root) ‘fall, stumble’ (Wat 62): Ys badán -wál- ‘fall down on one’s back, fall over’ (BYs 131). Even in such examples we find the alternation p : b as Bur also has padáy ~t- ‘kick a stone with foot’ (linked by B with ? with badá) (B 310).
—IE *pelh₂- ‘bear young’ (found in West Central IE): Alb pjell ‘give birth to, produce’, pelé ‘mare’, Gk pólos ‘foal’, Arm ul ‘kid, young of deer’, Eng foal (M-A2 192) : Bur bélis (L also bélis), Ys béles ‘ewe (which has had young)’ (B 48), and second component in súmpal etc. ‘young female kid or lamb’ (for details see Čašule 2009: 157-161).
—IE *peh₂(i)- ‘misfortune’, *pih₂- ‘revile’ e.g. OInd pámán- ‘skin disease’, piyati ‘insults’ (M-A 313): Ys bihái, Hz Ng biái ‘illness, disease’ (B 50).

IE p > Bur b : m
—IE *perk- ‘dig out, tear out’ (M-A2 139) : Bur Hz Ng biráq- ‘dig, dig anywhere’, part. nipíraq, Ys braq ét- and biráq ét- ‘to hoe; to belch’ (B 42) and with b > m : Ys di米兰q- ‘become dug out’ (Tiffou, q. in Berger 2008: 3.21).

IE t- > Bur d-
—IE *(s)teg- ‘cover, hide’ (with a possible Sanskrit cognate in sthagayati ‘covers, hides’ found only in one source, the Dhatupatha (T 13737) (with no clear continuants in IA) and considered a loanword into Indic by some etymologists (M-A 134, who state that the spread of this stem is in western and central Indo-European) (IEW 1013-1014) : Bur dağá- –ć- ‘hide, conceal oneself, take refuge’, part. nutağá(n), and –staqa- Ng –stağa- ‘hide, conceal’ (B 109).
—IE *terh₁- ‘rub, turn’ (> ‘thresh’) (Wat 91) : Bur dañ ‘crops that have been cut, threshing floor’ (L 114), dárći giy- Ng ‘thresh’ (B 115).
—IE *(s)táí-no- ‘stone’ (IEW 1010) : Bur dan ‘stone’ (B 113).
—IE *telh₂ or *tlh₂ - ‘lift, raise’ (< ‘carry, bear, uphold’) (M-A2 406): Bur dal - t- ‘drag along, haul’, dildál -yán- ‘carry’ (B 110-111).
—IE *stel-², *stelh₃- ‘spread out flatly, broaden’, (e.g. OChSl steljo ‘spread (out)’ (M-A 247: *(s)telh₂- ‘flat’), *stlā-to- ‘wide’ (1018-1019) : Bur 4tal man- ‘stagnant, slow
flowing’, tátal man- ‘(of oil, water) to spread around’ (B 416), which B (417) correlates with Bur taláso ‘shallow (of water), flat (of a container, bowl)’, tálkiš Ng ‘shallow (well), slow flowing (river)’. And further: Bur dáldalum ‘wide, width’ (B 111) as a reduplicated stem, or from IE *(s)tlá-to- ‘wide’ > *tal-to-lo > *dal-to-lo > dáldalum (cp. with Arm lain ‘wide’, Lat látus (*stlá-to-) ‘broad’).

IE k-, k > Bur g-
—IE *kers- ‘run’ (M-A 491) : Bur gáār- (part. nukáarć(in) Hz Ng ‘run, gallop; run away, run off; come running, run after; rush upon, charge; flow, pour down’ and -skarcá- ‘make gallop, make s.o. flee; make pour down; settle a quarrel’ (B 141).
—IE *korm- ‘broth, mash’ (M-A 84) : Bur garmá ‘a (thin) bread, cooked with vegetables’ (B 148).
—IE *(s)koli- ‘young dog’ (M-A 168) : Bur gaálgo, Ng also gaáljo, L also kaaljo sg and pl, Leitner has gal sg and gáljo pl ‘species of wild black dog’, Ys galjó ‘jackal’ (B 140).

1.4.8. Continuant

IE s > Bur s or s : c : čh
—IE -s- mobile in verbs (Fortson 70) : Bur -s- verbal prefix: e.g. IE *(s)ker- ‘turn, bend’ : Bur d-karan-, d-skaran- ‘surround, gather around, enclose’ (B 242).
—IE *suel- *sul- ‘to wet, moisten; flow; (noun) liquid, fluid, moisture, sap’, *seu-, *seu-,-, *sú- ‘juice’ (IEW 912-913) (Mann 1334-1335) : Bur čhil, Ys: čel ‘water; juice, sap’ (B 76) and d-sil-, d-sili, (NH also d-chil-) ‘make wet, water intensively’, du-súlgu- ‘become fluid, watery’, d-chulgu, d-chilgu- ‘make watery’ (B 384) (B 77).
—IE *së(i)-, *si- ‘to tie, bind’ (Buck 546) : Bur d-či-, Ng d-čhi- ‘to tie, tighten’ (B 76).
—IE *sem-s ~ *sem ~ *sm-h- and esp. zero-grade *sm ‘one, united as one, one together’ (Wat 75) : Bur -chánanum (L 47 -samanum) (B 73) Hz Ng ‘first-born (son, daughter, young animal)’ (in Ys -c-).
—IE *sor-gh- or *sr-gh- ‘to wound, tear’ < IE *ser-, *sor-, *sr- ‘split, rip apart, tear’: (Mann 1249) : Bur -sárk- ‘strike one thing on another, bring down (sword, axe, stroke) on, smite with’, čarák isárk- ‘(of animals) to hit out with hind legs’ (B 375-376) and Bur čar -t- ‘to tear, to tear off, split,
IE ks > Bur š
—IE *kes- ‘to comb, scratch, itch’ (e.g. Gk ksainō ‘scrape, comb [hair or wool], full [cloth]’, or flax, as in OEng heordan [pl] ‘hards [of flax], tow’ (M-A2 233) : Bur še ‘wool’ (B 393), from an ext. zero-grade: ks- + -e(s)- as in Gk ksásma ‘crumpled wool’ (< *ks-en). Also Ys hesk, Hz Ng hisk ‘comb, loom, wrist’ (B 200), from the e-grade. There are a few examples in Bur where h < k (Morgenstierne 1945: 74).
—IE *meug- ‘slimy, slippery’ (*muk-so- > Gk muka ‘mucus’, also Lat mucus ‘mucus’ (Wat 55-56) : Bur -mús ‘snot, nasal mucus’, Ys also ‘nose’ (B 296) (LYs 178).
—IE *ksēro- < *kseh-ro- ‘dry; bright (of weather)’ (e.g. Gk xēros ‘dry’, Lat serēnus ‘serene, bright, clear, dry (of sky or weather)’ (IEW 625) (possibly from IE *ks- < *kseh₁e- ‘burn, singe’) (M-A 170) : Bur širāu ‘(of sky) completely clear, cloudless’ (BYs 178).
—IE *(s)ker-g- < *(s)ker- echoic root ~ ‘sound’ (incl. ‘to clink, tinkle’) (IEW 567-571), esp. Thrac skarkē ‘coin’, correlated with Lett skards ‘iron, tin (plate), sheet metal’ (Neroznak 1978: 54-55) : (with sk > ks > (expressive) š) Bur Ys iskārk, Hz Ng šikārk ‘1. brass, copper; 2. yellow, pale’ (Will 108) (B 407).

2. Correlation of the Burushaski personal pronouns with Indo-European

Correspondences in personal pronouns between two languages are often considered strong evidence for a possible genetic relationship, and they are rarely borrowed as a whole system. In this respect, it is very important that the Burushaski personal pronouns can be correlated directly with Indo-European.

The third person pronouns are the same as the
demonstratives and are given in Section 4. All Burushaski pronominal forms are cited from Berger (1998: 1, 6.5).

The literature on the reconstruction of the Indo-European personal pronouns is vast and there is still disagreement on a number of points, even on the number of separate case forms to be reconstructed. Our sources for Indo-European are Katz (1998), Sihler (1995), Schmidt (1978) and Szemerényi (1996) and the more popular Beekes (1995) and Fortson (2004) as well as the convenient attempt at a unified synthesis in Mallory-Adams (1998), also Meier-Brügger (2003). Note also the clear critical overview in Kapović (2006). It is beyond the scope of this paper to engage in a discussion of the divergent points or present for every pronominal form all variant analyses.

One very significant difference between Indo-European and Burushaski in the personal pronouns that needs to be pointed out at the outset is that while in Indo-European the first and second person pronouns have independent forms for the nominative and non-nomnominative cases, in Burushaski there is only one form (with the exception of the 2 p. sg. pron.) based on the absolutive case from which the other oblique cases are formed. The oblique case forms, as they are common to both Burushaski personal and demonstrative pronouns are discussed in Section 3.

We summarize the close correspondence between the Burushaski personal pronouns and Indo-European in the following table:

<table>
<thead>
<tr>
<th>Indo-European</th>
<th>Burushaski</th>
</tr>
</thead>
<tbody>
<tr>
<td>*(h₁)ēgoh₂</td>
<td>ja (&lt; *ya &lt; *iga)</td>
</tr>
<tr>
<td>*me-</td>
<td>mi (limited. poss.)</td>
</tr>
<tr>
<td>*tuh₂om + ġhō-</td>
<td>un, ūn, um ‘you’, also ūngo ‘you here’</td>
</tr>
<tr>
<td>*ţi̱hō- dem. base</td>
<td>-go- and pron prefix gö- etc.</td>
</tr>
<tr>
<td>thum &lt; *tun+g or *tum+g ‘other, another’</td>
<td></td>
</tr>
</tbody>
</table>
1. person plural

*wei-

*mes-

pron. prefix mí-, mé-, mée- etc.

2. person plural

*úoh₁- or *uos-

ma- also (limited) wa-

pron. prefix má- etc.

PERSONAL REFLEXIVE PRONOUNS

*séue (acc.) (enclitic *se) [only lexical] -s-

*s(u)u-o- and *sū-

su-

*sue-lijon

salén, silajín

*kʷúr-, *kʷor-

-khár, Ng -kháre

*i/e-

-i

Table 3. The system of correspondences between the Indo-European and Burushaski personal pronouns.

2.1. First person singular

Bur Hz Ng je, Ys ja (gen.-erg. : jáa; dat. jáa; abl. jáacum — for the oblique forms see Section 3). Berger (2008: 48, 68) states that the Hz Ng je is secondary, as a result of palatalisation, and that ja is the oldest form (found in the oblique cases in Hz Ng).

It can be correlated with IE *h₁eǵ- (emphatic: *h₁eǵóm) ‘I’ (M-A 454) (Beekes 1995: 207) reconstructs a laryngeal, whereas almost all other analyses point to a nominative *eǵ-oh₂- (Meier-Brügger 2003: 225).

Zarubin (1927:314) considered the Burushaski pronoun imported from Wakhi žo (žu), also Ishkashmi azi, az. However, as first person pronouns are seldom borrowed, it is most likely an independent development.

Note that in Burushaski there is an alternation gːy- in the anlaut, which Møllergjert (1945: 79-81), also Berger (e.g. B 150: Hz Ng gaːs ‘price’ : Ys garč also yarč < *i-garš (i- is the pronominal prefix) trace to an earlier *i-g- > *y-g- > y-. And further: Bur Ys -yǎnji < *gán-či (B 472), -yǎmi : gámi- (B 471) (see Berger 2008: 3.16).

The Burushaski pronoun under this proposal could be explained from IE *(h₁)eǵoh₂- : [ (h₁)e- > i- : eː; -ǵ- > g; oh₂ > a] > *ig-a > *yga > *ya > ja-, perhaps influenced by the languages mentioned above. Refer further to the alternation j : y in Ys jagá, Hz Ng -yagá (B 470), Hz Ng jótis
Correlation of the Burushaski Pronominal System

Ys yótes (B 228), ġajámišo : ġayámišo (B 166), j. - : d-y(a)- ‘to come’ (of Indo-European origin), or Bur yaqhú < Türk jakki (B 472), which illustrates a possible change y > j.

Berger (2008: 4.15) gives also Ys ten-jó < *ten-yo, dan-jó < *dan-yó etc.

The pronominal prefix for 1 p. sg. is a- / á- / áa- (Berger I:6.40) (B 9), which Berger (2008:9.1) believes to derive from ja- with a loss of j-. We suggest that the a- is the result of the loss of the posited intermediate y-, i.e. before the change y- > j-.

Another less likely possibility would be to take into account the alternation g : j — note Bur gaálgo Ng, also gaáljo (L also kaaljo) sg and pl ‘species of wild black dog’ (B 140), also our derivation of Bur hanjil ‘charcoal’ (B 189) from IE *hóengl or *hóengl ‘charcoal’ (M-A 104) (with the common i : u alternation before r/l). This could mean that Bur ja may derive from *ga- : *ga- < *ega- < *ęgohe1, but would leave the aphaeresis of e- unexplained, even though as noted by Kapović (2006: 144), aphaeresis is typologically common in pronouns.

Lorimer, interestingly, notes Bur mi ‘my’, “only occasionally used, with titles of relations”, e.g. mi mama ‘my mother’, mi baba ‘my father’ (L 265, not recorded by Berger), which could be a continuant or relic of the IE 1. p. pronominal clitic *me- (in Bur < *mé-): e.g. Gk moi, Ved me, Hitt -mu, Old Lith -m(i), or rather the Indo-European stem *me- for the oblique cases (IEW 702) (Fortson 2004: 127-128) or more specifically from the derived IE possessive adjective *me-yo- (Wat 51). It could be, nevertheless, of local, Indo-Aryan provenience.

2.2. Second person singular

Bur un, uů, um ‘you (sg.)’ also uůgo (Murtezabad and Ganesh subdialect) ‘you here’ (gen. erg. úne, dat. únar, abl.

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Note in this respect the exact parallel with Slavic, i.e. OChSl azú : PSlav *ja(zú) ‘I’ (in all Slavic languages, except Bulgarian and Old Church Slavonic, with j-: e.g. Croatian, Serbian, Polish, Russian, Ukrainian, Byelorussian, Czech, Slovak, Lusatian, all: ja ‘I’, Mcd jas, Slovene jaz, but Bulgarian az ‘I’ (Kapović 2009: 53). The direct parallel between Slavic ja and Bur ja, as well as in the 1.p.pl, between Slavic my / mi ‘we’ and Burushaski mi ‘we’ is remarkable even if the derivational histories may be somewhat different.
úncum) (B 456).

The status of this pronoun in regard to Indo-European is complex and tenuous, and requires extensive argumentation and further analysis.

It can be correlated with IE *tuh₉om (emphatic form of *tuh₉ ‘you sg.’ (M-A 455) (Schmidt 1978: *tu-H-om) i.e. *tum- + -g by analogy with the 1 p. sg. (prior to the change g > y > j, see above) (as in Hitt *teg, Acc. *tug- or in Gothic and Venetic —Szemerényi 1996:213). Sihler (1995) reconstructs *ti/i (tu/u).

We can assume a change t > d, taking into account the change/alternation t > d- and t- > d- in Burushaski (Čašule 2010: 9 and Berger 2008: 3.11). Note: Bur dağa- ‘hide, conceal o-neself, take refuge’, part. nutağa(n), and -staqa- Ng and -stağa- ‘hide, conceal (living beings); close (the eyes)’ and nutağan ‘concealing o-self; secretly, stealthily’ (B 109) [< IE *(s)teg- ‘cover, hide’ (IEW1013-1014)] and note further e.g. dasmilā : tasmilā (B 116); dram : tram (B 122-123); dutúr : tutúr (B 127); dáltanas : taltánas (B 112); dáalumuc : táalumuc (B 108); datágar : tatágar (B 116) (L 119); dutáñ (NH) : tutáñ (B 449) (L (both) 150, 361); daltás (B 112) : taltás (Biddulph) ‘beautiful’ (B 112); Bur dáo ‘griddle’, Sh taáo (T 5768); Bur del ‘oil’ (Sh téel — T 5958), etc. — with the direction of change sometimes unclear as e.g. in Bur tasmuzá ‘glove’ < Pers dast mūzah (Berger 2008: 23) which reflects a d > t change - see the discussion in Berger (2008: 3.11-3.12).

After the change t- > d-, there would have been a subsequent loss of d- in the anlaut, replaced by a prothetic h- or y-, for which there are other instances as well, e.g. dudeéni vs yudeéni (B 124); Ys dúlas, but also helés, Hz Ng hilés (B 198) ‘boy, lad, youth (unmarried); child, infant’ (cp. with Lett dél ‘son’, Alb djalé ‘boy, young man, son’ < OAlb *delás ‘a boy’), Lat filius ‘son’ (Wat 18), ultimately < IE *dh₉h₁ileh₉- ‘teat, breast’, *dheh₉lus ‘nourishing, suckling’ (a northwestern and late IE word for ‘teat, breast’), also Ys -díl (BYs 142), Hz Ng -ndíl ‘breast, chest’ (B 302); Bur Ys -yúngus ‘tongue’ (BYs 187) < IE *dn̥g̥huh₉- ‘tongue’; under a very tentative interpretation, the first component *wa- in Bur válto ‘four’ (2X2), perhaps from IE *dʒoi- ‘two’ (M-A 400) (for other possibilities see Čašule
2009b or 8.1.4.); also akhîl vs dakhîl, dakhî ‘such as this, like this, of this kind’ (B 14); perhaps del ‘oil, fat’ (B 118): halé ‘fat, oily’ (B 187). The d- may have been retained in the Bur interjection do ‘hey you (to a woman)’ (BYs 141).

It is very significant that Burushaski has the adjective thum (< *tung or *tung, for ng, nk > m (Berger 2008: 4.4) ‘other, another’ (B 442) which is derived from thi ‘other; else; other than, apart from’ (B 439) which could be related to the 2. p. sg. pronoun in the sense ‘you’ = ‘the other of us (two)’. Note the direct correspondence of Bur *thu- : thi with Sihler’s (1995) reconstruction *ti/i (tu/ū). (For the alternation t : th see Čašule (2009c:10) with over 40 such instances.) This explanation would make it unnecessary to invoke IE *tuhom-, as -um is a Burushaski adjectival ending < -ung < IE *enko-, *ŋko- compound adjectival suffix (Wat 36).

The Burushaski pronominal prefix for 2. p. sg. is gu- /gú-, -kú- ; gó-, -kó; goó- /koó- (for the categorisation of the different forms, see B I: 6.34), which suggests strongly that it is the same element as the second component in the basic form of the personal pronoun.

Another possibility for interpretation of the second component could be from the IE pron. particle *ğhó- (G 692) (see the discussion in Section 4.2). The Murtezabad and Ganesh form ungo ‘you here’ (where -go- adds the meaning of ‘here’) is strong evidence for this explanation.

Note separately the tenuous and semantically more difficult possibility of correlation with Grmc *inkwís- ‘you two’: Goth iqkís ‘you two’, OEng git ‘ye two’, inc — incit ‘you two’, ON ykkër ‘you two’ (M-A 455) (Howe 1996).

2.3. First person plural

Bur mi ‘we’ (gen.-erg míi; dat. (reduplicated) mímar,

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9Consider the possibility that Bur -ú- ‘to give’ (B 453) may derive from IE *dō-, *dō-, *du- (IEW 223), in M-A2 (270): IE *deh₁, - to give’. Indicative in this respect is the irregular form of the 1. p. sg. prefix which for this verb is joó- (B I: 25-26) ‘to me + give’ which could reflect the old form, with eh₁ > oo i.e. ó (or we could have an alternation o : u). The d- in this verb could have been lost because of semantic conflict with the Bur prefix d- which denotes action directed towards the speaker (“the pronominal prefix with -ú- refers to the indirect object, the person or thing to whom something is given” (L 57).
abl. mićum) and the pronominal prefix mi– /mí- / mé– / méé- can be correlated directly within Indo-European with Arm mek’, Blt-Sl *mes e.g. OPrus mes, Lith mēs and PSl *my (Fortson 2004:127) for which there is a variety of explanations. (For the IE 1 p. pl. reconstruction, note Szemerényi 1996: 8.4.3: *wei and *ns-mes; GI 254: IE *mes- alongside with *wey-, - also in Schmidt (1978), with *wey considered younger; Beekes (1995: 208), gives for the nominative only *uei). In Katz (1998), 1. p. pl. *ùéy(e)s, *mes. Very pertinent is the discussion by Kapović (2006:154-155) who carefully weighs the evidence for considering the Balto-Slavic and Armenian forms, unique within Indo-European, either as an archaism, which is the dominant view he reluctantly seems to accept, or as an innovation from the older widely attested IE *wey-(e) with m- developing by analogy with the oblique singular stem or under the influence of *m in the 1 p. pl. verbal endings. This is a rather vexed question which cannot be adjudicated here.

In Burushaski we could have had w > b > m as manifested in the following examples: —IE *suekas-, *seks, *kseks and esp. *ueks- (: *uks-) ’six’ (the latter forms are considered to be the original ones, with the s- of ‘seven’ taken over (Beekes 1995: 213): Bur Ys biśindu, Hz Ng misindo hxy, Ys biśinde, Hz Ng misindi z ‘six’ (B 289). —IE *ues- ‘to clothe’ (Wat 101): Bur -wási- ‘put s-thing in or on’, (for y-sg objects biśá-) ‘put on; don (clothing); fix, attach; fit; suspend, hang’ (Will 121) + -k(a): beśke, Hz Ng biške ‘hair (of animals), fur’ and Ys beskáret, etc. ‘wether, ram (over 2 years old, castrated)’ (B 42). Compare with Alb bashkë ‘sheep’s wool’, Rom bască ‘same’, of substratal Paleobalkanic origin (from Thracian) (Brâncuș 1983: 40-1), and with an identical etymology). Berger (B 296) links the Burushaski words further with -múski ‘pubic hair’ (refer to 1.4.6).

This would indicate a derivation from *ùéy(e)s > *beye-s > *bē > mi, méé- or *ùéy(e)s > *baes [ey > a] > *bee-s > *bi > mi, mée- which would then suggest a common Balto-Slavic, Armenian and Burushaski development.

In regard to the loss of the final -s, consider Edel’man’s (1997: 207) careful analysis of the phonological
make up of the case and other grammatical endings — she notes the severe restrictions in the consonantism of the clitics and the affixes.

2.4. Second person plural

Bur ma, Ys also wa (only in T-M 151) which is most probably the older form (gen.-erg. máa; dat. (reduplicated) mámar; abl. mámacum) and the pronominal prefix ma- / má- / máa- can be correlated with IE *uoh- ‘you two’ (*ues-) or more precisely semantically from *uos, the enclitic and oblique form of *juh.s ‘ye’, (Schmidt 1978: nom. *yu-H-s, obl. stem *wos) (Meier-Brügger 2002: nom. *yú-H-s, dat. us-mé-i, accus. *us-mé, *wos) (GI 254 give for the 2. p. nom. pl. only *wós) (e.g. Lat vós ‘ye, you’, PSl *vy ‘ye, you’, OPruss wans ‘you’) (M-A 455).

Bur m- would be under the influence of 1. p. pl (or via an intermediate form *ba-). In Bur wo > wa, i.e. no Burushaski word has wo- in the anlaut. Note also Bur mawé ‘you pl.’ (B 284), which could be a reduplicated form, containing the “nucleus *we-” (Szemerényi 1996:217). For the change w > b : m, see 2.3.

For the discussion of the Indo-European origin of the case endings of the personal and the demonstrative pronouns, see Section 3.

2.5. The personal reflexive pronouns

The Indo-European reflexive pronoun has been reconstructed as *séue (acc.) (enclitic *se) (IEW 882) (Wat 87-88: *s(w)e-) meaning ‘(one)self’ (Fortson 2004: 130) (M-A 455: *séue (acc.) ‘-self’) or *s(u)u-o- ‘one’s own’ (“widespread and old in IE”), e.g. Av hva- ~ hava- ‘one’s own’, OInd svá ‘one’s own’, TochA śu śi ‘one’s own’, Lat sé ‘him-/her-/itself’, (poss. adj suus), OChSl se ‘-self’, OPruss sien ‘-self’, Lett sevi- ‘-self’, OHG sih, Goth sik ‘him-/her-/itself’ etc. and *sú- ‘joint family’10.

While it has not been preserved as a reflexive pronoun in Burushaski it is very productive in various lexical items.

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10 “It has been considered on the basis of the Latin and Vedic text that the original meaning was not ‘one’s own’, but rather ‘all pertaining to the (joint) extended, communal family.’ (M-A 412)
There is for example the first element in Bur sukúin ‘kinsman, blood-relation (descended from a common ancestor); near relation, such as cousin’ (B 384) (-kuin is the denominal suffix for derivation of names of professions (B I:19.13, and su- < IE *s(u)u-o or *sū-).

Consider also the first component s- in Bur ð- skir, pl. ð- skindaro, Ng pl. ð- skiríso ‘father-in-law, wife’s father or wife’s father’s brother or husband’s father’ (B 381) which we derive from IE *suékuros ‘father-in-law’ (M-A2 215, who cite Szemerényi’s suggestion of a deeper etymology from IE *sué- ‘own’ + *koro- ‘head’), also gus ‘woman’, ð-skus ‘mother-in-law’ (B 381).

Furthermore, we have Bur Ys salén also selén ‘husband’s sisters and daughters’ (BYs 175) correlated tentatively by B (378) to silajín ‘female relation’, related women-folk’ (L 314). Consider also -síldir ‘Väter eines Ehepaars auf einander bezogen’ (the second component derived by Berger (2008:3.31) with an inorganic -d- < hir ‘man’ and -sílgus ‘Mütter eines Ehepaars auf einander bezogen’, with gus ‘woman’ as the second component (B 379). There is a direct correspondence of these words with developments from IE reflex. *sue-lo-, *sue-lión ‘Schwäger, die Schwestern zu Frauen haben’, as in ON svilar ‘husbands of two sisters’, Gk aélioi ‘brothers-in-law whose wives are sisters’ (IEW 1046) (M-A 85 “word of north-west and centre of IE world”). The Burushaski vocalism in these derivations suggests origin both from *se- (in salén) or *sé- (< seúe (M-A2 417) (in silajín (< *saliín < *sue-lión) and -síldir and -sílgus).

The Burushaski basic personal reflexive pronoun is Hz Ys -khár, Ng -kháre (B I: 6.6) (B 252) (L 228). We suggest tentatively a correlation with IE *kúr- ‘where’, esp. e.g. Lith kūr ‘where’ and importantly Lith kuris ‘that one, who’ (interrogative and relative), and from *ku-also Alb kush ‘who’, OCS kúto ‘that one, who’, etc. or IE *k*or- ‘where’, e.g. ON hvar ‘where’, hverr ‘who’, etc. (M-A 456). In Burushaski it is used with the pronominal prefixes, e.g. akhár : a- pron. prefix 1. p. sg ‘my’ + -khár ‘self’ = ‘myself’. The semantic link with the Indo-European interrogative/relative pronoun would be in an emphasising sense of “me” + “the one”. The stem-vowel -a- instead of the expected -u-.
can be correlated with the reflexes of the IE syllabic
sonorant r which are ar : ur in Burushaski.

Burushaski also uses the form –ı ‘-self’, which is added
to the absolutive case of the personal pronouns, e.g. jéi
‘myself, etc. also used as an emphasising particle (B 210)
and defined by Willson (67): ‘1. right there; 2. completely;
3. alone, only; separately (as in ‘you alone’); 4. very (as in
‘at that very time’; 5. same, exactly; really; just even’. It
could be correlated with the Bur i– / i- / é- / ée-
pronominal prefix for 3 pers. sg. hmxy (see 4.1.) with a
semantic development as in akhár, i.e. jéi ‘myself’ : ‘me,
the one’. We would have the extension of an originally
demonstrative pronoun to anaphoric and reflexive use.

3. Oblique case forms

The Burushaski personal and demonstrative pronouns
have the same case endings as the nouns. These are added
to the absolutive case form, and are the same for the
singular and plural forms of the demonstrative pronouns,
in what is a major typological difference in regard to Indo-
European.

We list in an abbreviated form these endings used
both in the singular and the plural, with their possible
Indo-European derivation:

Bur gen. and erg. (except for hf sg) -e (B I:63) < IE
gen. sg. -(o)s, also -es (Beekes 1995: 173). E.g. 2. p. sg ún
(abs. case) : úne (gen.-erg. case).

Bur Ys dat. -a (T-P 23), in Hz -a-r, Ng -a-r(e) (B I:63) <
IE dat. sg. -(e)i (Beekes 173). The Ys forms do not have the
-r ending (for further details refer to 8.1.1). E.g. 3. p. h pl.
abs. u ‘they’ dat. úa(r) ‘to them’ etc.

Bur abl. -um, -m / -mo (the latter used to form
possessive adjectives) (B I:63) [(note the parallel with
TochB abl. mem (Winter 1998:160)] or rather from the IE
instr. *-mi, as in Sl kamenimi ‘stone’ (inst. sg.). Note also
the Arm inst. sg. ending -amb (Beekes 1995: 114-115). For
example, from khólle ‘here’ : khólum ‘from here’ (B I 69).

Bur abl. postp. -cum also -cimo ‘from’ (B 70) can be
compared with PSI *sunn ‘with; of, from’ (IEW 904), i.e.
ultimately from IE *sem-s ~ *sem ~ *sm-ih-s ‘united as one,
one together’ (for a detailed discussion see 8.1.4. and
Čašule 2009a), from which we have Bur -chámanum (L 47 -samarnum) (B 73) Hz Ng ‘first-born (son, daughter, young animal)’. The Bur form is from a zero-grade form *sm- and in Bur μ > -um, -am. (For the čh : s alternation, see Čašule 2003b: 28-29) (see 8.1.1.) E.g. inčum = ‘from him’: in ‘he’ + -cum ‘from’.

Bur instr. adess. -ate ‘on, with’ (composite ending: -ate (B I:63) (T-P 23). Compare with Hittite where the ablative in -ti took over the functions of the instrumental (Fortson 2004: 163) < IE abl. -ed or -et / -od. In Watkins (1998:66) the ablative thematic nominal ending is given as -öt < -o-h₂at (e.g. OLat gnaivōd). E.g. Bur eséete = ‘with it’: ese ‘it’ + -ate ‘with’.


4. Correlation of the Burushaski demonstrative system with Indo-European

The Burushaski system of demonstratives can be correlated with, and derived from, the Indo-European demonstrative system.

As indicated before, Burushaski nouns are traditionally grouped in four classes (for a general discussion of the underlying semantics of the different classes, see Benveniste (1948-1949):

- h-class ‘human beings’, subdivided in m (masc.) and f (fem.).
- x-class ‘non-human animate beings and individually conceived objects’.
- y-class ‘amorphous substances and abstract ideas’.

A fourth category, labelled z-form is used for counting.

It is indicative that in the demonstratives, the Burushaski human (masc. and fem.) class corresponds with the IE fem. and masc. gender pronouns, and the x- and y-classes correspond with the Indo-European neutral gender forms.

All three classes have separate forms of the demonstrative pronouns. The proximate demonstratives are derived by preposing the morpheme kho- (in some dialects alternating with gu-) or kh(i)- to the forms of the distal demonstratives.

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The demonstrative pronouns are also used as 3. p. pronouns. An important characteristic is that in at least two classes, the plural demonstrative pronouns are of suppletive nature, i.e. from a different pronominal stem to the singular.

Berger segments the core deictic elements of the Burushaski demonstrative pronouns in the following table:

<table>
<thead>
<tr>
<th></th>
<th>h</th>
<th>x</th>
<th>y</th>
</tr>
</thead>
<tbody>
<tr>
<td>sg.</td>
<td>n</td>
<td>s</td>
<td>t</td>
</tr>
<tr>
<td>pl.</td>
<td>u</td>
<td>c</td>
<td>k</td>
</tr>
</tbody>
</table>

Table 4. Core deictic Burushaski elements (Berger 2008:71).

In the next table we summarize the correspondences between the Indo-European and Burushaski demonstrative pronouns:

**DEMONSTRATIVE PRONOUNS**

<table>
<thead>
<tr>
<th>Indo-European</th>
<th>Burushaski</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Distal</strong></td>
<td></td>
</tr>
<tr>
<td>*i- + *eno- or *i- + *ne-</td>
<td>iné, in, Ys in, ne ‘that one; he, she, it’ (h)</td>
</tr>
<tr>
<td>*is-(e) ‘it’</td>
<td>isé, es, Ys se, os ‘that one, it’ (x)</td>
</tr>
<tr>
<td>*id- or *it-(e) ‘it’</td>
<td>ité, et, Ys te, ot y sg ‘that one, it’ (y)</td>
</tr>
<tr>
<td><strong>Plural</strong></td>
<td></td>
</tr>
<tr>
<td>*au-, *u-, *ue- ‘that, other’</td>
<td>ué, u ‘they, those, those people, the’ (h)</td>
</tr>
<tr>
<td>*is-(e) ‘it’ or *it-se</td>
<td>icé, è, Ys cé, oč ‘those’ (x)</td>
</tr>
<tr>
<td>*(i)-ge assev. emph. part.</td>
<td>iké, ek, Ys ke, ok (y) ‘those’</td>
</tr>
<tr>
<td><strong>Proximate</strong></td>
<td></td>
</tr>
<tr>
<td>*ko-, *ki- ‘this one’</td>
<td>kho- or kh(i)- ‘this one’</td>
</tr>
</tbody>
</table>

Table 5. The correlation of the Indo-European and Burushaski demonstrative pronouns
4.1. Distal demonstratives

We discuss first the basic distal demonstratives together with their derivation from Indo-European:

[1] h-class, sg.: Hz Ng iné [B (ibid) segments it as i-n-é] in, Ys in, ne [B segments it as n-e] ‘that one; he, she, it’ (B 213).

We can derive Bur iné, in < IE *i- dem. and pers. pron. + IE *eno- (probably an extension of a stem < *e-) or *ono-, e.g. Hitt éni ‘that one’, OCS oné ‘that; he’ (Fortson 2004: 130), also Sl ino- ‘other’, Lith anás ‘that’, perhaps also in Gk κένος ‘that’ (< *κε-eno), and Gk Thess τό-ne ‘this here’, Skt anyá-h ‘other’, Arm ter-n ‘the gentleman there’ (Brugmann 1904:82-115: IE *ne ‘distal deictic particle’), Arm no- ‘yon’ and further OEng geon ‘that’ < Grmc *jaino-, *jeno- (Wat 35). The particle appears in various IE demonstrative pronouns as the second element of a compound, of pronominal origin and originally expressed ‘nearness to a third person’. In Burushaski we would have: *i- + *(e)ne : *i- + *(e)no.

In regard to the IE demonstrative *e/i- (Watkins 1998: 66) note the direct correspondence with Bur i- / i- / é- / ée- pronominal prefix for 3 pers. sg. hmx.y.

For the Burushaski ending -é in the entire demonstrative series: iné, ité, isé etc., and in the adverbs, there are several possibilities — it may be derived from the IE adverbial and adnominal particle *ě or *ě : *ő or *ő ý; (IEW 280) (Wat 22) which “fused” with the gen.erg. ending -e. The use of forms with and without -é may be a sign that it is secondary in the demonstrative pronominal system. Note the tentative parallel with Lat iste/ille, with a final -e in the nom. masc. sg forms, whose “origin remains obscure, although it may derive from the bare stem with -e-grade” (Vineis 1998: 294) and need not go back to an older -e.

The Ys forms se, os; te, ot; ke, ok and ée, oć with the alternation e : o may be further confirmation of this

11 Note that Armenian makes use of the same core deictic markers as Burushaski in the demonstrative stems (except for Bur -s-): "Arm so (< *k yo-) ‘this’, do- ‘that’ (< *to-) and no- ‘yon’ (< *no-)" (Arjello 1998: 216).
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[1a] h-class, pl. The plural stem is suppletive. The h pl úé, u, Ys u, we ‘they, those, those people, the’ (B 213) (L 51) can be correlated directly with the IE demonstrative *au-, *u-, *ue- ‘that, other’ (IEW 73-75) or rather the IE particle u or ú for which the basic meaning of an emphasizing particle has been assumed (e.g. Gk pán-u ‘altogether, very’, Lat u-bi ‘there’, Av ava- ‘that one’, Skt asaú ‘that’ (“the basic meaning it conveyed was you-deixis” Lehmann 2002: 91, 94). Note in Burushaski also the pronominal prefix for 3. p. hx pl: u- / ú- / ó- / óo- (B 213).

[2] x-class sg. Hz Ng ísé, es, Ys se, os ‘that one, it’ (B 215). We derive ísé [Berger segments it as i-s-é], es from IE *is ‘he, it’ (GI 253) (IEW 281-283: e-, ei-, i-) (Wat 35-36: *i-) e.g. Lat is ‘he’, Goth is ‘he’, Lith ji, ji ‘he, she’, Gk (Cypriot) in ‘him, her’, HierLuw is ‘this’, etc. (widespread in IE) (M-A 458).

Berger (2008: 9.8) suggests that the x-class sg. distal demonstrative es is also used postpositively, i.e. is the same as the nominal suffix Ys -es, Hz Ng -is / -as (e.g. jót ‘small’ > jótis ‘small child’, Ys hálmunes : hálmun ‘rib’ etc. We have correlated the Burushaski suffix with the IE Nom. sg. ending -is, -us. Berger’s proposition is semantically and derivationally somewhat difficult and needs to be investigated further, especially as there appears to be no trace in the suffix -es of a demonstrative or definite meaning. It is striking, however, that a similar derivational process was suggested by Brugmann and other earlier linguists for PIE (q. in Lehmann 2002: 168), where “the -s in the nominative singular (…) was associated with the deictic particle *so ‘this’”.

[2a] The x-class pl. is Hz Ng ícë, éc, Ys éc, óc ‘those’. We concur with Berger (2008: 71) that in this class the sg. and pl. demonstratives derive from one original form. The plural is most likely a morphophonological variation of the singular form, considering the éc : s alternation in Bur — very indicative in this respect is the identical Ys sg and pl form of the proximate pronoun khos (see 4.2).

Another perhaps questionable explanation could be that the plural is a redetermination between the related *it- and *is- forms, i.e. ícë < *it-se, esp. considering the semantics of the nouns of the x-class, i.e. ‘non-human
animate beings and individually conceived objects’. In that respect, note the extension/redetermination in e.g. Oscan *is-id-um (< *is-id-um) (Silvestri 1998: 334).

[3] y-class, sg. Bur ité [Berger segments it as i-t-é], et, Ys te, ot y sg ‘that one, it’ (B 217). We derive ité, et ‘it’, very precisely semantically from IE *it ‘it’ (GI 253) or *h₁id- (M-A 458), e.g. Lat id ‘it’, OEng it ‘it’, Goth is/ita ‘he, it’, OInd idám ‘it, this’.

[3a] y-class, pl. iké, ek, Ys ke, ok ‘those, the; those ones, they’ (L 42) (B 217). The y pl involves a change from a sg. it- demonstrative base to a pl. ik- dem. base. The latter can be correlated with the IE asseverative and emphatic particle, used postpositively, *ge as in Gk ge ‘indeed’ or in the affix in Goth mik ‘me’ (Lehmann 93) or the enclitic particle -k (as in Oscan determiner/anaphoric pronoun nom. sg. iz-i-k and gen. sg. eiseis vs. gen. pl. eisun-k (Silvestri 1998:334-335). Since y class nouns refer to ‘amorphous substances and abstract ideas’ the notion that their plural could be indicated by an emphasising (or indefinite) particle is semantically sound.

Following this same line of reasoning, it could on the other hand be correlated with Bur ke ‘also, too, and; it also seems to serve as an emphasising particle’ (…) “ke frequently follows immediately after indefinite pronouns and indefinite adverbs of time and place” (L 231-232), which has been derived from IE *kʷe ‘and’ (IEW 519, e.g. Phrg ke ‘and, also, but’, Gk te, Lat que (see Čašule 1998:26). Alternately, and less likely, the plural ending could be correlated with the IE indefinite/interrogative base *kʷo-, *kʷi- (Wat 46) in the sense of ‘some quantity; much’. Note in this respect the Albanian particle aq ‘so much’ which Demiraj (1997:80) derives < a- + q (< IE *kʷoi-).

4.2. Proximate demonstrative pronouns
The Burushaski proximate demonstrative pronouns are formed by prefixing kho-, (dialectally also gu-) or kh(i)- to the distal demonstrative pronouns:

[4] Bur kh-i-né, kh-i-n h sg ‘this one; he, she’ (h pl khué and khu ‘these’) vs iné, in ‘that one; he, she, it’ (h pl ué, u, Ys u, we) (B I:6.7).

[5] Ng kho-sé, Hz Ys gusé, Hz Ng Ys khos x sg ‘this
one’ (x pl Ng khoćé, Hz Ng khoć (Ys khos), Hz Ng Ys gućé ‘these’) vs isé, es x sg ‘that one, it’ (x pl ićé, ec).

[6] Ng kho-té, Hz Ys guté, Hz Ng Ys kho-t y sg ‘this one’ (y pl Hz Ng khok, Ng khoké, Hz Ys guké ‘these’). vs Bur ité, et y sg ‘that one, it’ (y pl iké, ek, Ys ke, ok).

The proximate stem can be correlated directly with the Indo-European demonstrative pronoun *ko- ‘this one’ with variant form *kî- (Wat 43): OIr cé ‘here, on this side’, OEng he ‘he’, Eng he, OHG hiu-tagu ‘on this day, today’, OCSI sî ‘this (one)’, Lith šis ‘this’, Lat cis ‘on this side of’, Hitt ki ‘this’, kinun ‘now’ (< *ki-nú-n), Alb sot ‘today’ (in M-A 458: *kis-) (Fortson 2004: 130).

Most interesting is the identical (structural only?) development as in Albanian, where the prefix kë- (considered from a different origin) is added to the demonstratives that derive from IE *so, sà, tod to indicate ‘close to’ and the prefix a- is added to indicate ‘far away from’ : e.g. a-i / a-y, a-ta ‘that, those’ vs k-y, kë-ta etc. ‘this, these’ etc (Demiraj 1998: 493). This is coherent with other correspondences between Albanian and Burushaski, as e.g. in shepherd terminology (Čašule 2009a).

The alternation kh : g- in this set of pronouns can be purely phonetic (explained as such by Berger (2008:70) (and with a reduction o > u in unstressed position), considering various examples of k(h)- > g- in Bur: e.g. kapál : gapál ‘head’ (Sh kapáalo — T 2744) (B 146); katál : gatál ‘on foot’ (Sh gatál) (B 150); Bur garmá ‘a (thin) bread cooked with vegetables’ (B 148) < IE *korm- ‘broth, mash’; Bur gáar (part. nukáar (in) Hz Ng ‘run; run away, run off; rush, upon, charge; flow, pour down’ (B 141) < IE *kers- ‘to run’ : Lat curró (<*kra-se/o) ‘run’, cursus ‘road, run, voyage’ etc. (M-A 491); etc. (for further examples see Berger 2008: 3.11 and Čašule 2003b: 41).

On the other hand there could be historical reasons for the g- : k- alternation in Hz Ys x,y proximate demonstrative pronouns, i.e. they could be correlatable to IE *gho- [or *gho-] e.g. Lat hic, haec, hoc ‘this’, in Wat 31: “Base of demonstrative pronouns and deictic pronouns. Suffixed form IE *ghi-ke, neuter *ghod-ke, with i alternating with o as in other pronouns (-ke, ‘here’ deictic particle and *ko- ‘stem of dem. pronoun meaning ‘this’ with variant form *kî-‘(Wat 43). There is a high probability...
that two semantically identical demonstrative pronouns, differing only in having \(k\)- or its voiced pair \(g\)- in the anlaut, could have merged.

5. Burushaski demonstrative adverbs

<table>
<thead>
<tr>
<th>Indo-European</th>
<th>Burushaski</th>
</tr>
</thead>
<tbody>
<tr>
<td>*t(\theta)(r)-, *t(\varepsilon)(r) ‘there’ + *-le</td>
<td>*t-ali ‘such, of that sort’</td>
</tr>
<tr>
<td>dist. part.</td>
<td>*t-ali ‘such, of that sort’</td>
</tr>
<tr>
<td>te(\varepsilon)le, to(\varepsilon)le, Ys to, tôle ‘there’</td>
<td>*t-ali ‘such, of that sort’</td>
</tr>
<tr>
<td>-le also in khôle ‘here’, éle ‘there’, itéle ‘there’</td>
<td>*t-ali ‘such, of that sort’</td>
</tr>
<tr>
<td>tôorum (Ys taúrum) ‘that much, so much’</td>
<td>*t-ali ‘such, of that sort’</td>
</tr>
<tr>
<td>*tam- ‘so much’ &lt; *to-</td>
<td>tané ‘equal to, as big as, as much as’</td>
</tr>
<tr>
<td>*e- + *-le</td>
<td>*e- + *-le</td>
</tr>
<tr>
<td>*it- + éle</td>
<td>*it- + éle</td>
</tr>
<tr>
<td>*h(____)ith(____)a- ‘thus’</td>
<td>*h(____)ith(____)a- ‘thus’</td>
</tr>
<tr>
<td>ítí, it ‘that side of; relating to this, of this kind’</td>
<td>ítí, it ‘that side of; relating to this, of this kind’</td>
</tr>
<tr>
<td>*k(____)o- + *-le</td>
<td>khôle ‘here’</td>
</tr>
<tr>
<td>*k(____)i- + *h(____)ith(____)a-</td>
<td>khit ne ‘here’</td>
</tr>
<tr>
<td>*e(____)i- ‘this’</td>
<td>akhíl ‘like this’ ( (&lt; a + khi + l(e),) akhôle</td>
</tr>
<tr>
<td>*d(____)a- + *e(____)i-</td>
<td>*d(____)a- + *e(____)i-</td>
</tr>
<tr>
<td>*d(____)á ‘again, also, and’ and d-verb. prefix</td>
<td>da, dáa ‘again, also, and’ and d-verb. prefix</td>
</tr>
</tbody>
</table>

Table 6. Summary of the correlation of the Burushaski demonstrative adverbs with Indo-European

5.1. Distal demonstrative adverbs

5.1.1. Forms with to- and te-:

1. ‘there’. Bur te\(\varepsilon\)le and to\(\varepsilon\)le, Ys to, tôle ‘there’ (B 424-425), from IE *t\(\varepsilon\)r-, *t\(\varepsilon\)- (< IE demonstrative pronoun *to-) ‘there’ (IEW 1087) (M-A 457) (e.g. ON *par, Goth *par ‘there’, OInd tár-hi ‘at the time, then’) with a likely assimilation \(rl > l\), with the vowel length as a result of the loss/assimilation of \(r\).
The Burushaski particle/suffix -le (found also in Khólé 'here', and élé 'there' and itélé 'there' < it + élé (B 217) can be correlated with the IE particle -le which conveyed distal deixis (Brugmann, apud Lehmann 2004: 91).

In this respect note that from the same IE stem: *h₂ol- 'beyond; from that side' (Wat 2-3) or *h₂ élíois 'other', Bur has bóle, hólo 'out, out of' and hólum 'outside, other; foreign, strange' (B 201-202) (analysed in Čašule 2003b: 50-51) and most likely the stem of the numeral '2': altó y2 (Zarubin) háltó, altán h, altá and altác x (Berger 2008: 10.4, Čašule 2009b).

The Burushaski suffix could be further linked to the Burushaski particle le, léi, léei 'O!' (“an exclamation used in addressing a male person or persons and usually followed by their name or title” (B 265), which parallels the Slavic particle lé (*le) with a variety of meanings - in South Slavic also a particle used with the vocative (e.g. Mcd (stara) le majko — majko le 'O, mother'), which Berneker (apud Trubačev 1974, XIV: 171-173) related to the Indo-European demonstrative pronoun -l(e)- mentioned above (see Čašule 1998: 44) (consider its use with demonstratives in Sln tle vs tlele ‘there’, to - tole ‘that’).

2. ‘that much’. The -r- can be found perhaps in Bur tóorum (Ys taurum) or tóorman, Ng tóorman ‘as much as that; so much as that; that much; to that degree’ (B 429) (Will 113), from which Berger tentatively derives the Bur numeral tóorumo hxy, tóorumi, tôorim-z, ‘ten’.

3. ‘such, of that sort’. Bur Hz Ng taíl (adv.), Ys taíč ‘as it is, so, such, like this, of that kind’, (B 415), and the Bur unproductive adverbial ending -tali (B 417), also tai ‘thus, so, in such manner, as it is, like this’ (B 415) can be derived from IE *t-ali ‘such; of that sort, of that size’ (Wat 92-3). Note here the symmetrical IE interrogative pronoun *kʷeh₂li ‘of what sort, of what size’ (e.g. Lat quális ‘of what sort, of what kind’, Lith kóleis ‘how long’, Gk pélíkos ‘how old, how large’ and especially the reconstructed IE form *kʰoli for OCS kolikú ‘how large’, koli ‘how much’ (M-A 457) (in PSI *ko li, particle in indef. pron. ‘-ever, whoever, whenever’, e.g. Sln kjerkoli ‘where-ever’) from which we derive Bur kúli, Ng kulo, particle used after interrogative pronouns; also ‘always’; after verbs: ‘whenever, if ever’; after adverbs of quantity: ‘a little’, with negation ‘never
again’ (B 247) (L 236).

4. ‘so much, as much’. Bur tanč ‘equal to, as big as, as much as’ (LYs 230) (BYs 180), and as an intensifier in tam-ták ‘same, of the same value’ (B 444), tam-táláso NH ‘completely shallow’ (B 416) or tan-láq ‘completely naked’ (B 263), tan-hurgás ‘very thick’ (B 206) etc. can be derived from IE *tam adverbial form of *to- (e.g. Lat tantus ‘so much’) (Wat 92).

5.1.2. Distal forms with e.
Bur élé or éléi or aléi ‘there’ (B 137). The e- in élé could be a continuant of the IE pronominal stem *e-, *eno- or *ono-, e.g. Hitt ēni ‘that one’ (Fortson 2004: 130).

And further Bur étpa ‘on that side’ (B 138: ét + -pa ‘side’). Note also the e- in the variants of the distal demonstrative forms (see above): ité, et; isé, es; iné, in : in, ne. For the second component -pa, compare with TochB omp ‘there’, Lith -pi ‘at’, Gk epí ‘upon’ (Kortlandt 1983: 320).

5.1.3. Distal forms with i-
We trace Bur ítí, Ys also it ‘that side of, across; relating to this, of this kind’ (B 217-218), from IE *h₁ithₐ- ‘thus’ : MWels yt (verbal particle), Lat item ‘also, likewise’, ita ‘so, thus, in this manner’, Lith (dial.) it ‘as’, OInd ítí ‘thus, in this manner’ (M-A 458) — it could be a very old borrowing from Old Indian, yet the form is not found in the surrounding Indo-Aryan languages. Another possibility would be from IE *h₁idha- ‘here, there’ (Čašule 2003b: 74).

Note further Bur itéle ‘there’ < it + élé (B 217).

5.2. Proximate demonstrative adverbs
5.2.1. Proximate forms with kho-
Just as in the demonstrative pronouns, the Burushaski deictic element kho-, kh(i)- (for its derivation from IE *kó- ‘this one’ with variant form *ki- (Wat 43), see point 4.2) is preposed to the stem of the distal demonstrative adverbs to indicate ‘I-deixis’.

1. ‘here’. Bur khóle and akhóle ‘here’ (Ys also kho and akhó, Ng also khólei [L Ng khulei] (B 256) vs teéle ‘there’ (B 424-425).

Bur khití ‘on this side, here’, khit ne ‘here’ (B 255-
2. ‘this year; today’. khúín Hz Ng ‘this year’ (Ys khúín, akhúín, akhúí ‘today’) (B 257). khúulto ‘today’ (B 258) (Cp. with Hitt kinun ‘now’).

5.2.2. Proximate forms with a- and akh-

1. ‘such as this’. There is a Burushaski deictic morpheme a- in akhíl (also dakhíl, dakhí) ‘such as this, like this, of this kind’ (B 14), akhúru(u)m, akhúruman ‘as much as thus; this much, all this; as many as this; so much so many’ (L 2 analyses the latter as < a + kh +u+r, where the “-r- seems to denote quantity”).

2. ‘now, today’. Ys mútuk : amútuk ‘now, at present, nowadays’ (Hz Ng muú, muúto) (see Berger 2008: 9.6) and Ys khúín : akhúín, akhúí ‘today’ (B 257).

3. ‘here’. akhóle along with khóle ‘here’ (B 256).

The Bur a- can be derived < IE *ei- ‘this’ (with the regular change ei > a), as in Skt ay-ám (masc.), id-ám (neut.); Av im (accus.) ‘him’, Lat is, ea, id ‘this; he, she, it’, Goth is ‘he’ (Fortson 2004: 130).

It is tempting to correlate the Burushaski a- with the Albanian deictic particle a- (derived from IE *h2eu- ‘that’ (IEW 73), yet the semantics is opposite, as the Albanian particle, even if similarly used in the pronominal system in compounds, means ‘distant, afar’. Note also the Albanian particle aq ‘so much’ which Demiraj (1997) derives < a- + q (< IE *kwoi-).

5.2.3. Proximate demonstrative adverbs with d-

We have correlated the proximate demonstrative prefix d- in dakhíl, dakhí with Bur dáa, Ys da ‘1. again; 2. then and then; 3. further, in addition; 4. also, and; 5. else’ “this particle is one of the hardest worked words in the language. It has many shades of meaning which pass into each other, and in any given case the precise meaning is often difficult to determine” (L 103-104) (B 108). A link is possible with the Indo-European demonstrative pronoun *do, variant *to, in particular PSl *da ‘and, in order to, yes’, (< IE *dá-) (probably here also PSl prefix and preposition *do- ‘to, next to’, in verbs it marks completion, action directed towards the speaker, etc. (Skok I:418-419), OPers pron. dim ‘him, her’, OPruß din, dien ‘him, her’ (IEW 181-
Considering the productive use, semantics and the functions of Bur dáa, it could be correlated with the so-called complex “historical” Burushaski verbal prefix d-, which often refers to action directed towards the speaker and sometimes with an emphasising function, ultimately deriving from a deictic meaning (as pointed out by Bashir 1985, 2004) (Čašule 1998: 40).

Note also the very interesting direct correspondence between Lat demque ‘then’ and Bur dóon ke ‘all the same, yet’ (L 146) (B 121-122) which most likely belongs to this set.

6. Interrogative and relative pronouns

Berger states that all Burushaski interrogative/relative pronouns are derived from the stems me-, be- or am- and indicates that these are most probably of identical origin, noting the m : b alternation in Burushaski (B I: 82, f30). For example: Bur men sg. and h pl., also ménik pl. ‘who?, what?; someone, anyone’ (an occasional pl. form of the indef. pron. is méniko). men ke is used as an indefinite relative pronoun, also in the meaning of ‘many’ (B 286) or Hz Ng be ‘what?, how?; some, any’, Ys bo (B 46) (note the dialectal e: o variation). Also ámin hmf, ámis x, ámit ‘which, who’, interrogative, relative and indefinite pronoun (Ys with -e- in the inlaut: e.g. ámen, ámes etc — note the dialectal variation -e- : -i-). For the alternation between forms without and with initial a- (of demonstrative origin), note above Ys khúin, akhúin, akhúiª today, akhóle along with khóle ‘here’, Ys mútuk : amútuk ‘now, at present, nowadays’.

We can correlate them with the Indo-European interrogative/relative pronoun *me-, mo- : e.g. TochA mäkte ‘how’, mänt ‘how’, mäksu ‘who’ (interrogative, relative), Hitt män ‘whether, when’, masi ‘how much, how many’, OIr mā ‘when’ (Puhvel 39-43), which M-A (457) consider “a very likely candidate for PIE status” (B-K 524: *mi-, *me-).

7. Discussion and conclusions

The analysis of the Burushaski personal pronouns and the system of demonstratives shows essentially a close correlation with Indo-European.
The historical derivation of the absolutive/nominative Burushaski personal pronouns from Indo-European is mostly straightforward, except for the 2. p. sg. pronoun where there are various interpretations.

The most significant difference between the two systems is in the oblique case forms for the 1. and 2. p. pers. pronouns. The Burushaski case endings, fully derivable from Indo-European, are simply added to the absolutive case form of the personal and the demonstrative pronouns, typologically more like agglutinative particles, whereas in Indo-European the personal pronouns have independent shapes for the nominative and oblique cases.

A pertinent difference is also the use of go- (and related forms) as a pronominal prefix for the 2. p. sg. and the structure of the pronominal prefixes in general.

A specific characteristic of the Burushaski personal pronouns within Indo-European is the use of a form for 1. p. pl. in mi, me- etc. paralleling Baltic, Slavic and Armenian, possibly involving a w > (b) > m change both in the 1. and 2. p. pl.

While the entire Burushaski demonstrative system (pronouns and adverbs) corresponds with Indo-European, an important specific characteristic of Burushaski is that for two classes, it uses suppletive forms in the plural demonstratives.

As a category, the Burushaski human (masc. and fem.) class corresponds with the IE masc. and fem. gender pronouns, and the x- and y- classes correspond with the Indo-European neutral gender forms.

A significant differential trait are the Burushaski forms for the y-class plural for which we find no direct parallel in Indo-European. They can be explained as compound forms, where the plural endings carry the meaning of ‘a lot of’ which can be expected as the y-class refers essentially to ‘amorphous substances and abstract ideas’, concepts that do not have a plural in many languages but whose “plurality” can be expressed with some type of quantifier.

Most interesting is Berger’s (2008: 9.8) analysis of the postpositive use of the x-class sg. distal demonstrative es i.e. the suggestion that it is the same as the nominal suffix Ys -es, Hz Ng -is, which we have correlated with the IE Nom.
sg. ending -is, -us. It is pertinent, however, that a similar derivational process was suggested by Brugmann and other earlier linguists for PIE (or rather Pre-Indo-European?) (q. in Lehmann 2002: 168), where “the -(s) in the nominative singular (...) was associated with the deictic particle *so ‘this’”.

Within Indo-European very interesting is the Burushaski very productive use of the Indo-European distal particle -le which manifests the whole semantic range of this particle as in Slavic and South Slavic (for a detailed analysis see Čašule (2012a).

In his correlation of the demonstrative system of Balto-Slavic, Armenian and Tocharian, Kortlandt (1983: 321-322) proposes a reconstruction where “we start from a demonstrative pronoun so, to, an anaphoric pronoun e/i- and three deictic particles k’, au, an” from which the respective demonstrative systems can be derived. Consider (slightly simplified and schematized) the Burushaski repertoire which corresponds very closely with the system reconstructed by Kortlandt:

\[
\begin{align*}
\text{e/i-} & \\
\text{e/i + se (<so-e ?) = ise e/i + te (<to-e ?) = ite e/i + ne (<no-e ?) = ine} \\
\text{ki, ko-} & \\
\text{au (pl.)} & \\
\text{ei -} & \\
\text{to, da / daa (<dā)} &
\end{align*}
\]

It is very indicative that this shared system matches the correlation of Burushaski with Baltic, Slavic and Armenian in the pronominal form for the 1. person plural (2.3.), and with the Slavic instrumental ending.

Perhaps the most striking trait Burushaski shares within Indo-European is the use of kho-, khi- which is prefixed to the distal forms to derive the proximate demonstratives, which parallels the unique Albanian development where the Albanian prefix ke ý is preposed in the same way before the distal pronouns.

It can be said that, in spite of the important typological differences, which may be a result of language contact, Burushaski continues the Indo-European personal and demonstrative pronominal system in many respects more consistently and extensively than some of the other
branches of Indo-European.

Another important Burushaski-Albanian and Slavic commonality can be found also in the numeral system. Morphologically, the endings of the Burushaski numbers 2, 4, 5, (most probably also 6) and 9 can be traced to the IE ordinal numbers with -to, in Bur also -ti (in the forms used for counting) (the latter perhaps from the IE abstracts in -ti), generally the same as in Albanian and Slavic (Čašule 2009b).

These specific grammatical correspondences correlate with a number of lexical isoglosses with Slavic and esp. with the Albanian and Romanian ancient Balkan substratal lexis (for which, see e.g. Brâncuș (1983), Poghirc (1967), Russu (1967) (1970) and Burushaski. In Čašule (2009b), out of the 31 Burushaski autochthonous shepherd terms of (non-Indo-Iranian) Indo-European origin (and with no semantic latitude), 10 correspond closely with the Albanian and Romanian substratal pastoral vocabulary.

In the anatomical parts vocabulary, Burushaski consistently correlates most closely with North-Western Indo-European developments (Čašule 2003a). In the vocabulary involving reflexes of Indo-European gutturals, there are e.g. 28 stems where Burushaski aligns itself with NWIE (Čašule 2010).

The eminent Indo-Europeanist Eric Hamp, has examined all of Čašule’s Burushaski publications and unpublished materials (to 2009) and has accepted a large number of the autochthonous Indo-European etymologies (Topolińska Zuzanna p.c.). In a University of Chicago 2009 lecture handout of the Indo-European genealogical tree Hamp places Burushaski at the margins in a “sister-relationship” in regard to Indo-European, i.e. suggests an origin of Proto-Indo-European and Burushaski from a common ancestor. We reiterate Hamp’s newest assessment (in Čašule 2011a) : “Burushaski is at bottom Indo-European [italics EH] — more correctly in relation to IE or IH, maybe (needs more proof) IB[uru]” and further conjectures: “I have wondered if Burushaski is a creolized derivative; now I ask (Čašule 2009a) is it a shepherd creole? (as in ancient Britain)”. This statement goes hand in hand with the tentative conclusion that Burushaski might
be “a language that has been transformed typologically at some stage of its development through language contact.” (Čašule 2010: 70). It is well known, not least from the Balkan linguistic area itself, for example, that typological transformations can often be a result of intense language contact and can obscure a fundamentally close genetic relationship.

In the Addendum (8.1.1) we have put forward a coherent analysis, which needs to be elaborated further, which shows that the Burushaski nominal system could have been restructured due to language contact between an inflectional Indo-European language (the ancestor of Burushaski) and an agglutinative language. The possibility that Burushaski ergativity could be a result of language contact as well, requires careful scrutiny and is yet to be investigated.

It is indicative that many Burushaski typological traits have been suggested (even if not agreed upon by all) for the earliest form of Indo-European, i.e. Pre-Indo-European (Lehmann 2002) — its nominative-ergative structure with elements of an active structure, its inflectional-agglutinative type, the SOV order, the precise retention of the laryngeals, etc.

If in our theoretical approach we give sway to the typological differences (and they are more considerable in the nominal system and much less so in the verbal system), then we should contemplate a more distant, sister-relationship.

Based on the analysis of the personal and demonstrative pronouns, we can say that the evidence in Burushaski is strong for a common origin with Indo-European.

From all our available evidence we can also ascertain that Burushaski is definitely not an Indic or Iranian language.

Based on the evidence in this paper, and especially on the correlation of its verbal system and the other numerous grammatical and derivational correspondences with Indo-European, as well as on the very large number of lexical correspondences (over 500) in core and compact semantic fields, we could say that Burushaski is a separate, very archaic branch, derivable from Pre-Indo-European. Its
status would be comparable to the position of the Anatolian languages within what sometimes has been called Indo-Hittite.

This would mean a grouping: Indo-European — Anatolian — Burushaski, all deriving from Pre-Indo-European:

![Genealogical Tree]

Table 7. Burushaski as a branch of Pre-Indo-European (?)

Nevertheless, we have identified many lexical, grammatical and derivational correspondences/isoglosses between Burushaski and North-Western Indo-European. In the lexical correspondences, i.e. in the stratification of its vocabulary, Burushaski shows the greatest number of correlations with the Ancient Balkan languages (especially Phrygian but also Thracian, Ancient Macedonian) and Albanian, on the one hand and with Balto-Slavic and Germanic on the other. More importantly, as it shares a number of common developments and innovations with the NWIE branch within Proto-Indo-European, our preferred interpretation is that Burushaski could be a sub-branch of North-Western Indo-European, and a language that has been transformed typologically at some stage of its development through language contact.

Consider the following genealogical tree of North-Western Indo-European from another Hamp (2009) handout, where we have inserted the possible position for Burushaski with asterisks.
Table 8. North-Western Indo-European according to a 2009 Hamp handout (with our insertion of Burushaski). See also Hamp (1990) q. in Mallory-Adams (2006: 74).

Any Indo-European genetic classification of the Burushaski language would also have to account for the very convincing and close lexical correspondences with the Ancient Balkan languages and ascertain whether it may actually turn out to be a descendant of one of the Ancient Balkan languages (the elusive Balkan substratum?).

Another important task ahead is to trace the origin of the Burushaski non-core non-Indo-European vocabulary which may hold the clue as to which language(s) were historically in contact with an Indo-European language in giving the modern shape of Burushaski.
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Cunn = Cunningham, A. 1854.
ESSJ = Trubačev, O. 1974-
G-I = Gamkrelidze, T.V. and Ivanov, V.V. 1984.
Hay = Hayward, G. W. 1871.
IEW = Pokorny, Julius. 1959.
L = Lorimer, David L.R. 1938.
LI = Lorimer, David L.R. 1935.
Leit = Leitner, G.W. 1889.
LYs = Lorimer, David L.R. 1962.

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ADDENDUM.

8. Summary of other Burushaski grammatical correspondences with Indo-European

The semantic precision, the large number of shared basic lexical items (over 500), as well as the consistent phonological correspondences with Indo-European and the close correlation of the Burushaski and Indo-European pronominal systems, naturally raise the question of the correlations on the derivational and grammatical plane, which as is well known, are crucial in determining genetic affiliation. In this addendum we outline briefly some of the more outstanding non-phonological correspondences, which match our findings at the phonological and lexical level. Much important detail has had to be left out in this selective summary. The extensive and precise correlation between Burushaski and Indo-European in all grammatical categories and parts of speech advances strongly and perhaps even provides the conclusive proof of the Indo-European origin of Burushaski.

8.1. Nominal system

8.1.1. Nouns

The comparative historical nominal morphology of Burushaski and Indo-European has not been investigated in detail. It is a highly complex task and much remains to be done.

We note evidence of the preservation of IE *-o stems, *-i stems, *-u stems, *-eha stems, -men stems and consonantal stems in Burushaski:

*-o stems:
— Bur handó ‘stone’ < IE *h₁ond- / *h₂nd- ‘stone, rock’.
— Bur -phágo ‘stick, staff’ < *pāg- ‘fasten; strengthen; parts to drive in, peg, post’ and phaṅ man- ‘push, press forward’ < IE *pa-n-ṅ-, (Lat pango ‘drive in’).
— Bur hurgó, Ys: horgó ‘ascent, slope up; uphill’ < IE *h₄ órghei ‘mounts’ (‘climb up; rise, become puffed up’).
— Bur karéelo ‘ram’, kíro NH ‘sheep’ (B 245) káru ‘ibex’ (BYs 157), krizí and krózo ‘sheep and goats’ < IE *kors-, *kerauos ‘horned’, *κερ-, *κερb₂(s) ‘horn’.
— Bur Ys doǵóí, Hz duǵuí ‘noon’ > IE *dhogʷh-eyo- ‘burn, warm’ suff. o-grade (caus.) form < IE *dhegʷh- (esp. PGrmc *dagaz ‘day’, Goth dags ‘day’).
— Bur karkós ‘young sapling; stem of flower’ < IE *kér-h₃,k-’branch’.
— Bur duró (L also daro) ‘work, affair’, duróóć -ę-, duróoyas ‘to work’ < IE *derh₂-, *drā-, zero-grade *dh₃ - ‘to work’.
— Bur táro pl. táromuć and tóro, pl. tóromuć ‘cowdung beetle’ < IE *ter⁶- ‘noxious insects’ (e.g. Lat. tarmes (termes) ‘wood worm’ (from an o-stem *t₃rēmos)).
— Bur ġunó ‘seed; sperm’ < IE *ǵn - in words for ‘beget’, ‘bear’, ‘be born’ (> ‘sperm’ : Gk gónos ‘sperm, semen’).
— Bur ġoró, ġuró ‘stones’ < IE *g₃er-, *g⁵or- (g⁵erh₃) ‘mountain’ (Alb gur ‘stone’).
— Bur hamísō ‘a small insect’ < IE *h₁empis ‘gnat, stinging insect’.
— Bur dúrgas ‘ghost of the deceased’ < IE *dthroughos ‘phantom’ (unstressed o > a).
— Bur khándas ‘a tick’ < *k(o)nid- ‘nit, louse egg’ (o > a).

*i stems:
— Bur huıyés, huís (sg and pl) ‘small cattle (sheep and goats)’ < IE *h₂óuís (gen. *h₂óuios) ‘sheep’.
— Bur gabí ‘reed, tube, hollow stalk; horse’s bit’ < IE *ḡebh- ‘branch, stick’ (e.g. OIcl kafi ‘a cut off stick’, kefli ‘cable; stick; gag’).
— Bur kharéti ‘small wicker basket’ (< *kraţi- or *krti-) < IE *kert- ‘plait, twine’ (e.g. Lat crātis (< *kraţi-) ‘wickerwork, hurdle, honeycomb’).
— Bur téśi ‘roof (external aspect’) < IE *(s)tég-es, *tég-es-os ‘roof’ (e.g. Gk tēgos ‘roof’), *(s)tég- ‘to cover’.
— Bur garí ‘lamp, light; pupil of eye’ < IE *g⁶her- ‘to heat, warm’.
— Bur ġéniś ‘queen’ < IE *gʷén-i- ‘woman’ (> Eng queen).
— Hz Ng -úṭ and -úṭis, Bur Ys -hűtes ‘foot, lower leg’ hóti ‘artificial penis’ < IE *h₁óuh₃dhṛ- < *h₃euh₃dh- ‘swell (with
fluid’) (M-A 82), esp. PSl *udû- ‘limb, penis’.

—Bur buûrî ‘crest of hill, peak’, -ûrî and -ûris ‘crest, ridge, mountain peak; prong; fingernail’ < IE *uer- ‘high raised spot or other bodily infirmity’, zero-grade *ur-.

—Bur báli ‘wine container made of clay; wine measure; earthenware pot’ > IE *bhel- ‘pot’, zero grade *bhêl-.

—Bur ġasîl ‘individual stick or sticks’ < *gas-i-lo (cf. -dîl ‘breast’ < *dhi-lo), < Ys ãi -, Hz Ng giy-, ‘throw’ < IE *ğhais-os-, *ğhais-es- ‘a stick, spear’ < IE *ğhi- ‘throw’ (ses > ss > š).

—Bur -yâtîs, (L) -yêtîs, Ys -yâtes ‘head; mountain peak; leader; a big thing’, (T-P 156) -yâtîs < derived by Berger from -yâte ‘on, upon (someone), up, above’, yât ‘up, above, on top; (adj) upper, further, later, again’ (B 475) < IE *hî eti ‘in addition’ (Av aiti ‘over’, OInd âti ‘over, towards’, Phrg eti- ‘moreover, again’ (M-A 215) (in Bur from *i-eti-s).

—Bur basî ‘orchard’ < IE *șeis- ‘sprout, grow’ (also ‘fruit’, e.g. OPrus wêsîn ‘fruit’).

*-u stems:’

—Bur Ys -yûngus, Hz Ng -ûmus ‘tongue’ < IE *dêghuhs-, ‘tongue’.


—Bur bağû ‘double armful’, bağuç ‘small double armful’ < IE *bhağhus ‘(fore)arm’

—Bur dağû ‘glue’, dağanum ‘thick’, dağan ‘flour’, dağû ‘raw (not baked)’ < IE *dheigh- ‘work clay, smear; build up; form’ (> ‘dough’), (e.g. ON digr ‘thick’).

—Bur darû ‘hunting’ < IE *der- ‘run, walk, step’ (also ‘trap, snare’) (Wat 16).

—Bur ġamu ‘ice, frost; glacier’ < IE *ğheim- ‘winter’.

—Bur garû ‘spring’, and gari ‘lamp, light; pupil of eye’ < IE *g”her- ‘to heat, warm’.

—Bur mušk ‘forest, thicket’ and musqû ‘foliage (for sheep)’ < IE *busk ‘bush, thicket’, Gk boskê ‘fodder, pasture’, (Late) Lat buscus ‘forest’.

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12 Considering the u : o alternation and variation in Burushaski, some of these stems could have originally been o-stems.
—Bur -móqṣ (Ng) -móqṣ (Hz) ‘cheek’, -móqiṣ (Ys) ‘face’, -móqot (Ys) ‘cheek’ < IE *smokur- ‘chin, beard’.
—Bur dágánus ‘pig (taboo name)’ < dágán ‘thick’ (ON digr ‘thick’, OlIr digen ‘solid, sturdy’).
—Bur kharúu ‘louse’ < IE *kōris ‘biting insect’.
— Bur batúl ‘a thorny plant’ (< IE *bhe-dho-lo < *bhedh- ‘to prick, dig’.

*-eh₃ stems:
—Bur dála pl. dalámuc, Ys also daláh ‘larger irrigation channel’ (< IE *dh₃h₂o/eh₃) < IE *dhel- ‘curve, hollow’, ON dæla ‘wooden gutter on ship’, OHG tol(a) ‘channel’.
—Bur tharbái ‘pile of stones for fencing or walling off’ < IE *treb- ‘construction of planks, dwelling’.
— Bur thaná ‘success, good reputation’ < IE *tenk-² ‘thrive, flourish’.
— Bur Ys dúlas ‘boy, young lad’ (cp. with Lett dēls ‘son’) (i : u /_l), Bur Ys -díl ‘breast, chest’ < IE *dh₃h₁ileh₃- ‘teat, breast’.
—Bur Ys mátas (< IE *meitech-s-s) ‘beam (medium-sized)’.
— Bur Ys bálkas ‘treasure’ < IE *bhelg- < *bhel- ‘shine’, (e.g. PSl *bolgo, SSI blago ‘treasure’, Av bārag ‘ritual, custom’ and Skt bhārghah ‘light’).
— Bur garmá ‘a (thin) bread, cooked with vegetables’ < IE *korm- ‘broth, mash’.

-men stems:
—Bur Ys asúmun, asúmen, hasúman, Hz Ng asií, hasí ‘star’ < háas ‘glowing embers’ < IE *h₂eh₃-s- ‘burn, glow’ (> ‘star, ember’) and the derivatives, e.g. Hitt hastera ‘star’.
—Bur hoóm ‘sign, secret advice, secret notice’, with the indef. article: hoóman < IE *h₂eh₃- ‘trust in, believe’, esp. Latin ōmen ‘sign’ (in Wat 59, the IE stem is given as *ō, < *(h₂)eh₃ - “colored to *(h₂)oh₃-, contracted to *(h₂)ō”)
—Bur dúuman ‘pile, heap’ (B 127) < IE *dh₃h₃-mo- ‘pile’ (IEW 238) ( *dh₃h₃-mo- or *dh₃h₃-men ?).

Consonantal stems
—Bur dan ‘stone’ < IE *(s)tái-no- ‘stone’.
—Bur balk ‘plank, board’ < IE *bhel-ǵ- or *bhel-k- ‘beam, plank’.
—Bur khéen, Ys khen (Ys L khyen), kên, kyën ‘time, space
of time, period, season, celebration’ < IE *kʰyeh₁-, variant
form < *kʰeih₁- > *kʰyē- ‘rest, be quiet’, in words for ‘time’
in IE: esp. with an -n ext., e.g. ORuss činu ‘time, period’.
—Bur -móos ‘anger, rage’ < IE *mō-s- < *mō- : *mē-će (Wat
51: < *meh₁-) (esp. Goth mōps (d-) ‘courage, anger’).
—Bur Ys -díl, Hz Ng -ndíl ‘breast, chest’ < IE *dhh₁ileh₁-
‘teat, breast’.
— Bur yat ‘wound, annoyance, pestering, argument’ < IE
*ieudh- ‘set in motion, make excited, stir up’ (> ‘incite’).
— Bur hargin ‘dragon which comes into being from a
snake’ (< *hargint) < IE *h₂erg-nt-om ‘silver’ in a word for
‘dragon’, derived from this stem, e.g. Phrygian gloss
argwitas ‘dragon, Lamia’.
— Bur būran ‘seam, hem’ < IE *bherem₁ to stick out; edge, 
hem’ and *bhorm- : *bhrem-.
— Bur darc ‘cut crops, threshing floor’ < IE *terh₁- ‘rub,
turn’ (> ‘thresh’).
—Bur Ys -yúhar, Hz Ng -úyar pl. -úyarišo ‘husband’ < IE
*uíh₁rós ‘man, husband’.
—Bur batúl ‘a thorny plant’ < IE *bhe-dho-lo < *bhedh- ‘to
prick, dig’ (PSl *bodulū ‘thistle, thorn’) .
— Bur ǧīt ‘mud (wet or dry)’ < IE *gʰeidl(h)- ‘mud’.

Berger (BI: 63) distinguishes in Burushaski general
case endings (casus absolutus, genitive, ergative, dative-
allative and general ablative) and a number of ‘specific’,
composite and ‘petrified’ case endings. In the Burushaski
case system we find correspondences with the IE nom.,
gen., dat., and loc. endings, whereas the IE instrumental
was the source for the Bur ablative, and the IE ablative was
the source for Bur instrumental (which is not an
uncommon development):

—IE Nom. sg. ending zero or -is, -us : Bur casus
absolutus, sg. ending zero or -is/-es, -us, -as : Bur meénis
‘female sheep over one year old which has not had young’;
Bur huyēs ‘small cattle (sheep and goats)’ (Ys also: huís); Ys
-hútes, Hz Ng -út and -útis ‘foot, lower leg’ (this example
shows both outcomes); bélis, Ys béles ‘ewe (which has had
young)’; Bur -yātis, (L) -yétis, Ys -yātes ‘head’; Ys
turμukutes ‘long insect’; Ys -yīngus ‘tongue’; Bur -mŏqīș
(Hz), -mŏquș (Ng) ‘cheek’, -mŏqīș (Ys) ‘face’ (< *-irs or *-
urs); barís ‘artery’; -khúkhus ‘short lower rib’ (< IE *(s)ker- ‘twist, bend’ : Lith kr(i)áuklas ‘rib’); Bur Ys -niúnus, Hz Ng -dúmus ‘knee, hock’; hağúć (Ys hağós) ‘pass, mountain-pass’; -ulus, Ys -húles, -húlus ‘brother’; dağánus ‘pig (taboo name for’) < dağánum ‘thick’; karkós ‘young sapling’; khándas ‘a tick’; -wäldas ‘the back (anat.)’ (B 465) (< IE *plet- ‘back, shoulders’); Ys dúlas ‘boy, young lad’, -díl ‘breast, chest’; Ys mátas ‘beam’; Bur dùrgas ‘ghost of the deceased’; úrunas ‘morning star, Venus’; túranas ‘a kind of large black beetle’; Bur hurúginas ‘wave, stream, whirlpool’ etc.


—IE dat. sg. -ei > Bur Ys dat -a (T-P 23), in Hz -a-r, Ng -a-r(e) (B I: 63), with the -r- possibly from the Bur verb -r- ‘send, dispatch away from the speaker’ (B 361) (Will 50), used also in periphrastic verbal constructions. Note e.g. the dative mör (= mu- + -ar) ‘to her, for her’ vs the verbal form mör-as ‘to send her’ (L 268).

—IE instr. -mi (as in Sl kamenîmi ‘stone’ (inst. sg.) and the Arm inst. sg. ending -amb (Beekes 1995: 114-115). > Bur abl. -um, -m / -mo (the latter used to form possessive adjectives) (B I: 63).

—IE abl. -ed/-od > Bur instr. adess. -ate ‘on, with’ (composite ending: -a-te (B I:63) (T-P 23). Compare with Hittite where the ablative in -ti took over the functions of the instrumental (Fortson 2004: 163) < IE abl. -ed or -et / -od. In Watkins (1998: 66) the ablative thematic nominal ending is given as -ôt < -o-hat (e.g. OLat gnaívōd).

—IE loc. sg. -i > Bur loc.(specific ending) -i (B I: 63). The Bur abl. postp. -cum also -cimo ‘from’ (B 70) can be compared with PSl *sūnū ‘with; of, from’, OPruss sen ‘with’, Arm ham- ‘with’ (IEW 904), i.e. ultimately from IE *sem-s ~ *sem ~ *sm-ihₐ- ‘united as one, one together’, from which we have Bur -chémanum (L 47 -sammanum) (B 73) Hz Ng ‘first-born’. The Bur form is from a zero-grade form *sm- and in Bur m- > -um, -am. The Burushaski case ending -će, -ći ‘on, after’ (Sh isí, ichi ‘danach’) (B 70) could well be an apocopated form of the same stem.

The Burushaski case endings are the same for both the singular and plural forms, i.e. are essentially
agglutinative in character. It appears that the IE singular case endings were generalised in Burushaski. The great number of Burushaski noun plural endings could thus contain some of the original plural case forms.

A case in point is the productive Burushaski pl. suffix -nec (with variants -inc, -anc, -yanec, -wanec, -uanec) (B I: 51-53) which can be correlated directly with the IE pl. accus. ending -ns, -ns (the second form would explain the -a- in the Burushaski endings), paralleling the development in Luwian nom. pl where the Anatolian accusative pl. ending *-ns was generalised in the nominative pl. as -nz (Ramat 177-8). Note also the Bur pl. ending -ć, which can be compared with IE nom. pl. ending -es (Szemerényi 160). 13

Another process that needs to be considered is the retention in the plural forms of phonemes and morphemes which have been lost in the singular. For example, this is the case with the Bur h(x) pl. suffix -caro which is added mainly to words denoting relations (B I: 48), a variation of a suffix -taro, e.g. máma ‘mother’, pl. mámacaro (B 277) (< IE *m-h4em-)?, mi pl. -mičaro ‘mother, aunt on mother’s side’ (B 286) (< IE *mēh₄tēr ‘mother’), -yās ‘sister-in-law’, pl. -yāscaro and -yāstaro (B 474), Bur -úy and -ú pl. -úćaro and -ćaro ‘father; father’s brother; in pl. forefathers’ (B 460) < IE *h₂éuh₂-, *h₂euh₂ios ‘father’s father, ancestor on father’s side’ -ingo pl. -ingočaro ‘uncle’ (B 306), -néo pl. -nocaro ‘father’s sister; mother’s brother’s wife’ (perhaps corresponding to IE *h₁ienh₄ter- ‘husband’s brother’s wife’ (M-A2 210) ?), bapó ‘grandfather, father’ pl. bapócaro (also ‘prince’) (B 37) (from baba+pater?). This suffix -taro might be the IE suffix *-ter (considered by Benveniste (1973: 171) the classifier of the lexical class of kinship terms), found in *mēh₄tēr ‘mother’, *ph₄tēr ‘father’, *dhu₄(h₄)tēr ‘daughter’, *bhrēh₄ter ‘brother’, which through re-analysis

13Perhaps the semantics of the noun and its frequency in use with a particular case could have played a role in which case was “petrified” in the plural. Note e.g. (from IE *gēbh- ‘branch, stick’, i-stem) the plural of Bur 1gabi ‘reed, tube, hollow stalk’ [also gabí ten ‘collarbone’ (BYs 144)] which is gabenē (B 141), which continues the IE pl. accusative case (“to play/hold/blow + acc. of ‘reed’”). On the other hand, Bur 2gabi ‘horse’s bit’ has a plural pl. gabiμuč which appears to contain the instrumental case (“to gag with bit”). This very tentative explanation needs yet to be investigated carefully.
was understood as part of a plural formation (-tar-o > -taro : -caro). For an extensive discussion, see Caşule (2012b) (forthcoming).

Furthermore, we have found other cases where a morpheme or phoneme from the singular form has been retained in the plural, but lost in the singular in a shift in morpheme boundaries. For example, consider Bur ha ‘house’ (< *hak by Berger (2008: 25) (pl. hakíčan) or the Nager pl. of jot ‘small, young man’ is jótarko, which can be analysed as jót-ar-kó ‘he (they) who is (are) young’ — compare derivationally with Latin *new-er-kó > noverca ‘stepmother’ (‘she who is new’) (Wat 58); or in Bur -i-, sg. ‘daughter’, pl. Hz Ng -yugušanč, Ys pl. -yugušína ‘daughters’, also ‘brother’s daughters’ (B 210) (L 12, 386), which consists of -yu- and gus ‘woman’ + pl. suffix (the full stem is kept only in the plural form); or Bur ge, L also gye and Cunn gye ‘snow’, Ys ge, gye (B 151), which derives from IE *ghyem- ‘winter, snow’, where these forms could go back to forms with -m, as the Ng pl. ending here is -miń, i.e. the plural form is gyem < a sg. gyem (Caşule 2010a: ex. [125]), also e.g. Bur táro pl. táromuč and tóro, pl. tóromuč ‘cowdung beetle’ : Lat. tarmes (termes) ‘wood worm’ (from an o-stem *te-rmo-s) or Bur -skir, pl. -skindaro, Ng pl. -skirišo ‘father-in-law’ (< IE *suékuros ‘father-in-law’), where the Ng x pl. -skirišo and the x pl. ending -išo in general can be re-analysed as *-is-yo, with -is-being the IE animate nom. pl. ending -es i.e. Bur * -skiriš+yo < *skires+yo with *-yo correlatable with the IE relational adj. suffix -io- ‘of, or belonging to’ (Wat 103).

The numerous Burushaski plural suffixes (Berger I: 57) reveal a very complex system:

\[
\begin{align*}
\text{h-plural: } & -tín; -aro, -taro, -daro, -caro \\
\text{hx-plural: } & -o, -išo, -ko, -iko, Ng. -yáko; -juko; -óno; -ú, -úu; -č, -uč; -nč, -anč, -iňč, -janč, -muč, -umuč, -énc, -ónč. \\
\text{y-plural: } & -ň, -anč, -iňč, -ianč; -miń; -eň, -oň, -oň-o, -čiń, Ng -čanč, -iččn, Ng -ičanč; -mičń, Ng -mičanč
\end{align*}
\]

We will attempt to give a coherent explanation of this array of endings.

h and x plurals. We noted that the pl. forms: -nč, -anč,
-inč, -ianč and also -énč and -ónč, may derive from the IE accus. pl. (non-neuter) -ns. The vowels preceding -nč would possibly be a remnant of the IE stems, e.g. IE *-eh₂ns (old ā stems) > Bur -anč, IE -ns (pure consonantal stems) > Bur -nč, IE i-stems *-ins > Bur -inč, IE o-stems *-ons > Bur -ónc, IE *-ih₂ (accus. neuter of i-stems) + *-ns > Bur -ianč and Bur -énč possibly retaining a trace of the h₁-stems (Beekes 1995: 170-193) (Baldi 1999: 310).

The Bur plural ending -č, -úč could be a remnant of the nom. pl. case forms.

The Bur plural endings -muč, -umúč (with o > u in unstressed position after a labial) could contain the IE ablative/dative pl. suffix *-bh₂os, *-mos, or the instr. pl. -mi. The -u- in -umúč parallels directly the pl. forms of the -u stems, i.e. IE -umos.

The Bur plural suffixes ending in -o : -o, -išo, -ko and -iko could be a remnant of the o-stems. Berger (I 49) indicates that nouns ending in -s, -č or -n + -o > -s, -č and -y, which may point to a former suffix *io, where i- would be a remnant of the old sg. cases, e.g. the IE gen. sg. ending -i of the o-stems.

In the Bur pl. ending -išo we may have a remnant of the loc. pl. of the i-stems (IE *isu), with u : o and under the influence of the other related suffixes or with the -is- from the singular form.

In the cases of -ko and -iko we suggest that the suffix -ko (as in datú ‘autumn’, datúko ‘autumn’), was reinterpreted as a plural suffix, i.e. the original singular derivational suffix was understood as a plural formation (similar to the process in the suffix -taro).

The Bur ending -ú, -úu may be a remnant of the IE u-stems, e.g. the IE nom. neuter *-uh₂.

y-plural. All the Bur y-plural endings end in -n : -n, -ań, -in, -ian (grouped together by Berger I:57), and further -mín; -én, -ön; -ón-o; -čń, Ng -ćań; -ičń, Ng -ićań; -mičń, Ng -micań. Bearing in mind that y-nouns are non-human non-countable nouns referring to amorphous substances and abstract ideas, we suggest that we have here the IE adjectival compound suffix *-enko-, -ńko, e.g. Grmc *ingo, *-ungo, suffix used to form denominal and verbal abstracts, e.g. OEng leornung ‘knowledge’ < leornian ‘to learn’ (Ramat 409). It is conceivable that an IE suffix used to
form abstracts could be used instead of a plural morpheme for abstract nouns: Bur **duró**’work (noun)’ pl. **duró-in**’work’, where the notion/process of ‘working’ would express plurality in regard to ‘work’. This suggestion is further reinforced by the fact that we have derived the Bur adjectival suffix and participial ending **-um** from the same Indo-European derivational suffix.

The **h**-plural (unproductive) ending **-tiın** may be a composite suffix consisting of **-t**- (suffix forming agent nouns) or < **-to + -iın**. Maybe it is historically a variant of **-čín**, Ng **-čan; -ičín**, Ng **-ičan**.

It may be that the suffixes **-miın** and **-mičín** are composite, whereby the first component **-mi** can be traced to the IE instrumental plural **-*mi**.

The underlying supposition is that the IE system was reanalysed and applied to a different subcategorisation of nouns and that through language shift, i.e. one of the languages in contact being agglutinative, the case value of the plural endings was obliterated and the IE singular case endings were generalized and added to the plural ones. For language contact between an inflectional and agglutinative language and the adoption of agglutinative patterns, very indicative is the case of Greek in contact with Turkish in Asia Minor (most recently Janse 2001, and Karatsareas 2011).

### 8.1.2. Adjectives

Nearly all adjectival suffixes in Burushaski can be derived from IE:

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- **IE relational adj. suffix** -**io**, -**iio**- and ‘of or belonging to’ (Wat 103) : Bur suffix -**yo** and -**yo** e.g. **huyóo** ‘wool-bearing animal, sheep’ < **huyés**, Ys also: **huís** (sg and pl) ‘small cattle (sheep and goats)’ and further **máma** ‘endearing term for ‘mother’ < **máma, mámo** ‘mother’, **karóoyo** ‘with curved horns’.

- **IE suffix** -**ko**, secondary suffix, forming adjectives : Ved **sindhu-ka**- ‘from Sindh’, Gk **Libu-kós** ‘Libyan’ (Fortson 121) : Bur suffix -**ko**, also -**kus**, e.g. **datú** ‘autumn’, **datú-ko** adj. ‘autumn-’, **datú-kus** ‘autumn season’, **bái** ‘winter’ (noun) > **bái-kus** ‘winter-’ (adj.) (< IE **-*ko-s**: Lat -**icus**) (B I: 207); Bur **phúk** ‘a small speck of any substance, a
particle’, phúko adj. ‘small, tiny’ (B 334) < IE *pau-kos ‘little, few; small’.
—IE -isko composite suffix related to the previous example, ‘to indicate affiliation or place of origin’ or rather IE *-isko ‘formant of adjectives and noun diminutives’ (Ilić-Svityč 1976 I :204, who indicates that the -i- is probably from the i-stems, a continuant from many old root stems), in Watkins (36) IE *isko, compound adj. suffix, forming relative adjectives, denoting origin in Slavic, found also in Germanic and Thracian (for the latter, see Illyes 1988: 212): OHG diut-isc ‘pertaining to the (common people)’ > Grm Deutsch ‘German’, OChSl rúm-iskú ‘Roman’ (Fortson 121) : Bur suffixes -iski, Ng -áaski, also -ki (B I 249) with same function: Burúsín ‘Burusho’ : Burússkí (B 491), hir ‘man’, hiríski, Ys huríski ‘of men, men’s’, also Bur -sk, NH Bur -sko, Ys -ís ‘young (of animals), young one’, e.g. bus isk ‘kitten’ < bus ‘cat’ with the force of a diminutive.
—IE -en- suffix forming nouns and adjectives (with many variants) (Wat 23): Bur -(e)n: Bur meén ‘old’ (B 285) < IE *meh₁(i)- ‘grow’, Bur gén ‘thief’ < gén- Ys ‘steal’ (B 175) under one interpretation perhaps also -an : Bur dúuman ‘pile, heap’ (B 127) < —IE *dhoh₁-mo- ‘pile’.
—IE adjectival compound suffix -enko-, -enko- > Bur -um (main adj. suffix), derived historically by Berger < -u > e.g. burúm ‘white’, dañán ‘thick’ (B I: 5.1), also used as a participial ending (see 8.2.3.2).
—IE -to also -eto-, -oto-, an adjective forming suffix (marking accomplishment of the notion of the base) : Bur (also Shina) adj. suffixes -to, -to, e.g. bambú ‘ball’ > bambúto ‘thick’, dúrgas ‘ghost’ > durgas-úuto ‘lean’ (B I: 210, 19.24).

8.1.3. Numerals
For the full account of the correlation of the Burushaski numerals with Indo-European, refer to Čašule
Correlation of the Burushaski Pronominal System 145

Number 1.

—IE *h₁oi-no-s [IEW 281-6 (*oi-nos); Wat 59 (*oi-no-)] < *e-/*o- deictic pronoun [IEW 281-6 (*e-, *ei-, *i-)] + particle -no- (Celtic, Italic, Germanic, Baltic, Slavic, Albanian) (M-A 398-9): Bur Ys hen, Hz Ng hin h, han xy, Ys hek, Hz Ng hik ‘one’ (B 199). Berger (B 198) correlates hik, hek with IA (T 2462), i.e. with hekh ‘one’ Kohistāni dialect of Shina (with an ‘emphatic’ h-) (Berger 1992: 245) 14, from OInd éka ‘one’, but considers the forms in -n autochthonous. Thus: *h₁e/i-no- > Bur hen : hin and *h₁ei-no- (or *h₁oi-no) > Bur han. Also the Bur postp. indef. article -an, Ys -en h, -an xy (B 18).

—IE *sem-s ~ *sem ~ *sm-ih a- ‘united as one, one together’ (Luján Martínez 1996, for *sem- : 106-108, 126-137): Bur -chámanum (L -samanum) (B 73) Hz Ng ‘first-born (son, daughter, young animal)’ (in Ys without aspiration, in Sh čamiáako). Berger segments it as ? + manúm. We propose a segmentation -chámn + manúmn The Burushaski form would derive from a zero-grade form *sp- and in Bur µ > -um, -am.

Burushaski also has sum ‘(of animals) female’ (B 384) and sumán ‘(of animals) male’ (B 385) and the first component in sumphalikis ‘young female sheep’ (B 385) which parallels the semantic development from the above IE stem in Slavic, i.e. from PSl *samů ‘alone’ we have Russ, Cz samec, Pl samiec ‘the male animal’, and Russ samka, Pl samica, Cz samice ‘the female animal’ (Buck 139-140).


Number 2.

—IE *h₂elio- ‘second’, e.g. Gaulish allos ‘second’ (Beekes 1995: 216): Bur altó yr Ys (Zarubin) haltó, altán h, altá, altáč x (Berger 2008: 10.4): IE *h₂éljios ‘other’ < IE *h₂ol- ‘beyond; from that side’ (Wat 2-3): Bur hóle, hólo ‘out, out of’ and hólum ‘outside, other, foreign, strange’ (B 201-

14Alternation of h- forms with non-h-forms for ‘one’ is also found in various forms of Panjābī (Bashir p.c).
202). -t- would be < IE suffix -to, used in the forms of the ordinal numbers (in Burushaski also an adjectival suffix as in IE), also found in Bur huntí ‘nine’, wálti ‘four’, Ys biśindu, Hz Ng miśindo ‘six’ (-nd- < -nt-) and chundó, čhundi ‘five’ (for the rather complex and tentative correlation of this last numeral with IE, see Čašule 2008: 171-173).

Number 4.
—Bur wálto hxy, wálti, wál- (in Ys wálte) z ‘four’, also ‘a couple of, a pair of’ (B 463) (L 369, with -ā-). It consists of w- prefixed to the form of number 2. The first component w- < IE *wi- ‘apart, in half’ (hence ‘two’), the first component in *wikūti- ‘twenty’ (Wat 101). Thus: *wi-alto and by assimilation wáltó (the length noted by Lorimer could actually indicate compensatory lengthening).

There is another possible explanation of *w-, from IE *ṃbhī, also *bhī-, *ambhō(u) ‘from both sides, around’ (IEW 34-35). Note that we have segmented the component -ambo also in Bur altámbo etc. ‘eight’ (B 16) and possibly in Bur baskí ‘two’ (limited in use) (B 42). Berger (2008: 79) proposes a protoform for wálto < *u-(w)álto which we would trace < *ubalto, the latter correlatable with OInd ubhāu ‘both’, Av uwa- ‘same’. For the latter two forms Pokorny suggests a conflation with IE u- ‘two’ (IEW 35). A third possibility, if we assume a loss of d- as is the case in a small number of Burushaski words, is to derive it from IE *duoi- ‘two, group of two’ (M-A 400).

Number 6.
—IE *suekš-, *sekš, *ksekš and directly relevant for Burushaski: *uēkš- (: *uks-) ‘six’ (the latter forms, without s-, are considered to be the original ones, with the s- of ‘seven’ taken over (Beekes 1995: 213) : Bur Ys biśindu, Hz Ng miśindo hxy, Ys biśinde, Hz Ng miśindi z ‘six’ (B 289).

Number 8.
—Bur altámbo Ng althámbo hxy, altámbi and altám z ‘eight’ (B 16). Berger indicates that it could be related to altó ‘two’ and for the pattern quotes Finn kahdeksan ‘eight’ : kaksi ‘two’. This implicitly assumes that -ambo is a separate (unexplained) morpheme.

If we accept the very probable correlation of the Bur numeral 8 with the numeral 2 - altó, the second element -ambo can be traced to IE *ambhō(u) ‘both’, and ambhi
‘around, about’ i.e. we would have a structure altó + ambo. This gives a transparent semantic structure of ‘two all around’. It would mean that Burushaski had an innovation in the system which was formed with autochthonous IE material. Note here the further possibility of correlating -ambo to Pers and Khw amboh ‘much, many’ (Bashir p.c.).

Another possibility is that there may have been a conflation of this form with an older Bur form relatable to the basic IE numeral *októ ‘eight’ (dual) (M-A 402) under the influence of the Bur numerals 2 and 4 (i.e. *októ > *aktó > *altó). The structure of the Bur numerals 2, 4 and 8 fits well with the proposition that in the reconstructed IE numeral for 8 we may have duplicated forms for lower numbers (M-A 402).

Number 9.
— Bur huntí, Ys hutí z, huncéó, Ys huçó hxy ‘nine’ (B 205) derives from IE *h₁néu ‘nine’, and more specifically from the ordinal form *h₁néu-(e)tos ‘ninth’ (M-A 403). Beekes (1995: 216) states that the Greek form énatos ‘ninth’ points to a proto-form *h₁nun-to.

8.2. Verbal system
The typological similarity of the Bur verbal system with IE was noted first by Morgenstierne (L I:Xl) who remarked that the Bur verbal system “resembles to some extent the Latin one”. This assessment was reaffirmed by Tiffou and Pesot (T-P 33-4): “The Burushaski [verbal] system seems comparable with the system of ancient Greek: two aspects, one used in three tenses, the other in two tenses, and a third aspect without any particular tense value.”

We can only touch briefly on some of the verbal forms, which have been restructured and are highly simplified in Burushaski.
8.2.1. Verbal endings

Burushaski personal endings (B I 136-137):

- sg. 1. -a  pl. -an
  2. -a  -an
  3. -i  -an
  hf  -o  -an
  x  -i  -ie
  y  -i  -i

There is also a system of forms with an -m suffix (Tiffou-Pesot 1989: 39): 

- sg. 1. -a-m  pl. -a-m-n
  2. -V-m-a (-⁰m-a) -V-m-V-n (-⁰m⁰-n)
  3. -V-m-i (-⁰m-i) -V-m-V-n (-⁰m⁰-n)
  etc.  etc.

The -m suffix is characteristic also of the optative (B I 155).

- sg. 1. amánun  pl. mimánun
  2. gumánun  mamánun
  3. hm  imánun  umánun
  hf  mumánun  umánun
  x  imánun  umánun
  y  —  —

Burushaski also has an optative in -áa (B Ibid), e.g. et-áa (same in all forms), man-áa (same in all forms).

Berger (B I: 163) indicates that the imperative suffix -a is probably a variant of the optative suffix above.

Indo-European endings: The Burushaski verbal endings correspond with the IE middle endings of the present and aorist system (Szemerényi 239). The fact that Burushaski has a biactantial agreement pattern (absolutive and ergative), perhaps explains why precisely the middle endings (since the subject can be an affectee or an actant) would have been retained and their distribution expanded.

IE Primary Middle Endings  IE Secondary Middle Endings
1. -ai/-mai  -ä /-mä
2. -soi  -so
3. -toi  -to
4. -medha (-ä ?)  -medha (-ä ?)
5. -dhwe
6. -ntoi

The IE primary endings were used in the indicative of the present tense, the secondary were used in the indicative of the past tense, in the optative and the imperative, insofar as the latter had no specific endings (Beekes 226).

We propose that Bur generalised the ending of the first person sg. in the singular, with -i in the third person perhaps a remnant of the primary endings. We would have had an intermediate stage:

-ā /-mā / -sa /-ta then generalised as > -ā /-a, -mā / -ma

In this respect Edel’man’s (1997: 207) careful analysis of the phonological make up of the case endings and the other grammatical endings in Burushaski is very pertinent — she notes that the severe restrictions in the consonantism of the clitics and the affixes are of a systemic character, which would explain in this case the loss of the consonants at the morpheme boundary in the verbal endings.

In the plural, the 3 p. pl. would have been generalised for all persons after a simplification of the consonant cluster -nt- : -nto > -n (and/or a conflation with the 3. p. pl active secondary ending -nt) (Szemerényi 234).

For the processes of levelling in these forms, Gothic follows a very similar pattern of simplification in the middle endings (Szemerényi 238):

1. -da  Pl. 1. -nda
2. -za
3. -da

The above reconstruction is supported by the fact that the Burushaski optative endings -m and -āa are the same as the singular personal endings, thus also obtaining in Burushaski a system which functions the same as the secondary endings of the middle voice in IE (i.e. for the past tense, optative and imperative — the present tense in Burushaski is a compound tense).
For the relevance of the Indo-European middle passive for the understanding of the development of the Burushaski verbal system note further the very productive use of Bur verb *man- ‘be, become, turn into; become (absolute) > come into existence, occur, take place; belong to; proceed to, be about to; be necessary to do s-thing or for s-thing to be done’, also used in forming periphrastic verbal constructions (B 278) in compound verbs, in the sense ‘become’, ‘be’ (or sometimes semantically empty) + another stem, e.g. *hop -mán- ‘be puffed up, (of body parts) swell up suddenly’, *lam, lálam man- ‘shine, burn, light up; to beam’ (B 261), *háak man- ‘help s-one in their work’ (B 184). While this is a widespread pattern and structure in the languages surrounding Burushaski (Bashir p.c.), it seems to point also materially to the functions of the IE suffix -meno- or -mno- in the passive middle, e.g. Gk epómenos ‘following’ (Phrg gegrimenos ‘written’ (Diakonoff-Neroznak 1985: 111), which has also been derived from the same IE *men- ‘remain’ (Szemerényi 1996: 320-321) (refer to footnote 7).

8.2.2. Verbal affixes

8.2.2.1. Verbal prefixes

—IE *s- mobile in verbs : Bur -s- verbal prefix: Bur d*-karan-, d*-skaran- ‘surround’ (B 242) < IE *(s)ker- ‘turn, bend’ (‘ring, curve, circle, surround, encircle’).

—IE *do- (demonstrative stem) (e.g. Sl da ‘and; in order to, yes’, and verbal prefix do- ‘up to, towards the speaker’) : Bur verbal prefix d- used to form secondary intransitives (B 108) or action directed towards the speaker (e.g. in verbs like ‘come’, ‘bring’ etc.) (analogous to the semantics of the Slavic prefix), which is linked with Bur dáaa ‘again, and, also, moreover; another, other’ (Willson 33) (B 108), and the d- in dakhíl ‘like this, thus’, an alternative form of akhíl ‘same’ (B 110) (see point 5.2.2). (For comprehensive analyses of the Burushaski d-prefix, see Tiffou 1993, and esp. Tikkanen 1999a, and Bashir 2002).

—IE *an4, *ana, *anu, *ano, *no preposition ‘on’ (OEng an, on, a ‘on’ and prefixed *on-), OChSl na ‘on, at’, [in Slavic also a productive verbal prefix with a purely
perfectivizing function (see Richardson 2007: 53): e.g. Mcd prāvī ‘makes, does’ : naprāvī ‘complete / finish making’], also the Lith verbal prefix nu- (IEW 39-40) : Bur n-, nu-, ni- verbal prefix to form absolutive verbal forms (which also indicate the completion of an action) from verbs that do not have the d-prefix (B 298).

8.2.2.2. Verbal suffixes

—IE -io- formations, the most important and productive present suffix of late IE.

—Bur present stem involves yodation or palatalisation of the consonants of the past tense stem (with a formative *-y-, see Morgenstierne, (L: I.XX) who indicates this possibility, whereby we obtain the following morphonological alternations: c : é, s : š, n : y, t : č, l : lj, k : š (Edelman-Klimov 1970: 30, 60-61).

—IE *-n- and *-nu-, a verbal suffix marking present tense, usually transitive, as in *mi-nu- ‘to reduce’, and which “derives from what was originally a nasal infix -n- to roots ending in -u-” (Wat 59). Szemerényi (Ibid: 271) indicates that originally only -n- or -ne- was the formative element and developed into -ná- and -neu- and “came increasingly to be used as unitary suffixes, as in Lat asper-ná-ri, conser-ná -ri, OInd badh-ná-ti ‘binds’, also as -ano-” (also Kurylowicz, apud Szemerényi Ibid: 272).

—Bur suffix -n- / -an- / -in- does not have a particular function and we find verbal forms with and without it — e.g. -múru- : -múruṭin- ‘cut’; -qhól : -qhólan- (L -qhólin-) ‘to hurt’; Ys a-úl- ‘cannot’ : Ng ulán-, ilán- ‘be able to’ (B indicates that the older form of the suffix would have been -en-, as in Ys a-xát-en- ‘not to say’) (B I:212). Perhaps the facultative nature of the Bur suffix points to its original properties of an infix (see also the analysis of d-néiras, chindáas (Čašule 1998: 47, 48).

—IE verbal -sk- formations are productive in some IE languages, whereas in others there are only traces of them. Szemerényi (273) considers -sk- to consist of two elements s + k. It had an inchoative function in Latin, whereas in Hittite it had an iterative, durative or distributive meaning, and in Tocharian B it developed a causative sense : apparently all from a basic iterative-durative sense (iterative-intensive - Ramat; causative-intensive - Couvreur,
both authors apud Szemerényi 273-4.).

—Bur -eēs [for the change -sk- > -ks- > š in Burushaski see (Čašule 1998: 65 and (Čašule 2003a: 3.2.4.))] is a widespread suffix for deriving abstract nouns, mainly used in periphrastic verbal forms: šuray-eēs ‘happiness, enjoyment’ also used as an adjective, without a basic form (L 335) (B I:211), balan-eēs man- ‘to writhe, wallow’ used along with balán man- (L 67), aģat-ēs -mān- ‘to be ashamed’ from aģāto ‘one who is ashamed’ (B I: 211). The forms with this suffix are most productive in the compound verbal constructions, where the abstract noun is not used independently: darēs -t- ‘to endure, hold out’ (LYs 89) (BYs 141), sarkumeēs -t- Ng ‘to get ready, to put s-thing in order’ (analysed by B as ? + gumeēs -t- ‘to embellish’ (B 376), bandeēs -t- ‘to bind’ (B 376), sateēs -t- ‘to bring in order’ (B 376), Bur halēs -t- ‘to raise, rear, nourish’ (BYs 150) (< IE *hēl- ‘grow’ (pres. *hēle/o-) ‘grow, nourish’ (M-A 248). In most cases there is no basic form to which the “abstract nouns” can be traced.

8.2.3. Non-finite verbal forms
8.2.3.1. Infinitive

The Bur infinitive ends in -as (B I: 12.16) and can be compared to Lat -re < *-se or *si, also found in Vedic abstract nouns in -(a)ṣ (Szemerényi 325).

8.2.3.2. Participles and gerunds

—IE deverbative-adjectival ending *-no (> participle in Sl) : Bur past (absolutive) participle in -in/-n/-nin (B I: 12.13-12.14).

—IE desiderative in -s- which formed the base of the present tense in -se/o and developed into the bases of the present tense in * sie/o or *si (e.g. Lat lasseso) : Bur gerund II in -ś, -V-ś (E-K 1970:70) used with a desiderative meaning (si > ś).

—IE adjectival compound suffix -enko-, -ŋko- > -um (the main adj. suffix in Bur), derived historically by Berger from -un > e.g. burūm ‘white’, dağānum ‘thick’ (B I: 5.1), which is also used in the m-participle (B I:143) (‘static participle’) étum ‘done’, mānum ‘become’ (L 108) (a development analogous to the Germanic one in Indo-
European).

8.3. Adverbs

Most of the Burushaski primary adverbs (B I: 92-94) are of Indo-European origin (for demonstrative adverbs, refer to Section 4.)

—IE *dhāl- ‘to sprout, to bloom’ (> ‘flourish, rise, grow’) : Bur dal ‘up’, dal-ːt- ‘take up, send up’ and daltás ‘good, fine’, sem. as Hitt talles ‘be favourable’ (B 112).

—IE *h₁eti ‘in addition’ (> ‘over, moreover, again’) (M-A 215) : Bur -yāte ‘on, upon, up, above’, yāt ‘up, above, on top; (adj) upper, further, later, again’ (in Bur from *-i-etis) (B 475).

—IE *h₂ol- ‘beyond; from that side’ (Wat 2-3) or *h₂élios ‘other’: Bur hóle, hólo ‘out, out of’ and hólum ‘outside, other, foreign, strange’ (B 201-202).

—IE *kat-h₂e ‘down, with’ (Hitt katta ‘down, with, by, under’) (M-A 169) : 1. Bur Ys kḥāt, Hz Ng qḥāt (in L 239, also kāt) ‘down’ (B 348) and 2. the postposition -kāat, and adverb kāat, (in LYs 155, also -kāt and -kḥāt) ‘with, along with’ (B 238).

—IE *pelh₁- or *plh₁-, ‘in derivatives referring to abundance and multitude’ (Gk polús ‘much, many’ (Wat 64): Bur phāalis, phāalisa ‘a lot of, in abundance’ (B 320).

—IE *per- ~ pro- (in derivatives) ‘first’, esp. the formations with the suffix -mo- : Bur pūrme ‘beforehand, before the time’ (B 318).