

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 Caucasian 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.

The fundamental sources for the description and study of Burushaski are considerable and of very high quality. Most notable and authoritative is Berger's (1998) three-volume work on the Hunza-Nager dialect (grammar, texts and a Burushaski-German dictionary). Still very relevant is Lorimer's earlier ground-breaking three-volume work on Hunza-Nager (1935-1938) and Yasin (1962) Burushaski. Edel'man-Klimov's (1970) analysis, revised and summarised in Edel'man (1997) is valuable in the quality of the grammatical description. Willson's (1999) compact basic Burushaski vocabulary is also very useful. Fundamental for the study of Yasin Burushaski are Berger's (1974), Tiffou-Pesot's (1989b), Tiffou-Morin's (1989a) and Zarubin's (1927) grammars and vocabularies. A new corpus of Burushaski texts from Hispar, annotated, commented and translated, is provided by Van Skyhawk's (2003) remarkable book. We note Anderson's valuable contributions to a better description and understanding of Burushaski phonology (Anderson 1997), morphology (Anderson 2007) and syntax (Anderson-Eggert 2001).

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.

Čašule (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 Čašule (2012b).

The correlations between Burushaski and substratal and archaic Modern Macedonian and Balkan Slavic vocabulary are discussed in Čašule (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 (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).

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):

	a				ş	ś	s		
e	o	qh	kh	th	th	çh	čh	ch	ph
i	u	q	k	ṭ	t	ç	č	ć	p
		ġ	g	ɰ	d		j	z	b
		ñ			n				m

y h l r

Table 1. Phonological system of Burushaski (Berger 1998 I: 13).

(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**.

4. **ċ** = **ts** in Lorimer and **c** in Tiffou-Pesot (1989).

5. **ḡ** = **ɣ** in Lorimer and Tiffou-Pesot (1989). It is a voiced fricative velar /ɣ/. See further Čašule (2010:14-18) on the extensive variation between **ḡ** and **g**.

6. **ṅ** = [ŋ] or [ng] [nk].

7. The posterior **q** is similar to the Arabic **qāf**. “**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.)

[2] **i:u** in front of **l**, **r**. (Berger 2008: 2.10.)

[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

2008: 2.1, also B I: 2.18).

[5] **h** > **y** in postvocalic position.

[6] Variation **-we-** : **-wa-**.

[7] Change **w-** > **b-**. (Čašule 2010: 6-8).

[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.).

[9a] **p-**, **ph-** > : **b-** Čašule (2003b: 40-41) (Berger Ibid).

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

[10] Alternations of retroflex stops: **t** : **ṭ** and **d** : **ḍ**. For an extensive discussion of the development of the retroflex stops with many examples, see Čašule (2003b: 26-28) (2010: 10).

[11] **t** : **th**. There are numerous (over 50) examples of a **t** : **th** alternation Čašule (2010: 10).

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

[13] Change **ñ** [**ng**] [**nk**] > **m**.

[14] Variation Ys **ny** > Hz Ng **y**.

[15] Alternation **čh**, **č** : **s** (in anlaut also **z-**).

[16] Variation **p** : **ph**.

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

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

[19] Alternation **y**, **ǰ** : **j** : Ys **yótes** : Hz Ng **joṭis** (B 228); Bur **yaqhú** < Turk **jakki** (B 472); Bur **jú-** (present stem) : **d²-y(a-)** (B 235); **ǰayámiso** : **ǰajámiso** (B 166).

[20] **f** > **ph** (:p).

[21] **k** : **g**, **k** > **g** (Čašule 2010: 14-15).

[22] Extensive variation of **g** and **ǰ** (L 176).

[23] Dialectal alternation **q** : **ǰ** in intervocalic position (Varma (1941: 141) and Morgenstierne (1945)).

[24] Alternations of **k**. **k** : **q**, change **k** > **q** = (in loanwords), **k** : **kh**, **k** < **kh**, **k** > **kh**, **k** > **qh** (in loanwords), **kh** > : **qh**, **q** : **qh** (Čašule 2010: 14-18, with numerous examples).

[25] For **-rk-** < **-rg-**, note Berger (2008: 4.17) who states that after **r** media are (generally) voiceless.

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 ée , i
IE o	>	Bur ó
IE o (unstr.)	>	Bur a , u
IE ō	>	Bur oó , 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 h₁uer-	>	Bur har- : -war- : her-
PIE h₂-	>	Bur h-
PIE h₂e-	>	Bur ha-
PIE h₂ue-	>	Bur -we- : -wa-
PIE h_a-	>	Bur h-
PIE h_ae- > h_aa-	>	Bur ha-
PIE h₄-	>	Bur h-
PIE h₄e- > h₄a-	>	Bur ha-
PIE h₃-	>	Bur h-
PIE h₃e- > h₃o-	>	Bur ho-
PIE h_x-	>	Bur h-
PIE h_{1/2}i-	>	Bur i-
IE l , m , n , r	>	Bur l , m , n , r
IE u	>	Bur -w/-u
IE u-	>	Bur b- , also m- (rare)
IE y	>	Bur y/i
IE μ	>	Bur -um , am
IE ŋ	>	Bur -un , -an
IE ʀ	>	Bur -ur , -ar
IE ɺ	>	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) : ʈ , also d-
IE d	>	Bur d
IE dh-	>	Bur d-
IE VdhV	>	Bur -t, -ʈ
IE k	>	Bur k : kh , k : q ²
IE k^w	>	Bur k
IE k̂	>	Bur k : kh , k : q
IE g	>	Bur ġ
IE gh	>	Bur g
IE g^w	>	Bur ġ
IE g^wh	>	Bur ġ
IE ġ	>	Bur g , ġ
IE ġh-	>	Bur g , ġ
IE s	>	Bur s or s : ç , čh
IE ks	>	Bur ś

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** : **ś** , **ch**, 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.⁴ 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, Buddruss, 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), **éal-kharás** 'violent dispute' (B 83).

—IE ***gar-** 'shout, call' (IEW 352) : Bur **gar-** '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-h₂e** 'down, with' (Hitt **katta** 'down, with, by, under') (M-A 169) : Bur Ys **khaṭ**, Hz Ng **qhaṭ** (in L 239, also **kat**) 'down' (B 348) and the postposition **-káaṭ**, and adverb

⁴I note here with gratitude the early support for my work by Dz. Edel'man and G.A. Klimov.

kāat, (in LYs 155, also **-kāt** and **-khāt**) ‘with, along with’ (B 238).

—IE ***pāk-**, ***pāk-** and ***pāĝ-**, ***pāĝ-** ‘fasten; strengthen; parts to drive in, peg, post’ (IEW 787-8) (M-A 64: IE ***peh_aĝ-** ~ ***peh_ak-**) (Wat 61) : Bur **-phágo** ‘stick, staff’ (B 320), and **phañ man-** ‘push, press forward’ (B 322) < IE ***pa-n-ĝ-**, ***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 **sáo** (Ys **sáu**) pl. (**-o** and **-u** are pl. endings), double pl. **sáomin** ‘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^we** ‘and’ (e.g. Lat **-que**) (IEW 635) : Bur **ke** ‘also, too, and’, emphasizing particle; indef. particle after interrogative pronouns; conditional particle (B 244).

—IE ***ser₂** ‘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 ***ĝhyem-**, ***ĝhiem-** ‘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 ***bherĝh-** ‘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**, ***nē**, ***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 **nū** ‘not’ (B 303) which can be derived < IE ***nē**.

—IE ***pen₁** ‘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 **-cí**) (B 454).

—IE ***urenk-**, ***uronkā-** ‘bend, curve’ (> Balt-Sl ‘hand’) : Bur Ys **-rén**, Hz Ng **-riiñ** ‘hand’ (B 364).

—IE ***mend-**, ***mond-**, (***mṃd-?**) ‘suckle, (feed) young animals’ (IEW 729) (e.g. Rom **mînzare** ‘female sheep (for milking)’, **mînzar** ‘one year old lamb’ (Balkan substratal) Brâncuș (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 **munpáq** ‘grown big, developed (of a child or young animal)’ (L 270), (LYs 174 ‘a youth, lad’), possibly from IE ***mṃd-** + ***-ko-**. Perhaps also Bur **múndas**, Ys **búndas** ‘tick’ (B 294) (as a ‘blood-sucking insect’).

IE **e** (unstressed) > Bur **a**

—IE ***bhel-ǵ-** or ***bhel-k̑-** ‘beam, plank’ : (M-A 431) : Bur **balk** ‘plank, board’ (B 34-5).

—IE ***bherag-** ‘yeast bread’ (WP II 165): Bur **barǵúndo** ‘yeast, leavened bread’ (B 30).

—IE ***(s)ker-** ‘turn, bend’ : Bur **d̑-karan-**, **d̑-skaran-**, Ys **d̑-kharan-** ‘to surround, to gather around, to enclose’ (obsolete) (B 242).

—IE ***les-**, ***læs-** ‘weak’ (IEW 680) : Bur **las** ‘without consequence, insignificant, without influence’ e.g. **lasalás gučár-** ‘walk weakly, toddle weakly’ (**gučár-** ‘go’) (B 264).

—IE ***melh₂-**, ***mel-** ‘grind, crush’, ext. ***meldh-** ‘soft’ (IEW 716) (M-A 247) : Bur **maltás** ‘butter’ (B 276) < ***maltar-š** i.e. **máltar-** **-ć-** ‘(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 **máltaǵo** ‘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 ***m₁d^h-ṃ-ko** (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 ***m₁-**).

—IE ***mer-əgh-** a guttural extended stem < ***mer-** ‘tie, wind up, roll, twist’ (not found in Ind or Irn) (IEW 733) : Bur **maráq** ‘bend, twist, circuit’, **maráq man-** ‘make a curve, take a roundabout way; turn, turn back’, Bur **marǵúl** ‘curl, curly’

(B 281) (< ***margh-ulo**).

IE \bar{e} > Bur **ée**, **i**

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

—IE ***k^wyeh₁-**, variant metathesised form < ***k^weih₁-** > ***k^wyē-** ‘rest, be quiet’, in words for ‘time’ in IE: esp. with an **-n** extension, e.g. ORuss **čín** ‘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 ***rēk-** or ***rēk-** ‘arrange, prepare’, (OInd **racayati** ‘produce, fashion, form, make ready’, Goth **rahnjan** ‘work out, reckon’ (IEW 863) : Bur **rik man-** ‘be absolutely ready’, **rik -t-** ‘draw (sword, knife)’, **ririk man-** ‘be ready to strike’ (B 365).

IE **o** > Bur **o**

—IE ***smokur-** ‘chin, beard’ (M-A 107) : Bur **-móqis** (Hz), **-móquš** (Ng) ‘cheek’ **-móqis** (Ys) ‘face’, **-móqoṭ** (Ys) ‘cheek’ (B 291).

—IE ***dhog^wh-eyo-** ‘to burn, warm’ suffixed **o**-grade (caus.) form < IE ***dheg^wh-**: (note esp. PGrmc ***dagaz** ‘day’ (< ‘heat of the day’), Goth **dags** ‘day’ (M-A 124) : Bur Ys **doḡói**, Hz **duḡúi** ‘noon’, e.g. **sa duḡúi maními** ‘the sun is in its zenith’ (**sa** ‘sun’) (B 124).

— IE ***g^wer-**, ***g^wor-** (IEW 477), ***g^werh₃-** (Wat 34) ‘mountain’ (Alb **gur** ‘stone’): Bur Ys **ḡoró**, Hz Ng **ḡuró** ‘stones’ (B 181).

—IE suffix **-ko**, secondary suffix, forming adj. (Wat 36) : Bur suffix **-ko**, also **-kus**, e.g. **datú** ‘autumn’, **datú-ko** adj. ‘autumn-’, **datú-kus** ‘autumn season’ (B I: 207);

—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) and most likely the stem in the numeral ‘2’: **altó** yz Ys (Zarubin) **haltó**, **altán h**, **altá**, **altác** *x* (Berger 2008: 10.4).

— IE ***ḡonh₁-** ‘beget; bear; produce; be born’, e.g. Gk **gónos** ‘sperm, semen’ and Bur **ḡunó**, Ys **ḡonó** ‘seed (not of cereals); sperm, semen’ (B 180), Ng **gono** (L 186).

IE *ō* > Bur *ō*

—IE **dhē-k-* : **dhō-k-* : **dhə-k-* ‘do, make, put’, extended form of IE **dhē-* : (IEW 235): Bur **doók man-** ‘put, set down’, **doók -t-** ‘build, make, place a stone’ (B 121).

—IE **dhō-mo-* ‘pile’ (IEW 238) (**dhoh₁mo-*) : Bur **dúuman** ‘pile, heap’ (B 127) (with prev.).

—IE **uodō(r)-* ‘water’ (Wat 95): Bur **buđóo** ‘rinsing water’ (B 61).

—IE **iōs-to-s* (< **ioh₃s-to-s* < **ieh₃s-to-s* (Wat 103) ‘belted; girdle’ (IEW 513) : Bur **-óşcum**, Ys **-óştum** ‘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 **mōþs (-d-)** ‘courage, anger’) (IEW 704-705) : Bur **-móos** ‘anger, rage, temper, annoyance’, **-móoskiş** ‘prone to anger, wrathful, violent tempered’ (B 291).

IE *i* > Bur *i*

—IE **dhh₁ileh_a-* ‘teat, breast’ (M-A 82): Bur Ys **-díl**, Hz Ng **-ndíl** ‘breast, chest’ (B 302), and with *i* : *u* / *_l* : Ys **dúlas** ‘boy, young lad’ (BYs 142), (cp. with Lett **dēls** ‘son’, Alb **djalë** ‘boy, young man, son’).

—IE (*h_x*)*ih_x-ni-* (*h₁eih_x-*) ‘ice’ (e.g. Lith **ýnis** ‘glazed frost’) (M-A 287) : Bur **hío x pl** ‘hail’ (*-o* is the pl. suffix) (B 200), Hz **hiən** ‘hail’ (Varma 153).

—IE **ġhi-* (M-A 245), **ġhh_ai-* (M-A 537) ‘throw’ : Bur Ys **ġi-**, Hz Ng **ġíy-**, imp. **ġi** ‘to throw or cast down, fling; throw in; to attack’ (B 155).

—IE **pitus* ‘food’ (< **peih_x-* ‘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-ċi-**, Ng **d-ċhi-** ‘to tie, tighten’ (B 76).

—IE **h₂eim-* and zero-grade **h₂im-* ‘copy’ (Wat 2): Bur **imán** ‘duplicate’ (B 213).

IE *u* > Bur *u*

—IE **bhuġos*, **bhuġnó* ‘buck, he-goat’ (M-A 229) : Bur **buqhéni** NH ‘goat with certain distinctive features on the head’ (B 63).

—IE *bhāġhus* ‘(fore)arm’ (M-A2 180) : Bur **baġú** ‘double

armful', **bağúç** 'small double armful' (B 30).

—IE ***bhrúh_x-s** 'eyebrow' (M-A2 175) : Bur **bur** (also **būr**) 'a single hair', **Ꞥlpur** 'eyelash', **Ꞥlpurkiš** 'with thick eyebrows' (B 268).

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

—IE ***seug/k-** 'to suck(le)' (with zero-grade ***sūg-**, ***sūk-**) (G 570) : Bur **šuk** **Ꞥt-** 'to slurp, lick up, lap, sip', also **šik** **Ꞥt-** 'to slurp' (B 411) (with expressive **š**).

—IE ***meug-** 'slimy, slippery' (***muk-so-** > Gk **muxa** 'mucus', also Lat **mūcus** 'mucus' (Wat 55-56) : Bur **-mús** 'snot, nasal mucus', Ys also 'nose', **-múskiš** 'snotty-nosed' (B 296) (LYs 178) (**ks** > **ś**, from the zero-grade).

1.4.2. Diphthongs

IE **ai** > Bur **a**

—IE ***ĝhais-os-**, ***ĝhais-es-** 'a stick, spear' from IE ***ĝhi-** 'throw' (M-A 537) : Bur **ĝasíl** 'individual stick or sticks' (B 173). From ***gas-i-lo** (cf. **-díl** 'breast, chest' < ***dhi-lo**), and this from Bur Ys **gí -**, Hz Ng **gíy-**, 'throw or cast down, fling; throw in; attack' (B 155) (**sos** > **ss** > **ś**).

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

—IE ***(s)tāi-no-** 'stone' (IEW 1010) : Bur **dan** 'stone' (B 113).

IE **ei** > Bur **a**

—IE ***ĝheim-** 'winter' (IEW 426) : Bur **ĝamú** 'ice, frost; glacier' (B 168).

—IE ***g^wheiə-**, ***g^whī-** 'sinew, thread' (IEW 489): Bur **ĝay** 'thread in a warp' (B 175).

—IE ***gheis-** 'used of the emotion of fear or amazement' (IEW 427) : Bur **gusú** in **Ꞥs** ['heart'] **gusú** 'to be afraid' (L 175), also **Ꞥs Ꞥgusu** '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 ***leig₃-**, ***loig-** 'tremble, jump' (Gk **elelízō** 'make tremble') (IEW 667-668) : Bur **Ꞥlaq man-** 'shake, tremble', **lāāq man-** '(of branches) moving slowly' (B 263).

—IE ***mei-**, ***mē[i]t-** 'strengthen; pole', ***meith** : ***mit** :

OInd **mít-** f. ‘column, post’, OIcl **meiðr** ‘tree, beam, pole’, Lith **miētas** ‘stake, post’ (IEW 709) : Bur Ys **mátas** (< IE ***meiteh_a-s**) ‘beam (medium-sized)’ (BYs 164), ‘rafter, which rests on the main roof beams’ (LYs 180).

IE **eu** > Bur **a**

—IE ***h₁euk-** ‘become accustomed’ (> ‘learn, teach’, ‘home, dwelling’) (M-A 4) : Bur **hákin** ‘learn’ and **ha** ‘house’ (< ***hak** by Berger (2008: 25) (pl. **hakícañ**) (B 184).

—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 **d²ka-** ‘/to bend, to curve’ (B 253).

—IE ***ieudh-** ‘set in motion, make excited, stir up’ (> ‘incite’) (M-A 507) : Bur **yaṭ** ‘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-**, ***h₂euh₂ijos** ‘father’s father, ancestor on father’s side’ (M-A 609) : Bur **úu** and **úuy** ‘father, father’s brother’, in pl. ‘forefather’ (for loss of **-h-** note previous ex.).

IE **ou** > Bur **u**

—IE ***h₂óuis** (gen. ***h₂óujios**) ‘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 ***góur-**, (gen. ***gunós**) (IEW 397 ***geuro-s**) ‘body hair, lock of hair’ (M-A 252) : Bur **guyáñ pl** ‘hair of one’s head’ (B 183) (< ***gour-yo-** or ***gun-yo-**).

—IE ***dhroughos** ‘phantom’ (M-A 538) : Bur **dúrgas** ‘ghost of the deceased’ (B 126).

1.4.3. Laryngeals⁵

⁵ In Čašule (2003b), we provide an in-depth analysis of the Burushaski laryngeals and their direct correspondence with the Indo-European

- IE **h₁** > Bur **h** IE **h₁e-** > Bur **he-**
 —IE ***h₁em-** ‘take, gather; distribute’, e.g. OSl **imati** ‘catch, hunt, gather, take’, Lat **emō** ‘take, buy’, distribution in northwest IE (M-A 564) : Bur **d̄-mi-**, Ys **de-hémia-** ‘gather, collect, obtain, get; harvest (fruit)’, **d-ée-mi-**, Ys **de-hémia-** ‘gather together’ (B 287).
 —IE ***h₁néuŋ-** ‘nine’, and more specifically the ordinal form ***h₁néuŋ-(e)tos** ‘ninth’ (M-A 403). Beekes (1995: 216) states that the Gk form **énatos** ‘ninth’ points to a proto-form ***h₁nūŋ-to-** : Bur **huntí**, Ys **hutí z**, **huncó**, Ys **huçó** *hxy* ‘nine’ (B 205).
 —IE ***h₁erh₁-** ‘quiet, at rest’ (M-A 474) : Bur **her** ‘attentive, careful’ (B 197).
 —IE ***h₁erh_as-** ‘be well disposed to someone’ (> ‘be deferential, respectful’) (M-A 197-198) : Bur **hés** ‘accustomed, tame(d), acquainted with’ (L 199: **hées**) (**rš** > **s**) (B 197).
 —IE ***h₁uers-**, ***h₁uer-** ‘rain, drip’ (IEW 81: ‘to flow, to wet; water’) (> ‘urinate’) (M-A 477) (e.g. Gk **ourēō** ‘urinate’) : Bur **hará-**, Ys **hariá-**, Hz **-wara** ‘pissen lassen’, **harás** ‘urine’, **harált** ‘rain’ (B 191-192) (unstressed **e** > **a**) and with **-e-**: **hér-** ‘to weep, cry’ (B 197) (Čašule 2003b: 46), perhaps also **di-áarč-** ‘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 **hurógo** ‘perspiration’ (B 206), **hurtá** ‘wet’ (cp. with ON **aurigr** ‘wet’, **aurr** ‘wetness, water’), **hurú** ‘juice’, **hurús** ‘become damp’ (B 207).
 —IE ***h₁empis** ‘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: **h₁**, **h₂**, **h₃** and **h₄**. In this set, **h₂** and **h₄** color an adjacent ***e** to ***a** and **h₃** colors an adjacent ***e** to ***o**, and are considered to have been pharyngeal and/or laryngeal continuants (fricatives). The first laryngeal **h₁** does not cause coloring and has been assumed to be a glottal stop. Adams uses the symbol **h_a** when, because there are no Hittite and Albanian forms, it is impossible to determine whether the laryngeal is **h₂** or **h₄**. A generic **h_x** 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.

hamíso ‘a small insect’ (B 189).

—IE ***h₁eu(h_a)-** ‘leave, abandon, lacking, empty’: Gk **eūmis** ‘deprived’, Skt **ūnā-** ‘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 **śuǵón** : Ng **śuǵún** : Ys **śoǵón** (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 ***h₁óuh_xdh_r-** (< ***h₁eu(h_x)dh-** ‘to swell (with fluid)’ (M-A 82), esp. PSI ***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 **-úṭ** and **-úṭis** ‘foot, lower leg’ (B 459) (***hou-** > **u**, ***-dhr-** > ***-tr-** > **-ṭ-**), and with the common **u** : **o** alternation also Bur **hóti** ‘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 **hánchil** also **ánchil** ‘water that flows from a wound’, as adj. ‘watery’ (**chil** ‘water’) (B 19).

—IE ***h₂eh_x-s-** ‘burn, glow’ (> ‘star, ember’) (M-A 87) : Bur **háas** ‘glowing embers’ (B 184), **hasúman** (Ys) ‘star’ (B 21).

—IE ***h₂erg_x-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 **hargín** ‘dragon which comes into being from a snake’ (B 193). (See Čašule 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 **halkís** ‘womb’, and from zero-grade: Ys **-lkís** (Hz Ng **-úlgis**) ‘nest; sheath; burrow, hole, den’, and esp. Bur **-úl** ‘belly, abdomen’ in pl. **-úliśo**, **-úliñ** ‘bellies, innards’ (B 453-454). Bur **-úlkis** ‘greedy’ could however be a separate form from IE ***h₁elk-** ‘hungry,

ill' (e.g. Cz *lakomý* (also SSL) 'greedy').

—IE **h₂érios* 'cavity' (e.g. Hitt *hariya* 'valley, vale, dale' (M-A 96) : Bur *har* 'small nullah, ravine' (B 191).

—IE **h₂óuis* (gen. **h₂óuios*) 'sheep': (M-A 510) : Bur *huyés* (sg and pl) 'small cattle (sheep and goats)' (B 209), Ys also: *huís* (T-P 140).

—IE **h₂erh_x-* 'destroy, fall apart; lose' (M-A 158), *o*-grade **h₂orh_x-* : 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 *h_a* > Bur *h*, IE **h_ae-* > Bur *ha-*

—IE **h_aérh₃ie/o-* 'to plough' (M-A 434) : Bur *har-* 'to plough' (BYs 150).

—IE **h_aer(h_x-)* '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) (B I: 25, gives examples of loss of *h-/_a, u*).

—IE **h_aegh-*, **h_aeghlu-* (in B-K 534: IE **heg*^[h]-) (M-A 477), which B-K (388) trace to a Proto-Nostratic **hag-*/**hæg-* 'cover over, hide, overshadow; mist, darkness, cloudy weather' : Bur *hağúm* 'damp, moist, wet' (B 185), and *hak*² 'vapour, steam', which Berger links with *hak*¹ 'silver or gold plating' ['covering'] (B 186).

—IE **h_aeğ-* 'drive' (pres. **h_aeğe/o-*) (M-A 170): Bur *hağúc* (Ys *hağós*) 'pass, mountain-pass' (B 185), a deverbal noun with sem. development as in IE **h_aeğmen* : OInd *ájman-* 'career, passage, battle' and IE **h_aeğro-* '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 **h_aeğ-ro* 'driving, pursuing, grabbing' : Bur *ğark-* / *-ğárk-* Hz Ng 'drive oxen in ploughing, plough with oxen; catch, seize' (L 11: *-ağárkas*, 180: *-ğárkas*) (B 171-172), (with *-k*-extension, as e.g. IE **keu-k-* 'to shine, glow; burn' < IE **keu-*₂ 'to light, to burn' (IEW 594-595, 597) : Bur *d'-kukun-* 'light up (firewood, cigarette)' (B 254).

—IE **h_ael-* 'grow' (pres. **h_aéle/o-*) 'grow, nourish' (M-A 248) : Bur *halés'-t-* 'to raise, rear, nourish' (BYs 150).

—IE **h_aeug-* 'grow', (e.g. Lat *augeō* 'augment, increase', TochA *ok-* 'grow, increase') (M-A 248) (Buck 876: IE

***aweg**, ***aug-** and ***ug-**) : Bur **do-hóq-** Ys, **do-óq-** ‘swell out or swell up’, **d-uq-** ‘cause s-thing to swell’ (B 308). (**u** > **ó/_q** under stress), (B I:17). On **q** : **ǵ** in intervocalic position, see Varma (1941:141).

—IE ***h_aenǵhus** ‘narrow’ (Wat 4: ‘tight, painfully constricted’, e.g. Grmc ***ang-** ‘compressed, hard, painful’, ON **ongr** ‘narrow’ (M-A 391), PSI ***ozilū** ‘knot’ (G 638) : Bur **hanarát** ‘(wood) hard, knotty, (meat) tough; self-willed, refractory (~narrow-minded)’ (B 190) (< ***hang-aro-to**).

—[in auslaut] IE ***dhel-** ‘curve, hollow’, ***dholh_aos** ‘valley, vault’ [(OHG **tal** ‘valley’ (< Grmc ***dalam** ‘valley’), ON **dæla** ‘wooden gutter on a ship’, OHG **tol(a)** ‘channel, ditch, pipe’ (M-A 618: < ***dh_lh_ao/eh_a-**)] (not in IA) : Bur **dalá** pl. **dalámuc**, Ys **dalá**, **daláh** ‘larger irrigation channel’ (B 111) (< IE ***dh_lh_ao/eh_a-**).

IE **h₃-** > 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 ***h₃elh₁-** ‘smite, destroy’ : Hitt **h₃u-ul-la-a-i** ‘smite, destroy’, **h₃u-ul-la-an-za-iš** ‘battle’, Lat **ab-oleō** ‘destroy’ (M-A 158) : Bur **hol** *h pl* ‘armed forces, troops, army’, **hol ní-** ‘go to war’, **hol jú-** ‘advance armed’, **hólguš** and **hólkuš** ‘battle’ (B 201).

—IE ***h_{x(3?)}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-t-** ‘to give a sign’ (B 202).

—IE ***h_{2/3}nsis-** ‘large (offensive) knife, dagger’ (M-A 561) : Bur **hunc** pl. **hunzé** ‘arrow’ (for the sem. shift ‘dagger’ > ‘arrow’, cp. Arm **slak** ‘pike, spear, dagger, arrow’).

—IE ***h_{2/3}uerg-** ‘turn’ (M-A 640) : Bur **hurúginas** ‘wave, stream, whirlpool’ (B 207).

IE **h₄** > Bur **h**, IE ***h₄e** > Bur **ha**

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

—IE ***h₄erós**, ***h₄erios** ‘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 ***h₄órǵhei** '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 **h_x** > Bur **h**

—IE ***peh_x(i)**- 'misfortune', ***pih_x**- 'revile', e.g. OInd **pāmán**- 'skin disease', **pīyati** 'insults' (M-A 313): Ys **bihái**, Hz Ng **biái** 'illness, disease' (B 50).

—IE ***uih_xrós** 'man, husband' (Wat 101 ***wiæro**) (M-A2 202) : Bur Ys **-yúhar**, Hz Ng **-úyar** pl. **-úyaríso** 'husband, married man' (B 460).

—IE ***h_xond-** / ***h_xnd-** 'stone, rock': Bur **handó** 'stone' (B 189).

—IE ***h_xóngl_o** or ***h_xéngl_o** 'charcoal' (M-A 104) : Bur **hanjíl** 'charcoal' (B 189).

—IE ***h_xóiuo/eh_a**- '+/- fruit, berry' (M-A2 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 ***ueg^w**- 'wet' (M-A 639) : Bur **du-wáq-**, **d'-waq-** 'to become wet' (B 464).

—IE ***uel-₇** 'to turn, wind; round' (IEW 1441-1444) : (from the zero-grade ***ul_g**-) Bur **du-úl-** 'to wind, (of a ball of thread) to become wound up' (B 454).

—IE ***uora-** < ***uer-** 'faintness, giddiness' (e.g. Eng **weary**) (IEW 1180) : Bur **-wár-** 'to become tired' (pple **n-war**) (B 464-465).

—IE ***uer-₃** 'to turn, bend' and zero-grade IE ***ur_g**- (IEW 1152) : Bur **-wáre** or **-wára** 'around' (B 465) and **du-úr-** 'to turn' (B 457).

—IE ***h₂ues-** 'dwell, pass the night, stay' (M-A 171) : Bur **du-wáas-**, **d'-was-** (L: **d-uesas**) 'remain over; stay behind; to exist, survive' (B 462) (L 140).

—IE ***uer-₂** '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 ***uel-** 'see' (IEW 1136-1137 : OIr **fili** 'seer', Wels

gweled ‘see’, Toch **yel** (< ***uēl-**) ‘examine, investigate’ : Bur Ys (< ***u-bal-**) **wal-mán-** ‘keep guard over, stand guard, watch (plus dat. of object), **wal-ṭ-** ‘be under guard’ (BYs 185).

IE **u-** > Bur **b**⁶

—IE ***uer-** ‘high raised spot or other bodily infirmity’, zero-grade form ***ur-** (Wat 99) > Bur **buúri** ‘crest of hill, peak’ and Bur **-úri** and **-úriṣ** ‘crest, ridge, mountain peak; prong; fingernail’ (B 66) (possibly in **Burúṣaski** (< ***burisaski**) ~ ‘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 ***uel₈-** ‘to tear, pull’ (a common sem. development, e.g. in PSl ***ob-velkti** ‘put on clothes’) (IEW 1144-1145) > Bur **bél-** : Ys **wél-** ‘put sth on, don, wear’ (B 47).

—IE ***uer-(e)₈** ‘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 ***uet-ru** or ***ut-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 ***uers-**, IE ***uer-** (?) ‘+/- thresh (grain)’ (IEW 1169): Bur **bar-’** ‘thresh; husk’, **-war-** ‘make (oxen) extract grain by walking over cut crops’, **baris** ‘threshing’ (B 38-39).

—IE ***uer₆-** ‘to talk, speak’ (IEW 1162) : Bur **bar** ‘saying, speech, word; promise’, **bar ét-** ‘to speak’ (B 38).

IE **u-** > Bur **b- : m-**

—IE ***sueks-**, ***seks**, ***kseks** and esp. ***ueks-** (: ***uks-**) ‘six’ (the latter forms are considered to be the original ones, with the **s-** of ‘seven’ taken over (Beeke 1995:213): Bur Ys **biśindu**, Hz Ng **miśindo** *hxy*, Ys **biśinde**, Hz Ng **miśindi** *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; wear; don (clothing); fix, attach; fit; suspend, hang’ (Will 121) + **-k(a): beśké**, Hz

⁶It 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 **bišké** ‘hair (of animals), fur’ and Ys **beskárēt**, etc. ‘wether, ram (over 2 years old, castrated)’ (B 42). Compare with Alb **bashkë** ‘sheep’s wool’, Rum **bască** ‘same’, of substratal Paleobalkan origin (from Thracian) (Brâncuş 1983:40-1), and with an identical etymology). B (296) links the Bur words further with **-múski** ‘pubic hair’.

—IE (Phrg) **kavar** ‘sacred place’, **kavarmoyo** ‘altar’, Lyd **kave** ‘pagan priest’ (Čašule 2004: 78) : (?) Bur **kamariá** ‘Ismaili priest who leads the prayer’ (=U **qhalipá**) (B 350).

—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 ***yā-** ‘go, come’, i.e. ***ieh_a-** ‘go, travel’ (M-A 228) : Bur **d₁y(a)- / d₂y(a)-** (conative of **jú-** which is the present stem) ‘come, come along, approach’ (B 235-236).

—IE ***uih₁rós** ‘man, husband’ (Wat 101 ***wiəro**) (M-A2 202) : Bur Ys **-yúhar**, Hz Ng **-úyar** pl. **-úyarišo** (L 57 also **-uyer**) ‘husband, married man’ (B 460).

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

—IE ***h₁ieu-** ‘young’ (M-A 655) : Hz Ng **-í**, Ys **-yé**, pl. **-yú** also **-yúa** ‘son’, pl. also ‘children’ (B 210) (L 41, 386, also with **-ū-**).

—IE ***el-** or ***iel-** ‘empty, vain’ (e.g. Gk **hálíos** ‘vain, empty, useless’, PSI ***(j)alū-** ‘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).

—IE relational adjectival suffix **-io-**, **-iio** (Fortson 2004:120-121): Bur relational adj. suffix **-yo-** or **-yio-** (Čašule 2009: 45, 59).

1.4.5. Syllabic sonorants

IE **ŋ** > Bur **-un, -an**

—IE ***gñ-** in words for ‘beget’, ‘bear’, ‘be born’ (> ‘semen’) (IEW 273) : Bur **gñunó** ‘seed; sperm’ (B 180), to which B

relates also **ḡunón** ‘newly obtained land, in which only grass will be sown’, and the verb **du-ḡún-** ‘ripen; mature’, also **ḍ-squn-** ‘cause to mature (of sun, of people); have an idea, make a suggestion, give a stimulus’ (B 179), also Bur **ḡúni** ‘part, quarter (of room), corner, angle; group, society of people’ (B 161).

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

—IE ***m̥n̥-** (***men-**; ***mon-**) ‘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 ***men-** > Bur **menas** ‘tale’ (LYs 174) (sem. as in Lett).

—IE ***m̥n̥-**, ***men-** ‘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 ***h_xond-** / ***h_xnd-** ‘stone, rock’: Bur **handó** ‘stone’ (B 189).

IE **m̥** > Bur **-um**, **-am**

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

⁷Bur **man-** is a very productive verb. Within developments from IE ***men-** ‘remain, stay’ (a widespread and old IE stem), semantically the correspondence is direct with TochAB **māsk-** (< ***m̥n̥-sk̥e/o-**) ‘be, become’, and further Gk **ménō** ‘stand fast, remain; await’, Lat **maneō** ‘remain’, Arm **mnam** ‘remain, expect’ and with other semantic developments OIr **ainmne** ‘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).

čhámanum (L 47 **-samanum**) (B 73) Hz Ng ‘first-born (son, daughter, young animal)’ (in Ys **-č-**). 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 **túmbos** ‘barrow, tomb’ of “Pelasgian” origin, also Arm **damban** ‘grave’, Rom **dîmb** ‘hill, elevation’ (Georgiev 1981: 100) (Katičić 1976: 71-72): Bur **dambálum** ‘slight ascent, easy ascent’ (B 113).

IE **ǵ** > Bur **al, ul**

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

—IE ***g^wel-**, ***g^wol-** ‘strike, sting; pain; death’ (IEW 470-471) (M-A2 282) : From IE ***g^wǵ-** or ***g^wol-** : Bur **ǵulís** ‘long red tick, whose bite causes thirst’ (B 178), (cp. Lith **geluõ** ‘stinger’, Gk **déllithes** ‘wasps’) (M-A2 150), and from ***g^wol-** (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.) **qhuíl** ‘-t-hurt’ (NH) (B 360).

— IE ***bhel-** ‘pot’, zero grade ***bhǵ-** (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. ***pl̥sós** ‘stone’ (M-A 548) : Bur **balóos** ‘a kind of stone’ (Will 20) < ***balsós** (**ss** > **ś**).

—IE ***kel-d-** suffixed form of ***kel-** or ***kǵ-** ‘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 **miltos** ‘red dye; red-brown of plants’, also used to designate ‘blood’ as an euphemism or linguistic taboo, attested in Myc Gk (Tomaschek (1980 II:16 [1893-1894] gives it as a Thracian word), and **militáron** ‘blood’ (Chantraine III: 702), Lat **mulleus** ‘reddish purple’ (IEW 720-721), from a zero-grade ***mǵ-to-** : Bur **multán** ‘blood’ (B 293).

IE **ṛ** > Bur **ar, ur**

—IE ***kert-** ‘plait, twine’ (e.g. Lat **crātis** (< ***kr̥t-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 ***kr̥t-i-** or ***krt-i-**.

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

—IE ***pr̥mo-** ‘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 ***ghr̥(ə)-k-** (Wat 30, 32). In IEW 460, also ***ghrū-** and an ext. stem ***ghrēuġ(h?)-** : Bur **gurgín-**, **-úrġin-** ‘grind on a stone, rub’ and Bur **du-úrġas-** ‘rub’ (B 456) (< ***gurgas-**). And further: Bur **gark** ‘peas’ (B 148) and **gírġir** ‘lentils’ (B 154) (for the reduplicated form, cp. with Gk **keghkros** ‘millet’).

1.4.6. Stops

IE **p** > Bur **ph**, also **p**

—IE ***peth_a-** or ***pat-** ‘stretch, spread’ (> ‘unfurl; open, extended’) (< ***pe-**, ***pa-**), (***peth_a-**, pres ***pe_tneh_ati**) (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 ***peuōr**, ***pūr** ‘fire’, (gen. sg.) ***pu-n-és** < older ***peHu-** (M-A 201) : Bur **phu** ‘fire’ (B 334), **phu ét-** ‘make a fire’ (B 335), Ys **phurés -t-** ‘cook; slander’ (BYs 171).

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

—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 **-qhúrvat** ‘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 **bu** ‘mountain-, mountain wilderness; rocky; mountain grazing ground; big boulder’ (B 63). From IĒ ***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 ¹**bul** ‘spring (of water)’ and ²**bul** ‘a mild wind’ (B 62).

—IE (?) ***kab-** in Lat **cabō**, **caballus** ‘gelding, working horse, horse’, OSl **kobyła** ‘mare’, Phrg **kubela** ‘horse’, Gk **kabállēs** ‘working horse’ (Buck 168, considers the words of Anatolian or Balkan origin), also derivatives like PSI ***kobyľuka** ‘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 **bať** ‘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 ***bhāgh-** ‘sludge, slime; bog, mire’ (IEW 161). Bur **baǵéin** y pl. (Ng y sg.) ‘cow dung’, Ng also ‘horse manure’ (B 30) (Will 19 also ‘manure’).

—IE ***bhénǵhus-** ‘thick, abundant’ (M-A 3) (Wat 10, zero-grade ***bhǵhu-**) : Bur **bañ**, Ys **bañi** ‘resin, gum (of fruit trees)’ (L 60) (B 35) (Will 20, also ‘manufactured glue’).

—IE ***bher-**, ***bhour-** ‘storm, blow’ (G 157) : Bur **burpúriai** ‘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. OIcl **barmr** ‘edge, seam’) : Bur **búran** ‘seam, hem’, **búran ét-** ‘to stitch, hem’ (Sh **búren** ‘close-sewn hem’) (B 64).

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

blago ‘bonum, bona; benignus, lenis, suavis; beatus’ and esp. SSl **blago** ‘treasure’, borrowed into Rom as **blagă** ‘wealth, treasure’, Av **bərəjayeiti** ‘salute, pay respect’, **bərəg** ‘ritual, custom’ and Skt **bhārgah** ‘light’ (ESSJ II: 173) (IEW 124-125) : Bur Ys **bálkaş** (L: **bilkis**) ‘treasure’ (BYs 132).

IE **bh** > Bur **m** (rare)

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

—IE ***dhrebh-** ‘crush, grind’ (IEW 272-273) > AncMcd **drámis** ‘a type of bread’ (N 172), : Bur **dirám** ‘special kind of flour’, **dirám phítí** ‘a type of bread’ (B 120).

—IE ***busk** ‘bush, thicket’, Gk **boské** ‘fodder, pasture’, (Late) Latin **buscus** ‘forest’ (Buck 47) (Wat 14) : Bur **muşk** ‘forest, thicket’ and **muşqú** ‘foliage (for sheep)’ (B 296).

—IE ***dhabh-²** ‘proper, suitable; to fit/put together’ (ON **dafna** ‘competent, good’, **gedæftan** ‘put in order’ (Grmc ***gadafta-** ‘fitting, becoming’) (M-A 139) (IEW 233) : Bur **dámí** ‘excellence, exquisiteness’, **dámíe**, Ng also **dámí** ‘excellent, exquisite’, **dámí -t-** Hz Ng (also in Sh) ‘to approve, choose, select, prefer’ (B 113). (**-sí** < **-cí** loc. ending).

IE **t** > Bur **t**, also **th** (rare)

—IE ***stá-** > ***stə-īā** or ***stə-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 ***terh₁-** ‘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 **táris** ‘gap, (big) hole’ (B 422) (‘bored through’). From IE ***ter-es-** ‘threshing’ > Bur **dar** ‘cut crops, threshing floor’ (B 115) (**t** > **d**).

—IE ***treugh-** (e.g. OIr **trōg**, **truag** ‘miserable, poor’) (IEW 1071-1074) : Bur **taráq** ‘poor’ (B 421) and Bur **targáato** ‘tasteless meat from a skinny animal’ related by B to **turgót** Hz Ng ‘tasteless, insipid; slack, weak’ (Ys **tergét**, **tirgít**) (B 433).

—IE **ter*⁶- ‘noxious insects’ (related in IEW 1076 to **terh₁-* ‘rub, pierce’) : e.g. Lat. **tarmes** (**termes**) ‘wood worm’ (from an *o*-stem **t_rəmo-s*) : Bur **ṭáro** pl. **ṭáromuč** and **tóro**, pl. **tóromuč** ‘cowdung beetle’ (B 445), **túranas** ‘a kind of large black beetle’ (B 433) and the first component in Ys **turmúkuṭes** ‘long insect’ (B 182).

—IE **ter-*, **teru-* ‘feeble, fragile, weak’ (e.g. Lat **tardus** ‘slow, tardy’ (IEW 1070-1071: from **terh₁-* ‘to rub’) : Bur **tarádo** 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** **·t-** ‘to soak, immerse in water’ (B 418).

—IE adj. suffix **-to-** (**-eto-**, **-oto-**) adj. poss. suffix (Fortson 121) : Bur adj. suffix **-to**, **-ṭo**, **-áato** : **mamú-to** ‘sucking, immature’, **bambu-to** ‘thick’ (B I: 19.24).

—IE **treb-* (zero-grade **tr̥b-*) ‘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 **ḍengel** ‘prince, master’, MLG **dege** ‘thriving, flourishing; progress’, MCymr **brenhin teithiawc** ‘rex legitimus’) : Bur **tham** ‘prince, king’ (B 436-437), **thámkuṣ**, Ys **thánuṣ**, ‘kingship, sovereignty’ (B 435), **tháaṅ** ‘residence of the king, palace’ (DC Ys **tháni**) (B 435), also **thaná** ‘success, good reputation’ (B 437).

—IE **tuer*²-, **tur-* **tuerə-* ‘to grab, enclose’ (IEW 1101) > Lith **tvarkà** ‘Haltung, Fassung, Ordnung’, **tvorà** ‘fence, hedge, borderwall’ < Lith **tvér̃ti** ‘embrace, enclose, fence in’ correlated by Rasmussen (1999: 648-649) with Alb **thark**, **cark** ‘byre for animals’, Rum **ṭarc**, Arom **ṭarku** ‘winter byre for sheep; fence around stack’, a Balkano-Carpathian word believed to originate from one of the ancient Balkan languages (Neroznak 1978: 207) : Bur **tark** ‘byre, hut for animals’ (B 422), perhaps also Bur **tháark** ‘walled enclosure (constructed around a shrine)’ (B 435).

IE **d** > Bur **d**

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

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

—IE ***derh₂-**, ***drā-** (Wat 16), with zero-grade ***dr̥h₂-** ‘to work’ : Bur **duró** (L also **claro**) ‘work, affair’, **duroó -é-**, **duróoyas** ‘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 ***k̑l-** ‘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 ***dhroughos** ‘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’ (> PS1 ***drobūtū** ‘crumb, small piece’) (IEW 272-273): Bur **darbát** ‘a small piece, a little’ (BYs 141).

—IE ***dhāl-** ‘to sprout, to bloom’ (> ‘flourish, rise, grow’) (IEW 234) : Bur **dal** ‘up’, **dal -t-** ‘take up, send up’ and **daltás** ‘good, fine’, sem. as Hitt **talles** ‘be favourable’ (B 112).

—IE ***dhē-k-** : ***dhō-k-** : ***dhə-k-** ‘do, make, put’, extended form of IE ***dhē-** : (IEW 235): Bur **doók man-** ‘put, set down’, **doók -t-** ‘build, make, place a stone’ (B 121).

IE **-dh-** > Bur **-t-, -ṭ-**

—IE ***dhē-** ‘do, make, set, put’ with a zero-grade form ***dhə-** (IEW 235): Bur **-t-** ‘do; make, build; make happen; put, put on; say’ (B 413).

—IE ***bhe-dho-lo** < ***bhedh-** ‘to prick, dig’ (PS1 ***bodūlū** ‘thistle, thorn’) (G 142) : Bur **batúl** ‘a thorny plant’ (BYs 133).

—IE ***g^weid(h)-** ‘mud’ (IEW 469): Bur **gīṭ** ‘mud (wet or dry)’ (B 177).

—IE ***g^weh₂dh-** > ***g^wah₂dh-** > ***g^wadh-** ‘to sink’ (> ‘deep’)

(IEW 465): Bur **ǵáat man-** ‘to submerge, to sink’ (B 164), also Bur **ǵutúm** ‘deep’ (B 183).

—IE ***h₂erd(h)us** ‘high, lofty’ (> ‘rise out, stand out’) (M-A 269) : Bur **hart man-** ‘get up, rise abruptly’, **hart -t-** ‘lift, raise, hold up, stand up’ (B 195).

—IE ***dh(o)ngu-** ‘dark’ (Hitt **dankuis** ‘dark’) (M-A 147) (GI 173: ***d^hŋ-k’-**) : Bur Ys **ṭān** (LYs 230-231), NH: **tuṭān** ‘dark’, Hz Ng **tuṭān**, Ys **tuṭān**, and **tuṭaánkus**, Ng **tuṭánkus** ‘darkness’ (B 448) (maybe also Bur **dan** ‘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 **-skarç-** ‘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 Paleobalkan 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 ***kōris** ‘biting insect’ (M-A 312) (Čašule 2010: 23-24).

—IE ***trek-** ‘move, run’ (IEW 1092) : Bur **trak dél-**, Ng **trak(ín) dél-** ‘to skip, to hop’, also **trátrak dél-** (same) (B 430).

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

IE **g** > Bur **ǵ** (also **g**)

—IE ***g(e)u-lo-** ‘glowing coal’ (Wat 27) : Bur **ǵulú-** ‘be burnt up’ (B 178-179).

—IE ***gū-**, ***gouə-** ‘hand; to grab’ (IEW 403-404) : Bur **d--gun-** ‘make people seize, lay hold of’, given by B together with **du-ún-** ‘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(ín) 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 ***góur-**, (gen. ***gunós**) (IEW 397 ***geuro-s**) ‘body hair, lock of hair’ (M-A 252) : Bur **ǵuyán pl** ‘hair of one’s head’

(B 183) (< ***gour-yo-** or ***gun-yo-**).

IE **gh** > Bur **g**

—IE ***dhroughos** ‘phantom’ (M-A 538) : Bur **dúrgas** ‘ghost of the deceased’ (B 126).

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

—IE ***suerh_xK-** (IEW 1051: ***suergh-** ‘to take care of’) ‘watch over, be concerned about’ (M-A 636) : Bur **sarké** ‘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 **aukhén**, **-énos** m. ‘back of the neck, neck; strait’) (< ***aukh-en-**), OInd **usníhā** ‘nape’ (only pl.), (IEW 87) (in M-A2 176: ***h_aenĝh(w)ēn-** ‘neck’, < ***h_aenĝh-** ‘narrow’) : Bur **-qhún** (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 **-lkiš** (B 454). Lorimer (LYs 11-12) gives for Yasin also **-úlkis** and states that the **-u** could be the Ys 3 p. sg. and 3 p. pl. pron. pref. forms. Note also Ys **óštum** ‘waist-cloth, waist-belt’, which has a pron. prefixed form **-štūn** ‘back of waist, loins, small of back’ (B 308). See also **guncé**, **gon**, **ġark-**, **ġusánuš**, **gusú-** (Čašule 2010: 39, 52, 61) (the apheresis occurs mostly before **g** or **ġ**).

IE **k^w** > Bur **k**

—IE ***k^we** ‘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 interrogative pronoun ***k^weh_ali** ‘of what sort, of what size’ and esp. the reconstructed IE form ***k^woli** for OChSl **kolī** ‘how much’ (M-A 457) (in PSI ***ko li**, particle in indef. pron. ‘-ever, whoever, whenever’) : Bur **kúli**, Ng **kúlo** ‘particle used after interrogative pronouns; also ‘always’; after verbs: ‘whenever, if ever’; after adverbs of quantity: ‘a little’, with negation ‘never again’ (B 247) (with **ó** : **ú** alternation).

—IE ***k^wyeh₁₋**, variant metathesised form < ***k^weih₁₋** > ***k^wyē-** ‘to rest, be quiet’, found in words for ‘time’ in IE:

esp. with an **-n** extension, e.g. ORuss **činŭ** ‘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 ***yékr̥(t)-** (heteroclitic **-r/-n** stem) ‘liver’ (M-A 356) : Bur Hz Ng **kin**, ‘liver’ (B 245). Morgenstierne (L XXIII) noted a parallel with Skt **yakn** ‘liver’ but dismissed it as a coincidence. See Čašule (2003a: 18-19).

IE **g^w-** > Bur **ǵ**

—IE ***g^wē(u)dh-**, ***g^wō(u)dh-**, ‘dung, dirt; gross, disgusting’ (IEW 483-5), e.g. OSl **gaditi** ‘detestari, vituperare, reprove, condemn’, OSl **gadŭ** ‘Kriechtler, Gewürm’ (G 224): Bur **ǵutó** ‘stinky worm; stinking person’ (B 182), also Bur **d-ǵatin-**, **d-ǵati-** ‘be filled with wrath against s-one, envy s-one for s-thing, (be)grudge s-body s-thing’ (B 174), Bur **gat** ‘enmity, wrath, malice, hatred’, **gatǵuin** ‘bad, spiteful, hateful’ (B 150).

— IE ***g^wer-**, ***g^wor-** (IEW 477), ***g^werh₃-** (Wat 34) ‘mountain’ (Alb **gur** ‘stone’): Bur Ys **ǵoró**, Hz Ng **ǵuró** ‘stones’ (B 181).

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

—IE ***g^wet-us** ‘stomach, intestine; womb’ (in derivatives more generally ‘innards, entrails’) (IEW 481) : Bur Ng **ǵit** ‘anus, vulva; entrails’ and also **ǵitúiti** ‘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 ***g^wén-i-** ‘woman’ (> Eng **queen**) (Wat 34) : Bur **ǵéniš** ‘queen, Mir’s wife’ (B 175).

IE **g^wh** > Bur **ǵ**

—IE ***g^when-** ‘to strike, smite, kill’ (M-A 548): Bur **-ǵán-** ‘become wounded’, **du-ǵán-**, **d-ǵán-** ‘be worn out, exhausted; be finished, come to an end’ (B 168-169), **1^h-sqan-**, **-sqai-** ‘kill, slay, murder’, **d-^h-sqan-** ‘use up, get worn out’ (B 169). And further Bur **ǵináni** ‘harvest festival; small sheaf of barley’ (B 153) and Bur Hopar **ǵáni**, Hz Ng **ǵáni** ‘axe’ and **ǵantí** (< IE ***g^whntí-s** ‘Schlagen’) ‘europäische Spitzhakke’ (B 146).

—IE ***g^wher-** ‘to heat, warm’, zero-grade ***g^whr̥-** (Wat 34) :

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 ***g^wheia-**, ***g^whī-** ‘sinew, thread’ (IEW 489): Bur **ǵay** ‘thread in a warp’ (B 175).

—IE ***g^(w)hrēi-** : ***g^(w)hrī-** ‘smear, scratch’, e.g. Phrg **gegrimenos** ‘written, inscribed’, Arm **gream** ‘write’, Gk **khriō** ‘I write’ (D-N 1985: 111). Note further Arom **zǵirma**, **zǵrīma**, **sǵrīma** ‘scratch, scrape’ from the Balkan substratum (Illyes 1988: 237) : Bur **girmín-** ‘to write’ (B 155) (for the full discussion, see Čašule 2004: 71-72).

IE **k̂** > Bur **k** (with alternations)

—IE ***suékuros** ‘father-in-law’ (M-A2 215) : Bur **ǵ-skir** ‘father-in-law’ (B 381).

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

—IE ***kóuh₂r-** ‘hole, opening’ (M-A 96): Bur **kur** ‘small open tank; iron drain’ (B 247).

—IE ***ker-h₂k-** ‘branch’ (M-A 249) : Bur **karkós** ‘young sapling (that is being grafted); stem of flower, just sprouted’ (B 242).

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

—IE ***keu₂-** ‘to light, to burn’ (IEW 594-595, 597), esp. with a **-k-** formant as in IE ***keuk-** ‘to shine, glow; burn’: Bur **du-úikikin-** ‘(of fire) to become lit’, **d²-kukin-**, **d²-kukun-**, **d²-skukin-**, **d²-skukun-** ‘light up (firewood, cigarette)’ (B 254) (from a zero-grade form).

—IE ***keudh-** ‘to hide’ : In IEW 952: ***(s)keudh-**, also ***(s)keu-t-**; Wat 78: ***(s)keu-** ‘to cover, conceal’; in M-A 134 and 268 we find two stems: ***keudh-** ‘hide’ and ***(s)keu(h_x)-** ‘cover, wrap’ : Bur **du-khat-** / Bur **d²-kaṭ-** ‘to be stopped, closed, impeded; to get caught, get stuck, entangled’, also **d²-skat-** : **d²-skhat-** ‘stop, prevent, hold up, block’ (B 253), which Berger considers related to **du-kháci-** **-ć-** ‘enclose (men, animals)’ and **kháci-** **-ć-** ‘to shut up, enclose animals’ (with **-ty-** > **ć**) and **ǵ-káci-** ‘to keep s-body enclosed’.

IE **ǵ** > Bur **g**, **ǵ**

—IE ***ĝebh-** ‘branch, stick’ (only in Baltic and Germanic) (e.g. OIcl **kafi** ‘a cut off stick’, **kefli** ‘cable; stick; gag’) (IEW 353) : Bur ¹**gabí** pl. **gabenc** ‘reed, tube, hollow stalk’ (B 141), **gabí ten** ‘collarbone’ (BYs 144) and ²**gabí**, pl. **gabímuc** ‘horse’s bit’ (B 141).

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

—IE ***ĝen-**, ***ĝenh₃-**, ***ĝneh₃-** ‘know, be(come) acquainted with, perceive’ (> ‘appear’) (M-A 336-337) : Bur **ĝan-** ‘to appear, seem, be visible’ (B 168) Ys also **-ĝán-** ‘see, view’ and **ĝèn** ‘visible’ (B 20) and the neg. **akhén-** ‘not to know, not to understand’ (B 196).

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

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

—IE ***ĝerh₂-** ‘grow, age, mature; grain’ : (M-A2 190): Bur **ĝirĝār man-** and **ĝagár ní-** ‘(of corn, walnuts) ripen in great quantities’ (B 176), also **gur** ‘wheat’ (B 161).

—IE ***ĝonu-** (gen. ***ĝenus**) ‘knee, also angle’ (M-A2 183, note esp. Alb **gju** (< ***gluno-** < ***ĝnu-no**) ‘knee’ (M-A 336) : Bur Ys **-núnus**, Hz Ng **-dúmus** ‘knee, hock’ (B 125), also **-múnus** ‘corner’ (B 294). The Bur forms < ***gnun-g/kus** < ***ĝnu-no**.

IE **ĝh** > Bur **g**: **ĝ**

—IE ***ĝh_auos** ‘gaping hole’ and (NE) ***ĝhéh_a(u)-m_r** ‘interior (of mouth)’ (M-A 96): Bur **-ĝumór**, Ys **-ĝomór** ‘hole (small, in strap, etc)’, linked by B with Bur **-ĝúmar** ‘bowels, (the “inside” body); entrails’ (B 179) and **ĝamór** Ng ‘ear-hole’ (Varma 154).

—IE ***ĝhul-** ‘be crooked, bent’ : esp. sem. of OSl **zǔlǔ** ‘evil, malicious’, Gk **phalós** ‘bad, evil’ (G 692) : Bur ¹**ĝul** ‘grudge, enmity’ (L 185) (B 177) (in E-K 98: ‘malice’).

—IE ***ĝhle_xdh-ro-** ‘shiny’ (> ‘smooth’), considered a NW development of the root ***ĝhel-** ‘shine’ (e.g. Eng **glitter**) (M-A 529), and in words denoting color ‘green; greenish

yellow; yellow' : Bur **ǵiltír-**, Ng **ǵultír-** 'be extravagant in regard to dress and food, do o-self well, show off, make a display' (B 176) and Bur **giltír** 'pod, legume' (B 153).

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

—IE ***ǵheim-** 'winter' (IEW 426) : Bur **ǵamú** 'ice, frost; glacier' (B 168).

—IE ***dnǵhuh_a-** 'tongue' (M-A2 175) (IEW 223) : Bur Ys - **yúngus** (BYs 187), Hz Ng **-úmus** 'tongue' Hay. "**unas**" (according to B for ***u-únus**) (B 455-6).

—IE ***dhreǵh-** (***dhrǵh-nā-**) '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 ***bhēǵh-** : ***bhōǵh-** 'to quarrel, dispute' (Rix 68: ***b^heh,ǵ-**) (e.g. MIr **bāgach** 'warlike', Russ **bazgala** 'evil-doing', TochB **pakwäre** 'wicked', OIcl **bāgr** 'difficult, morose, awkward') (IEW 115) : Bur **baǵárk** 'evil, evil-doing, quarrelsome' (B 30) (Wil 19: 1. 'bad-tempered; fierce, violent; evil; wicked; naughty, mischievous; disobedient, immoral; unchaste' 2. 'naughty person, brat'), **baǵárkkus** 'evil, bad, damage'.

—IE ***ǵhor(ie/o)** 'desire' (M-A 158) (Wat 30: ***ǵher-** 'like, want', and suffixed zero-grade form ***ǵhr-ǵio**) (IEW 440) : Bur **gurú-** in **-s** 'heart' + **gurú-** 'to love, be fond of s-one, like; look after s-one' (B 161-162) possibly from ***ǵhr-ǵio** > ***guro** and by assimilation **gurú-**, (or alternation **o** : **u**).

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

IE **p** > Bur **b**

—IE ***pal-** 'to burn' (e.g. PSI ***paliti**, ***polēti** 'to kindle, to light', also IE ***(s)pel-** : OInd **sphulingah** 'spark', Arm **p'ail** 'shine, flash' (IEW 805) : Bur **bal-**, (in Will 19: **baláas**) '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 **padáay** **á-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', **pelë** 'mare', Gk **pólos** 'foal', Arm **ul** 'kid, young of deer', Eng **foal** (M-A2 192) : Bur **bélis** (L also **bēlis**), 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 ***peh_x(i)** 'misfortune', ***pih_x-** 'revile' e.g. OInd **pāmán-** 'skin disease', **pīyati** '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 **dimíraq-** '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 **daǵá-** **-ć-** 'hide, conceal oneself, take refuge', part. **nutagá(n)**, and **á-staqa-** Ng **á-staǵa-** 'hide, conceal' (B 109).

—IE ***terh₁-** 'rub, turn' (> 'thresh') (Wat 91) : Bur **dař** 'crops that have been cut, threshing floor' (L 114), **dárći gíy-** Ng 'thresh' (B 115).

—IE ***(s)tāi-no-** 'stone' (IEW 1010) : Bur **dan** 'stone' (B 113).

—IE ***telh₂-** or ***t̥lh₂-** 'lift, raise' (< 'carry, bear, uphold') (M-A2 406): Bur **dal** **á-t-** 'drag along, haul', **dildál -yán-** 'carry' (B 110-111).

—IE ***stel²-**, ***stelh_x-** 'spread out flatly, broaden', (e.g. OChSl **steljo** 'spread (out)' (M-A 247: ***(s)telh_x-** 'flat'), ***stlā-to-** 'wide' (1018-1019) : Bur ⁴**tal 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)', **tálkiş** Ng 'shallow (well), slow flowing (river)'. And further: Bur **dáldalum** 'wide, width' (B 111) as a reduplicated stem, or from IE ***(s)tlā-to-** 'wide' > ***tal-to-lo** > ***dal-to-lo** > **dáldalum** (cp. with Arm **lain** 'wide', Lat **lātus** (***stlā-to-**) 'broad').

IE **k-, k̑** > Bur **g-**

—IE ***k̑ers-** 'run' (M-A 491) : Bur **gáār-** (part. **nukáarc̑(in)**) Hz Ng 'run, gallop; run away, run off; come running, run after; rush upon, charge; flow, pour down' and **:-skarç-** '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 : ç : çh**

—IE **-s-** mobile in verbs (Fortson 70) : Bur **-s-** verbal prefix: e.g. IE ***(s)ker-** 'turn, bend' : Bur **d̑-karan-**, **d̑-skaran-** 'surround, gather around, enclose' (B 242).

—IE ***suel-**, ***sul-** 'to wet, moisten; flow; (noun) liquid, fluid, moisture, sap', ***seu-**, ***seuə-**, ***sū-** 'juice' (IEW 912-913) (Mann 1334-1335) : Bur **çhil**, Ys: **çel** 'water; juice, sap' (B 76) and **d̑-sil-**, **d̑-sili**, (NH also **d̑-çhil-**) 'make wet, water intensively', **du-súlğu-** 'become fluid, watery', **d̑-çhulğu-**, **d̑-çhilğu-** 'make watery' (B 384) (B 77).

—IE ***sē(i)-**, ***si-** 'to tie, bind' (Buck 546) : Bur **d̑-çi-**, Ng **d̑-çhi-** 'to tie, tighten' (B 76).

—IE ***sem-s** ~ ***sem** ~ ***sm-ih_a-** and esp. zero-grade ***sm̑** 'one, united as one, one together' (Wat 75) : Bur **-çhāmanum** (L 47 **-samanum**) (B 73) Hz Ng 'first-born (son, daughter, young animal)' (in Ys **-ç-**).

—IE ***sor-gh-** or ***sȓ-gh-** 'to wound, tear' < IE ***ser-**, ***sor-**, ***sȓ-** 'split, rip apart, tear': (Mann 1249) : Bur **-sárk-** 'strike one thing on another, bring down (sword, axe, stroke) on, smite with', **çarák isárk-** '(of animals) to hit out with hind legs' (B 375-376) and Bur **çar :-t-** 'to tear, to tear off, split,

cut open' (B 69).

—IE ***suékuros** 'father-in-law' (M-A2 215) : Bur **śskir** 'father-in-law' (B 381).

IE **ks** > Bur **ś**

—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 **śe** '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 a few examples in Bur where **h** < **k** (Morgenstierne 1945: 74).

—IE ***meug-** 'slimy, slippery' (***muk-so-** > Gk **muxa** 'mucus', also Lat **mūcus** 'mucus' (Wat 55-56) : Bur **-mús** 'snot, nasal mucus', Ys also 'nose' (B 296) (LYs 178).

—IE ***ksēro-** < ***kseh₁-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 ***ksē-** < ***kseh₁e-** 'burn, singe') (M-A 170) : Bur **śiráu** '(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) **ś**) Bur Ys **iskárk**, Hz Ng **śikárk** '1. brass, copper; 2. yellow, pale' (Will 108) (B 407).

—IE *(**s**)**tég-es**, ***tég-es-os** 'roof' (e.g. OIr **tech** 'house', Gk **tégos** 'roof', OPruss **stogis** 'roof', Lat **tēctum** 'roof', OHG **dah** 'roof' < *(**s**)**tég-** 'to cover' (IEW 1013-1014), as in Bur **daǵá-** **-ć-** 'to hide, conceal oneself, take refuge', part. **nutaǵá(n)**, **-staga-** 'hide, conceal' > Bur **tési** 'roof (external aspect)' (B 425) (**gs** > **ks** > **ś**).

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: I, 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-nominative 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:

	PERSONAL PRONOUNS
<u>Indo-European</u>	<u>Burushaski</u>
	<i>1. person singular</i>
* $(h_1)e\acute{g}oh_2-$	ja (< * ya < * iga) pron. prefix á- etc.
* me-	mi (limited. poss.)
	<i>2. person singular</i>
* tuh_xom + ĝhō-	un, uñ, um ‘you’, also uñgo ‘you here’
* ĝhō- dem. base	-go- and pron prefix gó- etc. thum < * tun+g or * tum+g ‘other, another’

	<i>1. person plural</i>
*wei-	mi
*mes-	pron. prefix mí-, mé-, mée- etc.
	<i>2. person plural</i>
*uoh ₁ - 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-liion	salén, silajín
*k ^w úr-, *k ^w or-	-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. **jáar**; 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 ***h₁eĝ-** (emphatic: ***h₁eĝóm**) 'I' (M-A 454) (Beekes 1995: 207) reconstructs a laryngeal, whereas almost all other analyses point to a nominative ***eĝ-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 **g-y-** in the anlaut, which Morgenstierne (1945: 79-81), also Berger (e.g. B 150: Hz Ng **gaş** 'price': Ys **garç** also **yarç** < ***i-garş** (**i-** is the pronominal prefix) trace to an earlier ***i-g-** > ***y-g-** > **y-**. And further: Bur Ys **-yánji** < ***gán-ċi** (B 472), **-yámi** : **gámi-** (B 471) (see Berger 2008: 3.16).

The Burushaski pronoun under this proposal could be explained from IE ***(h₁)eĝoh₂-** : [**(h₁)e-** > **i-** : **e-**; **-ĝ-** > **g**; **oh₂** > **a**] > ***ig-a** > ***yga** > ***ya** > **ja-**, perhaps influenced by the languages mentioned above. Refer further to the alternation **j** : **y** in Ys **jaĝá**, Hz Ng **-yaĝá** (B 470), Hz Ng **jótiš**

: Ys **yótes** (B 228), **ǵajámiso** : **ǵayámiso** (B 166), **j** - : **d²y(a)** ‘to come’ (of Indo-European origin), or Bur **yaqhu** < Turk **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-**.⁸

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 **hanjíl** ‘charcoal’ (B 189) from IE ***h_xóngl** or ***h_xéngl** ‘charcoal’ (M-A 104) (with the common **i** : **u** alternation before **r/l**). This could mean that Bur **ja** may derive from ***ga** : ***ǵa** < ***ega** < ***egoh₂**, 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 < ***mē-**): 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**, **un̄**, **um** ‘you (sg.)’ also **un̄go** (Murtezabad and Ganesh subdialect) ‘you here’ (gen.erg. **úne**, dat. **únar**, abl.

⁸Note in this respect the exact parallel with Slavic, i.e. OChSl **azŭ** : PSlav ***ja(zŭ)** ‘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 ***tuh_xom** (emphatic form of ***tuh_x** ‘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/ī** (**tu/ū**).

We can assume a change **t > d**, taking into account the change/alternation **t- > d-** and **ṭ- > ḍ-** in Burushaski (Čašule 2010: 9 and Berger 2008: 3.11). Note: Bur **dağá- -ć-** ‘hide, conceal o-neself, take refuge’, part. **nutağá(n)**, and **:-staqa-** Ng and **:-stağa-** ‘hide, conceal (living beings); close (the eyes)’ and **nutağán** ‘concealing o-self; secretly, stealthily’ (B 109) [**< IE *(s)teg-** ‘cover, hide’ (IEW1013-1014)] and note further e.g. **dasmilá : tasmilá** (B 116); **dram : tram** (B 122-123); **dutúr : tutúr** (B 127); **daltánas : taltánas** (B 112); **dáalumuc : táalumuc** (B 108); **datágar : tatágar** (B 116) (L 119); **ḍután** (NH) : **ṭután** (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 **dēls** ‘son’, Alb **djalē** ‘boy, young man, son’ < OAlb ***delās** ‘a boy’), Lat **filius** ‘son’ (Wat 18), ultimately < IE ***dhh₁ileh_a-** ‘teat, breast’, ***dheh₁lus** ‘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 ***dn̥ghuh_a-** ‘tongue’; under a very tentative interpretation, the first component ***wa-** in Bur **wálto** ‘four’ (2X2), perhaps from IE ***d̥woi-** ‘two’ (M-A 400) (for other possibilities see Čašule

2009b or 8.1.4.); also **akhíl vs dakhíl, dakhí** ‘such as this, like this, of this kind’ (B 14); perhaps **del** ‘oil, fat’ (B 118) : **halél** ‘fat, oily’ (B 187).⁹ 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 ***tumg**, 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**/ī (**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 ***tuh_xom-**, 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 ***ǵhō-** (G 692) (see the discussion in Section 4.2). The Murtezaabad and Ganesh form **uŋgo** ‘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 ***ink^wis-** ‘you two’: Goth **iqkis** ‘you two’, OEng **git** ‘ye two’, **inc** — **incit** ‘you two’, ON **ykkir** ‘you two’ (M-A 455) (Howe 1996).

2.3. First person plural

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

⁹Consider the possibility that Bur **-ú-** ‘to give’ (B 453) may derive from IE ***dō-**, ***dō-u-**, ***du-** (IEW 223), in M-A2 (270): IE ***deh₃-** ‘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 **eh₃ > oo** i.e. **ō** (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. **múicum**) and the pronominal prefix **mi-** /**mí-** / **mé-** / **mée-** can be correlated directly within Indo-European with Arm **mek'**, Blt-Sl ***mes** e.g. OPrus **mes**, Lith **mēs** and PSI ***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-me-s**; 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. ***uéy(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 ***sueks-**, ***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 **bišindu**, Hz Ng **mišindo** *hxy*, Ys **bišinde**, Hz Ng **mišindi** *z* 'six' (B 289). —IE ***ues-** 'to clothe' (Wat 101): Bur **-wási-** 'put s-thing in or on', (for *y*-sg objects **bišá-**) 'put on; wear; don (clothing); fix, attach; fit; suspend, hang' (Will 121) + **-k(a)**: **bešké**, Hz Ng **bišké** '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 Paleobalkan origin (from Thracian) (Brâncuș 1983: 40-1), and with an identical etymology). Berger (B 296) links the Burushaski words further with **-múški** 'pubic hair' (refer to 1.4.6).

This would indicate a derivation from ***uéy(e)s > *beye-s > *bē > mi, mée-** or ***uéy(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 ***uoh₁-** ‘you two’ (***ues-**) or more precisely semantically from ***uos**, the enclitic and oblique form of ***iuh₂s** ‘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 ***wōs**) (e.g. Lat **vōs** ‘ye, you’, PSI ***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 **śñ̄ yī** ‘one’s own’, Lat **sē** ‘him-/her-/itself’, (poss. adj **suus**), OChSl **se** ‘-self’, OPruss **sien** ‘self’, Lett **sevi-** ‘-self’, OHG **sih**, Goth **sik** ‘him-/her-/itself’ etc. and ***sū-** ‘joint family’¹⁰.

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

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 **:- skir**, pl. **:- skindaro**, Ng pl. **:- skirišo** ‘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’ + ***koru-** ‘head’), also **gus** ‘woman’, **:-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 **-sildir** ‘Väter eines Ehepaars auf einander bezogen’ (the second component derived by Berger (2008:3.31) with an inorganic **-d-** < **hir** ‘man’ and **-sílguš** ‘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-lijon** ‘Schwäger, die Schwestern zu Frauen haben’, as in ON **svilar** ‘husbands of two sisters’, Gk **aélioio** ‘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 ***sē-** (< **seue** (M-A2 417) (in **silajín** (< ***salijin** < ***saliijn** < ***sue-lijon**) and **-sildir** and **-sílguš**).

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 ***k^wúr-** ‘where’, esp. e.g. Lith **kuř** ‘where’ and importantly Lith **kuris** ‘that one, who’ (interrogative and relative), and from ***k^wu-** also Alb **kush** ‘who’, OCS **kŭto** ‘that one, who’, etc. or IE ***k^wor-** ‘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 **-í** ‘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- / í- / 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 **úne** (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 **khóle** ‘here’ : **khólum** ‘from here’ (B I 69).

Bur abl. postp. **-čum** also **-čimo** ‘from’ (B 70) can be compared with PSI ***sŭnŭ** ‘with; of, from’ (IEW 904), i.e. ultimately from IE ***sem-s** ~ ***sem** ~ ***sm-ih_a** ‘united as one, one together’ (for a detailed discussion see 8.1.4. and

Čašule 2009a), from which we have Bur **-čhāmanum** (L 47 - **samanum**) (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. **incum** = '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 **-ōt** < **-o-h₂at** (e.g. OLat **gnaivōd**). E.g. Bur **esēete** = 'with it': **ese** 'it' + **-ate** 'with'.

Bur loc. (specific ending) **-i** (B I:63) < IE loc. sg. **-i** (Watkins 1998:65). For example: **khóle** 'here' : Ng **khóléi** 'here' (B 256).

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.

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:

	h	x	y
sg.	<i>n</i>	<i>s</i>	<i>t</i>
pl.	<i>u</i>	<i>ċ</i>	<i>k</i>

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

<u>Indo-European</u>	<u>Burushaski</u>
	<i>Distal</i>
	<i>Singular</i>
*i- / *e- dem. and pers. pron.	i- / ĭ- / é- / ée- pron. prefix, 3 p. sg. <i>hmxy</i> .
*i- + *eno- or *i- + *ne-	iné, in, Ys in, ne ‘that one; he, she, it’ (<i>h</i>)
*is-(e) ‘it’	isé, es, Ys se, os ‘that one, it’ (<i>x</i>)
*id- or *it-(e) ‘it’	ité, et, Ys te, ot y sg ‘that one, it’ (<i>y</i>)
	<i>Plural</i>
*au-, *u-, *ue- ‘that, other’	ué, u ‘they, those, those people, the’ (<i>h</i>)
*is-(e) ‘it’ or *it-se	icé, ē, Ys cé, oc ‘those’ (<i>x</i>)
*(i)-ge assev. emph. part.	iké, ek, Ys ke, ok (<i>y</i>) ‘those’
	<i>Proximate</i>
*kō-, *ki- ‘this one’	kho- or kh(i)- ‘this one’ added to all distal pron.

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 **ēni** ‘that one’, OCS **onč** ‘that; he’ (Fortson 2004: 130), also Sl **ino-** ‘other’, Lith **anás** ‘that’, perhaps also in Gk **keĩnos** ‘that’ (< ***ke-eno**), and Gk Thess **tó-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’¹¹ 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 **ič** / **í** / **é** / **ée-** pronominal prefix for 3 pers. sg. *hmxy*.

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 ***ē** or ***ě** : ***ō** or ***ō 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 **če**, **oč** with the alternation **e** : **o** may be further confirmation of this

¹¹Note that Armenian makes use of the same core deictic markers as Burushaski in the demonstrative stems (except for Bur **-s-**): “Arm **so-** (< ***k ýo-**) ‘this’, **do-** ‘that’ (< ***to-**) and **no-** ‘yon’ (< ***no-**)” (Arjello 1998: 216).

proposal.

[1a] *h*-class, pl. The plural stem is suppletive. The *h pl* **u**é, **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 **ū** 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 **isé**, **es**, Ys **se**, **os** ‘that one, it’ (B 215). We derive **isé** [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 **jí**, **jí** ‘he, she’, Gk (Cypriot) **ín** ‘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. **joṭ** ‘small’ > **jóṭis** ‘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 **icé**, **ec̣**, Ys **cé**, **oc̣** ‘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 morphological variation of the singular form, considering the **ç** : **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. **icé** < ***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 **ísídum** (< ***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 ***k^we** '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 ***k^wo-**, ***k^wi-** (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 ***k^woi-**).

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 ***kō-** 'this one' with variant form ***ki-** (Wat 43): OIr **cē** 'here, on this side', OEng **hē** 'he', Eng **he**, OHG **hiu-tagu** 'on this day, today', OCSl **sī** '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 **kē-** (considered from a different origin) is added to the demonstratives that derive from IE ***so**, **sā**, **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**, **kē-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); **kaťál** : **gaťál** 'on foot' (Sh **gaťál**) (B 150); Bur **garmá** 'a (thin) bread cooked with vegetables' (B 148) < IE ***korm-** 'broth, mash'; Bur **gáarc-** (part. **nukáarc(in)** Hz Ng 'run; run away, run off; rush upon, charge; flow, pour down' (B 141) < IE ***kers-** 'to run' : Lat **currō** (<***k̑rse/o**) 'run', **cursum** '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 ***ġho-**] 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 (**-kē**, 'here' deictic particle and ***kō-** 'stem of dem. pronoun meaning 'this' with variant form ***ki-**' (Wat 43). There is a high probability

that two semantically identical demonstrative pronouns, differing only in having **ḳ-** or its voiced pair **ġ-** in the anlaut, could have merged.

5. Burushaski demonstrative adverbs

<u>Indo-European</u>	<u>Burushaski</u>
	<i>Distal</i>
* tō(r) -, * tē(r) ‘there’ + * -le dist. part.	teéle , toóle , Ys to , tóle ‘there’ -le also in khóle ‘here’, éle ‘there’, itéle ‘there’ tóorum (Ys taúrum) ‘that much, so much’
* -tali ‘such, of that sort’	taíl ‘as it is, such, so’ and -tali adv. ending
* tam- ‘so much’ < * to-	tanć ‘equal to, as big as, as much as’. ṭam- , tan- intensifier
* e- + * -le	éle or eléi or aléi ‘there’
* it- + éle	itéle ‘there’
* h₁ith_{3a}- ‘thus’	íti , it ‘that side of; relating to this, of this kind’
	<i>Proximate</i>
* kō- + * -le	khóle ‘here’
* kī- + * h₁ith_{3a}-	khi+iti = khíti ‘on this side, here’, khít ne ‘here’.
* ei- ‘this’	akhíl ‘like this’ (< a + khi + I(e).) akhóle
* do- + * ei-	dakhíl ‘like this’
* dā	da , dáa ‘again, also, and’ and d- verb. prefix

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 **teéle** and **toóle**, Ys **to**, **tóle** ‘there’ (B 424-425), from IE ***tōr-**, ***tēr-** (< IE demonstrative pronoun ***to-**) ‘there’ (IEW 1087) (M-A 457) (e.g. ON **þar**, Goth **þar** ‘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 **khóle** ‘here’, and **éle** ‘there’ and **itéle** ‘there’ < **it** + **éle** (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 ***h₂élios** ‘other’, Bur has **hóle**, **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** *yz* Ys (Zarubin) **haltó**, **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 **lě** (***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 **taúrum**) or **tóoruman**, Ng **tóoruman** ‘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**, **tóorim-** *z*, ‘ten’.

3. ‘such, of that sort’. Bur Hz Ng **tail** (adv.), Ys **tailc** ‘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 ***k^weh₂li** ‘of what sort, of what size’ (e.g. Lat **quālis** ‘of what sort, of what kind’, Lith **kōlei** ‘how long’, Gk **pēlíkos** ‘how old, how large’ and especially the reconstructed IE form ***k^woli** for OCS **kolikū** ‘how large’, **kolī** ‘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 **kūli**, Ng **kūlo**, 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 **tanć** 'equal to, as big as, as much as' (LYs 230) (BYs 180), and as an intensifier in **ṭam-ṭák** 'same, of the same value' (B 444), **tam-taláso** 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 **éle** or **eléi** or **aléi** 'there' (B 137). The **e-** in **éle** 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 **íti**, Ys also **it** 'that side of, across; relating to this, of this kind' (B 217-218), from IE ***h₁ith₂a-** 'thus': MWels **yt** (verbal particle), Lat **item** 'also, likewise', **ita** 'so, thus, in this manner', Lith (dial.) **it** 'as', OInd **íti** '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** + **éle** (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 ***kō-** 'this one' with variant form ***kī-** (Wat 43), see point 4.2) is proposed 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 **khíti** 'on this side, here', **khit ne** 'here' (B 255-

256).

2. 'this year; today'. **khúin** Hz Ng 'this year' (Ys **khúin**, **akhúin**, **akhúin** '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 **khúin** : **akhúin**, **akhúin** '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 ***k^woi-**).

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 PSI ***da** 'and, in order to, yes', (< IE ***dā-**) (probably here also PSI 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-

182). 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 **ami-** 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**, **akhúin** ‘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 **mān** ‘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:

e/i-
e/i + se (<**so-e** ?) = **ise** e/i + **te** (<**to-e** ?) = **ite** e/i + **ne** (<**no-e** ?) = **ine**
ki-, **ko**-
au (pl.)
ei -
to-, **da** / **daa** (< **dā**-)

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. Brâncuş (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:

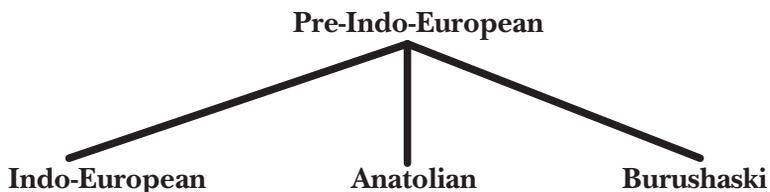


Table 7. Burushaski as a branch of Pre-Indo-European (?)

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.

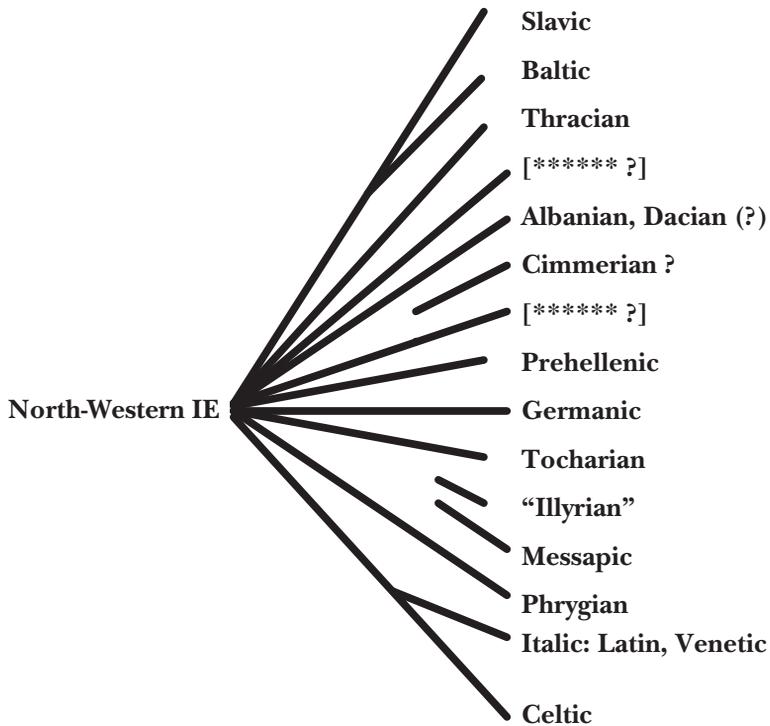


Table 8. North-Western Indo-European according to a 2009 Hamp handout (with our insertion of Burushaski). See also Hamp (1990) q. in Mallory-Adams (2006: 74).

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.

Abbreviations of sources cited

- B** = Berger, Hermann. 1998.
BYs = Berger, Hermann. 1974.
Cunn = Cunningham, A. 1854.
DC = Tiffou, E., Morin, Y.C. 1989a.
E-K = Edel'man, D. I. and Klimov, G. A. 1970.
E-M = Ernout, A. and Meillet, A. 1959.
ESSJ = Trubačev, O. 1974-
G = Gluhak, Alemko. 1993.
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.
L I = Lorimer, David L.R. 1935.
Leit = Leitner, G.W. 1889.
LYs = Lorimer, David L.R. 1962.
M-A = Mallory, J.P. and Adams, D.Q. (eds.). 1997.
M-A2 = Mallory, J.P. and Adams, D.Q. 2006.
T = Turner, Ralph L. 1966.
T-M = Tiffou, Etienne and Morin, Yves Charles. 1989.
T-P = Tiffou, Etienne and Pesot, Jurgen. 1989.
Wat = Watkins, Calvert. 2000.
Will = Willson, Stephen R. 1999.
W-I-S = Wodko, D. et al. 2008.

Abbreviations of languages and dialects

Alb - Albanian, **AncMcd** - Ancient Macedonian, **Arm** - Armenian, **Arom** - Arumanian, **Av** - Avestan, **Balt** - Baltic, **Blg** - Bulgarian, **Bret** - Breton, **Bur** - Burushaski, **Celt** - Celtic, **Corn** - Cornish, **Croat** - Croatian, **Cymr** - Cymric, **Cz** - Czech, **D ýom** - D omaaki, **Eng** - English, **Gk** - Greek, **Gk Att** - Attic Greek, **Gk Ion** - Ionian Greek, **Goth** - Gothic, **Grm** - German, **Grmc** - Germanic, **H** - Hindi, **Hitt** - Hittite, **Hung** - Hungarian, **Hz** - Hunza dialect of Burushaski, **IA** - Indo-Aryan, **IE** - Indo-European, **Illyr** - Illyrian, **Ind** - Indian, **Ir** - Irish, **Irn** - Iranian, **Itl** - Italic, **Khw** - Khowar, **Lat** - Latin, **Lett** - Lettish, **Lith** - Lithuanian, **Mcd** - Macedonian, **MEng** - Middle English, **MGk** - Modern Greek, **MHG** - Middle High German, **MIA** - Middle Indo-Aryan, **MIr** - Middle Irish', **Mold** - Moldavian, **Myc** - Mycenaean Greek, **MWels** - Middle Welsh, **Nep** - Nepali, **Ng** - Nager dialect of Burushaski, **NWIE** - North-Western Indo-European, **OCS** -

Old Church Slavonic, **OEng** - Old English, **OHG** - Old High German, **OInd** - Old Indian, **ON** - Old Norse, **OPers** - Old Persian, **OPrus** - Old Prussian, **OSI** - Old Slavic, **Osset** - Ossetian, **OWels** - Old Welsh, **PAlb** - Proto-Albanian, **Panj** - Panjābi, **Pers** - Persian, **PGrmc** - Proto-Germanic, **Phrg** - Phrygian, **PIE** - Proto-Indo-European, **Pk** - Prakrit, **Pl** - Polish, **PNC** - Proto-North Caucasian, **PSI** - Proto-Slavic, **Rom** - Romanian, **Russ** - Russian, **Sh** - Shina, **Skt** - Sanskrit, **Sl** - Slavic, **Srb** - Serbian, **SSI** - South Slavic, **Thrac** - Thracian, **Tib** - Tibetan, **Toch A**, **Toch B** - Tocharian A, Tocharian B, **Turk** - Turkish, **U** - Urdu, **Ukr** - Ukrainian, **Umb** - Umbrian, **Wels** - Welsh, **Ys** - Yasin dialect of Burushaski.

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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, **-eh_a* stems, *-men* stems and consonantal stems in Burushaski:

**-o* stems:

- Bur **handó** ‘stone’ < IE **h_xond-* / **h_xnd-* ‘stone, rock’.
- Bur **-phágo** ‘stick, staff’ < **pāĝ-*, ‘fasten; strengthen; parts to drive in, peg, post’ and **phañ man-** ‘push, press forward’ < IE **pa-n-ĝ-*, (Lat **pangō** ‘drive in’).
- Bur **hurgó**, Ys: **horgó** ‘ascent, slope up; uphill’ < IE **h₄órĝhei* ‘mounts’ (‘climb up; rise, become puffed up’).
- Bur **karéelo** ‘ram’, **kíro** NH ‘sheep’ (B 245) **káru** ‘ibex’ (BYs 157), **krízí** and **krózo** ‘sheep and goats’ < IE **kors-*, **kerəuos* ‘horned’, **ker-*, **kerh₂(s)* ‘horn’.

— Bur Ys **doğói**, Hz **duğúi** ‘noon’ > IE ***dhog^wh-eyo-** ‘burn, warm’ suff. **o**-grade (caus.) form < IE ***dheg^wh-** (esp. PGrmc ***dagaz** ‘day’, Goth **dags** ‘day’).

— Bur **karkós** ‘young sapling; stem of flower’ < IE ***ker-h_xk-** ‘branch’.

— Bur **duró** (L also **daró**) ‘work, affair’, **duroó -ć-**, **duróoyas** ‘to work’ < IE ***derh₂₋**, ***drā-**, zero-grade ***d₂rh₂₋** ‘to work’.

— Bur **taró** pl. **taromuć** and **toró**, pl. **toromuć** ‘cowdung beetle’ < IE ***ter⁶-** ‘noxious insects’ (e.g. Lat. **tarmes** (**termes**) ‘wood worm’ (from an **o**-stem ***t_εrθmo-s**)).

— Bur **gunó** ‘seed; sperm’ < IE ***g_ŋ** - in words for ‘beget’, ‘bear’, ‘be born’ (> ‘semen’ : Gk **gónos** ‘sperm, semen’).

— Bur **goró**, **guro** ‘stones’ < IE ***g^wer-**, ***g^wor-** (***g^werh₃₋**) ‘mountain’ (Alb **gur** ‘stone’).

— Bur **hamíso** ‘a small insect’ < IE ***h₁empis** ‘gnat, stinging insect’.

— Bur **hağúć** (Ys **hağós**) ‘pass, mountain-pass’ < IE ***h_aeğ-** ‘drive’.

— Bur **dúrgas** ‘ghost of the deceased’ < IE ***dhroughos** ‘phantom’ (unstressed **o** > **a**).

— Bur **khándas** ‘a tick’ < ***k(o)nid-** ‘nit, louse egg’ (**o** > **a**).

— IE ***suékuros** ‘father-in-law’ (M-A2 215) : Bur **- skir** ‘father-in-law’, the **-os** of the sg. is retained in the pl. form **- skirišo** (**i:u, o>ui**).

***i** stems:

— Bur **huyés**, **huís** (sg and pl) ‘small cattle (sheep and goats)’ < IE ***h₂ouis** (gen. ***h₂ouios**) ‘sheep’.

— Bur **gabí** ‘reed, tube, hollow stalk; horse’s bit’ < IE ***gebh-** ‘branch, stick’ (e.g. OIcl **kafi** ‘a cut off stick’, **kefli** ‘cable; stick; gag’).

— Bur **kharéti** ‘small wicker basket’ (< ***krət-i-** or ***k_ɾt-i-**) < IE ***kert-** ‘plait, twine’ (e.g. Lat **crātis** (< ***krət-i-**) ‘wickerwork, hurdle, honeycomb’).

— Bur **tési** ‘roof (external aspect)’ < IE ***(s)tég-es**, ***tég-es-os** ‘roof’ (e.g. Gk **tégos** ‘roof’), < ***(s)teg-** ‘to cover’.

— Bur **garí** ‘lamp, light; pupil of eye’ < IE ***g^wher-** ‘to heat, warm’.

— Bur **génış** ‘queen’ < IE ***g^wén-i-** ‘woman’ (> Eng **queen**).

— Hz Ng **-úṭ** and **-úṭis**, Bur Ys **-hútes** ‘foot, lower leg’ **hóti** ‘artificial penis’ < IE ***h₁ouh_xdh_ɣ-** < ***h₁euh_xdh-** ‘swell (with

fluid)' (M-A 82), esp. PSI **udū-* 'limb, penis'.

—Bur **buúri** 'crest of hill, peak', **-úri** and **-úriš** 'crest, ridge, mountain peak; prong; fingernail' < IE **uer-* 'high raised spot or other bodily infirmity', zero-grade **ur̥-*.

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

—Bur **ǵásil** 'individual stick or sticks' < **gas-i-lo* (cf. **-díl** 'breast' < **dhi-lo*), < Ys **ǵí** -, Hz Ng **ǵíy-**, 'throw' < IE **ǵhais-os-*, **ǵhais-es-* 'a stick, spear' < IE **ǵhi-* 'throw' (*ses* > *ss* > *ś*).

—Bur **-yátis**, (L) **-yétis**, Ys **-yátes** 'head; mountain peak; leader; a big thing', (T-P 156) **-yátis** < derived by Berger from **-yáte** 'on, upon (someone), up, above', **yát** 'up, above, on top; (adj) upper, further, later, again' (B 475) < IE **h₁eti* 'in addition' (Av **aiti** 'over', OInd **áti** 'over, towards', Phrg **eti-** 'moreover, again' (M-A 215) (in Bur from **-i-eti-s*).

—Bur **basí** 'orchard' < IE **ueis-* 'sprout, grow' (also 'fruit', e.g. OPrus **wēisin** 'fruit').

**-u stems:*¹²

—Bur Ys **-yúngus**, Hz Ng **-úmus** 'tongue' < IE **d̥ǵhuh_a-* 'tongue'.

— Bur Ys **-núnus**, Hz Ng **-dúmus** 'knee, hock' < **gnung/kus* < **ǵnu-no* < IE **ǵonu-* (gen. **ǵenus*) 'knee, angle' (esp. Alb **ǵju** (< **ǵluno-* < **ǵnu-no*) 'knee'.

— Bur **baǵú** 'double armful', **baǵuç** 'small double armful' < IE **bhāǵhus* '(fore)arm'

—Bur **daǵú** 'glue', **daǵánum** 'thick', **daǵoán** 'flour', **daǵúi** 'raw (not baked)' < IE **dheiǵh-* 'work clay, smear; build up; form' (> 'dough'), (e.g. ON **ǵigr** 'thick').

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

— Bur **ǵamá** 'ice, frost; glacier' < IE **ǵheim-* 'winter'.

—Bur **ǵarú** 'spring', and **ǵari** 'lamp, light; pupil of eye' < IE **ǵ^wher-* 'to heat, warm'.

— Bur **mušk** 'forest, thicket' and **mušqú** 'foliage (for sheep)' < IE **busk* 'bush, thicket', Gk **boské** 'fodder, pasture', (Late) Lat **buscus** 'forest'.

¹² Considering the *u* : *o* alternation and variation in Burushaski, some of these stems could have originally been *o*-stems.

—Bur **-móqus** (Ng) **-móqis** (Hz) ‘cheek’, **-móqis** (Ys) ‘face’, **-móqot** (Ys) ‘cheek’ < IE ***smokur-** ‘chin, beard’.

—Bur **dağánus** ‘pig (taboo name)’ < **dağánum** ‘thick’ (ON **digr** ‘thick’, OIr **digen** ‘solid, sturdy’).

—Bur **kharúu** ‘louse’ < IE ***kōris** ‘biting insect’.

—Bur **batúl** ‘a thorny plant’ (< IE ***bhe-dho-lo** < ***bhedh-** ‘to prick, dig’).

***-eh_astems:**

—Bur **dalá** pl. **dalámuc**, Ys also **daláh** ‘larger irrigation channel’ (< IE ***dh_lh_ao/eh_a-**) < 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 **thañá** ‘success, good reputation’ < IE ***tenk-**² ‘thrive, flourish’.

—Bur Ys **dúlas** ‘boy, young lad’ (cp. with Lett **dêls** ‘son’) (**i** : **u** / **_l**), Bur Ys **-díl** ‘breast, chest’ < IE ***dhh₁ileh_a-** ‘teat, breast’.

—Bur Ys **mátas** (< IE ***meiteh_a-s**) ‘beam (medium-sized)’.

—Bur Ys **bálkas** ‘treasure’ < IE ***bhelg-** < ***bhel-** ‘shine’, (e.g. PSI ***bolgo**, SSI **blago** ‘treasure’, Av **bərəg** ‘ritual, custom’ and Skt **bhārgah** ‘light’).

—Bur **garmá** ‘a (thin) bread, cooked with vegetables’ < IE ***korm-** ‘broth, mash’.

-men stems:

—Bur Ys **asúmun**, **asúmen**, **hasúman**, Hz Ng **asíi**, **hasí** ‘star’ < **háas** ‘glowing embers’ < IE ***h₂eh_x-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 ***h_xeh_x-** ‘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 ***dhō-mo-** ‘pile’ (IEW 238) (***dhoh₁mo-** or ***dhoh₁men** ?).

Consonantal stems

—Bur **dan** ‘stone’ < IE ***(s)tāi-no-** ‘stone’.

—Bur **balk** ‘plank, board’ < IE ***bhel-ĝ-** or ***bhel-k-** ‘beam, plank’.

—Bur **khéen**, Ys **khen** (Ys L **khyen**), **kēn**, **kyēn** ‘time, space

of time, period, season, celebration' < IE ***k^wyeh**₁- , variant form < ***k^weih**₁- > ***k^wyē**- 'rest, be quiet', in words for 'time' in IE: esp. with an **-n** ext., e.g. ORuss **činŭ** 'time, period'.

—Bur **-móos** 'anger, rage' < IE ***mō-s-** < ***mō-** : ***mē**-^ć (Wat 51: < ***meh**₁-) (esp. Goth **mōþs (-d)** 'courage, anger').

—Bur Ys **-díl**, Hz Ng **-ndíl** 'breast, chest' < IE ***dhh₁ileh₂-** 'teat, breast'.

— Bur **yať** 'wound, annoyance, pestering, argument' < IE ***ieudh-** 'set in motion, make excited, stir up' (> 'incite').

— Bur **hargín** 'dragon which comes into being from a snake' (< ***hargint**) < IE ***h₂erg₂-nt-om** 'silver' in a word for 'dragon', derived from this stem, e.g. Phrygian gloss **argwitas** 'dragon, Lamia'.

— Bur **búran** 'seam, hem' < IE ***bherem**-¹ to stick out; edge, hem' and ***bhorm-** : ***bhrem-**.

—Bur **darć** 'cut crops, threshing floor' < IE ***terh**₁- 'rub, turn' (> 'thresh').

—Bur Ys **-yúhar**, Hz Ng **-úyar** pl. **-úyarišo** 'husband' < IE ***uih₂rós** 'man, husband'.

—Bur **batúl** 'a thorny plant' < IE ***bhe-dho-lo** < ***bhedh-** 'to prick, dig' (PSI ***bodulŭ** 'thistle, thorn').

— Bur **gít** 'mud (wet or dry)' < IE ***g^weid(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 **huyés** 'small cattle (sheep and goats)' (Ys also: **huís**); Ys **-hútes**, Hz Ng **-úť** and **-úťis** 'foot, lower leg' (this example shows both outcomes); **bélis**, Ys **béles** 'ewe (which has had young)'; Bur **-yáťis**, (L) **-yéťis**, Ys **-yátes** 'head'; Ys **turmúkutes** 'long insect'; Ys **-yúngus** 'tongue'; Bur **-móqış** (Hz), **-móquş** (Ng) 'cheek', **-móqış** (Ys) 'face' (< ***-irs** or *-

urs); **barís** ‘artery’; **-khúkhurus** ‘short lower rib’ (< IE *(s)ker- ‘twist, bend’: Lith **kr(i)áuklas** ‘rib’); Bur Ys **-núnius**, Hz Ng **-dúmus** ‘knee, hock’; **haǵúc** (Ys **haǵós**) ‘pass, mountain-pass’; **-úlus**, Ys **-húles**, **-húlus** ‘brother’; **daǵánus** ‘pig (taboo name for)’ < **daǵánum** ‘thick’; **karkós** ‘young sapling’; **khándas** ‘a tick’; **-wáldas** ‘the back (anat.)’ (B 465) (< IE *plet- ‘back, shoulders’); Ys **dúlas** ‘boy, young lad’, **-díl** ‘breast, chest’; Ys **mátas** ‘beam’; Bur **dúrgas** ‘ghost of the deceased’; **úrunas** ‘morning star, Venus’; **túranas** ‘a kind of large black beetle’; Bur **hurúginas** ‘wave, stream, whirlpool’ etc.

—IE gen. sg. **-es** > Bur gen. and erg. (except for *hf* sg.) **-e** (B I: 63).

—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 **ǵ-r-** ‘send, dispatch away from the speaker’ (B 361) (Will 50), used also in periphrastic verbal constructions. Note e.g. the dative **mōr** (= **mu-** + **-ar**) ‘to her, for her’ vs the verbal form **mōr-as** ‘to send her’ (L 268).

—IE instr. **-mi** (as in Sl **kamenĩmĩ** ‘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 **-ōt** < **-o-h₂at** (e.g. OLat **gnaivōd**).

—IE loc. sg. **-i** > Bur loc.(specific ending) **-i** (B I: 63). The Bur abl. postp. **-ćum** also **-ćimo** ‘from’ (B 70) can be compared with PSI ***sūnũ** ‘with; of, from’, OPruss **sen** ‘with’, Arm **ham-** ‘with’ (IEW 904), i.e. ultimately from IE ***sem-s** ~ ***sem** ~ ***sm-ih₂-** ‘united as one, one together’, from which we have Bur **-ćhámanum** (L 47 **-samanum**) (B 73) Hz Ng ‘first-born’. The Bur form is from a zero-grade form ***sm-** and in Bur **m̄-** > **-um**, **-am**. The Burushaski case ending **-će**, **-ći** ‘on, after’ (Sh **isí**, **ichí** ‘danach’) (B 70) could well be an apocoped 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 **-nč** (with variants **-inč**, **-anč**, **-yanč**, **-wanč**, **-úanč**) (B I: 51-53) which can be correlated directly with the IE pl. accus. ending **-ns**, **-ŋs** (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 **-č**, 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 **-čaro** which is added mainly to words denoting relations (B I: 48), a variation of a suffix **-taro**, e.g. **máma** 'mother', pl. **mámačaro** (B 277) (< IE ***m-h₄em-** ?), **śmi** pl. **śmičaro** 'mother, aunt on mother's side' (B 286) (< IE ***méh_atēr** 'mother'), **-yás** 'sister-in-law', pl. **-yásčaro** and **-yástaro** (B 474), Bur **-úy** and **-ú** pl. **-úyčaro** and **-účaro** 'father; father's brother; in pl. forefathers' (B 460) < IE ***h₂eu_h₂-**, ***h₂eu_h₂ijos** 'father's father, ancestor on father's side' **śngo** pl. **śngočaro** 'uncle' (B 306), **ś néo** pl. **ś nčočaro** 'father's sister; mother's brother's wife' (perhaps corresponding to IE ***h₁ien_hₐter-** 'husband's brother's wife' (M-A2 210) ?), **bapó** 'grandfather, father' pl. **bapóčaro** (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 ***méh_atēr** 'mother', ***ph_atēr** 'father', ***dhu_g(h_a)tēr** 'daughter', ***bhréh_ater** '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 **¹gabí** 'reed, tube, hollow stalk' [also **gabí ten** 'collarbone' (BYs 144)] which is **gabenc** (B 141), which continues the IE pl. accusative case ("to play/hold/blow + acc. of 'reed'"). On the other hand, Bur **²gabí** 'horse's bit' has a plural pl. **gabímuč** 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** : **-čaro**). For an extensive discussion, see Čašule (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. **hakícañ**) or the Nager pl. of **joṭ** ‘small, young man’ is **joṭarko**, which can be analysed as **joṭ-ar-ko** ‘he (they) who is (are) young’ — compare derivationally with Latin ***new-er-ko** > **noverca** ‘stepmother’ (‘she who is new’) (Wat 58); or in Bur **í-i**, sg. ‘daughter’, pl. Hz Ng **-yúgušanč**, Ys pl. **-yúgušina** ‘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 **í-miñ**, i.e. the plural form is **g(y)émiñ** < a sg. ***gyem** (Čašule 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 ***t_crəmo-s**) or Bur **í- skir**, pl. **í- skindaro**, Ng pl. **í- skirišo** ‘father-in-law’ (< IE ***s_uékuros** ‘father-in-law’), where the Ng *x* pl. **í- 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 * **í- skiris+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:

h-plural : **-tiñ**; **-aro**, **-taro**, **-daro**, **-čaro**

hx-plural: **-o**, **-išo**, **-ko**, **-iko**, Ng. **-yáko**; **-juko**; **-óño**; **-ú**, **-úu**; **-č**, **-uč**; **-nč**, **-anč**, **-inč**, **-ianč**, **-muč**, **-umuč**, **-énc**, **-ónč**.

y-plural: **-ñ**, **-añ**, **-iñ**, **-ian**; **-miñ**; **-éñ**, **-oñ**, **-ón-o**; **-číñ**, Ng **-čan**, **-ícíñ**, Ng **-íčan**; **-mičíñ**, Ng **-míčan**

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**,

-inć, **-ianć** and also **-éñć** and **-ónć**, may derive from the IE accus. pl. (non-neuter) **-ns**. The vowels preceding **-nć** would possibly be a remnant of the IE stems, e.g. IE ***-eh₂ns** (old \bar{a} stems) > Bur **-anć**, IE **-ns** (pure consonantal stems) > Bur **-nć**, IE **i**-stems ***-ins** > Bur **-inć**, IE **o**-stems ***-ons** > Bur **-ónć**, IE ***-ih₂** (accus. neuter of **i**-stems) + ***-ns** > Bur **-ianć** and Bur **-éñć** possibly retaining a trace of the **h₁**-stems (Beekes 1995: 170-193) (Baldi 1999: 310).

The Bur plural ending **-ć**, **-uć** could be a remnant of the nom. pl. case forms.

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

The Bur plural suffixes ending in **-o** : **-o**, **-íso**, **-ko** and **-iko** could be a remnant of the **o**-stems. Berger (I 49) indicates that nouns ending in **-s**, **-ć** or **-n** + **-o** > **-ś**, **-ć** 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 **-ī** of the **o**-stems.

In the Bur pl. ending **-íso** 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 **-ñ** : **-ñ**, **-añ**, **-iñ**, **-iañ** (grouped together by Berger I:57), and further **-miñ**; **-éñ**, **-oñ**; **-ón-o**; **-ćiñ**, Ng **-ćañ**; **-ićiñ**, Ng **-ićañ**; **-mićiñ**, Ng **-mićañ**. 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-**, **-ŋko**, 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 **-tin** may be a composite suffix consisting of **-t-** (suffix forming agent nouns) or < **-to** + **-in**. Maybe it is historically a variant of **-cin**, Ng **-čan**; **-icin**, Ng **-ican**.

It may be that the suffixes **-min** and **-micin** 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:

—IE relational adj. suffix **-jo-**, **-ijo-** 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 **mámayo** 'endearing term for 'mother' < **máma**, **mámo** 'mother', **karóoyo** 'with curved horns'.

—IE suffix **-ko**, secondary suffix, forming adjectives : Ved **sínđu-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 ***-i-sk** 'formant of adjectives and noun diminutives' (Illič-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 **rŭm-iskŭ** 'Roman' (Fortson 121) : Bur suffixes **-iski**, Ng **-áaski**, also **-ki** (B I 249) with same function: **Burúsin** 'Burusho' : **Burúaski** (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. **buś isk** 'kitten' < **buś** '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 **ġén** 'thief' < **ġé-** 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-**, **-ŋko-** > Bur **-um** (main adj. suffix), derived historically by Berger < **-un** > e.g. **burúm** 'white', **daġánum** 'thick' (B I: 5.1), also used as a participial ending (see 8.2.3.2).

—IE ***(o)lo-**, secondary suffix forming diminutives (in Latin in various adj. suffixes) : Bur nom. and adj. suffix **-lo** : Bur **čhar-eélo** 'climber' from **čhar** 'stone', **paġaálo** 'blacksmith' from **paġ** **-t-** 'to hammer', **nams-iílo** 'greedy' < **nams** 'greed' (B 210, 19.24), **karéelo** 'wether, ram' : **káru** 'male ibex' (suffix found also in Shina).

—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

(2009a).

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** *z* ‘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 **ćamiáako**). Berger segments it as ? + **manúm**. We propose a segmentation **-chám** + **manúm**. The Burushaski form would derive from a zero-grade form ***sp-** and in Bur **p-** > **-um**, **-am**.

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

—IE ***per-** ~ **pro-** (in derivatives) ‘first’, esp. the formations in Italic, Germanic and Baltic with the suffix **-mo-** as in Lat **prīmus** ‘first’, OE **frum** ‘primal, original, first’, **fruma** ‘origin’, Goth **fruma** ~ **frumists** ‘first’, Lith **pirmas** ‘first’ (M-A 399) : Bur **púrme** ‘beforehand, before the time’ (B 318).

Number 2.

—IE ***h₂elio-** ‘second’, e.g. Gaulish **allos** ‘second’ (Beekes 1995: 216) : Bur **altó** *yz* Ys (Zarubin) **haltó**, **altán** *h*, **altá**, **altác** *x* (Berger 2008: 10.4) : IE ***h₂élios** ‘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 Panjábī (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 **čhundó**, **čhundí** ‘five’ (for the rather complex and tentative correlation of this last numeral with IE, see Čašule 2008: 171-173).

Number 4.

—Bur **wáto** *hxy*, **wálti**, **wal-** (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 ***wikṛti-** ‘twenty’ (Wat 101). Thus: ***wi-alto** and by assimilation **wáto** (the length noted by Lorimer could actually indicate compensatory lengthening).

There is another possible explanation of ***w-**, from IE ***mbhi**, also ***bhi-**, ***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 **wáto** < ***u-(w)áto** 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 ***sueks-**, ***seks**, ***kseks** and directly relevant for Burushaski: ***ueks-** (: ***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 ***oǵtó** ‘eight’ (dual) (M-A 402) under the influence of the Bur numerals 2 and 4 (i.e. ***oǵtó** > ***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 **hnutí**, Ys **hutí z**, **hunćó**, Ys **hućó** *hxy* ‘nine’ (B 205) derives from IE ***h₁néuǵ** ‘nine’, and more specifically from the ordinal form ***h₁néuǵ-(e)tos** ‘ninth’ (M-A 403). Beekes (1995: 216) states that the Greek form **énatos** ‘ninth’ points to a proto-form ***h₁nuǵ-to**.

8.2. Verbal system

The typological similarity of the Bur verbal system with IE was noted first by Morgenstierne (L I:XI) 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.	71.	-a	pl.	-an
	2.	-a		-an
	3. <i>hm</i>	-i		-an
	<i>hf</i>	-o		-an
	<i>x</i>	-i		-ie
	<i>y</i>	-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 (⁰ m-a)		-V-m-V-n (⁰ m ⁰ n)
	3. <i>hm</i>	-V-m-i (⁰ m-i)		-V-m-V-n (⁰ m ⁰ n)
	etc.			etc.

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

sg.1.	amánum	pl.	mimánum
2.	gumánum		mamánum
3. <i>hm</i>	imánum		umánum
<i>hf</i>	mumánum		umánum
<i>x</i>	imánum		umánum
<i>y</i>	—		—

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

1. **-ai/-mai**
2. **-soi**
3. **-toi**
4. **-medha** (\bar{a} ?)

IE Secondary Middle Endings

1. **\bar{a} / $\bar{m}\bar{a}$**
2. **-so**
3. **-to**
4. **-medha** (\bar{a} ?)

- | | |
|-----------------|--------------|
| 5. -dhwe | -dhwe |
| 6. -ntoi | -nto |

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 | 2. -nda |
| 3. -da | 3. -nda |

The above reconstruction is supported by the fact that the Burushaski optative endings **-m** and **-áa** 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 **dáa** ‘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 **pravi** ‘makes, does’ : **napravi** ‘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 **-jo-** 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 morphological alternations: **c : ć, s : ś, n : y, t : ć, l : lj, k : ś** (Edel’man-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 **-nā-** and **-neu-** and “came increasingly to be used as unitary suffixes, as in Lat **asper-nā-ri, conster-nā-ri**, OInd **badh-nā-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. **-múruṭ-** : **-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-́nciras, čhindáas** (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 **-eés** [for the change **-sk-** > **-ks-** > **ś** 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 : **śuray-eés** ‘happiness, enjoyment’ also used as an adjective, without a basic form (L 335) (B I:211), **balan-eés man-** ‘to writhe, wallow’ used along with **balán man-** (L 67), **aġat-eš -mán-** ‘to be ashamed’ from **aġáto** ‘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: **darés- ġ-t-** ‘to endure, hold out’ (LYs 89) (BYs 141), **sarkumeés ġ-t-** Ng ‘to get ready, to put s-thing in order’ (analysed by B as ? + **gumeés ġ-t-** ‘to embellish’ (B 376), **bandeés ġ-t-** ‘to bind’ (B 376), **sateés ġ-t-** ‘to bring in order’ (B 376), Bur **halés ġ-t-** ‘to raise, rear, nourish’ (BYs 150) (< IE ***h_ael-** ‘grow’ (pres. ***h_aéle/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)s** (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 **laccio**) : Bur gerund II in **-ś, -V-ś** (E-K 1970:70) used with a desiderative meaning (**si̇ > ś**).

—IE adjectival compound suffix **-enko-, -ŋko-** > **-um** (the main adj. suffix in Bur), derived historically by Berger from **-uñ** > e.g. **burúm** ‘white’, **daġánum** ‘thick’ (B I: 5.1), which is also used in the **m**-participle (B I:143) (‘static participle’) **étum** ‘done’, **mánum** ‘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 -t-** ‘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 **-yáte** ‘on, upon, up, above’, **yát** ‘up, above, on top; (adj) upper, further, later, again’ (in Bur from ***-i-eti-s**) (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 **khat**, Hz Ng **qhat** (in L 239, also **kat**) ‘down’ (B 348) and 2. the postposition **-káat**, and adverb **káat**, (in LYs 155, also **-kāt** and **-khāt**) ‘with, along with’ (B 238).

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

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