РАЗДЕЛ III. ЛИНГВИСТИКА ТЕКСТА

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THE LEXICAL CORE OF THE PROTO-INDO-EUROPEAN LANGUAGE: THE COMPLETE SWADESH LIST

Abstract

In this work, the lexical core of Proto-Indo-European is reconstructed using only the words that simultaneously fell into 4 main branches of Indo-European languages (Indo-Iranian, Italo-Celtic, Balto-Slavic, Greek), without violation of satemization and without any additional phonemes (4th laryngeal, Brugmann's "thorn"-clusters, *q). These restrictions minimize the likelihood of peripheral vocabulary and random coincidences getting into the reconstruction. The methodology of such a search for obtaining implied list of concepts is described in details. The resulting Swadesh list of 207 concepts is presented with a link to the work materials. Since, under such strict restrictions, it was still possible to deduce the entire list (complex cases are considered in details), there is a reason to think that it is possible to reconstruct "core PIE"

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(the direct common ancestor of the listed branches) as a full-fledged language and make its dictionary. Suggestions on the structure and procedure for compiling such a dictionary are given. It was also found that only 59% of the words of the resulting Swadesh list for "core PIE" are reflected in at least one Germanic language – this confirms the assumption that the Germanic branch does not originate from the core PIE, being in fact peripheral. In the process of searching for Balto-Slavic material, we have found a law according to which s and š are distributed in Lithuanian language (RUKI law operates completely in Proto-Balto-Slavic, including the endings): the suffix -s (if it is synchronously detected) is restored as -s regardless of the position; the final -š > -s, entailing the median -š- > -s- (including the satemic consonant š < č < ḱ). Also noted was *sm- > Latin sp-, Greek σμ- (later > μ-).

Keywords: etymology, method, proto-Indo-European, Swadesh, Sanskrit, Greek, Latin, Slavic, Lithuanian, RUKI rule.

The purpose of the study

The purpose of the study is to determine the lexical core of the Proto–Indo–European language (hereinafter referred to as PIE), taking into account the following conditions:

– the main condition for the presence of a word (or root) in the lexical core of PIE is its presence in all 4 main branches of Indo–European languages (hereinafter referred to as «quadruple cognates»): Indo-Iranian, Italo-Celtic, Balto-Slavic, Greek. The branches are determined by the number of involved etymologies of [60] (counting by index in the dictionary) and other considerations indicated in [36, 183–200];

– non-standard phonemes are not allowed: laryngeals except three standard ones (to explain, for example, the Greek ι), Brugmann's «thorn»-clusters, *q [4, 132];

– violations of satemization are not allowed (*g/*ǵ, etc. must be clearly separated).

These restrictions minimize the probability of including any random coincidences and words of peripheral vocabularies into the reconstruction of PIE.

At the same time, it is necessary to take into account the quality criteria for the reconstruction of the proto-language as a whole:

– coverage of basic concepts (Swadesh list, etc.);

– coverage of the dictionaries for separate languages (we work with »complete» dictionaries);

– accuracy of deduction (a small percentage of special cases: metatheses, contaminations, etc.).

In this paper, with the listed conditions, the Proto-Indo-European Swadesh list of 207 concepts is reconstructed. It should be noted that even the 100 concepts list has not yet been published with limitations so strict. Since Swadesh list for PIE is needed in any case, we will expand the search area a little – initially we will take all the branches in an expansive sense (and in the end we will evaluate the need for such expansions):

– the Greek branch is taken with Macedonian and Phrygian languages (in the absence of a generally accepted name for such a branch, we propose «Hellenic»). For example, for the concept 'brother's wife' in accordance with Skr. giri- (hapax, which might be an incorrect translation instead of 'mountain' [44, 115–121]) only the Phrygian gélaros, gállaros is known (not to be mixed with the concept of 'husband's sister, sister-in-law', for which there is Greek γᾰλόως, and from Indo-Iranian, respecting the satemization, only the Kashmiri zām 'husband's sister' is suitable);

– we treat Italic and Celtic as one, and allow to use data from Italo-Celtic languages whose group is not certain (Lepontic, Venetic);

– we allow data from Indo-Iranian languages that are not reliably included in either Indo-Aryan or Iranian group (Nuristani, Dardic);

– we allow dialectal words of Balto-Slavic languages, regardless of their coinage in closely related languages.

Research methodology

To begin with, neither dictionaries nor other sources are complete (therefore we will use the word «complete» in quotation marks) and free from errors. More distant from the primary material means less reliable. The gradation of sources is as follows:

1. The primary material is the oral language. Dialect dictionaries are available for dialects, however, «отсутствие в большинстве диалектных словарей и атласов литературной лексики не позволяет выявить ареалы литературных слов и тем самым определить направление диалектных потоков в истории формирования литературного словаря» [3, 105].

2. Secondary material – texts. Due to the peculiarities of written speech, the syntax and frequency of words are significantly distorted.

3. Explanatory dictionaries. Already at this stage, words of different origins can be combined into one nest (for example, in Dahl's dictionary [7] «плевелъ» in the nest of «плева» [7, III, 124]). Incorrect interpretations of individual words may appear: for example, «быком пить (to drink as a bull)» – 'to drink from a large vessel' instead of 'пить не отставляя сосуд (drinking without setting aside the vessel)' in the Deulino Dictionary [25] (which is confirmed by the first example there, and by Dahl's dictionary, and by the personal experience of one of the authors of this article, a Ryazan citizen) or «стрёма» 'дворник (janitor)' instead of

'стража, сигнал об опасности (guards, a signal of danger)' in the project of »Dictionary of the Russian language of the XIX century» [10, 183–210]. There may also be insidious misspellings, as in the aforementioned Deulino dictionary – the loss of dots over *ё* in the article «седня» and erroneous phonetic entries with *'e* instead of *'o* in the articles «сегодня», «спонасёрдки», «серёд», «серёдка» (which is easy to see if you compare them with the headings of the articles – that is, these «phonetic records» were compiled post factum according to the spelling records and, apparently, gave rise to the legend of non-jo-speaking dialects in the Ryazan region). A number of other misprints in dictionaries are listed in [2, 18–21]

4. Bilingual dictionaries. At this stage, the words under study may have additional ambiguity, since words in different languages do not accurately correspond to each other. Moreover, dictionaries are incomplete for various reasons: for example, in a two-volume Latvian–Russian dictionary of 53,000 words [47] there is no such basic word as pauts 'egg' (a message from a native speaker: «now only old Latvians call bird eggs that way, the second meaning of «man's testicles (male genital area)» has become more popular» [34]). It should also be taken into account that in the bilingual dictionaries of ancient languages, vowels can have accents, lengths and tones not supported by written sources, without marking the conjecture. Further, this information can be distributed in etymological studies. A separate problem exists in Sanskrit dictionaries, where either a whole word or its stem can be represented, without the indication which is which. In addition, verbs are often given in a personal form, but are translated by an infinitive.

5. Etymological research (for example, on individual words of Slavic languages). At this stage, «lexical phantoms» – reconstructed words can get into scientific circulation (for example, «Old Church Slavonic» *крава* [29, 21], *краль* [31, XI, 86–87]), or correspondences based on a «description of the situation» (such as сидеть 'to sit' ~ ходить 'to walk', because they were supposed to mean «to move while sitting in a cart» [28, IV, 253]), or comparisons of concepts that are close only from the author's point of view (as in [4]: 'shirt' ~ 'to strike' ~ 'a pole to fix the fabric on a loom' [4, I, 112], 'sparse' ~ 'silver' ~ 'rare' ~ 'hole' ~ 'pierced' [4, I, 112], 'food' ~ 'pleasure' ~ 'oak with nutritious acorns' [4, I, 114], 'urine' ~ 'sour' ~ 'raw' [4, I, 172], 'pasture, dwelling' ~ 'curse' [4, I, 180], 'row, line' ~ 'entrance, passage' ~ 'suddenly' [4, I,. 180]).

6. Etymological dictionaries (for example: [28]). At this stage, one dictionary can show etymologies that contradict each other (see, for example, the article «дождь (rain)» in Vasmer's dictionary [28, I, 521–522]). In addition, a reader of such dictionaries may perceive an illusion

about the proximity of certain languages to each other (in the case of Vasmer's dictionary, Slavic to Germanic) due to the peculiarities of the researcher's language background.

7. Macrocomparativistic studies. At this stage, random roots from different reconstructions of the previous level can be brought together, and such correspondences can again be based on the «description of the situation» according to the researcher's cultural intuition (for example: [1, 77] root II-39 «*Повивать, родильный, с земли, обрядно* (To nurse, maternity, from the motherland, ceremoniously)»: «the semantic focus here was the primordial ritual of raising a newborn child from the ground (= from the birthbed), which served as an act of recognizing him as similar to his parents and, accordingly, belonging to the genus and tribe»).

8. Macrocomparativistic dictionaries (for example, Altaic). Here, the results of the previous stage are supplemented by correspondences in a wide range of languages, possibly found by end-to-end computer search ignoring the morphology [69, 81].

9. Cultural studies. Additional bold conclusions are drawn here: if the concept did not get into the dictionary, then it did not exist, if it did, then it certainly was (even if it is an obvious derivative), and a general situation (which does not necessarily correspond to reality) is made up of fantastic «descriptions of situations».

10. Teaching. Among other things, there exist the issues of teachers' personal preferences and the peculiaries of their memory.

11. Finally, the most unreliable level is machine translation. In particular, at the time of writing this article, Google Translate website [43] translates non-existent (but etymologically plausible) «Lithuanian» words as follows: vèninis as 'marital', venìnis as 'brother-in-law', and šeivà as 'daughter'.

In order to give this study more quality, it is necessary to fulfill the following conditions:

– Whenever possible, involve a «complete» dictionary of the language in question.

– Deliberately avoid materials beyond the 6th level (etymological dictionaries). Etymological dictionaries (and researches) should be used after monolingual and bilingual dictionaries. When using bilingual dictionaries (for example, Greek–Russian [8]), check them with other bilingual dictionaries (for example, Greek–English [49]).

– If possible, do not base reconstructions on reconstructions. At the level of written languages, it is already useful to break and rethink the nests (for example, Lat. *via* 'road' and 'strip on clothes', Rus. *до* 'before' and 'to'), and to even greater extent, this applies to deeper levels.

Therefore, when drawing up intermediate reconstructions (which will certainly be needed – at least Proto-Balto-Slavic and Proto-Indo-Iranian), they should be used only as a hint, and, if necessary, corrected. We need consistency between the reconstructions of PIE and all intermediate levels, but this does not mean subordination of the reconstruction of PIE to the reconstructions of intermediate levels.

– Try to write down the applied phonetic correspondences with lists of reliable examples.

– Instead of quadruple cognates (that are needed), write down a "septet of cognates" (Baltic, Slavic, Italic, Celtic, «Hellenic», Indo-Aryan, other Indo-Iranian). The septets provide additional statistics and a valuable resource: on their basis, in some cases, it is possible to postulate the equality of proto-forms, and through this – postulate rare sound laws, for which there are not enough reliable examples. For example, it cannot be excluded that PIE *ǵo > Lat. ge: Greek γομφίος 'molar' (< *ǵombʰ-i-os) ~ Lat. gemma (< *ǵombʰ-n-ā?) 'gem, pearl' (Skr. jámbha- 'tooth', Pashto žāma 'jaw', OCS зѫбъ 'tooth', Lith. žaṁbas 'blade', Irish gop 'beak' (Gaul. *gobbo- > Old Fr. gobel, gobet 'bit') – full septet); Greek γόνῠ 'knee' ~ Lat. genu (< *ǵonu) 'knee' (Skr. jā́nu 'knee', Persian zânu 'knee', Pol. zonaczyć 'to incline', there are no exact correspondences in Baltic and Celtic, only Lith. žniùgti 'break' < *žniugas 'break, knee?', Old Irish glin 'knee' < Proto-Celtic *gninos); Greek γονεύς 'ancestor' ~ Lat. genius (< *ǵoneus?) 'the spirit of the genus' (it is important that in Lat. there are no formations with gon- for this root at all; perhaps here also Skr. jā́nukā 'woman giving birth', with less probability Skr. janu- 'the soul' (Brugmann's law is not reflected: *o>ā in an open syllable), Rus. зоня 'some byname'); possibly Greek γοάω 'I groan' ~ Lat. gemō (< *ǵomom?) 'I groan' (Rus. зуда 'whining', Slovene zum 'buzzing'?). Apparently, this does not apply to *ḱo: Lat. callēre 'to be or grow hard' ~ Lit. šáltas 'cold'.

– When deriving the meanings, the «description of the situation» is never used, but only the «closest common semantic ancestor», from which the meanings in the descendant languages are deduced.

– Try to write down morphological information (even among professional linguists, not many are able to remember about 200 Russian suffixes – see [18]). Knowing the morphology of a language well (and colloquial speech has a relatively free morphology [14, 27, 189]), we can find in it a word with the desired meaning indirectly. If in the reconstruction, instead of suffixes with a known function, some «root expanders» are used, this indicates problems in the reconstruction.

The process for reconstructing a given list of concepts (Swadesh list in our case):

1. Enter a column with the desired list of concepts. Further, while doing some other work, we can add other concepts, but we mark the concepts of Swadesh list separately.

2. Enter the quadruple cognates already found in our previous work [36, 183–200] in separate columns. (Since that publication, we added to words for *g-, *ǵ-, *gʷ-, *gʰ-, *ǵʰ-, *sgʰ-, *sḱ the words for *u-, *bʰ-, *dʰ-, collected by the same method – a comparison of "complete" dictionaries.) There should be columns for PIE, Proto-Balto-Slavic, Italic, Celtic, Greek (with other «Hellenic»), Indo-Aryan and Iranian (with other Indo-Iranian languages).

3. In a separate table, compile the Proto-Balto-Slavic Swadesh list, using [50], [51], [47] and [25] (taking into account the personal knowledge and interviews with native speakers of Baltic languages, see above the information about the primary material). The table should contain the following columns: meaning, Baltic words, Slavic words, Proto-Balto-Slavic words, and also separate columns for cognates in other Indo-European branches. This list is corrected when it is necessary.

4. For each word found for Proto-Balto-Slavic Swadesh list, we include Indo-European etymologies (NB: not all Proto-Balto-Slavic words will give quadruple cognates).

5. In separate columns of the main table, enter the quadruple cognates found while compiling the Proto-Balto-Slavic Swadesh list (NB: not all such quadruple cognates have meanings from the Swadesh list, there are common Balto-Slavic innovations that just indicate the reality of Proto-Balto-Slavic [22]).

6. In a separate column, compile the Proto-Indo-Iranian Swadesh list using the electronic Sanskrit dictionaries [61; 62], Large Russian-Ossetian dictionary [5], Avestan Dictionary [56], Persian Dictionary [66] and Etymological Dictionary of Iranian Languages [30].

7. Try to fill in the gaps in Swadesh list for PIE, searching for Latin [55], Greek [8; 49], Celtic [15] and Balto-Slavic words corresponding to Proto-Indo-Iranian, starting with cases where the Proto-Balto-Slavic word already corresponds to the Proto-Indo-Iranian one.

8. Try to fill in more gaps on the basis of Latin and Greek, searching for cognates in other languages for them.

9. In the presence of any gaps at this point, use the etymological dictionaries: J. Pokorny [57]; R. Matasovic [40]; R. Beekes [38]; M. de Vaan [39]; J. Cheung [41]. In these works, the search for quadruple cognates was rarely made, but for the present study, such searches are mandatory for each case. It should be emphasized that up to this point, the study was mostly independent, but now it's time to verify the Proto-

Balto-Slavic Swadesh list using Sayenko's data [23, 139–148] and Rick Derksen's dictionary [37].

10. If some concepts could not be deduced, an attempt to find cognates for suitable words of any languages and, if unsuccessful, marks that the word could not be deduced. In the process of marking, we keep statistics on how many concepts have been reconstructed for 7, 6, 5 or 4 groups from 7 involved (Baltic, Slavic, Italic, Celtic, «Hellenic», Indo-Aryan, other Indo-Iranian).

Research results

The Swadesh list of 207 concepts for PIE has been completed under the given limitations.

Analyzing the Latin data, we have found the outcome of PIE *sm- as Latin sp-:

– sparus 'a small kind of sea-bream' ~ Gr. σμαρίς 'Sparus smaris'.

– spīrō 'I am inspirated' ~ Gr. φιλο-μμειδής 'smiling with pleasure', OCS смѣхъ 'laugh', Ir. sméitid 'nods, beckons, winks'.

– spīcō 'I furnish with a sharp point', spīna 'thorn' ~ Gr. σμίλη (ῑ) 'knife; chisel', σμῖνύς 'prong-hoe'.

– spurcō 'I soil' ~ Slovene smr̀k 'snot'.

– spargō 'I sprinkle' ~ Rus. dial. *сморгáти* 'to blow one's nose with sound'.

– Old Fr. (14 c.) spruce 'spruce' ~ Ukr. *смерéка* 'spruce', CS смéрчие 'conifer'.

– spēs 'hope' ~ OCS съмѣти 'to dare' (NB not used with other prefixes, reconstructed as *smělъ(jь) 'daring' in EDSL [31, XXV, 18]).

Also with the assumption of s-mobile:

– spectō 'I examine' ~ Rus. dial. *смёк* 'wit', *кумéкать* 'to think'.

– spissus 'slow' ~ OCS мьдлость 'slowness'.

The alternation *sm-/*m- in Greek seems to be an internal Greek development *sm > *mm > *m (abbreviations after [48, XXVII–XXIX]):

– σμάραγδος (Her., Plat.)/μάραγδος (μᾰ) (Men.) 'emerald'.

– σμᾰρίλη (ῐ) (Arst.)/μᾰρίλη (ῐ) (Arph., Arst.) 'cinders, embers'.

– φιλο-μμειδής 'smiling with pleasure' (Hom.)/μείδημα 'smile' (Hes., Anth.).

– σμήρινθος/μήρινθος 'thread'.

– σμῑκρο- (Ionic, Old Attic)/μῑκρο- 'small'.

– σμῖλαξ (Poll., Theognost.)/Attic μῖλαξ 'yew'.

– σμοιός (Theognost.)/μοιός (H.) 'difficult, fearful, hated, sad- or angry-looking'.

– ἔμμορα pf. for μείρομαι 'to meet one's fate'.

– σμύδρος (H.)/μύδρος 'red-hot iron'.

– σμύξων (Arst.)/μύξων 'mullet or eel'.
– σμύραινα (Arst.)/μύραινα 'moray'.
– σμυρίζω (Archil.)/μυρίζω 'I salve, perfume'.
– σμυρναῖος (Anth.) 'of myrtle'/μυρρίνη, Eur., Plut. μυρσίνη, Doric μυρσίνα (ῐ) 'myrtle'
– σμῶδιξ (Hom.) 'bruise'/μῶδιξ (H.) 'blood vessel, boil'

Because of the same authors on the both sides, this alternation depends of copyists, and any word written with μ- in Greek literature might reflect PIE *sm-.

Analyzing the Balto-Slavic data, we have found a law for s and š in Lithuanian (RUKI law operates completely in Proto-Balto-Slavic, including the endings, and contrary to [4, 130], in all 4 contexts (for example, Lith. aušrà 'dawn', maĩšas 'bag', viršum̃ 'over', barkšóti 'to stick up')):

　　　　1)　suffix -s (if it reveals synchronistically) is restored as -s regardless of the context;

　　　　2)　final -š > -s, entailing the median -š- > -s- (including the satemic consonant š < č < ḱ):

– *alkšniš > *alksnis: Lith. al̃ksnis 'alder';
– *āušiš > *āusis: Lith. ausìs 'ear' (but aušúoti 'to converse');
– *auštiš (~ Rus. *устье* 'estuary') > *austis: Lith. úostas 'estuary' (but áušena 'gawk' ~ Rus. *уста* 'lips, mouth');
– *blušiš (~ Skr. plúṣi- 'flea') > *blusis: Lith. blusà 'flea';
– *bōbāušiš > *bōbāusis: Lith. bobaũsis 'строчок (mushroom)';
– *dāušuš (~ Old Rus. духъ 'spirit' with u-declension) > *dāusus: Lith. daũsos 'heaven';
– *dušgiš > *dusgis: Lith. duzgéti 'to rumble (possibly, about rain)';
– *gāušuš > *gāusus: Lith. gausùs 'numerous';
– *gāušiš > *gāusis: Lith. gaũsis 'abundance';
– *mušiš > *musis: Lith. musìs 'fly';
– *pušniš > *pusnis: Lith. pusnìs 'snow-bank';
– *teišuš > *teisus: Lith. tiesùs 'straight';
– *wāišiuš > *wāisius: Lith. vaĩsius/vaisiùs 'fruit';
– *waĩškuš > *waĩskus: Lith. váiskus 'transparent';
– *weiweršiš > *weiwersis: Lith. vieversỹs (OPr. werwirsis) 'lark';
– *wičiš (~ OCS вьсь 'whole') > *wišiš > *wisis: Lith. vìsas 'whole'.

Exception: ašìs 'axis' (however, formally it can be analyzed as regular ašsìs < *aššiš < *ačšiš < *aḱsis, cf. Lat. axis).
Hyperactivity: saũsas 'dry' (between two "s").

Might affect a median ž as well, but all the cases found are followed by a consonant: Lith. Añsk-upis (< *anžuš 'narrow'), blizgùs 'bright' (but blyškùs 'pale' from blỹkšti 'to pale'), burzdùs 'spry' and burzgùlis 'ardent person' (~ Rus. *бóрзый/борзóй* 'mettlesome'), vam̃zdis 'tube', vizgús 'twistful'.

Notes on used PIE notation:

– cases and numbers are written as Nsg., Asg., Gsg., Dsg., Isg., Lsg., Ablsg., Vsg., also -du., -pl. Gender is written as m., f., n.

– Asg. ending is written as *-n (preserved in Gr.), unlike *-m in 1 sg. pres. of verbs (lost in Gr.).

– after | we show known stems of oblique cases and derivatives.

– *a is equal to *h₂e of Leiden notation. *ā is equal to *eh₂ of Leiden notation.

– unknown laryngeal is written as H. If a laryngeal is underlined, this means we put it in a place that differs from the one in the preceding research. We assume Skr. *HC > Ch syllable-initially: *plHtus > Skr. pṛthú- 'wide' ~ Gr. πλατύς; *Hsta- > Skr. asthāt aor. 'stood' ~ Gr. ἵστημι 'stay'; *u̯rh₂d- > Skr. vṛhati (dh > h cf. rodhati = rohati 'grows') 'root up' ~ Gr. ῥίζα/Aeol. βρίζα 'root'; *dhruHg- > Skr. druha- 'son' ~ Lat. frūctus 'gain', Gr. τρῠφή 'luxury (surfeit)'. This might depend of the type of laryngeal.

– we don't reconstruct a synthetic laryngeal at the word onset if there is a vowel or a sonant.

– coarticulations are written with diacritical marks and superscript. However, a notation like *kʷ does not imply that we reconstruct this as a phoneme, not as a sequence of two. This is not yet decided.

– a construction, written as *gʷʰ/*ǵʷʰ by convention (as well as deducible combinations *gʰu̯/*ǵʰu̯), gives different reflexes in Greek, most commonly θ. Specimen: θείνω 'I hit, kill' ~ Skr. hánti 'hits, kills' ~ YAv. jaiṇti 'kills' ~ Lat. -fendō 'I hit' in offendō, defendō. θάνᾰτος (ᾰ) 'death' is also linked there. The presumed alternation pho/the (analogy to *kʷ) does not hold in any root, neither in declension, nor in conjugation. The best covering of data is achieved with the assumption of dialectal difference: Attic θ, Doric χ, Aeolic φ, with later borrowings. Specimen: ὄρνις 'bird' (Gsg. ὄρνῑθος/Dor. ὄρνῑχος, Asg. ὄρνῐθα/Dor. ὄρνῐχα; Npl. ὄρνῑθες/Dor. ὄρνῑχες, Gpl. ὄρνεων/Dor. ὀρνίχων, Dpl. ὄρνισι/Dor. ὄρνιξιν and ὀρνίχεσσι, Apl. ὄρνῐθας). Other cases of φ and χ instead of θ: αὐχήν/Aeol. Asg. ἄμφενα 'neck', ἐλᾰχύς/ἐλαφρός 'small', χωριαμός/φωριᾰμός 'chest', θερμός 'warm'/Dor. χάρμᾱ 'martial heat', θήρ/Aeol. φήρ 'animal', θλίβω/φλίβω (ῑ) 'I press', θλάω/φλάω/κλάω 'I hit', θνῄσκω 'I die'/ἔπεφνον 'I killed'. Possibly θυλλα (Hesych.,

Cretan?)/φύλλον 'leaves' (but [38] reconstructs *bʰ). The case of νῐφάς 'snow'/νίβα 'winter' (Hesych.) is likely a contamination with νέφος 'cloud'.

– sonants are marked as syllabic only for explanation of specific forms.

– verbs are reconstructed in the form of 1 sg. pres. with -om or -mi (for athematic verbs). If only the suffixed forms are known, like -st- (Baltic), -d- (Slavic.), -i-, -n- (in any language), the form is not reconstructed, this is a subject for separate research.

– stress is not reconstructed here.

– reconstructions already known are not commented. New cognates are added to them with NB.

Swadesh list:

1. 'I' = *eǵ [45: Vol. 4, p. 5–13], Asg. *(h₁)mēm, Gsg. *(h₁)mene?

2. 'you (sg.)' = *tuH, Asg. *tēm, Gsg. teue.

3. 'he' = *eis|*i-|*es- (see more in № 7. 'this').

4. 'we' = Npl. *mes, Apl. *nōs, Gpl. *nos?, Ndu. *uē (oblique cases use stem *nō-: OCS Adu. на, Gr. νῶϊ 'us (Adu.)', OCS GLdu. наю, Av. Gdu. nā, Gr. νῶϊν 'us (GDdu.)'). <u>Npl. *mes</u>: OCS мы 'we' (mixture of Npl. + Apl. *mes is kept in Slovene mé (f. n., but mí m.) and in the ending of Old Cz. budĕme (also budĕmy), Rusyn *будеме*, Ukr. *будемо*, Serb.-Cr. будемо), Lith. mẽs 'we', Lat. Memmius (Roman gens), Gr. Aeol. ἄμμες (< *n̥s-mes) 'we', Skr. asmā́n, Av. ahma (< *n̥s-me-) 'us (Apl.)', Oss. max 'we'. Also used in 1 pl. pres. of verbs: OCS -мь, Lith. -me, Old Lat. -mos, OIr. -mi/mai, Gr. Dor. -μες, Skr. -mas, Av. -ma. <u>Apl. *nōs</u>: OCS ны, Lat. nōs (also used in Npl.), Gr. epic νώ (Adu. or Apl.? see above the form of Adu.), Skr. nās, Av. nå̄ 'us (Apl.)'. <u>Gpl. *nos?</u>: Lat. nostrum 'us (Gpl.)', OIr. -nn (< *(s)nos? [39, 413]) 'us', Skr. nas, Av. nə̄ 'us (Gpl.)'. <u>Ndu. *uē</u>: OCS вѣ (< *uē), Lith. vēdu (< *uě̄) 'we two', Lat. «nec, quod fuimusve sumusve, eras erimus» 'that we were before and became, we shall not be tomorrow' (Lat. -ve 'or' is used after the second word of a copula, so the first ve (< *uě̄) is more likely 'we', not 'or'), Gr. ἡμεῖς (< *uē-me-), Skr. vā́m, Av. vā.

5. 'you (Npl.)' = *iū (Apl. *uōs): Polab. jai 'you (Npl.)' (regular i > ai, also indirectly confirmed by «и иже како люди мыслѣте» of the OCS alphabet) (OCS, Old Rus. NApl. вы), Lith. jūs 'you (Npl.)' (Apl. jùs, but OPr. Apl. wans by noun declension), Lat. iō 'look!', Welsh ych 'your', Gr. ὑμῶν (Apl. ῡ̔μᾶς/ῡ̔μείων/ῡ̔μέων/ῡ̔μῶν/ῡ̔μμέων/οὐμίων/ὕμμε), Skr. yūyám (AGDpl. vas), Av. yūžəm 'you (Npl.)' (Apl. vå̄).

6. 'they' = *eii m., iai? f., iō? n.: OCS Npl. of full adjectives -и m. (< *eii?), -ꙗ f. (< *iai? cf. Gsg. землꙗ and Gsg. жены), -ia n. (< *iō?), Lith.

jiẽ m. (< *eii?), dial. jaĩ f. (< two-syllabled *iai?), Old Lat. eī[1] m. (< *eii?), eae f. (< *iai?), Osc. ioc (Umbr. eu/eo) n. (< *iō?), OIr. é 'they' (< *eii?), Gr. εἶεν 'let it be!', εἶα 'let's!' (cf. meaning with Rus. *он/она/оно/они-то(сь)* 'let it be!' from 'he/she/it/they'+'just'(+'self'), about εν see № 7. 'this'), Zazaki ē 'they' (< *eii? but Skr. imé m., imás f., imá(ni) n. = Av. ime m., imå f., imā n., stem from Asg. *in > *im).

7. 'this' = *eis (*iā f., *iod n.) 'this one, he' and *ḱis (*ḱiā f., *ḱiod?[2] n.) 'this here':

*eis m. (Asg. *in, Gsg. *es?, Dsg. *iōi?, Lsg. *esiei?):

<u>Nsg. *eis</u>: OCS и 'that (m.)' (also used in Asg.), Sudovian es 'he' (Lith. jìs < *i-), Old Lat. eis 'this, that, he' (Osc. izik, Umbr. erek < *eis-ke, with Osc.-Umbr. pronominal *-ke), OIr. (h)é 'he', Skr. ayám (Av. aiiə̄m)[3] 'this (m.)'. – <u>Asg. *in</u>: Lith. jį̃, Old Lat. im 'him', Gr. ἴν[4] 'him', Skr. imám, Av. iməm 'this (Asg. m.)'. – <u>Gsg. *es?</u>: OCS ѥго (Proto-Slav. *e-go, cf. the particle in Lith. dial. tùgu 'you' and Venet. meχo Asg. 'me'; OCS чесо 'what (Gsg.)' (but Old Polish czso [64: V. 1, p. 317, 395; V. 6, p. 119]) < *keses < *kʷi- 'what' + *es + *es?), Lith. esą̃: «Jis, esą̃, nežinąs» 'he, by his words, doesn't know', Osc. eiseis (< *es + *es?), Umbr. ererek (< *es + *es + Osc.-Umbr. pronomial *ke?) 'this, that, him (Gsg.)', Gr. ἑός 'his (own), one's (m.f.)' (< *es + *es? aspiration after ὅς 'this'), Skr. asyá (Av. ahiiā, axíiāca, ahe, aŋhe) 'this (Gsg.)' (with -yám and noun declension? or ~ Gr. epic οἷο 'this (Gsg.)' < *es + *io ≠ лит. jõ 'him'). – <u>Dsg. *iōi</u>: OCS ѥмоу 'to him' (with DLIsg. extension -m-, -ōi > -oy cf. Gsg. of -o-declension: OCS -oy, Lith. -ui, Lat. -ō, Gr. -ῳ, Skr. -āya), Lat. eī 'to him/her/it (m.f.n.)', Gr. ἰῷ 'to one (m. or n.)', but Gr. praep. cum dat. ὁμῇ 'to', Skr. asmái (Av. ahmāi) 'to this' from the stem of Gsg. (with DLAblsg. extension -m-). – <u>Lsg. *esiei?</u>: OCS ece 'here is', Osc. eisei/eizeic 'in him', Gr. εἰ (epic-Dor. αἰ) 'if < in this' [42, 7], Av. ahmī (Skr. asmín) 'in this (m.)' (with DLAblsg. extension -m-).

*iā f. (Asg. *ian, Gsg. *iās?, Dsg. *iai?):

<u>Nsg. *iā</u>: OCS, Old Rus. ıa 'that (f.), she', Lat. ea 'this, that, she' (Osc. iiuk/ioc < *iā-ke?), Gaul. eia 'she', Gr. ἴα/μία 'one (f.)', Skr. yā́ 'which (f.)' (Av. yā [31, VIII, 204]): yā yā 'whatever woman', iyám (Av. īm) 'this (f.)'. – <u>Asg. *ian</u>: OCS ѭ 'that (Asg. f.)' (Rus. dial. *ю* 'her

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[1] Also eeis/eīs (by III noun declension), Osc. e)isai (from the stem of Gsg.), Osc. iusc (?).

[2] For n. -od cf. also n. *kʷod 'who', *dod 'when'.

[3] < *ei-, extension *-Hem cf. in Skr. tvám 'you', ahám 'I' (Av. azəm), also here ai-ṣámas 'this year' and eṣá-, etá- (Av. aēša, aētaṱ) 'that' [42, 21–28].

[4] Cypr. ἴν, Ion. μίν (ῐ), Dor.-Att. νίν (ῐ) (< *in, reduplication as in Lat. Asg. emem [42, 10]). Possibly, also here ἐν 'at that time' (< *in with augment *e-, as in ἐκεῖνος/κεῖνος 'that'?) – this contraction is known for εἰν in other meanings.

(Asg.)')', Lith. ją̃, Latg. jū 'her (Asg.)', Lat. eam (< *ian, but Osc. iak < *ian-ke?) 'this, that, her', Gr. ἴαν 'one (Asg. f.)', Skr. imā́m (stem from Asg. m. *in > *im). – <u>Gsg. *iās?</u>: Cz. jí 'of which (possessive)' (< *ji (*jy) < Proto-Balto-Slav. *iōs, but Slovene njẹ́ 'her (Gsg.)' < *iai by noun declension from *iā, OCS -ꙓ 'that (Gsg. f.)' < Gsg m. *es + idem), Lith. jõs, Gr. ἰῆς 'one (Gsg. f.)', Skr. asyā́s 'this (Gsg. f.)' (*es от Gsg. m.), Gsg. f. ending -ā-yās, but Lat. eius 'him, her, it (Gsg. m.f.n.)'? Umbr. erar 'her' from Gsg. m. – <u>Dsg. *iai?</u>: OCS ꙗи 'to that (f.)' (Rus. *eй* 'to her'), Lith. jái, Lat. eae 'to this, that, her', Gr. ἰῇ 'to one (f.)', Skr. asyái 'to this (f.)' (*es from Gsg. m.).

*iod n. (in oblique cases *id-[1]):

OCS ѥ 'that (n.)' (also used in Asg.), Lith. jì 'she' (< Asg. *id, Lith. generally does not use n.), Lat. id 'this (n.)' (< *id, Asg. m. eum, Umbr. eu < *iod-n?, Osc. ionc < *iod-ke?), OIr. (h)ed 'it' (Manx í 'she' [45, Vol 4, p. 10]), Gr. ἰόν 'one (Asg. m. or n.)' (< *iod-n?), Skr. yád 'which, that' (Av. yaṱ [31, issue 8, c. 204]), idám n. 'this' (< *id-, Asg. idám; but Av. Nsg. imaṱ[2] from *iod? for -d > -ṭ cf. ablative ahmāṱ).

*ḱis m., *ḱiā f. (in oblique cases *ḱia-?), *ḱiod? n. (in oblique cases *ḱid-):

OCS сь m. (< *ḱis), си f. (< *ḱiā), ce n. (< *ḱiod?), Lith. šìs 'this', Lat. cis 'from this side', OIr. (ogham) ci (Lsg. coi) 'this', Gr. Cypr. κιδνόν (< *ḱid (n.) + -n- [38]) 'here', Skr. śiṣṭa- 'remaining' (~ stha- 'staying', cf. № 125. 'to stand').

8. 'that' = *au- (Nsg. *so, Asg. *tom 'that' is only reflexed in Indo-Iranian and Greek, the roots are used separately in Celt. and Lat., *so in Balto-Slavic only appears in OCS самъ 'self'?): OCS овъ 'that', Lith. avà 'there', Lat. autem 'on other side', OIr. úa 'from', Gr. αὐτός 'that same', Skr. avōṣ 'those two', Av. ava 'that'.

9. 'here' = *idʰe: OCS идеже 'where (relative)', Umbr. ife (Lat. ibī) 'there', Gr. ἰθύς 'immediately' (cf. meaning of Rus. *тут* 'here; immediately'), Pali idha (Skr. ihá), Av. iδa 'here'.

10. 'there' = *an: OCS оноуде 'there', Lat. an, Gr. ἄν (ἄ) 'maybe' (cf. meaning of Rus. *там* 'there; (enclitic) maybe'), Gaul. antom, Skr. ánta- 'border', Skr. anā́, Av. anā 'through this', Pers. ânjâ 'there'.

11. 'who' = *kʷos m., *kʷā f., *kʷod n. (cf. forms with № 7. 'this'), also 'which': OCS къто 'who' (кыижьдо m., каѥажьдо f., коѥжьдо n. 'every'), Lith. kas 'who, what', Umbr. poi (Lat. quī) 'who (m.)', Osc. pai

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[1] For n. the use of Asg. instead of Nsg. is likely, and also Nsg. n. instead of Asg. m., as equally showing the inactivity.
[2] For the propagation of im- stem from Asg. *in m. cf. Asg. imā́m f. (Av. imąm), Npl. imé m., imā́s f., imā́(ni) n. (Av. ime m., imå f., imā n.).

(Lat. quae) 'who (f.)', pod (Lat. quod) 'who (n.)', OIr. nech (< *nekʷos) 'someone', Gr. ποῖος (Ion. κοῖος) 'which, who, what', Skr. kás, Av. kə̄ 'who'.

12. 'what' = *kʷi-.

13. 'where' = *kʷu-.

14. 'when' = *dos, *dā, *dod? (cf. forms with № 7. 'this'), often with *kʷo- 'which': Rus. dial. *то(г)дá/то(г)ды́/то(г)дé/тогдú* 'then', OCS къгда/когда; Slovene kedaj (Rus. dial. *кодáй*); Slovak kedy (Rus. dial. *когды́*), Lith. kada 'when', Lat. dum 'whiles' (quan-dō 'when' < *dod?), Gr. epic δηθά 'for a long time (=when + from)', Dor. οὐ δᾶν! 'no, I swear! (=no + when)', Skr. kadā́ 'when' (ekadā 'once', sadā 'always'), Oss. kæd 'when'.

15. 'how' = *kʷid и *kʷod (ablatives -d) from *kʷi- 'what' and *kʷos 'who'), various constructions of 'from + what/who' are also used:

– *kʷid: OCS чьто 'why', Latv. cik 'how', Lat. quid 'why' (NB in Lat. this ablative of *kʷi- 'what' has been substituted by quō (ablative of *kʷos 'who'), there is also a mixture of *kʷid + *kʷos: quis 'who'), Welsh py 'how', Gr. τί (ῐ) 'why', Oss. куыд 'how' (~ Skr. kim 'how; why; interrogative particle'?).

– *kʷod: Rus. dial. *ик* 'how' (*u* 'and'), Latv. ka 'how', Lat. quod 'how', Gr. ποῦ (Ion. κοῦ) 'how', Skr. kam/kad 'interrogative particle'.

– using *ā 'from' (Skr. ā- 'from') *in preposition*: OCS какъ (Pol. jak)/акы/како (Pol. jako) 'how' (такъ 'so', инакъ 'otherwise'), Lith. kóks n., kokià f. 'which' (tóks 'like that', šióks 'like this'); *in postposition*: Slovene kà 'as; when; perhaps', Latv. kā 'how', Lat. quā 'how', Welsh pa 'how', Gr. πῇ/πῆ (Dor. πᾷ/πᾶ, Ion. κῇ/κῆ) 'how', Skr. kā 'interrogative particle'.

– using *dʰen 'from' (Gr. -θε(ν) – partitive and genitive suffix): Lith. kàd 'if', Lat. quīdum 'how', Gr. πόθεν/Ion. κόθεν 'how', Skr. kathám 'how'.

16. 'not' = *ne|*n-.

17. 'all' = *uiḱis: OCS вьсь 'every', Lith. vìsi 'all' (Npl. of vìsas 'whole', see above about š > s), Lat. vīcēnī '20' (not derivable from *dui-deḱm-, derivable from 'all (fingers)'), Gr. ἴκτᾰρ 'together', Skr. víśva-, Av. vīspa 'all'.

18. 'many' = *plHus|*polH-: OCS плъкъ, Lith. pul̃kas 'crowd', Rus. *плынь/половодье* 'flood', Lat. plūs 'more', OIr. il 'much', Gr. πολύς 'much, many', πλοῦτος 'wealth', Skr. puru- 'many', Av. pouru 'much, many, full'. Also used is *uel-|*ul- 'much': OCS велии 'big', вельми 'very', Latv. un kā vēl 'and how!', OPr. walnennien 'the better', Lat. ultimus 'largest, highest', vēlōx 'fast' (*uellōks, *lok- 'fast': Spanish loco

'impetuous', Bologna (Modena) loc 'fast', Lith. lakùs 'fast', see № 120. 'to fly'), MWelsh gwell 'better', Gr. ἅλις (*-ḷ-) 'enough', Skr. vardhati 'grows'.

19. 'some' = *li: OCS ѥлико 'how many' (Old Polish ile/jele), Lith. kelì 'some; how many?' Lat. aliquī 'some' (quī 'how'), πηλίκος (ῐ) 'what size' (πῇ 'how'), Skr. li- m. 'sameness'.

20. 'few' = *men-|mn-: Rus. dial. *мéне/мнéй* 'less', Lith. menkaver̃tis 'of little value', Lat. minor 'less', Osc. menvum 'to lessen', MIr. menb (< *menwos) 'small', Gr. μᾱνός 'rare', μειόνως 'too few' (dissimilation of n-n, as in αὐχήν 'neck', ἤτρον 'belly', ἔν-δῑον 'noon'), Skr. manā́k 'a little', Oss. mængæj 'few, small'.

21. 'other' = *alios: Cz. ale, Rus. dial. *алé* 'but' (formed as an adverb from 'other'), Lith. aliái 'every', Lat. alius, OIr. aile/oile/eile (Gaul. allos), Gr. ἄλλος/αἶλος 'other', Skr. aryamán m. 'a bosom friend' (cf. meaning with OCS дроугъ 'other; friend'), Oss. æsægælon 'alien' (æsæg 'true' + *arịana- 'alien') [30, I, 223]. (Skr. anyá-, Av. aniia- 'other' – contamination with *antr- 'other' < *an- 'there, on the other side': Skr. ántara- 'different from', Av. aṇtara, Oss. æндæр, Lith. añtras, Latv. otrs, OPr. antars, antrā, anters 'other'; contamination to the other side: Lat. alter 'other'.)

22. 'one' = *oinos m., *oinā f.: Slovene èn, êna, Rus. dial. *éнный*, Pol. jany, OPr. ains, Sudovian ans, Old Lat. oinos (Osc. uinus), OIr. oén (Welsh un) 'one', Gr. οἴνη 'the ace on a die', Skr. ena-, MPers. ēn 'this'. Other formations from *oi- 'only?': οἶος 'only, single', Skr. éka- 'one', éva- 'alone, only', Av. aēuua 'one'. (Old Rus. иныи 'he; one', Lith. jinaĩ 'she' are from № 7. 'this' = *ei-.)

23. 'two' = *duoH|*duH-.

24. 'three' = *treies|*tri-.

25. 'four' = *kʷetuore|*kʷetur-: OCS четыре, Rus. *четы́ре*, Lith. keturì, Lat. quattuor, OIr. cethair, Gr. τέσσαρες/τέτταρες/Ion. τέσσερες/Dor. τέτορες/Lesb. πέσ(σ)υρες/Aeol. πίσυρες (but PIE *-es > Gr. -ος!), Skr. catur (m. pl. catvā́raḥ), Av. caθβar, caθβārō.

26. 'five' = *penkʷe.

27. 'big' = *meǵH-|*mǵH-: Rus. dial. *мéсто* 'wealth', *музлáн* 'peasant' (< *mǵH-n-, OCS мѫжь 'man' with the affiliation suffix -i-), Old Lith. mēzliava 'pooling', Lat. ingēns/magnus, OIr. maige, Gr. μέγας, Skr. mahā-, Av. maza 'big'. See also *uel-|*ul- 'much' in № 18.

28. 'long' = *dlHgʰos.

29. 'wide' = *plH̥tus.

30. 'thick' = *bʰengʰ-|*bʰngʰ-: Rus. dial. *бузлáн* 'big healthy man', Lith. búožė 'knob', Lat. fungus 'mushroom' (pinguis 'fat' contains

an irregular p), Welsh bwr 'fat, strong, big', Gr. παχύς 'thick', Skr. bahú-'large', Av. bązah- 'thickness' (Oss. бæзджын 'thick (of a book)'). Also used is *taūk-: Old Pol. tuczicz 'to make thick', Lith. taukùs 'thick', Lat. tūc(c)ētum 'some made-up savoury dish', Ir. tón 'buttock' (*tūknā-), Gr. τυκτά 'royal feast', Skr. tokma 'cloud'.

31. 'heavy' = *gʷrH- (cf. № 156. 'stone').

32. 'small' = *men-|*mn- (cf. № 20. 'few'). Also used is *moǵ-: Bulg. мо́зак 'a delicate creature, for ex., a child, a lamb etc.', Lith. mãžas 'small', OIr. mug, Corn. maw 'servant', Gr. μογοσ-τόκος 'speeding the birth', Skr. maj- 'under'.

33. 'short' = *mrǵʰus: Rus. *мерзáвчик* 'the smallest measure for vodka', *мергáч* (<*мерзгач?) 'small perch, small fish', *мервá* (<*мерзва?) 'small tailings of flax scutching', Lith. ìšbrizga 'clout, rag' (contaminated with brìzgti (brỹzga, brìzgo) 'to frazzle'), Lat. brevis, Gr. βρᾰχύς 'short', Skr. múhu/múhur (<*múrhu-?) 'suddenly, in a moment' (cf. meaning of English *shortly*), Av. mərəzu- (Oss. морз) 'short'.

34. 'narrow' = *anǵʰus (~ № 130. 'to squeeze').

35. 'thin' = *tenHus|*tnHu-.

36. 'woman' = *gʷenHs|*gʷneH-: NB Lat. Venus.

37. 'man (adult male)' = *uirH̲os: NB Rus. dial. *«мой миленок, вирьвирьёнок», верверьёнок* 'beloved man'.

38. 'human' = *h₁leuH̲dʰis: OCS людьскъ 'human (adj.)', OPr. ludis 'master of the house' (Latv. ļaudis 'people'), Old Lat. loeber 'free man' (irregular oe), Old Welsh luidt 'tribe, lineage, family' (Old Corn. leid 'descendants'), Gr. ἐλεύθερος 'free (man)', YAv. huraoδa- 'beautiful (of men and gods)' (hu- 'good').

Also used is *ǵʰen-|*ǵʰn-: Latv. zēns 'boy', Skr. jana- m. 'man, person', Gr. ἀχηνία (ᾰ): ὀμμάτων ἐν ἀχηνίαις (Aesch.) '(of a statue) in unseeing eyes (=unhuman)', Old Lat. hemo, Gsg. hemōnis 'human', Rus. dial. *зёма* '«countryman», an invocation', Old Lith. žmuõ 'human', Lith. žmónės 'people', OPr. smunents 'human', smoy 'man', Gpl. smūni, Rus. dial. (Vologda) *змо́выны*, Pol. zmówiny 'match-making (not an engagement!)', Slovene zmíkati 'to draw in', Pol. zmykany 'kind of dance', Rus. dial. (Smolensk) «сама змы́чет – не попова дочка (she keeps company with men(?), she is not from a priest's family)» [24, XXI, 34] (*zmykъ cf. камыкъ 'stone').

39. 'child' = *uoīkos: OCS чловѣкъ 'man' (Rus. dial. *вéкша* 'single woman, never married'), Lith. vaĩkas 'child' (Latv. vaiks 'boy', Npl. vaĩki 'children', OPr. wayklis 'son'), Lat. uxor/uохоr 'wife' (regular ū <*oi, regular orthography uo (wu) [17, 58], -sor cf. in soror <*suesor- 'sister'), Gr. οἰκεύς 'servant', Skr. vekaṭa- 'youth'.

40. 'wife' = *ḱoiuā? (from 'beloved woman'): Rus. *посевно́е полоте́нце* 'in a wedding rite: a towel, bride's mother moves it around the heads of the newly weds, saying «Сей ленок, будет платок»' [24, XXX, 145], *«Ну будь моя супруга севе́чная и праведная»* [24, XXXVII, 104] ('be my wife of (*севка*)s and pious'), *сивола́п* 'clumsy, rude man' [7, IV, art. 145] ('(*сева*)'s toucher' from *ла́пать* 'to touch'), Bulg. севда́ 'love' [6, 156] (Slav. -ьd < *-id '-ing'), Pol. Matka Boska Siewna '8th of September' [63, 127–128] ('Our Lady of (*siewa*)s'), Latv. sieva 'wife', лат. coitus 'sexual intercourse' (-oi- not from verb *ḱei- (regular outcome of *oi is ū), might be from *ḱoiuā + itus), MWelsh cu 'beloved' (Corn. cuf), Gr. κήδευμα 'relation (by wife)' (-id '-ing' cf. севда́), śéva- 'the male organ' (cf. Rus. *жени́лка* 'the male organ' from *жени́ть* 'to marry (him to her)'). Other formations from the same verb: Rus. *«друг мой си́тный»* 'my dear friend', Old Lat. ceivis 'friendly inhabitant', Skr. śéva- 'dear'. Also the word for 'woman' (№ 36) is used for 'wife'.

41. 'husband' = *potis (also 'lord'): NB Welsh udd 'lord'.

42. 'mother' = *mātēr|*mātr-.

43. 'father' = *pHtēr|*pHtr-: Lat. pater (Gsg. patris) 'father' (Osc. patir), Ir. aite 'tutor', Gr. πᾰτήρ (Gsg. πᾰτρός / πᾰτέρος) 'father', Skr. pitā́ (Dsg. pitré), Av. ptā (Oss. фыд, Old Pers. pitā), 'father'. Proto-Balto-Slavic *ptē gives *tē in most languages, suffixed and reduplicated forms are used: Rus. dial. *те́ки* 'uncle, mother's brother', Rus. dial. *тетя́й* 'father in wedding rite', Lith. tétė, Latv. tētis 'father', OPr. thetis 'grandfather'. Some of these forms (except for OPr., where *ptē-ptē corresponds to the meaning 'father's father') might be connected to Skr. tātá 'father', but it corresponds to Rus. *та́та* 'father', Cf. Rus. dial. *стёвушка* 'father-in-law', *стёвый* 'father-in-law's'. A common origin is possible for Old Rus. тьсть 'wife's father' (from a dialect with *pt > st, cf. Old Rus., Serb. нестера 'niece' ~ Cz. neteř 'niece') and Rus. dial. *те́тька* 'husband's father'. Also reflected is *pHtrui- 'father's brother': Rus. *стрый/строй* 'father's brother', Skr. pitṛvyā 'father's brother' (Baltic words without -r-: Lith. tévas, Latv. tȩvs, Sudovian tews 'father', OPr. thewis 'father's brother', tāws 'father' are also traced from *(p)tē + *aṷos 'ancestor' [35, 29]).

44. 'animal' = *ǵʰuēr|*ǵʰuer-: OCS звѣрь, Lith. žvėrìs, Lat. fera 'wild animal', MIr. geir (d) < *gwered- (MWelsh gwer) 'animal fat, tallow', Gr. θήρ/Aeol. φήρ 'beast', Skr. hūrava 'jackal'.

45. 'fish' = *perkā: Rus. *пе́речень* 'small bream', Pol. dial. perk 'Baltic herring', Lith. peř̃pelė 'пузанок, fish Alosa fallax', Lat. perca 'perch', Ir. earc 'salmon', Gr. πέρκη 'perch', Skr. parkaṭa 'heron' (*perkā + atti 'eater', cf. Rus. dial. *рыбое́д* 'heron' (literally 'fish-eater'), cf. tt shortening in páttram > pátram 'wing, feather'), Yazghulami púrgi zənéc

'bot. bladder fern (< fish's swimming-bladder)' ([30. VI, 173] shows 'mouse's swimming-bladder', that does not make sense), Pers. pul 'fish scales'?

46. 'bird' = *auis (*h₂euis for Old Arm. haw 'bird; hen').

47. 'dog' = *ḱuōn|*ḱuon- (Gsg. *ḱunes). NB Rus. dial. *сы* 'word for calling dogs', Rus. *свóра* 'pack of dogs', *сýка* 'bitch'.

48. 'louse' = *utis: Old Rus. въшь (diminutive of *въть), Lith. utìs, Lat. tinea 'louse' (*ut- with the singleness suffix *-īn), Gr. ὕσσωπος 'hyssop' (used against vermins), Skr. utkuṇa- 'louse'.

49. 'snake' = *neHg-|*nHg-: Skr. nāgá-/áhi- (Av. aži-) 'snake', OIr. nathir 'snake'/esc-ong 'eel', Old Rus. ужь 'snake' (пол. wąż), Lith. angìs 'viper', Lat. anguis 'snake', Gr. ἔχῐς 'viper' and ὄφις 'snake' (the latter with suffix -ṷ-, thus another colouring of *n and φ < *gʰ ṷ, see above on *gʷʰ/*ǵʷʰ).

50. 'worm' = *kerm-|*krm-: Slovene čȓm, Lith. kirmìs/kiȓmis 'worm', Lat. cirrus 'tentacle (of polyps)', OIr. cruim 'worm, maggot', Gr. κεραία 'tentacle', Skr. kŕmi-, Pers. kerm (Oss. калм) 'worm'.

51. 'tree' = *uer-: Rus. *верёга* 'long thick pole', *верéйка* 'pole of distaff', Latv. vēris 'big forest', Lat. verū 'javelin', MWelsh gwern 'alder, mast of a ship', Gr. ἔρμα 'pole', Skr. varaṇa-, Av. varəša, urvarā, Oss. бӕлас 'tree'. Also *doru|*dreu- 'wood': Rus. *дор* 'roofing lath', Latv. daȓva 'resin', Welsh derwen 'oak', Gr. δόρυ/δρῦς 'tree', Skr. dáru 'wood', drú 'tree, branch', Av. dāuru 'wood'. Hence the name of squirrel (Rus. *вéверица*, OPr. weware, Welsh wywer, Pers. varvarah).

52. 'forest' = *uen-: Rus. *венок/венец* 'one row of logs in a framework', Slovene venéti 'to be green', Lith. pavénis 'refuge from sun', Lat. vēnor 'to hunt' (cf. the meaning of Latv. mežs 'forest', medīt 'to hunt'), MIr. fian 'band of warriors' (Proto-Celtic *wēnā), Gr. εἰνοσί-φυλλος 'wooded', Skr. vána- 'forest', Av. vanā 'tree'.

53. 'stick' = *uerHbʰ-|*urHbʰ-: Rus. *верба* 'pussy-willow', Lith. viȓbas 'twig', Lat. verbēna 'a leafy branch of an aromatic tree', Gr. ῥάβδος (< *ṷrHbʰ-i-os) 'stick', Skr. vāribhava- 'kind of plant'.

54. 'fruit' = *māl- (*maHl- for Hitt. maẖla 'grape-vine'): Rus. *малúна* 'raspberry', dial. strawberry' (альтернативная праформа и второе значение русского слова). Lith. moliũgas 'pumpkin', Lat. mālum 'apple, pear', Gr. μᾶλον/μῆλον 'apple, lemon', Skr. nirāmālu- 'wood apple' (nīra- 'juice'), Yazghulami mawn 'apple' (< *m ālnā).

55. 'seed' = *seHmn: OCS сѣмѧ, OPr. semen, Lat. sēmen, MIr. seimed 'seed', Gr. ἥμερα 'crops', Skr. sāmagrya 'reserves' (agrya- 'roof'), sāman 'wealth' > sāmanta- 'leader', Pers. hāmat 'the chief of a people, family, or tribe'.

56. 'leaf' = *b^hol-: Rus. dial. *болобо́лки* 'a kind of water-lily', Lith. balãnas 'sod', Lat. folium, MIr. bileóc (< *$bhel\underset{.}{i}o$-) 'leaf', Gr. φολίς 'scales', φύλλον 'leaf', Skr. bharita- 'green' (bhariṇī 'green colour'), Pers. bar 'leaf'.

57. 'root' = *kor-|*ker-: OCS коренъ, Lith. kẽras 'root', Lat. cornū, MWelsh carn 'hoof', Gr. κόρσεον 'root of lotus', Skr. caraṇa 'root', Yazghulami čərmúk 'part of a spinning loom – pegs on the end of the frame, where the rope is attached' [30: V. 2, p. 232]. Also used is *ureh$_2$ds|*urh$_2$d-.

58. 'bark' = *korion (from *ker- 'separate (of bark)', Lith. kérti): Serb.-Cr. kôrje, Old Rus. корье, Rus. dial. *корьё* 'bark', лтш. krija 'bast', лит. karigė, OPr. karige 'rowan' (< Proto-Baltic *karijan, from the speckled bark used in folk medicine; the rowan-berry does not seem to be used before 18 c.), Lat. corium 'crust', Gr. κόριον 'maiden', Pers. kara 'мозоль'. Other formations with the same meaning from the same verb: Old Rus. кора 'bark', Latv. kārkls 'withe', Lith. karnà 'lime bast', Lat. cortex 'bark', Gr. κόρϝα 'maiden', Skr. karaka- 'a cocoa-nut shell', Skr. cárman, Av. carəman 'pelt', Oss. цъар 'bark'.

59. 'flower' = *b^hulH-: OCS былиѥ 'grass', Lith. burbùlis 'globe-flower', Lat. furfur 'husk', Gr. φύλλον 'petal', Skr. phulla-, Baluchi phul 'flower'.

60. 'grass' = *g^{wh}erH-: Ukr. *гре́ний/гря́ний* 'green', Latv. grīslis 'sedge', grīnis 'sedge-heather pinery', Lat. grāmen 'grass', Gr. θρῖον 'fig leaf', θρῖδαξ 'lettuce' (diminutive -id), Skr. hrasva- 'names of various plants', hrasvakuśa- 'Kuśa grass or a kind of short Kuśa grass'.

61. 'rope' = *uer-: Rus. dial. *ве́рька* 'rope', Lith. vėrė́ 'loop', vėrinỹs 'thread', Lat. vermis 'worm', Gaul. viria 'kind of bracelet', Skr. varatrā́ 'belt, rope', Pers. bārrang 'ropes, girths, bandages'.

62. 'skin' = *keHutos|*k$\underline{H}$ut-: NB Rus. *ку́тать* 'to wrap up', Skr. kutū 'a leathern oil-bottle'.

63. 'meat' = *mēmson.

64. 'blood' = *h$_1$esh$_2$r|*h$_1$sh$_2$en-|*h$_1$osh$_2$- (detransitive/protomiddle voice by Pooth [59]): NB Rus. dial. *восца́/восса́* 'herpes; eye decease in birds; sore; skin decease with itch (herpes, eczema, scab)'. Also used is *kreuHs (or it means 'raw meat').

65. 'bone' = *osts (*h$_3$est- for Hitt. ḫa-aš-ta-i n. /ḫaštāi/ 'bone') and *keh$_2$ulis.

66. 'fat' = *touHk-|*tuHk-: OCS тоукъ 'fat', Lith. táukas 'piece of lard', Lat. tūc(c)ētum 'sausage roll', Ir. tón 'buttocks' (*tūknā-), Gr. τυκτά 'royal feast', Skr. tokma- 'ear-wax'.

67. 'egg' = *ōuion. Also used is *kokkos.

68. 'horn' = *$\acute{k}$erHns|*$\acute{k}$rHn-.

69. 'tail' = *pouHǵ-|*puHǵ-: Rus. dial. *пу́зо* 'purse of a sweep-net', *пыж* 'anchor cable', Upper Sorbian wopuš 'tail' (< *puHǵ-s-), Latv. pušķis 'bunch, pompon' (Lith. dial. paustìs 'animal hair'), Lat. pūga, Gr. πῡγή 'buttocks', Skr. púccha-, Av. pusa- 'tail' (< *puHǵ-s-).

70. 'feather' = *spHeros|*spHr-: Rus. dial. *спореня́* 'a form of snow (unlike «крупинки»/grains and «ляпушки»/flakes)', *спо́рина* 'husk', Lith. spar̃nas (Latv. spãrns) 'wing', Latv. spal̃va 'feather', Lat. sparus 'dart', Welsh pâr 'spear', Gr. σπάρτον 'balance indicator', Pers. par 'feather'. Possibly here: Rus. *перо́* 'feather', *перна́тый* 'winged' (*perṇ-), Lat. pernīx 'quick', Gr. Περσεύς 'Perseus (he wore winged sandals)', Skr. parṇá, Av. parəna 'wing'.

71. 'hair' = *motos: Rus. dial. *мот* 'lock of hair', Latv. mats 'hair', Lat. mollestra 'sheepskin', OIr. molt 'wether', Celtiber. maTu- 'bear', Gr. μοτός 'rag thread or downy cloth for bandage', Skr. namata- 'felt, woollen stuff'.

72. 'head' = *ḱerH-|*ḱrH-: Rus. dial. *серя́к* 'headscarf; hoody cloak', Old Rus. серьга 'ear-ring', Lith. šérnas 'boar', Lat. cerebrum 'brain', MWelsh crib 'comb', Gr. κᾰ́ρᾱ 'head' (κρᾱνίον 'skull'), Skr. śíras, Av. sarəm Asg. 'head' (Oss. cæp, Pers. sar).

73. 'ear' = *h₂ōus.

74. 'eye' = *okʷ-.

75. 'nose' = *neh₂s|*nh₂s-: NB Gr. ἀάζω 'I breathe out'.

76. 'mouth' = *eHs-|*oHs-: Slovene jâška 'cavity in earth', Slovak jask 'tunnel', Lower Sorbian jašk 'a hole of a fish-trap', Ukr. *яскíня* 'cave', Lith. uostà 'mouth of a river' (also reflects *aust- 'lip'), Lat. ōs (Gsg. ōris) 'mouth', OIr. á 'mouth', Gr. ἤῐα 'food', Skr. ās-, Av. āh- 'mouth'.

77. 'tooth' = *ǵombʰos and *h₃dents|*h₃dont- (h₃ for Gr. (Ion.) ὀδούς, Arm. atamn 'tooth', h₁ for Gr. (Aeol.) ἔδοντες 'teeth', Gr. ἔδω, Arm. owtem 'eat' [39, 166, 186]).

78. 'tongue' = *ǵʰnHǵʰu̯ā: (with dissimilation ǵʰ-ǵʰ) OCS ѩзыкъ 'tongue', Rus. dial. *язы́ня* 'babbler', OPr. insuwis 'tongue', Lith. i̯žūláuti 'to cheek up', liežùvis (lie- from liẽžti 'to lick') 'tongue', Latv. iezt 'to grin', Osc. fangvam Asg., fancua Npl. 'tongue' (< *ǵʰnHǵʰu-), Lat. lingua 'tongue' from *hingua[1] (< *ǵʰnHǵʰu-) affected by lingō 'I lick', Gr. κανθάριον 'bowl' (< *ǵʰnHǵʰu-), καύχα 'boast' (metathesis of -ǵʰu-), χναύω 'I chew', χναυμάτιον 'dainty' (< *ǵʰnHǵʰu- without the second -ǵʰ-),

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[1] Old Lat. *dingua does not match Osc. fangvam and is not reliable, only mentioned by Gaius Marius Victorinus: «nos nunc... linguam potius per l quam per d», which might be corrupted by a copyist (single h perceived as D).

Skr. jihvá/juhū́, Av. hizvā 'tongue' (< *ǵʰnHǵʰu̯- with re-colouring of -a- < -n- because of the surrounding palatals and -i- < -H-).

79. 'fingernail' = *h₃nogʰus|*h₃ngʰeu-.

80. 'foot' = *pēds (Asg. podn, Gsg. pedes, Lsg. pedei?, Npl. pōdēs?, Apl. podns, Gpl. pedōn?). <u>Nsg. *pēds</u>: OCS пѣшь 'unmounted, foot (adj.)', Rus. *пе́ндаль* 'kick' (*pĕdъ + *dati 'to give'?), Lith. pėdà 'footprint', OPr. pedan 'foot', Lat. pēs 'foot', OIr. ís 'under' (*pēd-su?), Gr. πηδόν 'oar blade', Skr. pā́t, Old Pers. pāda-, Oss. fad (Oss. a < ā, æ < a) 'foot'. – <u>Asg. *podn</u>: Rus. dial. *под* 'hearth-stone, sole (of furnace)', Lith. pãdas 'sole', Celtiber. Asg. ozas, Gr. Asg. ποῦν (hence Nsg.. πούς, ποδ- in other cases), Phryg. Asg. ποδας, Skr. Asg. pā́dam 'foot'. – <u>Gsg. pedes</u>: Lat. Gsg. pedis 'foot', Gr. πέδον 'soil' (< Gsg. *πέδος? hence πέζα 'foot' ~ Rus. dial. *пе́жа* 'of something little', πεζῇ 'afoot'), Skr. Gsg. padás 'foot'. – <u>Lsg. pedei?</u>: Rus. dial. *педя́нка* 'abscess between toes (or fingers?)' (< Lsg.?), Umbr. Ablsg. persi 'foot' (< Lsg.?), Gr. πέδη 'fetters' (< Lsg.?), Skr. Lsg. pádi 'foot', pade 'at every step' (< Lsg.?). – <u>Npl. pōdēs?</u>: Rus. dial. *паджи́чи* 'onucha (winding on footwear)' (*жи́ца* 'thread'), *на́длаз* 'shoe on ski where the foot is mounted' (*лаз* 'hole'), Lat. pōdex 'anus', Umbr. atripursatu 'to dance the tripudium' (< *pōd-), Galat. Npl. ades 'feet' (< *pōd-), Skr. pā́das, also from this is Germanic *fōt-, Npl. *fōtiz. Ending *-ēs is reconstructed after Lat. pedēs, Gr. πόδες (*-ĕs > Lat. -is, Gr. -ος, cf. the ending of Gsg. and words like νέφος, εος 'cloud'). – <u>Apl. podns?</u>: OCS подъ 'under' (< Apl.?), Gr. Apl. πόδᾰς (thus Npl. πόδες), Skr. Apl. pádas 'feet'. – <u>Gpl. pedōn?</u>: Lat. Gpl. pedum, Gr. Gpl. ποδῶν (по Gdu. ποδοῖν/ποδοῖϊν?) 'feet', Skr. dvi-pád- 'bipeds' (< Gdu.?).

81. 'leg' = *korkos|*kerk-|*krk-: Bulg. крак 'leg', Lith. kárka 'shin', Lat. cancer 'cancer, crab' (< *krkr, dissimilation as in menetrīx 'escort girl' < meretrīx), MWelsh carn 'hoof', Gr. καρκίνος 'cancer or crab', κερκίς - ίδος (ῐ) 'shinbone', Skr. karkara- 'bone', karkaṭa- 'lobster', MPers. karčang 'crab'.

82. 'knee' = *ǵonu|*ǵneu- (see above about cognate septets).

83. 'hand' = *man-: Rus. *мани́ть* 'wave with hand', Latv. manīgs 'crafty', Lat. manus -ūs 'hand', OIr. muin 'patronage' (cf. the meaning of Rus. *ла́па*), Gr. μᾱνύω 'I point (at)', Skr. maniṣṭakā 'the little finger'.

84. 'wing' = *pet-|*pt-: OCS пътица 'bird', Lith. pùtė 'little bird', peteliškė 'butterfly', pẽtys 'shoulder', Lat. penna/pinna 'feather, wing', OIr. én 'bird' (MWelsh adein 'wing'), Gr. πτηνά 'birds', πτερόν 'feather, wing', Skr. pátram, páttram 'wing, feather', Av. pat- 'to fly' (Oss. bædūl 'nestling'). Cf. № 70. 'feather'.

85. 'belly' = *uentr-|*untr-.

86. 'guts' = *ǵʰh₃er-|*ǵʰh₃r-: Rus. dial. *зо́ренька* 'child's game with «жгуты»/laces', Lith. žarnà 'intestine', Lat. hīra 'jejunum, entrails', Gr. χόριον 'bowels', χορδή 'intestine', Skr. híra- 'strip, band', hirā́ 'vein'. Also used is *enteron|*entr- (from 'inside'): Rus. *ятро́* 'kidney? pl. entrails', Lat. exenterō (exinterō) 'I disembowel', interiōra 'entrails', Gr. ἔντερον 'intestine, belly', Skr. antrám 'entrails'.

87. 'neck' = *monHis|*mnH-: Rus. dial. *моне́я* 'beads', *мона́к* 'nod', *мони́сто* 'necklace', Lith. maniškà 'collar', Lat. monīle 'necklace', MIr. muin 'the upper part of the back below the neck', Gr. μανιάκης 'necklace', Skr. mányā, Av. manaoθrī- 'neck'.

88. 'back (body part)' = *noHt-|*nHt-: Rus. dial. *нотор* 'a peg where a pot is hanged', Slovene nât 'tops of vegetables', Lith. añt- 'on' (bare stem in tatpuruṣa compositions?), Lat. natis 'the buttock', Gr. νῶτος/νῶτον 'back (body part)', Skr. nāthá- 'protection, help, refuge', Saka ānata- 'protected' (cf. the meaning of English *back*).

89. 'breast' = *psten-: Rus. dial. *сте́нчики* 'little children', *стена́* 'side of cow: «Так стенами ниче корова»', Lith. spenỹs 'nipple, teat', Lat. stercēja 'nurse' (contaminated with stercus 'feces'), Manx sheeiney 'breast, teat, nipple', Gr. στήνιον, Skr. stána-, Av. fštāna 'breast'.

90. 'heart' = *ḱord (Gsg *ḱrdes): OCS срьдьце, Lith. širdìs, Lat. cor/cōr, Gsg. cordis 'heart', OIr. cride (*ḱerdi̯o-), κῆρ/κέαρ/ κραδίη/καρδίη, Dsg. κῆρι 'heart', Skr. śardha 'bold', śardhañjaha 'pulse'. Skr. hṛd- 'heart' (Av. zərəd) – contaminated with hárṣati 'is excited'?

91. 'liver' = *Hiokʷr|*Hiekʷr-.

92. 'to drink' = *pī-, aorist stem *po-.

93. 'to eat' = *edmi.

94. 'to bite' = *knHdom: пол. kądek 'bit', Lith. kąsti, kándu, Lat. mandō, Welsh cnoad 'to bite', Gr. κνώδων 'jag', Skr. khā́dati 'chews, bites', knathti 'hurts', Pers. xâyidan 'to chew'.

95. 'to suck' = *dʰeH-.

96. 'to spit' = *pstHuom|*psteHu- (NB Alb. pshtyj 'to spit'): OPol. pywala 'spat', Pol. pluć 'to spit', Rus. dial. *тьфу/стьфу* 'spitting sound', Lith. spiáuti, Lat. spuere, ppp. spūtum, Welsh -poeraf (amboeri) 'to spit', Gr. πτῦω, πυτίζω, ἐκ-πῦ-τίζω, Dor. ἐπι-φθύσδω 'I spit', Cypr. (Hes.) ψύττει 'spits', Skr. ṣṭhívati 'spits', sphoṭa 'boil [furuncle]', Oss. ту 'spitting', Northern Kurdish tifand 'to spit'.

97. 'to vomit' = *reūg-|*rūg-, also *uemh₁-.

98. 'to blow' = *dʰmom.

99. 'to breathe' = *h₂enh₁-.

100. 'to laugh' = *smeiom (see above on *sm- > Lat. sp-).

101. 'to see' = *ueidmi, also *derḱ-.

102. 'to hear' = *$\acute{k}$leu-: Baltic *kluštei (Lith. paklùsti 'listen to' with restored suffix -s, see above the rule for š) is due to dissimilation of č-š («Meillet's law»), cf. Lith. šlov$\tilde{\tilde{e}}$ 'glory' without the suffix.

103. 'to know' = *$\acute{g}$neh₃om.

104. 'to think' = *menom|*mn-. Also used is *(s)keit-|*(s)kit-: OCS число/чисмя 'number', чьтеније 'appeal (speech)', Lat. scītus 'clever', Gr. κισσάω/κιττάω 'I crave', Skr. cétas 'thinking soul', Av. cisti 'consciousness'.

105. 'to smell (perceive)' = *od- (*h₃ed- for Arm. hot 'smell'): NB Skr. svāda 'flavour' (su- 'good').

106. 'to fear' = *bʰei-|*bʰi-: NB Gr. φοιτάω 'I rush about'.

107. 'to sleep' = *suep-|*sup-.

108. 'to live' = *gʷīuom.

109. 'to die' = *mrom[1]|*mer-.

110. 'to kill' = *gʷʰen-|*gʷʰn-: NB Rus. *кровáвая жáтва* 'mass murder', Latv. dzenāt 'to flap (flies)'.

111. 'to fight' = *ieudʰom and *bʰer-: OCS брати 'to fight', Lith. bárti 'to scold', Lat. feriō 'I hit', OIr. berg [ā] 'robbery', Gr. φέριστος 'bravest', Skr. bhara 'battle', Osset. (Iron) byrsyn/byrst, (Dig.) bursun/burst 'to break; to intrude; to push, press on; to overcome in a fight, fight'.

112. 'to hunt' = *ueiHmi (1 sg. ending deduced from 2 sg. Skr. véṣi). Also *lau-.

113. 'to hit' = *bʰeiom.

114. 'to cut' = *ker-|*kr-.

115. 'to split' = *$\acute{s}$keid-|*$\acute{s}$kid-: NB Rus. *рассéдáться* 'to crack, split (intr.)', Lith. skiedrà 'chip'. Also *krih₁- 'separate': Upper Sorbian křida 'sieve', Lat. cernō 'to sift, to separate, to distinguish' (< *kri-n-h₁-), OIr. críathar 'sieve', Gr. κρῑ́νω 'to separate, to decide', Skr. krītá- 'a sort of despised caste'.

116. 'to stab' = *bʰedʰ-|*bʰdʰ-: Rus. dial. *бедь* 'a hole in the bench of a boat, where the mast is mounted', Lith. bèsti, bẽda 'to poke', Lat. fībula (<*bʰedʰ-dʰlā) 'pin', MWelsh beð 'grave', Old Breton bodou 'crow', Gr. φαλλός 'phallus', Skr. bādha- 'injury', bhadrā 'cow', Oss. бел 'shovel'.

117. 'to scratch' = *skabʰom: Rus. *скоблúть* 'to scratch', Lith. skabýti 'to tear off', Lat. scabō 'I scratch', MIr. (s)cīp 'hand', Gr. σκᾰ́φιον 'hoe or spade', MPers. /škpt/ 'violent, terrible', Choresmian (+ *para-ā-) /pr'škm-/ 'to rob' (cf. meaning with Rus. *ободрáть*, English *to strip*), Skr. missing or requires the loss of *a: skunāti 'tears, rends' (Cbʰn > Cun? Cbhn

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[1] [60, 439] incorrectly cites OCS u-mьrjetъ, in reality it has u-mьretъ, u-mьrǫ.

does not exist in Skr.). Also used is *kes- (missing in Lat. and Iranian). *ksu- is missing in Celto-It. *skrībʰ- is missing in Indo-Iranian.

118. 'to dig' = *kep-: OCS копати 'to dig', Latv. kaps 'grave', Lat. excipula (e>i is regular in the middle syllable) 'pool, pond', MIr. cechor 'bog'?, Gr. κοπίς 'butchering knife', Skr. kapanā 'a worm, caterpillar', Pers. kāftan/kāv- 'to dig'.

119. 'to swim' = *pleuom.

120. 'to fly' = *petom and *lek-: Slovene lèt 'flight', Rus. dial. леклéк 'stork, egret', лóкта 'ball', Lith. lễkti, lekiù 'to fly', Lat. lōcusta 'locust', Gr. λόκαλος 'stork?', Skr. racayati 'puts in motion (a horse)', Rushani racost, Khufi racūst 'to flee', hence Lith. lakùs 'fast', Lat. vēlōx 'fast' (see № 18. 'many').

121. 'to walk' = *eimi|*i- и *gʷe-|*gʷ-.

122. 'to come' = *eimi|*i- и *gʷe-|*gʷ-.

123. 'to lie (as in bed)' = *legʰ-: NB Skr. rahas 'sexual intercourse', Oss. лæууын 'to lie (as in bed)'.

124. 'to sit' = *sed-, 1 sg. *si(s)dom: OPr. sīdons 'sitting (pret.)', Lat. sīdō 'I sit down', OIr. -said 'sit', Gr. ἵζω 'I sit down', Skr. sī́dati 'sits', MPers. nšstn' 'sit on'.

125. 'to stand' = *H̲sta-: NB Skr. asthāt aor. 'stood' ~ Gr. ἵστημι 'stay'.

126. 'to turn (intransitive)' = *uertom|*urt-.

127. 'to fall' = *pedmi: OCS пасти, падж 'to fall', Lith. peslỹs 'kite', Lat. pessum 'downwards (to prostrate)', Gr. τροχοὶ ἐπήδων 'wheels (of broken chariots) flew away'; τρίτῳ Ἐτεόκλῳ τρίτος πάλος 'πήδησεν 'the third lot fell upon Eteoclus', Skr. pádyate 'falls', Av. paⁱdiiāⁱte 'falls into', MPers. ōbastan 'to fall' [30, VI, 238].

128. 'to give' = *dōmi.

129. 'to hold' = *segʰom: OCS сѧщи 'to touch', Lith. sègti 'to fasten, to pin', Lat. sevērus 'severe', OIr. suanem 'rope', Gr. ἔχω 'I have', Skr. sahate 'bears, withstands', Old Pers. frahanǰati 'to hang'.

130. 'to squeeze' = *angʰom (~ № 34. 'narrow').

131. 'to rub' = *terom|*tr-: OCS трѣти/терж (Rus. *тру* from the imperative *три?*), Latv. trīt 'to rub', Lat. terō, Gr. τείρω (*teri̯ō) 'I rub', Welsh tarnaf 'to dry, rub', Skr. tārás 'shrill' (= Gr. τορός), Shughni, Roshani tār-/tārt 'to cleanse, remore dirt'.

132. 'to wash' = *louom: NB Rus. dial. лáва 'gangway for washing the clothes', Lith. lovỹs 'trough', Skr. ravaṇaka- 'filter'.

133. 'to wipe' = *terom|*tr- (see № 131. 'to rub').

134. 'to pull' = *h₂uelkʷom|*h₂ulkʷ-: OCS влѣщи, Lith. vil̃kti 'to pull', Lat. ulcus 'quarry', Welsh gwalch 'hawk, rascal' (Lat. vultur

'kite'), Gr. αὖλαξ/epic Asg. ὦλκα 'furrow', Skr. varkate 'takes', Av. varək-
'to pull'.

135. 'to push' = *pisom (also 'to pound'): Rus. *пхать* 'to push',
Latv. pist, pisu 'to copulate', piesta 'pestle', Lat. pīnsō 'I pound', pistor
'baker', Gr. πῖλος 'felt', Skr. piṣṭás 'milled', Av. pišant- 'pounding'. Also
(s)per|(s)pr-. See also № 130. 'to squeeze'.

136. 'to throw' = *sei-|*si-: Rus. *просéивать* 'to sift', *cúmo* 'sieve',
Lat. sinō, situm 'I put' (cf. meaning with Italian mettere 'to put, throw'
< Lat. mittere 'to throw'), MWelsh hidl, Gr. ἠθμός 'sieve', Skr. sénā 'dart'.

137. 'to tie' = *bʰendʰ-: Rus. dial. *бедá/бедáрка* 'two-wheeled cart',
Lith. beñdras 'partner', Lat. offendīx 'knot, band', Welsh benn 'cart', Gr.
πενθερός 'father-in-law; brother-in-law, son-in-law', Skr. badhnā́ti/bandhati
'ties', Pers. bastan 'to bind, tie', Oss. бæттын 'to tie (sheafs)'.

138. 'to sew' = *siuHom.

139. 'to count' = *h₂ri-: Rus. dial. *pecá* 'multitude', Lith. rìkis
'formation', Fr. rime 'rhyme', Lat. rītus 'order', OIr. rím 'number', Gr.
ἀριθμός (ă) 'number' (νήρῐτος 'innumerable'), Skr. rītí- 'custom, method,
line'. Also *kʷeit-|*kʷit- (or it means 'to think').

140. 'to say' = *h₁re-: OCS рещи, Lith. réikšti (réiškia) 'to say', Lat.
reus 'a party in a court', OIr. réimm 'shout', Gr. εἴρω 'I say', Skr. ráva-
'talk', YAv. gāϑrō.rayant- 'shouting the holy hymns (of heretics)'.

141. 'to sing' = *kanom: Rus. dial. *кáня* 'beggar', Lith. kañklės
'gusli', Lat. canō 'I sing', Gr. ἠϊ-κανός 'rooster', Skr. kanda- 'in mus. a kind
of time', Oss. kadæg/kadæmgæ 'epic recital'. Also *gāi-.

142. 'to play' = *leid-|*lid-: Rus. dial. *лядáщий* 'mad', Lith. láidyti
'to fly (a kite), to toboggan', Lat. lūdō (< *loid-) 'I play', Gr. λίζει 'plays',
Skr. līlā (< *līḍā) 'play, amusement'.

143. 'to float' = *neh₂om.

144. 'to flow' = *sreuom, also used is tekʷ- (Gr. only has
a questionable τόπος 'place' [38, 1494]).

145. 'to freeze' = *gelom|*gl-: Cz. holet 'hoar-frost', Lith. gelumà
'great cold', Lat. gelō 'I freeze', Gr. γελανδρόν 'frost', Kurd (Sina) girsīān
'to coagulate, stiffen' [41, 105–106]. Also used is *sgʰal-: OCS хладъ 'cold
(noun)', Latv. gāle 'ice', Lat. hālō 'I blow', Gr. χάλαζα 'hail', Skr. hari 'the
wind'.

146. 'to swell' = *bʰruH-: Rus. dial. *брунéть* 'to swell', Lith. braūna
'flake', Latv. bruka 'hernia', Lat. frux 'fruit', OIr. brū 'belly', Gr. φρύαγμα
'arrogance', Skr. bhrūṇás 'embryo'.

147. 'sun' = *seh₂ul|*sh₂uen-.

148. 'moon' = *mēns|*mēns-. NB CS мѧсопоустъ '40-day fast'.

149. 'star' = *h₂stēr|*h₂str-.

150. 'water' = *uodr|*udn-, coll. udōr [38, 1526–1527].

151. 'rain' = *h₁uer-|*h₁ur-: Macedonian (Slavic) vrne 'rain', Lith. versmė̃ 'spring (source)', Lat. vēr 'spring (time)', OIr. feraid 'to pour, to shower', frass 'rain-shower', Gr. ἔρση/ἔερσα 'dew', Skr. varṣá, Av. vāra (Oss. уарын) 'rain'.

152. 'river' = *ap- (*h₂ep- for Hitt. ḫa-pa-aš 'river', Old Arm. hawaṙi 'riverbed'): NB Gr. Ἆπίς 'Peloponnesus', Ἀπῐδᾰνός/Ἠπιδανός 'Apidanus (river in Thessaly)'.

153. 'lake' = *sel-: Rus. dial. céльга 'shallow in a lake', сельгá 'brook', Lith. séliai 'Selons' (their home Augšzeme contains a lot of lakes), Oscan? Σιδικῖνοι 'Italic tribe on river Liri', Gr. ἕλος 'swamp', Skr. sáras 'lake, pool', Nuristani (Kamviri) sur 'mountain lake or pond'.

154. 'sea' = *mari-: NB Gr. μαρῖνος 'seafish', Μαρέη/Μάρεια 'lake and town near the mouth of Nile', Skr. maryā́dā 'shore'.

155. 'salt' = *sals.

156. 'stone' = *gʷrH- (suffixes -au and -n give 'millstone'): Rus. жёрнов, Lith. gìrna 'millstone', Lat. ūrium 'waste rock', OIr. brao 'millstone', Skr. grā́van 'a stone for pressing out the soma', Oss. куырой 'mill' (windmill: уадгуырой; watermill: донгуырой)?

157. 'sand' = *poiḱ-: OCS пѣсъкъ 'sand', Rus. cýпесь 'clay sand', пеcóвый 'of sandy colour', песовáтый 'sandy', Lith. paišaĩ 'soot', Lat. paegniārius 'gladiator' (cf. the meaning of arena 'sand'), Gr. ποικίλος (ῐ) 'motley', Skr. puru-pḗśa-, Av. paēsa- 'leprous'.

158. 'dust' = *prs-: OCS прахъ, Rus. пéрхоть, персть 'dust', Lith. piřkšnys 'tiny cinders', Lat. porrīgo 'scab', Gr. πρασία 'sap' (cf. καρδία/κραδία, κάρτος/κράτος, θάρσος/θράσος), Skr. pṛ́ṣan 'spotty', Av. pąsnu 'dust'.

159. 'earth' = *ǵʰem-|*ǵʰm-|*ǵʰom-: Rus. нáземь 'to the ground', чернозём 'black earth', Lith. žẽmė, Lat. humus 'earth', Gr. Lsg. χᾰμαί 'on earth', Skr. jamba- 'mud' (kṣám 'earth' is not in this series), Av. zam- 'earth'.

160. 'cloud' = *nebʰes|*nebʰes-.

161. 'fog' = *h₃migʰ-: NB Lat. migdilix 'a term of abuse (fog-lover? ~ dīligō 'I love')': «aduenisti nos captatum, migdilix, bisulci lingua quasi proserpens bestia» (Pl. Poen.1033).

162. 'sky' = *dieus.

163. 'wind' = *h₂ueh₁nt-: NB Rus. dial. вéя 'snowstorm', Lith. vėjétas 'windy', Latv. vējenes 'windmill'.

164. 'snow' = *snoigʷʰ-|*snigʷʰ-.

165. 'ice' = *h₁eiH-: Rus. úней (without suffix NB Rus. dial. (Yakut.) уе 'deep cavities filled with water from ice'), Lith. ýnis, Lat.

pruīna 'hoar-frost' (< *prurīna < *prus-īna, see № 194. 'wet'), MBret. yen 'cold', Gr. ἦν-οψ 'sparkling', Oss. их 'ice', Skr. eṣati 'glides'.

166. 'smoke' = *dʰuHmos.

167. 'fire' = *ngnis: NB Welsh engyl 'fire', North Kurd agir 'fire', Yazghulami aɣnág 'white stone (flint?)', wŭɣn (*au̯a-) 'blavk', YAv. name Dāštāɣni-, name *Ag-nu-par-nu (from Akkadian source).

168. 'ash' = *aHs (*h₂eHs- for Hitt. ḫāš 'ash', but Old Arm. ačiwn 'ashes'!).

169. 'to burn (transitive)' = *dʰegʰ-.

170. 'road' = *ponts|*pnt-: OCS пжть, OPr. pintys 'road', Lat. pōns, Gsg. pontis 'bridge, path', Ir. ar fhód mhearaighthe 'on the path of error', Gr. πόντος 'sea, sea way', πάτος 'path', Skr. patha, Osset. фæндаг 'road'.

171. 'mountain' = *gʷorH-|*gʷrH-: OCS гора 'mountain', Lith. garaĩnė 'barren mountain', Lat. grūmus 'hillock', Gr. Βορέᾱς 'north', Skr. girí, Av. gairi 'mountain'.

172. 'red' = *h₁reudʰos.

173. 'green' = *ǵʰelH-|*ǵʰlH-.

174. 'yellow' = *gʰel-|*gʰl-.

175. 'white' = *bʰaⁱlos: NB Rus. dial. *болóнь* 'hard white film on meat', *болóнка* 'window', *болóнка* 'turnip', *бóлоко* 'cloud', Lith. bãlas 'white', Latv. bàls 'pale', OFr. baille, OBret. baill 'paleness', Gr. φαλός 'white', Skr. bhāla 'splendour (great light, luster or brilliance)', Yazghulami vəráng 'salt standing out on ground', Rushani, Khufi ravār (*fra-) 'salt effusion on ground', Yidgha wārwan 'Milky Way'.

176. 'black' = *krs-: NB Lat. cerrus 'Turkey oak (gives ink)', Gr. κράνον 'Cornelian cherry'.

177. 'night' = *nokʷts|*nkʷt-.

178. 'day' = *dein-|*din-: OCS дьнь, Lith. dienà, Sudovian dins 'day', Lat. nūndinae 'market-days (once per 9 days)', Ir. denus 'spatium temporis', Gr. ἔνδῑον 'noon' (dissimilation of n-n, as in αὐχήν, ἦτρον, μειόνως), Skr. dína- 'day', MPers. ādīna 'friday', Ishkashimi dīn 'day'.

179. 'year' = *uetos.

180. 'warm' = *gʷʰer-.

181. 'cold' = *gel-|gl- (see № 145. 'to freeze').

182. 'full' = *plHnos.

183. 'new' = *neuos (secondary ew > ow in Balt., Slav., It., Celt.).

184. 'old (of things)' = *uetus: NB Skr. vātula 'affected by wind-disease, gouty, rheumatic'.

185. 'good' = *h₁ues-.

186. 'bad' = *ǵʰul-: OCS зълъ 'bad, evil', Lith. atžŭlas, atžūlùs 'heartless, unfeeling', įžūlùs 'boring, insolent, rude', Lat. ulcus 'ulcer; weak

or sore spot', ultor 'avenger', OIr. olc (Lepontic Ulkos) 'bad, evil', χωλός 'lame', Skr. hválati 'goes crookedly or wrongly or deviously', Av. zūrah- 'injustice' (Oss. æвзæр 'bad').

187. 'rotten' = *puH-.

188. 'dirty' = *melH-|*mlH-: Rus. *малевать* 'to daub', лит. mólis 'clay', Lat. malus 'weed', OIr. malcad 'rottenness', Gr. μέλας 'dark', Skr. malina-, samala- 'dirty', Oss. mīl/mel 'soot; back spot', Tajik murdor 'dirty'.

189. 'straight' = *h₃reǵtos: Rus. dial. *ретька* 'mandrel for stropping the scythe', *ретивой* 'healthy, trig, reliable', Lith. réžtas 'order', Lat. rēctus 'straight', OIr. recht 'law' (cf. meaning of Old Rus. правьда 'law' ~ правыи 'straight'), Gr. ὀρεκτός 'stretched out'.

190. 'round' = *uol-|*uel-|*ul-: Rus. dial. *обвалить* 'to encircle', Pol. obły 'round', Lith. apvalùs 'round', vẽlenas 'axle', Lat. volūmen 'ring', Welsh olwyn 'wheel', Gr. ὅλμος 'round stone, roller', Skr. valaya 'ring', Old Pers. vart- 'round'.

191. 'sharp (as a knife)' = *h₂oḱr|*h₂eḱon-.

192. 'dull (as a knife)' = *ne h₂oḱr? All the words for 'dull' are derived: OCS тѫпъ 'dull' (< *top-n- 'beaten'), Lith. šìpti 'to become dull' (~ šipulỹs 'chip'), brizgéti 'to become dull' (~ brìgzti 'to frazzle'), bùkas 'dull' (~ Latv. buknīt 'to poke'), Latv. truls 'dull' (~ trunēt 'to rot, decay'), Lat. hebes (< 'weak'), Gr. κωφός (< 'weak'), ἀμβλύς (< 'weak'), Bengal bhota (< *bʰug-t- 'bent'?), Skr. cipitha (< 'flattened'), muṇkha- (< 'bald'), hṛsita- (< 'bent'), tūpará- (< tup- 'to hurt'), kuṇṭha- (< kuṇṭ- 'to hurt, injure', kun- 'bad-') ~ Pers. kond 'dull'. So there was no separate root for this concept in PIE. Moreover, all the metaphors are dialectal: from 'beaten' ('broken', 'crushed') only in Balto-Slavic, from 'decayed' – only in Latv., from 'bent' and 'flattened' – only in Indo-Aryan, from 'injured' – only in Indo-Iranian, from 'weak' – only in Gr. and Lat. This forces the reconstruction of 'dull' as 'not + sharp' (the only morphological reconstruction in the list).

193. 'smooth' = *gʰleHdʰ-|*gʰlHdʰ-: OCS гладъкъ, Latv. gluds, Lat. glaber 'smooth', Bret. glann 'shore', Gr. χλᾰνίς 'blanket', Skr. hradá- 'big water space', Pers. lašan 'smooth'.

194. 'wet' = *prus-: Rus. прыскать, Serb.-Croat. pŕskati 'to splash', Lith. praũsti 'to wash', Lat. pruīna 'hoar-frost' (< *prurīna < *prus-īna, см. п. 165 'ice'), Welsh rhew 'frost', Gr. πρώξ 'dewdrop', Skr. pruṣita- 'wet', Khotanese pruha- 'hoar-frost, dew'.

195. 'dry' = *ssk- (< *sek-|*sk- 'to become dry': Lith. sèkti (señka, sẽko), Rus. *сякнуть* 'to dry out'): Rus. dial. *сех* 'oven' in a riddle «Старик во сехy, Переселся со смеху» (answer: a pot with boiling water

in an oven), *сяхнуть* 'to dry out' (contaminated with *сякнуть*), Lith. sùskis 'having tetter', Lat. siccus 'dry', MIr. sesc 'dry', MWelsh hysp 'dry', Gr. ἰσχνός 'dry', ἔσκετο φωνή 'the voice broke down', Skr. a-sáscuṣī- 'not drying up', Av. hišku- 'dry'.

Also used is *sh₂eus-|*sh₂us-: OCS соухъ 'dry', OPr. sausai 'сухо, насухо', Lat. sūdus (-sd- > -d-, except for compounds), греч. αὖος 'dry' (h-h > Ø-h by Grassmann's law), Illyr. (Hesych.) σαυκόν 'dry', Skr. śoṣas 'dryness' (< *siauṣas < *sHeusos), śúṣkas, Av. huška- 'dry'.

196. 'correct (true)' = *h₁sonts.

197. 'near' = *h₁opi|*h₁epi.

198. 'far' = *dueh₂-|*duh₂-: Pol. dial. dy 'dalej!', Rus. dial. *дыле* 'further', Lith. dūlùoti 'to appear vaguely', Lat. dūdum 'long ago', Bret. doun 'deep', Gr. δήν 'long ago', Skr. dūrá, Pers. dur 'far'.

199. 'right' = *deks-.

200. 'left' = *laiuos: NB Skr. revaṭa- 'a muscle or a conch-shell which coils from right to left' (Oss. галиу 'left' requires the explanation for the ra-: is this the intensive particle ghā, as in Skr.? it generally looks as ɣ- in Oss.).

201. 'at' = *prei.

202. 'in' = *en|*n.

203. 'with' = *so: OCS съ 'with' (see about the variations of prepositions/prefixes *без, въ, до, за, из, къ, на, о, от, по, подъ, при, прѣдъ, съ* with added -н- before j- and ѧти/нѧти ~ Lith. im̃ti/Latv. ņemt in [19] with the literature), OPr. sa- (sallūban 'spouse', sauinsle 'belt'), Lat. sospes, -itis 'safe' (~ spḗs 'hope'), OIr. sommae 'rich' < *so-ofsmiyo- (ср. OIr. doimm 'poor' < *dus-ops-mi-, Lat. ops, Skr. ápna- 'wealth'), Gr. ὅς 'my own/your own' (≠σός 'your own'), Skr. sākám 'with'.

204. 'and' = *kʷe.

205. 'if' = *kā: Rus. *как* 'if', Lith. kad 'if', Portuguese caso 'if', Gr. κέ(ν)/κά (ā) 'if', Pashto ka 'if'.

206. 'because' = *gʰi.

207. 'name' = *h₃neh₃mn|*h₃nh₃men- [39, 412].

Out of 207 concepts:

– in 161 the root is reflected in all 7 groups (Baltic, Slavic, Italic, Celtic, Greek, Indo-Aryan and Iranian);

– in 36 the root is missing in one group: 16 in Celtic ('all', 'at', 'back', 'blood', 'child', 'dust', 'fall', 'fruit', 'lake', 'left', 'push', 'sand', 'short', 'tongue', 'tail', 'when'), 16 in Iranian ('animal', 'count', 'fat', 'flow', 'hair', 'hand', 'heart', 'laugh', 'play', 'skin', 'stone', 'swell', 'this', 'throw', 'wash', 'with'), 4 in Indo-Aryan ('egg', 'human', 'straight', 'scratch'), 0 in Italic, 0 in Baltic, 0 in Slavic.

– in 10 the root is missing in two groups from different branches ('bark', 'freeze', 'if' in Celtic and Indo-Aryan, 'grass', 'guts', 'louse', 'smooth', 'some', 'smell', 'stick' in Celtic and Iranian), this was the worst case.

The cases when the Greek reflex is missing are not considered according to the limitations. This research might poorly reflect the groups where a considerable proportion of data was taken from etymological dictionaries (Iranian, Celtic).

The stats for the roots were also counted in Germanic languages, because they are the most studied of all peripherial Indo-European languages. Out of 207 concepts there are cognates for 123 (i. e. 59%, unlike 100% in other branches), including the words known only in West Germanic or only in East Germanic. Not found: 'all', 'animal', 'at', 'back', 'bad', 'bark', 'bird', 'blood', 'blow', 'bone', 'burn', 'child', 'count', 'day', 'dig', 'dirty', 'drink', 'dry', 'dull', 'dust', 'earth', 'fall', 'far', 'fear', 'fight', 'fire', 'float', 'flower', 'fog', 'forest', 'fruit', 'give', 'good', 'green', 'guts', 'hair', 'here', 'hold', 'how', 'if', 'kill', 'lake', 'leaf', 'left', 'leg', 'live', 'liver', 'louse', 'mountain', 'narrow', 'old', 'play', 'pull', 'push', 'rain', 'river', 'road', 'root', 'rope', 'round', 'rub', 'sand', 'say', 'scratch', 'sharp', 'sky', 'smell', 'some', 'split', 'squeeze', 'stick', 'that', 'there', 'tongue', 'tree', 'true', 'turn', 'walk', 'we', 'what', 'when', 'where', 'white', 'wife', 'wipe', 'with', 'worm', 'year'. (This list contains 21 of 26 words not found in Celtic, except freeze, grass, short, smooth, tail.)

This confirms the assumption that Germanic branch does not descend from the core PIE, but is in fact peripherial (preceding research has shown that 45,3% of Germanic strong verbs don't have Indo-European etymology [52, 168]).

NB: we can only state that we have not found the reflexes, but we cannot exclude them, because for most languages we don't have access to "complete" dictionaries (if they exist at all), and our method doesn't allow us to find prefixed words effectively.

Conclusions

It was possible to deduce a list of 207 concepts for PIE with strict limitations (reflection in all 4 main branches, no non-standard phonemes, no violations of satemization).

For 161 concepts, the root is reflected in all 7 groups (Baltic, Slavic, Italic, Celtic, Greek, Indo-Aryan and Iranian). Initially, it was supposed to use language branches in an expanded sense. But in practice, neither Macedonian nor Phrygian language data, nor ungrouped Italo-Celtic languages were needed, and there was only one case ('lake') where Nuristani data substitutes Iranian, which is compensated by the presence

of the corresponding word in Sanskrit. As for Balto-Slavic, there are no cases where the comparison is based on a single dialect example.

Additionally, Baltic, Slavic, Italic, Greek reflect all the roots. So the result doesn't depend on Italo-Celtic hypothesis and even on Balto-Slavic theory.

Out of 207 cases, the full form of the word is restored in 128.

Morphological reconstruction was needed only in 1 case: 'dull'.

And s-mobile was not needed in any case.

The result suggests that the 4 main branches of PIE are not just closer to each other than it was previously thought, but they have a direct common ancestor, which can be called the «core PIE». We can talk about the possibility of compiling a dictionary of this core PIE. The proposed composition of the dictionary (not counting the introductions, indexes, etc.):

1. Applied phonetic correspondences with the lists of reliable examples.

2. Prefixes and prepositions with meanings and examples.

3. Suffixes with meanings and examples.

4. Inflections (case and gender), inflection of names and verbs.

5. Remarks on accentology. For example: according to the existing theory of Proto-Slavic stress, simultaneous orthogonal marking by length, ictus and tone is required [11, 12], and it is tied not to vowels or syllables, but to morphemes [12, 12], in contrast, for example, to the $C\acute{V}RVC$, $CVR\acute{V}Ca$ system in Russian [20]; the high speed of stress mutation is clearly visible in Russian [13, 371–387], for example, the groups of words on *-аж, -ами* have changed stress in just one hundred years; the main mechanisms of stress formation are contraction (different dropped consonants can give different tones), vowel length and analogy.

6. Remarks about ablaut. It is necessary to bring together different theories [52; 46; 68; 58], using the data of core PIE as relatively more reliable material.

7. Root morphemes or reconstructed words in their entirety (usually only this part is published).

8. Reverse dictionary (some of the concepts have to be reconstructed using the above affixes, and such cases should be specially marked).

The presence of a reverse dictionary ensures that it is a language that is being reconstructed, not a random set of words. The compilation of the reverse dictionary can begin with this Swadesh list, then moving on to 400-word dictionary (for example, [65]), further adding concepts from Basic English [53] (850 words), [32] (about 1500 words), [54] (about 3000 words). At the latest stages, we need perfect knowledge of PIE morphology, because some words have to be reconstructed

morphologically. It is unlikely that we can get all the concepts directly from known languages, even if we use their «complete» dictionaries.

It makes sense (at least to obtain statistics on word substitutions in less noisy material than literary languages and various dictionaries of PIE) to reconstruct in parallel some of the intermediate proto-languages, namely Proto-Balto-Slavic and Proto-Indo-Iranian.

At the moment, we are working on 400-word dictionaries for core PIE, Proto-Indo-Iranian, Proto-Balto-Slavic, separately Proto-Baltic and Proto-Slavic. The material we are working with is posted at [33].

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ЛЕКСИЧЕСКОЕ ЯДРО ПРАИНДОЕВРОПЕЙСКОГО ЯЗЫКА: ПОЛНЫЙ СПИСОК СВОДЕША-207

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В данной работе лексическое ядро ПИЕ реконструируется только по словам, попавшим одновременно в 4 главных ветви индоевропейских языков (индоиранскую, италийско-кельтскую, балтославянскую, греческую), причём без нарушения сатемизации и без введения дополнительных фонем (4-го ларингала, «спирантов Бругмана», *q). Эти ограничения минимизируют вероятность попадания периферийной лексики и случайных совпадений в реконструкцию. Подробно описана методика такого поиска для получения заданного списка понятий. Результирующий список Сводеша на 207 слов приведён вместе со ссылкой на рабочие материалы. Поскольку при таких жёстких ограничениях всё же удалось вывести весь список (сложные случаи рассмотрены подробно), то есть основания полагать, что можно реконструировать центральный ПИЕ (прямой общий предок перечисленных ветвей) как полноценный язык и составить его словарь. Даны предложения о структуре и порядке составления такого словаря. Также обнаружено, что только 59% слов полученного списка Сводеша для центрального ПИЕ отражены хотя бы в одном германском языке – это подтверждает предположение, что германская ветвь не происходит из центрального ПИЕ, а действительно является периферийной. В процессе поиска балтославянского материала обнаружен закон, по которому распределяются s и š в литовском языке (правило RUKI действует в прабалтославянском полностью, в том числе в окончании): суффикс -s (если он синхронно обнаруживается) восстанавливается в виде -s независимо от позиции; конечное -š > -s и влечёт срединное -š- > -s- (в том числе это касается сатемного согласного š < č < ḱ). Также обнаружено соответствие *sm- > Lat. sp-, Gr. σμ- (позже > μ-).