

© A.B. Mikhalev

Pyatigorsk, Russia

Pyatigorsk State Linguistic University

abmikhalev@pglu.ru

Semantic derivation of iconic Indo-European roots with the initial bh-

The reconstruction of Indo-European roots and generally of the Indo-European family's proto-language itself was one of the first and the most important achievements of the comparative historic linguistics. The giant work started by F.Bopp, R.Rask, J.Grimm, followed and summarized by A.Schleicher and a whole pleiad of outstanding scientists, got crowned with the "Indo-Germanic Etymological Dictionary" by J.Pokorny (1) and the famous two-volume "Indo-European Language and Indo-Europeans" by T.V.Gamkrelidze and V.V.Ivanov (2). Seemingly, all issues in this field have been discussed and solved. Yet it should be noticed that however technically perfect an etymological study would be, it is considered as a version, a hypothesis, an individual interpretation. Different etymological dictionaries, appeared after J.Pokorny and representing concurrent views on origins of certain words and meanings, show the striking evidence of it.

One of the latest dictionaries of the kind, suggesting its particular view on language evolutionary processes, is the "Etymological Dictionary of Germanic Languages" by V.V.Levitsky (3). The author advances, for instance, new hypotheses: on the semantic syncretism 'cut/tie, weave/bend' exposed in certain i.-e. roots; on alternation of the extenders i8 – u – ø in i.-e. roots, leading to the Germanic alternation [ī – ai – a] or [iu – au – a]; on the i.-e. root *bhā- that expressed the ideas of 'sound' and 'light' taking their origin from the meaning 'intermittent movement'; on use of the same babbling word for naming elder and younger members of family.

V.V. Levitsky proves these hypotheses in one of his recent monographs "Semantic and Phonetic Links in the Indo-European Lexicon" (4) using a special method of quantitative analysis. Thereby, the syncretism of the meanings 'cut/tie/bend', that are the most recurrent in the dictionary, was justified. The hyperseme [movement], associating three meanings in the statistic experiment, such as 'vibrate', 'move to and fro', 'skip, shake, move quickly', is linked with the meaning 'bend' as well as with all three syncretic hypersemes 'cut/tie/bend'. According to the results of the qualitative (etymological) analysis, the meaning 'sound' belongs to derivatives of the hyperseme [movement], whereas the quantitative analysis also showed its relationship with hypersemes [dissociate], [join], [bend]. Besides, the hyperseme [sound] has strong and superstrong links with the hypersemes [color] and [shine]. Such abundance of its links makes it possible to suggest a nuclear status of this meaning in the system of Indo-European.

The quantitative analysis of V.V. Levitsky revealed a number of links of the hyperseme [humid, liquid], notably, with the main hypersemes [dissociate], [join], [bend], [movement], [sound] and, moreover, with the hypersemes [color], [press], [spread], [taste], [release]. The author notes that our suggestions (5) concerning the links of the seme [flow, pour, liquid] with the meanings 'soil, spoil', 'shine', 'see', 'flexible', 'rotate', 'tie' correspond almost completely to the inferences resulting from the quantitative analysis.

V.V. Levitsky unifies under the general hyperseme [taste] such semes as 'meal', 'bitter', 'sweet', etc. and detects its link with the hypersemes [dissociate] ('cut', 'split'), [bend] and [movement]. Explaining the reasons of these links, the author resorts, in particular, to the etymological data: lat. *cēna* 'meal' (< *kerstnā) – lit. *kirsti* 'hit, hack'; gr. *dais - daizō* 'divide'. J.Trier, for instance, interprets this link as juice extraction from trunks or roots of plants (6: 78), while we correlate the process of eating with the action 'gnaw' referring it to the hyperseme [cut] (5: 185).

According to statistic calculations of V.V. Levitsky, the hyperseme [harm] forms strong links with the following hypersemes: [cut], [bend], [throw], [movement], [press], [burn], [big, strong, hard]. These inferences got also corroborated through etymological analysis: i.-e. *(s)mer- 'rub' > lat. *morbus* 'sickness', ohg. *smerzan* 'be sick' (1: 737). The same links of the semes [cut] and [harm] can be seen in other roots: lat. *dolēre* 'hurt', *dolāre* 'split' (<*del- 'cut, split.); oe. *gehornian* 'insult, blame' < i.-e. *sker- 'cut' (4: 56).

Summing up the conclusions of the comparative study of semantic links through qualitative and quantitative analysis, V.V. Levitsky argues that the results of etymological research completely correspond to the data calculated from the statistic approach. But, nevertheless, the reverse is not always evident. The scholar brings forward the version that in cases of "incompatibility" of qualitative and quantitative analysis' data, the given hypersemes are mostly suggested to be the derivatives of the main nuclear hypersemes. As an example of this "incompatibility", Levitsky cites the neighborhood of hypersemes 'harm', 'guard, surround', 'grasp', 'perceive', 'calm, still' and 'burn'. In the review of this book we suggested a more comprehensible interpretation of possible link between them (V.V. Levitsky placed it in the Conclusion). If we put the meaning 'grasp', by definition iconic, as a central in this row, the denoted action possesses a number of features making possible the derivation to any of these hypersemes: 'grasp' ('take') > 'perceive'; 'grasp' ('strangle') > 'harm'; 'grasp' ('squeeze, hold') > 'guard, surround'; 'grasp' ('squeeze, immobilize') > 'calm, still'; 'grasp' ('envelop in flames') > 'burn'. Our own data from different languages witness other contiguities of 'grasp, squeeze' > 'container', 'cold', etc. (4: 218-219). Hereby, the problem of compatibility/incompatibility of semantic shifts turns to be the problem of interpretation of center and periphery of language's semantic system.

It is worth to note the basic point that brings V.V. Levitsky to his original etymological inferences: semantic components observed in definitions of roots with the same initial consonant, agree with the set of meanings of fully identical ("homonymic") by their structure roots. Our own research matches the scholar's viewpoint.

A number of our works (5, 7, 8, 9, 10, 11) and of our students' dissertations (12, 13) demonstrate a strong trend of ascending of various meanings to a limited set of

semantic prototypes which are hypothetically iconic by their phonosemantic nature. The fact of presence of links between such and such meanings and fields was established on the ground of a certain formal-semantic kinship, e.g. by an initial consonant, by an initial phonosteme, by a final phonosteme (rhyme). Like any etymological study which follows the same principle, inferences of the kind rest hypothetical. That is why, for the sake of reliability and cogency in substantiating links, it is useful to resort to data of polysemy, homonymy and etymology. In the study below we decided to focus on the directions of semantic development of Indo-European roots in different languages, limiting essentially by the iconic stock. Under the iconic stock we mean roots characterized by the unity of formal articulating-symbolic features and attributed meanings. The referents of iconicity are supposed to be qualities and processes of manual, bucal activities and onomatopoeias (vocal signals) which are the most accessible for imitation by speech apparatus. The identification of semantic development's vectors from ancient iconic roots to the modern state in one and different language branches could shed light on universal evolutionary trends of semantics, named "semantic laws". The used data are taken from the dictionaries of J. Pokorny (1), V.V. Levitsky (3), Grandsaignes d'Hauterive (14).

We suggest observing the semantics of roots with the initial aspirant *bh- and their derivates in different Indo-European languages as a part of this work (repeated meanings are not cited).

The root *bhā- is given in the dictionaries as two homonyms: **bhā**¹- 'speak' and **bhā**²- 'shine'. The first corresponds by its meaning to bucal and vocal activities, i.e. iconic referents. The combination of the aspirant plosive [bh] with the open [a] is the best illustration of language gesture imitating labial activities and intensive sound.

bhā¹- 'speak' >

Gr. I. phēmi 'say'; phatis 'speech'; phēmē 'reputation'; II. phō-nē 'voice'.

Lat. 1. fari, fatus 'speak'. 2. fatum 'fate'. 3. fama 'recognition'. 4. fateri, fassus 'confess' > profiteri 'teach', professio 'promise, profession'.

From Lat. > Fr. 1. fable 'fairy tale'. 2. fée 'fairy'; E. fable; Sp. habla 'speech'.

bhā²- 'shine' >

Skr. bhā- 'light'; bhānati 'he speaks'.

Gr. phainō 'show'; phasis 'accusation'; phantasma 'appearance'; phantasia 'image'; phanos 'lamp'.

From Gr. > Sp., It. fantasma 'fantom, ghost'; E. fantastic; fancy; G. Bann 'leaflet'.

Interpretation.

According to Levitsky's qualitative and quantitative analysis (4: 51), the meaning 'sound' reveals strong and superstrong links with the meanings 'color' and 'shine'. In the case of hypothetically homonymic roots **bhā**¹- and **bhā**²- it seems logical to suppose the polysemic derivation of the latter from the former based on an audio-visual synesthesia.

bher¹- 'bring, carry' >

1. OE. beran 'born', E. birth; OI., OE. byre 'son', Got. barn 'child';

2. E. barrow, G. Gebärde 'a look' (litt. 'carry an expression'), OI. bāra 'wave' (< 'that carries'), G. Bürde 'burden', OF. fiertre 'coffin', Gr. amphora, Lat. ferre

'bear', Skr. bharitram 'arm';

3. OE. byrian, G. gebühren 'befit', OHG. giburian 'happen', OI. byrja 'start' (V.V. Levitsky suggests the following way of the meaning's development: 'bring, to be brought > happen > befit'; from our viewpoint: 'born > child > start'), OI. byrr 'fair wind', E. (dial.) birr 'strength, energy', Lat. fortuna 'happiness, luck, destiny';

4. E. berth 'place, location';

5. Rus. brat 'take', Gr. phōr 'thief';

6. Sp., It. furtivo, Fr. furtif 'secret'.

Interpretation. The meaning 'bring, carry' belongs to the domain of iconic reference, i.e. manual activities. However the formal structure of the root **bher**- does not fit to symbolize this action. If the majority of semantic derivates yield to a rational explanation of shifts, the meanings 'place, location', 'thief', 'secret' could hardly correlate with the basic 'carry'. Consequently, there should be another meaning consolidating on the one hand all these 6 directions of semantic development, and, on the other hand, apt to be symbolized by articulation features of the root's phonetic structure. We suggest as such the meaning 'grasp, squeeze' which also belongs to manual activities. From this point 'bring, carry' could be treated as a derivate from 'grasp, squeeze' > 'take + move'. The other directions (1-3) are obviously linked with it. The presence of the meaning 'place, location' in the semantic system of **bher**- is easier to explain through the passage 'squeeze' > 'to be in (hand)' > 'place'; the meaning 'thief' as a derivate from 'squeeze, grasp'; the meaning 'secret' < 'hide' < 'squeeze'. The articulating-symbolic potencies of initial bilabial [b] make it possible to symbolize actions like squeezing, closing.

Hereby, the semantic derivation of the root **bher**¹- is distributed by 6 directions (fields) ascending to the basic iconic meaning 'squeeze, grasp': 1) 'carry, bring', 2) 'born'; 3) 'happen'; 4) 'place, location'; 5) 'take'; 6) 'hide'.

bher²- 'bubble, boil', 'move brusquely >

1. I.-E. *bheres- 'quick', E. bird (V.V. Levitsky explains this word as a result of the development 'splitted > chip' > 'small object > bird', but, to our view, small size cannot be a motivating feature of bird, since it can be also big. It is more probable that one of its striking features is the quickness of its movement and also quick flappings of wings).

2. OI. brimi 'fire', ME. brim 'heat', OE. birnan, E. burn, Got. brinnō 'fever', OI. brim 'flow, flood', Gr. phrimāō 'restless moving, jumping'; Fr. fervent 'ardent';

3. E. barm, OI. brēad, E. bread, G. Brot 'bread', Ukr. brud 'mud'.

Interpretation. The meaning 'bubble, boil' is obviously onomatopoeic. The main symbolic function belongs apparently to the vibrant -r-. The dissonant trembling of this process transfers synesthetically to 'brusque movements' (see gr. phrimāō). The first direction of semantic development which could be provisionally generalized by the seme 'burn', is motivated by the cause-effect contiguity of burning and boiling processes. In its turn, the meaning 'burn' shifts to 'heat', 'fever' and emotional glow 'ardent'. The second direction under the provisional name 'liquid, dense' is also the result of cause-effect shifting 'boil' > 'scum' > 'liquid, dense'.

Thus 'bubble, boil' gives way to the shifts: 1) 'brusque movements'; 2) 'burn'; 3) 'liquid, dense'.

bher³- ‘cut, rub, split, scratch’ >

1. OE. borian, G. bohren, E. bore, Gr. pharóein ‘plough’, Rus. borozda ‘furrow’, Mlr. bern ‘cleft, crevice’, Rus. brit ‘shave’, Sp. buril ‘cutter’;

2. Lat. ferire ‘hit, stub’, Rus. borot (sya) ‘wrestle’, OI. berja ‘kill’, OE. berian ‘torture’, It. ferire ‘wound’;

3. E. bark (rind), G. Brett ‘plank’, OHG. bort ‘board, shield’, Sw. bord ‘table’;

4. OE. bearu, OI. borr ‘coniferous forest’, OHG. baro ‘forest’;

5. G. Borte ‘edge’, OI. barð ‘border’;

6. Gr. pharynx, Lat. foramen ‘hole’, Sp. herida, It. ferita ‘wound’.

Interpretation. The meaning ‘cut, rub, split, scratch’ could be qualified as onomatopoeic (a distinctive disharmonic trembling sound while tearing or cutting smth.). Like in the case of bher²- cited above, the symbolic function belongs to -r-. The original meaning develops in 6 directions: 1) ‘various actions with sharp instruments’ and sharp instruments themselves; 2) ‘hit’ (a tight syncretism with ‘cut’); 3) ‘wood’ (material); 4) ‘wood, forest’ (derivate from the previous); 5) ‘edge’ (that has to be cut); 6) ‘hole’ (effect of action ‘hit, stub’).

bher⁴- ‘buzz, grumble’ >

E. bark, Ir. bressim ‘cry’, Ukr. brehati ‘bark’.

Interpretation. Onomatopoeic, vocal signals. V.V.Levitsky treats this root as a derivate from bhā¹- ‘shine’ or bhā²- ‘speak’ (see above). To our view, the bilabial [b] is apt to symbolize mainly bucal activities, in particular, vocal signals. In its turn this serves as a ground for the audio-visual synesthetic shift ‘vocal signals’ > ‘light radiation’.

bher⁵- ‘bright, light brown’ >

E. beaver, OInd. babhrú-h, E. brown, Fr. brun ‘brown’, E. bear.

Interpretation. We do not consider this root as a separate one. It is more probable that the meaning ‘brown’ derivates from ‘wood’ with its authentic color. Then the chain of shifts would look like ‘cut’ > ‘wood’ > ‘brown’. Maybe the motivating nominative feature for beaver and bear is not color, but a functional aspect. The beaver is famous mainly as gnawing, and the bear as a scratching animal. Hereby both correlate tightly with the meaning ‘cut’.

bher⁶- ‘spike, edge, smth. salient’.

Interpretation. This root does not seem separate. The meanings ‘spike, edge’ are direct derivates from the iconic meaning of the root bher³- ‘cut’. V.V.Levitsky makes the same suggestion.

*bhel-

bhel¹- ‘flower, leaf’ >

‘leaf’ in: Gr. phullon, Lat. folium, Fr. feuille, Sp. hoja, It. foglio, E. foil; ‘flower’: Lat. flos, Fr. fleur, E. flower, Sp. flor, It. fiore.

Germ. origin > E. bloom, G. Blume ‘flower’. There is a suggestion about the derivation of E. blood and G. Blut from the Germ. meaning ‘flower’ (associating with the red color of flower), though this version is doubtful (see below).

bhel²- ‘noise, sound’ >

Gr. phlênaphos ‘chat’; Lat. flere ‘cry’; flebilis (firstly belongs to a crying voice) ‘pitiful’, then ‘weak’ > Fr. faible, E. feeble, Sp. feble, It. fievole.

Germ. origin > E. bell; bellow; blubber; G. bellen

‘bark’.

bhel³- ‘blow, inflate’ >

Gr. pa-phlazô ‘boil’ (= ‘inflate, burst’);

Lat. flare ‘blow’; flabellum ‘fantail’, follis ‘sack inflated with air’ > 1. Fr. souffler, It. fiatare, Sp. soplar ‘blow’; Fr. flûte, Sp. flauta, It. flauto ‘flute’; 2. Fr. fou, folle, It. folle ‘mad’ (‘inflated’ > ‘empty’ > ‘empty head’).

Germ. origin > OHG. bald, It. baldo, E. bold; OHG. balla, Sp. bala, Fr. balle, E. ball;

E. belly; bellows; bulge; bulk; bolster.

bhel⁴- with extension bhleg-, bhleig- ‘shine’ >

Skr. bhālam, bhāgah ‘flash’; Gr. phlegô ‘set on fire’; phlox ‘flame’, phlegma ‘fire’.

Lat. fulgere ‘flash’; fulgor ‘thunder’ > OF. flambé; flamer ‘flame’; Fr. foudre ‘thunder’; E. flame, G. Flamme; It. fulgere, Sp. flagrar ‘flash’.

Germ. origin > ‘white’: Fr. blanc, Sp. blanco, It. bianco, prob., Fr. blême, G. blass ‘pale’; E. bleach, G. bleicken.

Interpretation. Like in the case of synesthetic audio-visual link of the roots’ meanings bha¹- and bha²-, the forms bhel²- and bhel⁴- expose a similar derivation: ‘vocal signals, sound’ > ‘flash’. The consonant structure of this root (bilabial aspirant + lingual) easily imitates uppermost bucal activities, namely ‘vocal signals’. The action ‘blow, inflate’ is another aspect of it, expressed in the meaning of the root bhel³-. As it follows from the examples of formal-semantic development of this root, its meaning transforms into ‘round’, ‘voluminous’, ‘empty’. As for the meanings ‘leaf’ and ‘flower’ which are hypothetically attributed to the homonymous root bhel¹-, from our viewpoint, they could be treated as derivates from ‘blow, inflate’ by two concurrent features: ‘round’ (shape of flower and leaf) and ‘enlarge, grow’ (dynamic feature). Concerning the proposed version of the derivation of the meaning ‘blood’ from the ‘flower’, we are not sure that red color is prototypical for flower. The Levitsky’s version, ascending these words and, correspondently, meanings to the I.-E. root *bhleu- ‘flow, be liquid’ (Cf. ‘flow, inflate’ (Grandsaignes d’Hauterive: 22), looks more attractive and reliable. By this latter meaning the given form interlaces with bhel³-, that is, it could be its variant.

It is interesting to compare the latter forms and meanings to the I.-E. root *bheu- ‘grow; to be’ that gave birth to numerous derivates: Skr. bhāvati ‘he is’, Gr. phuô ‘enlarge, grow’, physis ‘nature’, phuteuô ‘to plant’, Lat. fui (perfect from *sum* ‘I am’), futurus ‘should be’, fieri ‘become’; probus (from *pro-bho-s* ‘growing directly’) ‘honest’, probare ‘approve’, proba ‘proof’.

Germ. origin > E. be, G. ich bin, du bist ‘I am, you are’, E. build, G. bauen, E. neighbour, G. Nachbar.

Viewing the iconic structure of the root (bilabial aspirant), it is easy to suggest the semantic development ‘inflate’ > ‘enlarge’ > ‘grow’ > ‘be’. It is worth noting that the idea of existence, being is originally linked with organic developing world.

Summing up an interim phono-semantic study of homonymous variants of several Indo-European roots, we can claim that iconicity does give the nominative ground for the further lexical semantic extension. All studied roots with the initial bilabial aspirant bh- revealed three kinds of iconic reference: bucal, manual and

onomatopoeic. Each of these aspects develops into a set of semantic augments, and the homonymy attested by dictionaries is, in a number of cases, but a synesthetic shift of the same root's meaning. Pursuing such study of Indo-European roots based on iconic side of meaning would lead to the reduction of word and meaning derivative origins and to the whole description of language semantic system and evolution.

Works Cited

1. Pokorny, J. *Indogermanisches etymologisches Wörterbuch*. Bd. 1-2. Bern-München: Francke Verlag, 1959-1969.
2. Gamkrelidze, T.V., Ivanov, V.V. *Indo-European Language and Indo-Europeans (Indoyevropeyskiy yazik i indoyevropeytsi)*. V. 1-2. Tbilisi: Tbilis. univ., 1984.
3. Levitsky, V.V. *Etymological Dictionary of the Germanic Languages (Etimologicheskiy slovar' germanskikh yazikov)*. V. 1-3. Chernovtsi: Ruta, 2000.
4. Levitsky, V.V. *Semantic and Phonetic Links in the Indo-European Lexicon (Semanticheskiye i foneticheskiye svyazi v leksike indoyevropeyskogo yazika. Opit kvantitativnogo analiza etimologicheskogo slovary)*. Chernovtsi: Ruta, 2008: 232.
5. Mikhalev, A.B. *The Theory of Phono-Semantic Field (Teoriya fonosemanticheskogo polya)*. Pyatigorsk: PGLU, 1995: 213.
6. Trier, J. *Holz. Etymologien aus dem Niederwald*. Münster/Köln: Böhlau, 1952: 180.
7. Mikhalev, A.B. «Strata of the linguistic World Picture». *Language and Culture. Copenhagen Studies in Language*, 29. Copenhagen, 2003: 43-53.
8. Mikhalev, A.B. «Semantic prototypes» (Semanticheskiye prototipi). *Language and Reality (Yazik i deystvitel'nost')*. M.: LENAND, 2007: 383-388.
9. Mikhalev, A.B. «The Problem of Categorization (phonosemantic aspect)» (Problema kategorizatsii (fonosemanticheskiy rakurs). *Problems of General, Germanic and Slavic Linguistics. Papers for 70-th anniversary of Professor V. Levickij*. Chernivtsi: Books – XXI, 2008: 163-170.
10. Mikhalev, A.B. «Les constantes de la sémantique lexicale». *Creative innovations & Innovative Creations. PSLU Bulletin*, v.1(1), 2009.
11. Mikhalev, A.B. «Phonosemantics and Language World Picture» (Fonosemantika i yazikovaya kartina mira). *Language Reality of Man and Ethnos: cognitive and psycholinguistic aspects (Yazikovoye bytiye cheloveka i etnosa: kognitivniy i psikhologicheskoye aspekty)*, 15. M.: IN-ION RAN, MGLU, 2009: 133-140.
12. Zimova, M.D. *Iconic Trends of Initial Consonants in German and Greek (Zvukoizobrazitel'niye tendentsii nachal'nikh soglasnikh v nemeckom i novogrecheskom yazikakh)*. Dissertation. Pyatigorsk, 2005.
13. Danilova, M.E. *The Semantics of Rimes in Modern English Lexicon (phonosemantic aspect) (Semantika rifu sovremennoy angliyskoy leksiki (fonosemanticheskiy aspekt)*. Dissertation. Pyatigorsk, 2007.
14. Grandsaignes d'Hauterive, R. *Dictionnaire des racines des langues européennes*. P.: Larousse, 1948: 363.

List of Abbreviations

E. - English;
Fr. - French;
G. - German;
Got. - Gothic;
Gr. - Greek;
I.-E. - Indo-European;
Ir. - Irish;
It. - Italian;
Lat. - Latin;
ME. - Middle English;
Ml. - Middle Irish;
OE. - Old English;
OF. - Old French;
OHG - Old High German;
OI. - Old Icelandic;
OInd. - Old Indian;
Rus. - Russian;
Skr. - Sanskrit;
Sp. - Spanish;
Sw. - Swedish;
Ukr. - Ukrainian.