

I

Georg Holzer has argued for the prior existence of an unknown Indo-European substratum language from which Baltic and Slavic borrowed a collection of etyma with a distinctive consonant shift (1989). In this hypothetical language, which he calls "Temematic", (1) the Indo-European voiceless plosives $*p$, $*t$, $*k$ became voiced b , d , g whereas (2) the Indo-European voiced aspirates $*b^h$, $*d^h$, $*g^h$ became voiceless p , t , k . Since Winter's law did not operate in this hypothetical language, original $*p$, $*t$, $*k$ merged with Indo-European $*b$, $*d$, $*g$, which remained distinct from $*b^h$, $*d^h$, $*g^h$. Moreover, (3) the original syllabic liquids $*r$, $*l$ yielded ro , lo while (4) long vowels were shortened before resonants. Holzer adduces 45 etyma in his main text and 17 additional examples in an appendix. Since I have little to add to his full discussion of the material, I shall limit myself here to listing the 45 etyma with their new derivations (some of which were already proposed by Machek) and adding the main alternative etymologies (cf. also Brozović 1989, Loma 1990, Moszyński 1992). I shall follow his practice of omitting asterisks before obvious Slavic proto-forms. For the details I refer to Holzer's book.

I. "ACKERBAU"

1. *borzda* 'Furche' < $*borġ-dā-$ < $*pork-tā-$, Latin *porca*, OHG *furuh*; better than Gr. *φάρος* 'Furche'.
2. *proso* 'Hirse' < $*proso-$ < $*b^hrso-$, Latin *far* 'Dinkel', Speltz, ON *barr* 'Gerste', OCS *brašbno* 'Mehl'; better than $*per-$ 'schlagen'.
3. *bōrō* 'Hirse' < $*buro-$ < $*pūro-$, Gr. *πῦρός* 'Weizen', OE *fȳrs* 'Quecke', Lith. *pūrai*, RCS *puro*; better than $*b^her-$ 'hervorstehen'.
4. *zobv* 'Hafer, Futter' < $*ġobi-$ < $*kopi-$, Lith. *šāpas* 'Halm', ON *hafri*; better than *zobv* 'Kropf, Schnabel'.
5. *zona* 'taube Körner' < $*ġonā-$ < $*konā-$, Gr. *κεν(ε)ρός* 'leer, eitel', Arm. *sin*; better than *znobiti* 'frieren lassen'.
6. *loboda* 'Gänsefuß, Melde' < $*lo-bodā-$ < $*l-podā-$, Latin *olor* 'Schwan', *pēs* 'Fuß'; better than $*alb^ho-$ 'weiß'.
7. *smōrdv* 'Bauer' < $*kmir-do-$ < $*ġ^hmer-to-$, Av. *zamar* 'in der Erde', Vedic *jmán*, OCS *zemlja*; better than *smōrd-* 'stinken'.
8. *sēbrō* 'Bauer' < $*kem-ro-$ < $*ġ^hēm-ro-$, same root; better than ORu. *sēm̃bja* 'Gesinde', Lith. *šeimà*.

9. *těsto* 'Teig' < **toiġ-to-* < **d^hoiġ^h-d^ho-*, Gr. *τοιχος* 'Mauer', Latin *fungō* 'forme', Gothic *daigs* 'Teig', ORu. *děža* 'Teigmulde'; better than Arm. *t'rem* 'knete Teig', OHG *theismo*, *deismo* 'Sauerteig'.

II. "VIEHZUCHT"

10. *krot-* 'gezahmt' (in derivatives) < **kroto-* < **g^hrd^ho-*, Gothic *garda* 'Hürde, Viehhof', Lith. *gařdas* 'Pferch', OCS *ogradā*; better than Gr. *κροτέω* 'schlage', *κράτος* 'Starke'.

11. *sverēpō* 'ungezahmt' < **kwer-* < **g^hwēr-*, Gr. *θήρ* 'wildes Tier', Latin *ferus*, Lith. *žvėris*, OCS *zvěrb*; better than Lith. *svarūs* 'schwer', Latin *sērius*, *sevērus*.

12. *za-tvoriti* 'schließen' < **tworo-* < **d^hwo-ro-*, Gr. *θύρα* 'Tür', Latin *forēs*, Gothic *daur*, OCS *dvbri*; better than *tvoriti* 'schaffen, bauen', Lith. *tvėrti* 'formen, schaffen'.

13. *pōto* 'Fessel, Strick' < **ponto-* < **b^hond^ho-*, Vedic *bandhā-* 'Binden, Band', Gr. *πέσμα* 'Seil, Strick', Gothic *bandi*; better than *pēti* < **penH-* 'spannen'.

14. *zvon-* 'Hund' (in derivatives) < **gwon-* < **kwon-*, Vedic *ś(u)vān-*, Gr. *κύων*, Lith. *šuo*, Gothic *hunds*; better than *zvonō* 'Ton, Schall, Glocke'.

15. *těxa*, *těšiti* 'saugen' < **toi-sā-* < **d^hoi-(sā)-*, Vedic *dháyati* 'saugt', Gr. *θήσθαι* 'melken', OCS *doiti* 'saugen'; better than Lith. *taisýti* 'bereiten', *tiesà* 'Wahrheit', *tiesùs* 'gerade', *teisùs* '(ge)recht, aufrichtig'.

16. *toliti* 'Durst stillen' < **tol-* < **d^hol-*, Vedic *dhāru-* 'saugend', Gr. *θήλυς* 'nährend', Latin *filius* 'Sohn', Latv. *dēls*; better than OIr. *tuilid* 'schlaf', OHG *stilli* 'still'.

17. *telē* 'Kalb' < **tel-* < **d^hel-*, same root; better than Latin *tollō* 'hebe empor', OHG *dolēn* 'ertragen'.

18. *drēv-* 'alt' (in derivatives) < **drewo-* < **trewo-*, Av. *θraošti-* 'Reife, Vollendung, Ende', OHG *trowwen* 'pubescere, crescere'; better than Gothic *triggws* 'treu', Lith. *drūtas* 'stark, kraftig'.

19. *bolna* 'Fell, Haut' < **bol-nā-* < **pol-nā-*, Gr. acc.pl. *πέλλας* 'Häute', Latin *pellis* 'Fell', OHG *fel*; better than Gr. *φολίς* 'Reptilschuppe', *φελλός* 'Kork'.

20. *golēnō* 'Unterschenkel' < **gol-* < **kol-*, Gr. *κωλήν* 'Hüftknochen', Latin *caix* 'Ferse', OCS *kolěno* 'Knie'; better than *golō* 'nackt'.

21. *bedro* 'Oberschenkel' < **bed-ro-* < **ped-ro-*, Vedic *pad-* 'Fuß', Gr. *πούς*, Latin *pēs*, Gothic *fofus*; better than Latin *femen*, *femur* 'Oberschenkel'.

22. *ědro* 'Busen, Eingeweide' < **ědro-* < **ětro-*, Gr. *ήτρον* 'Bauch, Unterleib', OE *ǣdre* 'Ader', OIr. *inathar* 'Eingeweide'; better than **oid-* 'schwellen'.

23. *zōbrō* 'Wisent, *hornlos' < **gom-ro-* < **kom-ro-*, Vedic *sāma-* 'hornlos', Gr. *κεμάς* 'junger Hirsch', ON *hind* 'Hirschkuh', Lith. (Žem.) *šmūlas* 'hornlos'; better than *zōbō* 'Zahn'.

24. *bedr-* (in derivatives) 'Feder, Flügel' < **bedro-* < **petro-*, Vedic *pātra-*, Latin *penna*; better than *bodō* 'steche', *bedro* 'Oberschenkel', *bōdrō* 'wach'.

III. "IMKEREI"

25. *svepetŕ* 'Honigwabe' < **swep-* < *(s)*web^h-*, Gr. *ὠφή* 'Weben', Latin *vespa* 'Wespe', Lith. *vapsà*, OHG *weban*; better than Latin *sapa* 'Saft', OHG *saf*, Vedic *vápati* 'streut', Lith. *siúti*.
26. *trŕtŕ* 'Drohne' < **tron-* < **d^hrŕn-*, Gr. *θρῶναξ* 'Drohne', OHG *treno*; better than **ter-* 'reiben, bohren'.

IV. "BEVORRATUNG"

27. *prokŕ* 'Vorrat, Rest' < **proko-* < **b^hrg^ho-*, Gothic *baigan* 'bergen', Ru. *beregú* 'hüte, bewahre'; better than Gr. *πρόκα* 'sofort', Latin *procul* 'ferne, weit'.
28. *gŕrnŕ* 'Topf, Kessel' < **g^wir-no-* < **k^wer-no-*, Ml. *cern* 'Schüssel', ON *hverna* 'Kochgeschirr', Vedic *carú-* 'Kessel, Topf'; better than *gŕrnŕ* 'Ofen'.

V. "GESELLSCHAFT"

29. *svobodŕ* 'frei' < **swo-bodi-* < **swo-poti-*, Vedic *svá-pati-* 'sein eigener Herr', Latin *sui potens* 'unabhängig'; better than **swo-bh(w)o-*, Gothic *sibja* 'Sippe'.
30. *slobodŕ* 'frei, konnend' < **slo-bodi-* < **s^l-poti-*, ON *salr* 'Saal, Zimmer', OCS *selo* 'Feld, Acker, Ort', Lith. *salà* 'Dorf', Vedic *páti-* 'Herr'; better than Gothic *silba* 'selbst', OIr. *selb* 'Besitz'.
31. *sirŕ* 'verwaist' < **kei-ro-* < **g^hei-(ro-)*, Vedic *híyate* 'wird verlassen', Gr. *χήρᾱ* 'Witwe', Latin *hērēs* 'Erbe', Gothic *gaidw* 'Mangel'; better than Av. *saē-* 'verwaist'.
32. *trŕtŕ* 'Wache, Schar' < **trunk-to-* < **d^hrung^h-d^ho-*, OIr. *drong* 'Schar', OHG *truht*, OCS *družina* 'Gemeinschaft'; better than German *dringen, drängen*.
33. *gojŕ* 'Ruhe, Friede' < **g^wojo-* < **k^wojo-*, Av. *šāiti-* 'Freude', Latin *quiēs* 'Ruhe', OCS *pokoji*; better than *gojiti* 'pflegen, mästen, heilen', *žiti* 'leben', Vedic *gáya-* 'Haus, Hof'.
34. *iz-gojŕ* 'Freigekaufter' < **g^wojo-* < **k^wojo-*, Vedic *cáyate* 'racht, strafft', Gr. *τίνω* 'büße, bezahle', OCS *cěna* 'Wert, Preis'; better than *gojŕ* 'Friede', *gojiti* 'ernähren'.
35. *mŕsta* 'Rache, Strafe' < **mistā-* < **misdhā-*, Av. *mižda-* 'Lohn', Gr. *μισθός*, Gothic *mizdo*, OCS *mŕzda*; better than **mei-* 'wechseln, tauschen'.
36. *pŕtati* 'achtgeben, fragen' < **putā-* < **b^hud^hā-*, Vedic *bódhati* 'wacht, merkt', Gr. *πέυθομαι* '(er)frage', OCS *bŕděti* 'wachen'; better than Latin *putāre* 'rechnen, vermuten, meinen', Slavic *pŕvati* 'hoffen'.
37. *ne-pŕtja* 'Vorwand' < **pit-jā-* < **b^hid^h-jā-*, Gr. *πέλω* 'überrede', Latin *fidŕ* 'vertraue, glaube', Gothic *bidjan* 'bitten', OCS *běditi*; better than *pŕvati* 'hoffen', *pŕtati* 'fragen'.

VI. "ZIMMEREI"

38. *dolga* 'Brett, Fußboden' < **dol-gā-* < **tol-kā-*, Vedic *tala-* 'Fläche, Ebene', German *Diele*, OCS *tolō* 'Boden', OPr. *talus* 'Fußboden'; better than Gr. *δέλτος* 'Schreibtafel', German *Zelge* 'abgeschnittener Zweig'.
39. *prokō* 'Turm, Katapult' < **proko-* < **b^horg^ho-*, Gothic *baurgs* 'Stadt, Turm', OHG *burg*, Ru. *beregú* 'hüte, bewahre'; better than **per-* 'schlagen' oder 'fliegen'.
40. *tvordō* 'eingeschlossen' < **twir-do-* < **d^hwer-to-*, Gr. *θύρᾱ* 'Tür', Latin *forēs*, OCS *dvōri*; better than *tvoriti* 'schaffen'.
41. *tōkō* 'zusammenpassend' < **tuko-* < **d^hug^ho-*, Gr. *τεύχω* 'mache zurecht', OE *dugan* 'nützen, passen', Lith. *daũg* 'viel'; better than Gr. *τόκος* 'Hammer'.

VII. "SONSTIGES"

42. *gvězda* 'Stern' < **ǵwoid-dā-* < **kwoit-tā-*, Vedic *śveta-* 'weiß', Gothic *hveits*, OCS *cvětō* 'Blume, Blüte', *světō* 'Licht, Welt'; better than Gr. *φοῖβος* 'leuchtend, strahlend', *φαικός* 'klar, leuchtend'.
43. *pojetō* 'singt' < **paje-* < **bhāje-*, Latin *fōr* 'spreche, sage, besinge', OE *bōian* 'prahlen', Slavic *bajati* 'erzählen, besprechen', Gr. *φημί* 'sage'; better than Gr. *παῖαν* 'Heil- und Lobgesang', Gothic *faian* 'tadeln'.
44. *ędro* 'Kern, Hode' < **ęndro-* < **ęntro-*, Vedic *antrā-* 'Eingeweide', Gr. *έντερα*, OCS *jętro* 'Leber'; better than Gr. *άδρός* 'voll, ausgewachsen'.
45. *golōbō* 'Tauben' < **golumbo-* < **kolumbo-*, Gr. *κόλυμβος*, Latin *columba*; better than Lith. *gulbė* 'Schwan'.

While some of these etymologies may turn out to be false, it is improbable that all of them will eventually be rejected. We must therefore reckon with the definite possibility of a "Temematic" substratum in Slavic, and perhaps in Baltic. Apart from the interchange of the tenues and the mediae aspiratae as a result of (1) and (2) discussed above and the absence of Winter's law, Holzer has proposed the following developments for his hypothetical substratum language (1989: 13):

(3) The syllabic liquids **r*, **l* became *ro*, *lo*. There are only five examples in Holzer's 45 etyma:

2. *proso* < **b^hrso-*, Latin *far*,
6. *loboda* < **l-podā-*, Latin *olor*;
10. *krot-* < **g^hr^hd^ho-*, Gothic *garda*;
27. *prokō* < **b^hr^gh^ho-*, Gothic *bairgan*;
30. *slobodō* < **sl-poti-*, ON *salr*.

None of these instances has an obvious zero grade. The assumption of an original zero grade in the compounds *loboda* and *sloboda* is no more than a theoretical construct. There is a zero grade in Vedic *grhá-* 'Haus', which is clearly

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cognate with Gothic *gards* ‘Haus’, but the absence of zero grade in the immediate neighbourhood of the Slavic territory renders the idea rather arbitrary. The zero grade in Lith. *biřginti* ‘sparen’ can easily be secondary. I therefore think that the alleged development is no more than a possibility.

(4) Long vowels were shortened before resonants. In fact, there is only a single root where an original long vowel was NOT shortened:

22. *ědro* < **ētro-*, Gr. ἤτρον.

There is only one other etymon with an initial vowel, and this is an instance where the Slavic word has not preserved a vowel length contrast:

44. *ędro* < **entro-*, Gr. ἔντρα.

Thus, we may just as well say that there is no trace of the original distinction between long and short vowels in the material.

(5) Raising of **e* to **i* before tautosyllabic *r*. There are three examples in Holzer’s 45 etyma:

7. *smьrdь* < **ǵ^hmer-to-*, Av. *zamar*;

28. *gьrnь* < **k^wer-no-*, ON *hverna*;

40. *tvьrdь* < **d^hwer-to-*, Gr. θύρᾱ.

Since the number of examples is very small and raising of *e* to *i* before *r* is not a natural development, it is preferable to assume a morphological reduced grade in these derivatives. Note that the other derivatives usually have *o-* or zero grade (cf. Holzer 1989: 170-174).

(6) Diphthongs became acute before single consonant plus vowel. This rule is reminiscent of the one that assigns acute tone to Slavic borrowings from Germanic (cf. Ko14: 70). It suggests that the “Temematic” language may have had an expiratory accent on the initial syllable. In his tentative identification of the substratum with the language of the Cimmerians, Holzer proposes two additional developments (1989: 179):

(7) Unrounding of **o*, **ō* to **a*, **ā*, and

(8) Raising of **e* to **i* before tautosyllabic nasals.

These hypothetical changes fit the earliest Slavic developments after the end of the Balto-Slavic period very nicely (cf. Ko36: 264f. and Ko66: 46f.). We may therefore wonder if the “Temematic” substratum provoked the earliest developments of Slavic as a separate language, before the Scythian expansions took place.

II

The next question is: what was the position of the proposed substratum language between the surrounding Indo-European dialects? We find limited voicing of the tenues in Germanic (Verner's law) and total devoicing of the aspirates in Greek. These are precisely the two branches of Indo-European which share most lexical isoglosses with the newly proposed language (cf. Holzer 1989: 165). It is therefore reasonable to locate the new language between Germanic in the north and Greek in the south. The unaspirated voiced (or glottalic) plosives were devoiced in Phrygian (cf. Lubotsky 1998: 420²²), Armenian, and Thracian, but not in Greek, Albanian, and Dacian. As Phrygian was close to Greek (cf. Lubotsky 1988b) and Thraco-Armenian to Daco-Albanian (cf. K101), it is probable that the new language was originally spoken to the west of the dialect continuum which connected Slavic with Albanian and Armenian. (A possible borrowing into Albanian is *mjet* 'Mittel, Trennwand' < **meti*- < **medhi*-, cf. Demiraj 1997: 274f.) This places the speakers of "Temematic" in the western Ukraine, which is precisely the most probable homeland of the Slavs, at the time when the ancestors of the Greeks moved into the Balkan peninsula. We must therefore consider the possibility that their language, like Anatolian and perhaps Greek, had not yet developed a distinction of voicedness in the plosives at that time.

In my earliest discussion of the PIE system of obstruents (K032), I reconstructed plain fortes **T*: (traditional **t* etc.), glottalic lenes **T*^ʰ (traditional **d* etc.), and aspirated lenes **T*^h (traditional **d*^h etc.), and assumed that glottalization was lost at an early stage in Indic, Greek and Italic while aspiration was lost at an early stage in Balto-Slavic, Armenian and Germanic, yielding a complementary series of voiced lenes in opposition to the original voiceless fortes. Both glottalization and aspiration were lost yielding voiced lenes in Iranian, Albanian and Celtic, which occupied an intermediate position between the dialects just mentioned, while the original absence of voiced obstruents was preserved in Anatolian and Tocharian. I have now changed my view in two respects:

(1) It has turned out that glottalization was preserved not only in Balto-Slavic and Armenian, but also in Indo-Iranian, Greek, Italic and Germanic (cf. K075: 192-197). It is therefore possible that the absence of distinctively voiced lenes was maintained much longer in Greek and Italic, which have voiceless reflexes of the aspirates. This opens the possibility of reconstructing a Graeco-Phrygian proto-language with voiceless reflexes of both the glottalics (as in Phrygian) and the aspirates (as in Greek). Thus, we arrive at an outer ring of Indo-European dialects where the original system of obstruents was preserved, comprising Tocharian in the East, Anatolian and Graeco-Phrygian in the south, and Italic in the west, and a central area where voicedness arose as a distinctive

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feature in the aspirates, containing the satem languages and their western neighbours.

(2) The evidence for aspiration in the aspirates is limited to Indic and Greek, which have very different types of aspiration and do not even share it with Iranian and Phrygian. The Italic fricatives can easily have developed from a lenition of voiceless plosives without an intermediate stage of aspirated stops. The Greek aspiration may be the result of delayed voice onset after the voiceless lenes. It now appears that Indo-Iranian shared the rise of distinctive voicedness with the central Indo-European dialects and that the rise of voiced aspirates in Indic was a secondary development, as it was in the central dialects of Armenian (cf. K075: 188-191). It follows that we must reconstruct fortis $*T$, glottalics $*T'$, and lenes $*T$ for Proto-Indo-European, with neither voicedness nor aspiration as distinctive features. The phonetic distinction between fortis $*T$: and lenes $*T$ was probably a matter of consonantal length, as is essentially the case in modern Germanic languages, where voicedness and aspiration are concomitant features (cf. Goblirsch 1994: 11 and *passim*).

We may now reconsider the position of “Temematic” among its Indo-European neighbours. The absence of voicedness in the lenes (“aspirates”) suggests that the language was originally close to Graeco-Phrygian. The subsequent loss of glottalization and rise of voiced obstruents was a development shared by Daco-Albanian. The distinctive merger of the fortis with the new voiced obstruents resulted from a weakening process which can be dated before this development because the merger of fortis with glottalics and subsequent rise of voicedness is a more natural chain of events than the unmotivated rise of voicedness in the fortis at a stage when the glottalics had become voiced and the lenes were voiceless. In the latter chronology, one would rather expect both fortis and lenes to remain voiceless, as in Greek, or the lenes to become voiced, as in Daco-Albanian. The weakening of the fortis has a counterpart in Germanic, where the details are quite different because we find voicing after unstressed vowels (Verner’s law) and frication elsewhere (Grimm’s law) and rise of new fortis from the original glottalics. These developments were probably more recent. Farther to the west we find lenition of the original fortis yielding voicing in British and frication in Irish. Though it is difficult to see a historical connection here, it is remarkable that there is no trace of lenition in Balto-Slavic languages. One therefore wonders if the various kinds of lenition were induced by a non-Indo-European substratum language spoken on the western border of the Indo-European homeland when successive waves of migration (Italic, Celtic, Germanic, “Temematic”) passed through their territory. In any case, this hypothesis is compatible with the idea that after the migration of the Graeco-Phrygians into the Balkan peninsula, the speakers of “Temematic” moved from the southwestern part of the Indo-European homeland into the territory which was abandoned by the ancestors of Germanic

speakers when these moved westwards. Though it is difficult to prove the former existence of a “Themematic” language in any strict sense of the word, it is important to note that it fits into our picture of the original Indo-European dialects very nicely.