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## ARTICLES

Indo-European nominal *o*-stems  
and question of their origin

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blazek@phil.muni.cz**Abstract:** Václav Blažek. *Indo-European nominal o-stems and question of their origin.* The Poznań Society for the Advancement of Arts and Sciences, PL ISSN 0079-4740, pp. 7-16In the article the most productive formation of the Indo-European nominal declension, the *o*-stems, are described and analyzed. Two competing interpretations are discussed. One of them is finally preferred with respect to external typological parallels.**Keywords:** Indo-European morphology, nominal declension, pronominal declension, ergative syntax, postpositive determination

1. The so-called **thematic inflection** is limited only to nouns extended by the vowel *-o-* (with only exception in the voc. sg. in *-e-*), the so-called ***o*-stems**. If it is not indicated otherwise, in the table 1 the continuants of the IE words *\*w<sub>1</sub>lk<sup>u</sup>o-* “wolf” and *\*jug<sup>o</sup>-* “yoke” are cited (Table 1-2).

Table 1

Singular	Vedic	Hittite	Greek	Latin	Old Irish	Gothic	Lith.	OCS.	IE
nom.	<i>v<sub>1</sub>kas</i>	<i>ishās</i> “lord”	λύκος <sup>6</sup>	<i>lupus</i> <sup>14</sup>	<i>fer</i> <sup>24</sup>	<i>wulf</i> <sup>34</sup>	<i>vilkas</i>	<i>vъkъ</i>	*-os
vok.	<i>v<sub>1</sub>ka</i> <sup>1</sup>	<i>ishā</i>	λύκε	<i>lupe</i> <sup>15</sup>	<i>fir</i> <sup>25</sup>	<i>wulf</i>	<i>vilke</i>	<i>vъče</i>	*-e
acc.	<i>v<sub>1</sub>kam</i>	<i>ishān</i>	λύκον <sup>7</sup>	<i>lupum</i> <sup>16</sup>	<i>fer</i> <sup>26</sup>	<i>wulf</i> <sup>35</sup>	<i>vilka</i> <sup>40</sup>	<i>vъkъ</i>	*-om
nom.-acc. n.	<i>yugām</i>	<i>yugan</i>	ζυγόν <sup>8</sup>	<i>iugum</i> <sup>17</sup>	<i>scél</i> <sup>27</sup>	<i>juk</i> ; ORun. <i>horna</i> “horn”	Pr. <i>igo</i> <i>lunkan</i> <sup>41</sup>	<i>igo</i>	*-om
gen.	<i>v<sub>1</sub>kasya</i>	<i>ishās</i> <sup>4</sup>	λύκοιο <sup>9</sup>	<i>-osio</i> <sup>18</sup> <i>lupi</i> <sup>19</sup>	<i>?-oiso</i> <sup>28</sup> <i>fir</i> <sup>29</sup>	ORun. <i>-as</i> <sup>36</sup> <i>wulfis</i> <sup>37</sup>	Pr. <i>-as</i> <sup>42</sup> = abl.	= abl.	*-os *-os-jo * <i>-i</i> <sup>46</sup>
abl.	<i>v<sub>1</sub>kād</i>	<i>antuhset</i> <sup>5</sup>	<i>e-ko-me-no</i> <sup>10</sup>	<i>lupō</i> <sup>20</sup>	Clb. <i>-uō</i> <sup>30</sup>		<i>vilko</i> <sup>43</sup>	<i>vъka</i> <sup>42</sup>	*-ōd < *-o-ed <sup>47</sup>
dat.	<i>v<sub>1</sub>kāya</i> <sup>2</sup>	<i>ishī</i>	λύκοι <sup>11</sup>	<i>lupō</i> <sup>21</sup>	<i>fiur</i> <sup>31</sup>	ORun. <i>-ai</i> <sup>38</sup>	<i>vilku</i>	<i>vъku</i>	*-ōi < *-o-ei
loc.	<i>v<sub>1</sub>ke</i>	<i>ishī</i>	οἴκοι <sup>12</sup>	<i>domī</i> <sup>22</sup>	Clb. <i>-ei</i> <sup>32</sup>	dat. <i>wulfa</i>	<i>vilke</i> <sup>44</sup>	<i>vъčē</i>	*-oi < *-o-i
inst.	<i>v<sub>1</sub>kena</i> <sup>3</sup>		<i>a-to-ro-qo</i> <sup>13</sup>	<i>lupō</i> <sup>23</sup>	Clb. <i>-u</i> <sup>33</sup>	dat. <i>wulfa</i> <sup>39</sup>	<i>vilku</i>	<i>vъkomъ</i> <sup>45</sup>	*-oH <sub>1</sub> < *-o-H <sub>1</sub>

See Beekes 1995, 190-192; GHJ 79-83; Szemerényi 1996, 182-188.

Notes: 1) Absence of palatalization of the velar is explainable via paradigmatic levelling. 2) The final *-a* is a particle (Beekes 1995: 192). 3) Adapted from the pronominal inflection, cf. the instr. sg. of demonstratives *ena, téna, eténa*, interrogative *kéna*, relative *yéna*, reflexive *svéna* (Macdonell 1916[2000]: 77, 106-112). 4) It corresponds to the gen. ending of other inflectional types. In the Luwian subbranch the genitive is replaced by so-called possessive adjectives, formed by the suffix *-assi-* in Cuneiform Luwian and *-asi-* in Hieroglyphic Luwian. Szemerényi (1996: 184, 187; following Mittelberger) derived them from the *o*-stem gen. in *\*-os-jo*. Melchert (2012) adds relics in Hittite, e.g. *genušša/i-* “knee(-joint)”, *šakuwašša-* “deity of the eye”. 5) The instr. sg. from *antuhsas* “man”. The abl. sg. has the ending *-az*. 6) Cf. Myc. *wo-no* /*woinos*/ “vine”. 7) Cf. Myc. *to-ro-ḡo* /*trok<sup>w</sup>on*/ “strap” or *wo-i-ko-de*, *wo-ko-de* /*woikon-de*/ “in the house”. 8) Cf. Myc. *e-ra<sub>3</sub>-wo* /*elaiwon*/ “olive oil”. 9) Cf. Myc. *do-e-ro-jo* /*do(h)elojjo*/ “servant”. 10) Myc. toponym, which may preserve the abl. sg. in /-ō/. 11) Cf. Myc. *a-to-ro-ḡo* /*ant<sup>h</sup>rōk<sup>w</sup>ōil*/, cf. Gr. ἄνθρωπος “man” 12) Att. “at home”; cf. the Myc. toponym *pu-ro* /*pulōi*/ “in Pylos”. 13) Myc. /*ant<sup>h</sup>rōk<sup>w</sup>ōil*/ (notes 6-13: see Bartoněk 2003: 188-210 & Hajnal 1995: 23-24). 14) Cf. OLat. *equos* (Plautus), *duenos* (CIL I, 4), further Fal. *Kaios*, Ven. *Voltiomnos*, Osc. *húr<sup>z</sup>* “grove”, SPic. *meitims* “gift”? 15) Cf. Fal. *Uoltene*, Umb. *Šerfe*, Osc. *φατοφε*. 16) Cf. OLat. *manom* “hand”, Fal. *vinom* “vine”, Ven. *ekvon* “horse”, Osc. *húrtúm*, *dolom* “intent”, SPic. *meitimúm*. 17) Cf. OLat. *donom* “gift”, Fal. *duenom* “good”, Ven. *donom* & *donon* “gift”, osk. *sakaraklúm*, vol. *pihom* “of pious”. 18) Cf. OLat. *Popliosio Valesiosio* = class. Lat. ‘Publii Valerii’ (Lapis Satricanus, 500 BC), Fal. *Kaisiosio*. 19) Cf. OLat. *Aisclapi* (CIL I, 440), *argentí* (Plautus) “of silver” (adj.), Fal. *Marci*, Ven. *louki* “of sacred grove”. 20) Cf. OLat. *fileod* “to son”, Osc. *sakaraklúd* “to sanctuary”. 21) Cf. OLat. *Numasioi duenoi*, later *Aiscolapio*, Fal. *Kaisioi*, Ven. *murtuvoi* “to dead”, Osc. *húrtúu*, SPic. *brimeglúu*. 22) Lat. “in homeland”, lit. “at home”; cf. Osc. *húrtei*. 23) In the form of the typ *lupō* three cases merged: dative, ablative & instrumental sg.; cf. also Ven. instr. *Voltiio* (notes 14-23: see Meiser 1998: 134-135; UB 228-230). 24) Goid. *\*úiros* “man”; cf. Clb. *ueidos* “witness”, Gl. *tarvos* “bull”, Lep. *Alkouinos*, *Ulkos*. 25) Goid. *\*úire*, cf. Gl. (Lezoux) *nate* “oh, son!” (LG 143). 26) Goid. *\*úiom*; cf. Clb. *elaðunom*, Gl. (Alise) *celicnon* “hall”, but (Larzac) *brictom* “magic”. 27) Olir. *scél* “message” < *\*sk<sup>w</sup>etlom* (LEIA, S 39-40); cf. Clb. *Belikiom*, Lep. *uinom* “vine”, Gl. (Chamalières) *ollon* “all”, *meion* “small”. 28) Lep. gen. sg. *Xosioiso*. Metathesis? 29) Goid. *\*úirí*, Ogam *maqqi* “of son”; cf. Gl. (Couchey) *Segomari*, (Todi) *Trutikni*, Lep. *Áskoneti*, but Clb. *-o* in *karuo* etc. 30) Clb. *Usamuð*. 31) Goid. *\*úirú*; cf. Clb. *ueidúu*, Lep. *Pelkui*, Gl. (Cavaillon) *βαλαυδου* & (Couchey) *Alisanu*. 32) Clb. *kortonei*, Gl. *-e: uo duno derce* “under the barrow”, in *Alixie* “in Alesia”. 33) Clb. *auku*, Gl. *sunartiú* “by good strength” (notes 24-33: see Lejeune 1971: 467; LG 51-56; MLH 396-400). 34) Cf. ORun. *laukaz* “garlic”. 35) Cf. ORun. *stainu* “stone”. 36) ORun. *Godagas*. 37) Gmc. *\*-eso*, adapted from the pronominal inflection, cf. Goth. *hvis* “what”, *þis* “that”, OCS. *česo* “what”. 38) Cf. ORun. *hahai*. 39) Cf. the instr. sg. in OSas. *dagu*, OHG. *tagu* “by day”. 40) Cf. Prus. *deiwan* “god”. 41) Prus. “bast”. 42) Prus. *deiwas*. 43) *\*-ād* as in the *ā*-stems (cf. Szemerényi 1996: 183). 44) Diphthong remains petrified in some adverbs as Lith. *namie* “at home”, Prus. *bītai* “in the evening”. 45) After other inflectional patterns (Erhart 1982: 120). The original ending, which should be *\*-a*, may be fossilized in the interrogative & relative OCS. adv. *kogda*, *kъgda* “when”, if it is a compound of the pronominal root *\*ko-*, *\*kъ-*, and the word *godъ* “time” (Wiedmann apud Brugmann 1911: 189). 46) Cf. also Alb. *et* “of father” < *\*attī* : nom. *atē*; Toch. A *Mahišvari* “Mahišvari’s”, maybe also the genitive of kinship terms as A *pācri*, B *pātri* “of father” (Klingenschmitt 1992: 98-104). 47) Only the abl. sg. of the *o*-stems differs from the gen. sg., in other inflectional classes the gen. & abl. sg. merge (with exception of Italic languages, Celtiberian and Anatolian languages, where the dental ablative was extended in other inflectional classes). Its origin has been sought in the pronominal ablative of the type Ved. *mad*, OLat. (also acc.) *med* (Praeneste), *mēd* (Plautus), Fal. *med*, *met*, similarly OLat. *ted* & *sed*, and perhaps Gl. *\*med* & *\*sed* in the syntagms *to-med-ec-lai* (Voltino, North Italy), *met-ingi-set-ingi* “between me and between her” (Châteaubleau; see Lambert 2001: 112). The ending is identified with the particle *\*ad* < *\*H<sub>2</sub>ed* (Dunkel, Sihler etc.) or *\*eti* ~ *\*oti* < *\*H<sub>1</sub>eti* ~ *\*H<sub>1</sub>oti* (Neu, Tichy etc.), see Szemerényi 1996, 187.

Table 2

Plural	Vedic	Hittite	Greek	Latin	Old Irish	Gothic	Lith.	OCS.	IE
nom.	<i>vṛkās</i>	<i>ishēs</i>	λόκοι <sup>3</sup>	OU. <i>-us</i> <sup>9</sup> <i>luprī</i> <sup>10</sup>	<i>fir</i> <sup>16</sup>	<i>wulfos</i> <sup>24</sup>	<i>vilkaī</i> <sup>29</sup>	<i>vľbci</i>	*-ōs < *-o-es *-oj
acc.	<i>vṛkān</i> <sup>1</sup>	EN.MEŠ- <i>us</i>	λόκοις <sup>4</sup>	<i>lupōs</i> <sup>11</sup>	<i>firu</i> <sup>17</sup>	<i>wulfans</i>	<i>vilkaūs</i> <sup>30</sup>	<i>vľbky</i> <sup>35</sup>	*-oms
nom.-acc. n.	<i>yugā</i>		ζυγά <sup>5</sup>	<i>iuga</i> <sup>12</sup>	<i>scél(a)</i> <sup>18</sup> Clb. <i>-a</i> <sup>19</sup>	<i>juka</i> <sup>25</sup>	Prus. <i>warto</i> <sup>31</sup>	<i>iga</i>	*(e)H <sub>2</sub>
gen.	<i>vṛkānām</i> <sup>2</sup>	<i>siunan</i> "of gods" <i>ishās</i>	λόκων <sup>6</sup>	<i>lupōrum</i> <sup>13</sup>	<i>fer</i> <sup>20</sup>	<i>-o/-a</i> <sup>26</sup>  <i>wulfē</i> <sup>27</sup>	<i>vilkiū</i> <sup>32</sup>	<i>vľbktb</i>	*-ōm < *-o-om
dat.-abl.	<i>vṛkebhyaś</i>	<i>ishas</i>		<i>-oibos</i> <sup>14</sup>	<i>fer(a)ib</i> <sup>21</sup>	<i>wulfam</i> <sup>28</sup>	<i>vilkaūs</i> <sup>33</sup>	<i>vľbkomtb</i>	*-oj-b <sup>h</sup> /m- *-oj-os?
loc.	<i>vṛkeśu</i>	<i>ishas</i>	λόκοισι <sup>7</sup>	<i>lupīs</i> <sup>15</sup>	<i>-ei</i> <sup>22</sup>		<i>vilkuosē</i> <sup>34</sup>	<i>vľbcēxb</i>	*-oj-su
inst.	<i>vṛkais</i>		λόκοις <sup>8</sup>	<i>lupīs</i> <sup>15</sup>	<i>-uis/-us</i> <sup>23</sup>		<i>vilkaīs</i>	<i>vľbky</i> <sup>36</sup>	*-ōis <sup>37</sup>

See Beekes 1995: 192; Fortson 2004: 113-116; Szemerényi 1996: 183-88.

Notes: 1) Long *-ā-* after the nom. pl. *-ās*. Better is preserved the acc. pl. in OAv. *mašiiōng, mašiiqs-cā* "man" ("mortal") < \**martjanh*, \**ans-ca*; cf. Ved. *mártiyān, mártiyāms-ca* (Hoffmann & Forssman 1996: 120). 2) Influence of the *n*-stems. The primary gen. pl. is preserved e.g. in the syntagm *dévāñ janma* "race of gods" (Szemerényi 1996: 185). 3) Cf. Myc. *o-no /onoio* "donkeys". 4) The ending of the acc. pl. is preserved in Arg. *υιόνς* "sons"; Myc. *si-a-ro /sihalons/*; Gr. nom. sg. *σίαλος* "fat hog". 5) Cf. Myc. *do-ra /dōra/*; Gr. *δῶρον* "gift". 6) Cf. Myc. *e-ra-po /elaphōn/*; Gr. *ἔλαφος* "deer". 7) Cf. Myc. *te-o-i /t'e(h)oi(h)il/*; *θεός* "god". 8) Cf. Myc. *de-so-mo /desmois/*; Gr. *δεσμός* "strap" (notes 3-8: see Bartoněk 2003: 188-210; Hajnal 1995: 23-24). 9) Osc. *Núvlanis*, SPic. *Safínus*, Umb. *Ikuvinu*. 10) Cf. OLat. *peploē*, besides epigraphic *Virei*. 11) Cf. OLat. *deivos*, Ven. *deivos*, Osc. *feihūs*, Umb. *vitluf*. 12) Cf. Umb. *iuku* & *iuka*. 13) Adapted from the pronominal inflection: \**ōrum* < \*-*ūsom* < \*-*oj-s-ōm*, cf. the Vedic demonstrative *téśām*, OCS. *těxb*. The nominal gen. pl. is preserved in OLat. *deom*, Ven. *Oterginon*, Pael. *Cerfum*, CPic. *Safínúm*, Osc. *Núvlaním*. 14) Ven. *ekvoibos*, besides *louderobos*. 15) In Lat. the dat.-abl. pl. of *o*-stems in *-īs* merged with two other cases, the loc. pl. in \*-*oī-su*, and instr. pl. in \*-*oīs*. The diphthong is also preserved in OLat. *quouis*, Pael. *pucluis*, Osc. *feihúis*, *zicoluis* (notes 9-15: see UB 229-230). 16) Goid. \**uirī*; cf. Gl. (Brionia) *Tanotaliknoi*, (Mailly-le-Camp) *ταουτανοι* & (Saint-Germain) *Aresequani*, Lep. *Kasiloī*, Clb. *Alaboi*. The original nom. pl. in \*-*ōs* was preserved in Old Irish voc. pl. *firu* < Goid. \**uirūs*. 17) Goid. \**uirūs*; cf. Gl. (Graufesenque) *tuθtus*, Clb. \**matus*. 18) Goid. \**sk<sup>h</sup>etla*. 19) Clb. *korta*. 20) Goid. \**uirōm*; cf. Gl. (Chamalière) *ditiuion* & *ande-dion*, Clb. *Titum*. 21) Goid. \**uiro[i]bi(s)* (Thurneysen 1946: 182) with the ending \*-*bi(s)*, corresponding to the Gl. instr. pl. *gobedbi*, cf. dat. pl. in Gl. *Rudiobo*, Lep. *Uvltiauoobos*, Clb. *Uetikubos*, similarly abl. pl. *Nouantubos*. 22) Clb. *Lutiakei* (Cólera 2005, 124). 23) Gl. (Vaison) *τοουτιους* / (Graufesenque) *Vindulus*. 24) The pronominal nom. pl. in *-ai* appears in the Gothic strong adjective nom. pl. m. *blindai* "blind". Further cf. ORun. *arbijarjostez* „most legitimate-to-inherit“, besides later *stAinAz* "stones", ON. *ulfar* "wolves". 25) Cf. ORun. *hag<sup>a</sup>lu* "hail": nom. sg. n. *hag<sup>a</sup>la*. 26) ORun. *Wiwio*, later *flAinA*, ON. *daga*, OEng. *dægga*, OSax. *dago* "days" < \*-*ō*. 27) The Gothic gen. pl. m./n. in *-e* instead of expected \*-*o* had perhaps to eliminate homonymy with the gen. pl. f. (Brugmann 1911: 238-239; Ringe 2006: 282). Kortlandt apud Beekes (1985: 142) explains *-e* from Gmc. \*-*ē* < \*-*ej-om*, thus from the gen. pl. *i*-stems, whence the ending had to spread. 28) Cf. ORun. *borumz* "to sons". Kortlandt (apud Beekes 1985: 144) explains the vowel *u* in the OHG. dat. pl. *tagum* via the *u*-umlaut caused by vocalization of the ending \*-*mus* (notes 23-27: see Antonsen 1975: 18-19). 29) Cf. Prus. *wijrai* "men". 30) Lith. *-us* < \*-*uos* < \*-*ōns* (Otrębski III, 16). Cf. Prus. *deiwans* "gods". 31) Prus. "doors". 32) Cf. Prus. *grīkan*: nom. sg. *grīkas* "sin". 33) Cf. OLith. [Daukša's Postilla] *waykāmus* = Lith. *vai-kāms* "to children". 34) The Lith. ending to loc. pl. could originate in contamination with the acc. pl. \*-*uoms* and postposition \*-*en*, cf. Žemaitic loc. pl. in *-unse* (Otrębski III, 16). 35) Sl. acc. pl. *-y* < \*-*ōns*. 36) Sl. instr. pl. *-y* < \*-*ōjs* (Erhart 1982: 121). 37) The instr. pl. in \*-*oīs* (Gr., It., Balt.) or \*-*ōis* (Il., Celt., Sl.) remains non-transparent. Maybe, it is the instr. sg. in \*-*oH*, extended by non-singular \*-*oi-* and pluralizing *-s* (otherwise Erhart 1982: 98; Szemerényi 1985: 519-520).

Besides the singular and plural the Indo-European protolanguage also differentiated the dual, although this category was not preserved in all daughter branches. E.g. in old literary Germanic languages the dual disappeared from the nominal morphology, but remained in the pronominal and verbal systems. In Latin the traces of the dual are preserved only in the

numerals *duo* (*duō* by Plautus), *duae*, *duo* “two”, and *ambō*, *-ae,-ō* “both”. In the Anatolian branch the traces of dual have been sought in designations of the pair body parts, e.g. Hitt. *sakuwa* “eyes”, Luw. *aruta* “wings”, *issara* “hands”, *pata* “feet” (Krasuxin 2004: 133; Szemerényi 1996: 161). Thanks to homonymy of endings the dual paradigm is less rich in comparison with plural even in those languages, where the dual was preserved (Table 3).

Table 3

Dual	Vedic	Avestan	Greek	Old Irish	Lith.	OCS.	IE
nom.-acc. m.f.	<i>vṛkā, vṛkau</i>	<i>spādā</i> <sup>3</sup>	λύκοι <sup>7</sup>	<i>fer</i> < * <i>uirā</i>	<i>vilkū</i>	<i>vlъka</i>	*-o-H <sub>1</sub>
nom.-acc. n.	<i>yugé</i>	<i>šiiāoñōi</i> <sup>4</sup>	ζυγός <sup>8</sup>	<i>scél</i> <sup>11</sup>		<i>i(d)zě</i>	*-o-iH <sub>1</sub>
gen.	= loc.	<i>qsaiiā</i> <sup>5</sup>	= loc.	<i>fer</i> < * <i>uiroū</i>	<i>dviejaus</i> <sup>12</sup>	= loc.	*-oi-H <sub>1</sub> ōs
loc.	<i>vṛkayos</i> <sup>1</sup>	<i>zastaiiō</i> <sup>6</sup>	λύκοιιν <sup>9</sup>		<i>dviejau</i> <sup>12</sup>	<i>vlъku</i>	*-oi-H <sub>1</sub> ou
dat.-abl.-inst.	<i>vṛkābhyām</i> <i>aśvebhyām</i> <sup>2</sup>	<i>zastōibiiā</i> <sup>6</sup> <i>aspaēbiiā</i> <sup>2</sup>		<i>fer(a)ib</i> < * <i>uirobim</i>			*-oi-b <sup>h</sup> ioH <sub>1</sub>
					<i>vilkām</i>	<i>vlъkoma</i>	*-o-moH <sub>1</sub>
instr.			<i>o-mo-pi</i> <sup>10</sup>		<i>vilkam̃</i>		*-o-b <sup>h</sup> miH <sub>1</sub>

See Beekes 1995: 194-195; Brugmann 1911: 282-283; Hoffmann & Forssman 1996; Szemerényi 1996: 183-185.

Notes: 1) \*-oi-H<sub>1</sub>ou + -s perhaps after the gen. 2) “horse”. 3) OAv. *spāda-* “army”. 4) OAv. *šiiāoñna-* “action”, cf. YAv. *saite* “200”, *duiie*, *duiiaē-ca* “2”. 5) OAv. *qsa-* “share”. 6) OAv. *zasta-* “hand”. 7) Cf. Myc. *po-ro /pōlō/* “two foals”. 8) Ending of the m.-f. du. 9) Rix (1976, 141): \*-ojsin after the dat.-loc. pl. \*-ojsi with the final nasal after the instr. du. \*-oi-b<sup>h</sup>im; otherwise Beekes (1995: 195): \*-oi-Hu-m? 10) Myc. *ioimop<sup>h</sup>il* : Gr. οἴμος “bundle” (Hajnal 1995: 23). 11) It causes a nasalization of the following initial: maybe an identification with the ending of the nom. sg. n. \*-om. More original is perhaps Gl. *uercobreto* (Thurneysen 1946: 182). 12) Lith. *dvejì* “double”.

2. Origin of the *o*-stems was discussed many times. Two hypotheses seem best argued. 2.1. Pedersen (1907: 152) mentioned that the subject of transitive verb looks like in genitive (sigmatic case), if was active, and like in instrumental, if was inactive. On the other hand, the subject of intransitive verb and object of transitive verb were in absolutive (i.e. asigmatic) case. This asymmetry between valency of transitive and intransitive verbs is summarized in Tab 11 (see Beekes 1995, 193) (Table 4).

Table 4

Verb		Nominative system	Ergative system
transitive verb	subject	nominative	ergative
	object	accusative	absolutive
intransitive verb	subject	nominative	absolutive

Beekes (1985: 191-195; 1995: 193) and Kortlandt (2002: 217) develop Pedersen’s idea, assuming that the nominative syntax of old Indo-European languages was formed later and the case system of the Indo-European protolanguage is primarily based on the ergative syntax. The same ending of the nom. and acc. neuter designating originally inactive nouns originated from the primary absolutive, while the ergative belonged to the active subject. According to Beekes the sigmatic genitive-ablative developed from the ergative. During transformation of the ergative system into nominative one the form reconstructed as *CC-R-ōs* became the nominative, a new case of subject. The vowel *-o-* had spread to other cases. Schmalstieg (1997: 401-407) and Gamkrelidze & Ivanov (1984: 267-91: active typology) formulated their own theories assuming the ergative past of the IE syntax.

## The implications of the ergative interpretation:

Table 5

Case	Form* <sup>*</sup>	Comments in perspective of the ergative interpretation
sg. nom.	-ø	in HD inflection and PD neuters (B 1985: 172)
	-s act.	identical with the sigmatic gen.-abl. sg., originally ergative (B 1985: 172-195)
	-om inact.	agens of the transitive verb (Pedersen 1907: 152; Schmalstieg 1997: 405-406: instr. of <i>o</i> -stems)
voc.	-ø	see B 1985: 99-108
acc.	-m	originally directive-terminative (B 1985: 198)
gen.	-( <i>o</i> )s	originally ergative (B 1985, 172-95); in Hitt. used in both gen. sg. & pl.
( <i>o</i> -stems)	- <i>osjo</i>	< gen. *- <i>os</i> & relative * <i>jo</i> (B 1985: 185; Nikolaev 2000)
	- <i>ī</i>	cf. the suffix of affiliation *- <i>ijo</i> - (*- <i>iHo</i> -?); see K 1994: 98-104; Meiser 1998: 135
abl.	-os	identical with the gen. sg. in *-( <i>o</i> )s, originally the ergative (B 1985: 172-195)
( <i>o</i> -st.)	-( <i>o</i> )t/d( <i>i</i> )	cf. also Hitt. - <i>az</i>
dat.	-( <i>e</i> )i	on persons; dat. & loc. were originally one and the same case (B 1995: 173)
loc.	-i	on places & inactive nouns; originally identical with the dative (B 1995: 173); cf. Arm. <i>herow</i> , Gr. πέπος(ν), ON. <i>i fforð</i> "last year", OIr. <i>ón n-urid</i> "from last year" < * <i>per-uti</i> "year ago"
instr.	- <i>H</i> <sub>1</sub>	cf. instr. pl. of the <i>o</i> -stems *- <i>ōjs</i> < instr. sg. *- <i>oH</i> <sub>1</sub> + non-singular *- <i>oj</i> - + pluralizing - <i>s</i>
pl. nom.	- <i>es</i>	
( <i>o</i> -stems)	- <i>oī</i>	plural of pronominal origin
	- <i>oī</i> -	non-singular affix of the <i>o</i> -stems, preceding the case ending
	- <i>H</i> <sub>2</sub> inact.	collective
voc.	= nom.	
acc.	- <i>ms</i>	= acc. sg. - <i>m</i> + pluralizing - <i>s</i> in congruence to the nom. pl. in - <i>es</i>
gen.	- <i>om</i>	see Kortlandt 1978; in Hitt. used in both gen. sg. & pl.; Schmalstieg 1997: 405-406: ergative
abl.	- <i>jos</i>	> Arm. - <i>ǰ</i> , Il. *- <i>b<sup>h</sup>(i)-ios</i>
dat.	- <i>mus</i>	> BSL. *- <i>mus</i> ; Gmc. *- <i>muz</i>
loc.	- <i>su</i> ~ - <i>si</i>	cf. Lat. <i>mox</i> , MWelsh <i>moch</i> "soon" < * <i>mok-su</i> ; Alb. abl. pl. - <i>sh</i> : <i>malesh</i> "in mountains"; <i>për-posh</i> "down", <i>posh-të</i> "below": * <i>posh</i> < * <i>pēd-si</i> ; Phryg. τεῦτοσι "in villages" (K 1994: 313; H 2003: 129)
instr.	- <i>b<sup>h</sup>i</i>	originally probably without number distinction, cf. Gr. ἰφι "strongly"; Myc. <i>wi-pi-no-o</i> / <i>Wīp<sup>h</sup>i-no(h)os</i> !, Hom. Ἰλιόφῳν ... τεῖχῃα "walls of Ilion" (Rix 1976: 158-159; Ba 2003: 274); Il. dat. of personal pronouns: OAv. <i>maibiīā</i> , <i>taibiīā</i> , <i>ahmaibiīā</i> , <i>yūšmaibiīā</i> vs. Ved. <i>tūbhya(m)</i> , <i>asmābhyam</i> , <i>yušmābhyam</i> ; OCS. dat.-loc. <i>tebě</i> , <i>sebě</i> , instr. <i>tobojoq</i> , <i>sobojoq</i> (see Br 1911: 187)

B = Beekes; Ba = Bartoněk; Br = Brugmann; H = Hajnal; K = Klingenschmitt.

Note: Identification of non-singular morpheme \*-*oī*- and pluralizing -*s* imply in some cases the agglutinative structure.

2.2. Jean Haudry (1982: 36-38) formulated the idea that the *o*-stems originated from pronouns with determining function added to a nominal base, playing so a role of a postpositive article. For this solution there are typological parallels e.g. in Balto-Slavic languages, where the adjectives used in the attributive role are extended by the IE relative \**jo*-/\**iā*-, the postpositive determination using demonstratives is living in modern Balkanian or Scandinavian languages. So-called *mimation* & *nunation* in Semitic languages also represent in principle the postpositive determination. In Indo-European a good candidate could be identified in the Anatolian pronoun -*a*- of the 3rd person attested only in postposition (HEG 1-2: 6-7) (Table 6).

Table 6

Case	Hittite	Palaic	C. Luwian	Hier. Luwian	Lydian	*
nom. sg. c.	-as	-as	-as	-(a)s	-aś	*-os
nom.-acc. sg. n.	-at	-at	-ata	-(a)ta	-ad, -at	*-ot
acc. sg. c.	-an /-un	-an	-an	-an	-av	*-om
nom. pl. c.	-e	-as				*-o <sub>i</sub>
nom.-acc. pl. n.	-e	-e				*-o <sub>i</sub>
acc. pl. c.	-us					*-oms
acc. pl. n.	-at		-ata	-(a)ta		*-ot

3. Summarizing the preceding partial reconstructions, it is apparent, most difficult is to establish the original protoforms of the ablative, dative and instrumental plural. It is natural to suppose mutual levelling, merging, interference. These processes are concentrated to Table 7 (see Brugmann 1911: 120; Beekes 1985: 144-146), whence the following case proto-system may be postulated (Table 7), to explain the partial case systems in daughter branches.

Table 7

case	IE	II	Arm.	Gr.	Messap.	Italic	Celtic	Gmc.	BSl.
dat. pl.	*-mus								*-mus
>								*-mos	
abl. pl.	*-jos		-j <sup>2</sup>						
>		*-b <sup>h</sup> jos			-bis <sup>3</sup>	*-b <sup>h</sup> os	*-b <sup>h</sup> os		
ins. pl.	*-b <sup>h</sup> i <sup>1</sup>	*-b <sup>h</sup> is	*-b <sup>h</sup> i(s)	*-b <sup>h</sup> i			*-b <sup>h</sup> i(s)		
>					-bas <sup>4</sup>		*-mi <sup>5</sup>	*-mi <sup>6</sup>	*-miHs
dat. pl.	*-mus								

Notes: 1) Probably the same suffix appears in Hitt. *kuwapi* “where, when” (HEG 4: 229-232). 2) Arm. -j in the abl. pl. of personal pronouns *mēnj*, *jēnj* is derivable from \*-jos (Kortlandt 1984: 103-104 = 2003: 50; Beekes 1985: 144). 3) Messap. abl. pl. *ogrebis*, *tatθebis*, *valebis* (see MLM II). 4) Messap. dat. pl. *Laidehiabas*, *Logetibas*. 5) Cf. the OIr. dat. pl. *n*-stems of the type *ann(a)imm* from *ainm* “name” (already Brugmann 1911: 188 thought about this solution and Hamp 1996 returned to it). 6) See WGmc. dat. pl. *Vatvims* & *Aflims*, corresponding to Lat. *Vatviabus* & *Afliabus*, and OEng. dat. pl. *ḏēm* from the demonstrative *sē* “that” with the *i*-umlaut (Brugmann 1911: 262, 264).

Table 8

Number	Singular		Plural		Dual	
	athematic	thematic	athematic	thematic	athematic	thematic
nom. anim.	*-s	*-os	*-es	*-ōs < *-o-es	*-H <sub>1</sub>	*-o-H <sub>1</sub>
voc.	*-ø	*-e	*-es	*-ōs < *-o-es	*-H <sub>1</sub>	*-o-H <sub>1</sub>
acc. anim.	*-m	*-om	*-ms	*-oms	*-H <sub>1</sub>	*-o-H <sub>1</sub>
nom.-acc. n.	*-ø	*-om	*-H <sub>2</sub>	*-eH <sub>2</sub>	*-iH <sub>1</sub>	*-o-iH <sub>1</sub>
gen.	*-s	*-os(-iø)	*-om	*-ōm	*-H <sub>1</sub> ōs	*-o <sub>i</sub> -H <sub>1</sub> ōs
abl.	*-s	*-ōd < *-o-ed	*-jos	*-o <sub>i</sub> -os	= dat.	= dat.
dat.	*-e <sub>i</sub>	*-ō <sub>i</sub> < *-o-e <sub>i</sub>	*-mus	*-o <sub>i</sub> -mus	*-mōH <sub>1</sub>	*-o <sub>i</sub> -mōH <sub>1</sub>
loc.	*-i	*-o <sub>i</sub>	*-su	*-o <sub>i</sub> -su	*-H <sub>1</sub> o <sub>i</sub>	*-o <sub>i</sub> -H <sub>1</sub> o <sub>i</sub>
instr.	*-H <sub>1</sub>	*-oH <sub>1</sub>	*-b <sup>h</sup> i(s)	*-o <sub>i</sub> -b <sup>h</sup> i(s)	*-b <sup>h</sup> iH <sub>1</sub>	*-o <sub>i</sub> -b <sup>h</sup> iH <sub>1</sub>

See Beekes 1995: 173; Fortson 2004: 113.

4. A little surprising typological and structural argument supporting one of the preceding solutions may be found outside the Indo-European language family. In the Uralic protol-

language the nominative has been reconstructed as unmarked. But in several Fenno-Ugric languages a specific nominative was formed from demonstratives or demonstrative suffixes of the 3rd person according to the scenario described by Haudry in connection with the IE *o*-stem nominative in *\*-s* (§ 2.2.) (Table 9).

Table 9

Language	indet. sg.	det. sg.	indet. pl.	det. pl.	origin of suffix
Mordvin	<i>tolga</i> "feather"	<i>tolgaš</i> "that f."	<i>tolgat</i> "feathers"	<i>tolgat'ñä</i> "those f."	<i>šä, še</i> "that" : <i>ñe</i> "these"
Udmurt	<i>iz</i> "stone"	<i>izez</i> "that s."	<i>izjos</i> "stones"	<i>izjosjz</i> "those s."	-z suffix of 3rd person sg.
Komi	<i>vok</i> "brother"	<i>vokjs</i> "that b."	<i>vokjas</i> "brothers"	<i>vokjasjz</i> "those b."	-s suffix of 3rd person sg.

See Szinnyei 1910: 62.

Summing up, from both competing hypotheses described in §2.1. and 2.2. the latter solution operating with postpositive determination seems more probable, since is supported by external typological parallels.

## Abbreviations

ab(l). ablative, abs. absolute, adj. adjective, adv. adverb, advr. adverbialis, Aeol. Aeolic, acc. accusative, Alb. Albanian, act. active, Arg. Argive, arch. archaic, Arc. Arcadian, Arm. Armenian, Att. Attic, Av. Avestan, Balt. Baltic, Bret. Breton, BSl. Balto-Slavic, c. genus communis, C. Cuneiform, Celt. Celtic, Cib. Celtiberian, Cl. Classic, col. collective, com. comitative, cons. consonantic, Corn. Cornish, Cret. Cretan, Cz. Czech, dat. dative, det. determined, dir. directive, Dor. Doric, du. dual, E East, Eng. English, ep. epigraphic, erg. ergative, f. feminine, Fal. Faliscan, Fi. Finnish, fin. finalis, FU. Fenno-Ugric, Ge. Georgian, gen. genitive, Gl. Gaulish, Gmc. Germanic, Goid. Goidelic, Goth. Gothic, Gr. Greek, heter. heteroclitic, Hier. Hieroglyphic, Hitt. Hittite, Hom. Homeric, id. idem, IE Indo-European, II. Indo-Iranian, inact. inactive, indet. indetermined, ins(tr). instrumental, Ir. Irish, It. Italic, Lat. Latin, Latv. Latvian, Lep. Lepontic, Lesb. Lesbian, Lith. Lithuanian, loc. locative, Luw. Luwian, Lyd. Lydian, Lyc. Lycian, m. masculine, M Middle, Marr. Marrucine, Mars. Marsian, Messap. Messapic, Myc. Mycenaean, n. neuter, N North, nom. nominative, O Old, obl. oblique, OCS. Old Church Slavonic, OHG. Old High German, ON. Old Nordic (incl. Old Icelandic), ORun. Old Runic, Osc. Oscan, OU. Oscan-Umbrian, p- proto-, Pael. Paelignian, Phryg. Phrygian, Pic. Picenian, pl. plural, Pr(us). Prussian, pred. predicative, S South, sg. singular, Skt. Sanskrit, Sl. Slavic, soc. sociative, suf. suffix, Sx. Saxon, Syr. Syriac, term. terminative, Toch. Tocharian, tran. transformative, Umb. Umbrian, Ved. Vedic, Ven. Venetic, voc. vocative, Vol. Volscan, W West, Y Young.

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