

Nominal Compounding*

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0. Introduction

One has to distinguish between genuine compounds, juxtapositions, and extragrammatical combinations like echo words (ModE *hip-hop*) or blends (ModE *smog* from *smoke* and *fog*). A compound “can be loosely defined as grammatical combination of words, that is lexical items or lexemes, to form new words”, as per Dressler (2006: 24). Both compounds and juxtapositions consist at least of a first member (= FM) and a second member (= SM), and both result from a univerbation of at least two members of a phrase, but it is only in the case of univerbation by compounding that a (visible) morphological process is involved. E.g., the FMs of IE compounds as a rule are bare stems and neither inflectional case forms nor adverbs from adjective or numeral stems, with the systematic exception of FMs with locative semantics, as per Schindler (1997: 538). Genuine compounds are further to be divided into endocentric and exocentric compounds. This “classification concerns the relation of a compound as a whole to its members”, as per Bloomfield (1933: 235), who made these two terms prominent in linguistic theory; on the history of these terms see Noordegraaf (*Hist. Ling.* 16, 1989: 211-215), while the fundamental distinction between these two types was already basically described by Schröder (1874). Within an endocentric compound, its head – as per Williams (*LI* 12, 1981: 245ff.), i.e., the constituent carrying the grammatical information – lies *inside*, that is, is part of the compound (usually the SM in IE and non-IE languages). In an exocentric compound, the head lies *outside* the compound. In other words, an endocentric compound XY usually denotes an X-type Y or an Y-type X, whereas an exocentric compound XY refers to an XY-type Z. In PIE all exocentric compounds clearly started out as adjectives.

In general, there are very few compounds to be found in IE languages that form equations and are hence reconstructable for the protolanguage. Nevertheless, in case a certain compounding pattern is attested in at least two branches independently and already in the earliest periods, chances are high that we are dealing with an inherited type even if there are no equations.

I. Iterative “Compounds” (Skt. *Āmreḍita*)

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These are not genuine compounds, but juxtapositions consisting of two identical, fully inflected word forms carrying one single accent, e.g.: Ved. *divé-dive* ‘day by day’, Ved. *prá-pra (asthita)* ‘(moved) on and on’, Ved. *píbā-piba* ‘drink!’, Myc. *we-te-i we-te-i /wetehi-wetehi/* ‘year by year’, TA *waṣta-waṣt* ‘house after house’, TB *osta-ost* ‘id.’. See AiGr II/1: 142ff., § 59ff. (Ved.); Meissner/Tribulato (*TPhS* 100/3, 2002: 315ff.) (Gk.); Bernhard (1958: 117ff.) (Toch.); Dressler (1968: 39ff.) (PIE).

II. Copulative Compounds (Skt. Dvandva)

The Sanskrit term *dvandva* has the lit. meaning ‘pair’. These are true compounds of the endocentric kind, having the FM and the SM semantically coordinated, so that they are to be translated as ‘FM and SM’. Typical examples are provided by numerals of the type ModE *fifteen* or Ved. *nīla-lohitā-* ‘indigo’ < ‘dark and red’, cf. AiGr II/1: 149ff., § 62ff.

In Indo-Iranian there exists a remarkable subtype called dual *dvandva*, one or both member(s) of which inflect in the dual while not having the meaning of a dual, e.g., Ved. *mātārā-pitārā* ‘parents’ < ‘mother and father’ (not †‘(the) two mothers and (the) two fathers’). In the Rigveda we have five different morphological types of dual *dvandas*, only two of which can be taken for compounds: (1) one single accent, the FM is a bare stem, the SM is a dual form (attested for four pairs, 24 attestations in total), e.g., *indra-vāyū* ‘Indra and Vāyu’; (2) one single accent, both the FM and the SM are dual forms (attested for five pairs, 19 attestations in total), e.g., *vātā-parjanyaā* ‘Vāta and Parjanya (= wind and rain)’; (3) both the FM and the SM are dual forms and both carry an accent, which is on the same syllable as in the respective simplex (attested for 16 pairs, 145 attestations in total; note that the caesura often falls between the FM and the SM), e.g., *mitrā-vāruṇā* ‘Mitra and Varuṇa’ – quite obviously we have to do here with juxtapositions; (4) the two dual members are attested in tmesis and accordingly both carry an accent (attested for five pairs, 35 attestations in total), e.g., *indrā ... agnī* ‘Indra and Agni’; (5) only one member of the (intended) pair shows up, which is a dual form (attested for eleven pairs, 80 attestations in total), e.g., *āhanī* ‘day (and night)’ (not †‘(the) two days’). The latter variant is called *elliptic dual*. Types (1) and (2) are clearly secondary developments based on stages (3)-(5), i.e., the juxtapositions of type (3) clearly grew out of type (4), while (4) is a clarification of (5) by adding the second member of the pair. On the development of the Vedic dual *dvandva*, see Insler (1998) and Kiparsky (2007) (applying OT). The elliptic dual itself is inherited from PIE and shows a special use of the dual also attested in other language groups; see Malzahn (2000) with ref.; Kiparsky (2007) with ref. takes the elliptic dual to be an associative dual.

According to Schindler (in class), Gk. *nuchth-ēmeron* ‘a night and a day’ ~ Ved. *aho-rātām* ‘id.’ are not copulative compounds in the first place, but are based on DerCs, more precisely complexive compounds of the type Lat. *bi-duum* ‘period of two days’ (for which see below § VI.). On the other hand, a form like Gk. *iatró-mantis* ‘physician fortune teller’ (i.e., “a physician who is also a fortune teller”, not †“physician and fortune teller”) or OE *were-wulf* ‘werewolf’ (i.e., “a man who is also a wolf”, not †“a man and a wolf”) are DCs (Risch, *IF* 59/1, 1944 = *Kl. Schriften*: 56ff. spoke of “Mischungskomposita” (“hybrid compounds”) denoting “Mischwesen” (“hybrid creatures”).

III. Determinative Compounds (Skt. Tatpuruṣa and Skt. Karmadhāraya)

DCs are endocentric true compounds, but in their case the FM is semantically subordinated to the SM. Ancient Indian grammar distinguished two subtypes that differ with respect to the nature of the FM – but actually there are at least four distinct major groups of DCs:

III.1. The SM is a substantive that is not a verbal abstract

III.1.1. Tatpuruṣa (lit. ‘servant (*púruṣa-*) of this (*tád*)’)

In this type the FM is the substitute of an oblique case form of another substantive, as is the case with, e.g., Ved. *rāja-putrá-* ‘son of a king’. This type is uncommon in the older periods of the Vedic language, but very productive later on. Beside different compounds of the *X-páti-* ‘lord of X’ type, the RV only has: *rāja-putrá-* ‘son of a king’, *hiraṇya-piṇḍá-* ‘gold nugget’, *aśva-yūpá-* ‘horse pillar’, and *ṅṛ-bāhú-* ‘arm of a man’.

III.1.2. Karmadhāraya (lit. ‘subject-holder’)

In this type (note that the Skt. term *karmadhāraya* itself is a VGC) the FM is the substitute of an adnominal in the nominative, and is mostly an adjective, as, e.g., in *kṛṣṇa-śakuní-* (AV) ‘black bird’, i.e., ‘raven’. However, the FM can also be a substantive as in *puruṣa-mṛgá-* (VS) ‘male antelope’, i.e., “an antelope who is a male”, or Gk. *iatró-mantis* “a physician who is *also* a fortune teller”.

In Sanskrit, this type only becomes common from the Brahmana period of Vedic onwards and is very productive in Classical Sanskrit. In the RV one only finds a few examples of DCs with an adjective as FM: *candrā-mās-* ‘moon(god)’ (lit. “bright (*candrā-*) moon”, shortened to *candrā-* ‘moon’ AV+) and compounds with a FM *mahā°* such as *mahā-vīrá-* ‘great man’, *mahā-dhaná-* ‘great prize’.

This kind of composition is productive in many languages, esp. modern IE languages, but is generally very rare in the early periods of Sanskrit and Ancient Greek. However, in both languages the productivity of the type increases with time. On the type see AiGr II/1: 241ff., §§ 97ff.; Risch (*IF* 59/1, 1944 = *Kl. Schriften*: 1ff.); (*IF* 59/3, 1949: 245ff. = *Kl. Schriften*: 62ff.); (1974: 212ff., § 76).

The Vedic tatpuruṣas clearly grew out of juxtapositions with a genitive as FM (and still two accents) such as PN *Śúnaś-śépa-* lit. ‘dog’s tail’ (RV), or PN *Dívo-dāsa-* lit. ‘*dāsá-* of the heaven’.

As for the accent of Vedic DCs, apart from PNs and with the noticeable exceptions of *°páti-* ‘lord of X’ and *candrā-mās-*, the accent in DCs regularly lies on the SM, and hereby contrasts with BVs (see below). The SM either has the accent on the same syllable as the respective simplex or is oxytone even if the respective simplex is not, cf. *mahā-rājá* ‘great king’ vs. *rājá* ‘king’. This accent shift found in DCs has to be an inner-Indian innovation (see also below the discussion about accent in BVs).

III.2. The SM is a verbal abstract

What look like DCs and even tatpuruṣa compounds with verbal abstracts in *-ti- as SM are quite well attested in both Indo-Iranian and Greek; see Jacobsohn (*Gnomon* 2, 1926: 383); AiGr II/2: 633f. The same also holds for Gothic; see Schulze (*KZ* 42, 1909 = *Kl. Schriften*: 545ff.). On the other hand, seeming DCs with other kinds of verbal abstracts (i.e., *-tu-, *-eh₂-, and masculine *-o-stems) as SM are in the early periods as rare as any other kinds of DCs; see Jacobsohn (1911: 444ff.); AiGr II/2: 95ff., 248f.,

633f., 664; and see again Schulze (KZ 42, 1909 = *Kl. Schriften*: 547ff.) on Gothic. As for an explanation of this deviant behavior of *-ti-stems, already Jacobsohn (*Gnomon* 2, 1926: 383) suggested that what seem to be DCs with verbal abstracts in *-ti- as SM had started out as *-i-abstracts of compounds (NB: seeming DCs) with verbal adjectives in *-to- as SM; for the latter type, see immediately below § III.3. Note that these compounds in *-ti- are often counted among the so-called *synthetic* compounds because it seems they could have been formed (at least in Indo-Iranian and Greek) directly on the basis of any free verbal phrase, which is otherwise typical of so-called synthetic compounds (see below § V.).

III.3. The SM is an adjective

What seem to be DCs with a verbal adjective in *-to- as SM truly abound already in the earliest periods of the most archaic branches, above all privative compounds of this kind are extremely frequent. (Note that also these compounds are often referred to by the term “synthetic compounds”; actually at least their Indo-Iranian and Greek continuants even seem to meet the description of VGCs with governing SM, for which see §§ V. and V.1.) On the other hand, what seem to be DCs with an adjective in *-ro- as SM are also attested in many branches, cf., e.g., Ved. *a-citrá-* ‘not bright’, Gk. *pód-argos* (if from *^ogro-) ‘swift-footed’. Finally, mention should be made of the fact that in both Vedic and Greek beside the verbal adjectives of the Ved. *yújiya-* and Gk. *hágios* types (with disyllabic *-i̯jo-) there exist respective privative formations ending in monosyllabic *-i̯jo-, see Balles (*Sprache* 39/2, 1997: 143ff.).

As for an explanation of this deviant behavior of seeming DCs with an adjective as SM, all of them may have started out as PCs with the substantivized neuter of the respective adjective (which could take on the semantics of the respective adjective abstract) acting as SM; this is actually a strategy already adopted by Puhvel (*Lg* 29, 1953: 16f.) at least for the privative compounds in *-to-.

As for the so-called “reversed bahuvrīhi” of Germanic and Celtic, and also for Hitt. *pattar-palḫi-* ‘having broad wings’, see Schindler (1997: 540) and also Uhlich (*HS* 110, 1997: 31ff.).

III.4. The FM is an adverb (preposition, preverb, etc.)

Kinship-term compounds having the adverbs PIE *pro and PIE *(H)apo as first members certainly existed already in PIE. In such compounds, PIE *pro means ‘one generation removed from the SM’, PIE *(H)apo ‘two generations removed’, cf. Ved. *prá-napāt-* ‘great-grandson’, Lat. *pro-nepōs* ‘id.’, Gk. *pró-pappos* ‘great-grandfather’, OP *apa-nyāka-* ‘great-great-grandfather’, Lat. *ab-nepōs* ‘great-great-grandson’, etc.

Note that occasionally VGCs can also be interpreted as DCs synchronically, but there is absolutely no reason to do so diachronically.

IV. Possessive Compounds (Skt. Bahuvrīhi)

PCs = BVs are often referred to by the Indian term *bahuvrīhi* (lit. ‘having much (*bahú-*) rice (*vrīhí-*)’ → ‘rich’), a word that is a BV itself. On the term and its attestation in Vedic see Sadovski (*TPhS* 100/3, 2002: 351ff.) and Sadovski (2003). On the type see AiGr II/1: 273ff., § 107ff.

As is the case with DCs, also in BVs the FM is subordinated to the SM. BVs are, however, the most notorious kind of exocentric compounds (for a definition see § 0.). In the special case of BVs, Z is with XY or has XY with him/her/itself, which may imply either that Z is in the possession of XY or that Z is *bringing (about) XY*; the latter then may be tantamount to *procuring XY / providing with XY* and/or *making Y (become) (of/with) X*. Quite consistently, Schindler (1986: 398) called the BVs best to be translated as ‘procuring XY’ and/or ‘making Y (become) (of/with) X’ *factitive BVs*. Characteristic examples include Ved. *ánaṣṭa-vedas-* ‘making the possessions unfading’ (= *Pūṣan*) (with the FM used predicatively) or ‘procuring possessions that do not fade’ (with the FM used attributively), Ved. *vīpra-vīra-* ‘making men high-spirited’ (= *soma*); Av. *druuō.staora-* ‘procuring healthy livestock’ or ‘making the livestock healthy’ (= goddess *Druuāspā*, whose name is a factitive BV itself, meaning ‘procuring healthy horses’ or ‘making the horses healthy’); Av. *vīspō.paiti-* ‘procuring drinking for all’; Gk. *ōkú-moros* (= arrow) ‘procuring = causing swift death’, Gk. *kūdi-áneira* ‘making men famous’.

IV.1. Some remarkable subtypes

IV.1.1. The *ghṛtānna-* type

In this type, the FM stands for a nominative / the same case form as the one taken on by the SM. Obvious examples are Ved. *ghṛtā-anna-* (*ghṛtānna-*) ‘having ghee as food’ (paraphrased as *ghṛtām ānnam asya* ‘ghee is his food’ by Pāṇini); Ved. *īndra-śatru-* ‘having Indra as a foe’; Av. *āθrauuō.puθrī-* ‘having priests as sons’. In Greek, there are only very few possible examples. According to Schindler (1986: 399f.), here belongs Gk. *Kúkl-ōps*, i.e., “(gleichsam) ein Rad als Auge habend”, and possibly also Gk. *helíkōps* if ‘(quasi) having *hélíkes* as eyes’ and Gk. *zeídōros (ároura)* if ‘having grain as gift’. On the other hand, (Theoc. Syrinx) Gk. *tauro-pátōr* ‘having a bull as father’ was independently coined, according to Schindler (in class), on the model of DCs such as Gk. *astu-geítōn* ‘neighbor of the city’, which could be reinterpreted as BV ‘having X as neighbor’.

IV.1.2. BVs with FMs having the semantics of a genitive

FMs with the semantics of a *genitivus possessivus* are found, e.g., in Av. *ərəzifiiō.parəna-* (= arrow) ‘having feathers of eagles’, Gk. *hippó-komos* (= helmet) ‘(decked) with hairs of horses’, and again in the BVs with adjective abstract as SM Ved. *bāh_u-o_{jas}-* ‘having strength of arms’ = Av. *bāzuš.aojah-* ‘id.’, Gk. *pod-ōkēs* ‘having swiftness of feet’. Compounds with such a genitival FM could finally turn into suffixal formations, as has been the case with Gmc. *X-*lika-* ‘having the form of X’ > ModHG *X-lich* (see Carr 1939: 65); similarly Ved. *X-rūpa-*, Gk. *X-ódēs*.

Quite often such a FM is used metaphorically, cf., e.g., Gk. *kun-ōpēs* ‘having eyes like that of a dog’, OE *wulf-heort* ‘having a heart like that of a wolf’, TA *atra-tampe* ‘having strength like that of a hero’, TB PN *Kwem-toko* ‘having swiftness like that of a dog’ (Pinault, *TIES* 1, 1987: 85ff.), and again with adjective abstract as SM, Ved. *vāta-ramhas-* ‘having swiftness like that of the wind’, Ved. *ūrṇa-mradas-* ‘having softness like that of wool’, Gk. *meli-ēdēs* ‘having sweetness like that of honey’, Gk. *ourano-mékēs* ‘having width like that of the sky’.

There exist, however, also BVs with FMs having the semantics of a *genitivus materiae* used either literally or metaphorically: Ved. *áyo-hanu-* ‘having jaws (as if)

made out of metal’, Gk. *chrūs-āōr* ‘having a sword of gold’, OHG *gold-fahs* ‘having hair (as if) of gold’.

IV.1.3. The *ghṛtá-yoni-* type

The type of Ved. *ghṛtá-yoni-* ‘having a place (*yóni-*) that is with ghee’ (= Agni) clearly has a FM that acts synchronically as a substitute for a possessive adjective in *-ṽe/ont-; see Schindler (1986: 395) and below § IV.2.1. As also was shown by Schindler (1986), the so-called *rhodo-daktylos* compounding type of Greek was just an offshoot of that *ghṛtá-yoni-* type, with a FM in (deleted) *-ṽent- used metaphorically (as is also the case with Ved. *mádhu-vacas-* ‘delivering a speech (as sweet as if) provided with honey’).

IV.1.4. The *íṣu-hasta-* type

Sanskrit has a type sometimes called “umgekehrte Lokativ-BV” such as Ved. *íṣu-hasta-* ‘having arrow(s) in the hand’ or Ved. *rukṃá-vakṣas-* ‘having golden ornaments (*rukṃá-*) on their chests (*vákṣas-*)’ (= Maruts). That the FMs of these compounds were synchronically viewed upon as substitutes for locatives can be seen by a free phrase like *vákṣassu rukṃāḥ* (Maruts) “on their chest are golden ornaments”, and this was also the analysis of Sanskrit grammarians (Pāṇ. 2.2.35). According to Schindler (1986: 395f.), however, these forms also go back to BVs with FMs that were *-ṽent-stems with the *-vat-* synchronically deleted, originally meaning ‘*having a hand that is with an arrow’, ‘*having a chest that is with golden ornaments’, cf. Av. *gao.zastō* ‘having milk in the hand’ still alternating with *gaomata zasta* ‘(with a) hand with milk’.

IV.2. The structure of the FM (morphology)

Descriptively, the FM can be a substantive (which is rather the rule), a primary adjective (as in Gk. *neo-penthēs* ‘with, in new sorrow’, but see below § IV.2.1. on secondary adjectives), a pronoun (Ved. *tád-anna-* ‘having that as food’), a numeral (Ved. *dvi-pád-* ‘having two feet’), and a preposition/adverb (Ved. *ánti-mitra-* ‘having friends around’, Gk. *én-theos* ‘having a god inside’); the latter are called *entheos* compounds (see for the respective history of scholarship Forster 1950: 9ff.).

IV.2.1. Adjectives as FM

Secondary (i.e., denominative) adjectives were originally restricted from serving as FM. In case a secondary adjective is needed *semantically* as FM, the stem of the very basic noun is used, e.g. instead of *X-ejo- ‘(made out) of X’ simply X is found (cf. Gk. *chrūs-āōr* ‘having a sword of gold’ above in § IV.1.2.), and instead of *X-ṽe/ont- ‘provided with X’ simply X again (see above §§ IV.1.3. and IV.1.4.). In case the adjective belongs to the Caland system, we find an *i-*stem as FM (see below § VII.).

A comparative/superlative form can be used as FM in case there is no positive adjective made from the same root standing beside it, cf. Gk. PNs in *aristo*^o (as early as Mycenaean). Usually, if a comparative or superlative FM is required semantically, the respective gradation suffixes is attached to the end of the compound, cf. Ved. *āśú-aśva-tama-* ‘having the fastest horses’ = Av. *āsu.aspō.tāma-* ‘id.’, Gk. *kako-xeinō-teros* ‘having worse guests’. Since in personal names such a comparison suffix in the SM

cannot have been applied, it was precisely in PNs where a comparative/superlative suffix in the FM crept in at first.

IV.3. The final part(s) of BVs

Only substantives can be used as SMs of BVs; these substantives may be either concrete nouns or abstract nouns (both adjective and verbal abstracts).

If an *o*-stem is used as a SM, the respective BV usually is simply an *o*-stem as well. If an athematic stem is used as SM, the respective BV usually is also athematic, but its SM then quite often follows an inflectional pattern that is quite different from the one that is found with the stem of the SM if used as a simplex, i.e., an athematic stem if used as a SM of a compound seems to behave exactly like an internal derivative of itself. As is the case with uncompounded internal derivatives, the most frequent types of shift in inflection are the following ones:

(1) acrostatic → proterokinetic: Ved. *jānu* ‘knee’ < PIE **ǵón-u* beside Ved. *mitá-jñu-* ‘with straightened knees’; compounds in **p̑ku-* ‘(having) small cattle’; see Klingenschmitt (*Baltistica* 48, 2008: 417); Ved. *rayíḥ* ‘wealth’, dat.sg. *rāyé* < PIE *(H)*róh₁-i-s*, dat. *(H)*réh₁-i-ej* beside dat.sg. *brhád-rāye* < PIE **o-rh₁-ej-ej*;

(2) proterokinetic → hystero-kinetic: Gk. *génos* ‘birth’ beside *eu-genēs* ‘having a good birth, well-born’;

(3) acrostatic/proterokinetic/hystero-kinetic → amphikinetic: Gk. *oúthar* ‘udder’ < PIE **h₁ouHdʰr̥* beside Ved. *an-ūdhá* ‘without udder’ (hystero-kinetic inflection not to be excluded; note the *n*-inflection of the compound); Gk. *peírar* ‘limit’ beside Gk. *apeírōn* ‘boundless’ (note again the *n*-inflection of the compound); *patér* beside *eu-pátōr* ‘having a good father’, Ved. *pitár-* beside *tvát-pitārah* (TS) ‘having you as parents’.

Note that in this respect DCs mostly behave like BVs, e.g., already Homer has *mētro-pátōr* ‘father of the mother’.

Although Ferdinand Sommer (followed, e.g., by Risch, *MH* 2, 1945: 25f. = *Kl. Schriften*: 122f.) did not like the idea and tried to play down the respective facts (for very personal reasons; see Oberheid 2007: 72ff.), there can now be no serious doubt that already in PIE, BVs with an athematic noun as SM could alternatively be formed by adding suffixal **-o-* to the stem acting as SM; cf., e.g., Ved. *an-udr-á-*, Gk. *án-udr-os* ‘waterless’ from PIE **uod-r̥*, **ued-n-* ‘water’ (for the use of *-r-* in a derivative from a heteroclitic in front of a suffixal vowel cf. Gk. *pīerós* ‘fat’, PIE **piH₂uer-ih₂* ‘fat (f.)’ beside PIE **piH₂uon-* ‘fat’), Gk. *nónum(n)os* ‘nameless’ from PIE **h₁nēh₃m₂* ‘name’, etc.

Any kind of word-final **-o-* of BVs can be substituted by *-i-*; this is quite often the case in Latin (*imberbis* ‘beardless’, etc.) and Celtic, but happens rather rarely in Indo-Iranian and especially Greek (where there is even just the one example of Gk. *án-alk-is* ‘without strength’).

Not surprisingly, now and then we find BVs enlarged with suffixes otherwise typically used in the formation of uncompounded possessive derivatives, e.g., **-t-* (in Gk. *polu-boútēs* ‘rich in oxen’), **-to-* (in Av. *hu-karəp-ta-* ‘having a beautiful body’, Gk. *án-al-tos* ‘saltless’, etc.); see, e.g., Puhvel (*Lg* 29, 1953: 17), and also Vedic *-ín-* and Gmc. **-an-*; for the latter two, see Zucha (*IF* 94, 1989: 301-305).

Quite remarkably, the suffix **-(i)jo-* seems to have been banned from BVs and been confined to DerCs in PIE, see the detailed argument in Korn (1998: 56ff.).

IV.4. The accentuation of BVs

In Greek, BVs quite consistently show the accent on the FM (for a list of possible exceptions, see Klingenschmitt 1974: 277f.). The same kind of accentuation rule can also be reconstructed for Proto-Germanic, see, e.g., Brugmann (*IF* 18, 1905/6: 65). In Vedic, BVs usually carry the accent on the FM as well and by doing so contrast with the DCs, which as a rule have the accent on the SM, cf., e.g., DC *rāja-putrá-* ‘son of a king’ vs. BV *rāja-putra-* ‘having kings as sons’ (= Aditi). The correct use of the accent is nicely demonstrated in the story of the demon Tvaṣṭṛ in ŚB 1.6.3.8ff. and TS 2.4.12.1ff. There are a lot of exceptions to that basic rule of accentuation for BVs, and in many of the cases either a FM with a high vowel (such as *tri-*, *dvi-*; *duṣ-*, *su-*; *puru-*, etc.) or privative *a-* from **h₂-* is involved (cf., e.g., *a-phalá-* ‘unfruitful’ beside simplex *phála-* ‘fruit’); but beside the likes of *a-phalá-* there are even a lot of other instances of oxytonesis found in BVs ending in a (suffixal or non-suffixal) *-a-* (see AiGr II/1: 293ff., §§ 114f.). These exceptions have no doubt correctly been taken for archaisms already by Kuryłowicz (1935: 216ff.) and Klingenschmitt (1974: 277). Note in addition that what are evidently archaic variants of nominal stems regularly used as FMs of any kinds of compound seem to lack *e*-grades completely, see Schindler (1987: 345f.) for FM variants showing zero grade(s) only, and note also Klingenschmitt (*Baltistica* 48, 2008: 413ff.), who speculates that the *o*-grade variants of certain PIE adverbs may have started out precisely as unstressed *e*-grade variants used as FMs of compounds. Characteristic examples of FMs include both privative and intensive PIE **h₂-* > Ved. *a(n)°*, Gk. *’a(n)°*, Lat. *in°*, Got. *un°*, etc.; PIE **h₁su°* ‘well’ (from **h₁esu-* ‘good’) > Ved. *su°*, Gk. *eu°*, etc.; PIE **tri°* (from **trejēs* ‘three’) > Ved. *tri°*, Gk. *tri°*, Lat. *tri°*, etc.; Ved. *jñu°* < PIE **ǵnu°* from PIE **ǵo/enu-* ‘knee’ or Av. *fšu°* < **pku°* from PIE **po/éku-* ‘cattle’; PIE **dus°* ‘bad’ > Ved. *duṣ°*, Gk. *dus°* (from **deu-es-* ‘lack’); PIE **m̥ǵs°* (from PIE **meǵ-es-* ‘greatness’) > Av. *aš°* ‘very’ and similarly PIE **m̥ǵh₂°* (from PIE **meǵ(o)h₂-* ‘id.’) > Gk. *aga°* ‘very’. If it is correct that in PIE there existed many BVs and practically no DCs (as amply argued above), we will have to conclude that the original state of affairs must have been different indeed, i.e., that PIE BVs first had carried the accent on the SM or a final compounding suffix themselves, as per Schindler (1987: 345f.).

V. Verbal Governing Compounds

In VGCs, either the SM or the FM is to be translated as a participle. It is this very member of the compound that is called the governing one. As for the other member, its only purpose is to define the governing member, i.e., that participle more closely.

The German term “Verbale Rektionskomposita” (= verbal governing compounds) was coined by Delbrück in VS III: 139f., § 53. As for those with a governing SM, Schröder (1874: 206) called them “synthetische Composita” (= synthetic compounds), and this term was also used by Wackernagel in AiGr II/1 and since then by a lot of other scholars including Puhvel and Schindler. Traditional Indian grammar subsumes this type under the DCs with a verbal noun as SM. However, a DC can only be set up in case such a verbal noun is also attested as a simplex synchronically. In many or even most cases, however, such an autonomous simplex is not attested, as already pointed out by Schröder (1874: 206) and Jacobi (1897: 5); as a matter of fact, “synthetic compounds” may even be defined as compounds synchronically based on *verbal phrases* only. All species of VGCs clearly also started out as adjectives.

V.1. VGCs with Governing SM

In case the respective verbal root (stem) can take on a transitive meaning at all, in such formations the SM may have transitive, or passive, or intransitive semantics. If the FM is a substantive, its semantics may be that of any kind of case form. Note that precisely in such compounds we occasionally find an inflectional case form rather than the respective bare stem even if the FM does not have the semantics of a locative form (– as per § 0. above); in that very special case we meet inflected locative forms even on a regular basis.

V.1.1. The compound ends in an ablaut variant of a root that is not followed by any other morpheme

This type is usually called root compound (“Wurzelkomposita”). It is productive in the earlier Vedic period, and further attested with certainty in Iranian, Greek, Latin, and Celtic. See Scarlata (1999) (Ved.); Kellens (1974) (Av.); Schindler (*Sprache* 25, 1979: 59f.) (Av.); Risch (²1974: 194f., § 72) (Gk.); Benedetti (1988) (Lat.); Uhlich (*TPhS* 100/3, 2002: 408ff.) (Celt.); Solmsen apud Jacobi (1897: 13ff.) (Balto-Slavic).

In accordance with what was stated above sub § V.1., the SM may either have transitive, or passive, or intransitive semantics:

(1) transitive: Ved. *vṛtra-hán-/-ghn-* ‘beating/shattering Vṛtra (= the obstacle)’, Av. *vərəθra-jan-/-γn-* ‘shattering the obstacle’, Gk. *bou-plḗx* ‘ox goad’ < “*stinging cattle”, Lat. *iū-dic-* ‘judge’ < “*one who shows or pronounces the law”, OIr. PN *Luguid/Lugaid* < *lugu-dek- ‘serving the god Lug’; (2) passive: Ved. *indra-pā-tama-* ‘preferably drunk by Indra’, Gk. *oistro-plḗx* ‘stung by a gadfly’, Lat. *con-iug-* ‘spouse’ < “*paired together”; (3) intransitive: Ved. *pari-śád-* ‘sitting around’, Av. *miθrō.druj-* ‘cheating concerning the contract’, OIr. *arae* ‘charioteer’ < *are-sed- ‘staying (on the chariot)’.

As per § V.1., the FM may have the semantics of any kind of case form: that of a nominative (Ved. *mano-jū-* ‘hurrying like a thought’; and see Schindler 1987: 344f., 347, fn. 40), an instrumental (Ved. *ṛta-yúj-* ‘bound by the *ṛta*’), an ablative (Ved. *divo-jā-* ‘born from the heaven’), a dative (Ved. *nare-ṣṭhā-* ‘suitable for the man to stand in’), or a locative (Ved. *divi-jā-* ‘born in heaven’); see Scarlata (1999: 2, 8, 743ff.).

It should also be noted that most of these compounds show the root acting as SM constantly in the zero grade, which no doubt must be due to secondary leveling, especially since it is precisely the SM that carries the accent in Vedic constantly. As for the accentuation of the Greek cognates, see Wackernagel (*Göttinger Nachrichten* 1914: 29f. = *Kl. Schriften* II: 1131f.).

V.1.2. The compound ends in an ablaut variant of a root followed by *-t-*

On the type see Scarlata (1999: esp. 763) (Ved.); Kellens (1974: 243ff.) (Av.); Risch (²1974: 195f., § 73,a) (Gk.); Benedetti (1988) (Lat.); Lambert (2008: 140f.) (on Gaul. *Coriosolitae* < “*korio-swelit-es” glossed as “who turn over armies”).

Root compounds with a SM derived from a root ending in a sonorant or a glide such as Ved. *vṛtra-hán-* and Lat. *cōmis* ‘friendly’ (see Benedetti 1988: 32 with ref.) are very rare. As for roots of this structure, instead of root compounds we regularly find compounds ending in the zero-grade allomorph of the respective root followed by *-t-* such as Ved. *deva-stút-* ‘praising the gods’, Lat. *com-it-* ‘escort’ < “*going together”.

There can be little doubt that this type of compounds has something to do with the existence of uncompounded verbal abstracts in *-t-* of the type Ved. *stút-* ‘(song of) praise’, for which see, e.g., Watkins (*Ériu* 29, 1978: 155ff.). It is reasonable that the Gk. VGCs ending in *-tā-* (which can be attached descriptively to both the *e*-grade and the zero-grade allomorph of any kind of verbal root) derive diachronically from the very same type; see above all Leukart (1994: 66f., 278f.).

In various branches such compounds ending in *-t-* are also found with roots ending in a laryngeal; note, however, that with respect to roots of this structure the pivotal forms quite often must have rather had the *e*-grade of the root; e.g., Gk. *agnōt-* ‘not knowing, not known’ cannot go back to PIE **-ǵnh₃-t-* because PIE sequences of the **(-)CR̥H-t-* type if carrying the accent on the syllabic sonorant turned into Greek *disyllabic* sequences of the **(-)CəRE-t-* type by sound law (wrongly, e.g., Leukart 1994: 284f.), and note further forms such as Lat. *locu-plē-t-* < PIE **-pleh₁-t-* ‘wealthy’ < **filling one’s pocket*, Av. *haṇ^vharə-stā-t-* < PIE **-steh₂-t-* ‘staying in hiding’; see the forms in Benedetti (1988: 33f.) and Strunk (*Glotta* 72, 1994[1995]: 222ff.); differently, Nussbaum (1999: 414, fn. 101) (< PIE **-sth₂-ēt-*, etc.). Lat. *sacer-dō-t-* ‘priest’ was often said to show the *o*-grade of the root **√d^heh₁*, but see now Strunk (*Glotta* 72, 1994[1995]: 222ff.) and Nussbaum (1999: 396ff.).

V.1.3. The compound ends in an ablaut variant of a root followed by *(*)-ó-*

On the type see AiGr II/1: 174ff., § 75ff. (Ved.); Duchesne-Guillemin (1936: 76ff.) (Av.); Risch (1974: 196ff., § 74) (Gk.); Lindner (2002: 51) (Lat.); Uhlich (*TPhS* 100/3, 2002: 403ff.) (Celt.).

Best attested type is the subtype with the SM having the root in the *o*-grade. In Greek, forms of this morphological type with the SM to be translated as transitive participle are either oxytone (e.g., Gk. *psycho-pompós* ‘leading the souls’) or barytone (e.g., Gk. *patro-któnos* ‘murdering one’s father’ from **patro-ktonós* by Wheeler’s Law, and Gk. *dru-tómos* ‘wood-cutter’ simply following the model of Gk. *patro-któnos*), whereas such compounds with a SM having passive semantics such as Gk. *oresí-trophos* ‘nourished in the mountains’ have proparoxytone accent.

Lesser frequent is the type with the SM showing the zero grade, which is that of Gk. *neo-gn-ós* ‘new-born’, Gk. *molo-br-ós* ‘pig’ < **mud-devouring*. Finally, there are very few compounds of that type with a SM having *e*-grade, such as Gk. *théskelos* ‘set in motion by a god’ and the numerous Latin compounds in *°genus*.

V.1.4. Other subtypes

V.1.4.1. The SM is clearly reminiscent of a special kind of verbal abstract formation

This scenario is quite often met in case the respective type of VGC with governing SM is confined to just one single branch. E.g., Vedic *°advan-*, fem. *°advārī(-)* < PIE **°-u_{er}ih₂* ‘eating’ (attested in the animal name *vy-ádvarī(-)*), of course, strongly reminds of the Epic Gk. heteroclitic *eídār* ‘food’, and the Gk. VGCs in *°genés*, etc. even look much the same as the Gk. BVs in *°genés*, etc. that have verbal abstracts such as Gk. *génos* ‘race’, etc. as their SMs. Since time and again a BV with a verbal abstract as SM turns into a VGC even before our very eyes, as is the case with, e.g., RV *idhmá-bhṛti-* ‘having the bringing of firewood’ > ‘bringing firewood’ (hapax), RV *ánna-kāma-* ‘having desire for food’ > ‘desiring food’ (hapax) or Gk. *tachu-bāmōn* ‘with swift step’ > ‘swift-walking’, there can be little doubt that those other subtypes

of VGCs with governing SM attested in one single branch only had developed out of BVs with a verbal abstract as SM as well, as per Puhvel (*Lg* 29, 1953: 18f.).

V.1.4.2. Latin *agricola* and seemingly related forms

In various branches one finds VGCs with a governing SM that end in a long or short *a*-vowel and denote (basically) *males*. Such forms are quite frequently attested in Latin, Tocharian, Greek, and Armenian; as for the material from Latin (Lat. *agri-cola* ‘(male) peasant’, Lat. *indi-gena* ‘(male/female) native resident’, etc.) and Tocharian (TB *kārtsé-rita* ‘searching the good’, etc.; on which see Malzahn, in print), the respective nom.sg. forms evidently lacked final *-s. As for the Greek type (attested, e.g., by Gk. *hippo-sóās* ‘urging a horse’, Gk. *bathy-dínēs* ‘whirling deeply’), the nom.sg. forms mostly do end in -s, and the few forms that (seem to) lack *-s such as Boeotian *Pythio-nika* are best taken for misspellings and/or old vocative forms; see Leukart (1994: 42ff. with ref.). As for Armenian (on which see in general, e.g., Leukart 1994: 239f. fn. 280 with ref.), one simply cannot tell whether the nom.sg. lacked *-s or not, and the same holds for Gaul. *andognam* (with -*gna*- clearly belonging with PIE $*\sqrt{\text{gēnh}_1}$; see Uhlich, *TPhS* 100/3, 2002: 420f.), and isolated Slavic (OCS) *voje-voda* ‘army leader’, which is usually suspected to be a calque on a Germanic form such as OHG *heri-zogo* ‘duke’ < $*\text{‘army leader’}$, which is said to come from a calque based on Gk. *strat-elátēs* itself; see Leukart (1994: 145f. fn. 49 with ref.) and in addition Carr (1939: 5ff.) and the references in Meineke (*RGA* 14: 479ff.).

Since the Greek type is best explained as being due to an inner-Greek reinterpretation of former BVs with a (more or less abstract) \bar{a} -stem as SM (such as Gk. *bathy-dínēs* $*\text{‘having deep whirls’}$) as VGCs (as per Rüedi 1969: passim; Leukart 1994: 127ff., esp. 145f. with fn. 49), the similar types of Latin, Tocharian, and Armenian most probably do not derive from a special (late) PIE type of VGCs (as suggested by Meillet, *MSL* 18, 1914: 258) either. On the one hand, many of them may be former BVs (with a verbal abstract in $*\text{-eh}_1\text{-}$ such as $*\text{k}^{\text{h}}\text{olh}_1\text{-eh}_2\text{-}$ ‘cultivation’ as SM) turned into VGCs themselves (as claimed by Schindler, in class and apud Lindner 2002: 38 and 73, fn. 77 on behalf of Lat. *agricola*). On the other hand, at least some of them (e.g., Lat. *indigena* and maybe even most of the pivotal forms of the Tocharian type; see Malzahn, in print) may have started out as root compounds derived from roots ending in a laryngeal, as suggested first by de Saussure (1909: 459ff. = 1984: 585ff.), who was followed most recently by Bammesberger (1996: 53ff.).

V.2. VGCs with Governing FM

For the type see basically AiGr II/1: 315ff., § 120 (Ved.) and Risch (2 1974: 190ff.; §§ 70,b and 71) (Gk.).

The default strategy applied to such compounds is to translate the (governing) FM as a transitive participle, and the SM as an acc.(sg. or pl.) form dependent on that participle. Note, however, that this strategy does not always work; e.g., Gk. *tala-kardios* clearly once had a meaning ‘carrying, enduring *in/with* the heart’, and for Myc. Gk. *Ne-ti-ja-no* /Nesti-anōr/ ‘returning *together with* the (other warrior) men’ this seems to impose itself, given the fact that in Greek there is no verbal stem derived from the respective root $*\sqrt{\text{nes}}$ that denotes ‘make return’ or ‘save’. Moreover, as has already been noted by, e.g., Dubois (2006: 61), many personal names that evidently go back to VGCs with governing FM would make very bad

sense if translated along the lines of the default strategy, e.g., Ved. *Trasá-dasyu-* would mean ‘trembling before the enemy’, and Gk. **Phygóstratos* (presupposed by *Phygostratídas*) ‘fleeing the (enemy’s) army’ or, even worse, ‘draft dodger’; despite of the fact that Ved. *trasa-* (which, incidentally, can hardly be taken for an adjective ‘trembling’ to be derived from a PIE *e*-grade *o*-stem **treso-*) and Gk. *phygo-* clearly are *not* derived from verbal stems with causative semantics, one would, of course, prefer to render these and similar names by ‘making the enemy tremble’, ‘making the (enemy’s) army flee’, etc., i.e., to translate the FMs as participles of respective causative formations. The same holds for Vedic appellatives such as Ved. *vṛṣṭí-dyāv-* ‘letting the sky rain’ and Ved. *rītí-āp-* ‘letting the waters flow’. Finally, note that Greek compounds with Gk. *egre-* as FM such as Gk. *egre-máchē(s)* surely have the meaning ‘exciting, rousing the SM’ despite of the fact that the thematic stem Gk. *egre/o-* is only attested in the meaning ‘wake up (intr.)’.

As for the final part of such compounds, they simply do not seem to differ at all from the BVs.

V.2.1. The FM is the *e*-grade or zero-grade allomorph of a bare root

This type seems only to be attested in Indo-Iranian, Greek, and Slavic; but see now also Lambert (2008: 140) on Galatian **Swoli-brogi-* derived from older **sweli-* and glossed by “those who exchanged land”; and see also the ref. in Dunkel (1999: 49, fn. 8) on Hittite. It is in general very rare. Prominent examples are GAv. gen.pl. *jānarām /jan-nraām/* ‘killing ($\sqrt{\text{jan}}$) the men (*nar-*)’, Yav. *nidā-snaiθiš* ‘putting down (*ni* $\sqrt{\text{dā}}$) the weapon (*snaiθi-*)’, Gk. PN *Tlē-pólemos* ‘enduring war’, Slav. *ne-zna-bog* ‘not knowing ($\sqrt{\text{zna}}$) god (*bog*)’. All the examples listed so far seem to have the *e*-grade of the root, but Myc. Gk. *a-ko-da-mo / a-ko-ro-da-mo*, which was already taken to mean ‘gathering the *dāmos*’ before, may quite probably also belong here, and then would have a FM deriving from a zero grade **h₂gr̥-*. If this is the correct analysis of that Myc. Gk. word(s), the obvious solution for the Gk. *lipó-naus* ‘deserting the fleet’ type (on which see immediately below § V.2.2.) would be to derive it from **lik^h-n^o-* type forms; as for the *-o-* that such compounds have at the end of the FM in alphabetical Greek, this may have been secondarily introduced, i.e., have been taken over from the countless BVs that had a FM ending in an *-o-*.

V.2.2. The FM is a thematic verbal stem ending in **-e-* (*phéré-oikos* type)

This type seems to be attested in Indo-Iranian and Greek only (on Armenian, see Watkins 1969: 94f. with ref.), and only in Greek it was productive. For the Ilr. examples see Dunkel (*Glotta* 70, 1992[1993]: 203f.). At least in Greek the FM can be derived from both a thematic present and a thematic *aorist* stem, with the exception of Homeric Greek, where VGCs of this type can only be derived from thematic *present* stems as maybe is the case in Indo-Iranian. On the other hand, if in Homeric Greek a VGC with a governing FM is to be based on a thematic *aorist* stem, we regularly find forms of the *lipó-naus* type, which seems to be another archaic trait of the Homeric language, as per Watkins (1969: 97f., § 80); for a likely explanation of the *lipó-naus* type see § V.2.1. above. As a matter of fact, at least most part of the Greek thematic aorists derive precisely from *athematic* root aorists.

The place of accent in Vedic is difficult to determine, because most of the few forms attested are vocatives; on the other hand, we have Ved. *ṣiksā-nar-á-* ‘giving

presents to men' contrasting with Ved. PN *Trasá-dasyu*-. The accentuation of the latter form is, of course, strongly reminiscent of the one found with the forms discussed in § V.2.3. below. The type is often attested with PNs, cf. also OP *Xšaya-aršan*- 'ruling men'.

V.2.3. The FM is an ablaut variant of a root followed by *-át-*

This type seems to be attested in Indo-Iranian only, which means that *-át-* could be traced back to both PIE **-e/ot-* and PIE **-ṛt-* (of course, the Greek *lipó-naus* type could also be derived from a type with PIE **-ot-*; quite differently, Watkins 1969: 95, § 77 with ref.). It is far more productive than the types discussed in §§ V.2.1 and V.2.2. The root can have the zero grade (Ved. *vidád-vasu*- 'finding goods'), the *e*-grade (as in Ved. PNs *Bharád-vāja*- 'carrying away prices' and, most notably, *Jamad-agni*- 'coming to Agni'), and even in the lengthened grade (Ved. *sādád-yoni*- 'sitting down on the lap'). The respective root itself may either form a root present (both thematic or athematic) or a root aorist (both thematic or athematic). Note that in Avestan the suffix could be added to any kind of (both thematic or athematic) present stem, no doubt secondarily; see Dunkel (*Glotta* 70, 1992 [1993]: 207, fn. 41).

V.2.4. The FM consists of a root (or a verbal stem) followed by *(*)-ti-* (*terpsí-mbrotos* type)

This type is only attested with certainty in Indo-Iranian and Greek, and only in Greek it is productive, cf., e.g., Gk. *terpsí-mbrotos* 'gladdening (*térpō*) men (*brotós*)'. It is usually found in PNs (as early as in Mycenaean, cf. Myc. *Ne-ti-ja-no*) and in poetic adjectives (e.g., Gk. *lūsi-melēs* 'loosening the limbs'), but only rarely elsewhere (as is the case with Gk. *dōsí-dikos* Hdt. 'submitting to the law').

The allomorph Gk. *-ti-* is only attested in a few forms, while Gk. *-si-* is productive. Analogically, a third type with Gk. *-eti-/esi-* has been created (e.g., Gk. *alphesí-boia* 'bringing in cattle (as present from a suitor)'). The subtype with *-si-* synchronically either stands beside (1) an *s*-aorist of the respective verb, (2) an *s*-future, (3) or a *si*-abstract. If neither of these sigmatic forms is already available, no *si*-compound is formed.

The allomorph Gk. *-si-* is usually interpreted as assibilation product of *-ti-*, although the distribution of *-ti-* and *-si-* in this category is somewhat different from, e.g., that of the 3.sg. act. present endings *-ti* and *-si*. Both Mycenaean and Homer have both compounds with *-ti-* and compounds with *-si-*, and the same holds for West Greek in general. As for an explanation, Schindler (in class) assumed that *terpsí-mbrotos* forms with *-si-* could be genuine West Greek ones, and such with *-ti-* could at the same time be genuine Ionic-Attic or "South Greek" ones, working with the following analogical scenario: If one starts with pairs such as **g^uōti-C/*g^uōti-V*, **dekti-C/*dekti-V* and is willing to assume that **-ktiV-* turned by sound law into *(*)-ks-* earlier than assibilation took place in "South Greek", one would get *dekti-C* vs. *deks-V*, which could be turned into *deksi-C/deks-V* by leveling. On the model of *deksi-C/deks-V* (the latter member of the pair looking precisely like the *deks-V* met in the sigmatic aorist, and descriptively showing elision of *-i-* in front of a vowel) there could then be formed pairs of the *lūsi-C/lūs-V* type on the one hand, and such of the **g^uōti-C/*g^uōt-V* type on the other hand, and the (analogically created) **g^uōt-V-*

type forms could have finally blocked “South Greek” assibilation in *g^uōti-C by another process of leveling which would have worked in the opposite direction.

In Indo-Iranian the type is clearly not productive, but attested as early as in Mitanni Aryan in the PN *Šattivaza*, the equivalent of a Ved. **sāti-vāja-* ‘winning prizes’ (cf. *vāja-sāti-* ‘gaining of prizes’). Again, the high percentage of PNs among the few examples is striking, cf. Ved. *Púṣṭi-gu-* ‘letting the cattle flourish’, Ved. *Śruṣṭi-gu-* ‘making the cattle obey’; for the causative meaning of the FMs see above § V.2.

VI. Derivational Compounds

The term “Ableitungskomposita” (“derivational compounds”) was coined by Risch (*MH* 2, 1945: 17 = *Kl. Schriften*: 114), who was the first to describe this compounding type. These compounds are also exocentric ones, but the Z they denote is rather “of, for, from, together with, in/at XY” than “in the possession of/bringing (about) XY”. The stems of DerCs almost never end in a non-syllabic(/high vowel); as for the two rather early exceptions to this rule mentioned by Klingenschmitt (*Baltistica* 43, 2008: 418), at least Av. *āxšnu-* ‘(reaching) to the knee’ can be explained differently, see Nussbaum (1986: 272). Instead, they regularly end either in a suffixal or non-suffixal *-o-, in a suffixal *-jo-, or in a suffixal *-i-. It is rather obvious that they started out as hypostases of (at least often predicatively used) phrases consisting either of two nouns or an adverb and a noun. More precisely, DerCs can be based upon the following kinds of phrases:

(1) two-noun phrases with the governing substantive in the genitive: Gk. *hekatóm-ped-os* ‘100 feet long’ ← “of 100 feet”, Gk. *pan-dēm-ios* ‘belonging to the whole demos’ ← “of the whole demos”, Ved. *viśvá-deva-* ‘pertaining to all gods’ ← “of all gods” (= *nákṣatra-* ‘celestial body’ in RV 6.67.6); (2) dative: Ved. *viśvá-deva-* ‘suitable for all goods’ ← “for all gods” (= *sóma-*, e.g. in RV 9.92.3; most likely also *viśvá-deva-sátpati-* ‘lord over all gods’ = ‘lord for all gods’, epithet of Savitṛ in RV 5.82.7); (3) ablative: Gk. *a-delphe-ós* ‘brother’ ← “from the same womb”, likewise Gk. *homo-gástr-ios* ‘coming from the same womb’; (4) instrumental (comitativus): RV 1.142.12 *pūṣaṇvāte marútvate viśvádevāya ... havyám índrāya kartana* “make a sacrifice for Indra who is accompanied by Pūṣan, by the Maruts, by all gods”; (5) locative: Gk. *meso-nukt-ios* ‘in the middle of the night’, Ved. *ásva-prṣṭha-* ‘(carried) on the back of a horse’; (6) prepositional phrases: Gk. *hyp-aspíd-ios* ‘being under the shield’, Gk. *ein-ál-ios* ‘being in the sea’.

VI.1. Prepositional derivational compounds

The FM is a preposition, as in Ved. *adhás-padá-* ‘being under the feet’, Gk. *ein-ál-ios* ‘being in the sea’, Lat. *ē-greg-ius* ‘selected from the flock’ > ‘excellent’; see AiGr II/1: 311ff., § 119. The term “prepositional governing compounds” was at first used by Delbrück in VS III: 139f., § 53. Risch (*MH* 2, 1945: 18 = *Kl. Schriften*: 115) showed that these are just a special type of DerCs, namely hypostases of prepositional phrases such as Ved. *adhás padós* “under both feet”, Gk. *ein halí* “in the sea”, Lat. *ē grege* “from the flock”.

VI.2. *meso-nuktios* compounds

Based on the prototypical example discussed by Risch (*MH* 2, 1945: 16ff. = *Kl. Schriften*: 112ff.), non-prepositional derivational compounds are called *meso-nuktios*

compounds. These are hypostases of non-prepositional phrases used adverbially or predicatively, as is the case with Gk. *meso-núkt-ios* ‘pertaining to midnight’ derived from adverbial phrases such as (*peri*) *mésas núktas*, (*en*) *mésōi nuktōn* ‘in the middle of the night’.

VI.3. Complexive compounds (Dvigus)

There also exist DerCs based on genitival phrases that have a numeral as FM, e.g., Gk. *hekatóm-ped-os* ‘of 100 feet, 100 feet long’ (vs. BV Gk. *hekatóm-pod-* ‘having 100 feet’). Now one often encounters substantivized neuters from such DerCs, like Lat. *tri-duum* ‘period of three days’ < **tri-diū-om*, Gk. *tetrá-drachm-on* ‘four drachme (coin)’. The Sanskrit term for such neuters which have typically complexive semantics is *dvigu* (Pāṇini), but note that the term Skt. *dvigu-* itself is *not* a *dvigu* compound, because one would expect **dvi-gv-a-* with addition of a suffix (cf. Ved. (ŚB) *ṣaḍ-gav-ám* ‘a team consisting of six cows’). Sommer (1948: 55) called them “Komplexivkomposita” = “complexive compounds”. One also finds the term “Kollektivkomposita” (“collective compounds”), but note that “[d]ie betr[effenden] Zusammensetzungen drücken nicht eine schlechthinige Vielheit des Hinterglieds aus, sondern setzen Zusammengehörigkeit, einen Komplex voraus” (AiGr II/1: 305, § 117,b).

VI.4. The accentuation and the general morphology of DerCs

The DerCs of Vedic and Greek show basically the same accentuation as the BVs, i.e., whereas it is usually the FM that carries the accent, there are at least in Vedic a lot of forms ending in (suffixal or non-suffixal) *-a-* showing oxytonesis (see, e.g., Schindler, *Sprache* 15, 1969: 166f.), and in Greek there are at least *a-delphe-ós* ‘brother’ (see Klingenschmitt 1974: 277) and probably also *a-kar-ós* ‘brain’ showing the same behavior. Accent on final *-o- goes very well with the zero grades met in the FMs *a-* < **sm̥-* and *a-* < *(H)ṇ- of these two Greek DerCs, so the obvious conclusion will be that originally also the DerCs had been oxytones only. That we find bare stems as FMs (such as **sm̥-*) rather than outcomes of inflectional case forms (such as **s(e)m(e)s*) does not come as a huge surprise either, because in regular IE nominal and verbal derivation suffixes get attached more often to bare stems than to inflectional case forms.

As for the suffixes met in DerCs, hypostatic *-ó- is also found in what are clearly hypostases of single word-forms, e.g., in Gk. *palaiós* ‘old’ derived from Gk. *pálai* ‘long ago, of old’ (see, e.g., Brugmann, *IF* 18, 1905/6: 65, and see also Schindler apud Mayrhofer 1986: 161), and truncation of an ending before that hypostatic *-ó- can also be found in some uncompounded forms; e.g., there are the Attic Greek “participles of necessity” in *-téo-*, which are clearly based on datives in *-teuej. As for *-io-, this may have spread from DerCs in which aforementioned *-ó- had been attached to a locative in *-i. As for DerCs in suffixal *-i-, note that *-i- instead of expected *-o- is also found in other (sc. uncompounded) adjectives such as Gk. *ídris* ‘experienced’. What strikes as odd is the fact that there are hardly any DerCs with an athematic SM that show hypostatic derivation of the suffixless kind as met, e.g., in uncompounded **d^hǵ^hmén* ‘on earth’ → **d^hǵ^hmon-* ‘a human’ (for which see Nussbaum 1986: 187-191, 236f.).

VII. Caland's Law

As first noted by the Indologist Caland (*KZ* 31, 1892: 267f. and *KZ* 32, 1893: 592) for Indo-Iranian only, when one expects what seems to be a primary adjective in *-ro- to act as a FM of BVs for semantic reasons, one quite often finds a FM having -i- instead of the expected *-ro- ("Caland's Law"), as in Av. *tiyra-* 'pointy' beside Av. *tižii-aršti-* 'having pointy arrows (*aršti-*)' and Ved. *ṛjrá-* 'shining' beside Ved. *ṛjī-śvan-* 'having shining dogs (*śván-*)'. Wackernagel (1897) showed that the same phenomenon is also met in Greek (*kūdrós* 'famous', but *kūdi-áneira* 'making men famous', etc.), and must therefore be inherited from PIE. Still later, it was finally recognized that such adjectives in *-ro- tend to be found beside adjectives of identical or similar meaning formed with certain other suffixes (*-mo-, *-no-, etc.), adjectival abstracts in *-es-, and verbal stems in *-eh₁- all built from the respective root as well, so that one now either says that the respective roots form "Caland systems" (of their own) or that they form part of "the Caland system", see above all the quite useful chapter on "Die Calandschen Suffixe" in Risch (1974: 65-112).

Nussbaum (1976) argued that because core adjectival suffixes of "Caland systems" (*-ro-, *-mo-, *(o)nt-, *-u- etc.) are found deriving possessive adjectives from substantives in IE, and because a substantial number of roots with Caland systems also make root nouns with abstract meanings, it would appear that prototypical Caland adjectives like PIE *h₁rud^h-ro- 'red' (> Lat. *ruber* etc.), which could in principle be primary, are actually analyzable as denominatives made from root nouns. The result was the scheme *h₁rud^h- 'the red, redness' (> OIr. *ru*, *rod* 'reddening') → *h₁rud^h-ro-. Since denominal adjectives in PIE were excluded as FMs of compounds, and the nouns from which they were derived appeared there instead (as shown above), Nussbaum's theory of 1976 did account for the descriptive dropping of the *-ro-, *-mo-, *-no- etc. of Caland adjectives when a FM was to have the effective meaning of such an adjective. But this approach would also predict compounds of the form *h₁rud^h-X- (which only occasionally occur, e.g. *duh₂-h₂ju- 'long-lived' > Ital. *dūjū- > *dijū- > Lat. *diū* 'for a long time' [: *duh₂-ro- > *dūrus* 'long-lasting, tough, hard' etc.]) rather than the *h₁rud^h-i-X- type that is typically found.

In more recent presentations Nussbaum has proposed an explanation of *h₁rud^h-i-X- which starts from the observation that Caland systems frequently include simple thematic adjectives (mostly with root *o*-grade) of the type *h₁rou^h-o- 'red' (> Lat. *rūfus* etc.). As amply demonstrated by Schindler (1980: 390ff.), followed by Nussbaum (1999: 399ff.), *-o-adjectives of virtually every kind in PIE could derive abstracts (acrostatically inflected) in *-i-. Since an *i*-stem abstract of this sort was perfectly eligible to appear as FM of a BV, there would have been, as can be gleaned from Nussbaum (1999: 401, 404), BVs of the type *h₁rud^h-i-X- beside the root noun type *h₁rud^h-X-, where both would have meant 'whose X is with (i.e. has) redness'. The "classic" Caland *h₁rud^h-ro-: *h₁rud^h-i-X- thus amounts, in Nussbaum's account, to the spread of *h₁rud^h-i-X- at the expense of originally isofunctional *h₁rud^h-X- and a synchronic rederivation of compositional *h₁rud^h-i- from *h₁rud^h-ro-.

To account for this general replacement of *h₁rud^h-X- by *h₁rud^h-i-X- it might be easiest to suppose, as Nussbaum has done, that *h₁rud^h-i-X- very simply offered the advantage of what was, in effect, an independently and very well motivated linking vowel. The success of the FM in *-i- for BVs, however, may also be explained by

pressure to make BVs formally distinct from homonymous VGCs that had a bare root descriptively acting as the governing FM, as proposed by Schindler (in class). In fact, compounds of the type $*h_1rud^h-X-$ in Late PIE could synchronically have had both a BV analysis ('whose X has redness') and a VGC analysis ('making X red'). To disambiguate, PIE speakers merely had to generalize one of the alternants for each type of compositional FM. To judge by the indications offered, e.g., by the Caland system centered on the root noun $*kruh_2-$ ('injury >) bloody wound, bloody flesh, gore' (> YAv. *xrū-* etc.) and the $*-o-$ -adjective $*krouh_2o-$ (Gmc. **hrawa-* 'raw'), the type with FM in $*-i-$ became normal in transparent nominal BVs (Av. *xruui-dru-* 'whose club is bloody' [: $*kruh_2-ro-$ > Ved. *krūrā-*, Av. *xrūra-* 'bloody']), while the simple root noun could be retained in compounds taken as VGCs (GAv. *xrū-nāra-* 'injuring men').

VIII. Compounding in PIE and in IE languages

As already stated above, IE languages in general increase the productivity of DCs while diminishing the productivity of BVs, and there is also a trend of secondarily reinterpreting BVs as VGCs. Some former SMs of BVs have further become productive as derivational suffixes, as is the case with the Germ. *-lich* formations.

Composition played an important role in PIE onomastics and continued to do so in many branches (compound names). However, with respect to the special pragmatics personal names are usually involved in the claim has been made that by far not every compound name attested in an ancient IE language can or should be traced back to a meaningful appellative; see, e.g., Schmitt (2000: 7f., 90, 146); but note that according to Uhlich (*HS* 110, 1997: 36f. with ref.) this claim is not correct at least for Germanic and Celtic.

VIII.1. The DC

Since DCs are very rare in the earliest periods of the older IE languages, and those with an adjectival FM are even rarer or non-existing, most scholars today assume that DCs were not a compounding type in PIE at all, cf., above all, Risch (*IF* 59/1, 1944 = *Kl. Schriften*: 1ff. and *IF* 59/3, 1949: 290ff. = *Kl. Schriften*: 107ff.); recently Scarlata (1999: 765, fn. 1049). What look like old DCs with $*-pot(i)-$ 'lord' as a SM clearly started out as juxtapositions < noun phrases such as PIE $*dém-s$ $*pótis$ 'lord of the house' (> Ved. *dámpati-* beside Ved. *pátir dán*, Gk. *despótēs*, etc.) with a highly archaic root-noun gen.sg. PIE $*dém-s$. The certainly inherited kinship terms having PIE $*pro$ and $*(H)apo$ as FMs such as Ved. *prá-napāt-* 'great-grandson' can also be interpreted as juxtapositions, and the same also holds for PIE $*pér-ut(i)$ 'in the previous year'; see Nussbaum (1986: 272). Eichner (*Sprache* 20, 1974: 40) evidently suggests that DCs *did* exist already in PIE times indeed, but were confined to the more informal styles of PIE.

VIII.2. DerCs, BVs, and VGCs

Quite obviously, already PIE had three morphologically and semantically distinct types of compounds: possessive compounds, verbal governing compounds, and derivational compounds. While it is clear that DerCs are hypostatic derivatives from phrases that formed part of a clause or sentence, as per Risch (*MH* 2, 1945: 16 = *Kl. Schriften*: 113), the origins of the BVs and of the VGCs are highly controversial.

VIII.3. Former theories on the origin of the BVs

That there is a fundamental difference between the formation of DCs and BVs was already clearly seen by Justi (1861: 117ff.), who basically claimed that DCs resulted from juxtapositions while BVs in contrast, according to him, developed out of whole sentences or clauses, more precisely relative clauses (“bezügliche Zusammensetzungen”). Justi (1861: 118) also already pointed out that the “subject” of the latter lies “outside” the compound itself. Schröder (1874: esp. 208) then classified compounds into precisely these two main types, i.e., what we today call endo- and exocentric ones: “1) Composita, die den Redetheilcharakter des 2. Gliedes bewahren; 2) Composita, die ihn nicht bewahren”. Schröder himself used “composita immutata” for endocentric and “composita mutata” for exocentric ones. As morphological device for the “mutation” (= “das formell nicht ausgedrückte Moment der adjektivischen Beziehung”), Schröder (1874: 197) already speculated about what we today would call a zero morpheme (“Ist bei ihrer Zusammensetzung ein neues, formell nicht ausgedrücktes Moment hinzugekommen oder nicht?”).

Since the times of Justi and Schröder, there have then been basically two different views with respect to the origin of the BVs: (1) the view that BVs had developed out from another type of compound, notably the DC; (2) the view that BVs had developed out not from a phrase that formed part of a clause or sentence, but from a whole clause (such as a relative clause with no relative pronoun and no verb) or a whole sentence (such as a parenthetical nominal sentence) that underwent an (obviously not so regular) process of univerbation.

That BVs resulted from metonymically used DCs was at first proposed by Osthoff (1878: 128ff.: “jedes bahuvrīhi beruht im grunde auf einer metaphor”), a metonymic use of DCs originating with personal names in particular being assumed by Petersen (*IF* 34, 1914/15: 254ff.).

This theory, however, has two fundamental flaws: (1) there is no evidence that DCs existed in PIE times at all; (2) it does not explain the fact that PIE compounds have a morphology completely different from that of juxtapositions. To be sure, a metonymic use of DCs as is evidently attested in modern IE languages, e.g., by ModHG *Dickkopf* (see, e.g., Hirt 1932: 121), is also attested in older IE languages as well, e.g., by the RV PN *Śúnaś-śépa-* ‘lit. dog’s tail’, which, however, is clearly a juxtaposition.

On the other hand, Wheeler (*TAPA* 34, 1903: lxviiiiff.) claimed that the BVs had started out as VGCs with governing SMs that had passive semantics, but this then begs the question of how those VGCs had come about themselves.

As for the second kind of strategy first advanced by Justi (1861), it had quite a lot of supporters up till now, among others Jacobi (1897); Neckel (*IF* 19, 1906: 249ff.); Humbach (*MSS* 5, 1954: 90ff.), many of them referring to the univerbation process required by the term “hypostasation”, thus, e.g., Dunkel (1999: 57: “These are all hypostasised nominal sentences”); Scarlata (1999: 757f.). Brugmann (*IF* 18, 1905/6: 59ff.) was the first to use that term in the context of compounding, but was not explicit at all about what he thought had been the basis of BVs, and also assumed their formation started out in pre-inflectional times. There can be indeed no doubt that some of the Ilr. BVs such as Ved. *tád-anna-* were precisely based on nominal

sentences such as *tád ánnam asya* “this is his food”, as per Schindler (1997: 538), but then how to explain that these have an inflected case form (in *-ad*) as FM, whereas in almost all of the other BVs we rather find a bare stem? That is, if it were true that all BVs were ultimately based on nominal sentences, why do we not have Gk. **ōkuspo(u)s vel sim.* rather than *ōkupo(u)s*? In order to account for that, most advocates of the “hypostasation” theory claimed that the formation of BVs had started already at a “pre-inflectional” stage of PIE, see the quotations in Dunkel (1999: 50ff.), and in addition, e.g., Puhvel (*Lg* 29, 1953: 15). For another way of explanation, see Dunkel (1999: 56ff.); I fail to understand the point Humbach (*MSS* 5, 1954: 90ff.) wants to make. There is also another question to be raised: if BVs are based on univervations of nominal sentences, why do we have Gk. *apeírōn*, etc. with the *-n(-)* typical of the *oblique cases* of heteroclitics in *-r/n-* rather than Gk. **apeirar* or at least **apeirōr*, etc.? As for this question, whoever is willing to accept the theories by Schindler and Nussbaum on internal derivation could argue that because BVs had exocentric semantics they could by analogy adopt the morphological behavior of exocentric internal derivatives such as PIE **piH_uon-* ‘fat (adj.)’ based on **piH_ur/*piH_un-* ‘fat (subst.)’.

VIII.4. Former theories on the origin of the VGCs

VIII.4.1. VGCs with a governing SM

So far, there have been basically two approaches: (1) seeing in them results of a so-called “hypostasation” of (verb-final) clauses or sentences (“verbal sentences”); (2) tracing them back to other types of compounds, which may have been either BVs with verbal abstracts as SM or DCs with nomina agentis (possibly themselves former verbal abstracts reinterpreted as agent nouns) as SM.

The first of the two strategies was most recently adopted by Benedetti (1988); Dunkel (1999: 55, 67: “*vṛtrám hanti > vṛtrahán-*”); and Scarlata (1999), but within this framework it would be especially hard to account for the morphological shape of the so-called root compounds; see, e.g., Dunkel (1999: 55). Note also the speculations about “Relativparticipia” dating from pre-inflectional stages of PIE in Jacobi (1897) (rejected, e.g., by Delbrück in *VS* III: 162ff., § 65).

As for the second strategy, it seems already Schröder (1874: 363, fn. 1 and 371) toyed with the idea that at least the root compounds had started out as BVs, but in the end he did not dare to do so because root compounds and BVs seemed to show different kinds of accentuation. Almost 80 years later, Puhvel (*Lg* 29, 1953: 15ff.) explicitly derived all kinds of “synthetic” compounds from former BVs with a verbal abstract as SM, but there was an admixture of rather unsound speculations about the root compounds attesting “to an original isolating type of language”. Puhvel’s kind of strategy was rejected especially with regard to the root compounds by both Benedetti and Scarlata. Benedetti (1988: 22) objected that all SMs of attested root compounds lack uncompounded cognates acting as verbal abstracts, but synchronic description and diachronic explanation are two different things. Scarlata (1999: 760) further argued that the oldest examples of genuine BVs have only concrete nouns as SMs (basing himself on Risch ²1974: 182ff. and Leumann ⁵1977: 386). However, if it is true that BVs with verbal abstracts as SMs tended to be reinterpreted as VGCs with governing SM (as already shown above in § V.1.4.1.), any absence of old BVs with

verbal abstracts as SMs could be precisely explained as a natural consequence of that tendency.

VIII.4.2. VGCs with a governing FM

So far it has been customary to derive at least those VGCs that have a suffixless FM from verb-initial sentences with a 2.sg. active imperative form or a 3.sg. active injunctive form acting as the finite verb form of that sentence. This explanation principle has been applied by some authors even to the Ilr. compounds with *-at-* and those with (*)*-ti-* and Gk. *-si-*, most notably by Dunkel (*Glotta* 70, 1992 [1993]: 206-210 and 212-223); for previous takes on the *terpsí-mbrotos* type see Dunkel (l.c., 212f.) and esp. Knecht (1946: 4ff.). There are, however, various problems with such an approach. To name just two, it would be extremely hard to set up Proto-Greek finite verbal forms of the (*)*phug(o)* type, and the fact that the FMs are often to be translated as respective *causative* participles would have to be left unaccounted for. Note further that the Germanic *pickpocket* and the Romance *gratte-ciel* (French term for ‘skyscraper’) compounding types (“imperative compounds”) should not be taken for independent parallels (as is often done); the Germanic type evidently rather goes back to compounds having noun stems as FM, as already amply argued by Osthoff (1878: 125ff.), and the Romance type was ultimately based on the Gk. *pheré-oikos* type, as convincingly argued by Bork (1990).

VIII.5. Schindler’s point of view

VIII.5.1. The origin of the VGCs

According to Schindler (1997; in class and p.c.; see also Janda 1999: 183-203, 202f.), all of the different kinds of VGCs started out as BVs. As far as VGCs with a governing SM are concerned, this solution has already been advanced before by Puhvel (*Lg* 29, 1953: 15ff.); but Schindler was the first to explain all of the various types of VGCs with governing FM as reanalyzed former *factitive* BVs having possessive adjectives in *-*uent-* (which, of course, had to be deleted synchronically according to § IV.2.1.) derived from verbal abstracts as FMs (i.e., had been “double possessives” as per Fabian 1931). Schindler based himself on the following arguments: (1) all kinds of formations that act as SMs of VGCs with a governing SM are also attested as uncompounded verbal abstracts; (2) VGCs with a governing SM having a numeral as FM like Ved. *dvi-jā-* ‘born twice’ contain the bare stem (as is *dvi-*) and not the respective derived numeral adverb, which would have been PIE **duis* ‘twice’ (‘having two births’ → ‘born twice’); (3) a reinterpretation of former BVs with a verbal abstract as SM as VGCs with a governing SM seems to happen quite often even before our very eyes, see the examples above in § V.1.4.1.; (4) setting up verbal abstracts as original SMs of VGCs with a governing SM can neatly explain the fact that the SMs of each type of them may take on either transitive, or intransitive, or passive semantics; e.g., Gk. *oresí-trophos* ‘nourished in the mountains’ will then have started out as ‘having nourishment in the mountains’; (5) interpreting FMs of VGCs with governing FM as (possessive adjectives derived from) verbal abstracts that acted as FMs of *factitive* BVs will immediately explain the strange *transitive-causative* semantics of the FM that is often met with such VGCs, as amply described above in § V.2.; e.g., the Ved. PN *Trasá-dasyu-* would have originally meant ‘making the enemy being provided with trembling’ turning into ‘making the enemy tremble’; (6) claiming

that the FMs of the *terpsí-mbrotos* type had started out as possessive adjectives in *-ǵent- nicely fits the fact that a total of three of the rather few Vedic derivatives in -mát- from -ti- abstracts, viz. Ved. *puṣṭi-mát-*, Ved. *vṛṣṭi-mát-*, and Ved. *śruṣṭi-mát-*, is found to occur precisely besides cognate Vedic representatives of that compounding type, viz. PN Ved. *Púṣṭi-gu-*, PN Ved. *Śruṣṭi-gu-*, and Ved. *vṛṣṭi-dyāv-* ‘letting the sky rain’.

As a corollary, according to Schindler the FMs of the *terpsí-mbrotos* compounds had started out as (derivatives of) -ti- abstracts indeed, notwithstanding the fact that the Greek representatives of this type regularly show the full grade of the respective root, whereas the Greek -ti- abstracts proper tend to show the zero grade of the respective root. As for this discrepancy, Schindler (in class) assumed that the Greek compounds had undergone analogical influence from the agent nouns in -tōr-, which regularly showed the root in the full grade indeed (for a different view on the full grades, see Vine 2004); note also that many of the Greek compounds in -tā- show full grade of the root as well (see, e.g., Leukart 1994: 282ff.), which also rather comes as a surprise from a diachronic point of view. As for the VGCs having a governing FM that is an allomorph of a bare root only, Schindler, of course, derived the FMs from abstract root nouns (*g^hen-h₂ner- ‘making men (to be) provided with killing’ eventually turning into ‘killing men’). As for the *pheré-oikos* type, Schindler first suggested that the FMs of the *b^here- type had started out as extremely archaic weak-stem allomorphs of verbal abstracts of the *b^hór-o- (Gk. *phóros*) type, but later preferred to explain them by setting up the analogical proportion 3.sg. *g^hen-ti : *g^hen-(h₂ner-) = 3.sg. *b^here-ti : x, x = *b^here-.

VIII.5.2. The origin of the BVs

As for the BVs themselves, Schindler also put forth a completely new explanation: according to him (Schindler 1986; 1987; 1994 and in class) they started out as a mere subclass of the DerCs, i.e., as hypostases not of nominal sentences (as has been assumed by all advocates of so-called “hypostasation” before, maybe with the exception of Brugmann), but merely of predicatively used phrases consisting of a substantive in the instrumental and an adnominal depending on the instrumental that together formed part of a clause or sentence (for a predicative use of instrumentals in PIE, see above all Schindler 1980). As a matter of fact, among the DerCs attested it is precisely examples derived from phrases denoting “in the possession of XY” (i.e., *possessive instrumental* phrases) that seem to be missing. For the possibility to turn predicatives of *is*-sentences into adnominals see, e.g., Vogel (1994: 193ff.). Accordingly, just as Ved. *viśvá-deva- índra-* is ultimately based on a sentence “Indra is with all gods”, Ved. *ghṛtā-anna- agní-* ‘Agni having ghee as food’ would be ultimately based on a sentence “Agni is with food that is ghee / Agni is with ghee food”.

As for the adnominals of these underlying possessive instrumental phrases (that just formed part of a clause or sentence), i.e., for the members of the phrases that turned into the FMs of the BVs, they evidently could have been (1) prepositions/adverbs: “with a god inside” → Gk. *én-theos* ‘having a god inside’; (2) primary adjectives and appositive substantives: “with food that is ghee” → Ved. *ghṛtā-anna-* ‘having ghee as food’; (metaphorically used) “with an eye that is (like a) wheel” → Gk. *Kúkl-ōps* ‘*having an eye like a wheel’; (3) genitives of substantives: (a)

gen. possessivus: “with hair of horses” → Gk. *hippó-komos* ‘having horse hair’; (b) *gen. possessivus* used metaphorically: “with a heart (like that) of a wolf” → OE *wulf-heart* ‘having a heart like a wolf’; (c) *gen. materiae*: “with a throne of gold” → Gk. *chrūsó-thronos* ‘having a golden throne’; (4) instrumentals of substantives (triggering “double possessives”): “with a place that is with ghee” → Ved. *ghṛtá-yoni-* ‘having a place that is with ghee’. According to Schindler (1997: 537f.), they could not have been, however, locatives of substantives, which he claimed were not allowed to function as adnominals in PIE.

If it is true that the BVs had started out as DerCs, one will, of course, have to come up with an explanation for the morphological differences of the two compounding types. As a matter of fact, both kinds of compounds shared a compounding suffix *-ó- (which then evidently would have to be taken for the hypostatic *-ó- also in the case of the BVs). The fact that the compounding suffix *-iō- was originally restricted to the DerCs proper can be easily accounted for by its most probable etymological analysis as locative *-i- + hypostatic *-ó- (see above § VI.4.). On the other hand, the claim made by Jacobsohn (*Glotta* 16, 1928: 53ff.) that the compounding suffix *-i- had originally been restricted to the BVs cannot be substantiated. So there is then just one remarkable morphological difference left, viz. the fact that manifest suffixless derivation abounds in BVs, but is practically absent in DerCs proper. As has also already been argued above in § VI.4., this kind of behavior of the DerCs must be taken for a secondary innovation anyway. As for a possible motive for this restriction, one has to bear in mind that the DerC Ved. *viśvá-deva-* has quite a lot of completely different meanings (as per § VI.), and note that Gk. *én-theos* could theoretically have two completely different meanings as well, viz. not only ‘having a god inside’ (= DerC), but also ‘being in god’ (= BV). One may therefore speculate that suffixless derivation was banned from the formation of DerCs proper precisely in order to keep DerCs (especially so-called prepositional governing compounds) formally distinct from BVs (especially *én-theos* compounds) at least in the cases of athematic stems acting as SMs. (On different hierarchies of interpretation of IE compounds due to their reduced morphology, see basically Lühr 1994.)

In the case of suffixless derivation, the SMs of the BVs of course as a rule looked still somewhat different from their uncompounded variants (e.g., Gk. °*genēs* vs. Gk. *génos*), but in the case of root nouns acting as SM there probably was not even this tiny difference to be seen in PIE, owed to the fact that (most probably) the principle of internal derivation was not applied to root nouns in PIE. Accordingly, the SM of Ved. *a-pād-/pād-* ‘having no feet’ inflected exactly like the uncompounded basic noun; as for Gk. *eu-énōr* ‘having good men’ (or maybe ‘having good strength’) from *anēr*, etc., also Schindler assumed that we have to do here with an innovation of Greek, which, of course, would have been based on the model of Gk. *patēr* → Gk. *eupátōr vel sim*. This then implies that at least in the case of root nouns acting as SMs of BVs (and VGCs developed out of former BVs) hypostasation would have occurred without being expressed by any formal means; as a matter of fact, such a process of zero-morpheme hypostasation was already suggested for other cases outside of nominal compounding by Widmer (*Sprache* 45, 2005: 190ff. with further ref.).

If Schindler's views on the origins of PIE BVs and VGCs are correct, one would, of course, have to conclude that within PIE times, compounds were only created via a process of hypostasation of *noun phrases* forming part of a sentence, and not by hypostasation of entire clauses or sentences. (The Ilr. *tád-anna-* type of BV was probably not inherited from PIE.) That said, it is clear that already in Late PIE all three types of compounds existed indeed as synchronically different types with each of them having special formation principles of its own.

IX. References

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