Towards an assessment of decasuative derivation in Indo-European

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Abstract

The currently popular model of decasuative derivation has been criticized on various grounds, both typological and comparative. This paper assesses both the critique and the model.

Keywords

linguistics – Indo-European – morphology – derivation – inflection – decasuative – hypostasis – deadverbial – adnominal – typology – universals – conversion

1 Introduction

One of the more popular recent trends in the world of Indo-European nominal morphology has been to derive certain words not from roots or stems but decasuatively, that is, from inflected case-forms that remain fully intact as the derivational base.¹ As proposed for Proto-Indo-European and later prehistoric periods, such derivation can be instantiated in one of two ways. In the first,

1 The intact state of the inflectional ending is what distinguishes decasuative derivation from more common kinds of hypostasis where the inflectional ending is deleted before adding further material (type Lat. *salūtāre* ‘greet’ ← *salūt(em dare)*). See further §6 on hypostases.

a derivational suffix is added directly to a case-form, e.g. instr. $*\hat{g}^{hol}-oh_i$ 'with anger' → $*\hat{g}^{holoh_i}-to$ 'possessing anger, angry' (> Gk. $\chi\omicron\lambda\omega\tau\acute{o}\varsigma$ 'angry'). In the second, which represents a subtype of internal derivation, a case-form of a noun becomes the base of a possessive or appurtinative derivative, accompanied by a shift in inflectional class-membership vis-à-vis the original noun; a familiar example is $*d^h\hat{g}^h(e)m-en$ 'on the earth/ground' → $*d^h\hat{g}^h\acute{e}m-\acute{o}(n)$ 'earthling, human being' (> Lat. *homō* 'person', etc.).² Since it is not assured (even if widely assumed) that forms like $*d^h\hat{g}^h(e)m-en$ were synchronically true paradigmatic locatives in PIE as opposed to adverbs,³ we will primarily be concerned with the first type in this study.

Though the term 'decasuative' is relatively new, stemming from a 1998 oral presentation by Alan Nussbaum, the idea of deriving words from inflected forms goes back a very long way. As not much of this history may be familiar to contemporary readers, it is worth a brief review. Already in 1846, quite an interesting paper on the subject was published by one Richard Garnett, who adduced a wide variety of words, from both inside and outside Indo-European, that he claimed were derived from case-forms (pp. 12–14).⁴ This paper and, a generation later, Scherer (1868), which contained somewhat prescientific thoughts on various forms said to be derived from locatives (pp. 336ff.), amounted to little more than flashes in the pan that do not appear to have directly spawned subsequent research.⁵ The notion reappears in the early

2 These have sometimes been labeled back-formations, as by Nussbaum (1998, with reference to YAv. *xšapan-/xšafn-* 'night' < $*k^wsep-\acute{e}n/*k^wsep-n-$ < $*k^wsep-en$ 'at night' and Gk. $\chi\epsilon\iota\mu\alpha$ 'winter weather' < $*\hat{g}^h\acute{e}im-\eta/*\hat{g}^h\acute{e}im\acute{e}n-$ < $*\hat{g}^h\acute{e}im-en$ 'in winter').

3 Compare the important study of Lundquist (2014) on the 'locatives' in $*-er$.

4 Among his Indo-European examples are: Gk. $\iota\phi\iota\omicron\varsigma$ 'mighty' (?) < $\iota\phi\iota$ 'with might' ('generally allowed by philologists to be [so] formed'), $\eta\mu\epsilon\rho\eta\sigma\iota\omicron\varsigma$ (wrongly given as $\eta\mu\epsilon\rho\eta\sigma\iota\omicron\varsigma$) 'a day long, by day' < $\eta\mu\epsilon\rho\eta\sigma\iota$ dat. pl. 'on days', $\eta\mu\acute{\alpha}\tau\iota\omicron\varsigma$ 'by day' < $\eta\mu\alpha\tau\iota$ dat. sg. 'on the day', $\beta\acute{\iota}\alpha\iota\omicron\varsigma$ 'violent' < $\beta\acute{\iota}\alpha\tilde{\epsilon}$ dat. 'with force' ('with a profusion of similar terms'), $\omicron\iota\kappa\epsilon\iota\omicron\varsigma$ 'in/of one's house' < loc. $\omicron\iota\chi\epsilon\iota$ 'at home', $\eta\mu\acute{\epsilon}\rho\iota\omicron\varsigma$ 'lasting a day' < instr. (he compares Skt. instr. sg. $-ena$), Skt. *mad-īya-* 'mine' etc. < abl. *mád* 'from me', *māma-ka-* 'mine' etc. < gen. *māma* 'of me', Arm. *i mēñj-k* 'the ones of ours', *i mēñj-ic* 'of the ones of ours', etc. < abl. pl. *i mēñj* 'from us'. (The lists of forms in this and the following footnotes represent simple unvarnished reportage with one or two parenthetical comments thrown in, and are not meant to imply acceptance of their claimed decasuative status on my part or the part of other subsequent scholars. Some are discussed below in §3.3.2. I include all this material for historical interest.)

5 Garnett is cited by Scherer but nowhere else that I have seen; Scherer is mentioned in Debrunner (1957: 778).

1880s, in work by Fick⁶ and Persson,⁷ where many forms were adduced that were claimed to be derived from locatives. But it was later in the 1880s that the notion really took off, and soon a burgeoning cottage industry was up and running, especially in delocalitives, that extended into the early 1900s, with contributions made by central figures in the history of Indo-European linguistics: see Brugmann (1889: 135);⁸ Bartholomae (1889: 27–32);⁹ Johansson (1892: 50);¹⁰ Sommer (1900: 1–2);¹¹ Brugmann (1901: 392¹);¹² Brugmann (1905–06: 661);¹³ and Brugmann (1906: 164, 183, 187, 196, 270–71, 273, 274).¹⁴ To be sure, not everyone was on board with the approach; the flurry of activity prompted Schulze (1904: 435³) to label it a recent fad that he mostly disapproved of.¹⁵

- 6 Fick (1881: 444) (not credited in subsequent literature except in Persson 1886: 122 [Addenda et Corrigenda]): Gk. -ιος adj. suff. ← loc. -i, as in: 'Ιθακήσιος 'Ithacan' ← **Itakēsi* dat. (< loc.) pl., Θριάσιος ← Θριάσι (this and the following sic without iota subscript in his notation), Πεντελῆσιος ← Πεντελῆσι, Πτελεάσιος ← Πτελεάσι, Φυλλάσιος 'a man of Phyle' ← Φυλῆσι, Φλύσιος ← Φλύσι, πρυμνήσια 'stern cables' ← πρύμνησι dat. pl. 'sterns', Ἀργεῖος 'Argive' ← Ἄργει loc. 'in Argos', Μαραθώνιος 'of Marathon', Λακεδαιμόνιος 'of Lacedaemon (Sparta)', Σελινούντιος 'of Selinus', ἱφίος 'mighty' (?) ← ἱφι 'with might', εἰνάλιος 'in/of the sea' ← εἰν ἅλι 'in the sea', ἐνύχιος 'by night' ← ἐν νυχί 'in the night' (§νυχί actually not attested!), ἐπιχθόνιος 'earthly' ← ἐπὶ χθονί 'on the earth', ὑποχείριος 'under someone's control' ← ὑπὸ χειρί 'under the hand', Τελαμωνίδης 'son/descendant of Telamon' ← abl. **Telamōnid* 'from Telamon', Τελαμωνιάδης ← abl. **Telamōniad* (*genead*) 'vom Telamonischen Geschlechte', Ved. *divyá-* 'heavenly' ← *diví* loc. 'in the sky'.
- 7 Persson (1886: 109–11): ἄρι-στον 'breakfast' < **auseri-ston* 'Früh-stück', lit. 'das am frühesten (seiende)', αὔριον 'tomorrow' ← **aus(e)ri* 'at dawn', εἰ(ι)αρινός 'of spring' ← **ēari* loc. 'in spring', νυκτερίος/νυκτερινός 'occurring at night' ← **nukteri*, χειμέριος/χειμερινός 'occurring in the winter' ← **kheimeri* 'in winter', περυσινός 'last year's' ← πέρυσι 'last year', Lat. *nocturnus* 'occurring at night' if *noctur* = Gk. νύκτωρ 'at night'. Also Ved. *dákṣi-ṇa-* 'right', Gk. δεξιτερός 'right', etc. ← loc. **deksi* to **dekos* = Lat. *decus* 'befitting thing, honor, grace' adduced in both Persson (1886: 112–13²) and Persson (1893: 244²).
- 8 The first edition of the *Grundriss*: he lists just the Gk. delocalitives ἑαρινός 'of spring', ἡμερινός 'during the day', νυκτερινός 'at night', and περυσινός 'last year's'.
- 9 Skt. adjs. in -an- ← loc. in -an, *udrás* 'otter' etc. ← *r*-loc. **uda_r*, Gk. Ἀλοσύδνη epithet of Thetis, perhaps 'belonging to the sea-water' ← **uda_n* loc. 'in the water'.
- 10 Comparative suff. *-ios- ← loc. in *-i.
- 11 Adj. suff. **īo-* ← loc. *-i + *-o- (apparently independently of Fick (1881) above, n. 6, and generalizing to PIE).
- 12 Lat. -īnus ← gen. -ī.
- 13 Skt. *divyá-* ← loc. *diví* (apparently independently of Fick 1881 above, see n. 6).
- 14 Gk. ἱφίος 'mighty' ← ἱφι 'with might', ἐπιπατρόφιον 'patronymic' ← ἐπὶ πατρίφι, Ved. *usríya-* 'ruddy', Gk. αὔριον 'tomorrow' ← loc. 'at dawn' (Ved. *usrí*, although on p. 193 he says *usríya-* is simply an extension of *usrá-* 'id.'), Lith. delocalitives and degenitivals like *dangujeis* 'heavenly' ← *dangujė*, *mūsū-jis* 'our(s)' ← gen. *mūsu* (his notation); Oscan gentilicia in -īi(o)- ← genitives in -ī; delocalival account of Osc. *vereiiai*, *kersnai[i](ā)-*, *Maraieiis*, and Lat. *plebēius*; OS names like *Glaser*, *Guser* < **-āja-z*; and some others.
- 15 'An die seit ein paar Jahren in Mode gekommene Herleitung von Adjectiven aus Locativ-

After a lull of many decades,¹⁶ a second wave of decasuative research came on the scene, coincidentally almost exactly a century after the first one started. It includes such watershed developments as Jay Jasanoff's analysis of the Indo-European *ē*-statives as ultimately built to instrumentals in **-eh₁* (Jasanoff 1978: 122–26, with revisions in Jasanoff 2002–03); Jochem Schindler's account of the origin of *ṽddhi* (so-called 'proto-*ṽddhi*') in old lengthened-grade ending-less locatives (e.g. loc. **pēd* 'at the foot' → **pēd-ó-* in Gk. *πηδόν* 'blade of an oar', Lith. *pėdà* 'footprint');¹⁷ the theory of internal derivation from locatives exemplified above and developed in Nussbaum (1986),¹⁸ partly an extension of Bartholomae (1889); and the same scholar's proposal of deinstrumental derivation as a source of nominal and adjectival forms in 1996 (in which he proposed the type *rubēta* 'kind of toad' ← instr. **h₁rud^heh₁* 'with redness'), to which he added degenitivals in 1998.¹⁹ Since then, the secondary literature has practically exploded with further putative examples of such formations, with deinstrumentals occupying a particularly prominent and conspicuous role. In light of this recent development, it is of some interest to note that deinstrumental derivation is also not really new; the idea was suggested by Hermann Osthoff to Karl Brugmann in a letter of 30 January 1902,²⁰ who then incorporated it (unattributed) into the second edition of his *Grundriss* (1906: 405, mooted that *-V̄-to-* derivatives of *V̄*-stems may have been built to instrumentals in **-V̄*). But aside from being briefly picked up a couple of decades later by Vendryes (1920: 104–06)²¹ and making a probably independent appearance in Haudry (1981; 1982), the idea of deinstrumentals seems not to have taken root in any significant way before Nussbaum's work from the 1990s.

formen zu glauben sehe ich meist gar keine Veranlassung. Nur *δίος* (aus **δῖfjos*) mag in der That aus dem Locativ *divi* stammen. Denn ein zur Adjectivableitung dienendes Suffix *-jo-* kenne ich sonst nur in Worten wie *ἄλλος μέσσος*, die offenbar eine besondere Kategorie bilden ...' (i.e. **-ijo-*, not **-io-*, had this function productively).

16 Except for Vendryes (1920) (see below with n. 21).

17 This account was never published but is reported in several sources, including Nussbaum (1998); Balles (2006: 286 ff.⁴⁷³); Widmer (2008: 618); and Schaffner (2014: 374⁵⁵).

18 Aside from the example cited there, also **h₃nb^h-én* 'at the navel' → **h₃enb^h-ōn* 'belly', **k₁h₂s-én* 'in/on the head' → **kerh₂s-ōn* 'skull, crown', **h₂us-s-ér* '(found) at dawn' → **h₂us-s-ér* 'mist, dimness (occurring at dawn)' (this last one building on Kiparsky 1967: 626).

19 At least some of which were already advanced by Brugmann; see above, n. 14.

20 Published in Einhauser (1992: 239–42). I thank Michael Weiss for the reference.

21 Lat. *astūtus* 'clever', *āctūtum* 'forthwith', *uersūtus* 'wily', *Restūtus* PN ← adverbial ablatives/instrumentals in **-ū*. This is rejected in W.-H. and not mentioned in E.-M. or de Vaan (2008) (with the latter citing the article but not referring to the analysis).

Just as happened a century ago, the contemporary enthusiasm for decasuative derivation has also invited criticism. This critical reaction, together with my responses to it and discussion of the relevant data, will occupy us up until §4. I will defend the decasuative approach against some of the criticism that has been lodged against it, but will find that other critical points are justified. These will be amplified with some additional critical reactions of my own in §§4 and 5. I will, however, maintain throughout that the approach is worth pursuing, as long as certain principles are adhered to that will be summarized at the end, following discussion of some related material in §6.

2 Typological naturalness

The most consistent objection to the modern decasuative industry has been the typological one that the addition of a derivational suffix to an inflected form is cross-linguistically unnatural. This view is expressed for example in Kaspars Ozoliņš's recent UCLA dissertation (Ozoliņš 2015: 58):

As more so-called decasuative derivations have recently been invoked among scholars, some have begun to question the ability of actually establishing such derivations, and whether they are typologically comparable in other languages. It has been argued that no language has ever made use of a derivational process that takes a synchronic case form from a paradigm (as opposed to a stem or a root) in order to produce an entirely new derivative.²²

Criticism of a typological nature has also been leveled at decasuative verbal derivations like Jasanoff's, as in this remark by Balles (2008: 177): 'It would be unique in Proto-Indo-European verbal morphology to have case endings used as denominative verbal stems. I do not know of typological parallels ...'²³ And in their recent comprehensive overview of IE morphology, Jesse Lundquist

22 Ozoliņš does not specify who the 'some' in his first sentence are that have raised questions, nor who has or have made the argument reported in the second.

23 Cf. Balles (2006: 302) (on *ē*-statives): 'Dagegen ist einzuwenden, daß die Verwendung einer ... Kasusform als Verbalstamm ... nicht a priori einleuchtend und typologisch trivial ist: Andere Sprachen zeigen in ähnlichen Funktionen bei Denominativa vielmehr Konversionsbildungen. Die dabei in der Tat häufig auftretende instrumentalische Semantik ist jedoch keineswegs einem wie auch immer enthaltenen Kasus Instrumental geschuldet, sondern ergibt sich auch und einfacher aus dem "Ding-Aktion-Konglomerat" ...'

and Tony Yates object that “decasuative” derivation in its strong formulation directly challenges the proposed typological universal that inflection does not feed derivation (Greenberg’s ... Universal 28)’ (Lundquist & Yates 2017: 2108), though later in their discussion (which extends to additional points that we will treat later) they leave the possibility open that languages with synchronic decasuativity might yet be identified.

Such languages do indeed exist, as will be shown shortly. Before proceeding, however, it will be necessary to tease apart Lundquist & Yates’s objection quoted above, because it actually conflates what are two distinct typological claims.

The first is Joseph Greenberg’s Universal 28, a proposed descriptive principle governing the linear order of affixes, in which he claimed that derivational affixes appear closer to the root than inflectional ones (Greenberg 1963: 93; cf. already Nida 1949: 99). It will be useful to reproduce his original wording in full:

Where both derivational and inflectional elements are found together, the derivational element is more intimately connected with the root. The following generalization appears plausible:

Universal 28. If both the derivation and inflection follow the root, or they both precede the root, the derivation is always between the root and the inflection.

Several corrective points should be made about how this is to be handled and understood. Note first that Greenberg merely says the proposal ‘appears plausible.’ This is an important reminder of something about which he was quite explicit right in the very first sentence of his study: ‘The tentative nature of the conclusions set forth here should be evident to the reader’ (p. 73). All his universals were preliminary statistical generalizations based on a limited sample of thirty languages. They should therefore not be taken as anything akin to laws of nature. Statements to the effect that decasuativity ‘violates’ this universal exaggerate the status of that which has purportedly been violated. Additionally, Universal 28’s formulation is actually ambiguous: what exactly does ‘both the derivation and inflection’ mean? The broad interpretation is that if a word has both derivational and inflectional affixes, the derivational affixes will be closer to the root than the inflectional ones, while the narrow interpretation is that *the inflection of the word* appears farther from the root than any derivational material. The first interpretation is more relevant for us than the second; but under either one, the proposal is often not true. There are legions of words with inflectional affixes that are closer to the root than the derivational ones; to

give a tiny list, consider *hand-s-y*, Germ. *Kind-er-chen* ‘(little) children’,²⁴ Breton *bag-où-ig-où* ‘boat-PL-dim-PL = little boats’, plus many more that we will soon have occasion to expand upon.²⁵

The real elephant in the room with Universal 28, though, is that it begs a crucial question: it assumes a clear distinction between derivation and inflection in the first place.²⁶ If research in this area since Greenberg’s day has shown us anything, it is that satisfactorily defining these terms is a very elusive goal; there is a heavily contested gray area between the two, with some scholars even denying that they are distinct at all.²⁷ This problem equally besets the second typological claim wrapped up in Lundquist & Yates’s statement above, namely the proposition that inflection cannot feed derivation. This, of course, is not a claim about linear order, but a much broader claim about the workings of grammars. Such an approach is perhaps best known as part of the so-called split morphology hypothesis from the 1970s and 1980s, most prominently associated with Stephen Anderson.²⁸ Split morphology views morphological processes or categories as essentially of two kinds, those that are somehow connected with syntax and those that are not; under this framework, derivation is a process completed in the lexicon before syntax, and inflections (defined as ‘what [are] relevant to syntax,’ S. Anderson 1982: 587) are inserted by a different component of the grammar much later, after syntax. This approach encountered a number of difficulties, among them a succession of increasingly challenging counterexamples,²⁹ a deepening of confusion over the definitions of derivation and inflection, and an unremitting onslaught of new competing morphological

24 In Early New High German, this was generated as pl. *Kinder* plus dimin. *-chen*; more recently, *-erchen* has been reanalyzed as a unitary plural diminutive suffix (Chapman 1995: 77).

25 Though not especially germane to our topic, the universal is not applicable to non-linear derivational and inflectional processes like umlaut and templatic morphology, nor to phenomena observed in polysynthetic languages. A useful survey of the scholarship on Universal 28 and the proposed counterexamples is provided in Helten (2006).

26 Cf. Laca (2001: 1215).

27 For discussions see e.g. Beard (1998: 44–46); Haspelmath (2002: 70–82); Aronoff & Fudeman (2011: 168–71); Štekauer, Valera, & Körtvélyessy (2012: 19–23); and Spencer (2016: 36–44).

28 E.g. in S. Anderson (1982; 1988: 41; 1992: 126 ff.); also Perlmutter (1988), who actually coined the term.

29 Lodged e.g. in Sherwood (1983); Bochner (1984); Rice (1985); Stump (1990); Booij (1993); LeSourd (1995); and Bobaljik (2005)—and cf. already Garnett (1846) above (n. 4)! See also Sadock (1995: 332–35), pointing out *inter alia* the inadequacies of an approach like S. Anderson’s (1992: 127) that stipulatively labeled the locative in the Mongolian delocatives (see below, § 2) as not really inflectional but adverbial.

theories, for many of which concepts like ‘derivation,’ ‘inflection,’ ‘morpheme,’ and ‘lexicon’ had no meaning.³⁰

It is neither to my purpose nor within my competence to contribute substantively to these theoretical disputes, but the counterexamples lodged against the hypothesis that inflection cannot feed derivation are of considerable interest, for they show a variety of types of inflected forms that provide the basis for derivation of new words (at least under most people’s understanding of these terms). Examples forwarded early on include derivatives built to plurals and comparatives, especially the widely represented phenomenon whereby diminutive suffixes get added to plurals.³¹ Now since it has been claimed that categories like plural and comparative are actually more derivational than inflectional,³² these counterexamples may not pack that much of a punch; but the items to follow are a different matter entirely, for they illustrate derivation on the basis of case-forms. It must be emphasized at the outset that the examples I have gathered come from a typologically fairly broad range of languages, so they cannot be dismissed as irrelevant to Indo-European simply because they are in greater or lesser degrees typologically dissimilar to our family.³³

Khalkha Mongolian has a kind of suffix of appurtenance *-kh* meaning ‘the one of’ that can be affixed to any genitive, e.g. *bagsh-yn* teacher-GEN ‘of the teacher’ → *bagsh-yn-kh* ‘the one of the teacher’. The resultant form can be inflected and further suffixed like any other noun: dat. *bagsh-yn-kh-d* ‘at the teacher’s’, *Bi bagsh-yn-kh-d-aa* 1SG teacher-GEN-the.one.of-DAT-POSS ‘I (am) at

30 See in general Stewart (2016).

31 For examples see e.g. Chapman (1997) on German dialects; Booij (2006: 659–60) on Dutch; Bochner (1984: 414–17) on Yiddish; Stump (1990) on Breton; Stump (1993: 6–7) on Barasano; Bobaljik (2005) on Itelmen; LeSourd (1995: 126–27) on Passamaquoddy diminutive verbs; and Aronoff & Fudeman (2011: 171) on Nootka. Split morphologists tried to counter that only irregular, memorized plurals that were treated as a unit could form the base of such derivations (cf. Perlmutter 1988; S. Anderson 1988: 180⁸), but we also find productive plurals in this capacity. See also Bochner (1984: 417) on Yiddish distributive adverbs in *-vayz* added to plurals, and Stump (1990) on the Breton denominal adjective suffix *-ek* added to plurals. Derivation to comparatives is of the type Germ. *ver-schlechter-n* ‘to make worse (*schlecht-er*)’.

32 See e.g. Bybee (1985: 33–34 & 102 ff.) on plurals.

33 Note in general for this discussion that decasuativity is not to be confused with *Suffixaufnahme* or case-stacking, whereby a noun, typically in the genitive, further agrees with its head noun by the addition of another case-marker. See Plank (1995b) and the other contributions to Plank (1995a). Likewise irrelevant are renewals of lexemes due to reanalysis of a case-form as the stem, of the type Ved. *páda-* ‘foot’ << root noun acc. *pád-am*, *dánta-* ‘tooth’ << root noun acc. *dánt-am*, *tṛbhi-* m. ‘star’ << instr. pl. **tṛbhis* (cf. *stṛbhis* RV; Knobl 2009: 120 ff., with many more Vedic examples). These of course are not the result of derivation.

my teacher's'.³⁴ Koasati has a similar suffix added to locatives: *tiyá:li-fa-kitt-on hí:ca-l* stepping-LOC-ART-ACC.FOC see-1SG 'I see its footprints (lit., place where he stepped)'.³⁵ And, somewhat along the lines of Jasanoff (1978) on the deinstrumental source of the *ē*-statives, Basque provides examples of denominative verbs productively derived from the allative or instrumental of nouns: *etxe-ra* house-ALL → *etxeratu* 'to go home, take s.o. home', *mahai-gain-era* tabletop-ALL → *mahagaineratu* 'to put sth. on the table', *ur-ez-ta* water-INSTR-TA → *ureztatu* 'to water' (vs. *ur-tu* 'to become water, melt').³⁶ Further examples of verbs derived decasually come from some Australian languages like Warlbiri and Warumungu, where allatives can form the basis for causatives; thus Warlbiri *walya-kurra-ma-ni* ground-ALL-CAUS-NPST 'land (e.g. a plane) on the ground', Warumungu *jalkkaji-kkina-rni-nta* spearthrower-ALL-CAUS-PRES 'put (e.g. a spear) on a spearthrower'.³⁷

These data could be expanded, but the point that they make is clear: decasuality is in fact a cross-linguistically well-attested phenomenon. And an important additional point needs to be made in the form of a particularly useful generalization drawn some time ago by Booij (1993: 42–45) but not widely reproduced.³⁸ The background to this generalization is the familiar observation that two types of nominal cases are to be distinguished cross-linguistically: those used to express core syntactic arguments like subject and object, versus those used for more peripheral roles in the clause like instrument and locational relations.³⁹ Booij's observation was that it is the peripheral cases, not the core structural cases, that cross-linguistically can serve as the basis for derivation in decasual formations. The relevance of all this for our Indo-European

34 Kullmann and Tserenpil (2015: 105) and Tim Leonard, p.c. This type of derivation is mischaracterized as 'deadverbial' in S. Anderson (1988: 180 & 1992: 127), see n. 29 above.

35 Malchukov (2009: 637) (with minor corrections from Kimball 1991: 409), who also describes the diachrony. An anonymous referee queried this structure, wondering if syntactic cases are phrasal markers rather than word-level markers. The material in Kimball's grammar does not suggest that this is the case.

36 Berro Urrizelki (2015: 101–06); cf. already in general Garnett (1846: 9–10) with much more decasual material from this language. There is apparently some dispute about the correct interpretation of the suffix *-ta* in the instrumental examples, but that should not detract from the overall import.

37 Booij (1993: 43).

38 So far only by Miller (2006: 4), as far as I have seen. Some earlier discussion can be found in Chapman (1996).

39 See e.g. Booij (1993); Blake (2001: 31–33); Asbury (2008: 7–9); Haspelmath (2009: 508); Malchukov (2009: 637); and Spencer (2009: 193–94 & 197). The types are variously labeled core vs. peripheral, grammatical vs. semantic, abstract vs. concrete, contextual vs. inherent, and structural vs. inherent.

topic is obvious. Not only is decasuativity in Indo-European typologically paralleled, but the specific *kinds* of proposed decasuatives, namely delocatives, deinstrumentals, and degenitivals, fit squarely in the mold of what is typologically *expected* for such formations: the instrumental and locative are classic peripheral cases, and the genitive probably counts as one too at least for Indo-European, though there is some debate over its position in this hierarchy cross-linguistically.⁴⁰

Thus our first conclusion is that decasuativity cannot be ruled out *in principle* as a process available to the Indo-European derivational-morphological toolkit. Now it is true, as an anonymous referee points out, that the cross-linguistic data I have assembled do not include much by way of deinstrumentals, which are so prominent among proposed Indo-European decasuatives, and furthermore only include an instance of deinstrumentally derived verbs rather than nouns—also in contrast to the bulk of scholarly proposals in this domain. My purpose in the previous sections was simply to show that decasuativity exists in the world in a relatively healthy way, and I do not think the specific gap identified by the referee means much one way or the other. First of all, it may well be accidental: given that the cross-linguistic data in § 2 were gathered by only one researcher with limited time (myself), the odds are that there are many more examples and patterns of decasuativity yet to be brought to our attention. And second, there must be some allowance made to each language and language family for having its own cut to its jib; neither nominal derivational suffixes nor individual instantiations of the instrumental case are functionally or structurally comparable in every respect across different languages. Note that this has an important flip-side: even if there were a thousand languages with robust deinstrumental nominal derivation, that would not prove its validity for reconstructed stages of Indo-European. Its believability for IE must be judged on other, family-internal, language-internal, and case-specific criteria instead. Those matters will occupy us for the remainder of this paper.

⁴⁰ Incorrect, therefore, is this remark of Sproat (1992: 362) on nominal plurals serving as the basis for derivation: 'One would be significantly more surprised to find (in a language with nominal case) that instrumental noun forms are selected to serve as the basis for lexical derivation.'

3 Further contemporary criticisms

3.1 Overview

We come first to three further points and suggestions on the parts of Lundquist, Yates, and Ozoliņš that are, indeed, more family- and language-internal. Lundquist & Yates (2017: 2107–08) aver that

none of the ancient IE languages show compelling evidence for productive ‘decasuative’ derivation; rather, commonly adduced examples are drawn from reconstructed stages of these languages, as is the case for Ved. *dán̥ya-* (no direct reflex of PIE **dóm-i* is attested in the RV).

This makes them skeptical that ancestral stages of those languages or PIE could have had decasuative derivation, either. As an alternative, they suggest that some to-be-defined subset of the proposed decasuatives (basically, those that are most convincing) may be better interpreted instead as deadverbials (ibid. p. 2108):

Some proposed examples of decasuative derivation are more likely derived directly from adverbs, for example the Vedic adjective *purā-ṇá-* ‘old’ from the adverb *purā́* ‘formerly’ (itself historically the petrified instr.sg. of a root noun). ... Unless comparable cross-linguistic parallels for synchronic ‘decasuative’ derivation can be identified, it may be necessary to limit the ‘decasuative’ hypothesis to forms that could plausibly have passed through an intermediate historical stage in which the inflected case-form had grammaticalized as an adverb (and whose derivation would thus be deadverbial).

In a similar vein, Ozoliņš (2015: 62) set up a sort of wish-list of conditions for believable decasuative derivations:

- a. The formation in question must involve a stem generally amenable to locative semantics relating to time or location;
- b. This would be facilitated either by a case form that had become paradigmatically isolated due to adverbialization (i.e. a paradigmatic locative), or,
- c. The case form would have become morphologically opaque and ‘bleached’ of grammatical clarity (i.e. an old endless locative).

The combined thrust of these remarks by Lundquist & Yates and Ozoliņš is that convincing etymologies that have been termed ‘decasuatives’ (or that retro-

actively could be so labeled) will not actually turn out to be decasuatives in the strict sense, but rather only derivatives from historical case-forms. The third point, voiced by Lundquist to me in a personal communication, is that the burden placed in recent scholarship specifically upon the instrumental as a derivational basis is problematic when accounting for forms in branches where that case disappeared—especially Italic, the beneficiary of a particularly impressive number of deinstrumental proposals in recent scholarship. According to Lundquist, the problem here is not that we might not expect many deinstrumental forms in a branch where the instrumental was lost early,⁴¹ but rather that, since the loss of the instrumental in (pre-)Italic was instead tolerably recent,⁴² an inherited deinstrumental derivational process should not have suddenly ceased operations just because the phonological shape of the synchronic instrumental (by Italic times historically an ablative) had changed. This expectation was also expressed by an anonymous referee.

3.2 *Would an inherited decasuative process automatically live on?*

The last of the points above is to my mind the least problematic for the decasuative approach and will be dealt with first. I am quite unsure whether I share Lundquist's and the referee's expectation that an inherited deinstrumental derivational process should live on in spite of the changed morphophonological landscape described above. Every morphological process is a piece of knowledge that forms part of a synchronic grammar and that has to be deduced afresh from the primary language data (PLD) by each new learner; it has no built-in continuous long-term viability or independent existence. We must ask, at each reconstructible stage, whether the data that learners were exposed to allowed the deduction of a given process. The core of Italic forms that Nussbaum and others have argued are deinstrumentals are isolated and look old, whatever else one may think of them (e.g. Lat. *amīcus* 'friend', *marīta* 'wife', *aegrōtus* 'sick'). So one can easily imagine, for example, that after some genera-

41 After all, such early disappearance could, a bit paradoxically, actually *increase* the chances of historical instrumentals serving as bases for derivation: a moribund instrumental case is a rich source of adverbs from which deadverbials could be generated.

42 The merger of the instrumental with the ablative happened before the breakup of Italic but after the breakup of Italo-Celtic (assuming the existence of this node). Celtiberian attests the spread of ablative **-d* (> *-z*) from the *o*-stems to the ablatives of other stem-classes exactly as in Italic, and it is reasonable to take this as a defining innovation of Italo-Celtic. Cf. Weiss (2009: 213² & 2020: 230²). (The spread of *-t* in Young Avestan ablatives proceeded along rather different lines.) The instrumental, however, was still a separate case in Celtiberian (*sua* 'in this way, thus', without *-z*).

tions of language change, a learner of pre-Italic or pre-Latin acquired originally deinstrumental forms like **amīkos* and **marītā* but not their instrumental bases **amī* and **marī*. The non-acquisition of the latter could have happened for any of the usual reasons, e.g. the instrumental was getting replaced by the ablative, or there had been semantic change obscuring the relationship, or the base nouns themselves were extinct *tout court*. Such learners could not have drawn a derivational connection between **amīkos* and **amī* (etc.), and this sort of situation only became more common. To be sure, new deinstrumentals may have continued to be created, but at some point on the way to Italic when the old instrumental and the new ablative-instrumental were in competition with one another, a learner who was still able to perceive that (e.g.) **uestītos* was derived from the (old-fashioned?) instrumental **uestī* may not have made the generalization that one could add **-tos* to any form functioning as an instrumental, but rather deduced that **-tos* could only be added to forms ending in long vowel, which were rapidly dying out. The step from that understanding to (e.g.) coming up with a new rule that lengthened a short stem-vowel before **-tos* is quite small.⁴³ And forms like *aegrōtus* that were in principle still transparent may not have constituted a robust enough trigger in any case.

The anonymous referee further opined that ‘decasuative derivation does not in principle depend on the phonological realization of the case-ending’; therefore, if there had been a deinstrumental process before the syncretism of ablative and instrumental, it should have continued to produce deinstrumentals even though the instrumental slot was now filled formally by the ablative. This argument is difficult to discuss productively because of the unbounded set of hypotheticals attending the putative decasuative process. Assuming that such a thing existed before the syncretism of ablative and instrumental, nothing constrains our imagination in conceiving the details of that process and theorizing what inputs were allowed. And if it was primarily or only a deinstrumental process, is it licit to continue speaking of an instrumental at all after the instrumental-ablative syncretism? It is noteworthy that extremely few deablativals have been forwarded in decasuative scholarship beside the plethora of deinstrumentals.⁴⁴ If ablatives were never licit inputs to a decasuative process in IE, then it should not be taken for granted that the new Italic ablative, even

43 Assuming such a rule was not already in existence. In Nussbaum’s framework, deinstrumentalism produced presuffixal lengthening (or its immediate ancestor) already in PIE. See §5 below for fuller discussion.

44 See n. 80 below for the tiny smattering of proposed deablativals that I know of, plus the couple from older scholarship mentioned in nn. 4 & 6.

with its 'expanded' instrumental semantics,⁴⁵ was any more licit an input than its formal predecessor had been. I would not want to exclude the possibility that the final dental limited its ability to combine with consonant-initial suffixes, at a time when the language was arguably gradually moving away from such combinations.

3.3 *The deadverbial suggestion*

We will return later in a couple of other contexts to the issue of whether any of the branches provides evidence of having inherited a living decasuative process from an earlier stage of Indo-European. Let us now move on to the suggestions forwarded by Lundquist & Yates, with comparable remarks voiced by Ozoliņš, that at least some proposed decasuatives might better be understood not as built to synchronically living case-forms, but as deadverbials.⁴⁶ It is inarguably the case that deadverbials are much more widely (and securely) attested than decasuatives in Indo-European. And interestingly, the feeling that it might be a good thing to play the adverbialization card when arguing for a decasuative analysis already figured in Jasanoff's (1978) proposal of the deinstrumental origin of the *ē*-statives,⁴⁷ and several of the 19th-century sources listed at the outset combined delocative and deadverbial derivation in the same discussion. (The dividing line between the two is of course not clear-cut.) As will be shown below, though, deadverbials as a group have a very different semantic profile from most of the proposed decasuatives, which, consequently, are unlikely to be reclassifiable in this way (whatever else one chooses to do with them).

45 Which n.b. may not have been all that expanded anyway, given the inherent overlap in instrumental and ablative as expressing cause and source; cf. Delbrück (1893: 195).

46 I shall ignore the possible red herring that the term 'adverb' introduces, since functionally and structurally all sorts of oblique case-forms could be seen as 'adverbial' entirely on their own (cf. *hastily* = instr. *with haste*).

47 His account at that time was that predicative instrumentals like Ved. *gúhā* 'in hiding' were reinterpreted as 3sg. verb forms, and he motivated this reanalysis partly on the basis of the obsolescence of such root-noun instrumentals, and specifically uses the term 'adverb' in that context. Since then, he has revised his conception of how this derivation was effectualized both morphologically and semantically, preferring to focus on the adjectival rather than adverbial character of the predicate instrumentals (cf. § 4 below). Under either version of his theory, though, the basic point is the same—that such instrumentals, or at least a core of them, were perceived as something other than living instrumentals at the time they were captured as derivational bases.

3.3.1 Profile of deadverbials in Indo-European

Deadverbials in Indo-European have not to my knowledge received any comprehensive treatment. Grammars of the individual languages, as well as other studies, tend just to mention individual examples, sometimes with brief discussion.⁴⁸ It has occasionally been pointed out⁴⁹ that they are built to adverbs of time and location. The comparative material that I have gathered and analyzed below confirms this general impression and allows us to fine-tune it somewhat. My collection is not exhaustive, but I believe it is reasonably complete for several of the languages; and since the same semantic patterns keep recurring, more data is unlikely to change the picture significantly. In the tables below, I have broken the forms down by the meanings of the adverbial bases, and have limited myself almost entirely to those derivatives whose adverbial bases are still synchronically in the language. The bases are usually adverbs of temporal or spatial deixis. Consequently, adjectives derived from such forms often function as souped-up deictics or demonstratives—more specific ways of saying ‘this’ or ‘that’ with reference to time or place.

First I present the forms built to temporal adverbs, usually basic time indicators like *today/tomorrow/yesterday*, *in the morning/night*, *this year/last year*, and *recently/long ago*, often (like most of these) groupable as oppositional pairs, plus a smattering of adverbs of frequency like *again* and *often*:⁵⁰

‘before’, ‘after’ Ved. *pra-tná-* ‘former, old’ ← *prá* ‘before’; Skt. *purastāt-tna-* ‘preceding’ ← *purástāt* ‘before’, *purā-tana-*, *prāk-tana-* ‘former’

48 Cf. among others Brugmann (1906: 164–65 & 407–08); Schwyzler (1950: 179); Debrunner (1957: 592–93); Bailey (1997); and Melchert (2009).

49 As by Chantraine (1933: 39); Schwyzler (1950: 179); and Debrunner (1957: 592).

50 Because of unclarity concerning their antiquity, I have omitted forms based on adverbs of season like Ved. *hemantá-* ‘occurring in winter’ and Gk. *ἐαρινός* ‘occurring in spring’, which could be synchronically derivable from the adverbs *héman* ‘in winter’, *ἐαρί* ‘in spring’, but are often thought to be much older. For the most part I am also omitting forms like Lat. *antemeridiānus* ‘happening in the morning’ ← *ante meridiem* ‘before noon’, *suburbānus* ‘located close to the city’ ← *sub urbe* ‘close to the city’, which are often treated as dephrasal derivatives (usually termed ‘hypostases’; cf. further §6) but are typically just the result of compounding. To be sure, the dividing line can be pretty thin between such forms and those like *extemporāneus* ← *ex(-)tempore*. Importantly, one cannot trust the handbooks that all such forms are hypostases of actual adverbial phrases. A strongly cautionary tale is that of the *Paradebeispiel* Lat. *subsōlānus*, which is said to derive from the phrase *sub sōle* (e.g. Leumann 1977: 265), but *subsōlānus* means ‘easterly’ whereas *sub sōle* just means ‘under the sun, in the sunshine’, and in fact has been rendered as ‘towards the south’ at Sall. *Iug.* 18.9 (e.g. in the translations of J.C. Rolfe and S.A. Handford)!

← *purá, prák* 'formerly'; Gk. πρότερος 'earlier' ← πρό 'before'; NHG *ehemalig* 'former' ← *ehemals* 'formerly', *vorig* 'former' ← *vor* 'before'; Gk. μετασσος 'occurring later, born afterwards' ← μετά 'after'; Lat. *posterus* 'later' ← *post* 'after'⁵¹

'today',
'tomorrow',
'yesterday'

Skt. *adya-tana-* 'of today' ← *adyá* 'today'; Lat. *hodiernus* 'of today' ← *hodiē* 'today'; OHG *hiutig* 'of today' ← *hiutu* 'today'; Russ. *sevodnjašnij* 'of today' ← *sevodnja* 'today'; Ved. *śvās-tana-* 'of tomorrow' ← *śvās* 'tomorrow'; Lat. *crāstinus* 'of tomorrow' ← *crās* 'tomorrow'; OHG *mor(ge)nec* 'of tomorrow' ← *morgen* 'tomorrow'; Russ. *zavtrašnij* 'of tomorrow' ← *zavtra* 'tomorrow', *poslezavtrašnij* 'of the day after tomorrow' ← *poslezavtra* 'the day after tomorrow'; Skt. *hyas-tana-* 'of yesterday' ← *hyás* 'yesterday'; Lat. *prīdiānus* 'happening the day before' ← *prīdiē* 'on the day before'; OHG *gēsterig* 'of yesterday' ← *gēsteren* 'yesterday'; Russ. *včerašnij* 'of yesterday' ← *včera* 'yesterday', *pozavčerašnij* 'of the day before yesterday' ← *pozavčera* 'the day before yesterday'

'in the
morning/
early', 'in the
evening/at
night'

Ved. *prātas-tāna-*, Skt. *prātas-tya-* 'occurring in the morning' ← *prātár* 'early in the morning'; Skt. *prage-tana-* 'early in the morning' ← *prage* 'at dawn', *prāhṇe-tana-* 'occurring in the morning' ← *prāhṇe* 'in the morning'; Gk. ἑωθινός 'occurring in the morning' ← *ἑῶθι (cf. ἡῶθι) 'in the morning'; LLat. *mānicāre* 'come early in the morning' ← *māne* 'early in the morning'; Skt. *doṣā-tana-*, *sāyan-tana-* 'occurring in the evening' ← *doṣā*, *sāyám* 'in the evening'; Lat. *noctuābundus* 'having traveled all night' (Cic.), *noctua* 'night-owl' ← *noctū* 'at night'

'this year', 'last
year'

Lat. *hornōtinus* 'occurring this year' ← *hornō* 'this year'; Germ. (dial.) *heurig* 'occurring this year' ← *heuer* 'this year'; Skt. *parut-tna-* 'of last year' ← *parut* 'last year', *parāri-tna-* 'of the year before last' ← *parāri* 'the year before last'; Gk. περυσινός, Myc. *pe-ru-si-no-wo* 'last year's' ← πέρυσι 'last year'⁵²

51 I do not see evidence for the existence of *parastāt-tna-* 'following' ← *parástāt* 'further on' cited in Debrunner (1957: 593), but it would be built exactly like *purastāt-tna-*.

52 Or ablative **perutim* per Vine (2009a).

'now'	Ved. <i>nūt(a)na-</i> 'contemporary, new' ← <i>nú/nú</i> 'now', <i>adhunā-tána-</i> 'present' ← <i>adhunā</i> 'now', <i>idā-tana-</i> , <i>idānīn-tana-</i> 'id.' ← <i>idā</i> , <i>idānīm</i> 'now'; Gk. ἄρτια 'things to the purpose, suitable things' ← ἄρτι 'just now'; MHG <i>ieze</i> 'of now' ← <i>iez</i> 'now'; NHG <i>derzeitig</i> 'contemporary' ← <i>derzeit</i> 'now, currently'; Russ. <i>teperešnij</i> 'contemporary' ← <i>teper</i> 'now', <i>nynešnij</i> 'present' ← <i>nyne</i> 'now'; Lith. <i>nūnas</i> 'of now' ← <i>nūn</i> 'now', ⁵³ <i>dabartinās</i> , <i>dabartinės</i> 'id.' ← <i>dabar</i> 'now'
'recently', 'long ago', 'for- merly, then, in the past'	Lat. <i>nūperus</i> 'newly arrived' ← <i>nūper</i> 'recently'; Russ. <i>daveš-nij</i> 'recent' ← <i>daveča</i> 'recently'; Hitt. <i>karuili-</i> 'former' ← <i>karū</i> 'formerly'; Skt. <i>tadānīn-tana-</i> 'of that time' ← <i>tadānīm</i> 'then'; Gk. παλαιός 'old' ← πάλαι 'long ago'; OHG <i>fornic</i> 'ancient' ← <i>forn</i> 'before'; NHG <i>damalig</i> 'of that time' ← <i>damals</i> 'then', <i>ein-stig</i> 'belonging to former times' ← <i>einst</i> 'once upon a time'; Russ. <i>togdašnij</i> 'of that time' ← <i>togda</i> 'then', <i>iskonnij</i> 'age-old' ← <i>iskoni</i> 'from time immemorial'
'always, forever'	Skt. <i>sadā-tana-</i> 'eternal' ← <i>sādā</i> 'always'; Av. <i>yauuaētāt-</i> 'perpetuity' ← <i>yauuōi</i> 'forever'; Gk. ἄϊδιος 'eternal' ← ἄϊ(ν) 'forever'; ⁵⁴ Lat. <i>sempiternus</i> 'eternal' ← <i>semper</i> 'always'; Russ. <i>vsegdašnij</i> 'habitual' ← <i>vsegda</i> 'always'
'again', 'x number of times'	Lat. <i>iterāre</i> 'repeat' ← <i>iterum</i> 'again'; OHG <i>avaren</i> , <i>abaren</i> , <i>avarōn</i> 'repeat' ← <i>avur</i> , <i>abur</i> 'again, a second time'; ⁵⁵ NHG adjs. in <i>-malig</i> 'happening x times' (e.g. <i>einmalig</i> , <i>zweimalig</i> , <i>abermalig</i>) ← advs. in <i>-mal</i> 'x times', <i>anderweitig</i> 'occurring elsewhere' ← <i>anderweit</i> 'a second time, otherwise'
'for a long time', 'for a short time'	Skt. <i>ciran-tana-</i> 'existing since long ago' ← <i>cirām</i> 'for a long time'; Lat. <i>diūtinus</i> 'lasting a long time' ← <i>diū</i> 'for a long time'; Gk. μινυνθάδιος 'short-lived' ← μινυνθα 'for a short while'
'straightaway, at once, suddenly'	Ved. <i>makṣūyī-</i> 'swift' ← <i>makṣū</i> 'soon, suddenly'; Gk. ἀφάρτε-ρος 'swifter' ← ἄφαρ 'straightaway', αἰφνίδιος 'sudden' ← αἰφνής 'suddenly'; LLat. <i>subitāre</i> 'surprise', VLat. <i>*subitānus</i> 'sudden'

53 Petit (2009: 319¹⁵).

54 The adjective is Attic-Ionic, the adverb Aeolic, < **aīwi*.

55 Bailey (1997: 89).

(> Old Ven. *sotan*, Fr. *soudain*, Prov. *soptan*) ← *subitō* ‘suddenly’;⁵⁶ NHG *sofortig* ← *sofort* ‘right away’, *baldig* ‘occurring soon’ ← *bald* ‘soon’

other Lat. *cottidiānus* ‘daily’ ← *cottidiē* ‘daily’, *extemporālis* ‘without premeditation’ ← *ex tempore* ‘on the spur of the moment’, *sērōtinus* ‘belated’ ← *sērō* ‘late’; OHG *oftig* ‘occurring often’ ← *ofto* ‘often’

Next come the forms derived from locational or spatial adverbs. Almost all the bases are very basic expressions that can also be grouped as oppositional pairs, like *here/there*, *near/far*, *above/below*, *inside/outside*, plus a small number of others:

‘here/near’, Ved. *arvāk-tana-* ‘situated on this side’ ← *arvāk* ‘hither’, *āvāt-* ‘there/far/away’ ‘nearness’ (AV) ← *ā* ‘hither’; Skt. *iha-tya-* ‘located here’ ← *ihá* ‘here’; Gk. ἄρχιμος ‘near’, ἄρχιξαι ἐγγίσαι Hsch. ← ἄρχι ‘near’, ἐγγύτης ‘nearness’ ← ἐγγύς ‘near’; OHG *nāhhlihōn* ‘approach’ ← *nāhhliho* ‘nearly’; NHG *hie(s)ig* ‘situated here’ ← *hie* ‘here’, *diesseitig* ‘situated on this side’ ← *diesseits* ‘on this side’; Russ. *zdešnij* ‘local’ ← *zdes* ‘here’, *tutošnij* ‘local’ ← *tut* ‘here’; Hitt. *tuwala-* ‘distant’ ← *tuwa* ‘at a distance’; Ved. *parāvāt-* ‘distance’ ← *pārā* ‘away’; Skt. *tatra-tya-* ‘located over there’ ← *táttra* ‘there’, *tatas-tya-* ‘proceeding thence’ ← *tátas* ‘thence’; Gk. ἕκαστος ‘each, separately’ ← ἑκάς ‘*off by himself, far off’; OHG *ferrēn/firren* ‘be distant, distance oneself’ ← *ferro* ‘far’ (or already NWGmc., cf. OS *firrian*, OFr. *fira*, OE *firran*, ON *firra*); NHG *dortig* ‘situated there’ ← *dort* ‘there’, *jenseitig* ‘situated on that side’ ← *jenseits* ‘on that side’; Russ. *tamošnij* ‘local’ ← OESl. *tamo* ‘there’

‘above/up’, Hitt. *šarāzziya-* ‘upper’ ← *šarā* ‘up’; Ved. *upari-tana-* ‘upper’ ← ‘below/down’ *upāri* ‘above’, *udvāt-* ‘height’ ← *úd* ‘up’; Lat. *superus* ‘situated

56 Meyer-Lübke (1968: s.v. *sūbito*). I leave out Ved. *muhūrtā-* ‘moment, short space of time’ ← *múhur* ‘suddenly; for a little while’, which only becomes a full-fledged noun in later texts but starts out just as an adverbial *muhūrtám* ‘in/for an instant’ RV III 2× (same poet). Cf. below, n. 119. *EWaia* follows the competing view that it is a compound of **h₂rto-*.

- above', *superāre* 'overtop' ← *super* 'above';⁵⁷ *supernus* 'situated above' ← *superne* 'above';⁵⁸ OHG *ūfōn* 'pile up' (NWGmc. verb), *ūf(f)en* 'bring forth', *ūfinōn* 'disclose', *giūffaren* 'reveal, uncover' ← *ūf* 'above'; MHG *überec* 'left over' ← *über* 'over'; NHG *obig* 'above(mentioned)' ← *ob(er)* 'above'; Ved. *nivát-* 'depth', *nimná-* 'directed downward; (subst.) depth' ← *ní* 'down'; Skt. *adhas-tana-* 'lower' ← *adhás* 'below'; OHG *nidaren* 'reduce oneself' ← *nidar* 'down(wards)'
- 'in', 'out' Skt. *antas-tya-* 'intestine' ← *antás* 'inside'; Gk. ἐντόσθια, ἐντοσθίδια 'entrails' ← ἔντοσθε(ν) 'from within'; Lat. *intrāre* 'enter' ← *intrā* 'within, inside', *penitus* 'interior' ← *penitus* '(from) within'; OHG *innōn* 'incorporate into one's circle', MHG *innec* 'located within' ← *inne* 'within'; Gk. ἐκτότης 'absence' ← ἐκτός 'without; outside', ἐξωτικός 'foreign' ← ἔξω 'out of';⁵⁹ Lat. *exter* 'external' ← *ex* 'outside', *extrāre* 'leave' ← *extrā* 'outside'; LLat. *extrīnsecus* 'outer' ← *extrīnsecus* 'from outside'; OHG *ūzen/ūzōn* 'banish' ← *ūz* 'out' (NWGmc. verb); Russ. *vnešnij* 'exterior' ← *vne* 'out of' (OCS *vŭněštĭnŭ*), *naružnyj* 'external' ← *naružu* 'outside'
- 'opposite',
'face-to-face',
'against' Gk. ἀντίος 'face-to-face' ← ἀντί 'opposite' (could also be older, cp. Lat. *antiae*, OHG *andi/endi*), ἀντάω 'meet face to face', ἀνταῖος 'set over against' ← ἀντα 'opposite'; OHG *gaganen/geginen* 'meet, encounter', *gaganōn/geginōn* 'set up a meeting' ← *gagan* 'against' (or already NWGmc.), *widaren/widarōn* 'reject' ← *widar* 'against'; NHG *widrig* 'repellent' ← *wider* 'against'
- 'front'/'forth'/
'forward',
'back(ward)' Hitt. *parā-ⁱ* 'appears' ← *parā* 'forth';⁶⁰ Ved. *pravát-* 'road going forward' ← *prá* 'forwards'; Gk. (ἐμ)πρόσθιος, προσθίδιος 'foremost' ← (ἐμ)πρόσθε(ν) 'in front', πρύμνη 'prow', πρυμνός '*growing out of', πρόμνοι Aesch. 'leading' ← πρό 'before,

57 Probably not *superus*; Mignot (1969: 281).

58 For this direction of the derivation see E.-M. s.v. *super*.

59 The supposed word ἐσωτικός 'internal, of the household' ← ἔσω 'within' that appears in some older literature is actually a variant of ἐξωτικός; see Robert (1936: 121).

60 Oettinger (1979: 472), Melchert (2009: 336).

forward';⁶¹ Lat. *antenna* 'yardarm' ← *ante* 'before';⁶² OHG *fremmen* 'effect' ← *fram* 'forward' (or already NWGmc., cf. OS *fremmian*, OFr. *frem(m)a*, OE *fremman*, ON *fremja*); NHG *vorig* 'previous' ← *vor* 'before'; Hitt. *appezziya-* 'hindmost' ← *appā* 'back';⁶³ Gk. ὀπίσθιος, ὀπισθίδιος 'hind(-)' ← ὀπίσθε(ν) 'behind'; Sp. *redruña* 'left hand', *redrar* 'go back' ← *redro* 'backwards'; OHG *biforōn* 'take care of, put right, oversee' ← *bifora* 'back(wards)'⁶⁴

'together',
'apart' Ved. *saṃvát-* 'side' ← *sám* 'together'; OHG *samanōn* 'gather together' ← **saman* 'together' (Gmc. verb); Hitt. *šanna-i* 'conceal' ← **šanna* 'separately' (cf. *šannapi* 'in an isolated place'), *šannapili-* 'empty' ← *šannapi* 'scattered here and there, separated, apart'; Gk. χωρίζω 'separate' ← χωρί(ς) 'apart', νοσφίδιος 'clandestine', νοσφίζομαι 'shrink back', etc. ← νόσφι 'aloof, off to the side'; OHG *suntarig* 'separate', *suntarōn* 'sunder' ← *suntar* 'separately, apart'

'between', 'in
the middle' Ved. *madhyāyú-* 'seeking (the one) in the middle' ← *madhyá* 'in the middle';⁶⁵ Gk. μεταξύτης 'middle position' ← μεταξύ 'in between'

'around' Gk. ἄμφιον 'garment' ← ἀμφί 'around'; Russ. *okrestnyj* 'surrounding, neighboring' ← *okrest* (arch.) 'around'

'through(out)' Russ. *splošnoj* 'continuous' ← *sploš* 'throughout', *skvoznoj* 'transparent' ← *skvoz* 'through'

61 See Forssman (1964); πρῦμνός refers to the part of something connected to something else, whence often 'thickest (part of)'.
62 Forssman (1964).
63 Though formally identical to Ved. *ápatya-* 'offspring' and almost identical with Lith. *apačią* 'bottom', the Hittite form seems to be a separate creation.
64 Bailey (1997: 9).
65 Debrunner (1957: 847) mentions that *madhyāyú-* could just be **madhya-yú-* with lengthening, but then it ought to mean 'seeking the middle', which is not what the context demands (it is a hapax at RV I 173.10d). Note that the previous pāda contains *mitrāyú-* 'seeking an ally' (also a hapax) with genuine metrical lengthening. The poet does seem to be playing on the possible meanings or non-meanings of the long vowel. Earlier in the hymn in verse 2 there is a third *m*-initial *yú*-hapax, *mandayú-* 'exuberant', with no lengthening.

- 'at home',
'abroad' Ved. *amātya*- 'companion' ← *amā* 'at home'; Gk. (Cret.) ἐνδο-
θίδιος 'of the household' ← ἔνδοθι 'within, at home'; Russ.
domašnij 'domestic' ← *doma* 'at home'; Skt. *anyatas-tya*-
(*jāyin*-) '(conquering) the enemy' ← *anyatās* 'from elsewhere';
Lat. *peregrīnus* 'foreign' ← *peregrī* 'abroad'
- other Hitt. *appa*-ⁱ 'be finished' ← *appa* 'off';⁶⁶ Ved. *āvis-tya*- 'man-
ifest' ← *āvis* 'obviously'; Lat. *obuius* 'located in the way' ←
obuiam 'in the way';⁶⁷ NHG *beiderseitig* 'situated on both
sides' ← *beiderseits* 'on both sides, mutually'; Russ. *nikudyšnyj*
'worthless' ← *nikuda* 'to nowhere'

When we move to other categories of adverbial bases, the number of deriva-
tives drops precipitously. Only a few manner adverbs function as sources for
deadverbials; most widely found are expressions for 'in secret' and 'in vain'.⁶⁸
The miscellaneous remaining forms are built to pretty basic expressions, plus
several that veer towards exhibiting deixis:

- 'secretly' Ved. *sasvartā* 'secretly', instr. of **sasvarta*- ← *sasvár* 'secretly';
Gk. κρυφαῖος 'hidden, secret' ← κρύφα, κρυφαῖ 'in secret',
λαθραῖος 'secret' ← λάθρᾳ 'by stealth'; Lat. *clandestīnus* 'secret'
← *clam* (or **clam-de*) 'secretly'
- 'in vain' Gk. μαψίδιος 'vain, false' ← μάψ 'in vain'; Lat. *frūstrāre* 'delude,
baffle' ← *frūstrā* 'in vain'; OHG *arawingōn* 'go off, miss' ←
arawingo 'in vain';⁶⁹ Russ. *zrjašnyj* 'empty, vain' ← *zrja* 'to no
purpose'
- other Gk. ῥᾶδιος/ῥῆδιος 'easy' ← ῥέα, ῥᾶ 'easily'; Lat. *nimius* 'exces-
sive' ← *nimis* 'too, excessively', *temerārius* 'accidental, reckless'
← *temere* 'blindly', *sēdulus* 'diligent' ← *sēdulō* 'carefully', possi-
bly *idōneus* 'useful' if < **ideōneus* < **ideōnus* 'dafür-ig' ←

66 Melchert (2009: 335) with lit.

67 *peruius* 'traversable' is said to be built to an adverb *peruiam*, but the evidence for this
adverb is extremely thin.

68 Cf. the importance of Ved. *gúhā* 'in hiding' and *mśā* 'in vain' in Jasanoff's (1978) account
of the origin of the *ē*-statives.

69 Bailey (1997: 86).

ideō ‘for that reason’;⁷⁰ OHG *bazēn* ‘become better’ ← *baz* (adv.) ‘better’;⁷¹ *anderwīsōn* ‘change, transform’ ← *anderwīs* ‘otherwise’;⁷² NHG *etwaig* ‘possible’ ← *etwa* ‘perhaps’, (arch.) *allenfallsig*, *d(i)esfallsig* ← *allenfalls* ‘if need be’, *d(i)esfalls* ‘in this case’, *jeweilig* ‘respective’ ← *jeweils* ‘respectively’; Russ. *vzapravdašnij* ‘real’ ← *vzapravdu* ‘in truth, really’

All that is left is a smattering of numerical adverbial bases:

- ‘half(-way)’ Lith. *pusiautinas* ‘half-way’, *pusėtinās* ‘fairly complete’ ← *pusiáu* ‘half-way’, *pūsė* ‘half’⁷³
- ‘twice’ etc. Lat. *bīnī*, *ternī*, *quaternī* ‘two, three, four at a time’ ← *bis*, *ter*, *quater* ‘twice, thrice, four times’; Gk. *τριχθάδιος* ‘threefold’ ← *τριχθά* ‘in(to) three parts’

Crucial for our purposes is what we do *not* see represented among the adverbial bases: those with rich lexical content. Even modern German, which is unusually profligate in the production of deadverbial adjectives among the languages I surveyed,⁷⁴ does not have such forms. Thus in the last row of the manner-adverb table marked ‘other,’ almost all the examples are from German, but the adverbial semantic kernels are still very basic (and in the case of *d(i)esfallsig* and *jeweilig*, also deictic in nature).⁷⁵

70 Leumann (1922: 123).

71 Bailey (1997: 93).

72 Bailey (1997: 85).

73 Cf. Leskien (1891: 407 (257)).

74 Especially in German bureaucratic language, which makes heavy use of attributive adjectives and thus encourages the conversion of other parts of speech into attributive modifiers.

75 The English attributive adjectives of manner, of the type *a heavy smoker*, *an elegant dancer*, *an early riser*, have been called deadverbial (Radden & Dirven 2007: 152); in predicative position only a scalar, not a manner, interpretation is possible (*the smoker is heavy*, *the dancer is elegant*, *the riser is early*). It is true that attributive adjectives of manner indicate the manner of the verbal action underlying the head agent noun. But I very much doubt that they are genuinely derived from adverbs as the term ‘deadverbial’ implies; claiming that the scalar attributive *heavy* is a separate lexical item from the manner attributive *heavy* would be extremely costly. (Schönefeld 2010: 276 in fact objects to Radden & Dirven’s use of ‘deadverbial’ in her review of their book.) Probably we are dealing instead with agent-noun nominalizations of whole V+Adv. phrases (*heavy smoker* ← *smoke heavily*, *elegant dancer* ← *dance elegantly*, etc.).

3.3.2 Profile of proposed decasuatives

We may now compare the semantic profile of these deadverbials with the semantics of decasuatives proposed in literature of the past several decades, of which I have collected as many as I could.⁷⁶

There are a smattering where the semantics are comparable:⁷⁷

Lat. *mātūrus* ‘early’, *futūrus* ‘about to be, future’ ← instr./adv. **mātū* ‘at an early time’, **futū* ‘in the future’ (Fortson 2007: 88)

Lat. (*Māter*) *Mātūta* perh. ← **mātūt-* ← **meh₂-tuh₁* instr. ‘at the proper/early time’ (Pike 2011: 215, with reference to Fortson 2007: 88)

Perhaps, but a bit doubtfully, to be placed here as well is the group consisting of Hitt. *šāudišt-*, *šāwidišt-* ‘suckling, of suckling age’, Ved. *saṃvatsarā-* ‘a single year’, Gk. οἰέτεας *Il.* 2.765 ‘of the same age’ ← gen. **sm̥-uet-es* ‘during (one and) the same year’ and derived locative **uet-s-er* ‘in a year’ (Vine 2009b: 213–14, cf. also Lundquist 2014: 94 with n. 10). For reference, I add a couple below that are derived from *en-* and *er-* ‘locatives,’ even though (per §1) it is not assured that such forms were synchronic paradigmatic cases:⁷⁸

Hitt. *išpant-* ‘night(time)’ < **k^wspen-t-* ‘that which is at night’ ← **k^wsep-en* ‘at night’ (Nussbaum 1998)

Ved. *dārā-* ‘wife’ < **dṛh₂r-ó-* ‘in/of the house’ and Gk. δάμαρτ- ‘wife’ < **dṛh₂r-t-* ‘the one in the house’, both ← **dṛh₂-ér* ‘in the house’ (Nussbaum 1996 & 1998)

76 There are surely others that I have missed; I have not, for instance, scoured *NIL* for all the decasuative proposals populating its pages.

77 I omit the oft-cited Hitt. *gimmant-* ‘winter’ < **ḡheimen-t-* ‘the thing in winter = winter’ ← **ḡheimen* ‘in winter’ (Nussbaum 1998), which cannot be equated directly with Ved. *hemant^o* because the Hittite geminate cannot continue single intervocalic **m*. This was pointed out already by Melchert (1984: 70 & 146–47), who reconstructed **ḡhei-mn-ont-* or **ḡhi-mn-ont-*. Cf. also Rieken 1999: 77 and Kloekhorst 2008: s.v. *gimm-*. It is of course possible, as suggested in *NIL* s.v. **ḡhej-om* n. 16, that *gimmant-* is remade from **gimant-* under the influence of the stem *gimm-* < **ḡhi-mn-*, but that is hardly a sure thing. I also omit Lith. *žemaitis* ‘lowlander’, *aukštaitis* ‘highlander’, taken by Weiss (2006: 266) as delocativals, which maybe they are at a formal-historical level (Stang 1966: 276 lists the formal phonological possibilities), but synchronically they are deadverbials (to *žemai* ‘low’, *aukštai* ‘high’).

78 The sporadic addition of *-i* to such forms does not prove that they were paradigmatic locatives, cf. **perut* ‘last year’, an adverb in reconstructible PIE, becoming **peruti* outside of Indo-Iranian (cf. Debrunner & Wackernagel 1930: 43).

At least two others have bases that might pattern with the basic manner adverbs above in § 3.3.1 (first table):

Ved. *samā-ná-* 'in common' ← instr. **samā* 'same' (Nussbaum 1998)⁷⁹
 Lat. *festināre* 'hasten' ← **b^hrist-ih₁* 'with haste' (Vine 1999: 79 ff.)

But the vast bulk of proposed decasuatives could not stand in sharper semantic contrast with the deadverbials. The ones that I have collected are reproduced below in the order in which they were published or presented, with a minimum of annotation.⁸⁰

Gk. μέδιμνος 'bushel' ← loc. **medi* 'measure' ('ins Maß gehend'; Forssman 1964: 25–26⁴)
 Lat. *auī-tus* 'ancestral' ← gen. *auī* 'of one's grandfather' (Leumann 1977: 413; Nussbaum 1998)
 Lat. *erī-lis* 'of one's master' ← *erī* gen. 'master's' (Leumann 1977: 350 & 413; Nussbaum 1998)

79 See n. 85 below.

80 I have omitted the more speculative deep-time derivations of forms like **med^hios*, **alios* from hypothetical case-forms or pseudo-case-forms (**me-dhi*, **ali*). I also omit derivations on the basis of supposed dental-final instrumentals, including Pinault (1980) (Vedic nouns in *-it* ← instr. **-i-t*); Peters (2002: 371 with n. 64) (Gk. Ἀρτεμίτ- ← instr. **artemi-t* 'Unversehrtheit', cf. ἀρτεμής 'unversehrt'; Χάριτ- 'Grace(s)' ← **χαρι-τ* 'with grace'; *huzāmit-* 'being of good birth' ← **huzāmi-t* 'with good birth'); and Garnier (2015–16) (Lat. *-idus* adjs. ← instr. **-id* to *i*-abstracts + *-o-*; *forda* 'pregnant' ← **b^hor(i)-d*; Gk. ἀκίδ- 'spear tip'), none of which is plausible without good evidence for the existence of such instrumentals outside Anatolian. Willms's (2016: 102) derivation of Lat. *pecud-*, *herēd-* from an ablative is not semantically convincing. The derivation of the name of Boeotia from abl. **Boiōt* to Βοῖον (ἄρος) (Schwyzer 1939: 503) is unlikely; decasuative derivatives of place-names generally come from locatives, and even if the people came, following the legend, from Mt. Boios, Boeotia would not really lend itself to being called 'the place (away) from Mt. Boios'. I also omit the following two items. Hitt. *gim(ma)ra-* 'field, open country' was taken by Eichner (1979: 57⁴⁹) as ← loc. **d^hġhem-er* (cp. Av. *zamar-*), followed by Nussbaum (1986: 222 with nn. 5 & 243), but Kloekhorst (2008: s.v. *gimra-*) says this is not possible phonetically (cf. Hajnal 1992: 210¹⁸), which may well be right given the retained dental in CLuv. *tiyamm-* 'earth' < **d^hġhem-*. Ved. *vāyavyā-* '(living) in the air' has been taken as ← loc. **vāyav-i* to *vāyú-* 'wind' by Nussbaum (1998), but the addition of *-(i)ya-* to *u*-stems produces *-arya-*/*-aryā-* productively (e.g. *paśarya-* 'stockade', *vasarya-* 'wealth'); furthermore, the variant *u*-stem locative ending *-avi* in animate nouns (the only inanimate example being *sānavi* 'on the back' 9x) is a peculiarity of Book VIII and almost solely found in proper names (*Ānavi* and *Drūhyavi* 10.5, *Trasādasyavi* 49.10 [Vāl.], *Dāsyavi* 'the Dasyu' 6.14, *Pāvīravī* 51.9 [Vāl.], *Vīṣṇavi* 3.8, 12.16, *sūnāvi* 68.15). By contrast, *vāyavyā-* is a hapax in Book X and not from the proper name *Vāyú-*.

- Lat. (*rāna*) *rubēta* ‘type of poisonous toad’ ← **h₁rud^h-eh₁* ‘with redness’;
 sim. *acētum* ‘vinegar’, *olētum* ‘excrement’ (Nussbaum 1996 & 1998)
- Gk. πολίτης ‘citizen’ ← **polh₁-ih₁-t-* ‘the one with a polis’ ← instr. **polh₁-ih₁*
 (Nussbaum 1996 & 1998)
- Gk. χολωτός ‘angry’, Lith. *ragúotas* ‘horned’, OCS *bogatŭ* ‘rich’, Lat. *aegrō-*
tus ‘sick’ (← *aegrum* ‘distress’), U. *vaputu* ‘endowed with a sharp stone’,
 OE *we(o)rod* ‘endowed with an army, crowd’ all < instr. **-oh₁* + **-to-*
 (Nussbaum 1998; García Ramón 2010: 81 with nn. 35 & 37)
- OCS *mastitŭ* ‘fatty’, Lat. *crīnītus* ‘(long-)haired’ < instr. **-ih₁* + **-to-* (or
 could be analogical; Nussbaum 1998)
- Lat. *cornūtus* ‘horned’ < instr. **-uh₁* + **-to-* (Nussbaum 1998)
- Lat. types *Bellōna*, *Portūnus*, *Fortūna*, Gk. ἐχῖνος ‘hedgehog’ < **‘having a*
*snake’*⁸¹ < instr. in **-oh₁/*-ih₁/*-uh₁* + zero-grade of ‘individualizing’
-on-*, thematized (-h₁-on*⁸² → **-h₁-n-o-*) (Nussbaum 1998)
- maybe Arc. Locr. κοινάν, Ion. κοινέων, Att. κοινών ‘companion, partner’
 < **-āiōn-* or **-āsōn-*, and if the former, best analyzed as dat.-inst.
**-āi+on-* to a **koināi* ‘in common’ (still in Arg. κοινᾶ, Boeot. κυνή, Att.-
 Ion. κοινή), and **koināi-on-* = ‘the one in concert’ (Nussbaum 1998)
- Gk. ἐ(ι)ρωτάω ‘ask about’ ← **erūōtós* ← **h₁ry-oh₁* ‘by inquiry’ (Vine 2002
 [2004])
- Lat. denominational *-iōn-* (e.g. *dupliō*) and deverbal *-tiōn-* < instr. **-(t)ih₁-on-*
 (Nussbaum 2005 & 2006)
- Lat. *amicus* ← **h₁₂mh₃-ih₁* ‘with love’, *mendicus* ‘beggarly’ ← **mendih₁*
 ‘with deformity’ (Vine 2006)
- Goth. *fahēps* ‘joy’ < **pokeh₁-t-i-* ← instr. **pokeh₁* ‘with contentment’
 (Weiss 2006: 265–66)
- Gmc. **arbaidiz* ‘(agricultural) labor’ < **h₃orb^hoi-t-i-* ‘cultivation’ ←
**h₃orb^hoi-t-* ‘cultivator’ ← **h₃orb^hoi-* ‘in turning, in cultu’ (Weiss 2006:
 266)⁸³
- Lith. *Kauniētis* ‘one from Kaunas’, etc. ← locatives (Weiss 2006: 266)
- Ved. *vatsá-* ‘calf’, OIr. *feis* ‘sow’ (Celt. **uetsī*), perh. Alb. *viç* ‘calf’ ← gen.
**uet-es* ‘of a year’ (Vine 2009b: 216–17)
- Italic **-āsiŋo-* ← gen. **-ās* + **-iŋo-* (Weiss 2009: 277 & 2020: 297; similarly
 already Haudry 1982: 35)

81 He actually wrote ‘with snakes’. Note a bit of awkwardness in deriving forms like this and *cornūtus* from an instrumental *singular*.

82 Herein Nussbaum sees the origin of the ‘Hoffmann’ possessive suffix, an analysis also proposed independently in Haudry (1981: 63 & 1982: 50–51).

83 Printed there with *h₁*, evidently an error. For the semantics of the root see Weiss’s study.

- Lat. *terrēnus* 'belonging to dry land', *aliēnus* 'belonging to another' perh.
 ← loc. **terrai*, **aliai* (Weiss 2009: 288 & 289¹²⁰ & 2020: 308 & 309¹²⁷)
- Lat. abstr. suff. *-(t)iōn-* ← instr. **-(t)ih₁-* (Weiss 2009: 311–12 & 2020: 331–32)
- Lat. *imbūtus* 'steeped, suffused' < **en-d^h-u-h₁-to-* morphosemantically = 'infected, immersed, impregnated' (Weiss 2010: 198)
- Ved. *ṛd^hikā-* 'abundance' (?) RV VIII 78.4a (see *RVCommentary* ad loc.),
dṛśika-/dṛśikā- 'sight' ← instrumentals (Vine apud García Ramón 2010: 74¹⁴)
- Gk. πόλις 'city', Baltic **pili-* ← loc. in **-i* (Haudry 2011: 126)
- Lat. *salūs* (plus deriv. Pael. *Saluta* PN), *salūbris* < instr. **s^lh₂-u-h₁* 'with wholeness' (possibly > TA *salu* 'wholly') + **-t-* bzw. **-d^hli-* (Pike 2011: 202–05; he only writes this laryngealistically as a *Transponat*)
- Luv. *h¹irūn, -ūt-* 'oath' < instr. **h₂ēr-uh₁-* 'with shouting' (semantics?) + **-t-* (Pike 2011: 206–07)
- perhaps ultimately OPr. *kailūstiskun* 'health' if ← **koil-ūt-to-* (Pike 2011: 207–08)
- Lat. abstr. suff. **-tāt-* < instr. **-teh₂-h₁* plus **-t-* (but alternatives possible; Pike 2011: 217–18)
- Lat. *-tūdō* ← instr. **-tuh₁* + **-d-* (Pike 2011: 234–35)
- Lith. *šerdis* 'core' ← loc. **kerd* 'in the heart' (Villanueva Svensson 2011: 166–67.)
- Lat. *marīta* 'wife' ← instr. **m_r(r)-ih₁* 'with a youth' (Vine 2011: 266)
- Lat. *opīmus* 'fat, rich' ← instr. **opih₁* 'with wealth' like Gk. πῖ-μελής 'id.' (García Ramón 2012: 113)
- Lat. *salīua* 'saliva' ← **salīuo-* 'slimy' ← **salī* instr. 'with slime', Slavic denominal *-ivŭ* (type *řečivŭ* 'talkative' ← *řečī* 'speech') 'invites analysis' as a deinstrumental (Vine 2006 & 2016: 486–87)
- adj. suff. **-ēno-* (Balt. **-ėno-*, Lat. *-ēno-* in *aliēnus*, *Picēnus*, etc., maybe Iran. *-āna-* in names of inhabitants of particular places) < instr. **-eh₁-no-*; also Slav. **-ěn-* < **-eh₁-n-*, with *-n-* the zero-grade of the individualizing suff. (Schaffner 2014: 376, 377⁷⁰, 378, though he views **-eh₁* as a 'Zugehörigkeitssuffix' that 'might be' identical with the instrumental)

From *en-* and *er-* 'locatives':

- **h₃enb^h-ōn* 'belly' ← **h₃nb^h-én* 'at the navel' (Nussbaum 1986: 191)
- Gk. ἡπειρος, Dor. ἄπειρος '(mainland)' ← loc. **āp-er-i* to **āp-* 'water' (Balles 1997: 152)

- Arm. *getin* 'ground, land', Hitt. *udnē* 'land' (*'watery, riverine land'),
 CLuv. *wattaniya-* 'land' < **u(e)den-o-* ← loc. **ud-en* = 'in the water'
 (Oettinger 2000 & 2004 [2010]; similarly but to a different root, Nikolaev 2009: 470²⁴)
- Gk. X-(f)έτηρος 'having X years', Germ. **wepru-* 'lamb' ← loc. **uet-er* 'in a year' (Rau 2007)
- Germanic family of *sword* < **sh_{2/3}u-er-tó-* 'sharp' ← loc. (Nikolaev 2009)
- Gk. ὄνειρος 'vision' ← loc. **h₁oner-i* 'in a dream' (Nussbaum 1998; independently Nikolaev 2009: 466, but see Keydana 2016: 12)
- Lat. *femur* 'thigh' < **dhemur/-n-* 'thick muscle, thigh' ← loc. **dhmūén* 'in thickness' < **dhému-* **dhméu-s*, internal derivative of **dho/emu-* 'thickness' (Nikolaev 2009: 479)
- Ved. *vāsará-* 'auroral' ← (*)*vasar* 'at dawn, early' (in cpds.) (Lundquist 2014: 97)⁸⁴
- denumeral **-ero-* ultimately ← loc. **penk^w-er* 'in/on/at five' (Majer 2017)

To these may be added some putative decasuative verb formations (besides the theory of *ē*-statives from instrumentals of Jasanoff 1978: 122–26):

- Gk. ἀκέων ← instr. **ἀκῆ* (cf. ἀκᾶ Pi.) (Schwyzer 1939: 727, tentatively)
 **-ōje/o-* denominatives to instrumentals in **-oh₁* (e.g. Peters 1999: 310⁴⁴ and *passim*; Malzahn 2010: 401 ff.).
- χρή 'it is necessary' ← instr. **ǵ^{hr}-eh₁* '[es ist] mit Wollen > es wird gewollt' (Balles 2000 & 2006: 258–60)
- Gk. (οὐκ) ἀπίθησε ← **b^{hid}-eh₁* 'mit Gehorsam' (Peters 2007)
- Germanic III-weak verbs claimed by Dishington (2010 [2011]: 303–05) to have Caland affinities and to continue deinstrumental/stative **-eh₁(-)*
- Gk. δεῖ 'it is necessary', (μετα)μέλει 'it is a care' ← instr. **deusē* 'mit Mangel', **melē* 'mit Sorge' (Peters 2013: 235)
- Myc. (*jo-*)*a-se-so-si* 'sie werden sättigen' ← instr. **sadsē* < **sh₂(e)d-s-eh₁* or **satīē* < **sh₂-tī-eh₁* 'mit Sättigung' (Peters 2013: 236)

Except for scattered remarks and the forms I took the liberty of dismissing from consideration in nn. 77 & 80, it is not my intention to evaluate these claims individually, both for reasons of space and because my opinions are not particularly relevant to our larger purpose. But however one chooses to analyze these forms, the derivational bases as a rule evince much richer or more specific lexi-

84 Termed there deadverbial.

cal content than we saw with the deadverbials—‘with redness’, ‘with a polis’, ‘at the navel’, etc.—or have little in common with spatial or temporal deixis. And not many of the bases even seem like forms that would have lent themselves to adverbial lexicalization to begin with.

Thus Lundquist’s, Yates’s, and Ozoliņš’s suggestion to reinterpret some decasuatives as deadverbials is certainly thinkable for the first few examples in this subsection, and since the bases all happen to be reconstructed forms, nothing stands in the way of assuming they were adverbs at the time of derivation.⁸⁵ But for the overwhelming majority of the proposed decasuatives, it is much more difficult to entertain that approach. I repeat that this does not prove that these forms were instead generated decasuatively, an issue to which we will soon return; nor does it invalidate Lundquist et al.’s suggestion in any general way, which was not meant to encompass every proposed decasuative. Pursuing this line of inquiry was at any rate productive not only in establishing that deadverbial derivation has a particular semantic profile that can be used diagnostically, but also in showcasing the great semantic diversity of the proposed decasuatives as a group, which will have additional ramifications. We will avail ourselves of this diagnostic once again as soon as we address the last remaining of the three points in §3.1, namely Lundquist & Yates’s assertion that productive decasuativity is not attested in the historical period in any ancient Indo-European language.

3.4 *Living decasuatives*

3.4.1 Living decasuatives: Secure examples

Leaving aside some uncertainty regarding the label ‘productive’, decasuativity actually *is* attested from the living stages of ancient Indo-European languages (or from their very shallow prehistories), though there is indeed vanishingly little of it that I have been able to find, with one outlier to be deferred to §3.4.3. To be sure, there are likely some forms to be added to the material below that escaped my notice, and I hope other scholars can create a fuller list, but I do not expect that there are prodigious numbers of these forms that would alter my account. The strongest examples known to me are the set of Hittite degen-

85 It seems altogether likely for **mātū*, **futū*, and pre-Lat. **fristī* (> **ferstī(-)* > *festī(-)*), since the derivatives are confined to Latin and were surely created later than the pre-Italic loss of the instrumental. **k*sep-en* and **d̥mh₂-ér* are, again, not assuredly paradigmatic case-forms and could well have been adverbs. If *samānā-* is built to **samā* and its creation was recent, then it is probably deadverbial as well, since the *a*- and *ā*-stem instrumentals in *-ā* were on the retreat already by the time of the R̥gveda and the synchronically productive instrumental, which was also used as an adverb, was (fem.) *samáyā*.

ital adjectives consisting of *šielā-* ‘(that) of one, solitary, unmarried’, *II-ela-* ‘twosome’, *apella-* ‘belonging to that one’ ← gen. *šīēl*, *II-el*, and *apēl* (Hoffner 2006; Hoffner & Melchert 2008: 170–71);⁸⁶ the possibly nonce Hitt. *kuenzumnaš* ‘whatever his home’ (KBo 1.35 iii 9) ← gen. pl. **kuenzan* ‘of which(ever) people’; Arm. *aramb-i* ‘married woman’ ← instr. *aramb* ‘with a man’⁸⁷ (e.g. Meillet 1913: 35; Olsen 1999: 438);⁸⁸ Arm. *yolov(i-)* ‘numerous’ ← **i olov* ‘in great number(s)’ < **polu-b^{hi}* ‘with multitudes’;⁸⁹ and possibly OCS *utrěi* adj. ‘of tomorrow’ ← loc. *utrě* ‘in the morning’, if this last base form was not synchronically an adverb.⁹⁰

86 Rieken (2008) claimed that the *el*-genitives in Hittite are apocopated from **-e-lo-*, but it seems very unlikely that the forms noted by Hoffner (unfortunately not discussed by Rieken) are direct continuations of that earlier thematic formation.

I omit the free-standing genitive or *genetivus absolutus* of Hittite (Hoffner & Melchert 2008: 256–57 with references), where the genitive can stand for an exocentric appurtenant derivative of itself, of the type *šāwatarāš* ‘(the one) of the horn = hornplayer’, *tayazilaš* ‘(the one) of the theft = thief’, and *arḫa tarnummaš* ‘the one of the releasing = one to be released (from military service)’. Its synchronic analysis is disputed, but it does not appear that such genitives, in their exocentric meanings, were separate lexical entries (i.e., derivatives via a zero morpheme). Very rarely, separate lexical entries arose from them through reanalysis or conversion; see § 6 below with n. 139. Yakubovich’s (2006) interpretation of them as elliptical N + Gen. phrases with the head noun gapped is plausible for some examples, but I do not think every instance can be so explained. The quasi-agentive ones like *šāwatarāš* are probably modeled on Akkadian (type *ša bilti* ‘the one of the burden = porter’; H.C. Melchert, p.c.). Per Puhvel (2011) (a reference I also owe Melchert), we must simply admit that the synchronic grammar allowed genitives to be used exocentrically (or, which amounts to the same thing, metonymically), like *I’m going to Bill’s* in English, where no specific noun needs to be understood as gapped (and where of course *Bill’s* would not be considered a separate lexical entry).

87 Contra the explicit or implicit treatment in the handbooks, *kanamb-i* ‘married man’ is not a second independent instance of this in Armenian. The instrumental of *kin* ‘woman, wife’ is *knaw*, not **kanamb*; *kanambi* is modeled on the better-attested *arambi*. Cf. gen.-dat. pl. *kananc* ‘(alongside *kanac*)’ modeled on *aranc*. Pedersen’s (1906: 419) assumption of a collective **kanan* as the source of instr. **kanamb* is disposable. Cf. also now Matzinger (2005: 126–31) on the prehistoric constitution of the paradigm of *ayr* ‘man’.

88 *aṛn-i* ‘male’ mentioned by Jensen (1959: 43) as built to gen. *aṛn* ‘of a man’ is uncertain, as *aṛn-* could have simply been synchronically interpreted as the stem form; cf. Olsen (1999: 663 & 672), following Meillet (cf. n. 34 above). The same goes for derivatives of *asr* ‘wool’ in *asow-*, contra Jensen *ibid*.

89 Widmer (2004: 86–87), modifying Olsen (1999: 778 & 808). Widmer (*ibid*. p. 87¹⁵) considers **-b^{hi}* an adverbial suffix rather than a true case-form because of the adverbs *ardarew* ‘truly’, *ardewk* ‘certainly’ noted by Klingenschmitt (1992: 95), which continue a virtual **-e-b^{hi}*. But forms like *aysowhetew* ‘from now on’, *orovhetew* ‘because’ that appear to have started out as hypostases of instrumental phrases (*aysow*, *orov* instr. ‘this’, ‘which’, *het^o* ‘track’) might indicate that *-ev* was perceived as an instrumental synchronically, though it depends on the time at which the suffix *-ew* became involved.

90 I do not fully comprehend the reservations about this analysis in Petit (2009: 319¹⁵).

To this list could be added the various possessive pronominal adjectives built to genitives, of the type Germ. *mein*(-), *dein*(-), etc. ← gen. *mein*, *dein*, etc., Arm. *im*-, *k'o*(yo)- ← gen. *im* 'of me', *k'o* 'of you', Toch. B *cwi-ññe* 'of his' ← gen. *cwi* 'of him',⁹¹ etc.

3.4.2 Living decasuatives: Less secure examples

The others that I have seen mentioned in the literature are at best ambiguous. I fully expect that some of my doubts below, which buck over a century of *communis opinio* in a few cases, will be summarily rejected by some readers as anything from hypercautious to retrograde. But I believe I am simply being honest about the evidence. The big picture must be kept in view: even if I am wrong and even if these forms are secure examples of synchronically productive decasuativity, they do not add much additional bulk to the collection.

Ved. *apsavyà*- 'being in the water' MS+, *apsumánt*- 'having water as its nature' are on the surface built to the loc. pl. *apsú* 'in the waters' (Wackernagel 1905: 46 & 212). But it is likely that *apsú* (a very common form in the Rigveda) was reinterpreted as a stem-form in the same way as may have happened with *patsú* and *pr̥tsú* (the only Rigvedic form attested to this noun, 31×) to produce the notorious forms *patsutáh* 'at the feet' VIII 43.6a, I 32.8d (^ośt̥), *pr̥tsúsu* 'in battles' I 129.4e; cf. compounds in *apsu*- and *pr̥tsu*- (Wackernagel 1905: 46 & 212) and already the discussion in Bloomfield (1896: xxxvii n. ‡).

Gk. *μυχότατος* 'innermost, farthest from the door' *Od.* 21.146 is built to a formal locative **μυχῶι* to *μυχός* 'innermost part' that is equivalent to the Cypriot locative *μυχῶι*· ἐντός Hsch., but to judge by the gloss of the Cypriot form, **μυχῶι* like *μυχῶι* had surely become fossilized as an adverb.

Ved. *sahasāná*- 'showing might, mighty' has been claimed as a deinstrumental derivative of *sáhasā* 'with might' (Nussbaum 1998 & 2004; Jasanoff 2002–03: 148³⁵), though Insler (1968: 18–19), followed by Jamison (*RVCommentary* ad IV 3.6), took it as metathesized from perfect participle **sasahāná*- (> *sāsa-hāná*-, later *sehāná*-),⁹² buttressed by philological arguments.⁹³ I am not certain I find Insler's account convincing, but even if it is built directly to *sáhasā*,

91 Adams (2013: 1.278). I owe this last example to Francesco Burroni (p.c.).

92 Insler (1968: 19) postulated a phrase **sáhasā sasahāná*- 'victorious by might' that may have led to the generation of *sahasāná*- and for the type compared *śavasā śuśuvāmsā* 'swollen with swelling' ('swollen in expanse', Jamison & Brereton 2014) VII 93.2b, as well as *sáhasā śahasvān* VI 5.6b.

93 *sahasāvan* voc. 'O mighty one' is modeled on *sahasāná*-, and cf. *śavasāvan* 'strong one' I 62.11, in a hymn where *śavasāná*- occurs repeatedly.

the latter was synchronically often used adverbially (Insler loc. cit.), meaning *sahasāná-* could just be deadverbial.⁹⁴

Alongside *sahasāná-* are numerous other adjectives or pseudo-participles in *°asāná-*, mostly in the same semantic realm, that are ultimately modeled on it.⁹⁵ Insler is not clear to what extent he envisages these as deinstrumentals. He notes they are mostly correlated with adverbial instrumentals (p. 19), and proposes that the *Nebeneinander* of instr. *sáhasā* and (in his view originally not deinstrumental) *sahasāná-*, alongside pairs like *purá* ‘formerly’ ~ *purā-ñá-* ‘existing from formerly’, *bhiyá* ‘with fear’ ~ aor. part. *bhiyāná-* ‘fearing’ led to the reanalysis of *sahasāná-* as a deinstrumental and to the subsequent derivation of other such forms from instrumentals where these were prominent, or otherwise by analogy (ibid. 19–23). Again, for him these instrumentals were primarily adverbials; there is furthermore the strong possibility that *-āná-* or even the whole sequence *-asāná-* was interpreted as a suffix in its own right, acting like a middle participial suffix, especially given that the commonest of these forms, *mandasāná-* ‘exhilarated’, must be modeled on the participles *mándamāna-* and *mandāná-* and there is no noun *šmāndas-*. This is true, *mutatis mutandis*, of various others as well that are modeled on middle aorist participles (Insler 1968: 21–23).⁹⁶

Probably all researchers would include Gk. ἰφίος as a sure-fire deinstrumental, which has been derived from ἰφί ‘by force’ since antiquity.⁹⁷ I have no objection on the formal side,⁹⁸ but—without wishing to be tendentious—I do not consider the derivation secure because we do not know what ἰφίος means and the contexts in which ἰφί and ἰφίος occur could not be more different. The adjective is only attested as an epithet of small ungulates (sheep and/or goats) in the formulaic phrase ἰφία μῆλα;⁹⁹ it is traditionally translated with approbatory words drawn from the semantics of ἰφί itself—‘mighty’, ‘robust’, ‘strong’,

94 Cf. Grassmann’s (1873: s.v. *sáhas*) remark at the end of the citations for the instr. sg.: ‘bisweilen ... in die adverbiale Bedeutung hinüberspielend.’ Jamison & Brereton (2014) translate it adverbially twice, ‘forcefully’ (I 98.2) and ‘mightily’ (VI 48.5). Many other passages admit interpretation either as a full instrumental or as an adverb.

95 The commonest ones are *mandasāná-* ‘exhilarated’, *śavasāná-* ‘acting with might’, *vr̥dhasāná-* ‘grown strong’, and *rñjasāná-* ‘(going) straightways’, plus a proper name *Arśasāná-*.

96 I see from my class notes as a graduate student in 1995 that Calvert Watkins called *-āná-* in these forms a ‘pizzazz suffix.’

97 Going back at least as far as Herod. *De pros. cath.* p. 125.14–18 Lentz, discussing the formation of deadverbials with the suffix *-ιος*. I thank Francesca Schironi for the reference.

98 Note that Chantraine (1933: 77) is wrong to claim that ἰφίος has no digamma like (f)ἰφί, cf. πολλὰ δὲ ἰφία μῆλα (3×).

99 Almost always collocated with βόες ‘cows’.

‘fat’, ‘goodly’, and the like.¹⁰⁰ The problem is that ἰφι ‘by force’ only occurs in phrases having to do with ruling, fighting, or killing: ἰφι ἀνάσσειν ‘rule by force’, ἰφι κατέμειναι ‘killed by force’ *Il.* 3.375, ἰφι μάχεσθαι ‘fight with force’, ἰφι δαμῆναι ‘be conquered by force’. That ἰφι could generate an epithet straightforwardly applicable to sheep or goats is more than a little doubtful, as sheep in particular are prototypically nonaggressive animals not fabled for their might or forcefulness and (depending on the breed) among the smallest and weakest of domesticated ungulates¹⁰¹ (the giant sheep of Polyphemus notwithstanding). Goats can be more aggressive, but ‘mighty’ or ‘forceful’ is still not the most obvious label one would attach to them. Even if ἰφιος is a derivative of ἰφι and small epic ungulates or their formulaic ancestors were genuinely conceived as strong or forceful, it is probably also synchronically deadverbial, since ἰφι was no longer a productively generated case-form and, to judge by the use of -φι in the 2nd millennium B.C. in Mycenaean, had not been for quite a long time.¹⁰²

Since the 19th century, forms like Ved. *divyá-* ‘located in the sky, heavenly’ have been uncontroversially regarded as delocative (← *diví* ‘in the sky’), as said to be reflected in the frequent disyllabic scansion of the suffix (*divíyá-*).¹⁰³ The most cogent additional candidate in Vedic whose putative locative base is also attested is probably *hṛd́ya-* ‘in one’s heart, dear’; *kṣáḿya-* ‘earthly’ can be added too, though it only occurs twice and both times collocated with *divíyá-*, on which it appears to be modeled (though the accents differ). *dáḿya-* ‘domestic’ and *áṕya-* ‘belonging to the water, living in the water’ do not stand alongside attested locative bases.¹⁰⁴ There is little evidence for a productive

100 ἰφιος was understood to mean ‘strong’ in the Homeric scholia; see Cairns (2008). But other ancient scholars disagreed; see the next footnote. These views of course say nothing about what the word actually meant in Homer’s day, and the dispute only showcases its opacity already in post-Homeric Greek.

101 Indeed, this fact caused puzzlement for some ancient exegetes operating in the tradition that ἰφιος meant ‘strong’; they solved the problem by claiming that it actually meant ‘weak’, or that it meant ‘strong’ but was used of sheep euphemistically (ewe-phemistically?) or by antiphrasis. See the passages quoted in Cairns (2008: 217). For the Romans, sheep were prototypically weak or soft; cf. Horace’s *infirmas ouis* ‘weak sheep’ at *Ep.* 2.16 and other passages cited in Cairns’s study. (One could claim that Homer was being comical in referring to sheep as mighty. There is indeed more humor in Homer than many would care to admit, but probably not here.)

102 My best suggestion for upholding the traditional interpretation of ἰφιος is to take μῆλα as referring collectively to flocks of sheep or goats rather than the individual animals (as also at Aesch. fr. 158), with ἰφια then referring in an extended sense to their strong numbers. But this is a stretch.

103 For a list of the relevant forms see Arnold (1905: 84–85).

104 Cf. Lundquist & Yates (2017: 2107–08) on *dáḿya-*, quoted above in § 3.1.

consonant-stem *dam-* in the Rigveda. It is possible that the genitive *dán* is used in place of a locative at X 15.2a (I do not see a clear way of taking it as a genitive, and Jamison & Brereton 2014 translate it locatively) or that this is in fact an irregularly formed (bzw. analogically altered) endingless locative. The locative of 'house' was normally expressed by thematic *dáme* (41×); at any rate, whether a **dámi* ever existed is questionable.¹⁰⁵ And *ap-* 'water' is virtually a plurale tantum in Vedic, though a singular genitive *apáh* occurs very occasionally. It seems altogether more likely that *dám'ya-* is from *dáma-* and *áp'ya-* is simply built to the stem *ap-* in the normal way. Also to be excluded is *usríya-* 'ruddy', which is not from *usrí* 'at dawn' (hapax at V 53.14c) but rather from *usrá-* 'reddish color at dawn'. For *div'ya-*, *h'f'd'ya-*, and *kṣám'ya-* I again have no objection to a delocalival analysis in principle, but I cannot group them with the assured synchronic decasuatives. Because, as is well known, there is no established rhyme or reason for the synchronic distribution of *-ya-* and *-íya* (or *-íya-*) in Vedic or their equivalents anywhere else in Indo-European, with rhythmic factors like Sievers' Law and analogy having thoroughly muddled any original semantically based distribution, these forms are fully ambiguous between the segmentations *divi-yá-* etc. and *div-íyá-* etc. Until more clarity is achieved regarding the distribution, it remains a dicey proposition to cherry-pick from the semantically very diverse pool of forms with disyllabic *(*)-i(i)o-* those where delocalival derivation is formally and semantically plausible and on that basis claim that the disyllabic version of the suffix originally comes (or could come) from loc. **-i* + **(i)o-*. Note that if synchronic delocalival derivation were productive in Vedic, it would be difficult to explain why there are no forms in *-eya-*, for example, to the very common thematic locatives in *-e*.

The mostly 19th-century proposals listed above in nn. 4 and 6–14 include numerous forms that were (or still are) thought to have been decasuatively generated in the historical period (generally from locatives), but none except for the Lithuanian material to be discussed below in § 3.4.3 is clearly such. The many adjectives in *-ios* are all ambiguous between delocalival (or, depending on the form, dedatival) *-i* + *-(i)os* and simple suffixation with **-i(i)os* (see also § 6 below on the hypostasized phrases of this type). On the (non-decasuative) sources of the Greek adjectives in *-ειος*, *-ησιος*, et sim., see Schwyzler (1939: 466–68). Some are deadverbial, like Gk. *περυσινός* 'of last year' ← *πέρυσσι* 'last year'. The time adjectives like *ἐαρινός* 'of spring' are, again, ambiguous as to

105 The picture is bolstered by Avestan, where the normal loc. sg. is *dqm*; YAv. once has a renewed form *dqmi*.

their age (n. 50 above) and their bases, though formally locatives, are easily interpretable as adverbs of time anyway.

Two remaining uncertain decasuatives may finally be appended. Debrunner (1957: 699) notes inscriptional Skt. *salakhanapure-tya-* 'located in Salakhana-pura' (Chaulukya land-grant, Aṇhīlvād, Gujarāt, *Indian Antiquary* 6 [1877] 204, line 2), with *-tya-* suffixed to a locative, but he says it is in imitation of *dūretya-* 'located far away'. Bühler (1883: 580) attributes the form to Gujarati influence, citing *Salakhanapuramāṇnā* (nom. pl. of an adjective derived from the locative **pura-mām* 'in the city'). George Cardona (p.c.) agrees with Bühler; see also Cardona (1965: 144) for more on derivational affixes to locatives in Gujarati.¹⁰⁶ Thus *salakhanapuretya-* is not secure as a genuine home-grown Sanskrit decasuative. The second is Lat. *cruciāre* 'to torture, crucify', which has been derived from dat. *crucī*, supposedly abstracted from phrases like *crucī effigere* 'nail to a cross' (Leumann 1977: 546). It is true that the source of the *-i-* in *cruciāre* is a bit of a mystery, but if the truncation of case-endings typical of Latin delocutive verbs is any guide (cf. § 6 below), we would not expect the dative desinence to have been retained. Cf. the reservations in de Vaan (2008: s.v.) ('not a normal procedure in Latin'). Note that it cannot be excluded that *crux* was originally an *i*-stem, to which *cruciāre* would be the expected denominative. The genitive plural is not attested; Charisius (141.16 Keil = 178.25–29 Barwick) quotes a passage from the younger Pliny saying that *crux* has no *i* in the genitive plural, but by his time an originally *i*-stem genitive plural could have been replaced by productive consonant-stem *-um*, especially if the form was so rarely used.¹⁰⁷

3.4.3 Living decasuatives: Lithuanian definite locatives

One IE language where we do see pretty numerous examples of productive decasuativity is Old and dialectal Lithuanian, where the suffix *-jis*, used to derive definite adjectives, can be added instead to nominal locative singulars to form so-called definite locatives. From Lazūnai (= Lazduny, Belarus) come *dangujėjis* 'heavenly' ← *dangujė* loc. (< **dangujė*) and similarly *žemėjėjis* 'earthly', *peklojėjis* 'located in hell, infernal', *pragarėjis* 'id.', *viršujėjis* 'located above', *kalnėjis* 'located on a mountain, upper', *viduryjėjis* 'middle, inner', *dienojėjis* 'day-time (adj.)', *naktyjėjis* 'nighttime (adj.)', *duobėjėjis* 'located in a pit, lower', to which can be added Žem. *viduōjis* 'middle' ← loc. *viduō* 'in the middle', *viršuōjis* 'upper' (Stang 1966: 274; Senn 1966: 169; Parenti 1996: 69⁶); plus, from Priekulė (Klaipėda district, western Lithuania), *apatėjėjis* 'lower', *kraštėjėjis* '(of the) edge',

106 I am grateful to Prof. Cardona for consultation on the Gujarati facts.

107 Many Latin monosyllables lack the genitive plural (see e.g. Greenough et al. 1903: 43).

viršutėjis ‘upper’, *vidurėjis* ‘middle’, *ugnėjis* ‘flaming’, *vienatėjis* ‘sole’ (← *vienatis* ‘oneness, uniqueness’), *širdyjėjis* ‘of the heart’ (Otrębski 1965: 85–86; Parenti 1996: 67³, 69, 70).¹⁰⁸ In the dialect of Lazūnai, the suffix is also added to genitives, usually personal names (e.g. *Viľko-jis* ‘belonging to Vilkas’). In Priekulė, a wife can be referred to by the genitive of her husband’s name plus *-jis*, e.g. *Mártyno-ji* ‘Martynas’s wife’ (Parenti 1996: 71–72). Nineteenth-century dialect forms are also recorded with the genitive plural as base: *mūsųjis* ‘of ours’ ← *mūsų* gen. pl. ‘of us’, *žmoniųjis* ‘human’ ← *žmonių* gen. pl. ‘of people’, *pačiųjis* ‘relative’ ← *pačių* gen. pl. ‘of selves’ (Stang 1966: 274; Senn 1966: 169), *Prūsaičujis* ‘belonging to the family of the Prūsaičiai’ (Parenti 1996: 72). Otrębski (1965: 86) also notes, built to a genitive singular, *diėvojis* ‘divine’ ← *diėvo* ‘of God’. In all these cases the resultant definite adjectives mean ‘located in’ or ‘belonging to’ the substantive.¹⁰⁹

But these data, however rich, are the exception that proves the rule. Lithuanian, even what we call Old Lithuanian, and conservative though it may be in some respects, is a modern language, not an ancient one, separated from PIE by as much as five millennia. And though synchronically there is no way around the fact that *-jis* was a derivational adjective-producing suffix that could be added to living case-forms, diachronically matters are more complicated. Since this suffix results from a grammaticalization of the relative pronoun, its very status as a derivational suffix is innovatory, and so is the decasuative behavior. This decasuative behavior indeed cannot be separated from the erstwhile status of *-jis* as an independent word:¹¹⁰ what became a synchronic derivational process (addition of *-jis* to certain case forms) results from the univerbation of syntagms (of the type **dangujė jis* ‘the one who (is) in heaven’). Though these Lithuanian forms unquestionably attest productive decasuativity in the IE family writ large—the importance and interest of which I do not wish to underplay—they do not provide a straightforward parallel for decasuativity at the PIE level, with which they have no historical connection in any case.¹¹¹

108 The forms *ugnėjis*, *vienatėjis*, and *širdyjėjis* are built to the shorter locative ending *-y* (cf. Senn 1966: 98).

109 I am grateful to Daniel Petit for providing me the reference to Parenti and for some additional information.

110 Whence its somewhat greater positional freedom in Old Lithuanian, e.g. *pa-io-prasta* ‘usual (def.)’, *ne io-kaltoia* ‘not guilty (def.)’ (Stang 1966: 270).

111 An anonymous referee suggests that Old Lithuanian may be an outlier anyway given its innovated additional cases that could betoken contact-induced structural change, of which decasuativity could also be a part. That issue is beyond our scope, though I would tend to think that the diachrony of the definite relative is a home-grown phe-

Based on the above, though Lundquist & Yates were technically incorrect to say there is no true decasuativity in the attested histories of the IE daughter languages, its extent is so limited that one is hard-pressed not to arrive at the same doubts about its viability for earlier stages of IE. If we cleave closely to the comparative method, the meager evidence of living decasuativity in the daughter branches does not immediately cry out to be back-projected onto PIE in any more robust form. Even branches with living instrumentals, such as Indo-Iranian, do not have unambiguous evidence of productive synchronic deinstrumental derivation in the data that I collected above.¹¹² And there is no evidence that the processes that produced the forms in § 3.4.1 (or even § 3.4.2) are inherited from the proto-language, except in the rather vapid sense that, anywhere along the chronological continuum, every great once in a while, a living case-form of a word (drawn from a pretty restricted set, see directly below in § 4 as well as § 6) could be seized upon as a unit that constituted licit input to a derivational-suffixational process, with occasional more productive patterns arising independently under special circumstances. And it would be completely circular to claim that PIE had more productive decasuativity that did not survive into its descendants but that is reflected in the numerous proposals that collectively are our subject.

4 Plausibility of proposed prehistoric decasuatives

The proposals, in fact, need to be evaluated for their plausibility *qua* decasuatives before anything else. For this, we need simply compare them to the living decasuatives.

The first item to be considered, again, is the semantics. Starting with the Lithuanian definite relatives, though the nominal bases do indeed have full lexical content, the resulting decasuatives still pattern pretty much like the deadverbials in referring to basic locational and temporal relations: ‘above’, ‘upper’, ‘middle’, ‘at night’, etc.; even ‘in heaven’ and ‘in hell’ are effectively proxies for ‘above’ and ‘below’.¹¹³ To be sure, the existence of relational adjectives

nomenon. Even if, say, Uralic influence underlies the rise of the additional cases, I do not see anything in that family that would have been a straightforward model for the Lithuanian definite relative.

112 Even counting *sahasānā-* and its ilk, there were numerous contributing factors at work in their creation.

113 So also Otrębski (1965: 85) (‘built to the loc. sg. form of nouns occurring in the function of an adverb of place or time’); he notes (ibid. 85–86) a few forms built to adverbs: *artyjė-*

formed from the genitives of personal names might appear to run counter to this, but the properties of personal names intersect in various well-known ways with those of deictics.¹¹⁴ And if they are in any way exceptional, they are another exception that proves the rule: these forms arose through contact with Belarusian, which productively forms relational adjectives from proper names (Parenti 1996). As for the remaining scattered living decasuatives, most of them also pattern with the deadverbials, such as OCS *utrěi* ‘in the morning’ and the Hittite degenitival adjectives. Armenian *arambi* (a real deinstrumental!) is built to an item of very basic vocabulary—true also of Ved. *sahasāná-* and Gk. ἰφίλος if they turn out to be genuine decasuatives rather than deadverbials (or pseudo-participles in the case of the *-asāná-* family). The overall semantic feel of the living decasuatives is thus much like that of the deadverbials, and as we already saw, the proposed prehistoric decasuatives do not fit that mold. Note that some of the delocativals proposed in the 19th and early 20th centuries (nn. 4 ff. above) fare better in this regard.

Another fact that calls attention to itself is that the morphosemantic make-up of the prehistoric decasuatives proposed in recent scholarship does not resemble what is typical of the living decasuatives. This touches on what is to my mind a real problem with a lot of contemporary decasuative proposals, in particular the deinstrumental adjectives. In the living decasuative data, though a couple of details could be discussed, the combinations of case-form and suffix tend to make literal sense; we usually start with a locative or a genitive and the resulting form basically means the sum of its parts, something like ‘the one in X’ or ‘the one of X’. This is not true of many recent decasuative proposals I have seen. Probably the most conspicuous examples are the proposed deinstrumental adjectives with the suffix **-tó-*. As is well-known, this suffix formed possessive adjectives from nouns meaning ‘having/with/possessing (the noun)’.¹¹⁵ Like all suffixes in Indo-European, normally it was added to a root or stem, as in pre-Lat. **hones-* ‘honor’ → **hones-to-* (> Lat. *honestus*) ‘having honor’. But the putative deinstrumental *tó-* formations are no different semantically from the non-deinstrumental *tó-* formations, and I have not seen explicit

jis ‘near’ (adj.) ← *arti* ‘near’ (adv.), *aukštyjėjis* ‘upper, superior’ ← *aukštaĩ* ‘high’, *nūnqjis* ‘of now’ ← *nūnai* ‘now’, *paskūjis* ‘recent’ ← *paskuĩ* ‘afterwards, later’, *vidūjis* ‘internal’ ← *viduĩ* ‘inside’ (Samogitian *uojis* ← *uo*). Petit (2009: 318) saw the limited variety of the locatival bases but did not go into detail: ‘Les locatifs déterminés sont largement répandus en vieux lituanien, quoiqu’ils apparaissent limités à un petit nombre d’adjectifs.’

114 See e.g. Fillmore (1977); Fludernik (1991); and J. Anderson (2004).

115 Whether this **-tó-* is the same as the **-tó-* used to make verbal adjectives is not important here.

arguments that motivate the use of an instrumental as the input for the derivation rather than a root or stem as is normally the case. Put another way, the suffix **-tó-* conveyed possessive semantics all on its own; why would it need to be added to something that was already marked as possessive? This issue routinely gets evaded in the decasuative literature with a glossatorial sleight-of-hand: the instrumental base **X_[instr.]* is glossed with a phrase like ‘with *X*’ and the *tó*-adj. **X_[instr.]-tó-* that is built to it is then glossed ‘with *X* (adj.)’ or ‘possessing *X*’ or ‘(characterized by) being with *X*’ or the like.

To his considerable credit, Jasanoff (2002–03: 148³⁵) has at least put out an explicit claim in print about what **-tó-* is doing in these forms: he calls it an ‘attributive-forming suffix’ that could ‘supply declinable attributive adjectives to uninflected predicate instrumentals.’¹¹⁶ What he means—in spite of somewhat infelicitously terming instrumentals ‘uninflected’—is that **-tó-* could function as a conversion or hypostasizing suffix for making an attributive adjective out of something that was not one. To be sure, any adjective-deriving suffix that gets added to nouns functions that way at a basic level, since all such suffixes allow one to predicate some quality or property of another noun in the form of an attributive adjective. But that built-in conversion feature is epiphenomenal and at any rate not the central function of denominal **-tó-* as standardly reconstructed, which was to indicate possession. Crucially, I do not know of independent comparative evidence that **-tó-* was a conversion or hypostasizing suffix.

Other scholars (especially Balles 2006) have interpreted the instrumental bases as adjectives; under this view they were captured in predicative usage that was quasi-adjectival. But **-tó-* (and its conglutinative descendants) was not otherwise added to adjectives. Isolated apparent counterexamples have special explanations that do not change this picture.¹¹⁷ Another tack is to treat

116 Jasanoff also applied this statement to the suffix **-ent-*. Somewhat similar is Nussbaum’s vision of the prehistoric situation discussed below in § 5.

117 Fundamentally these sorts of forms are secondary extensions or renewals of existing adjectives using more productive morphology and are not derivatives, such as Av. *hukarəpta-* ‘well-shaped’ alongside *hukarəfš* ‘id.’, *masita-* ‘long’ alongside *mas-* ‘id.’ (or this is a thematized refashioning of *masit-* ‘id.’), Lat. *cān-ūtus* ‘grey’ alongside *cānus* ‘id.’, Eng. *hard-hearted*, *barefooted* refashioned from earlier *hard-heart*, *barefoot*, Lith. *purvinuotas* ‘dirty, muddy’ alongside *puṛvinas* ‘id.’; or they express a subtle difference, like Lat. *ātrātus* ‘covered in black’ alongside *āter* ‘black’, *crēbrātus* ‘closely woven’ alongside *crēber* ‘densely packed’. Ved. *hārīta-*, YAv. *zairīta-* ‘yellow, tawny’ alongside *hāri-*, *zairi-* ‘id.’ is probably analogical to other color terms in *-ita* like *rōhīta-* ‘red’ (YAv. *raoiḍīta-*), or (per Nussbaum 2006 & 2017: 261) are thematized from an intermediate *t*-stem (*harīt-* ‘*tawinness; bay mare’). Sometimes surface analogies are involved, e.g. Lat. *ūbertus* ‘rich (in style)’ (Gell. 6.14.7) alongside *ūber* ‘id.’ was probably inspired by the noun *ūbertās* ‘richness, fecundity’;

the instrumentals as adverbs: this also does not help since **-tó-* was not added to adverbs either,¹¹⁸ and anyway, once again, most of these forms are semantically not of a piece with typical deadverbials. Furthermore, at least in the attested languages, an attributive adjective that does mean the same thing as a predicative instrumental is, as far as I know, always an independent formation and not a derivative of the instrumental.¹¹⁹ A good example of this pattern comes from Vedic, where the adnominal formations that are notionally equivalent to predicative instrumentals are possessive adjectives in *-vant-*, of the type instr. *marúdbhir* ‘with the Maruts’ = adj. *marútvān*, instr. *prajāyā* ‘with offspring’ = adj. *prajāvān*, etc. (examples from Balles 2006: 265–66). In some cases, a predicative oblique form gets coopted as an adnominal in its own right, like the Latin dative *frūgī* ‘*for fruit, being a source of fruit’ (pred. dat.) = ‘worthy’ (used attributively—and indeclinably!).¹²⁰

*senectus** ‘old’ (especially in the phrase *senectā aetāte* ‘in old age’) may be based on the noun *senectūs* ‘old age’; Ved. *sūṇṛta* voc. ‘o generous one’ (> Cl. Skt. *sūṇṛta-* ‘friendly, joyful’) RV VIII 46.20b is based on *sūṇṛtā-* ‘generosity, liberality’ perhaps under the influence of its quasi-opposite *āṇṛta-* ‘without truth’ (Debrunner 1957: 589).

- 118 Again isolated counterexamples do not change the picture. At least the ones in Vedic that I know of are problematic or ambiguous and tend to be nominal and not adjectival when looked at more closely. *Avatā-* ‘well’ is a noun and there is no reason to think it is a substantivized adjective. *Muhūrtā-* ‘moment, short space of time’ ← *mūhur* ‘suddenly; for a little while’ only occurs as a noun used adverbially (*muhūrtām* RV III 2x; recall n. 56 above). Adverbs in *-tā* and *-tād* like *sasvārtā* ‘secretly’ ← *sasvār* ‘id.’, *avāstād* ‘below’ ← *avās* ‘down’, *prāktād* ‘from in front’ ← *prāk* ‘in front’ do not necessarily imply the existence of an intervening base in *-ta-*, which would have had to be substantival in any case (cf. Debrunner 1957: 590; *pace* Nussbaum 1996 and subsequent works). Av. *patarəta-*, said by Bartholomae to be from adv. **patarə* ‘in flight’ and glossed ‘flying’ in earlier literature, is nowadays understood instead to be a denominative adjective from **patar-* ‘wing’ (: Hitt. *pattar*) and is rendered ‘winged’ (de Vaan 2003: 590, following Gershevitch). Derivatives of season adverbs like *hemantā-* ‘winter’ ← loc./adv. *héman* ‘in winter’ (but possibly going back to PIE) are also nouns; at a proto-stage, according to Nussbaum (1996) and subsequent works, these are substantivized thematic adjectives that were themselves derived from *t*-derivatives (**ǵ^h(e)im-en* ‘in winter’ → **ǵ^him-en-t-* ‘what is in winter, winter weather’ → **ǵ^h(e)iment-o-* ‘winter weather-ish, wintry’). See further below, §5. From other languages, I will just mention Latin adjectives like *astūtus* ‘clever’ and *uersūtus* ‘wily’ that Vendryes (1920: 104–06) derived from adverbial/ablatival/instrumental *astū* ‘cleverly’, *uersū* ‘with turning’, etc., but this is unnecessary.

- 119 It may or may not be correct to insist on just *predicative* instrumentals being the source of deinstrumental adjectives or other deinstrumentals. But if it is correct to do so, then that is another reason not to take *sahasānā-* as a deinstrumental, since neither *sáhasā* nor *𐎱𐎠𐎼𐎿*—nor probably most manner adverbs—are used in that way. Armenian *arambi*, by contrast, seems a stronger candidate for having originated in predicative-instrumental usage.

- 120 The instrumental *drūṇā* ‘with wood’ has been interpreted as an adnominal instrumental of material, ‘wooden’, modifying *sadhāstha-* ‘seat’ at RV IX 1.2c, 65.6c, and (with implied

Another feature of the recent decasuative proposals calling attention to itself is their sheer quantity, which is almost stupefyingly larger than the very modest assortment of living decasuatives. The variety of different derivational suffixes across these proposals is also strikingly large by comparison.¹²¹ Perhaps this is not a problem in and of itself; after all, a good two millennia of linguistic history across numberless idiolects, sociolects, and dialects over hundreds of thousands of square miles transpired before the first attestation of any IE language, which would have given ample opportunity for even the most sporadic of processes to collectively produce scads of outputs by the end of the day. But combined with the sharply contrasting semantic profiles of the living versus the reconstructed decasuatives, this lopsidedness does give one pause.

Finally, a further semantic question that deinstrumental attributive adjectives in **-tó-* raise is whether they would have really meant the same thing as their putative adnominally used instrumental bases. As is well-known, possessives in *-tó-* express or imply inherent, permanent, or long-lasting attributes, whereas instrumentals (particularly predicate instrumentals) generally indicate temporary ones.¹²² As Balles (2006: 164) points out, the very prominent role of instrumentals in producing adverbs goes hand-in-glove with this, since modifying or characterizing a predicate typically involves a temporary circumstance. If pre-PIE speakers wanted to make an attributive adjective that had no other purpose than to allow an adnominal instrumental to agree in case and number with the modified head noun, **-tó-* (as well as several of the other suffixes claimed to have had deinstrumentalizing capabilities) may not have been the most obvious choice.

For all these reasons, I am not confident that most of the proposed decasuatives were such. It is in fact hard to escape the impression that decasuative derivation, especially deinstrumental derivation, has come to be used as a kind of catch-all account for divers words with presuffixal long vowels, with little attention paid to typological semantic plausibility, to family-internal pat-

sadhásthā-) 98.2c. If so, it would be another example where no need was felt to use an attributive adjective, cf. Balles (2006: 264⁴¹⁶). However, see Jamison, *RVCommentary* ad loc., for a different interpretation, with doubts about the existence of an instrumental of material in Vedic. For arguments that *gúhā* ‘in hiding’ and *mīṣā* ‘in vain’ are primarily adnominal rather than adverbial and for a new morphological analysis of them, see now Barth (2018: 153–59).

121 The decasuative proposals as a body encompass suffixation with **-d-*, **-dʰri-/dʰli-*, **-i̯o-/i̯ā-*, **-ko-*, **-lo-/li-*, **-mno-*, **-mo-*, **-no-*, **-o-*, **-(o)n-*, **-ro-*, **-t-*, **-ti-*, **-to-*, and **-uō-*.

122 Though its specific uses are an innovation of that family, the Slavic predicate instrumental ultimately conforms to this characterization as well. See Balles (2006: 236–44) with refs., and especially p. 241.

terms exhibited by exponents of the type, to any overall system into which the formations could be argued to fit, or to why the specific suffixes in question were added to a case-form. Some of the recently proposed delocatives to *er*- and *en*-locatives are similarly problematic, apparently motivated simply by the presence of an *r* or *n* before a derivational suffix. The problems I have sketched do not beset every single decasuative proposal, and to be clear I am not trying to deny the validity of the idea in any general way: given its existence in Lithuanian (however secondarily arisen) and in a few other places, of course we should explore if it is useful to propose for earlier stages of the family. But it is premature to take for granted extensive generalizability of decasuative derivation until it has been undergirded by, and systematically incorporated into, an overall theory of Proto-Indo-European word-formation that is consonant with the behavior of attested processes. As currently implemented in many quarters, it has become an unconstrained and overly powerful piece of theoretical apparatus.¹²³

5 Nussbaum on the prehistory of deinstrumental **-tó-* (preliminary discussion)

One way out of this clutch of problems might be the suggestion by Nussbaum (1996; 1998; 2004) that the ability to suffix **-tó-* to instrumentals resulted from the reanalysis of a derivational chain whereby an earlier complex of instrumental plus individualizing or nominalizing **-t-* was thematized to produce an adjective, and the resulting sequence of instr. + **-t-* + **-ó-* was reanalyzed as instr. + **-tó-*.¹²⁴ In his view, **-t-* was only added to adnominals—adjectives (including adjectival roots), adjectival compounds, and adnominally used case-forms like instrumentals and locatives. Thus the instrumental **h₁rud^h-eh₁* ‘with redness’, used adnominally, could form the basis of **h₁rud^h-eh₁-t-* ‘the one with redness’, from which was further derived **h₁rud^h-eh₁-t-ó-* ‘being one with redness, having redness’. The reinterpretation of this and similar forms as **h₁rud^h-eh₁-tó-* had the result of ‘expand[ing] the derivational domain of pre-existing **-tó-* (both in point of eligible bases and in point of derivational semantics)

¹²³ For what it is worth, Nussbaum himself (p.c.) agrees with this last statement (if not necessarily with the critique of deinstrumental **-tó-* or with sundry other details of my arguments), and feels that ‘collectives’ have been abused in much the same way.

¹²⁴ This paragraph combines material from the handouts of the just-cited talks by Nussbaum with some very helpful clarifications and updates communicated personally. I am, of course, solely responsible for its presentation.

and [of creating] more specifically a hypostatic decasuative **-tó-* which had not existed before' (email, 23 October 2019). Nussbaum leaves it open whether, in the first instance, this **-tó-* was a new suffix homonymous with already existing **-tó-* or was actually identified with the latter. By the time of the most recent reconstructible stage of the proto-language, in his view, forms like **ǵʰol-o-h₁-t(-)* 'being one with anger, angry' had been reanalyzed as **ǵʰol-o-h₁tó-*, i.e. **-tó-* had acquired an 'augmented' allomorph *-h₁tó-* when added to a stem ending in a short vowel.

Operating with a nominalizing or individualizing suffix (rather than a possessive suffix) that could be added decasuatively certainly avoids the morphosemantic problems raised above in connection with adding a possessive suffix to a case-form, and is typologically very easy to parallel, as we already saw (§ 2, and compare the Lithuanian definite locatives).¹²⁵ But it only works on the basis of the hope and promise that there were enough of these deinstrumental forms in the first place to allow the proposed reanalysis of the sequence **-h₁-t-ó-* as **-h₁-tó-*. And the believability of this reanalysis depends on the nature of the contemporaneous PLD¹²⁶ (about which we are utterly lacking in information), i.e. whether the reanalysis was motivatable based on the data learners were exposed to. Here we are dealing with fundamentally the same issue that was raised in § 4, now transferred to the acquisitional domain: if there was no difference in semantics between a standardly derived secondary form like **kleu-m_ṇ-tó-*¹²⁷ 'having a reputation, famous' and a deinstrumental form like **h₁rudheh₁-tó-* 'having redness, red(dish)', how would a kid know when to use an instrumental and when not to?

It also depends crucially on the accuracy of labeling reanalyzed **-tó-* as a hypostasizing suffix, assuming this means a conversion suffix (recall § 4), about which I have already voiced concerns. The proposed examples of decasuative derivation with **-to-* themselves cannot be touted as evidence for such a function without circularity.¹²⁸ Nussbaum proposes (email of 23 October 2019) that

125 Nominalizers can get added to pretty much anything cross-linguistically, including also inflected verbs and whole phrases and clauses. For some examples, see Lehmann (1984: 50 ff.) (Turkish, Dravidian, Quechua) and Michalowski (2004: 51–52) (Sumerian).

126 An anonymous referee found the use of this term in this context 'jarring'. But it is very deliberate: every time we make claims about reanalyses at any proto-stage, we must pause to think about their real-world believability, not just how elegant they look on paper. Reconstructed PIE is an abstraction, to be sure, but we are in the business of making claims about the unfolding of history, which involved real children learning real languages.

127 Assuming this accentuation in the first instance.

128 Nussbaum (p.c.) says that *-tus* in Lat. *auītus* 'of a grandfather, ancestral' can hardly be anything but a hypostasizing suffix. For further discussion of this, see the Appendix.

‘there was a precise model and thus positive encouragement for the recognition of a “new” hypostasizing **-tó-* beside pre-existing possessive **-tó-* in the unquestionable existence of a simple PIE **-ó-* that had both hypostasizing and possessive derivational function as far back as we can see.’ But the fact that there was another suffix in the language that acted as both hypostasizer and possessive does not seem to me, on its own, likely to motivate the reanalysis of a *different* possessive suffix as also a hypostasizer (bzw. the creation of a homonymous suffix that was one).¹²⁹

For those comfortable swimming in these primordial waters, there is a potential way around these difficulties. Jasanoff proposed (2003: 77 with n. 37 & 134–35 with n. 16) that **h₁* was lost between obstruents in non-initial syllables. This rule was devised to explain the fact that various instantiations of the PIE sigmatic desiderative suffix (namely, the Ilr. *syā*-future, the Greek future, and the OIr. long-vowel future) can be reconstructed as beginning with **-s^o* after an obstruent but otherwise with **-h₁s^o*. In the case of the Greek sigmatic future, for example, the result is that after obstruent-final stems the morpheme appears simply as *-se/o-* (type $\lambda\epsilon\acute{\iota}\pi\text{-}\sigma\omega$ [= $\lambda\epsilon\acute{\iota}\psi\omega$] ‘I will leave’) whereas addition of the suffix to a stem ending in short vowel is accompanied by lengthening of the vowel (type $\phi\acute{\iota}\lambda\acute{\eta}\sigma\omega$ ‘I will love’ [stem $\phi\acute{\iota}\lambda\epsilon\text{-}$]). The parallelism between the alternation *-T-s-* ~ *-V̄-s-* in the future and the alternation *-T-tó-* ~ *-V̄-tó-* in the possessive adjectives (types *hones-tus* ‘honorable’ ~ *uestitus* ‘clothed’ [stem *uesti-*]) is noteworthy.¹³⁰

Let us assume that this rule had come online already by the time that, or while, deinstrumentals in **-h₁-t(-ó)-* were being productively generated. We would expect that such forms were created from all stem-types. But Jasanoff’s rule would have automatically deleted the underlying laryngeal in any such forms derived from obstruent stems where the instrumental suffix was in the

129 By contrast, evidence for a hypostasizing use of **-no-* is stronger, cf. delocative (or dead-verbial) forms like Gk. $\epsilon\alpha\rho\acute{\iota}\nu\acute{o}\varsigma$ ‘occurring in springtime’ (or its ancestor, cf. Lat. *uernus*, Lith. *vasarinis*). Why **-to-* and **-no-*, otherwise functionally parallel suffixes, differ in this respect may or may not be an *explanandum*; they are, after all, different suffixes.

130 Resonant-final stems are more complicated, since the futures evidence a laryngeal (cf. e.g. Ved. *karīṣyáti*, *jíghāmsati*) while the *tó*-derivatives do not. But Jasanoff must be right that **h₁*-deletion did not happen after liquids and nasals (2003: 134–35¹⁶); cf. e.g. **h₂enh₁mos* ‘breath’. The absence of the laryngeal in **-tó*-derivatives of resonant-final stems would have to be analogical to the other consonant stems. (Note, tangentially, the implications of this for futures like $\epsilon\rho\acute{\epsilon}\omega$ that continue proximate **uerh₁-s^o*: since laryngeals pattern with resonants, such forms—if not analogical—must ultimately be the result of regular PIE degemination of **^oRh₁-h₁s^o* rather than the laryngeal-loss rule. It is also possible that any sequence of **-HH-* was simplified, whether the laryngeals were identical or not.)

zero-grade ($^{*o}s-h_i$, $^{*o}t-h_i$, etc.).¹³¹ Thus a form ending e.g. in underlying $^{*o}s-h_i-t-ó-$ would have surfaced as $^{*o}s-t-ó-$ and been formally (and functionally) identical to an ordinary secondary $^{*t-ó-}$ derivative in $^{*o}s-t-ó-$. Learners exposed to such data for whom the original morphological analysis of e.g. $^{*}g^hol-o-h_i-t-ó-$ was not recoverable would quite naturally have deduced a possessive suffix with two allomorphs, an ‘augmented’ $^{*}h_itó-$ after short-vowel stems and ‘unaugmented’ $^{*t-ó-}$ otherwise.¹³²

This scenario (suggested *exempli gratia*) avoids postulating a hypostasizing $^{*t-ó-}$ and the difficulties pertaining thereunto, and similar phonologically-based accounts might be available for other suffixes putatively involved in decasuative derivation.¹³³ However, it does rely on the reanalysis of the trimorphemic string $^{*}h_i-t-ó-$ as a monomorphemic allomorph of possessive $^{*t-ó-}$ happening in one fell swoop. More problematic for me is the fact that if possessive $^{*t-ó-}$ were already in existence, I continue not to understand what the difference was between a deinstrumental $^{*}g^hol-o-h_i-t-ó-$ and a regular non-deinstrumental $^{*}g^hol-o-t-ó-$, and what the motivation would have been for creating the former, more complicated, entity. And if much of the point of this enterprise is to account for the phenomenon of ‘presuffixal lengthening’,¹³⁴ there are

131 Assuming a zero-grade instrumental suffix. Cf. Hale (2010: 91 ff.) on the ablaut of this ending in the proterokinetic *s*-stems.

132 An anonymous referee suggested that the suffix was underlyingly the augmented form which was reduced by Jasanoff’s rule after obstruents. But this would require a separate rule of laryngeal deletion after resonants, and only for this suffix. Under the scenario outlined above, the use of $^{*t-ó-}$ rather than $^{*}h_itó-$ after resonants would be by analogy to the other consonant-stems.

Nikolaev (2012–13: 207⁹¹) ventured that $^{*to-}$ was originally added to instrumentals across the board; in the sequence $^{*}eh_2-h_i-to-$ the instrumental desinence was eliminated, and by analogy to the resulting truncated sequence $^{*}eh_2-to-$ it was eliminated in consonant stems elsewhere. But I do not see a motivation for his pandeinstrumentalistic starting point.

133 Nussbaum remarks (p.c.), for example, that the eventual distribution of these allomorphs of $^{*to-}$ according to stem-type is paralleled by $^{*no-}$, and notes that a phonological explanation could work here as well: if, as many believe, $^{*}sHn-$ was reduced to $^{*}sn-$ in the proto-language (the so-called *asnō*-rule, which goes back to Schmidt 1895: 87–92), then *s*-stem deinstrumentals in $^{*}s-h_i-no-$ would have been reduced to $^{*}s-no-$.

134 One of Nussbaum’s main arguments in favor of deinstrumental derivation is that it ‘explains simultaneously’ the following five items (Nussbaum 1998, rendered and punctuated here as prose): (1) Otherwise difficult L. *acētum* type; (2) the entire phenomenon of ‘pre-suffixal lengthening’; (3) the limitation of ‘pre-suffixal lengthening’ to $^{*to-}$ (which happens to have substantivizing $^{*}h_i-t-$ beside it) and $^{*no-}$ (which happens to have substantivizing $^{*}Hon-$ [= $^{*}h_i-on-$] beside it); (4) the origin of the ‘Hoffmann suffix’; and (5) the desubstantial $^{*}Hon-$ type (Av. *māθrān-*) and the de-adjectival $^{*on-}$ type (Av. *marātan-*) as basically one and the same.’ The point must be taken seriously, though it is only as

other ways of achieving that (not limited to the traditional warhorse of analogy) that could be profitably explored—for example, using the full-grade of the individualizing suffix (**ǵʰol-o-ot-*), cp. ἄργῆτ- < **h₂rǵ-e-et-* (Schindler 1976) or **h₂rǵ-e-ot-* (Nussbaum 2004, with a rule PIE **-eo-* > **-ē-*).¹³⁵

The above remarks are only intended to sketch a discussion of Nussbaum's scenario, a discussion which others must carry forward. The number of thinkable variants is vast. Important to keep in mind, though, is that even if such a framework can be cogently designed for pre-PIE, the comparative evidence for decasuativity at the level of reconstructible pre-breakup PIE is extremely slender. If productive decasuativity (or really any morphological process for which the comparative evidence is virtually lacking) is suggested for pre-PIE, the suggestion should ideally be accompanied by arguments not only for why one might think the process was there, but also for how it was later attenuated or lost.

6 Decasuatives and hypostases

The re-entrance of the term 'hypostasizer' into the above discussion brings us to our last topic, and will allow us to circle back to one of the points made by Lundquist, Yates, and Ozoliņš. As hinted at at the outset (n. 1), 'decasuative derivation' and 'hypostasis' can at times overlap, and, as will emerge, nailing down the specifics of this overlapping will be instructive.

Most of the time, there is a salient formal difference between decasuatives and what are generally termed hypostases in that the latter usually delete the inflectional termination of the base word or phrase before adding a derivational suffix. Such hypostases—let us call them Type A—come in at least two formal subtypes.

In the first subtype, the base is truncated, with its desinence replaced with a derivational suffix. Examples include delocutives¹³⁶ like Lat. *salūtāre* 'greet' ← *salūt(em (dare))* acc. '(give) a greeting', as well as, according to the traditional literature, masses of prepositional governing compounds ostensibly derived from prepositional phrases, of the type Lat. *ēgregius* 'outstanding' ← *ē*

strong as each of the items listed. Obviously this is not the place to discuss them, though note in passing that Weiss (2009: 293–94 & 2020: 314) takes the *acētum* type as simply old *to*-participles, and there are other suffixes besides **-to-* and **-no-* that exhibit presuffixal lengthening (cf. again all the proposals in § 3.3.2 and recall § 4 with n. 121).

¹³⁵ Also thinkable for the *n*-suffixed forms.

¹³⁶ See Poccetti (2014) for a new discussion and collection of examples, mostly from Greek.

greg(e) abl. 'out of the herd', *obnoxius* 'legally indebted; subject to harm' ← *obnox(am)* acc. 'on account of liability', etc. However, many, perhaps most, such forms could be derived simply through compounding (cf. 50). It is also usually not necessary to postulate an intermediate prepositional phrase as the basis of forms like Lat. *subrūmāre* 'place under a teat'. In some cases like Gk. ἔκτοπος 'distant' ← ἐκ τόπου gen. 'away from a place', the phrase has been converted via a zero-suffix into an attributive adjective. Possibly belonging here also are the Luvian possessive adjectives in **-os(ī)e/o-* ← gen. **-os(ī)o* (Bachvarova 2007; Yakubovich 2008; Melchert 2012). One interesting subgroup that is unambiguously dephrasal contains forms derived from inflected phrases of determiner plus noun where only the final inflection is truncated. Balto-Slavic has a number of such forms in time expressions: Lith. *tometūkas* 'belonging to that year' ← gen. *tō mēto* 'of that year', Russ. *sijuminutnyj* 'belonging to this minute' ← acc. *siju minutu* 'in this minute', *sijunedel'nyj* 'belonging to this week' ← acc. *siju nedelju* 'in this week', *potustoronnyj* 'otherworldly' ← *po tu storonu* 'on that/the other side (of)', Pol. *tymczasowy* 'temporary' ← instr. *tym czasem* 'in the meantime', *tegoroczny* 'this year's' ← gen. *tego roku* '(occurring) this year'.¹³⁷

In the second subtype of Type A, there is also no overt derivational suffix added, but the product is an exocentric derivative rather than simply a homonymous adjective. The examples of this type that I know of start out life as genitives used exocentrically (cf. n. 86 above for Hittite) that later get converted into (or reanalyzed as) fully declinable *o*-stems, e.g. Lat. *reus* 'the one of the case, defendant' ← gen. **rējos* 'of the case'; Hitt. ^{DUG}*išpanduwa-* 'the thing of the libating, libation vessel' ← gen. *išpanduwaš* 'of the libating', ^(SÍG)*pittula-* 'the thing of the spreading, loop, snare' ← gen. *pittulaš* 'of spreading'.¹³⁸

It is obvious that both of these subtypes are formally distinct from decasuatives; and since there is no restriction to bases drawn from temporal and spatial deictics or basic vocabulary, they are also distinct semantically, both from 'living' decasuatives and deadverbials.

¹³⁷ I leave out Latin forms of the type *Foroiuliensis* 'of Forum Iulii'; it is possible but not assured that these are hypostasized from phrases like *Forō Iulii* 'in/at Forum Iulii', for the *-o-* could be just a union vowel and quantitative information is lacking. See Lindner (2002: 36). Not relevant are unverbated phrases or tatpuruṣas where the first element is frozen in a particular case-form, like Lat. *agricultūra*; these of course are simply compounds.

¹³⁸ Of the fairly extensive list of possible Hittite degenital hypostases forwarded by Puhvel (2011: 71–72), ^(SÍG)*pittula-* is the only one that H.C. Melchert (p.c.) considers assured (Puhvel does not mention ^{DUG}*išpanduwa-*), though some of the others are at least plausible in his view.

But there is a second type of hypostasis—we can term it Type B—where the original phrase-final inflection is retained and derivational material¹³⁹ is added to it. These are also typically dephrasal. Leaving aside derivatives to place-names that were once locatives or similar case-forms (type Fr. *Aixois* ‘person from Aix’ ← *Aix* < Lat. *Aquīs* (*Sextiūs*) ‘at the Sextian waters’), I do not know of many examples: NHG *zufrieden*(-) ‘satisfied’, *vorhanden*(-) ‘available’ ← *zu Frieden* (dat. sg.) ‘at peace’, *vor Hand-en* (dat. pl.) ‘at (the) hands’, Boeot. ἐπιπατρόφιον ‘patronymic’ Schw. 462 A 28 ← *ἐπὶ πατρό-φι ‘from the father(s)’,¹⁴⁰ πατροφιστί ‘father-wise’ ← *πατρόφι, and Russ. *nikčěmnyj* ‘good for nothing’ ← *ni k čěm* ‘not for anything’.¹⁴¹ I again omit the numerous forms in *-ios* in the literature that are purportedly built to locatives in *-i* (type Gk. ἐνάλιος ‘located in/on the sea’ ← ἐν ἁλί ‘in/on the sea’). I do not have a comprehensive collection of Type B, but the examples just given suggest that the inflection could be retained if the base contained unproductive morphology and/or if the phrase was analyzed as a unit. *Vor Handen*, for example, is a fixed, idiomatized phrase preserving an old dative plural (vs. modern *Händen*). The source phrases, where we have them attested, are usually predicative; the hypostasis serves to convert the phrase into an attributive adjective.

139 Sometimes limited to a zero-morpheme plus inflectional endings.

140 See now López Chala (2017: 189–90) with refs. Van Beek (2013: 23⁵¹) follows Ruijgh in casting doubts on this derivation and taking the interior *-o-* as a union vowel rather than resulting from the vocalization of the **r* of **patrp^hi*. But that would mean it was built with a suffix *-φίον*, which is not plausible; this suffix, fairly marginal, forms diminutives and a few locational nouns, and there are no examples of it preceded by a union vowel *-o-*.

141 OCS *besčinaje* ‘disorderly’ is claimed by Parenti (1996: 74) to be built to *bes čina* (gen.) ‘without order’. But this is probably a ghost form. Although booked in some dictionaries (e.g. Cejtin, Večerkin, & Blagova 1994) glossed as *átaktos*, a look at its one putative occurrence shows that this is due to a misinterpretation of Supr. 161^v 25–26. The original is written without word-divisions as (25) *gradūžeslyšęvetūxyisūborabesči* (26) *najemnožistvora-zoumēvai*, corresponding to the Greek Πόλιν δὲ ἀκούων, τὴν παλαιάν τῆς συναγωγῆς ἄτακτον πληθὺν ἐπιγίνωσκε ‘But hearing (the word) “city,” understand the old disorderly crowd of the assembly’ (*In ramos palmarum* = PG 59 col. 705; text attributed to St. John Chrysostom but considered spurious in PG [cols. 703–04, *Admonitio*]). The Slavic text is to be divided *gradū že slyšę vetūxyi sūbora bes čina je množstvo razoumēvai*. The masculine *vetūxyi* was thought by Miklosich (1845: 37–38) to be faulty for *vetūxoje*, but it is possible that the translator mistakenly took τὴν παλαιάν as modifying πόλιν. The sentence therefore means either (with the Greek) ‘And hearing (the word) “city,” understand: it is (= *je*, i.e. *jest*) the old crowd of the assembly without order’ or ‘And hearing (the words) “old city,” understand: it is the crowd of the assembly without order’. Although *besčinaje* is written as a single word in Miklosich’s edition of the homily (1845: 8, l. 134), in his critical note (pp. 37–38) he indicates that it should more correctly be *besčiniñoje* or *besčina*. (I am indebted to Wayles Browne for much of the material in this footnote.)

The Type B forms have been called ‘hypostases’ rather than ‘decasuatives’ for historical reasons because that has been the term applied to the univerbations of whole phrases since Usener (1878) coined the term. But they are not formally distinct from decasuatives, unlike the Type A hypostases, and they constitute the closest formal match for Nussbaum’s use of ‘hypostasizing’ in characterizing derivational suffixes like **-to-* and **-no-*. Unlike the living decasuatives, they are more varied in their semantics, though still limited to basic vocabulary, and the apparent restriction to morphologically fossilized bases is also not the same as what we saw with the living decasuative data. Nevertheless, it would be perverse not to unite the two groups on such grounds. The ‘living decasuative’ data from Old and dialectal Lithuanian show that Ozoliņš’s suggestion (2015: 62)—that only exceptional or fossilized inflectional forms with locative semantics could provide licit bases for decasuative derivation (§ 3.1 above)—is too narrow;¹⁴² but the basic intuition is not wrong. Common forms of common words, like the locative of ‘water’ or comitative of ‘man’ and ‘woman’ or the locatives of basic nouns, are just the kinds of forms that cross-linguistically can get treated as units in the mental lexicon whether or not they are morphologically irregular.¹⁴³

If all this is correct, then the most believable decasuative proposals for the proto-language or other reconstructed stages thereafter will be those where the base was a morphologically unproductive item and/or simply a common word.¹⁴⁴ It is, of course, risky to make claims concerning frequency and (un)-productivity for unattested languages, but there should be little argument that a form meaning ‘in the sky’ would lend itself to stereotyping in a way that a form meaning ‘in thickness’ or ‘with slime’ would most likely not.

This further means that decasuativity in Indo-European is actually nothing special (in spite of the dozens of pages that I have made you, gentle and patient reader, wade through): it does not constitute a separate kind of derivation unto

142 A similar tack was pursued, unsuccessfully, by S. Anderson (1982; 1988) and Perlmutter (1988) in defending the split-morphology hypothesis against various decasuative counterexamples (cf. n. 30).

143 See e.g. Clahsen, Hadler, & Weyerts (2004), with references to earlier literature, for experimental evidence that frequent regular paradigmatic forms are stored as single units (whole words). To be sure, how to model the interaction of lexical storage/retrieval and rule application is the subject of controversy.

144 Generally of course these overlap. And once again, Jasanoff intuited this long ago, in his original proposal of a deinstrumental origin for the *ē*-statives (1978: 124–25): ‘Probably an important factor in the reanalysis of the instrumental ending **-ē* as a verbal suffix was the growing obsolescence in late Indo-European of the root noun class from which forms like *gúhā* were derived, and its replacement by the productive neuter type in **-e/os-*’.

itself. Then as now there were always circumstances—however uncommon overall—under which a whole word or phrase could be treated as a unit, i.e. as a virtual stem, and get suffixed accordingly. While our brief tour of hypostases showed all kinds of phrases can be treated as units for derivational purposes, not all of those units included the desinence. A speaker had to regard the desinence as an indivisible part of the unit in order to include it in the string that underwent suffixation. There is little surprising in the fact that such words or phrases would have been restricted in number and variety. In other words, the semantic restrictions we have identified are not encoded in the grammar as such, but fall out from more general properties of language and acquisition, and/or from metalinguistic phenomena like token frequency. It may well be that the variety of licit decasuative and deadverbial bases was greater in colloquial (and unfortunately ephemeral) nonce-formations, as so often happens.

7 Conclusion

Lundquist, Yates, and Ozoliņš have done a great service in opening a long-needed critical discussion about what the limits of decasuativity in Indo-European may have been, and this paper has been intended as a partial answer to their call for '[f]urther typological and diachronic research addressing this issue' (Lundquist & Yates 2017: 2108). I believe the material in §§ 2 & 3.3.1 settles the central typological question, and shows their doubts on that score to have been unfounded. However, they were in my opinion right to be skeptical of wholesale employment of the decasuative approach for early stages of IE, and I am not persuaded that the majority of the forms in § 3.3.2 were synchronically created by decasuative derivation, contrary to what is either explicitly stated or strongly implied in the original proposals.

My main findings and claims may be summarized as follows, slightly re-ordered:

- a. Decasuative derivation is typologically unproblematic and thus possible for IE, and some good plus some arguable examples of synchronic decasuativity are attested in any case.
- b. Most proposed prehistoric decasuatives do not lend themselves to being reclassified as deadverbials, on semantic grounds.
- c. Most 'living' decasuatives—under which rubric we can include hypostases retaining the desinence of the base—either fit the semantic profile of deadverbials and/or are built to fossilized case-forms and/or to basic vocabulary.

- d. Most proposed prehistoric decasuatives do not fit the profile of 'living' decasuatives, either.
- e. Many proposed deinstrumental adjectives lack clear motivation for being built to an instrumental case-form.
- f. 'Living' decasuatives have arisen only very sporadically and do not clearly point to great(er) productivity of decasuativity at earlier stages of IE.
- g. Decasuative reconstructions should be modeled on attested patterns.

I have conditionally left open the possibility that more productive synchronic decasuative processes of very ancient date may be accessible by internal reconstruction of PIE, processes that may (for instance) be the origin of suffixal conglomerates with long vowels that got abstracted and generalized in the daughter languages; but my exploration of those matters has perforce been largely programmatic, as has my treatment of numerous other issues that I hope colleagues more learned than me can flesh out and improve upon. In short, I see no reason why we cannot still take advantage of the decasuative approach if there is material that demands its application and if the constraints I have proposed—should they be upheld—are hewed to.

Appendix

Here I will briefly discuss the claim (see n. 128) that *-tus* in Lat. *auītus* is a hypostatic suffix. This depends on the validity of the long-standing analysis of *auītus* as degenitival (← *auī*; cf. Leumann 1977: 350 & 413). Many readers will think this analysis (and, *mutatis mutandis*, the degenitival analysis of *erīlis* and others) is iron-clad. But I am not aware of any evidence from Latin that *-to-* could get added to genitives or added hypostatically, with one possible exception discussed near the end.

But such readers do deserve an answer to the obvious challenge, 'What else could *auītus* possibly be?' First, it is important to deconstruct the motivation behind the degenitival analysis, which is not just the *-ī-* but also the meaning of the word; the expectation is that it should mean 'having an *auus*' rather than 'belonging to or stemming from an *auus*, ancestral'. But it is pretty clear that this is merely a specialization, by metonymy, of the more familiar possessive meaning. It is perhaps unappreciated how many Latin *-tus* denominals already exhibit various kinds of metonymy. The largest group is made up of those that mean 'possessing the character of ..., resembling ...', i.e. not possessing the thing itself but possessing something metonymically associated with it. Both senses can be borne by the same lexeme: thus *rōbustus* means 'made of oak' as well as 'having the strength of oak, strong'; *aquātus* means

'having water, diluted' and therefore also 'watery, like water'; *turrītus* is 'fitted out with towers' as well as 'tower-shaped'; *mellītus* is 'containing honey' and 'honey-sweet'. This kind of metonymy is especially commonly recruited to refer to physical shapes, e.g. *orbītus* 'wheel-shaped, circular', *ostreātus* 'striped like an oyster', *turbīnātus* 'shaped like a spinning-top, cone-shaped', *alue(ol)ātus* 'hollowed out like a trough'; but note also *fūnestus* 'having the character of a funeral rite, concerning death and mourning'. English *-ed* is exactly parallel: it normally means 'possessing ...' (*forested, mannered*, etc.) but can also mean 'having the character of ...' (*dogged, crabbed, bigoted, cupped* 'cup-shaped'). But another kind of metonymy, sometimes overlapping with the first one, is that of a source-relationship, which can take various forms ('originating in, determined by, belonging to'). Notably, this is *only* found in derivatives *not* formed to words for physical objects or phenomena (which constitute the overwhelming majority of *-tus* adjectives).¹⁴⁵ Thus *iūs-tus* 'deriving from/in accordance with/having the character of law or what is right', *fās-tus* 'in accordance with divine law', *fortūitus* 'originating in or determined by chance', as well as now *auītus* 'stemming from or belonging to one's *auus*' plus *patrītus* 'belonging to one's *pater*' (said to be analogical to *auītus* but attested earlier) and *cerrītus* 'possessed by Ceres'.¹⁴⁶ The two senses overlap in *iūstus* above as well as in *grātūtus* 'free of charge', i.e. 'having the character of a favor' as well as 'stemming from a favor', and the source and possessive senses overlap in (*comitia*) *centuriāta/cūriāta/tribūta* '(assembly) derived from or consisting of (i.e., possessing) the centuries/curiae/tribes'. The semantic feature [+human] (with gods equivalent for grammatical purposes) clearly plays a role in nudging the metonymic interpretation to 'belonging to': humans are more likely to be possessors than inanimate objects. So the force of *-ītus* in *auītus* is not in itself problematic, nor is it unique to just this Latin avatar of **-to-*.

Turning now to the *-ī-*, aside from *marītus* 'married', which is an *i*-stem derivative (cf. Celt. **mori-* 'young girl'), the only certain *to*-adjectives in Classical Latin built to bases referring to individual humans (or gods) are, precisely, *auītus*, *patrītus*, and *cerrītus*.¹⁴⁷ This cannot be separated from the much larger phenomenon of suffixes beginning with *-ī-* whose core and/or primary usage

145 Not the other way around, since some *-tus* derivatives of abstract concepts are possessive (*astūtus, uersūtus, aegrūtus, honestus*, etc.). All of these are formed to *u*-stems or *s*-stems.

146 Arguably, this is really 'possessing Ceres', cf. ἔνθεος 'having the god within, possessed'.

147 The adjective *uirātus* cited in Lewis & Short and in Bordellé (1873: 31) from Varro apud Non. 187.15 is a mistake for *uirācius*, though *uirātus* does appear in the Vulgate at Ecclus. (Sir.) 28.19 meaning 'courageous'. *Fimbriātus* and *Figulātus* quoted from Asinius Pollio at Quint. 8.3.32 are of uncertain signification and could be quasi-factitives, '(made to be) like a Fimbrius/Figulus'.

is with human or animate bases, especially *-īnus*, *-īlis*, *-t-īuus*, and to a lesser extent *-īcius*; cf. also *uirītim*. See Leumann (1977) for each of these families. The *-ī-* in this group of suffixes has a variety of sources and I would not want to rule out genitive *-ī* for some of them, but it may well turn out that the perceived underlying genitive semantics are secondary, as with *auītus*. It all deserves further careful investigation which I cannot undertake here.

As for other material in Latin, the only possible candidates showing a hypo-stasizing function of *-tus* that I know of are four surveyors' terms attested in Nips. *Grom.* 290–92 L. (saec. ii A.D.): *dextrātus* 'located to the right (of the orienting line)', *sinistrātus* 'located to the left', *citrātus* 'located on the near side', and *ultrātus* 'forming the furthest limit'. These could indeed be built directly to the adverbs *dextrā* 'on the right', *sinistrā* 'on the left', etc., but they are obviously a special and limited case. Since *dextrātus* is attested in other contexts as well, it could easily be an *-ātus* extension of the adjective *dexter* in a technical meaning (see the list of such adjectives in Bordellé 1873: 47–49, and cf. n. 117), or it could be a pseudo-factitive ('made to be on the right, positioned on the right'), with *sinistrātus* etc. formed the same way or analogical to it. It is impossible to tell what role the adverbs played in all this.

As a tangential add-on, if the conclusions above are correct, they provide support for Pike's (2011: 215) suggestion that (*Māter*) *Mātūta* 'Dawn' is not a *to*-adjective but a *t*-abstract **mātūt-* 'earliness, dawn' (**the early one*) recharacterized with the addition of feminine *-a* like Paelignian *saluta*; from it is derived *mātūt-īnus* 'early in the morning'.

Acknowledgments

Earlier versions of this paper were presented at the 30th Annual UCLA Indo-European Conference, Los Angeles, in November 2018, and in the Linguistics Department at Cornell University, Ithaca, in March 2019. It has benefited greatly from discussions with Wayles Browne, George Cardona, Joe Eska, Ron Kim, Jesse Lundquist, H. Craig Melchert, Alan Nussbaum, Daniel Petit, Jeremy Rau, Michael Weiss, Tony Yates, and two anonymous referees, one of whom provided exceptionally detailed and helpful comments that led to many material improvements. Of course, all opinions and errors are solely my responsibility.

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