Luwian and Sanskrit action nouns in $*-i\text{-}eh_2-$

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Abstract

The Luwian nominal class of common gender *a*-stems, which has been argued to reflect Proto-Indo-European stems in $*-eh_2-$, has not yet been explored to a full extent. In Cuneiform Luwian, a number of action nouns in *-a-* c. derived from verbs in *-(ya)-* ($< *i\text{-}e/o-$) have been noticed by scholars, but a larger analysis of all examples including Hieroglyphic Luwian is still lacking. It is the goal of the present paper to fill this gap. After a synchronic analysis of all examples, their stem formation will be compared to a similar derivational process found in Sanskrit. Consequently, the comparative evidence will shed light on the function of the suffix $*-eh_2-$ in Proto-Indo-European, including Anatolian.

Keywords

verbal abstract nouns – derivational morphology – parallel innovations – Luwian – Sanskrit – Old Irish

1 Introduction

Recent papers on the nominal suffix $*-eh_2-$ in Anatolian have demonstrated that it is used productively in combination with thematic suffixes to build agent nouns or “individualizations”, e.g. $*-tjo-$ + $*-eh_2-$ c. (Hajnal 2003: 193), $*-lo-$ + $*-eh_2-$ c. (Sasseville 2014–15), $*-sjo-$ + $*-eh_2-$ (Sasseville 2018). In her extensive analysis of Lycian *a*-stems ($< *-eh_2-$), Martínez Rodríguez (2018: 279–83) reemphasizes the “abstract” function of $*-eh_2-$, previously known almost solely from Eichner’s (1973: 59) morphological analysis of Hitt. *miyaḥḥuntešš^(mi)* ‘to become old’ ($< *mij\text{-}eh_2\text{-}uent\text{-}eh_1\text{-}s-$), in which the reconstructed noun in $*-eh_2-$, i.e. $*mijeh_2-$ ‘growth’, represents a deverbal abstract noun derived from the Hit-

tite verb *māi-/mi(ya)*-(^{hi}) ‘to grow’. Martínez Rodríguez (2018: 280) establishes the existence of this derivational process in Lycian by adducing e.g. *tama-* c. ‘building’ (< PIE **doméh₂-* ← **dem-* ‘to build’) and *xupa-* c. ‘grave’ (← *heap*), equivalent to Hitt. *ḫūppa-* ‘heap, pile’ (< PIE **h₂upéh₂-*) derived from the non-attested Lycian cognate of the Hittite root verb *ḫuwāpp-/ḫu(wa)pp*-(^{hi}) ‘to cast, to hurl down’.¹

While preliminary investigations of the verbal abstract function of **-eh₂-* have been undertaken, there is yet no broader study of this derivational process. Based on examples cited above, Anatolian root verbs could generate a common gender action or result noun in **-eh₂-*. In his monograph on Luwian nominal morphology, Starke (1990: 63 & 584) points out a number of verbal abstract nouns in *-a-* c. that are derived from verbs in *-i-* (**-ie/o-*), whose origins have never been addressed, e.g. *tūmmanti*-(^{ti}) ‘to hear, listen’ → *tūmmantiy-a-* c. ‘obedience’. Therefore, it is the goal of this paper to explore first whether the Luwian suffix *-a-* c. that derives abstract nouns from verbs in **-ie/o-* can go back to the Indo-European suffix **-eh₂-* and, second, whether there is a comparable derivational process outside of the Anatolian branch that could support its reconstruction for Proto-Indo-European.

2 Luwian verbal abstract nouns in *-iy-a-* c.

In this section, Luwian verbal abstract nouns in *-iy-a-* c. and their derivational bases will be extensively analyzed in both the Cuneiform and Hieroglyphic Luwian corpora. Sasseville (2014–15: 106–07) argues that the Luwian nominal class of non-mutated *a*-stems should be equated with the Lycian class of *a*-stems going back to common gender stems in **-eh₂-* (likewise Norbruis forthcoming). The lack of *i*-mutation in this class is the prime argument for the equation. The second argument is the Luwian dative singular in *-a*, which is equivalent to the Lycian locative singular in *-a*, both being confined to non-mutated common gender *a*-stems.² Therefore, while investigating the Luwian suffix *-iy-a-* c., it will be important to pay attention, first, to whether it ever takes *i*-mutation and, second, with which dative singular ending it is inflected. In the remainder of this section, action nouns in *-iy-a-* c. with an attested deriva-

1 See Eichner (2017: 283). On abstract nouns in **-eh₂-* in Anatolian and their existence in the prehistory of Hittite, see also the brief overview of Melchert (2014: 259).

2 On the paradigmatic appurtenance of the Luwian dative ending *-a* to the non-mutated *a*-stems, see Yakubovich (2015: 6.2).

tional base will be discussed first, followed by those without an attested base. We begin with the clearest examples.

2.1 Tūmmantiya- c.

Luwian *tūmmantiya-* c. has been semantically compared to Hitt. *ištamaššuwar* (Laroche 1959: 99, followed by Melchert 1993: 233) and translated accordingly as ‘obedience’. In his morphological analysis, Starke (1990: 134) describes the Cuneiform Luwian substantive *tūmmantiya-* c. as an action noun derived from the verb *tūmmanti-*^(ti) ‘to hear, listen’, which is in turn a denominative verb in *-i-*^(ti) (< *-ĭé/ó-) derived from the noun *tūmmant-* n. ‘ear’.³ Regarding its occurrences, it is found solely in Hittite contexts, though sometimes marked with a *Glossenkeil*: nom. sg. *tu-u-ma-an-ti-ia-aš* (KUB 17.10+ iv 33), *du-um-ma-an-te-ia-aš* (KUB 17.20 ii 10, acc. sg. *tu-um-ma-an-ti-ia-an* (KBo 2.9+ i 49), *tu-um-ma-an-ti-ia-an* (KUB 24.1 iii 10’), dat./loc. sg. [*t*] *u-um-ma-an-ti-ia* (IBoT 3.83, 4’). These five attestations demonstrate that the stem-final *-iya-* undergoes neither *i*-mutation nor contraction and that the dative/locative singular ending is not *-i*, but *-a*. Therefore, *tūmmantiya-* c. can go back to a common gender abstract noun in *-eh₂-.

2.2 Ārraḥḥaniya- c.

The following example, which is not mentioned by Starke (1990: 584), is *arraḥḥaniya-* c. This lexeme is found at least once in a Luwian context (acc. sg. *a-ar-ra-aḥ-ḥa-ni-a[n]* (KUB 35.109 iii 15)) and several times in Hittite contexts (nom. sg. *ar-ra-aḥ-ḥa-ni-ia-aš* (KBo 41.210, 12’), acc. sg. *ar-ra-aḥ-ḥa-ni-ia-an* (KUB 55.38 i 3), dat./loc. sg. *ar-ra-aḥ-ḥa-ni-ia* (KUB 50.26+ iii 34)). The common gender stem of *arraḥḥaniya-* shows no *i*-mutation in the nominative or accusative singular and has a dative/locative singular in *-a*, which points towards an original stem in *-eh₂-. In a philological and linguistic analysis of the verb *ārraḥḥani-*^(ti) and its derivatives, Rieken (2017) argues convincingly that *ārraḥḥani-*^(ti) means ‘to curse, to grumble’ and its action noun *ārraḥḥaniya-* c. ‘cursing, crumbling’.⁴ Thus, the abstract noun *ārraḥḥaniya-* c. is a perfect example of a formation in *-iy-a-* derived from a verbal stem in *-i-*^(ti) (< *-ĭé/ó-).

3 Contra Starke (ibid.), the participial form *tūmmātaimmiš* does not belong to the same verbal paradigm as that of *tūmmanti-*^(ti) (see Melchert 1993: 232).

4 There are also a few “Hittitized” forms of the Luwian verb in Hittite contexts, i.e. *ārraḥḥaniye/a-*^(mi); cf. [*a-ar-r*] *a-aḥ-ḥa-ni-ia-ad-du* (VSNF 12.124, 3’) and [*a-ar-ra-*] *aḥ-ḥa-ni-ia-at* (KBo 43.14, 5’).

2.3 Tiwataniya- c.

The substantive *tiwataniya-* c. is attested only in Hittite contexts (gen. sg. *ti-wa-ta'-ni-ia-aš* (KBo 41.210 obv. 12'), dat. sg. [*ti-wa-t*] *a-ni-ia* (KBo 54.99+ iii 35)). It was not mentioned in Starke's summary of action nouns in *-iya-* c. (1990: 584), although its derivational base is the well-known verb *tiwatani-*^(ti) (Starke 1990: 147⁴⁶⁷).⁵ On contextual and etymological grounds, *tiwatani-*^(ti) 'to swear by the Sun-god, to utter a curse' has been analyzed as a denominative of *tiwat-* c. 'Sun-god' (Watkins 1993: 470, Melchert 1993: 230, Rieken 2017: 242–43). Consequently, the action noun *tiwataniya-* c. should refer to the action of 'swearing by the Sun-god, uttering a curse'. As can be seen from the two attested forms, no *i*-mutation occurs in the stem-final *-iya-* of *tiwataniya-* c. and the dative singular ending is *-a*, which allow us to posit an original nominal stem in **-ch₂-*.

2.4 Tarāwiya- c.

The noun *tarāwiya-* c. /trawiya-/ is attested exclusively in a Hittite context: nom. sg. *ta-ra-a-ú-i-i[a-aš]* (KBo 11.1 obv. 15), *ta-ra-a-wi₅-ia-aš* (KBo 11.1 obv. 44), acc. sg. *ta-ra-a-wi₅-an* (KBo 11.1 obv. 28). Goetze (1963: 60–61) connects *tarāwiya-* c. with the Luwian verb *tarāwi-*^(ti), which he interpreted as 'to enrich' and, thus, suggests the meaning 'wealth' (followed by Starke 1990: 63). Laroche (1963: 246) likewise connects it with the Luwian verb *tarāwi-*^(ti), which he translates as 'to put down' instead, and consequently suggests for the derivative *tarāwiya-* c. the meaning 'calm'. However, Melchert (1992: 53) has convincingly argued that Luwian *tarāwi-*^(ti) means 'to hand over', connecting it further with Lydian *tro-*^(d) 'to hand over'. Thus, he translates the action noun *tarāwiya-* c. as 'control'; cf. the meanings of Hitt. *maniyahh-*⁽ⁱ⁾ 'to hand over, to manage, to control'. Considering the context in which *tarāwiya-* c. occurs, it definitely refers to something good that a land needs to prosper:

nu ^{D10} EN-IA A-NA DINGIR^{MEŠ} [*m*]e-^rma¹-ú *nu-kán* DINGIR^{MEŠ} KUR-TAM *an-da* ^rták¹-šu-li-it IGI^{H1A}-it ú-wa-an-du *nu-kán* ŠÀ-BI KUR-TI *a-aš-šu* *ta-ra-a-wi₅-an* *ták-šu-ul aš-šu-ul mi-i[a-tar]-ra i-ia-an-du*

KBo 11.1 obv. 27–28

5 The other forms in which the sequence *-iya-* is preserved, e.g. *ti-wa-ta-ni-ia-at-ta* (KUB 35.39 i 23, KBo 22.254 rev. 9), *ti-wa-ta-ni-ia-am-ma-ti* (KUB 35.58 ii 3'), reflect a factitive derived from the action noun in *-iya-* c. For a new classification of Luwian verbal stems in */-i-*^(ti)/, */-iya-*⁽ⁱ⁾/ and */-iy-a-*^(ti)/, see Sasseville forthcoming.

The Storm-god, my Lord, must speak to the (other) gods. The gods must look at the land with peaceful eyes. They must generate in the land goods, *tarāwīyan*, peace, goodness and growth.

From a Luwian perspective, *tarāwīya-* c. is clearly a derivative in *-a-* c. of the Luwian verb *tarāwi-*^(ti) ‘to hand over, to give over (to a god)’. The verb can be used in the negative sense of ‘handing an enemy over’ (KUB 35.45 + KBo 29.3 ii 25–26) or in a positive sense of ‘handing (offerings) over to the gods’ (KUB 35.54 ii 35’–36’). Therefore, since it can be interpreted formally as an action noun with positive semantics, a meaning such as ‘the action of handing offerings over to the gods’ or in other words ‘(religious) commitment’ is suggested here. On the other hand, the meaning ‘control’ suggested by Melchert in the sense of ‘management’ or ‘administrative control (over the land)’ cannot be excluded. Until further attestations in different contexts are discovered, the passage cited above may be tentatively translated as:

They must generate in the land goods, commitment (or control?), peace, goodness and growth.

Based on the few attested forms, one can notice that neither *i*-mutation nor contraction occurs in the derivational sequence *-iya-* (< **-ĭ-eh₂-*).

2.5 Lappiya- c.

The next example *lappiya-* c., adduced by Starke (1990: 584), occurs only in a Luwian context: acc. sg. *la-ap-pí-ia-an* (KUB 35.109 ii 7’), *la-ap-pí-an* (KUB 35.109 iii 14). It refers to something negative alongside ‘woe’, ‘blood’ and ‘wailing’. Its derivational base is surely the verb *lappi-*^(ti), whose semantic assignment depends on the etymological connection with Hitt. *lāpp-*^(mi) ‘to glow (?)’ (CHD L–N: 39–40, Kloekhorst 2008: 519). The same semantics are suitable for the Luwian verb:

nu-kán^{GIŠ} *a-la-an-za-na-aš* *KI-LI-LI*^{HLA} [...] *nu kiš-an* *SÌR*^{RU} *GIŠ* *a-aš-ta-ra-la-an*⁽⁻⁾ [...] *la-ap-pí-in-ta*
KUB 35.142 iv 8’–10’

[They ...] the crowns of *alanza(n)*-wood. (The crowd) sings in the following manner: “They made [...] the throne glow.”

Regarding the action noun *lappiya-* c., a sense ‘glowing’ would be expected from a morphological perspective. In comparison with Hitt. *lappiya-* c. ‘fever,

embers', a meaning such as 'heat, glow (?)' has been suggested (Starke 1990: 63, Melchert 1993: 126, Kloekhorst 2008: 519, Soysal 2017: 82 'glowing fire, embers'). This is appropriate for the Luwian context, which requires something negative that applies to a human being. As for its morphology, Luw. *lappiya-* can be reconstructed as an action noun in **-eh₂-* derived from a verb in **-iē/o-*.

2.6 Walliya- /BONUS-li-ia- c.

The substantive *walliya-* c. is found once in a Hittite context and translated as 'glory' (Kloekhorst 2008: 948, HEG W–Z: 260): gen. sg. *wa-al-li-ia-aš* (KUB 19.13 i 48). It also occurs once in a Hieroglyphic Luwian inscription, in which servants incised someone's name with glory or pride: abl./instr. *BONUS-li-ia-ti* (ANCOZ 8, §7). The derivational base is surely the verb *walli^(ti)-* 'to raise' attested in Cuneiform Luwian. Thus, *walliya-* c. can be interpreted as an action noun in *-a-* c. derived from the verb *walli^(ti)-* 'to raise' with the meaning 'raising, exalting' → 'glory'. However, the two attestations available do not tell us anything regarding the presence or absence of *i*-mutation in this noun. Furthermore, no dative/locative singular form is attested so far. Therefore, the morphological interpretation of this lexeme as an action noun in **-eh₂-* is dependent on the other examples presented here.

2.7 Wa/i+ra/i-ia- c.

In the Hieroglyphic Luwian corpus, we find the substantive *wa/i+ra/i-ia-/warriya-* c. 'help, assistance', which is an *a*-stem showing no contraction of the sequence */-iya-/*: acc. pl. *wa/i+ra/i-ia-zi^a* (SULTANHAN, §13), abl./instr. *wa/i+ra/i-ia-ri+i* (SULTANHAN, §45). Its derivational base is the verb */warriya^(ti)-* 'to help' (BOHÇA, §7, 8, 11, 12), whose semantics were argued convincingly by Hawkins (1975: 139). Therefore, the noun */warriya-* would refer to 'the act(ion) of helping' and, since the first attestation listed above shows absence of *i*-mutation, it would represent another example of a common gender action noun in */-iy-a-/* (< **-i-eh₂-*).

2.8 LEPUS+ra/i-ia- c.

In Hieroglyphic Luwian, the noun */tabariya-* c. 'authority' is attested several times: nom. sg. [LE]PUS+*ra/i-ia-sa* (KARKAMIŠ A23, §2), gen. sg. LEPUS+*ra/i-ia-sa* (BOROWSKI 2), abl./instr. *ta-LEPUS+ra/i-ia-ti* (BOROWSKI 3, §5), LEPUS+*ra/i-ia-ti* (KÖRKÜN, §3; MARAŞ 1, §5). It is also found in full phonetic spelling in Hittite context as *tapariya-* c. 'authority': acc. sg. *ta-pár-ri-ia-an* (KUB 40.1 rev. 19, 21, 27), dat./loc. sg. *ta-pa-ri-ia* (KUB 14.7+ i 7, 15), unclear *[t]a-pár-ia-aš-š[a(-)]* (KBo 64.256, 5'). Its derivational base is most likely a verb **/tabari^(ti)-*, which does not seem to be directly attested. The stem

tapariye/a-(^{mi}), which one encounters in the literature, can actually be taken as a verb of the *ḥatrāi*-class instead, i.e. *tapariyā(i)*-(^{mi}) '(intr.) to command, decide' (KUB 13.4 iv 9), '(tr.) to designate, appoint (a person or a house)' (KUB 21.1+ i 65, Bo 86/299 ii 36. ii 94 (Bronze Tablet), KUB 2.2+ ii 48) and thus can be morphologically interpreted as a denominative derived from the noun *tapariya*- c. 'command'. But one may assume a variant *tapar*-(^{ti}) beside **tapari*-(^{ti}) and a derivation **tapari*-(^{ti}) → *tapariya*-. The same situation is found with *kup*-(^{ti})/**kupi*-(^{ti}) 'to plot' → *kupiyat(i)*- c. 'plot'. Not only the dative/locative in *-a*, but also the lack of *i*-mutation in the nominative singular speak for /*tabariya*-/ c. as a common gender stem in *-a*- c. (< **-eh₂*-).

2.9 *Lalhiya*- c.

The next example adduced by Starke (1990: 584) is *lalhiya*- c. 'campaign', attested once in a Luwian context: acc. sg. *la-al-ḥi-ia-an* (KUB 25.39 iv 12). As its derivational base, Laroche (1959: 62) reconstructs a verb **lalhi(ya)*- 'to march', comparing Hittite cognates such as *lahḥiye/a*-(^{mi}) 'to go on an expedition' (followed by Melchert 1993: 123). Furthermore, a mediopassive stem in *-i*-(^{ti}) is attested in a fragmentary Luwian context, i.e. *lahḥintari* (KUB 35.79 iv⁷ 12'). The base **lalhi(ya)*-, on the other hand, is reduplicated and must belong to a different stem class; cf. *ḥišḥiya*-(ⁱ)? 'to bind', *ḥanḥaniya*-(ⁱ) 'to be perturbed'. Thus, there is enough comparative evidence to make the claim that Luw. *lalhiya*- c. 'campaign' is an action noun in *-a*- c. (< **-eh₂*-) derived from a verb in *-iya*-(ⁱ); cf. /*warriya*-(ⁱ)/ above.

2.10 *Zaršiya*- c.

The last potential action noun in *-iy-a*- c., which was also adduced by Starke (1990: 37), is *zaršiya*- c. 'guarantee, safe conduct' found solely in Hittite contexts: nom. sg. *ṣza-ar-ši-ia-aš* (KUB 14.3 ii 63), *ṣza-ar-ši-ia-aš* (KUB 8.79 rev. 14), acc. sg. *ṣza-ar-ši-ia-an* (KUB 14.3 ii 62), dat. sg. *ṣza-ar-ši-ia* (KUB 14.3 ii 1), *ṣza-ar-ši-ia* (KUB 14.3 ii 65), *za-ar-ši-ia* (KUB 8.79 rev. 4). This substantive shows a dative singular in *-a* and a lack of contraction or *i*-mutation in the sequence *-iya*-. Morphologically, it can be interpreted as an action noun derived from an unattested verb **zarši*-(^{ti}) '?'.⁶

Based on the preceding analysis, verbal abstract nouns in *-a*- c. are derived from verbs in *-i*-(^{ti}) (< **-ié/ó-*) or in *-iya*-(ⁱ) (cf. Hitt. *-āi-/i(ya)*-(^{hi})). The large number of examples demonstrates that this process is highly productive in Luwian. As to the prehistory of the suffix *-a*-, the lack of contraction and of

6 HEG W-Z: 673–74.

i-mutation combined with the dative/locative singular ending *-a* speaks for an origin in PIE **-eh₂-*. Consequently, there is now evidence for a derivational chain creating verbal abstract nouns in **-eh₂-* based on verbal stems in **-ie/o-* in Anatolian. In the next section, a parallel derivational chain in another branch of the Indo-European family will be addressed.

3 The Sanskrit suffix *-yá-* f.

The Sanskrit language of the Indo-Iranian branch has a suffix *-á-* f. going back to **-eh₂-*, which is productive in forming derivatives from both primary and secondary verbal stems. This includes deverbal derivatives such as desideratives in *-ṣ-*, e.g. *śúśrūṣ-* ‘to want to listen’ → *śúśrūṣā-* f. ‘obedience’, *jigīṣa-*^{te} ‘to be greedy’ → *jigīṣá-* f. ‘the wish of achieving, greed’, *bhīkṣa-*^{te} ‘to desire to have a share for oneself’ → *bhīkṣá-* ‘the wish of begging’ (AiGr. II, 2: 242–43, Tucker 1988: 101), and root verbs, e.g. *nind-* ‘to rebuke’ → *nind-á-* f. ‘reproach’, *rādh-* ‘to succeed’ → *rādh-á-* ‘success’, *dhvṛ-* ‘to cause to fall’ → *dhvar-á-* ‘causing to fall’ (AiGr. II, 2: 245–47). Furthermore, the same nominal suffix is productive with verbal stems in *-ya-* (< **-ie/o-*), e.g. *tṛṣ-ya-* ‘to be thirsty’ → *tṛṣy-á-* f. ‘thirst’ (cf. *tṛṣyá-vant-* with Hitt. *miyaḥḫi-unt-ešš-(mi)*),⁷ *dá-ya-* ‘to take part in, to sympathize’ → *day-á-* f. ‘sympathy’, *gr̥dh-ya-* ‘to be greedy’ → *gr̥dhya-á-* f. ‘greed’, *apasyá-* ‘to be active’ → *apasyá-* f. ‘activity’, *mṛgáya-* ‘to hunt’ → *mṛgayá-* f. ‘hunt’, *vacasyá-* ‘to be audible’ → *vacasyá-* f. ‘eloquence’ (AiGr. II, 2: 243–44), *namasyá-* ‘to do reverence’ → *namasyá-* f. ‘the act of doing reverence’. All these derivatives designate the actions of their verbal bases and are thus genuine verbal abstract nouns. The derivational chain *-yá-* f. in Sanskrit further belongs to a productive system including participles in *-y-ánt-* and agent nouns in *-y-ú-*, e.g. *avasya-* ‘to seek help’ → *avasyánt-* ‘seeking help’, *avasyú-* ‘seeking help, helping’.⁸

7 Whether one takes *tṛṣ-ya-* as a deradical formation or a denominal formation derived from the co-existing root noun is a more general problem within the reconstruction of the Proto-Indo-European language. However, it is likely that this ambiguity was also perceived by native speakers of Proto-Indo-European, which may have been the starting point for the extension of the derivational process: deradical → denominal.

8 Gotō 2013: 53 & 130–31. These formations also acquired a desiderative sense, whose origin has not always been clear. Tucker (1988) argues that the desiderative value comes from formations in *-śánt-*, *-śú-* and *-sá-*. Furthermore, she claims that since the full system of parallel derivatives in *-yáti*, *-yú-*, *-yá-* is productive only in the Saṃhitās, that this might indicate that the extension of *-yú-*, *-yánt-* and *-yá-* to form new derivatives with double desiderative and non-desiderative value is a poetic feature (Tucker 1988: 113²³).

Because of the unclear morphemic analysis of certain examples, the morphological origins of these suffixes have long been obscure. In cases where roots end in *-ay*, it has been questioned whether the suffix was really *-yá-* or *-yú-* or simply *-á-* or *-ú-*, e.g. *tāyú-* ‘thief’ ← Av. *stay-át* ‘stolen’, *māyá-* ‘magical power’ and *dur-māyú-* ‘using evil craft’ ← *mī-* ‘to deceive’ (AiGr. II, 2: 469–70).⁹ However, on comparative grounds, the first example is actually a root ending in a laryngeal, whereas the glide is part of the verbal suffix; cf. OIr. *táid*, OCS *tatb* < **táh₂-ti-* m. ‘thief’, Gk. *τήτης* f. ‘lack’, Hitt. *tāye/a-*^(mi) ‘to steal’ < **téh₂-ie/o-*. Even though the Indo-Iranian branch may have created a neo-root **teh₂(i)-* including the glide, the comparative evidence of Gk. *τηῦστος* ‘in vain’ requires the reconstruction of the derivative **teh₂-i-ú-* already in the common prehistory of Greek and Sanskrit (LIV²: 616). The second example *māyá-* has a highly debated etymology, and the analysis of the derivation depends strongly on the shape of the root. An etymological connection with the root **meh₁-* ‘to measure’ has been defended.¹⁰ In this case, one could assume that the derivational chain was **meh₁-ieh₂-*, unless one posits a verbal formation in **-ie/o-*, i.e. **meh₁-ie/o-*, as the derivational base of the action noun in *-á-* (and the agent noun in *-ú-*). However, independent evidence for a PIE present in **-ie/o-* derived from this root would be welcome (cf. LIV²: 424). There is a different etymological connection with the root **meiĥ₁-* ‘to grow’,¹¹ in which case the glide would indeed be part of the root, while the derivative in *-á-* (and *-ú-*) would be directly derived from the root verb. In any case, as long as the etymology of an example is not assured, it cannot be used to determine the origin of the underlying morphological process.

There is an existing view that the derivational chain described above owes its existence to a primary suffix *-yá-* or *-yú-*, which was derived directly from verbal roots (AiGr. II, 2: 243). For example, Stüber (2012: 127–28, 2015: 113) takes as prototype Skt. *sarvavidyá-* f. ‘all-knowing’ ← *ved-* (against older-looking *vidá-* f. AiGr. II, 2: 247) and *śayyá-* f. ‘warehouse’ ← *śay-* ‘to lie’ (against older *śayá-* in *śayásu* AiGr. II, 2: 247), because she posits that the origin of the abstract suffix **-ieh₂-* lies in the collective form of the neuter suffix **-io-*. However, *sarvavidyá-* is much more likely to represent a late formation instead of an inherited process, which would indicate that the suffix was metanalyzed from *-y-á-* to *-yá-* within the history of Indo-Iranian. In the next section, we will turn to the origin of the process and address the Celtic data cited by Stüber.

9 Albino (2012) raises the possibility that *dur-māyú-* is a haplological form of **dur-māya-yú-*.

10 KEWA II: 624 with further literature.

11 KEWA II: 624 with further literature. Cf. also Yakubovich (2010) for a different reconstruction of the root.

4 The origin of the derivational process

On the basis of the Anatolian data, which was until now unknown to the wider Indo-European literature, the original derivational pattern can be more precisely reconstructed. First, it is known that the suffix $*-eh_2-$ was productive in deriving verbal abstract nouns from root verbs, e.g. $*b^heug^h-$ ‘to flee’ → $*b^heug^h-éh_2-$ ‘flight, escape’ (Gk. φυγή, Lat. *fuga*), $*g^uhen-$ ‘to strike’ → $*g^uhen-éh_2-$ ‘the action of striking’ (Gk. φοναί ‘bloodbath’, Cz. *ú-hona* ‘wound’, both having developed to result nouns).¹² Further examples of this type in Hittite, which would make a welcome addition, have never been properly sought. Kimball (2015) looks for the Indo-European $\tau\omicron\mu\acute{o}\varsigma$ -type of noun formations in Hittite and ends up tracing all oxytone result nouns in $-\bar{a}-$ to this type, e.g. *parš-* ‘to break’ → *paršā-* c. ‘crumb, morsel’, *ḫarp-* ‘to combine’ → *ḫarpā-* c. ‘heap’, but a consideration of the type in $*-eh_2-$ is completely missing in her analysis. Since Proto-Indo-European stems in $*-o-$ and $*-eh_2-$ merged paradigmatically in Hittite, a distinction between the $\tau\omicron\mu\acute{o}\varsigma$ - and the $\tau\omicron\mu\acute{\eta}$ -types will not be demonstrable without a Luwian or Lycian cognate.

Considering that root verbs co-existed with verbs in $*-ie/o-$, the suffix could have easily been extended first to deradical stems in $*-ie/o-$, e.g. $*u\check{H}-i\acute{e}/\acute{o}-$ (Luw. *walli-*^(ti) ‘to raise’) → $*u\check{H}-i\acute{e}h_2-$ (Luw. *walliya-* c. ‘raising, glory’) and $*g^u\check{d}^h-i\acute{e}/\acute{o}-$ (Skt. *gr̥dhya-* ‘to be greedy’) → $*g^u\check{d}^h-i\acute{e}h_2-$ (Skt. *gr̥dhya-* f. ‘greed’),¹³ and second to denominatives in $*-ie/o-$, whose productivity is assured for both Luwian and Sanskrit. Furthermore, the extension of the abstract suffix $*-eh_2-$ to the verbal suffix $*-ie/o-$ is supported by the parallel extension to Sanskrit desideratives in $-\acute{s}-$ (< $*-se/o-$), e.g. *bhikṣā-* ‘the wish of begging’ ← *bhīkṣa-te* ‘to desire to have a share for oneself’. Thus, abstract nouns in $*-eh_2-$ could be derived from various kind of verbal suffixes. The question then becomes which derivational process was present already in Proto-Indo-European and which must be considered an independent innovation of the two separate branches. The productivity of $*-eh_2-$ with denominative stems in $*-ie/o-$ is not likely to be inherited despite its existence in Anatolian (though so far only in Luwian) and Indo-Iranian (only in Sanskrit), especially if one considers how difficult it is to reconstruct denominative verbs based on word equations for Proto-Indo-European. Therefore, this derivational process is more likely to be an independent innovation of Luwian and Sanskrit. On the other hand, the extension of the derivational process of

12 Rix (1979: 736). For their remarkable productivity in Ancient Greek, see Chantraine (1933: 18–26).

13 On the Proto-Indo-European etymology, see EWA: 474.

*-eh₂- suffixation from verbal roots to deradical verbs in *-ĭe/o- can be safely reconstructed for the protolanguage.

Before concluding, a similar suffix that has recently been discussed in Celtic will be addressed. Stüber (2015: 113–14) addresses the morpheme *-ĭā- within the Celtic branch and argues for the existence of an inherited Indo-European suffix *-ĭeh₂- derived from verbal roots, e.g. OIr. *rige* ‘stretching’ (< **riġĭeh₂*-) beside OIr. *rigid* ‘to stretch, rule’ (< **réġĭ-/riġ-*). However, some of her examples clearly co-existed with a deradical verb in *-ĭe/o-, e.g. OIr. *guide* f. ‘plea, prayer’ < PIE **g^uhed^hĭeh₂*- beside OIr. *guidid* ‘asks for, prays’, Gk. θέσσεσθαι ‘to ask, to be a suppliant’ and Av. *jaiðiemi* ‘to beg’ < PIE **g^uhed^hĭe/o-*,¹⁴ OIr. *fige* f. ‘weaving’ < PIE **ueġĭeh₂*- beside OIr. *-figther* ‘is woven’ < PIE **ueġĭe/o-*, OIr. *slaide* f. ‘strike’ beside OIr. *slaidid* ‘strikes’ < Proto-Celtic **sladiĕ*-. These examples would speak for the existence of *-eh₂- derived from deradical verbs in *-ĭe/o- in Celtic. Stüber nevertheless takes the Celtic derivatives in *-ĭeh₂- that are found beside root verbs as prototypes of this derivational process. However, such an incomplete synchronic picture is also found in Anatolian, where a prehistoric verb in *-ĭe/o- must be posited beside the attested root verb (see Section 2.8). Consequently, instead of taking Proto-Celtic *CVC- : *CVC-ĭeh₂- as the prototype of the derivational process, it would be preferable on morphological grounds either to restore the missing formation in *-ĭe/o- or to assume a metanalysis of the suffix from *CVC-ĭeh₂- → *CVC-ĭeh₂-.

In sum, having established the process *C_{RC}-ĭeh₂- for Luwian, Sanskrit and additionally Old Irish, its genesis can be posited for the Proto-Indo-European stage. The development of the morphological process can be postulated as follows:

PIE	1. *CoC-éh ₂ - / *C _{RC} -éh ₂ -
PIE	2. (deradical *-ĭe/o-) *C _{RC} -ĭeh ₂ - (Luwian, Sanskrit, Old Irish)
Post-PIE	3. (denominal *-ĭe/o-) *CERC-VC-ĭeh ₂ - (Luwian, Sanskrit)

5 Conclusion

The derivational chain of deradical *-ĭe/o- + *-eh₂- building verbal abstract nouns occurs in at least three branches of the Indo-European family, i.e. Anatolian, Indo-Iranian and Celtic. On the basis of the comparative data adduced above, the creation of this derivational chain is argued to have begun already

14 LIV²: 217. For the Old Irish verb, see Cowgill (1980: 49–59).

in the Proto-Indo-European period. Two further developments of this derivational type can be observed in these languages. In Luwian and Sanskrit, the suffix $*-eh_2-$ was extended to denominal verbs in $*-ie/o-$, and then, in Sanskrit and Old Irish, it seems to have been reanalyzed to $*-ieh_2-$. These two innovations must however be considered late and independent.

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