Reconstructing Proto-Indo-European Deponents

*Laura Grestenberger**
Concordia University
Laura.Grestenberger@concordia.ca

Abstract

This paper argues that the Proto-Indo-European voice system, despite undergoing several waves of morphological renewal on the way to the daughter languages (Jasanoff 2003), was typologically that of early IE languages like Vedic and Greek, and contemporary languages such as Modern Greek, and that the syncretic voice systems of these languages share the property of having deponents. While previous discussions of middle-only verbs have focused on a few morphologically archaic but semantically unsurprising middles, I show that PIE also had agentive, syntactically active middles that escaped the expected remodeling as formally active verbs and surface as deponents in the IE daughter branches. Reconstructing verbs with "unexpected" voice morphology may seem counter-intuitive, but is necessary to cover the empirical facts and may also serve as a diagnostic for the relative chronology of the morphological innovations that occurred in the domain of PIE voice morphology.

Keywords

deponents – voice morphology – middle voice – Vedic – Greek – Hittite – Latin

1 Introduction: The Proto-Indo-European Middle

The reconstruction of the Proto-Indo-European middle is notoriously fraught with difficulties, both in terms of its morphology and its function(s) in the protolanguage. Concerning the formal side, Jasanoff's 2003 reconstruction of an original "proto-middle" or "*h_2e-conjugation" set of endings has recently gained ground and is followed by standard textbooks such as Weiss 2009 and Fortson 2010. The *h_2e-conjugation theory essentially states that PIE had two sets of endings, the active *mi-set and the middle *h_2e-set, which ultimately gave rise to a number of different sets of inflectional endings in the IE daughter branches, depending on whether it was morphologically renewed as formally active or as formally middle. The following table summarizes the PIE middle endings for the singular and plural (based on Jasanoff 2003: 55).

(1) PIE middle endings

	primary	secondary
1sg.	*-h_2e-r	*-h_2e
2sg.	*-th_2e-r	*-th_2e
3sg.	*-o-r; *-to-r	*-o; *-to
1pl.	*-med^hh_2(-r?)	*-med^hh_2
2pl.	*-$d^h(u)u̯e$(-r?)	*-$d^h(u)u̯e$
3pl.	*-ro(-r?); *-nto-r	*-ro; *-nto

There are three main novelties that set this reconstruction apart from older reconstructions of the PIE middle (which can be found in other standard textbooks, such as Meier-Brügger 2010 and Tichy 2001): 1) the reconstruction of 1sg. *-h_2e(-r), 2sg. *-th_2e(-r) based on the evidence of Hittite, Tocharian, and Italo-Celtic; the traditional Graeco-Aryan based reconstructions *-$mai̯$, *-$soi̯$ are fairly straightforward innovations of the "inner Indo-European" branches[1]

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[1] I use "inner Indo-European" to refer to the group of languages that share this innovation, that is, the replacement of *-r by *-i as the marker of the primary middle endings ("core IE" is also used). In general, I assume a model in which Hittite, Tocharian, and Italo-Celtic split off from the proto-language (and in that order) before the dispersal of the "inner IE" branches began; see Anthony and Ringe 2015 for a recent discussion of evidence in favor of this type of model and Jasanoff 2003 for the use of the term "inner Indo-European". This term should be understood as a loose cover term and may ultimately not stand for a separate node in the family tree but a "dialect continuum" (Anthony and Ringe 2015), but it is useful for present purposes for grouping together branches with certain shared properties in their voice systems.

based on the active endings, 2) the reconstruction of the 3sg. and 3pl. forms, which originally were "dentalless" *-o and *-ro, beside which we find the renewed variants *-to and *-nto already in (late?) PIE (again based on an obvious analogy with the corresponding active endings, cp. also Watkins 1969), and 3) the primary/secondary distinction is expressed through the "hic-et-nunc" marker *-r in the middle, as opposed to *-i in the active, meaning that the post-Italo-Celtic branches of Indo-European again innovated in switching from *-r to *-i in the middle.

This reconstruction has been motivated at length by Jasanoff in several publications (Jasanoff 1977, 1978, 1979, 1998, 1994, 2003 among others) and is not the primary focus of this article. There is, however, still some debate concerning the original functions of the Proto-Indo-European middle (see, e.g., Gonda 1960, Benveniste 1966: 168 ff., Hollifield 1977: 5 ff., Rix 1988, Benedetti 2006, Meiser 2009). In particular, there is almost no discussion of the oppositional functions of non-active voice that are such a stable feature of languages with the same type of voice system as PIE, namely a bivalent active/non-active system, similar to the voice systems of Vedic Sanskrit, Classical Greek, Latin, Hittite, Tocharian, Modern Greek, and Albanian. The discussion of the original function of the PIE middle usually centers on a few very archaic, isolated, and usually non-alternating forms called deponents (but see below for a redefinition of the term), which, being archaisms, tend to have synchronically irregular morphology. Examples of such frequently discussed middles are given in (2) (see Villanueva Svensson 2012 for more middle presents).

(2)   a. *$\hat{k}ei̯$- 'lie': Ved. *śáye, śére*, YAv. *sōire*, Gk. κεῖμαι, Hitt. *kitta(ri)*, CLuv.
          zīyar(i), etc. < *$\hat{k}éi̯$-o(r)

      b. *h_1es- 'sit down':[2] Ved. *ā́ste*, YAv. 3pl. *ā̊ŋhāire*, Gk. ἧμαι, Hitt. *eša(ri)* <
          *$h_1ḗs$-(t)o(r).[3]

      c. *$d^heu̯g^h$- 'be/make useful': Ved. *duhé* 'gives milk', 3pl. *duh-ré*, Goth.
          daug, Gk. ἔτυχον 'happened to be at, chanced upon' (?τεύχω 'prepare',
          see LIV[2]: 148–149; 640) < *d^hug^h-ó(i̯)

      d. *mag^h- 'be able to, enable, achieve': Ved. *ā́ mahe*[4] < *mag^h-oi̯, Gk.
          μάχομαι 'fight' (+ dat.), Goth. *mag* 'be able to', OCS *mogǫ*.

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2   LIV[2]: 232: *h_1eh_1s- 'sit (down), occupy something.'

3   Cp. Villanueva Svensson 2012: 335 and fn. 7 and Melchert 2014; both argue against a reduplicated present *h_1e-h_1s-(t)or since *h_1e-h_1s- should have given Hittite *ēšš*- (Kimball 1999: 144), cp. the fientive/inchoative suffix -ēšš- < *-eh_1-s- (Watkins 1971, Melchert 1994: 78, Jasanoff 2004, differently Kloekhorst 2008: 255 f.).

4   The active optative *mahema* is attested twice in the Rigveda.

e. *$steu$- 'praise':[5] Ved. *stavé* 'is praised' (beside thematic *stávate*, later also "renewed" athematic *stuté*), *stávāna-*, YAv. *staota*, 1sg. *-stuiiē*, Gk. στεῦται, Hitt. *ištuwāri*, etc.

But basing one's reconstruction of the distribution of PIE middle morphology on such forms alone is likely to lead to a skewed picture of that distribution. Forms like the ones in (2) in particular have led to the reconstruction of a separate morphological category "stative" in PIE by Oettinger (1976b), (1992), Rix (1988), Kümmel (1996), Gotō (1997), among others, and this category has become canonized by LIV² as "Wurzelstativ". However, the functional status of this category and its delimitation from the category "middle" remain unclear. The literature just cited suggests (sometimes implicitly) that this was a third voice category beside active and middle, but a trivalent system active-middle-stative has no obvious typological parallels; and it is awkward that the category "stative" only has distinct endings from the middle in the 3sg. and 3pl. Moreover, most of the verbs on which this category is based are inherently stative, and not in any obvious sense by virtue of the morphology they take. Cross-linguistic research suggests that stative predicates in general tend to take non-active morphology in bivalent voice systems (see Kemmer 1993 and Zombolou and Alexiadou 2014a on Modern Greek) and that this should be considered one of the canonical syntactic contexts which license non-active morphology (cp. the Modern Greek examples cited by Zombolou and Alexiadou 2014a, e.g., *kime* 'lie', *ime* 'am', *dikeume* 'have the right', *tsigunevome* 'am stingy', *ironevome* 'am ironic', etc.).

In Hittite, on the other hand, the "stative" dentalless 3sg. ending is found with a number of transitive deponents with a decidedly non-stative meaning: *arka*(*ri*) 'mounts', *ḫanna*(*ri*) 'contests at law, sues', *ḫatta*(*ri*) 'slits; sacrifices', *ḫuett*(*i*)*a*(*ri*) 'plucks, pulls', *iškalla*(*ri*) 'tears, slits', *paḫša*(*ri*) 'protects', etc. Oettinger (1992: 354) mentions these cases briefly and suggests that they are *einzelsprachlich* developments, but that does not explain their synchronically unproductive and evidently archaic inflection. Not all of these verbs have a good etymology, but *arka*(*ri*), *ḫanna*(*ri*) and *paḫša*(*ri*) have cognates, and if the authors of LIV² feel confident enough to set up a "stative" for the root *$tuek$- based on the evidence of Hittite *dukkāri* alone, then not doing so for *iškalla*(*ri*)/*$skelH$- and *ḫatta*(*ri*)/?2. *h_2et- (see the respective entries in LIV²) because of their "aberrant" syntactic behavior seems inconsistent.

5　This root may have been alternating; Villanueva Svensson 2012: 336 classifies the full grade middle forms as oppositional.

It has to be stressed that the "stative" hypothesis rests largely on the opposition between the dentalless 3sg. *-o and the 3sg. mid. *-to (and the 3pl. *-ra in Indo-Iranian), since the other endings of the "stative" paradigm are identical to those of the middle. As Gotō 1997: 191 points out, it is not clear that this is enough evidence for setting up a separate verbal category, since the usual mechanism of morphological renewal can adequately capture the replacement of *-o by *-to.

As for the "meaning" of the middle, the discussion likewise places too much emphasis on *media tantum*, especially archaic forms like those in (2). For instance, Rix 1988: 104 cites the following three functions as being original to the PIE middle: "A) The deponent function or the middle tantum, B) the reflexive function, and C) the passive function."

However, it is not clear what the deponent/middle tantum "function" would be since this category by any definition encompasses a variety of different verb classes.[6] While passive and reflexive constructions are indeed syntactic contexts in which middle morphology is cross-linguistically encountered, Rix also cites *śrayate* 'lean' (itr., glossed as "rises himself") as an example of the reflexive function B), presumably because it has oppositional active forms, and then claims that the reflexive function is not "capable of accounting for a deponent verb as … Greek ὦρτο 'arose' …" (p. 105). But if *śrayate* can be glossed as "rises himself", then there is no principled reason why the same should not be possible for ὦρτο. Of course, ὦρτο is *medium tantum* whereas *śrayate* is an alternating verb, but neither of them is reflexive.

As for the deponent category, Oettinger 1992 claims that transitive deponents cannot be inherited, since they do not express the original function of the middle ("Betroffenheit des Verhaltensträgers", affectedness of the agent/actor). He subsumes some cases which must be inherited, like *sekʷetoi̯*, under "reflexives", but it is not clear why *sekʷetoi̯*, Ved. *lábhate* 'seizes' or Gk. μέμφεται 'scolds' should be reflexive (p. 353), whereas Lat. *populātur* 'devastates, ravages' and Hitt. ḫattari 'slits' are not (ibid.). Oettinger goes on to suggest that even the latter group of verbs may originally have been reflexive, and that this component of their meaning was lost in the individual branches.

To summarize, agentive verbs with middle morphology (deponents) are generally considered innovations of the individual languages, to be explained by the loss of some aspect of the original, canonical meaning of the middle verb in question. While such a canonical meaning is recoverable in some cases, there are also cases of verbs with unexpected non-canonical middle morphology that have cognates in several branches and must be inherited, having lost their

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6   And "function" is clearly a misnomer for deponents and *media tantum*.

canonical middle function in the remote prehistory of Proto-Indo-European and having escaped the usual strategy of remodeling old *h_2e-conjugation categories which had acquired an active meaning as morphologically active. These synchronic "exceptions" are discussed in sections 2–4. In the next section, I give an overview of the general properties of active/middle voice systems.

1.1 *Voice and Deponency*

1.1.1 Canonical Uses of Non-Active Morphology

Many of the older IE languages (Hittite, Tocharian, Vedic Sanskrit, Avestan, Greek, Latin, Old Irish) and some modern IE languages (Greek, Albanian) have a voice system in which an opposition between active and non-active voice is expressed through verbal inflection together with tense and agreement features. The terminology for non-active morphology differs depending on the language ("middle" for Vedic and Greek, "passive" for Latin, "mediopassive" for Hittite, etc.), as does the distribution of the endings. For present purposes, we can use non-active as a convenient cover term for all of these.

A priori, the distribution of these endings should be straightforward: the active endings should be found in "syntactically active" contexts, the non-active endings in "non-active" syntactic contexts, taking into account cross-linguistic variation in what is considered a canonical "active" or "non-active" syntactic context. There is widespread agreement in the literature that non-active morphology is cross-linguistically found in the same or very similar syntactic environments (e.g., Geniušienė 1987, Rivero 1990, Klaiman 1991, Kemmer 1993, 1994, Embick 1998, 2004, Kaufmann 2007, Kallulli 2007, 2013, Alexiadou and Doron 2012, Alexiadou 2013, Alexiadou et al. 2015, etc.; on Modern Greek in particular see Manney 2000 and Zombolou 2004).

Researchers generally also agree that non-active is the marked member of the opposition, and that there is a unifying context for non-active while active is "elsewhere" or unmarked morphology. I have argued that this view holds for the older Indo-European languages as well in Grestenberger 2014a.

The following are contexts in which non-active morphology appears in "Greek-type" languages that have this kind of binary, synthetic voice system:

(3) Canonical functions of non-active morphology
   a. Anticausatives
   b. Reflexives and reciprocals, including indirect reflexives (self-benefactives)
   c. Dispositional/generic constructions
   d. (Medio)passives

In discussing the fact that the same voice morphology is used in these different syntactic contexts, Embick 1998 introduces the term "voice syncretism". Moreover, the non-active verbs in these contexts usually alternate with formally and syntactically active verbs in a predictable manner, creating "voice alternations" (these are alternating or "oppositional" non-active verbs).[7] Alternating non-active verbs are of course well represented in the older IE languages; I give a few representative examples below.

(4)   Anticausatives/inchoatives:
       a. Sanskrit: *várdhate* 'grows' (itr.): *várdhati* 'grows sth' (tr.), *vártate* 'turns' (itr.): *vártati* 'turns' (tr.), etc.
       b. Greek: ἐρεύθομαι 'become red': ἐρεύθω 'make red', αἴθομαι 'burn' (itr.): αἴθω 'burn something', etc.

This type of voice alternation is especially common with "state-oriented" roots, many of which are (or were) associated with the Caland system (see Rau 2013 for discussion and examples).

(5)   Naturally reflexive verbs, naturally reciprocal verbs ("grooming verbs"):
       a. Hittite: 3pl.medio-pass. *zaḫḫanda* 'they hit each other': 3pl.act. *zaḫanzi* 'they hit sth.'
       b. Sanskrit: *śumbháti* 'beautifies, makes beautiful': *śúmbhate* 'makes oneself beautiful'; with differing stem-forming morphology: *pávate* 'washes oneself': *punā́ti* 'washes sth.'
       c. Greek: λούομαι 'wash myself': λούω 'wash sth.'

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7   The dispositional or generic function is not easily illustrated without its syntactic context; basically these are the equivalents of English "middles" like *bureaucrats bribe easily* or *this book sells well*. In languages like Greek, the verbs always take non-active morphology in these constructions, as in the following Modern Greek example from Alexiadou and Doron 2012:

   afto to   vivlio diavazete   efkola
   this the book reads.NACT easily
   'This book reads easily'

   Generic middles are also found in older IE languages with a syncretic voice system, like Greek and Vedic.

(6) Self-benefactives/indirect reflexives:
 a. Sanskrit: *yájate* 'sacrifices sth. for one's own benefit': *yájati* 'sacrifices sth.', *bhárate* 'takes/carries sth. for oneself': *bhárati* 'carries'
 b. Greek: φέρομαι 'carry for myself; win': φέρω 'carry', τίθεμαι 'make, place something for myself': τίθημι 'put, place', etc.

(7) (Medio)passives:
 a. Hittite: *ḫalziya(ri)* 'is called': *ḫalzāi* 'calls'
 b. Sanskrit: *stáve* 'is (being) praised': *stáuti* 'praises'
 c. Greek: βάλλομαι 'am (being) hit': βάλλω 'hit', ῥήγνυμαι 'am (being) broken' (also anticaus. 'break'): ῥήγνυμι 'break sth.', etc.
 d. Latin: *amor* 'am (being) loved': *amō* 'love', *capior* 'am (being) seized': *capiō* 'seize', etc.

In addition to alternating contexts, non-active morphology is also found on a number of verb classes which do not alternate between active and non-active. In other words, non-active morphology seems to be obligatory for these verbs (non-alternating or non-oppositional non-active verbs, cp. Kemmer 1993 and the collection in Zombolou and Alexiadou 2014a). These, too, fall into some cross-linguistically stable and more or less well-defined verb classes, including the following:

(8) Canonical non-oppositional non-active verbs:
 a. Experiencer/psych verbs
 b. Stative verbs
 c. (Some) verbs of motion
 d. Deadjectival and denominal stative and inchoative verbs
 e. (Some) verbs of speech and communication

In languages whose non-active endings are traditionally called "middle", these verbs are called *media tantum* (Lat. "middle only") verbs. It is an unfortunate practice that these verbs are also often referred to as "deponents", suggesting that their voice morphology is unexpected. I do not follow this practice and reserve the term "deponents" for verbs which have agent subjects and accusative objects.[8] The verb classes in (8), on the other hand, should be

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8   As an anonymous reviewer has pointed out, the object could in principle also be a partitive genitive. The reason I focus on accusative objects is because I use passivization as a diagnostic for deponent status in Grestenberger 2014a, and internal arguments with accusative case

seen as canonical non-actives, since they do not have these properties (thus recently Kallulli 2013 and Zombolou and Alexiadou 2014a). Note that many of the archaic dentalless middles that have been claimed to reflect the "stative" category fall into the verb classes listed in (8).

1.1.2   Non-Canonical Use of Non-Active Morphology: Deponents

After surveying the canonical function of non-active morphology, we notice that all the languages discussed above also have a small class of formally non-active verbs that intuitively violate the expected distribution of voice morphology. These verbs have non-active morphology, but are found in syntactically active contexts, and both native speakers and linguists share the intuition that they are exceptions to the expected distribution of active vs. non-active voice morphology. These verbs are traditionally called deponents (from Lat. *dēpōnere* 'lay aside', sc. the verb's passive or non-active meaning[9]). Representative examples of such verbs are given below. In each case, an agentive verb ('incite', 'punish, take revenge', 'protect') is found in a canonically active syntactic context, namely a transitive construction with an agent subject and a direct object in the accusative.[10] However, all these verbs obligatorily take the non-active set of endings rather than the expected active one.

(9)   **Latin**: *hortor* 'incite, encourage': Plautus, *Mercator* 695–697:
      sed **coquos**, quasi in mari solet hortator **remiges hortarier**, ita **hortabatur**
      'But just like at sea a rowing-master (lit. 'inciter') is wont to urge the rowers, so he urged the cooks'

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are usually the ones that are passivizable, i.e., able to become nominative subjects although Ancient Greek also allows genitive and dative arguments of certain verb classes to be passivized, see Smyth and Messing 1956:, Conti 1998, Anagnostopoulou and Sevdali 2014, and both Vedic and Ancient Greek have restrictions on what types of accusatives are passivizable (e.g., Vedic does not allow passivization of an accusative of goal, with rare exceptions, cp. Delbrück 1888: 104 ff.). For this reason, the case on the object by itself is not a sufficient diagnostic for deponent status, even though deponents tend to be transitive. See also footnote 10 below.

9   For a detailed discussion of the history of the term see Flobert 1975.

10   "Syntactically active" is of course a pre-theoretical term, and, as rightly pointed out by a reviewer, may include agentive (i.e., unergative) intransitive verbs. However, voice mismatches are easier to diagnose in transitive constructions, so I will focus on these in the following discussion. See also footnote 8 for some caveats on the direct object case.

(10) **Greek**: τίνυμαι 'punish': Homer, *Iliad*, 3.278–279:
καὶ οἳ ὑπενέρθε καμόντας ἀνθρώπους τίνυσθον
'… and (you) who in the underworld punish the men who have passed on'

(11) **Vedic**: *trā́yate* 'protects, rescues': RV 2.23.4a–b:
trā́yase jánaṃ yás túbhyaṃ dā́śāt
'(…) you rescue the man who will do (ritual) service for you'[11]

(12) **Hittite**: *paḫša(ri)* 'protects': KBo 8.35 ii 14–15:
nu mān kūš **lingāuš paḫḫašduma šumāš**=a DINGIR.MEŠ-eš **paḫšandaru**
'If you protect these oaths, let the gods likewise protect you!'

Of course, agentive verbs in transitive clauses like the ones above are expected to take *active* morphology in the languages under discussion, and it is easy to find (near-)synonyms to these verbs (Lat. *hortor*: *moneō* 'encourage, incite'; *fūror*: *clepō*, *rapiō* 'rob, steal'; Ved. *grásate* 'devours': *átti* 'eats'; Greek ἐρύομαι 'protect, guard': φύλασσω, etc.).

Moreover, the non-active morphology of deponents cannot be motivated in terms of the *synchronic* canonical functions of non-active morphology. That is, synchronically they do not fall into any of the categories listed in section 1.1.1 (reflexive, self-benefactive, anti-causative, experiencer, etc.). This means that these are genuine instances of "laying aside" (*dēpōnere*) the function expected for the morphology of these verbs. In this paper, I will concentrate on this class of verbs (agentive, transitive, non-active morphology) and use the following definition of deponency, modified from Grestenberger 2014a: 65, which includes verbs like the ones in (9)–(12), but excludes many of the *media tantum* class (canonical non-oppositional non-active verbs) which are often also called "deponents".

(13) Definition of deponency
In an active—non-active voice system, a deponent is a verb with an agent subject which appears in a syntactically active context and is morphologically non-active.

Note that even though this definition does not make explicit reference to transitivity or case, for the most part "syntactically active context" in (13) will boil down to a transitive construction with a nominative subject and an accusative object.

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11   All Rigvedic translations are from Jamison and Brereton 2014.

The phenomenon of deponency raises several questions about the synchronic properties of syncretic voice systems, since it seems to be a regular diachronic feature of "Greek-type" voice systems (cp. Lavidas and Papangeli 2007, Zombolou and Alexiadou 2014b on Ancient to Modern Greek). I have argued elsewhere (Grestenberger 2014a, Grestenberger 2016) that deponency is indeed linked to the way voice morphology is instantiated in "Greek-type" languages, but cannot discuss this here for reasons of space.[12] The main goal of this paper is to show that Proto-Indo-European, as a language with a syncretic, bivalent voice system, had deponent verbs, and that these can be reconstructed using the usual tools of the comparative method. Deponents are found at every diachronic stage of languages that have a "syncretic" active/non-active voice system. Since deponent verbs are a regular feature of syncretic voice systems, and since PIE had such a voice system, we should expect to see occasional inherited forms that do not conform to the expected reconstructed distribution of active and non-active morphology. This raises a methodological issue with respect to reconstructing "exceptions". I contend that our reconstructions should reflect the properties of the linguistic system based on the available evidence of the daughter languages rather than provide an idealization of what the system should have been. In the case of deponents, I argue that we can reconstruct "voice mismatch verbs" at least for late Proto-Indo-European, thus confirming the typological generalization that syncretic voice systems have deponent verbs.

The next section is dedicated to discussing these verbs.

2　Proto-Indo-European Deponents

2.1　*Criteria*
In the following, I discuss the PIE verbs that displayed deponent behavior based on the evidence of the daughter languages. There are several criteria for positing deponent status of a given verbal stem (or root) in PIE:

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12   Deponency is standardly explained as an idiosyncrasy of particular lexical entries ("roots" or "stems" depending on the framework), that is, some kind of diacritic in the lexical entry of a verb that marks it as morphologically non-active independent of its syntactic context, e.g., V[NonAct] or V[pass] (Embick 1998, 2000, 2004, similarly Kiparsky 2005). I have criticized this standard approach in Grestenberger 2014a and Grestenberger 2016, but nothing in this paper hinges on this.

– **Synchronic deponent status in at least two separate branches**, according to
the definition of deponency given in Section 1.1.2. "Two separate branches"
means non-adjacent language families without shared innovations, that
is, a deponent attested in Greek and Vedic, for example, is less securely
reconstructible for PIE than one attested in, e.g., Hittite and Vedic (but in
turn better than one attested only in Vedic and Avestan).

– **No synchronic motivation for non-active morphology**: If there is some syn-
chronic motivation for non-active morphology on an agentive verb in one
branch, like analogy with a semantically or morphonologically similar verb,
its claim to PIE deponent status is weakened, unless there is corroborating
evidence from other branches in which there is no synchronic motivation
for non-active morphology. In other words, the non-active morphology on
such verbs must be "non-trivial" from a synchronic point of view. To give
an example (pointed out to me by Jeremy Rau), the non-active morphol-
ogy of the Greek denominative transitive deponent αἰτιάομαι 'accuse, cen-
sure, hold responsible' (αἴτιος 'responsible') is most likely due to analogy
with the semantically similar deponent μέμφομαι 'blame, censure'. While
the inner-Greek origin of αἰτιάομαι is beyond any doubt, other cases may
be less clear, so we need to exclude the possibility of "innovative" non-
oppositional canonical middles through "local analogy". This mostly con-
cerns non-oppositional verb classes like stative and experiencer verbs which
show a great deal of cross-linguistic variation with respect to canonical voice
morphology, so voice morphology that is canonical for a given subclass of
verbs in one language may be non-canonical in another. This is especially
relevant for verbs of speech and certain verbs of visual perception, which
vary greatly across the individual branches.

– **Morphological correspondence**: If cognate deponents in different branches
correspond in their derivational morphology (stem-forming morphology),
they are more likely inherited than if they have differing verbal morphology.
The same caveats with respect to adjacent branches as above apply.

– **Syntactic correspondence**: Identical object case and inherited agent nouns
or verbal adjectives with the same syntactic behavior may provide additional
evidence for deponent status (if one or more of the above criteria already
apply).

It is clear that these criteria will lead to a very conservative estimate of the num-
ber of deponents we can reconstruct, and most of the time not all of them will
be in evidence for a given formation. However, this list can serve as a starting
point for classifying verbs into secure and less secure mismatch cases. I discuss
the secure ones in this section. In the following, the roots are cited after Rix
2001.

2.2   *deh_2-$i̯$- 'divide, distribute'

While the root *$deh_2(i?)$- 'divide' (LIV²) itself was not exclusively deponent (cp.
the Vedic aorist forms *dīṣva* (YV) vs. *áva adāt* (MS), *ava-dyáti* (YV)), it made
an ablauting *h_2e-conjugation *i*-present 3sg. *$déh_2$-$i̯$-e, 3pl. dh_2-$i̯$-$énti$ (Jasanoff
2003: 105 ff.) which surfaces as a thematized deponent in Vedic *dáyate* 'dis-
tributes'[13] and Greek δαίομαι 'distribute', with reanalysis of the glide as part of
a synchronic neo-root.[14] LIV²: 103 f. (based on Gotō 1987: 172 f., cp. also Lubot-
sky 1989: 95, Kulikov 2000: 277 f.) reconstructs an *$éi̯e/o$-present *dh_2-$éi̯e/o$- to
account for the Vedic and Greek forms; the lack of aspiration on the dental
is explained as analogical to the full grade aorist forms, which are, however,
somewhat late. Jasanoff (2003: 101) argues that the Vedic zero grade "iterative-
causatives" of the type *iṣáya*- 'impel', *rucáya*- 'shine', *turáya*- 'press forward'
are better explained as *ya*-extended presents of zero grade thematic *tudáti*-
presents (or thematic aorists) with which they are synchronically associated.
These have a very different averbo from that of *i*-presents like *dháyati* 'sucks',
kṣáyati 'rules over', and *hváyati* 'calls', and it is this class that *dáyate* synchron-
ically belongs to. The root shape /*day*/ is, of course, unexpected both in Vedic
and in Greek from a strictly phonological point of view (Greek should have lost
the glide, while Vedic should retain the glide with compensatory lengthening
after loss of the laryngeal). Given that the (originally stem-forming) glide was
synchronically perceived as part of the root in both branches, it is unsurprising
that it would have been restored early on in Greek to preserve the root shape.
Other Greek derivatives from this neo-root in which the glide was preserved
before a consonant certainly played a role, too (e.g., δαίς, -τός 'feast', the future
δαίσω, etc., cp. Jasanoff 2003: 105).

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13   Gotō 1987: 172 argues that Ved. *dáyate* is actually the conflation of two distinct roots that
      fell together in Indo-Iranian, one meaning 'separate' (from which the meaning 'divide, dis-
      tribute' can be derived relatively easily) and one meaning 'destroy'. I agree with Stephanie
      Jamison that the passages that support the meaning 'destroy' according to Gotō (RV 3.34.1,
      4.6.5, 4.7.10, 6.6.5, 6.22.9, 10.80.2) "can all be seen as metaphorical extensions of 'divide,
      cut apart' (3 of the 5 passages occur with *ví*), an extension well within the bounds of RVic
      poetic imagination …" (Jamison 2015: 28; see the relevant passages in Jamison and Brere-
      ton 2014 for the translations). That *dā̄ⁱ* 'divide' is to be separated from *dā* 'mow, cut' (LIV²:
      102: *?*deH*) has been independently motivated by Narten 1968, and I follow this separa-
      tion here. However, *dā* 'mow, cut' did not make a *$i̯e/o$-present, so nothing hinges on this
      decision.

14   This is somewhat similar to the analysis of Kulikov 2000: 277 f., who argues that *dáyate* :
      dyáti should be at least synchronically analyzed as a class I : class VI pair. However, he
      remains open to the idea that *dáyate* was originally an *$éi̯e/o$-present.

The Vedic root shape is more problematic, as we would expect compensatory lengthening to result in *$dáyate$ (< *deh_2-i-e-toi), cp. the standard derivation of $spháyate$ 'grows fat' < *$sph\acute{e}h_1$-ie/o- (LIV²: 584). However, Jasanoff 2003: 101 ff. argues that there are actually two distinct groups of *CeH-i-verbs in Vedic, one that appears to display compensatory lengthening ($spháyate$ 'grows fat', $pyáyate$ 'swells', $gáyati$ 'sings', $tráyate$ 'protects', on which see below) and one that does not ($kṣáyati$ 'rules over', $vyáyati$ 'envelops', $hváyati$ 'calls', $dháyati$ 'sucks', $dáyate$ 'distributes'). LIV² consistently reconstructs *$éie/o$-presents for the latter class. Jasanoff (2003: loc.cit.), on the other hand, argues that the lack of compensatory lengthening actually reflects the origin of the latter class as *h_2e-conjugation *i-presents. Root-final laryngeals in i-presents underwent a Proto-Indo-European sound law that Jasanoff calls the "AHIHA-rule": *-$AHIHA$- > *-$AIHA$- (A = any vowel, I = i or u; basically a laryngeal dissimilation rule) which would result in a short vowel before the glide in the 1sg. of the paradigm of these verbs (e.g., *$déh_2$-i-h_2e > *$dé$-i-h_2e), with subsequent analogical extension of the new root shape to contexts where compensatory lengthening would regularly take place, like the 3sg. *deh_2-i-e. This rule also operated in the instrumental singular of $ā$-stems[15] and would explain the attested root shape /day/ in Vedic. Referring to the "AHIHA-rule", Yakubovich 2014 also makes a case for laryngeal dissimilation in Old Indic in certain *eh_1-statives,[16] but with the caveat that these phonological rules are "based on controversial morphological reconstructions" (Yakubovich 2014: 19). Moreover, 3pl. forms like dh_2-i-$énti$ are contexts for Pinault's Law by which laryngeals are deleted in the context *C_i (Pinault 1982).[17]

Taken together, this means that we actually have an *embarras du choix* for the deletion of root-final laryngeals in old *i-presents and the subsequent analogical spread of the laryngealless allomorph. Rather than having to motivate the loss of the laryngeal, the question then becomes how to constrain the application of this rule (or rules) and explain apparent counterexamples such as $spháyate$. The answer must lie in the way phonological rules interact with the morphological environments in which they apply, crucially the morphological analysis of the *-i-, and therefore in the different *averbos* of the two groups discussed above. While the $kṣáyati$-group (to which $dáyate$ formally belongs)

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15   Instr.sg. -$ayā$ instead of *-$āyā$ from *-eh_2-ih_2-eh_1; the glide reflects a contamination with the $dev\acute{i}$-stem allomorph according to Jasanoff 2003: 102 and fn. 226, who credits Jochem Schindler for this analysis.

16   See also Peters 2016, who suggests that the laryngeal in de-instrumental *ie/o-stems was lost through Kuiper's Law before the suffix was added.

17   See chapter six of Byrd 2015 for a recent reevaluation of Pinault's Law. Byrd argues that only *h_2 and *h_3 are deleted.

seems to have consistently reinterpreted the palatal glide as belonging to a "neo-root" (recall Kulikov 2000's argument that the derivationally related form -*dyáti* must be synchronically analyzed as a class VI verb), the *spháyate*-group has grouped the glide with the suffix and patterns as class IV, even though some members of this class also originated as *h_2e-conjugation *i*-presents.[18] This group therefore had more opportunities for analogically reintroducing the root allomorph that had undergone lengthening in environments where no glide followed.

To summarize this discussion, it is easy to derive the attested Greek paradigm of δαίομαι from an old *h_2e-conjugation *i*-present if ones assumes that the suffix was reanalyzed as part of the root relatively early in some predecessor of Graeco-Aryan. It involves slightly more steps in the case of its Vedic cognate *dáyate*, but in this case the complications arise because of specifically Indo-Iranian phonological and morphological developments (the independently discussed problem of laryngeal dissimilation and of the different treatment of inherited *i*-presents). None of these seem insurmountable.

The immediate predecessor of the Greek and Vedic forms was presumably still an oppositional middle with canonical "middle semantics", given that these verbs were renewed as formally middle (rather than as formally active like other *h_2e-conjugation *i*-presents such as *kṣáyati*, *dháyati*, etc.). However, both the Vedic and the Greek forms are agentive and there is no trace of an older canonical function, cp. (14):

(14) RV 7.21.7c:
      índro magháni dayate visáhya
      'Indra, having conquered, distributes bounties'

Greek has a few instances of passive use that must be innovative. Both active and passive use are attested in the Odyssey:

(15) Act.: Od.15.140:
      πάρ δὲ Βοηθοΐδης κρέα δαίετο καὶ νέμε μοίρας
      'And nearby the son of Boethous carved up the meat and distributed the portions.'

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18   Notably *spáyate* itself, cp. Hitt. *išpāi* 'fills oneself, eats one's full', pl. *išpiyanzi*, Lith. *spěju*
      'have time', OCS *spějǫ* 'am successful', OE *spōwan* 'thrive', etc.; see Jasanoff 2003: 108.

(16) Pass.: Od.1.48:

> ἀλλά μοι ἀμφ' Ὀδυσῆι δαΐφρονι δαίεται ἦτορ
> 'But my heart is divided for/on account of skillful Ulysses'

The perfect in Od.1.23 is likewise passive ("are divided"), as are two instances of the present participle (Od.5.61 and 9.551). The two active passages (Od.15.140, ptcp. δαιόμενος in Od.17.332) both take κρέα 'meat' as direct object. The comparison with Sanskrit suggests that the transitive use is older, so the passive use may be due to an inner-Homeric reanalysis of δαίομαι as an oppositional middle/mediopassive to an unattested active *δαίω (which in turn could be interpreted as underlying the active future δαίσω and the aorist ἔδαισα).

There is no synchronic reason why a verb meaning 'distribute' should be middle in either language, since neither the Vedic nor the Greek verb is oppositional or has obvious self-benefactive semantics,[19] making it a clear synchronic deponent. However, as already mentioned, the continuants of other *i-presents in Vedic are formally active (*dháyati* 'sucks', *kṣáyati* 'rules over', *hváyati* 'calls', *vyáyati* 'envelops'), and the fact that the reflexes of other *h_2e-conjugation *i-presents are formally active in Hittite, Vedic, and Greek suggests that the immediate predecessor of Vedic *dáyate* and Greek δαίομαι retained its oppositional middle semantics slightly longer than these other *h_2e-verbs. To be on the safe side, we should therefore operate with a late PIE/pre-Graeco-Aryan deponent, that is, a *h_2e-conjugation verb that escaped the expected recharacterization as a formally active verb and only developed into a deponent verb in the immediate common ancestor of Indo-Iranian and Greek, where it requires an immediate preform 3sg. *$déh_2\text{-}i\text{-}e\text{-}toi̯$.

2.3   *$h_1u̯eg^{uh}$- 'speak solemnly, praise'

This root made an athematic reduplicated middle present (*$h_1e\text{-}h_1u̯og^{uh}\text{-}/)h_1e\text{-}h_1ug^{uh}$- (LIV²: 253, Villanueva Svensson 2012: 335), which is reflected in the

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19   This is difficult to test in a non-informant language, but the comparison with Modern Greek suggests that the self-benefactive interpretation is tied to the availability of an oppositional active with non-benefactive semantics; see Zombolou 2004, 2015, Zombolou and Alexiadou 2014b, Lavidas and Papangeli 2007, Lavidas 2009 for a discussion of the connection between the loss of oppositional actives and the development of deponents. Modern Greek deponents such as *metahirizome* 'use', *epititheme* 'attack', etc., are not synchronically perceived as self-benefactives by native speakers (Despina Oikonomou, p.c.). This is additional (if somewhat indirect) evidence that forms like Ved. *dáyate* and Gk. δαίομαι were at least not synchronically analyzed as self-benefactives.

Vedic athematic present 3pl. *óhate*, *óhāna-*,[20] the Old Avestan 1sg. *aojōi*, 3sg.ipf.
aogədā, ptcp. *aojāna-*, and the Greek 3sg.ipf. εὖκτο (*Thebaïs* 3.3). This was
remodeled as a thematic present εὔχομαι very early on (cp. Myc. *eu-ke-to*
/eukhetoi/). While a root athematic present *h_1eug^{uh}-to* with full grade I would
also give the Greek and Indo-Iranian forms, the reconstruction of the root
shape *h_1ueg^{uh}-* seems necessary because of the Latin present *voveō* 'vow' (re-
flecting an *$éie/o$-iterative *h_1uog^{uh}-éie/o-*) and may find further confirmation
in Ved. *vāghat-* 'praiser' (< *$h_1uo/ēg^{uh}$-nt-?*), which could belong to the same root
(EWA II: 539).[21]

   The Greek and Vedic forms suggest that a non-alternating verb *$h_1e-h_1ug^{uh}$-
toi was already part of some late stage of the proto-language. Whether the
non-active inflection is non-trivial from a synchronic point of view (a criterion
for deponency) is more difficult to determine with certainty. Transitive verbs
of speech and communication vacillate between taking active and non-active
morphology in languages with "Greek-type" voice systems (cp. Kemmer 1993:
127 ff.). Thus Vedic has active *gṛṇā́ti* 'praises, greets', *níndati* 'mocks, taunts', *pṛc-
cháti* 'asks', *brávīti* 'says (to)', *vádati* 'says', aor. *ávocat* 'said, spoke (to)' and *stáuti*
'praises', but also middle *ī́ṭṭe* 'praises' and *vándate* 'praises'. Given the archaic
and synchronically non-alternating status of *ī́ṭṭe* and 3pl. *óhate* and the fact that
active morphology prevails in this class, it seems safe to assume that middle
morphology is indeed synchronically marked and that these verbs can there-
fore be treated as deponents. Things are less certain in Greek, which has active
αἰτέω 'beg, demand', φημί 'say', the act. aorist εἶπον 'said', καλέω 'call, summon',
κλείω, κλέω 'tell of, make famous', ὄμνῡμι 'swear', but also middle λίσσομαι 'beg,
demand', εἴρομαι 'ask, question', κέλομαι 'urge, command', ψεύδομαι 'lie, belie',
μέμφομαι 'blame, reproach' and στεῦμαι 'promise, declare to'.

2.4   *peh_2-s- 'protect'*

The root *peh_2-* is not exclusively deponent; Indo-Iranian has an active root
present in Vedic *pā́ti*, OAv. *pā̊ṭ* 'protects' and an active subjunctive *pāsati*. The
latter is generally identified as *s*-aorist subjunctive, e.g., LIV²: 460 and Narten
1964: 168 f., who also argues that it is a recent, metrically conditioned formation.
However, there are other *s*-stem forms of this root that point to an *s*-present or
desiderative *peh_2-s-(e/o-)* which surfaces with non-active morphology more

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20   Also *ohāná-*.

21   I am grateful to Jay Jasanoff for bringing this form to my attention. Further evidence for
     a full grade II root (variant) may come from Armenian, which has a defective aorist stem
     gog(e)- (e.g., 2sg.ipv. *gog* 'speak!') that could go back to *uog^{uh}-*. See Klingenschmitt 1982:
     275 for a discussion of this stem.

often than not in the daughter branches. The clearest case is Hittite *paḫš-* 'protect', which is classified as active *mi*-verb by LIV[2]: 460, but active forms are practically non-existent until the Neo-Hittite period. Kloekhorst 2008: 612 moreover points out that *paḫš-* takes on the active *ḫi-* rather than the *mi*-inflection when it is finally transformed into an active verb (the form *paḫḫašmi* cited by LIV[2] is actually attested only once, whereas *paḫḫašḫi* is much more frequent). The fact that *paḫš-* takes the dentalless 3sg. middle ending only confirms its status as an archaism. The same *s*-present or desiderative is presumably what underlies the OCS present *pasǫ* 'graze, herd'[22] and has also been suspected behind the Tocharian A class II present 3sg. *pāṣtär*, 3pl. *pāsantär* 'protect' (Jasanoff 1988: 230 f., fn. 10, 2003: 136, 182 f., 2012a). The Tocharian A deponent inflection makes it tempting to compare this verb directly to Hittite *paḫša(ri)*, but the corresponding Tocharian B present *pāṣtär*, 3pl. *paskentär* suggests that both rather go back to an *$\hat{s}ke/o$-present that became a neo-root in Tocharian (thus Hackstein 1995: 178, Malzahn 2010: 699). Hackstein rightly points out that assuming an **s-present for Tocharian A and a *$\hat{s}ke/o$-present for Tocharian B is uneconomical, but the connection between the PIE **s- and *$\hat{s}ke/o$-forms is not completely straightforward. Thus, Latin *pāscō* 'graze' has an unexpected full grade which LIV[2] loc.cit. explains as analogical to that of the "*s*-aorist" *$*p\acute{e}h_2$-s-/$p\acute{e}h_2$-s-$. However, the evidence for this *s*-aorist is based only on Vedic *pāsati*, which is a young formation, and the Latin perfect *pāuī*, which according to Meiser 2003: 124 f. could represent the inner-Italic replacement of an older *s*-aorist because of a synchronic ban on *s*-perfects to roots ending in ***-eH* in Latin. This is indirect evidence at best, and without the Vedic subjunctive form, it seems easier to assume that the full grade in *pāscō* is due to the *s*-present (for which independent evidence exists at least in Hittite and OCS) which was remodeled as an Italic *$*ske/o$-present on the way to Latin. It must be pointed out, however, that this full grade (so far the strongest argument in favor of an old *s*-present in Latin) could also be an inner-Italic analogy to that of *pāvī*,[23] in which case Latin may simply have inherited the same -*$\hat{s}ke/o$-present as Tocharian and introduced the -*ā*-later. The Latin evidence for an old *s*-present is therefore not completely unambigous.

The Latin PPP *pāstus* and the agent noun *pāstor* could also be evidence for the existence of an *s*-present/desiderative beside the *$*\hat{s}ke/o$-formation in Latin (Meiser 2003: 124, Jasanoff 1988: 230 f., fn. 10), but see Hackstein 1995: 177 for

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22   Cp. LIV[2]: 460, especially fn. 8.
23   Hackstein 1995: 177, citing Monteil 1984.

objections (a development from *-*sk-t*- rather than *-*s-t*- is phonologically also possible). Nevertheless, based on Hittite alone we must reconstruct a deponent *s*-present *péh₂-s-or for Proto-Indo-European. The same stem also underlies the OCS form. We can further speculate that this *s*-stem was remade as a **sḱe/o*-present in (at least) Tocharian B and Latin (with the above caveats), where *-*sk*- was a synchronically less marked present-stem-forming suffix than -*s*-. In Latin, this remodeling was accompanied by the loss of middle inflection, which was preserved in Tocharian.

A wrinkle in this picture is the "*si*-imperative" *paḫši*, which Jasanoff (2012a; also Jasanoff 1988: 230 f., fn. 10 and Jasanoff 2003: 182 f.) traces back to the 2sg. *s*-present subjunctive *peh₂-se-si, haplologized to *peh₂-si (see Oettinger 2007 for a different view). It is unclear why a formally active 2sg.subj. form would be chosen to supplete the imperative paradigm of a formally middle deponent.[24] However, this pattern is more generally found with dentalless deponents in Hittite, e.g., *ḫannari* 'sues; judges': ipv. *ḫanni*, *ḫuittiyari* 'pulls': ipv. *ḫuetti*, *iškallari* 'tears off': ipv. *iškalli*, etc., (see Oettinger 2007), and presumably needs an inner-Anatolian explanation. Nevertheless, the prehistory of the relationship between formally active *paḫši* and the deponent paradigm of *peh₂-s- is not completely clear.

While the stem **peh₂-s-(e/o)*- may have been a desiderative at some point, which would explain the inherited middle inflection of Anatolian and Tocharian,[25] the daughter languages preserve no traces of desiderative meaning, and the neo-root is decidedly agentive in all branches. Moreover, there is no synchronic motivation for non-active morphology on verbs meaning 'protect' in these languages (cp. Ved. *páti*, *rákṣati*, OAv. *pāṭ*, Gk. φυλάσσω, Lat. *custōdiō*, *conservō*, Hitt. *paḫšnuzzi*, etc.). It is therefore unproblematic to assume that this stem was a deponent already in late Proto-Indo-European.

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24   As Jay Jasanoff has pointed out to me, it may be relevant here that Vedic has a few more cases in which a formally active subjunctive is paired with a formally middle indicative of the same stem. This is regular for *s*-aorist subjunctives, which are usually formally active and do not alternate (only ≈ 20 middle forms are found in the RV, Macdonell 1910: 379), while the corresponding indicatives take both the active and the middle endings. This means that verbs that take middle endings in the *s*-aorist indicative (as expected for *media tantum*, for example) will end up with a formally active *s*-aorist subjunctive. Examples include aor. *astoṣṭa* 'praised': subj. *stoṣat*, aor. *ayaṁsta* 'directed, drove': subj. *yáṁsat*, aor.3pl. *neṣata* 'led': subj. *néṣat*, etc.

25   Cp. Kemmer 1993: 79 ff. for the connection between desiderative semantics and non-active morphology.

2.5 *h_2neh_3- 'scorn, reprimand'

The deponent inflection of this root is guaranteed by the correspondence between Greek ὄνομαι 'scorn, reprimand' (2sg. ὄνοσαι, etc., inner-Greek aorist ὠνοσάμην), Hitt. *ḫannari* 'contest at law, sue; judge',[26] and perhaps also by the *k*-extended Tocharian root *năk* seen in the class I subjunctive B (inf) *nāktsi* (replaced by a class VII subjunctive in Tocharian A), pret. III *năksate*, and the new class VIII present B *năkṣtär*, A *nākäṣtär* 'blames, reprimands' (Hackstein 1995: 65 ff., Malzahn 2010: 677 f.). However, since the stem-forming suffix has changed in Tocharian, the deponent status of this verb in PIE is primarily based on Hittite and Greek (cp. the criteria in 2.1 above).

The Greek present could reflect either *$h_2\mathring{n}h_3$-(t)or* or a full grade I variant *$h_2énh_3$-(t)or* more or less directly. Both *$h_2\mathring{n}h_3$-C-* and *$h_2énh_3$-C-* would have given *ano-C-* with subsequent assimilation to *ono-C-* (thus Hackstein 1995: 66, who also dismisses the Homeric form ὤνατο as evidence for root-final *-h_2; see also Pinault 1982: 20 ff. who connects the Greek and Old Irish forms with the root of *h_1neh_3-mṇ* 'name'), preceded by the by now familiar replacement of the 3sg.mid. *-o* by *-to*. The Hittite form is more problematic. A full grade II middle is impossible. While a full grade I middle *$h_2énh_3$-or* should have given *HanH-V- > ḫann-V-* (cp. *ḫarra-* 'crush' < *$h_2érh_3$-V-*, Melchert 1994: 79 f., Kloekhorst 2008: 300 f.; on the loss of *h_3 in other positions see Melchert 1994: 72 ff.), *h_3 was apparently also preserved in medial position in some cases, the circumstances of which are not clear, cp. Hitt. *walḫ-* < *$u(e)lh_3$-* (Kloekhorst 2008: 945 f.); Hitt. *lāḫu-* 'pour' < *$lóh_3$-u-* (Melchert 2011). If *$(C)Rh_3V$* gave *$(C)aRḫV$*, as Kloekhorst, loc.cit. suggests, a zero grade middle *$h_2\mathring{n}h_3$-ór*, on the other hand, should presumably have surfaced as *ḫanḫāri*, and even if gemination took place, the resultant verb should behave like *dukkāri* 'is visible' (reflecting accent on the ending). Since full grade seems to be the more expected ablaut grade of old *media tantum* and the medial reflexes of *h_3 are contested either way, it therefore seems more prudent to operate with a full grade I middle *$h_2énh_3$-(t)or* for Greek and Hittite.

Old Irish and Tocharian, on the other hand, seem to require a full grade II form. Tocharian inherited a root shape *$n\breve{a}$- < *h_2neh_3-* which it extended with an element -*k*- (Hackstein 1995: 66 f.); this stem also exhibits deponent inflection. Old Irish -*antar* 'is blemished' (Watkins 1962: 116 ff., Pinault 1982 loc.cit., LIV² loc.cit.), is explained by LIV² as a blend of the full grade reflex *$n\bar{a}$* with the zero grade reflex *ana* (Watkins operates only with the zero grade).

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26 Hackstein 1995: 67 also adduces Lycian *qãti*, *qãnti* (cp. HED: III, 82), but see Kloekhorst 2008: 284 for objections.

Synchroncially, it behaves like the passive of an unattested *anaid < *anati 'blemishes' (cp. the nominal forms OIr. on; anim, both 'blemish'), but the clear deponent status of this root in Greek, Hittite, and Tocharian suggests that this use is an innovation of Old Irish.

While the transitive syntax and agentive semantics of this stem are relatively clear in three out of four branches and the non-active morphology is synchronically non-trivial (but cp. μέμφομαι 'blame' in Greek), the root shape is not. While full grade I is usually assumed to arise from full grade II as its *Schwebeablaut* variant (that is, as a new full grade based on its zero grade), it seems that in this case the full grade I present would be quite old. Since at this point we expect *media tantum* to have full grade, and since zero grade would be problematic for Hittite anyway, this nevertheless seems to be the less problematic reconstruction.

2.6   *med- 'measure (out), discern'

The deponent behavior of this root is amply attested in Indo-European: Greek has μήδομαι 'devise, contrive' (aor. ἐμήσατο) and μέδομαι 'take care of'. The Hesychian gloss μῆστο · βουλεύσατο could reflect a present injunctive *mēd-to, in which case the thematic present would go back to an athematic Narten present, as reconstructed by LIV²: 423.[27] Greek μῆστο is moreover cognate with the Old Irish "long-vowel preterite" ·mídair 'judged', confirming that this root made a Narten imperfect (Jasanoff 2012c).[28]

There are no reflexes in Vedic, but Avestan has three forms that belong to this root according to Hintze 2000: the Old Avestan 3sg. aorist subjunctive *masatā* 'shall measure out',[29] the Young Avestan 3pl. present injunctive *vī-māδaiiaṇta* (V.7.38, V.7.40) and 3pl. present subjunctive *vī-māδaiiâṇte*. Latin has a present *medeor* 'help, heal' that could reflect *med-eh₁- i̯e/o- (see Jasanoff 1978 and 2004

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27   An alternative explanation for the apparent lengthened grade of μήδομαι is influence of the synonymous *meh₁ 'measure', cp. Beekes 2010: 941; however, this root does not otherwise have reflexes in the Greek verbal system. For the semantic difference between *meh₁ 'measure' and *med 'measure out, discern' see furthermore Benveniste 1969.

28   See Schumacher 2004: 74 ff. for the more traditional account of the Old Irish preterite, which takes it to be a replacement of an older (at least Proto-Celtic) reduplicated perfect. A general critique of the "reduplication" theory of long-vowel verbal formations can be found in Jasanoff 2012c; note that there is no evidence for an old perfect formation to this root outside of Celtic.

29   This form could also be read as disyllabic *masᵃtā*, in which case it would be a 2sg. *s*-aorist injunctive reflecting *matsta < *mad-s-ta, but Hintze 2000: 170 f. rejects this solution in favor of a trisyllabic reading.

on the prehistory of PIE verbs in *-eh₁-i̯e/o-) or *med-ei̯e/o- (for the e-grade of the root cp. *mereō* 'deserve', *vegeō* 'move, excite').[30] LIV² loc.cit. tentatively sets up an "essive" *m̥d-h₁i̯é- (see Harðarson 1998 on this category and Jasanoff 2004 for counterarguments), but concedes that the (likewise unexpected) full grade of the root is probably connected to the full grade presents found in Greek, Old Irish and Gothic. Gothic *mitan* 'measure' (OE *metan*, OHG *mez(z)an*, etc., cp. Feist 1939: 363 f.) reflects thematic *med-e/o-. This stem also underlies the Old Irish deponent present *midithir* 'judge', which was remodeled to *med-i̯e/o- within Celtic (Schumacher 2004: 481; Kortlandt 2007: 137 on the other hand assumes an athematic *i*-present). While the Avestan causative present and the Latin *ē*-stem are most likely creations of those branches, the full-grade thematic presents of Greek, Celtic, and Germanic could reflect the remodeled athematic Narten-ablauting present.

More evidence for a verbal Narten fomation may come from Baltic. Villanueva Svensson 2006 argues that the Old Lithuanian athematic present *pamĕmi* (< *pa-mĕdmi*), inf. *pamĕdėti* (also (*pa*)*mĕdyti*) 'imitate, ape' and the corresponding Latvian form *mẽdît* 'imitate' go back to Proto-Baltic *mēd-mai* 'measure' and provide further evidence for an old athematic Narten present *mēd-/med-*. He notes that the lengthened grade in the Baltic forms could also be due to Winter's Law, but the Greek forms independently require a lengthened grade form *mēd-.

To summarize, we find reflexes pointing to a present stem with R(ē) in Greek, Baltic and Old Irish, and reflexes of full grade in Greek, Old Irish, and Germanic. That the formation underlying these presents was athematic is suggested by Baltic and Greek. Deponent inflection is found in Greek, Avestan, Old Irish, and Latin. Based on this evidence, Villanueva Svensson 2006 reconstructs an athematic middle present *mḗd-or, 3pl. *méd-ror. This would provide a straightforward point of departure for the forms of the daughter branches, taking into account the usual language-specific innovations and remodeling (thematization, replacement of *-o by *-to, levelling of ablaut differences, etc.). The Narten ablaut in a middle-only paradigm (where we would not expect ablaut at all) is unusual, to put it mildly, but seems to be required by Greek and Old Irish and supported by the Baltic evidence. I therefore follow Villanueva Svensson's reconstruction of a Proto-Indo-European deponent for the root *med-. The formally active participles μέδων, μέδεων 'ruler, ruling' (Hom.+) do not disturb this picture; they could be interpreted as an attempted inner-Greek "activization" of this verb, and there is independent evidence that *-(o)nt- was not originally

associated exclusively with formally active verbal paradigms.[31] An old *-(o)nt-participle to this root would therefore not be a counterargument to reconstructing a non-alternating middle.

To avoid setting up an ablauting middle paradigm, we could assume that the Narten ablaut was actually a feature of this verb's *h_2e-conjugation predecessor.[32] *h_2e-conjugation verbs originally had R(o/e)-ablaut, but there is no principled reason why Narten root *h_2e-verbs should not have had R($\bar{e}$/e)-ablaut. This would be exactly parallel to the alternation between R(o/e) and R($\bar{e}$/e) ablaut in the nominal domain, for example in root nouns (*dóm-/dém-'house', *$g^u\acute{o}u$-/$g^u\acute{e}u$- 'cow', *pód-/péd- 'foot' vs. *$h_3r\acute{\bar{e}}\hat{g}$-/*$h_3r\acute{e}\hat{g}$- 'ruler, judge', *l$\acute{\bar{e}}\hat{g}$-/*l$\acute{e}\hat{g}$- 'law', see Schindler 1972) and in *i-stems (*$h_2\acute{o}u$-i-/*$h_2\acute{e}u$-i- 'sheep', *$h_2\acute{o}\hat{k}$-ri-/*$h_2\acute{e}\hat{k}$-ri- 'peak, point' vs. d$\acute{\bar{e}}r$-i-/dér-i- 'flaying', etc., see Schindler 1980: 390, Widmer 2004: 50 ff.), among other formations.[33]

We can therefore assume that Proto-Indo-European had occasional Narten *h_2e-presents of the structure 3sg. R($\acute{\bar{e}}$)-e, 3pl. R($\acute{e}$)-r̥(s), and that the root *med-made such a present in the remote prehistory of Proto-Indo-European. Once the *h_2e-verbs split up into either a new formally active conjugation (the Hittite ḫi-conjugation and the thematic conjugations of "inner-IE") or a renewed middle, *med- took the latter route, renewing the 3sg. -e as *-o(r). While Germanic generalized the weak root grade, Baltic is ambiguous and Greek and Old Irish have reflexes of both the strong and the weak grade, but note that there was an early semantic differentiation between the two root shapes that justifies the retention of both in Greek. Avestan and Latin seem to have independent formations to this root.

This scenario implies that both ablaut variants of the old Narten present were available relatively late, namely up until pre-Greek. While this may seem surprising, since *h_2e-verbs usually generalize either the strong or the weak stem, there are parallels for the preservation of both ablaut grades in the same language elsewhere in Indo-European (see Jasanoff 2003: 68 ff. on Hittite and 2012b on Tocharian).

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31   Recent discussions of this question are Frotscher 2013, Melchert forthcoming, Pinault forthcoming, Fellner and Grestenberger forthcoming.

32   I am grateful to Jay Jasanoff for this suggestion.

33   Note that I am not claiming that R($\bar{e}$/e) ablaut was a functionally distinct ablaut type beside R(o/e) and R(e/Ø) ablaut; presumably it was simply the Narten variant of the latter. For a different view according to which verbal Narten behavior represented a distinct Aktionsart/present-stem type in Indo-European see Kümmel 1998 and Melchert 2014.

Concerning the aorist, LIV² loc.cit. assumes that the sigmatic aorist seen in Greek ἐμήσατο and Old Avestan *masatā* belonged to the proto-language, but it cannot be completely excluded that these stems were independently formed in Greek and Avestan.

While the formal side is thus relatively clear, the semantic side is more complicated. We find the meaning 'measure' in Avestan, Germanic, and Italic (Lat. *modus* 'measure, mode', Osc. *meddíss* 'magistrate, judge' < 'the one who shows (*$dei\hat{k}$-) the measure (*med-), the established mode'), 'devise' in Greek, 'heal' in Latin (presumably related to 'take care of' seen in Gk. μέδομαι), 'judge' in Old Irish (and cp. Osc. *meddíss*), 'rule' in Greek μέδων, and 'imitate' in Baltic. LIV²: 423 essentially follows Benveniste (1969: 123 ff.), who argues that the meaning 'measure out (to establish/decide something)' was the original meaning of this root. This is seen most clearly in Avestan and in the Italic nominal derivatives of this root. This then developed into 'measure out, establish (the right measure) for somebody' > 'take care of' in Greek and Latin. For Latin, this actually makes a denominal origin *$med\text{-}eh_1$* (instr.) + *$\text{-}\underset{\,}{i}e/o\text{-}$* from the instrumental of the root noun underlying Osc. *meddíss* the most likely derivation of *medeor* 'help, heal', in which case the deponent inflection might be an independent innovation.[34] This formation should have meant 'have/be with the right measure (for)', and the fact that *medeor* usually takes the dative (rather than the accusative) might confirm this.[35]

The development from 'measure out' to 'establish, rule, judge' (Gk. μέδων, OIr. *midithir*) on the one hand and 'devise' (Gk. μήδομαι) on the other is also not too surprising. The only real problem is Baltic 'imitate', but here at least there is a parallel in the development of Skt. *prati-mā-* 'measure out, imitate' from *mā* 'measure' (Villanueva Svensson 2006: 97). The meaning 'measure out as, create' is also occasionally found for the simplex verb, e.g., RV 9.83.3 *māyāvíno mamire asya māyayā* "They were measured out [= created] as masters of artifice by his artifice" (Jamison and Brereton 2014: 1317). This seems to be a rare, but not impossible semantic shift.

As a final point, it should be noted that there is some variation in the object case of this verb. Greek μέδομαι usually takes the genitive, like other verbs that mean 'take care of, think of', and Latin *medeor* is usually found with the dative.

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34   Certain classes of denominal verbs regularly take non-active inflection, cp. Zombolou and Alexiadou 2014a for Modern Greek and Grestenberger 2014a.

35   However, an anonymous reviewer has pointed out that *help*-verbs regularly take the dative in other languages, as well as in Latin (cp. *auxilior* 'help', *sub-veniō* 'help', etc.), so the case on the object by itself is not a strong argument for or against the denominal analysis.

However, Greek μήδομαι, Avestan *masatā*, and Old Irish *midithir* take accusative objects (*midithir* is also used with the preposition *for* 'on, over'), suggesting that the transitive use of **med-* is old.

2.7   **i̯i-i̯eh₂-* 'demand, seek'

As argued by García Ramón 1993 and 1999 (see also LIV²: 310 f.), Greek δίζημαι 'seek' forms a word equation with the stem of Vedic *ī́mahe* 'we are asking, pleading'. He traces both verbs back to a reduplicated middle present **i̯í-ih₂-* and argues that the Vedic middle forms 1sg. *íye*, 1pl. *ī́mahe*, and the middle participle *iyāná-*[36] go back to this stem more or less directly (with remodeling of the reduplication syllable), while Greek δίζημαι introduced the full grade of the root (ζᾱ-/ζη- < **i̯eh₂-*), perhaps in analogy to the active root present **i̯eh₂-ti* attested in Vedic *yā́ti* 'asks, requests' (and note that the synchronic **to-* participle seen in Ved. *yātá-* and OAv. *yāta-* also reflects full grade of the root). Moreover, *ī́mahe* synchronically belongs to the paradigm of act. *yā́ti* and is therefore not a synchronic deponent in Vedic.

Deponent behavior of this root is also found in the Toch. B subj. II *yāṣtär* 'will ask, beg' < **ih₂-sḱe/o-*, which reflects a different present stem formation (see Malzahn 2010, also Hackstein 1995: 184 ff.; 242 who posits a now obsolete root **di̯eh₂-*).

The Vedic, Greek, and Tocharian deponents of this root are transitive and they all display agentive behavior. García Ramón 1999 in particular points out the correspondence between Ved. *yātár-* 'avenger' and Gk. Ζητήρ (Ζητήρ · Ζεὺς ἐν Κύπρῳ, Hsch.), both reflecting an old agent noun **i̯eh₂-tér-* 'seeker'. Moreover, at least four Rigvedic passages contain a passive *īyate* that must be interpreted as the passive of the root underlying *ī́mahe* (Kulikov 2012: 494 f., see also Schmid 1956, Insler 1972: 100 f.).

While this root did not exclusively take middle morphology (e.g., Ved. *yā́ti*, aor.subj. *yāsat* 'shall plead', cp. Narten 1964: 209 f.), we have enough evidence to set up a reduplicated deponent present **i̯i-i̯ₐ/ih₂-toi̯* 'seeks, requests' at least for late inner-Indo-European/pre-Graeco-Aryan. The Tocharian comparandum could suggest that deponent behavior was even older, but because of the non-matching stem-forming morphology this is uncertain.

2.8   *Summary*

To conclude, we have discussed six verbal stems which must have behaved as deponents in the (late) proto-language: **déh₂-i-e-toi̯* 'distributes, divides',

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36   The accent of the participle is unexpected for a reduplicated present, however.

*h_1e-$h_1$ug^{uh}-toi̯ 'praises', *péh₂-s-or 'protects', *h₂énh₃-(t)or 'reprimands, passes judgment', *mḗd-or 'measures out', and *i̯i-i̯ₐ/ₜh₂-toi̯ 'seeks, requests'. The middle inflection on these verbs is unexpected from a synchronic point of view in each of the branches that attests it, and moreover supported in each case by at least two separate branches. I submit that this property is inherited from the late proto-language, and that we should not reconstruct alternating paradigms as LIV² tends to do in these cases, usually to motivate the "unexpected" full grade of these middles (of course, this does not exclude the possibility that these verbs were alternating in early or pre-Proto-Indo-European).

Additionally, we have seen that deponency is linked to verbal stem-forming morphology. Roots themselves are not specified as "deponent" (cp. the case of *peh₂- and *i̯eh₂-). I have discussed this observation elsewhere (Grestenberger 2016) in more detail.

In addition to these cases, there are a few deponents that are only attested in one Indo-European language, but are synchronic archaisms and may therefore also reflect (late) Proto-Indo-European deponents. These are treated in the next section.

3 Possible Proto-Indo-European Deponents

3.1 *u̯er- 'protect; fend off, stop'

Greek has a u-present ἔρῠμαι (also thematized ἐρύομαι) and a middle perfect εἴρῡμαι, probably based on the athematic present (and synchronically functioning as present). The lack of a digamma effect has given rise to comparison with Latin servō 'save, protect'; this is rejected by Solmsen 1901: 245 ff. who also discusses the digamma problem. LIV²: 685, n. 4 suggests that the full grade of ἔρυμαι < *u̯ér-u-mai was introduced in analogy to the active or the subjunctive, but the root is solidly deponent in Greek and we have already seen evidence that media tantum paradigms tend to have full grade (see Villanueva Svensson 2012). In light of this, the apparent ablaut suggested by the zero grade variant ῥῦμαι < *ϝr-ū-mai (later also thematic ῥύομαι) is more problematic. Beekes 2010: 466, following Frisk and Chantraine (GEW: I, 568 f., DELG: II, 376), assumes that there were two ablaut variants *ϝeru- and *ϝrū- in Proto-Greek, but without discussing the relationship between them.

Moreover, the affiliations of this root outside of Greek are completely unclear. LIV² loc.cit. suggests that some of the nominal and verbal forms traditionally grouped with Vedic vr̥- 'cover' (as in EWA II: 512 f. and Lubotsky 1997: II, 1336 ff.) actually belong to a separate Vedic root vr̥- 'protect' < *u̯er- that fell together with the reflexes of *Hu̯er- 'lock in, keep safe' (?Ved. ávar 'opened',

Lat. *aperiō* 'open', etc.) and 1. **u̯el-* 'lock in, cover up' (Ved. *vṛṇóti* 'locks in', Gk. εἰλέω 'hem in', etc.) because of the formal and semantic overlap of these roots in Indo-Iranian, but it is difficult to tease apart which verb forms belong to which root. Nevertheless, there are several nominal forms that seem to be built on the same *u-present that is attested in Greek, e.g., *várūtha-* 'protection', *varūtár-/várūtrī-* 'protector' (beside *vartár-* 'defender', cp. EWA II: 512 f.) and provide indirect evidence that this present belonged to at least late Proto-Indo-European/pre-Graeco-Aryan. LIV² furthermore tentatively suggests that certain verbal formations that are usually grouped with *vṛ* 'cover' might belong to this root, like the aorist subjunctive *várate* 'shall ward off' or even some forms of *vṛṇóti* in the meaning 'wards off, stops', but this is uncertain because of the aforementioned difficulties in telling the two roots apart (cp. Hoffmann 1967: 241, who argues that all forms of *vára-* can be explained as aorist subjunctives of *vṛṇóti*).

Hackstein 2002: 124 f. tries to solve the morphological and phonological problems in Greek by assuming that the underlying root is the same as that of Gk. 3pl. ὅρονται 'are watching over, taking care of', YAv. *nī haraitē* 'preserves', etc., for which LIV²: 534 has a separate entry 1. **ser-*, and of Lat. *servō* 'save, protect'. He posits a root **su̯erh₃-* (the meaning of which is never defined) and argues that the different root shapes seen in Greek, Latin, Avestan, etc., can be accounted for by the Proto-Indo-European metathesis rule **u̯R̥(H)* > **Ru(H)* (cp. Mayrhofer 1986: 161 f.). Beside the full grade **su̯erh₃-* and the regular zero grade *su̯r̥h₃-*, this would give us a metathesized weak stem variant **sruh₃-* which would give Gk. ῥῡ- (ῥῦμαι) directly. While this solution would solve both the problem of the missing digamma in the anlaut and the /ŭ/ in the auslaut (these two properties correlate according to Hackstein 2002: 124 f.), it means we have to give up the equation with the Vedic forms, which lack initial *s-* and are moreover *aniṭ* (cp. *vṛtá-*, *vártar-*, etc., EWA II: 512 f.). On the other hand, there is no convincing alternative to the structural analysis of Ved. *varū°* as **var-u-H°* (the proposal by Klingenschmitt 1982: 233 of /ū/ as due to rhythmic lengthening is completely ad hoc), and the same holds for Greek ῥῡ°. That is, there seems to be no way around the laryngeal metathesis proposed by Hackstein, which in turn is potentially incompatible with some of the Vedic forms discussed here. Pending a thorough study of which forms outside of Greek actually belong to the same root, I cannot offer a solution to this problem.

While the formal side of the Greek forms is problematic, it is clear that this verb was synchronically an agentive deponent (cp. the agent noun ῥῡτήρ 'protector'). Non-active inflection on this verb is moreover non-trivial, that is, there is no clear synchronic motivation for it (cp. ἀλέξω 'ward off, defend', ἀμῡ́νω 'ward off, keep away', φυλάσσω 'protect, guard', etc.). To conclude, there is

some evidence for a pre-Greek (possibly late Proto-Indo-European) deponent *u̯-present *u̯er-u-to 'protect, defend, fend off', apparently preserved in Greek, but with formal difficulties concerning the root shape and ablaut, and perhaps indirectly preserved in Vedic nominal forms like varūtár- 'protector'. That Vedic also inherited verbal forms of this root is possible, but cannot be conclusively shown. Because of uncertainties concerning the verbal comparanda, very little can be said about the original morphosyntax of this verbal stem, so this must remain a somewhat unhappy case of potential deponency.

3.2   *treH-/*trā- 'protect'

LIV²: 646 tentatively sets up this root for Proto-Indo-European based on the Indo-Iranian evidence alone, and this seems warranted given that the middle inflection of both Vedic trā́yate 'protects' and Young Avestan ϑrāiieṇte 'protect' (Yt.13.146, also inf. ϑrāiiōidiiai, Y.34.5, Y.11.9) is not explicable from a synchronic perspective and suggests an inherited archaism.[37]

This root also made an s-aorist in Indo-Iranian, attested in the Vedic imperatives trā́sva, pl. trā́dhvam (= Old Avestan ϑrāzdūm, Y.34.7, Y.58.5) and the subjunctive trā́sate. These and a few other attested forms are discussed by Narten 1964: 131f., who claims that the Vedic s-aorist was marginal and falling out of use.[38] This verb is transitive and agentive (cp. Ved. trātár- 'protector' = Av. ϑrātar, see EWA I: I, 679f. for more nominal forms), and it is safe to assume that at least pre-Proto-Indo-Iranian (late Proto-Indo-European?) had a deponent *trā-i̯a-tai̯ 'protects'.

3.3   *gres-/gras- 'devour'

Vedic grásate 'devours' (perf. mid. opt. jagrasīta, ptcp. jagrasāná-, superlative grásiṣṭha-, cp. EWA I: 507) shows deponent behavior (the inner-Indic active causative grāsayati (Br.) is hardly a counterargument) and has a cognate in the formally active thematic Greek present γράω 'eat, gnaw' (Call., also Hsch. γρᾶ · φάγε, see GEW: I, 325, DELG: I, 237 for more instances). The middle inflection in Vedic is non-trivial, since other verbs of ingestion are formally active (átti 'eats', aśnā́ti 'eats', ághas 'devoured', píbati 'drinks', cp. Buck and Petersen 1945: 327 ff.). Since the same is true in Greek (ἐσθίω 'eat', ἔδω 'eat', but fut. ἔδομαι, aor. ἔφαγον, βέβρωκα 'have devoured', πίνω 'drink' vs. πατέομαι 'eat, taste', ἐρέπτομαι 'feed

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37   If this present stem is indeed attested as a loanword in Uralic as suggested by Katz 2003: 178, this would be additional evidence for its age.

38   "Die vereinzelten modalen s-Aor.-Formen im RV. können wohl ebensowenig wie die nachṛgvedischen Ind.-Formen (…) ein im eigentlichen lebendiges s-Aor.-Paradigma bezeugen", Narten 1964, loc.cit.

on'), we could posit a late Proto-Indo-European/pre-Graeco-Aryan deponent, whose middle inflection was given up in Greek. Given that it is easier to find a synchronic account for the active inflection in Greek than for the middle inflection in Vedic, we can tentatively set up a deponent *gras-e-to.[39]

Note that LIV²: 192 sets up an athematic present based on the Cypriotic Greek active imperative *ka-ra-si-ti* /grásthi/ (dated to the 4th century BCE by Masson 1983: 280). This form suggests that the root was not exclusively deponent in PIE and that the mismatch behavior was a relatively late development of the pre(-Graeco)-Aryan thematic stem. That this root was agentive may receive more evidence if the etymology of γαστήρ 'stomach' < *gras-tér- 'devourer' holds (thus, e.g., GEW: 291, but Beekes 2010: 262 is sceptical).

3.4   *Summary*

In the last two sections, I have discussed 6 very likely and 3 possible Proto-Indo-European deponent stems. I have argued that based on their stem-forming morphology, inflection, syntax, and meaning, these should be reconstructed as such already for some stage of the proto-language. This is a deliberately conservative approach—many other synchronic deponents found in Vedic, Greek, and Hittite could be added here, but have been excluded for now because of their lack of unambiguous non-active marked cognates in other languages, lack of root etymology, and/or potentially canonical middle semantics (e.g., Vedic *bādh-* 'attack', *rabh-* 'seize', *kṣad-* 'serve, arrange'; Hittite *parš(i)-* 'break', *tuḫš-* 'cut off', *iškalla-* 'tear, slit', etc.). As I have argued in the case of *gras-*, the middle morphology in such agentive predicates is very often the *lectio difficilior*, since a functionally active deponent was always at risk of being "regularized" by switching to active morphology. In other words, it is likely that more verbs will have to be added to this list in the course of time. Potential cases include:

- The family of Gk. ἱλάσκομαι, ἵλαμαι 'appease' and Lat. *sōlor* 'comfort, console', which has been excluded here because of the possible denominal origin of the latter and because of uncertainties concerning the meaning of the root, cp. LIV²: 530: *selh₂-* 'gnädig werden', also Klingenschmitt 1970.
- Gk. σκέπτομαι 'watch', Lat. *con-spicor* 'see', etc. (vs. active *speciō*) < *speḱ- (LIV²: 575 f.), excluded here because it is not clear whether active or middle morphology was canonical for PIE verbs of this type (similar to speech act verbs) and because the Indo-Iranian reflexes of this root are *activa tantum*.

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39   For Greek, *gr̥s-e-* would also be possible (Gotō 1987: 129, fn. 153).

– Lat. *ūtor* 'use', if this is indeed cognate with Gk. οἴσομαι, the suppletive future of φέρω (cp. LIV[2]: 297: ?*$h_3 e\underset{\circ}{i} t$- 'mitnehmen').

In the next section, I discuss the Proto-Indo-European middle presents that were originally canonical middles, but developed into deponents in one or more of the daughter languages. They differ from the verbs in section 3 in that we can usually also reconstruct an oppositional active verb that was lost relatively recently.

4   Inner-Indo-European Deponents

The Indo-European daughter languages also have a number of synchronic deponents which go back to earlier canonical middles. That is, a diachronic motivation for their middle morphology is easily reconstructible. In this section I discuss middles which are deponents in one branch, but go back to PIE non-deponents.

4.1   *$h_2 e\underset{\circ}{i} sd$- 'praise, revere'

The middle-only inflection of this root is assured by the correspondence in non-active morphology between Vedic *ī́ṭṭe* 'implores, beseeches' from athematic $h_2 i$-$h_2 e\underset{\circ}{i} sd$-/$h_2 i$-$h_2 isd$- (or from $h_2 isd$- with compensatory lengthening, cp. LIV[2]: 261) and Homeric αἴδομαι 'be reverent of, fear' from *$h_2 e\underset{\circ}{i} sd$-$e/o$- (cp. Peters 1980: 77 f.), later replaced by the denominative αἰδέομαι, likewise a *medium tantum*. Vedic also has a middle perfect *īḷé* < *$h_2 i$-$h_2 isd$-$a\underset{\circ}{i}$.

Formally active forms are found in Avestan and Gothic: Old Avestan has a stem *išᵃsa-* (Y.50.2 *išᵃsōiṯ*, Y.51.19 *išᵃsqs*, Y.31.4 *išᵃsā*) which according to Humbach 1956: 67 goes back to *$\bar{\imath}žd$-$s\hat{k}e/o$-. In Gothic, we find the 3pl. present *aistand* 'they are in awe', which may continue the same full grade thematic stem we find in Greek.

While the Vedic forms are undoubtedly agentive (agent noun *īḍitár*-'praiser' (AV); the passive *īḍyate* is attested in Classical Sanskrit), Greek and Gothic point to an experiencer verb meaning 'fear, be afraid of' (with NOM-ACC alignment). We could therefore reconstruct a full grade *medium tantum* *$h_2 e\underset{\circ}{i} sd$-$e$-$to\underset{\circ}{i}$ as the immediate preform for Greek. As for Vedic, Peters (loc.cit.) suggests a reduplicated preform *$h_2 i$-$h_2 isd$-$o\underset{\circ}{i}$ (my notation), with replacement of *-o- by *-to-, and compares the formal relationship between the reduplicated present and the full grade thematic present to that of Vedic *ī́jate* 'impels': *ájati* 'drives'. On the meaning side, it seems easiest to assume that the primary verbal formation made to this root was originally an experiencer verb meaning 'fear, be in awe of'

(and therefore a canonical middle-only verb) that developed into a deponent in Vedic as its semantics shifted and it became agentive.

4.2   *h_3ek^u- 'behold, catch sight of'

Ved. *íkṣate* 'sees, perceives' goes back to a reduplicated desiderative *h_3i-h_3k^u-*se/o*-; the same desiderative is also attested in the Greek future ὄψομαι < *$h_3(e)k^u$-*s-e/o*-. While middle morphology on *s*-desideratives and futures may be considered canonical, Homeric Greek also has a present ὄσσομαι < *h_3k^u-*i̯e/o*- 'see, foresee' that lacks desiderative semantics. However, the consistent middle morphology may be due to an original meaning 'perceive', and hence an experiencer verb (with NOM-ACC alignment), making the synchronic deponent status uncertain.

Formally active forms are found in Young Avestan *aiβii-āxšaiia*- 'oversee', which may be an *(e)i̯e/o*-extension of the thematic desiderative stem seen in Greek (LIV²: 297; for a different view see Werba 1999), and in Greek, which has an active perfect ὄπωπα.[40]

4.3   *Hei̯ḱ̇- 'appropriate, seize'

The Vedic present *íśe* 'owns, has power over', corresponding to Old Avestan *isē* (Y.50.1), *isāna*-, etc., goes back to a result state perfect *Hi-Hiḱ̇- ← *He-Hoi̯ḱ̇-/He-Hiḱ̇- 'own' < *'has appropriated, seized' according to LIV²: 223, and this is also the preform of the Germanic preterite-present seen in Gothic *aih*, 3pl. *aigun* 'own' < *ōi̯χ-/ai̯γ- (OE *āh, āgon*, OHG *eigun*, etc., cp. Seebold 1970: 69 ff., LIV² loc.cit.). The root is also attested in Tocharian B, where it makes a *medium tantum* class II present *aiśtär* 'recognizes, knows' (see Malzahn 2010: 543 f.; for the semantic development cp. the meanings of Engl. *grasp*).

The root meaning 'appropriate, seize' given by LIV² seems to rest mainly on the evidence of Ossetic *īs-/es*- 'take', whose affiliation to this group of forms is doubtful. Without it, a basic meaning 'own' would derive the Indo-Iranian and Germanic meaning from a stative perfect and would also work for Tocharian assuming a semantic shift to possessing knowledge. In that case, the external argument was originally a possessor rather than an agent. Moreover, while the Germanic and Tocharian forms take accusative/oblique objects, in Indo-

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40   However, note that the status of a formally active perfect in Greek and Indo-Iranian is different from that of a formally active *mi*-verb. The latter was always active, the former goes back to the PIE proto-middle endings (Jasanoff 2003, etc.). A formally active perfect in these languages is therefore no evidence that middles belonging to the same averbo are younger.

Iranian the genitive prevails (although there are occasional uses with an accusative). Taken together, it seems that the use of middle morphology with this verb can be considered canonical, either because it was inherently stative ('own') or because it was self-benefactive ('has taken for him/herself').

4.4   *sekᵘ- 'join, accompany, follow'

This verb is one of the most conspicuous candidates for Proto-Indo-European deponent status. We find middle morphology in almost all Indo-European languages with a morphological voice distinction. The ubiquitous thematic middle present *sekᵘ-e-to(r/i̯) is seen in Ved. sácate, OAv. hacaitē, Gk. ἕπομαι, Lat. sequor, OIr. sechithir, and also in Lith. sekù 'follow' and possibly Goth. saihvan 'see' and its Germanic cognates. In Greek, middle morphology is actually found in all tense-aspect stems. The middle thematic aorist ἑσπόμην is not necessarily a replacement of an older root aorist (as suggested by LIV²: 525), given that the pattern full grade thematic middle: zero grade thematic aorist is well-established in Greek (cp. δέρκομαι: ἔδρακον 'see', τρέπω: ἔτραπον 'turn', πεύθομαι: ἐπυθόμην 'learn, come to know', etc.).

An old root aorist has been reconstructed based on the Vedic middle root aorist found in the putative participle sacāná- (only once in the Rigveda beside thematic sácamāna- = Av. hacəmna-, hacimna-) and the optative sacīmahi (KS), which may be a younger, inner-Vedic replacement of the Rigvedic s-aorist optative (Narten 1964: 262). As for sacāná-, Lowe 2012a has argued that Vedic aorist participles in general do not necessarily imply a "live" aorist paradigm (see also Lowe 2012b on Caland-associated participles in -āna-, Lowe 2013 and Lowe 2015: 247 against the interpretation of sacāná- as an old root aorist participle). Old Avestan, on the other hand, has two active forms in Y.46.1 hōcā 'I will accompany' and the 3pl.ipv. scaṇtū (Y.53.2) 'let them accompany' which LIV² loc.cit. interprets as aorist subjunctive and imperative, respectively. However, Kellens 1984: 354, 394 remains undecided between present and aorist, and trisyllabic hōcā is usually interpreted as active present subjunctive (thus Harðarson 1993: 120, fn. 96, but see also Narten 1986: 288, fn. 3). The YAv. 1pl. haxma is interpreted as a root aorist injunctive by Cardona 1960: 54. In other words, while there is some evidence for an old root aorist in Indo-Iranian, the material is fairly ambiguous and uncertain.

Indo-Iranian also has several formally active formations to this root which have the same syntactic and semantic behavior as the full grade medium tantum (cp. Gotō 1987: 319 f.), so these were not oppositional actives and should therefore be interpreted as inner-Indo-Iranian innovations. The most conspicuous form of this class is the reduplicated present Ved. síṣakti, 3pl. sáścati ≈ OAv. 1pl. (subj.?) hiścamaidē (Y.40.4), YAv. 3sg. ā.hiṣhaxti (V.5.34), but the new

Vedic perfect also has active forms (1pl. *saścima*, 3pl. *saścur*) beside the more commonly found 3pl. perfect middle *saściré*.

Finally, Vedic and Avestan have a few active *s*-formations that are variously classified as desideratives or *s*-aorist subjunctives. The Old Avestan 1sg.subj. *haxšāi* (Y.46.10) is classified as an *s*-aorist subjunctive by Kellens 1984: 367, who, however, also points out that several of the passages containing *haxš-* are corrupt and may have to be emended to *hixš-*, a desiderative present. Narten 1964: 262 groups *haxšāi* with the Vedic *s*-aorist subjunctive *sakṣat*, and points out that this was a productive aorist class (type *bhaj*: *ábhakṣi*), whereas LIV² loc.cit. classifies both OAv. *haxšāi* and Ved. *sakṣat* as subjunctives of an old desiderative present *sek^u-s-/sk^u-s-* (cp. Gk. ἕψομαι 'will follow').

To summarize, the Proto-Indo-European averbo of this root was based on the full grade thematic middle present *$sék^u$-e-to(r/i)*, which judging by the evidence of Indo-Iranian and Greek also made a desiderative *sek^u-s-* that surfaces as active in Indo-Iranian and as middle in Greek. The active reduplicated present and the perfect are innovations of Indo-Iranian, but the root may have had an old middle root aorist (the reconstruction of which rests entirely on the somewhat uncertain Indo-Iranian evidence).

While there are no objections to reconstructing a deponent present on the formal side, the meaning and external syntax of the reflexes of *$sék^u$-e/o-* suggest that this was a canonical middle verb in Proto-Indo-European. While the reflexes of this verb take accusative objects in Vedic, Old Irish, and Latin ((17a–c), respectively), they usually take dative objects in Greek (accusative is also found occasionally) and instrumental in Vedic (which is more common than the accusative), cp. (18a–b):

(17) a. Ved., RV 4.7.11c:
          vā́tasya meḍíṃ sácate (…)
          'He accompanies the roaring of the wind …'
      b. OIr., Ml. 19b11:
          ní sechetar immurgu ord oc suidiu
          'They do not, however, follow the order in this'
      c. Lat., Plaut., *Aulularia* 4.7.16:
          I, iam sequor te, mater
          'Go! I (will) follow you at once, mother.'

In Vedic, construal of *sac* with the instrumental means 'join with, go together with' (but see the passive examples immediately below), and the same construction seems to underlie the use of Greek ἕπομαι with the dative.

(18) a. Ved., RV 9.74.5a:
     árāvīd aṃśúḥ sácamāna ūrmíṇā
     'The plant, keeping company with the wave, has roared.'
   b. Gk., Od.9.159:
     νῆες μέν μοι ἕποντο δυώδεκα
     'Twelve ships followed me'

In Indo-Iranian, this construction is often ambiguous between an active, "intransitive-reflexive" reading (Narten 1986: 289) "follow, join (with) somebody" and a passive reading "be accompanied by". This ambiguity is often found in the middle participle, e.g., (19b):

(19) a. Ved., RV 1.145.2d:
     'syá krátvā sacate ápradṛpitaḥ
     'Undistracted, he is accompanied by his resolve.'
   b. Ved., RV 5.42.8a–b:
     távotíbhiḥ sácamānā áriṣṭāḥ bṛhaspate maghávānaḥ suvírāḥ
     'O Bṛhaspati, the bounteous ones accompanied by your help, who are invulnerable and possessing good heroes, ...'
   c. OAv., Y.43.12:
     səraošō aṣī ... hacimnō
     'Obedience (is) ... accompanied/followed by reward.'[41]

Hollifield 1977: 11 suggests that the "intransitive-reflexive" behavior with an instrumental argument points to an old reciprocal middle meaning "accompany each other", and since reciprocals and verbs of motion are well-attested canonical functions of non-active morphology, this verb did not originally belong in the deponent category. This is confirmed by the lack of synchronic agentive behavior (no agent nouns, no *yá*-passive in Vedic, etc.).

4.5   *$h_1$erǵʰ-* 'climb up, onto'
The reconstruction of an old middle-only present stem rests mainly on Hittite *arkatta*; *arga*, ipv. *argaru* 'mount sexually' (sheep, etc.) which is formally ambiguous and could reflect *$h_1$érǵʰ-o(r)* (cp. Melchert 1994: 136f.) or *h_1ṛ́ǵʰ-ó(r)*;[42] in the latter case the lack of expected *$argári$* would have to be explained

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41   See Insler 1975: 65, Narten 1986: 289.

42   *$h_1$órǵʰ-o(r)* is excluded because accented /ó/ should have lengthened in both open and closed syllables, see Melchert 1994: 146f. On the other hand, if active *ārki* is old (which is

as analogical to the old full grade type seen in Hitt. *kitta* 'lies', *kīša* 'becomes' (Craig Melchert, p.c.).

Hitt. *ark-* is almost exclusively transitive (HW: I, 301); the formally active 3sg.pres. *ārki* attested in a Neo-Hittite text (KBo 10.45 iv 30) is probably not old (a variant of the same text has *arga*). If the Greek iterative ὀρχέομαι 'dance' < *$h_1$orĝʰ-éi̯e/o-* belongs to this root as well, it would confirm the middle inflection associated with this root, as well as the semantics: Watkins 1975: 18 f. points out that the verb has sexual connotations in Archaic Greek graffiti inscriptions.[43]

Another potential candidate is Greek ἔρχομαι 'come, go', which is usually taken to be a *ské/o-*present to *$h_1$er-* 'reach something, stand' (thus Rix 1970: 98, LIV²: 238 f.). However, the other attested *ské/o-*presents to this root are formally active (Ved. *r̥ccháti* 'reaches', Hitt. *āraskizzi* 'reaches', OP *-ársatiy* 'comes'). If ἔρχομαι does go back to *$h_1$erĝʰ-*, it provides a parallel for transitive use in Hittite, since it is used with accusative objects designating the path/goal of the action, as in Il.1.322: ἔρχεσθον κλισίην Πηληϊάδεω Ἀχιλῆος "go to the hut of Achilles, the son of Peleus". However, it is difficult to decide whether this verb should be grouped with *$h_1$erĝʰ-* or *$h_1$er-* (as a compromise, LIV² loc.cit. suggests that the reflexes of *$h_1$erĝʰ-e/o-* and *h_1r̥-ské/o-* may have fallen together in Greek).

To summarize, based on Hittite alone, we can set up an athematic middle present for *$h_1$erĝʰ-* which seems to have been a verb of translational motion ("climb onto"), and hence a canonical middle, which developed into a deponent with the meaning "mount sexually". A reflex of the (likewise middle) iterative formation to this root is found in Greek.

4.6   1. *$u̯es$- 'wear clothes'

The full grade middle present of this root is amply attested: Vedic *váste* 'is wearing', 3pl.ipf. *avasran* (RV 4.2.19), Old Avestan *vastē*, YAv. mid.ptcp. *vaŋhāna-*, Greek εἷμαι (synchronically used as the perfect of the new present ἕννῡμι 'am putting on (clothes)'), and Hittite *wēšta*, 3pl. *wēššanta* all point to a PIE middle present *$u̯és$-o(r), 3pl. *$u̯és$-ro(r) (Ved. *avasra(n)*), remodeled as *$u̯és$-to, 3pl. *$u̯és$-n̥to (cp. LIV²: 692 f., Villanueva Svensson 2012: 335). According to Malzahn 2010: 896 f. the Tocharian A subjunctive V 1sg.opt. *wsīmār*, 2sg. *wsitār* does not continue the full grade middle present but a zero grade middle aorist *us-*to*, based on the evidence of the corresponding subjunctive I in Tocharian B

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doubtful, see main text) it would reflect an *o*-grade *$h_1$órĝʰ-ei̯*, cp. Kloekhorst 2008: 203 f. (who reconstructs initial *h_3-* for this root).

43   Watkins also adduces Vedic *r̥ghāya-* 'rage, rave' as a potential further cognate, but this is phonologically problematic, cp. EWA I: 249.

(3sg. *wastär*, inf. *wastsi*). Given that this root otherwise shows Narten behavior (in Tocharian as well, see Malzahn 2002) and does not have an old aorist formation (the Greek aorist ἕσσα 'I wore' and the Armenian aorist *z-gecʿaw* 'put on',[44] both apparently from **u̯es-s-*, are unlikely to be old), this would have to be a Tocharian innovation. However, Toch. B *wastär* could also continue the old middle present **u̯és-to(r)*. The only objection to this explanation would be the lack of root-initial palatalization in Toch. B, but the fact that middle subjunctive I stems never have root-initial palatalization (see Malzahn 2010: 277) makes analogical depalatalization an unproblematic assumption, and this way we do not have to assume an otherwise unparalleled zero grade form of this root (this is also tentatively assumed by LIV² (loc.cit) for the Toch. A opt. *wsīmār*). Since subjunctive I is often synchronically associated with a class III preterit, the preterit III forms Toch. B *wässāte*, A 3pl. *wsänt* cannot be interpreted as evidence for an old *s*-aorist of **u̯es-* (*pace* LIV²), especially since both the subjunctive and the preterit lack root-initial palatalization, making it more likely that the preterit is an inner-Tocharian creation based on the (analogically depalatalized) subjunctive.

On the other hand, the class IX present Toch. B 3pl. *yäskeṃtär* shows synchronically unexpected full grade and initial palatalization. Hackstein 1995: 270 suggests that this is due to an inner-Tocharian remodeling of the inherited full grade middle present as **u̯es-śke/o-*, with retention of the full grade of the older present formation. It is unclear why the irregular initial palatalization would be retained in the present stem, but eliminated in the subjunctive. Nevertheless, it seems easiest to assume that the old full-grade middle present in fact underlies both formations.

The root also made an active causative **u̯os-éi̯e/o-* attested in Hitt. *waššezzi*, later *waššii̯a-* (Eichner 1968, Melchert 1984: 164), Ved. *vāsáyati*, Goth. *wasjan*, OE *werian*, etc. (see Feist 1939: 552 f.) and Alb. *vesh*, all meaning 'dress (somebody) in'.

The middle present of this verb is transitive in all branches, the direct object being what is being worn (cp. Eichner 1968), as in the following Vedic example:

(20) RV 4.2.19b:
     ṛtám avasrann uṣáso vibhātíḥ
     '(as) the radiant dawns have clothed themselves in truth'[45]

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44   Cp. Klingenschmitt 1982: 286 f..
45   Cp. Insler 1968.

Greek εἶμαι, synchronically the perfect of the active present ἕννυμι, also takes accusative objects. Its participle likewise has active syntax:

(21) Hom., Od.15.331:
χλαίνας εὖ εἱμένοι ἠδὲ χιτῶνας
'wearing cloaks and tunics/well dressed in cloaks and tunics'

Hittite *wēšta* 'wears' can be intransitive or transitive with an accusative object (Kloekhorst 2008: 1004 ff.), as in (22).

(22) Hitt., ABoT 4 + I 24 f. (Neu 1968a: 193, Eichner 1968: 14):
weššanda=ma išḫarwantuš TÚG·ḪI.A-uš putaliyanteš=a
'They are wearing blood-red clothes and are girded up.'

The same construction is found in Tocharian, where *wäs-* takes oblique objects, as in (23) (from Malzahn 2010: 897, see also Hackstein 1995: 264 ff.).

(23) Toch. B, 107b 4–5
wässate kaṣār-wassi
'He put on the *Kāṣāya*-garment.'

Despite this correspondence in transitive syntax, I have not added this verb to the deponent category because of its lack of agentive syntax (especially passivization), even in the cases where it means 'put on' rather than 'wear', as in Tocharian. Since **u̯es* is usually classified as inherently stative, its subject is better characterized as holder/possessor.

4.7   3. **u̯es- 'graze, eat'*

This root is attested in Hittite, where it makes a deponent *wešiyattari* 'grazes', which is usually causative-transitive ("x grazes Y"), but can also be intransitive ("Y grazes"), e.g., KBo 17.23 [...] GUD-uš u⟨e⟩šietta "[...] a cow is grazing" (which is actually the oldest attestation of this verb). Kloekhorst 2008: 1007 f. suggests that this verb is a denominative of *weši-* c. 'pasture', which could explain the variation in valency. However, deponent inflection is also found in Latin *uēscor* 'nourishes oneself (with), enjoys, makes use of', which goes back to Proto-Italic **u̯ēs-sk̑e/o-* (differently LEW: II, 769). The lengthened grade could suggest an old Narten ablauting paradigm (cp. **med* above), and this is what LIV²: 693 f. tentatively sets up based on the additional evidence of nominal forms like Avestan *vāstra-* 'pasture' and *vāstar-* 'herdsman' (cp. also ON *vist* 'nourishment' < **u̯es-ti-*), but it is also possible that the lengthened grade in the verbal

forms was taken over from the nominal forms and is therefore secondary (thus de Vaan 2008: 669).

Although the Hittite and Latin verbs use different stem-forming suffixes, they agree with respect to their object case. The transitive forms in Hittite take accusative objects (but note that the oldest attestation is intransitive), and so does Latin *uēscor* at the oldest stage, although this is later replaced by the ablative (presumably under the influence of semantically similar verbs like *ūtor* and *fruor*). That this verb was agentive is furthermore confirmed by the close correspondence in agent noun formations between Avestan *vāstar-* and Hittite *wēštara-*, both meaning 'herdsman, shepherd' (the Hittite form presumably reflects a thematization *$u̯ēs$-tr-o- of the *-ter-$/$-tr- stem, cp. Kloekhorst 2008: 1008).

The correspondence in middle inflection and transitive use and the similarity in meaning makes it tempting to set up an old deponent for this root, but there is no morphological common denominator with respect to stem-forming morphology, and an inner-Hittite denominative origin of *wešiyattari* cannot be excluded. Moreover, the meaning of the Latin verb suggests that this verb may originally have had a canonical middle meaning (reflexive "nourish oneself" or experiencer "enjoy"). It is surprising that this also took on the corresponding causative meaning in Hittite, but again this development seems to be *einzelsprachlich*. While it is tempting to set up a Narten *h_2e-verb for Proto-Indo-European (as we did for *med-), the difference in stem formation suggests that these deponents developed independently on the way to the individual branches, possibly as originally denominal verbs.

4.8   *?*potie̯/o- 'be master over, own'*

Both Indo-Iranian and Latin have a denominative deponent *$pót i̯$-e/o- from *$póti$- 'lord, master' (Ved. *páti-* 'master', Gk. πόσις 'master, husband', Lat. *potis* 'able'). In Vedic, this is reflected as *pátyate*; Avestan has *paϑiete* 'becomes master over' (N.105) and the subjunctive *paiϑiiāite* in V.18.76, as well as active *paiϑiieiti* in V.5.62 which should be restored to *paiϑiiāite*, cp. Kellens 1984: 20 (see also EWA II: 72). Latin has a deponent *potior* (3sg. *potitur* and *potītur*) 'become master of, take possession of', but formally active forms are also found already in Plautus (see DELL: 528 f., LEW: II, 350 f., de Vaan 2008: 484 f.). While it would be tempting to reconstruct a Proto-Indo-European denominative deponent, both the Vedic and the Latin form are analyzable as synchronic denominatives to *páti-* and *potis*, respectively. Moreover, the variation in the object case suggests an old stative or inchoative formation with a possessor subject ('be/become master of'). In the Rigveda, *pátya-* takes accusative objects in 16 out of 28 passages (twice with the preverb *abhí*), the instrumental twice, and the locative five times (sometimes with a dative). The Avestan passages all have

accusative objects, while Latin varies between accusative, genitive, and ablative (accusative is more common in Old Latin than in Classical Latin, but there does not seem to be any difference in meaning between the different cases, DELL: 528). Since transitivity alone is not a criterium for deponent status, and since the verb does not otherwise show agentive behavior, I have excluded it from the deponent class.

4.9   *Summary*

The middle verbs discussed in this section can mostly be explained as PIE canonical middles, although some of them occasionally show deponent-like behavior in the individual branches.

Finally, it should be noted that the different deponent types discussed in sections 2–4 all have in common that deponent behavior is linked to *imperfective* stem-forming morphology, that is, they are all presents. These verbs either do not make aorists at all synchronically or have aorists that are clearly *einzelsprachlich*. For reasons of space, I will not discuss this correlation here (but see Grestenberger 2014b and Grestenberger 2016 for an in-depth discussion).
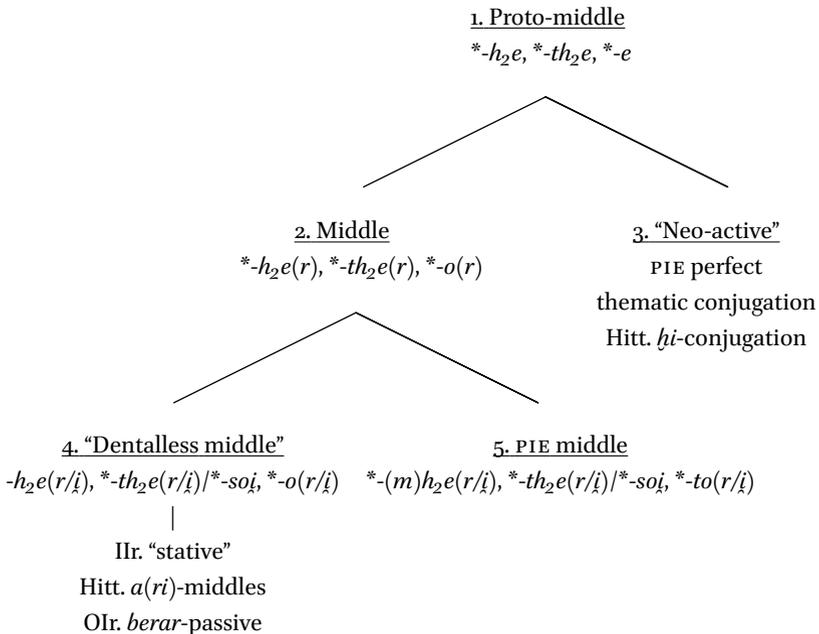
5   Conclusion

I have argued in this paper that separating *media tantum* from deponents via the definition of the canonical function (or rather, canonical syntactic environments) of middle morphology allows for a more fine-grained distinction between different types of middle paradigms in Proto-Indo-European. In particular, I have shown that it is possible to reconstruct non-canonical middles—deponents—already for the proto-language, which is expected from the perspective of the general typology of active/non-active voice systems. The crucial difference between canonical and non-canonical middles is that the latter have agent subjects and should therefore take active morphology synchronically, while the former express one of the canonical functions of non-active morphology discussed in section 1.1.1. That deponents are in fact non-canonical middles because they are agentive has been motivated in section 1.1.2 and in more detail elsewhere (Grestenberger 2014a). I have also argued that transitivity alone is not a decisive criterion for distinguishing between canonical and non-canonical middles.

The final question that needs to be answered is what these verbs tell us about the diachronic development of Proto-Indo-European voice morphology. As argued by Jasanoff, the original PIE "proto-middle" endings of the $*h_2e$-conjugation were subject to several cycles of morphological renewal on the way

to the attested daughter languages. Verbs of the *h_2e-conjugation in principle had two options: they could either be renewed as formally middle verbs (3sg. *-o-r* or *-to-r*) if their middle semantics clearly marked them as such, or they could turn into formally active verbs in the daughter languages if their original middle meaning had somehow been lost. This development may or may not give rise to a new oppositional middle made to the same stem, of course, as argued by Jasanoff 2003: 72–74 for Hitt. 3sg. *kānki* 'hangs' (tr.), which *formally* continues an older *h_2e-conjugation proto-middle, vs. renewed 3sg. middle *gangattari* 'hangs' (itr.), which is a formally renewed middle, but *functionally* continues the older proto-middle—a classic case of Kuryłowicz's Fourth Law of Analogy. The latter development (loss of the original "protomiddle" meaning, with or without a new oppositional middle) produced the Hittite active *ḫi*-conjugation, the PIE perfect endings, and the active thematic conjugation (see Jasanoff 2003). The most important innovations in the development of the *h_2e-conjugation are summarized in the figure below (based on Jasanoff forthcoming).

(24) Development of the *h_2e-conjugation/proto-middle

<div align="center">

1. Proto-middle
*-h_2e, *-th_2e, *-e

</div>

<div align="center">

2. Middle
*-$h_2e(r)$, *-$th_2e(r)$, *-o(r)   3. "Neo-active"
PIE perfect
thematic conjugation
Hitt. *ḫi*-conjugation

</div>

<div align="center">

4. "Dentalless middle"
-$h_2e(r/i̯)$, *-$th_2e(r/i̯)$/*-soi̯, *-o(r/i̯)   5. PIE middle
*-$(m)h_2e(r/i̯)$, *-$th_2e(r/i̯)$/*-soi̯, *-to(r/i̯)

|

IIr. "stative"
Hitt. *a(ri)*-middles
OIr. *berar*-passive

</div>

Given their active syntax and meaning, deponents should have been recharac-terized as formally active and made their way into one of the categories in node

3 in the tree above. A quick comparison with the development of deponents from Ancient to Modern Greek confirms that deponents can indeed switch from non-active to active morphology; some relevant forms are collected by Lavidas and Papangeli 2007 (see also Lavidas 2009 and Zombolou and Alexiadou 2014b on the development of deponents in Greek). However, Modern Greek of course also preserves a number of deponents with the inherited non-active morphology, which, after all, is a general property of languages with syncretic voice systems.

That the Indo-European daughter languages would preserve the occasional syntactically active verb with its original middle morphology is therefore not a problem *per se*. However, given that a Proto-Indo-European non-canonical middle (or even proto-middle) would have to go through several points at which morphological renewal took place makes one expect a recharacterization as active. To put this question differently, why was the PIE 3sg.mid. *$\hat{k}$ónk-e 'hangs' (Hitt. *kānki*, see above) renewed/classified as an *active* verb, while the putative 3sg.mid. *$m\acute{e}d$-e (remote preform of Gk. μήδομαι, etc.) was renewed as a *middle* verb?

I believe the answer must lie in the relative chronology of the respective morphological renewals. That is, each deponent must have had enough canonical middle semantics to be formally renewed as middle at each of the crucial stages (2, 4, and 5 in the tree above), and was reanalyzed as a non-canonical agentive verb only afterwards. Note again that this is the conservative approach to this problem—languages like Modern Greek show that deponents can remain stable over relatively long time-spans, even if some of them become recharacterized as formally active. Whether or not recharacterization takes place seems to depend on a variety of factors, including the lexical semantics and frequency of use of a given verb, as well as prescriptive pressure.[46] The fact that some

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46   Preliminary evidence from L1 acquisition of Modern Greek verbs suggests that deponents are acquired with the same speed (and error rate) as other non-active verbs. That is, acquirers make the same amount of voice morphology errors with anti-causative, reflexive, and passive verbs as with deponent verbs (Katis 1984: 135). Katerina Zombolou (p.c.) confirms this, but has also pointed out to me that bilingual children and heritage speakers tend to regularize deponents more than non-bilingual L1 acquirers, meaning that deponents are turned into morphologically active verbs. Some of the bilingual acquirers that "activize" deponents go back to using non-active morphology after age 7, which could suggest that prescriptivism also plays a role in these cases. This means that verbal semantics, time of acquisition, language contact and prescriptive pressure may all be relevant to whether or not a given verb is acquired as deponent or remade as a formally active verb.

verbs, like *$\hat{k}$*ónk-e*, were recharacterized as formally active therefore does not preclude that others were recharacterized as formally middle despite their non-middle semantics.

Concerning the 6 relatively secure deponents discussed in section 2, three belong at least to pre-Graeco-Aryan: *h_1e-h_1ug^{uh}-$toi̯* 'praises', *$i̯i$-$i_ǝh_2$-$toi̯* 'seeks, demands', and *$dái̯(h_2)$-e-$toi̯* 'distributes'. We may still be able to say more about the internal morphological and semantic prehistory of these forms; the point here is that their deponent status must *at least* belong to stage 5 in the tree above.

Two deponents are dentalless middles in Hittite with transitive middle cognates elsewhere in the family (*$péh_2$-s-or 'protects' and *$h_2n̥h_3$-or 'scorns'), suggesting that they belong to an older layer of PIE middles, namely at least stage 2.

Finally, we have two cases in which non-active morphology paired with transitive syntax may go all the way back to the proto-middle, even if this is somewhat uncertain. The first one is *med-* 'measure'; I have argued in Section 2.6 that this may ultimately go back to a *h_2e-present *$m\acute{e}d$-e/*$méd$-$r̥s$ → *$m\breve{e}d$-$(t)o(r/i̯)$ → *$m\acute{e}d$-e-$to(r/i̯)$, *$méd$-e-$to(r/i̯)$), based partially on the reconstruction by Villanueva Svensson 2006. The second one is *$déh_2$-$i̯$- 'distribute', whose reconstruction as a deponent is based only on Greek and Indo-Iranian, but which can be traced back to a *h_2e-conjugation *i-present *$déh_2$-$i̯$-e through internal reconstruction (cp. the discussion in Jasanoff 2003: 103 ff.). This reconstruction is much less certain, however. The problem with these two forms is that a proto-middle with active meaning and transitive syntax should have been remade as formally active on the way to the individual branches, as outlined above. That is, it should have become a "neo-active" (node 3 in (24)), most likely a thematic active in Greek and Indo-Iranian. It is not clear why *$m\acute{e}d$-e and *$déh_2$-$i̯$-e escaped this fate, since there were several opportunities for morphological remodeling. To be on the safe side, we should reconstruct these as deponents for stage 2, with a question mark over their possible stage 1 deponent status.

As for the root ablaut grades, no clear generalization emerges. Full grade seems to be the common denominator for all of the forms in Sections 2–4, not unexpectedly given the observation that root present *media tantum* in general prefer full grade of the root (Watkins 1969: 113, Hollifield 1977: 128, Villanueva Svensson 2003: 145, Villanueva Svensson 2012: 341), but how this relates to the derivational prehistory of these verbs warrants more research. The fact that we also have two reduplicated middles with zero grade of the root may suggest that they were alternating middles at some point (again, not unexpectedly, given that the two forms in question belong to the relatively late layer of PIE deponents).

To conclude, in reconstructing the distribution of the PIE active (*-*mi*, *-*si*, *-*ti*) vs. the (proto-)middle set of endings (*$*h_2e$, *$*-th_2e$, *$*-e$), we need to distinguish between canonical and non-canonical uses of the latter, in addition to distinguishing between oppositional and non-oppositional middles. We also have to take into account the different chronological "split-off" points that led to morphological renewal. With these caveats in mind, I hope to have shown that we can use the comparative method to reconstruct not only the overall, "regular" voice system of PIE, but even its (typologically expected) exceptions.

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