

Verbal Adjectives and Participles
in Indo-European Languages

Adjectifs verbaux et participes
dans les langues indo-européennes

Proceedings of the conference
of the Society for Indo-European Studies
(Indogermanische Gesellschaft),
Paris, 24th to 26th September 2014

edited by
Claire Le Feuvre, Daniel Petit
and Georges-Jean Pinault

HEMPEN VERLAG
BREMEN 2017

The printing of this book was generously supported by the
École Pratique des Hautes Études, Paris Sciences et Lettres

Le présent ouvrage a pu être publié grâce au soutien financier de
l'École Pratique des Hautes Études, Paris Sciences et Lettres

Bibliografische Information Der Deutschen Nationalbibliothek

Die Deutsche Nationalbibliothek verzeichnet diese Publikation in der Deutschen
Nationalbibliografie; detaillierte bibliografische Daten sind im Internet über
<http://dnb.d-nb.de> abrufbar.

ISBN 978-3-944312-50-7

© 2017 Hempen Verlag, Bremen; www.hempen-verlag.de

Das Werk einschließlich aller seiner Teile ist urheberrechtlich geschützt.
Jede Verwertung außerhalb der engen Grenzen des Urheberrechtsgesetzes
ist unzulässig und strafbar. Das gilt insbesondere für Vervielfältigungen,
Übersetzungen, Mikroverfilmungen und die Einspeicherung
und Verarbeitung in elektronischen Systemen.

Umschlaggestaltung: detemple-design, Igel b. Trier

Gedruckt auf alterungsbeständigem Papier

Printed in Germany

CONTENTS

• Foreword	VII-XV
• Marina BENEDETTI, Liana TRONCI, Nunzio LA FAUCI, Les adjectifs verbaux d'obligation (AVO) en védique, grec ancien et latin, d'un point de vue systématique	1-15
• Francesca DELL'ORO, Sur l'origine et l'histoire des adjectifs en -(σ)μιοϛ II. Les adjectifs en -(σ)μιοϛ comme adjectifs verbaux ? Étude contrastive des propriétés sémantiques et syntaxiques	17-28
• Camille DENIZOT, Les constructions dites à participe dominant en grec ancien : motivations sémantiques et pragmatiques	29-49
• Emmanuel DUPRAZ, Zur Syntax und Semantik der <i>Participia necessitatis</i> im Altirischen	51-71
• Hannes A. FELLNER, The syntax and semantics of agent formations in Tocharian	73-84
• José L. GARCÍA RAMÓN, Heterogeneous correspondences and reconstruction: the 'gerundive' in <i>-mi-na</i> in Hieroglyphic Luvian	85-103
• Laura GRESTENBERGER, On the syntax of the participles of Indo-European deponent verbs	105-117
• Agnes KORN, Verbal nouns in Balochi	119-140
• Martin KÜMMEL, Partizipien und Verbaladjektive als Prädikate im Indoiranischen	141-158
• John J. LOWE, The paradigmatic status of aorist participles in Rgvedic Sanskrit	159-172
• Rosemarie LÜHR, Zum informationsstrukturellen Beitrag von Partizipialkonstruktionen in altindo- germanischen Sprachen	173-196

Verbal Adjectives and Participles in Indo-European Languages

- Audrey MATHYS,
Formes en -ως dérivées de participes et réaction verbale en grec ancien 197-215
- H. Craig MELCHERT,
The source(s) of Indo-European participles in **-e/ont-* 217-220
- Fanny MEUNIER,
Quelques éléments de syntaxe des adjectifs verbaux (gérondifs) et participes en tokharien 221-232
- Alan J. NUSSBAUM,
Agentive and other derivatives of ‘τόμος-type’ nouns 233-266
- Norbert OETTINGER,
Der Ursprung des indogermanischen Caland-Systems und die *-nt*-Stämme 267-275
- Daniel PETIT,
Reflexivpartizipien im Baltischen 277-325
- Michaël PEYROT,
On the part of speech and the syntax of the Tocharian present participle 327-341
- Georges-Jean PINAULT,
Genesis of the PIE gerundival suffix **-etó-* 343-375
- Jeremy RAU,
The derivational history of the perfect participle active 377-389
- Elisabeth RIEKEN,
Das hethitische Partizip: Zur Schnittstelle von Syntax und Semantik 391-403
- Theresa ROTH,
À propos de la paradigmaticité des noms en *-tor* du latin 405-418
- Florian SOMMER,
Komposita, Partizipien und Partizipanten im Jungavestischen 419-433
- Roman SUKÁČ,
Participle present active revisited: synchrony and diachrony in West Slavic languages (especially in Czech) 435-443

ON THE SYNTAX OF THE PARTICIPLES OF INDO-EUROPEAN DEPONENT VERBS

Laura Grestenberger

It is standardly assumed that the participial and participle-like suffixes that can be reconstructed for Proto-Indo-European were inherently specified for voice, i.e., either active or middle (and potentially also passive in the case of **-tó-*). The most commonly discussed suffixes are listed in table 1., together with the languages or language families in which they are attested.

Table 1. Participial and verbal-adjective forming suffixes in PIE

	<i>*-(e)nt-</i>	<i>*-mh₁no-</i>	<i>*-tó-</i>	<i>*-uos-/us-</i>
‘active’	Ilr., Gk., Lat., Gmc., B.-Sl., Toch.			Ilr., Gk., Toch.
‘middle’		Ilr., Gk., Toch., Lat.		
‘theme- oriented’	Hitt.		Ilr., Gk., Lat., B.-Sl., Gmc.	

‘Active’ means that the resulting participle is subject-oriented and associated with ‘active functions’, ‘middle’ means it is associated with ‘middle’ functions (these may vary depending on the language), ‘theme-oriented’ means the resulting form is object-oriented or ‘passive’. There are two ways of approaching the distribution of ‘active’ **-(e)nt-* vs. ‘middle’ **-mh₁no-* (leaving aside Anatolian for now):

1. Syntactic selection: **-(e)nt-* is inherently active, **-mh₁no-* is inherently middle. Therefore **-(e)nt-* selects syntactically active predicates, **-mh₁no-* selects middle predicates.
2. Morphological selection: participles associated with formally active finite verbs select **-(e)nt-*, participles associated with formally middle finite verbs select **-mh₁no-*.

These two approaches make different prediction. 1) predicts that **-(e)nt-* participles will always surface with active syntax and **-mh₁no-* participles with middle syntax (because the two participle suffixes are specified for a particular voice value). 2) predicts that **-(e)nt-* participles will always surface with the same syntactic behavior as the corresponding finite active paradigm and **-mh₁no-* participles with the same syntactic behavior as the corresponding middle finite paradigm because they are not inherently

specified for voice, but selected in accordance with the morphology of the corresponding finite paradigm.

The aim of this paper is to argue that the behavior of deponent participles in Indo-European provides evidence for 2), morphological selection, and that consequently participial morphology itself was not specified for voice in Proto-Indo-European, or indeed in the attested daughter languages.

The focus of the discussion will be on *-(e)nt- and *-mh₁no-, with some brief remarks on *-tó-. For a discussion of the ‘perfect participle’ in *-u₂os/-us- see Rau (2017). I start by giving some background on deponency in the next section. For reasons of space, I keep this background discussion brief, but see Grestenberger (2014a) and (2014b) for a more thorough treatment.

1.1 BACKGROUND: DEPONENTS

Before discussing the behavior of participles, a brief discussion of the terms ‘deponent’ and ‘voice mismatch’ are in order. I use the term ‘deponent’ only to refer to verbs whose voice morphology does not ‘match’ the syntactic context in which they are found. That is, there is a synchronic mismatch between morphological exponence and expected syntactic function (‘voice mismatch’). In Indo-European languages, voice mismatches usually involve verbs which are formally middle (‘non-active’), but syntactically active. ‘Syntactically active’ is defined as agentive (and usually, but not always, transitive), meaning that the non-active morphology of such verbs cannot be motivated synchronically. I have argued elsewhere for this ‘narrow’ definition of deponency based on argument structure which excludes many of the verbs often referred to as ‘deponents’ in the literature (see Grestenberger 2014a, 2014b). Besides their synchronically unmotivated voice morphology, their exceptional status can be gleaned from the fact that deponents are usually found besides semantically very similar formally active verbs, as illustrated in table 2.

Table 2. Active/non-active (near-)synonyms

Language	Deponent	Meaning	Active synonym
Hitt.	<i>tuḥša(ri)</i>	‘cuts (off)’	<i>kuerzi</i>
Ved.	<i>grásate</i>	‘devours’	<i>átti</i> ‘eats’
Gk.	ἐρύομαι	‘protect, guard’	φύλασσω
Latin	<i>hortor</i>	‘encourage, incite’	<i>monēō</i>

Verbs which obligatorily take non-active morphology, but are ‘canonical’ non-active verbs (meaning that their non-active morphology is synchronically expected given its canonical uses in a given language) are not considered ‘voice mismatch verbs’, neither

are verbs that obligatorily take active morphology, *activa tantum*, for reasons discussed in, e.g., Grestenberger (2014a).

The following discussion focuses on the syntactic behavior of the participles of deponents as defined above.

2. ACTIVE VS. MIDDLE PARTICIPLES

2.1. THE ‘ACTIVE’ PARTICIPLE: *-nt-

The traditional view of the function of *-nt- is best illustrated with a quote from Brugmann (1892: 370): ‚Dieses Suffix bildete seit der idg. Urzeit alle activen Participia mit Ausnahme des part. perf.‘. This statement certainly holds for synchronically productive and canonical cases of thematic and athematic active participles associated with different stem classes, e.g., thematic participles like Ved. *bhárant-*, Gk. φέρων, Lat. *ferēns*, Goth. *bairand-* < *b^hér-o/e-nt- ‘carrying, bringing’, athematic participles like Ved. *ghnánt-*, Av. *γnant-* < *g^hn-ént- ‘slaying’, Gk. (aor.) δούς, θείς < *dh₃-ént- ‘giving’, *d^hh₁-ént- ‘placing’, causative present participles like Ved. *sādáyant-* ‘seating, settling sbdy’, Lat. *monēns* ‘admonishing’, etc., participles of transitive *s*-aorists, e.g., Ved. *sákṣant-* ‘vanquishing’ (*sah*), *dhákṣant-* ‘burning’ (*dah*), Gk. δειξῶς ‘showing’, and in transitive desiderative and future stems, e.g., Ved. *vakṣyánt-*, Av. *vaxšiant-* ‘wishing to speak’ (*vac*), etc.

However, there are also cases in which the ‘active’ participial morphology does not match the syntax of the participle. In Vedic, we find formally active, stative *járant-* ‘old’ (cp. Gk. γέρων ‘old man’; a Caland-associated *nt*-formation, Rau 2013:71f) besides synchronically active transitive-causative *jáрати* ‘make old’ vs. middle *járate* ‘become old’; *vrđhánt-* ‘growing’ (itr., RV also has *vrđhāná-*) besides the synchronic active present *várdhati* ‘cause to grow’ vs. middle *várdhate* ‘grow’ (itr.), etc. (cp. AiG II,2: 163ff.; Lowe 2015:283ff.). In Greek, the underspecification of participial morphology is best illustrated with the participles *ίών* ‘coming, going’ vs. *έρχόμενος* ‘coming’ vs. *έλθών* ‘coming’ of the respective suppletive verbs that are either *activa* or *media tantum*. The participial morphology is clearly sensitive to the morphology, rather than the valency of the corresponding finite verb. The same holds for the participles of Greek ‘passive aorists’, which are likewise morphologically active (like the finite passive aorist) rather than middle, as might be expected given the passive or stative-intransitive meaning of the passive aorist, e.g., aor.ptcp. μιγείς ‘mixing, mingling’ (itr., besides Hom. μιγήμενος, Hom.) : 3sg. aor. έμίγη. A synchronically unexpected case comparable to Ved. *járant-*, etc., above is that of μέδων ‘ruler’, a participle from the same root found in the *medium tantum* μέδομαι ‘think of, take care of’ and μήδομαι ‘devise’. To judge from its cognates, this root made exclusively middle verbs already in Proto-Indo-European, suggesting that the active *-nt-formation underlying μέδων was formed when the suffix *-nt- was not primarily associated with finite active verbs.

More remnants of this state are found in Latin (see Leumann 1977: 583): *vertēns* ‘turning’ (transitive *and* intransitive) seems to go with both active (transitive-causative)

vertō ‘turn’ and intransitive, formally non-active *vector* ‘turn’. The same goes for *volvēns* ‘rolling’ (tr./itr.): active transitive-causative *volvō* ‘roll’, intransitive non-active *volvō* ‘roll’. The participle *liquēns* ‘fluid’ must belong to *liquor* ‘become fluid, melt’ rather than intransitive, but formally active *liqueō* ‘am clear’ (later also active transitive *liquō* ‘make fluid, melt sth.’). The plurale tantum *gignentia* ‘growing things, plants’ (Sall.) is semantically closer to the Greek middle γίγνομαι ‘come into being, be born’ than to the corresponding (formally active and transitive) Latin form *gignō* ‘produce, bring forth’. Finally, the behavior of deponent verbs, which take formally active present participles, is a further piece of evidence that *-nt- was integrated into verbal paradigms and associated with formally active finite verbs only relatively late. Deponents regularly have formally active present participles, e.g., *sequor* ‘follow’ : *sequēns*, *hortor* : *hortāns*, *loquor* : *loquēns*, etc., in which the mismatch between morphological form and syntactic function that characterizes deponents appears to be suspended (but see section 3.2 below).

2.2 THE ‘MIDDLE’ PARTICIPLE

Starting again with Brugmann (1892), his characterization of the middle participle *-mh₁no-¹ is as follows: ‘*-mno-, *-meno-, *-mono-: Mit diesem Suffix waren in uridg. Zeit participia med. (pass.) der themavocalischen Tempusstamme gebildet, ...’ (p. 154); ‘seit idg. Urzeit mit demselben Sinne, den die medialen Personalendungen hatten.’ (p. 423, emphasis mine). Here it is even more noticeable that the participle is not inherently specified for voice (or a particular valency), but takes its semantics directly from the corresponding finite middle paradigm.

Standard examples in which middle participial morphology corresponds to ‘middle’ syntax include, e.g., Ved. *bhāramāna-* ‘carrying for oneself; (being) carried’ (*bhārate* ‘carries for oneself’, ‘is carried’), Av. *barəmna-* ‘being carried’ (*baraitē*), Gk. φερόμενος ‘winning for oneself; being carried’ (φέρομαι ‘win for myself’); Ved. *yājamāna-* ‘sacrificing, worshipping (for oneself)’ (*yājate*), Av. *yazəmna-* ‘worshipping’ (*yazaitē*) ≈ Gk. ἄζόμενος ‘worshipping’ (ἄζομαι), etc. There are some remnants of this use in Latin (which does not otherwise use *-mh₁no- as a participial suffix), e.g., *alumnus* ‘nursling’ < *h₂al-o-mh₁no- (not integrated in the paradigm of *alō* ‘nourish, feed’, passive *alor* ‘am nourished, fed’), *fēmīna* ‘woman’ < *d^heh₁-mh₁neh₂,² *calūmnia* ‘slander’ (< ?*k^hl^hh₁-u-mh₁no-, Lat. *caluor* ‘deceive’, LIV²: 349), see Leumann (1977: 322), Weiss (2009: 437), Pinault (2013).

However, deponent participles in Vedic and Greek illustrate that middle participial morphology does not always have ‘middle’ syntax. Like the corresponding finite

1 See, e.g., Klingenschmitt (1975), Mayrhofer (1986: 130f.), Weiss (2009: 437), Pinault (2012, 2013) and Melchert (2014) for the reconstruction, especially concerning the phonology. Lowe (2012) moreover argues that some Vedic -āna-formations that have traditionally been characterized as middle participles had better be analyzed as denominal (deinstrumental) Caland adjectives (taking -āna- from *-eh₁no-).

2 Semantically difficult, see Pinault (2013).

paradigms, these participle are syntactically active, transitive, and without any trace of ‘middle’ meaning.³ Some examples are given below:

1) Vedic⁴

a. *īd* ‘praise’, RV 10.66.14a-b:

vásiṣṭhāsaḥ pitṛvād vācam akrata devām īdānā ṛṣivát svastāye

‘The Vasisthas have made speech in the manner of their father, invoking the gods in the manner of that seer for well-being.’

b. *bādh* ‘oppress, attack, fend off’, RV 1.35.3cd:

ā devó yāti savitá parāváto (á)pa vísvā duritá bādhamānaḥ

‘God Savitar drives hither from afar, thrusting away all obstacles.’

2) Greek

a. *δίζημαι* ‘seek sth.’ : ptcp. *διζήμενος* ‘seeking’, *Od.* 1.261-2:

ᾠχετο γὰρ καὶ κεῖσε θοῆς ἐπὶ νηὸς Ὀδυσσεύς φάρμακον ἀνδροφόνον διζήμενος

‘And then Ulysses went into his swift ship, seeking (some) men-slaying poison.’

b. *τίνυμαι* ‘avenge, punish, chastize’ : ptcp. *τῖνύμενος*, *Od.* 24.326:

λώβην τῖνύμενος θυμαλγέα καὶ κακὰ ἔργα

‘... avenging (their) grievous insults and bad deeds.’

This suggests once again that the reflexes of **-mh₁no-* in these languages are not *inherently* middle with respect to their syntactic behavior, but take their cue from the corresponding finite paradigm.⁵

2.3. THE LATIN PERFECT PARTICIPLE

Although Latin does not use **-mh₁no-* as a non-active participial suffix, the inherited (verbal) adjective suffix **-to-* has developed into a passive participial suffix with many similar properties to those of *-μενος* in Greek and *-(m)āna-* in Sanskrit, namely primary association with a finite non-active paradigm with simultaneous preservation of active, transitive syntactic behavior if made to a deponent. That is, the Latin *tus*-participles of deponent perfects are active and transitive, like the corresponding finite (present) forms.

3)

a. *sequor* ‘follow’, perf.ptcp. *secūtus* ‘(having) followed’,

Livy, *Ab urbe condita* 4.20.5:

omnes ante mē auctōres secūtus, ... exposuī

‘Having followed all authors before me, I have stated (that) ...’

3 Defined as ‘canonical function of middle morphology’ in those languages, that is, anti-causative, self-benefactive, reflexive, passive, etc. For a descriptive typology of canonical « middle » functions see Klaiman (1991) and Kemmer (1993).

4 All translations from Jamison & Brereton (2014).

5 See Fellner & Grestenberger (to appear) for arguments that this generalization also holds for the Tocharian reflexes of **-mh₁no-*.

b. *com-minīscor* ‘invent, devise’, perf. *commentus sum* ‘(having) devised’:

Plautus, *Truculentus* 85:

eo nunc commenta est dolum

‘For this reason she has now devised this deceit.’

c. *loquor* ‘speak, say’, perf. *locūtus sum* ‘(having) said’:

Plautus, *Trinummus* 563:

quid hīc est locūtus tēcum?

‘What did he discuss with you?’

We have seen that the middle participles in Vedic and Greek and the Latin ‘perfect passive’ participle have the same syntactic behavior as the corresponding finite, morphologically non-active forms. This suggests that approach 2 outlined above (morphological selection) is correct and that the late PIE ‘active’ and ‘middle’ participial suffixes were not inherently marked for voice. Rather, they are synchronically selected in accordance with the morphology of the corresponding finite paradigm. Anomalies such as the formally active Ved. *jārant-* ‘old’ or the use of formally active present participles of deponent verbs in Latin are archaisms; remnants from a time when these suffixes were not fully integrated into a verbal paradigm.

If, on the other hand, approach 1 were correct (syntactic selection), we would expect the selection of a middle or passive participial suffix to trigger ‘middle’ or passive syntax and to suspend the voice mismatch (because it is inherently specified for ‘middle’ or passive syntax). But this is not what we observe in deponent participles: the morphologically non-active participle of Ved. *īṭte* ‘praises’ (*īd*), *īdāna-* means ‘praising’, not *‘(being) praised’, and the participle of *bād hate* ‘attacks’, *bādhamāna-* means ‘attacking’, not *‘(being) attacked’.

The same point can be made for Gk. *τῖνύμενος* (‘punishing’, not *‘(being) punished’ or some other ‘middle’ function), Lat. *secūtus* (‘having followed’, not *‘having been followed, persecuted’) and the other examples given above.

If approach 1 were correct and the active and middle/non-active participle suffixes were inherently specified for voice, there are two possible patterns we might expect for deponent participles. We would expect deponents to either have formally non-active participles with non-active meaning (middle or passive, pattern 1), which as we have just seen is not the case. Or we would expect them to have formally active participles, corresponding to the active, transitive syntactic properties of the finite forms (pattern 2). However, this is also not what we get: Ved. *bād hate* ‘attacks’ does not have a corresponding active participle **bād hant-* ‘attacking’ and Gk. *τίνυμαι* ‘punish’ does not have an active participle **τῖνύς* ‘punishing’ (the apparent counterexamples from Latin, e.g., *sequor* – *sequēns*, will be addressed immediately).

To summarize, the syntactic behavior of deponent participles in Vedic, Greek and Latin is a strong argument in favor of the view that the participle suffixes *-nt-, *-mh₁no- and *-to- were not inherently specified for a particular voice context (active, middle and passive, respectively), and that this was not only the case in Proto-Indo-European, but is still synchronically the case in those languages in which these suffixes have become integrated into the verbal paradigm and associate with formally active or

formally non-active finite verbs. Even at that stage, their syntactic behavior is determined by morphological, rather than syntactic selection: it mirrors the syntactic behavior of the corresponding finite forms.

The next section briefly addresses apparent counterexamples in Vedic and Latin. In Vedic, we see cases in which the formally middle participles of active transitive (morphologically middle) verbs are passive (potentially instantiating pattern 1), which is unexpected under the ‘morphological selection’ approach. In Latin, we see that some formally non-active verbs, including deponents, have morphologically active present participles, potentially instantiating pattern 2.

3. VEDIC AND LATIN ‘COUNTEREXAMPLES’

3.1. VEDIC

Delbrück (1888: 264), Debrunner (AiG II, 2: 270) and Kulikov (2006), among others, have pointed out that some Vedic *āna*-participles of formally middle, but syntactically active (transitive) verbs are passive, which might suggest that their syntactic behavior is determined by something other than association with a synchronic middle paradigm (thus a potential problem for the ‘morphological selection’ approach). The following cases that seem to instantiate pattern 1 (passive participles to transitive, formally middle verbs) have been noted:

- *hinvāná-* ‘impelling, spurring’ (10x in the RV) vs. passive ‘impelled, spurred’ (18x in the RV). While the corresponding ‘stative’ is syntactically active and transitive in the 1st and 2nd person (e.g. *hinvé* ‘I impel, spur’), the 3sg. *hinvé* is passive (‘is impelled, spurred’). Therefore the unexpected voice fluctuation mirrors that of the corresponding finite paradigm (cp. Kulikov 2006: 46, Kümmel 1996: 141).
- aor.ptcp. *yujāná-* ‘yoking’ (14x) vs. passive ‘yoked’ (8x). This participle formally belongs to both the transitive middle root aorist, e.g., *áyukta* ‘yoked (for him/herself)’, and the passive aorist (3sg. *áyoji* ‘was yoked’, cp. Kümmel 1996: 90, Kulikov 2006: 46-47). Hence the transitive readings of *yujāná-* presumably belong to the athematic middle aorist, while the passive readings belong to the passive aorist.
- The same explanation holds for *sunvāná-* ‘pressing’, which is passive in RV 9.101.13. The transitive use belongs to the paradigm of the transitive 3sg. middle *sunuté* ‘presses’, while the passive one belongs to the ‘stative’ (passive) 3sg. *sunvé* ‘is pressed’ (cp. Kulikov 2006: 50, Kümmel 1996: 123ff.); note also the pair 3sg.aor. *ásāvi* ‘was pressed’: aor.ptcp. *s(u)vāná-* ‘pressed’.
- *indhāna-* ‘kindling’ (5x) vs. passive ‘kindled’ (3x) formally belongs to the syntactically active transitive 3sg. middle *indhé* (< **ind-dhé* < **indh-té*) ‘kindled, lit up’ and the homophonous intransitive 3sg. ‘stative’ *indhé* (= *indh-é*) ‘is kindled, lights up’ (RV 7.8.1), cp. Kulikov (2006: 53), Lowe (2013).

Similar cases in which the syntax of the middle participle indicates that it belongs to a ‘stative’ present or passive aorist paradigm include *srjāná-* ‘set free, released’ from the

passive aorist *ásarji* ‘was discharged, set free’ (rather than the 3sg. middle aor. *ásrṣṭa*); *drśāná-* ‘visible’ belongs with the paradigm of *ádarśi* ‘appeared, was seen’ (but note that in this case there is no formally middle transitive aorist), *rucāná-* ‘shining’ to *(a)roci* ‘shone’ (but note that Lowe 2012b: 93 interprets this as denominal Caland adjective of *rúc-* f. ‘light’), *stávāna-* ‘praised’ (18x) : 3sg. stative *stavé* ‘is praised’, *stuvāná-* ‘(being) praised’ : passive aorist *ástāvi* ‘was praised’ and the aor.ptcp. *adāná-* ‘being eaten’ (hapax in RV 4.19.9) which seems to belong to an unattested passive aorist **ádi* ‘was eaten’.

These Vedic middle participles do not provide evidence for approach 1. Apparent ‘mismatches’ between the syntax of the finite and the participial forms (or rather apparent variation in the syntactic behavior of the latter) happen when different present or aorist stems share the same participial morphology. This is the case for ‘stative’ vs. middle pairs, as pointed out above. In these cases, the finite forms have distinct ‘passive’ (= ‘stative’) and middle morphology (see table 3), whereas their respective participles both surface with the same suffix *-āna-*:

Table 3. ‘Stative’- middle pairs

<i>grṇé</i>	‘is/gets praised’	<i>grṇt́é</i>	‘praises’ ⁶
<i>śṛṇvé</i>	‘is heard, famed as’	<i>śṛṇut́é</i>	‘hears’
<i>bruvé</i>	‘is spoken’	<i>brūt́é</i>	‘speaks’
[<i>*indh-é</i>	‘lights up’	<i>*indh-t́é</i>	‘lights sth. up’]

3.2 LATIN

We have already seen that pattern 2 appears to be attested in Latin: deponent participles take the same participial morphology as active participles in the present, e.g., *hortor* : *hortāns*, *sequor* : *sequēns*, *loquor* : *loquēns*, etc. This looks like what is predicted by approach 1 (syntactic selection): Latin deponent participles select the *active* participial suffix because they are syntactically active. However, to understand this pattern we need a more global account of Latin participial morphology. It is not trivial that Latin does not have a designated present *passive* participle. In other words, morphologically passive verbs in Latin (deponent or otherwise) cannot “choose” between an active and a non-active participle (a choice that is in principle available to their Vedic and Greek counterparts). The fact that they end up with an *nt*-participle in the present can be reduced to the fact that there is no other suffix available and suggests that *-nt-* is in fact underspecified for voice (thus Embick 2000).

6 Also ‘is praised’, e.g., RV 5.41.10.

Table 4. Latin participles

	a. Present		b. Perfect	
Alternating Ptcp.	Pres.act. <i>amō</i> ‘I love’	Pres.pass. <i>amor</i> ‘I am loved’	Perf.act. <i>amāvī</i> ‘I have loved’	Perf.pass. <i>amātus sum</i> ‘I was loved’
	<i>amāns</i> ‘loving’			<i>amātus</i> ‘loved’
Deponent Ptcp.		<i>sequor</i> ‘I follow’		<i>secūtus sum</i> ‘I have followed’
		<i>sequēns</i> ‘following’		<i>secūtus</i> ‘having followed’

Under this analysis, *-nt-* is underspecified for voice, but specified for present tense, while *-tus* is underspecified for both voice and tense (or rather aspect), see Embick (2000: 216ff.) and Weiss (2009: 437).

This analysis is corroborated by formally active participles to non-deponent verbs that associate with both the active and the passive forms of the corresponding finite paradigm in terms of their syntactic behavior, like *vertēns* ‘turning’, *volvēns* ‘rolling’, or only with a formally passive one like *līquēns* ‘fluid’ or *gignentia* ‘growing things, plants’ (see section 2.2 above).

To summarize, the apparent ‘pattern 2’ in Latin is due to a synchronic syncretism in its participial morphology. Greek and Indo-Iranian, on the other hand, show that in the absence of such syncretism, voice mismatches are continued in non-finite formations, which suggests their participial suffixes are selected according to morphological, not syntactic considerations.

4. CONCLUSION

I have argued that the reflexes of **(e)nt-* and **(m)h₁no-* in Greek, Indo-Iranian, and Latin are not inherently marked for a particular syntactic behavior with respect to voice. Rather, they are morphologically selected based on the corresponding finite paradigm and mirror its syntactic behavior. This pattern reflects the diachronic development of these suffixes, which were originally denominal and were integrated into their respective verbal paradigms relatively late.

Deponent participles in Greek and Indo-Iranian provide crucial evidence for the view that the selection of a given participial suffix is synchronically motivated entirely by the corresponding finite forms, since they preserve the mismatch between morphological form and syntactic function that characterizes the finite forms. The same holds for Latin once the syncretism in its participial morphology is taken into account.

5. APPENDIX: A NOTE ON *-(e)nt- IN HITTITE

A brief note on the reflexes of *-(e)nt- in Hittite is in order, since they diverge from what has been outlined above (section 2.1). The Hittite use of *-ant-* < *-(e)nt- diverges from that of the ‘inner-Indo-European’ languages (e.g., Vedic, Greek, Latin) in that it functionally corresponds to the reflexes of **-to-* in these languages: broadly speaking, it has a passive interpretation if made to transitive verbs and is intransitive or ‘subject-oriented’ when made to intransitive verbs (see Hoffner and Melchert 2008: 339ff., Frotscher 2013, Melchert 2017):

- 4) Intransitive *ant*-participles:
 - a. *akkant-* ‘having died, dead’ (*āk-/akk-* ‘die’)
 - b. *uwant-* ‘having come’ (*we-/uwa-* ‘come’)
 - c. *arant-* ‘standing’ (*ar-* ‘stand’)
- 5) Transitive *ant*-participles:
 - a. *appant-* ‘seized, taken’ (*epp-/app-* ‘seize’)
 - b. *piyant-* ‘given’ (*pai-/pi-* ‘give’)
 - c. *taruppant-* ‘assembled’ (*tarupp-* ‘collect, assemble’)

This is not the place to discuss the prehistory of *-(e)nt- and its development in the daughter languages (but see Melchert to appear and Fellner and Grestenberger to appear). What is important is that the *ant*-participles of deponents pattern with regular transitive verbs like those in 5) in having a passive reading:

- 6) Deponent *ant*-participles:
 - a. *paršiyant-* ‘broken’ (*parš(i)-* ‘break’)
 - b. *huetiant-* ‘pulled’ (*huet(i)-* ‘pluck, pull’)
 - c. *tuhšant-* ‘cut off’ (*tuhš-* ‘cut off’)

This is exactly parallel to the behavior of Ved. *-tá-* and Gk. *-τός* with respect to transitive deponents vs. transitive non-deponents:

- 7) Vedic *-tá-*:
 - a. transitive non-deponents: *ha-tá-* ‘slain’ (*han*), *uk-tá-* ‘spoken’ (*vac*), *pī-tá-* ‘drunk’ (*pā*)
 - b. deponents: *gras-itá-* ‘devoured’ (*gras*), *bādh-itá-* ‘beset, hemmed in’ (*bādh*), *-lab-dha-* ‘taken’ (*labh*)
- 8) Gk. *-τός*:
 - a. transitive non-deponents: *θετός* ‘placed, set’ (*τίθημι*), *ποιητός* ‘made’ (*ποιέω*), *τρητός* ‘pierced, perforated’ (*τετραίνω*)
 - b. deponents: *ἔξαιτος* ‘picked; choice’ (*ἔξαινυμαι*), *μνηστή* f. ‘wooed one’ (*μνάομαι*), *εὐκτός* ‘(thing) prayed for, desired’ (*εὐχομαι*)

This pattern could be taken as evidence that the reflexes of **-tó-* are inherently passive, or object-oriented, since deponents pattern with formally active transitive verbs in terms of the syntactic behavior of the **tó*-participle and the voice mismatch is suspended. While this is descriptively correct, I have argued elsewhere (Grestenberger 2014a, ch. 5, based on, e.g., Embick 2000, Anagnostopoulou 2003, Alexiadou and Anagnostopoulou 2008) that the ‘passive’ or object-oriented reading arises because the functional projection that triggers (active vs. middle) voice morphology in finite forms

(Voice Projection, VoiceP) is absent in Greek and Indo-Iranian **to*-formations and in Hitt. *-ant-*, but present in Ved. *-(a)nt-* and *-(m)āna-* and Gk. *-ων* and *-μενος*, as well as in Latin *-nt-* and *-tus*. The distribution is summarized in the following table for deponent participle morphology:

Table 5. Morphosyntax of deponent participles in Indo-European

	a. includes VoiceP	b. no VoiceP
syntactically active	Gk. <i>-μενος</i> , Ved. <i>-(m)āna-</i> , Lat. <i>-ns/-tus (-tūrus)</i>	
syntactically passive (‘object-oriented’)		Gk. <i>-τός</i> , Ved. <i>-tá-</i> , Hitt. <i>-ant-</i>

The discussion in this paper has focused on the suffixes of column a., all of which include VoiceP. Since this projection must be present for deponent behavior to surface, I have left the column b. suffixes aside here, but their behavior is in line with the assumption that participial suffixes were not specified for (a particular value of) voice.

REFERENCES

- AiG II,2 = DEBRUNNER, A., 1954. *Altindische Grammatik, vol. II,2: Die Nominalsuffixe*. Göttingen, Vandenhoeck & Ruprecht.
- ALEXIADOU, A., ANAGNOSTOPOULOU, E., 2008. ‘Structuring participles’. Ch.B. Chang, H.J. Haynie (eds.), 2008. *Proceedings of the 26th West Coast Conference on Formal Linguistics*. Somerville, MA, Cascadilla, 33-41.
- ANAGNOSTOPOULOU, E., 2003. ‘Participles and voice’. A. Alexiadou, M. Rathert, A. von Stechow (eds.), 2003. *Perfect Explorations*. Berlin, New York, Mouton de Gruyter, 1-36.
- BRUGMANN, K., 1892. *Grundriss der vergleichenden Grammatik der indogermanischen Sprachen. 2. Bd.: Wortbildungslehre (Stammbildungs- und Flexionslehre), Teil 1*. Strassburg, Trübner [reprinted 2009, Cambridge University Press].
- DELBRÜCK, B., 1888. *Altindische Syntax*. Halle a.S., Verlag der Buchhandlung des Waisenhauses (= Syntaktische Forschungen 5).
- EMBICK, D., 2000. ‘Features, syntax, and categories in the Latin perfect’. *Linguistic Inquiry* 31/2, 185-230.
- FELLNER, H.A., GRESTENBERGER, L. (to appear). ‘Gemeinsame Unterschiede und unterschiedliche Gemeinsamkeiten der hethitischen und tocharischen Nominalmorphologie: Die Reflexe der **-nt-* und **-mh₁no-*Partizipien’. To appear in the proceedings of *100 Jahre Entzifferung des Hethitischen — Morphosyntaktische Kategorien in Sprachgeschichte und Forschung*, Workshop of the Society for Indo-European Studies, Philipps-Universität Marburg, September 21-23, 2015.
- FROTSCHER, M., 2013. *Das hethitische -ant-Partizip und seine indogermanischen Grundlagen: Semantik, Morphologie, Syntax*. Doctoral Dissertation, Università degli Studi di Verona.
- GRESTENBERGER, L., 2014a. *Feature Mismatch: Deponency in Indo-European*. Doctoral Dissertation, Harvard University.

- , 2014b. “Split Deponency” in Proto-Indo-European’. S.W. Jamison, H.C. Melchert, B. Vine (eds.), 2014. *Proceedings of the 25th Annual UCLA Indo-European Conference*. Bremen, Hempen, 75-86.
- HOFFNER, H.A. JR., MELCHERT, H.C., 2008. *A Grammar of the Hittite Language. Part I: Reference Grammar*. Winona Lake, Ind., Eisenbrauns.
- JAMISON, S.W., BRERETON, J.P., 2014. *The R̥gveda: The Earliest Religious Poetry of India, vol. I-III*. Oxford, Oxford University Press.
- KEMMER, S., 1993. *The Middle Voice*. Amsterdam, Philadelphia, John Benjamins.
- KLAIMAN, M.H., 1991. *Grammatical Voice*. Cambridge, New York, Cambridge University Press.
- KLINGENSCHMITT, G., 1975. ‚Tocharisch und Urindogermanisch‘. H. Rix (ed.), 1975. *Flexion und Wortbildung. Akten der V. Fachtagung der Indogermanischen Gesellschaft (Regensburg, 9.-14. September 1973)*. Wiesbaden, Reichert, 149-63.
- KÜMMEL, M., 1996. *Stativ und Passivaorist im Indoiranischen*. Göttingen, Vandenhoeck & Ruprecht.
- KULIKOV, L., 2006. ‘The Vedic medio-passive aorists, statives and their participles: reconsidering the paradigm’. *Themes and Tasks in Old and Middle Indo-Aryan Linguistics. Papers of the 12th World Sanskrit Conference, vol. 5*. Delhi, Motilal Banarsidass, 45-63.
- LEUMANN, M., 1977. *Lateinische Laut- und Formenlehre. Lateinische Grammatik, vol. I*. München, Beck.
- LIV² = RIX, H., 2001. *Lexikon der Indogermanischen Verben*. Bearbeitet von Martin Kümmel, Thomas Zehnder, Reiner Lipp und Brigitte Schirmer. 2nd edition. Wiesbaden, Reichert.
- LOWE, J., 2012. ‘Caland adjectives and participles in the R̥gveda: the case of *-āna-*’. S.W.Jamison, H.C.Melchert, B.Vine (eds.), 2012. *Proceedings of the 23rd Annual UCLA Indo-European Conference*, Oct. 28-29, 2011. Bremen, Hempen, 83-98.
- , 2013. ‘Aorist participles in the R̥gveda’. Paper presented at the 25th Annual UCLA Indo-European Conference, Oct. 25-26, 2013.
- , 2015. *Participles in Rigvedic Sanskrit: The Syntax and Semantics of Adjectival Verb Forms*. Oxford, Oxford University Press.
- MAYRHOFER, M., 1986. *Indogermanische Grammatik I, 2. Halbband: Lautlehre [Segmentale Phonologie des Indogermanischen]*. Heidelberg, Winter.
- MELCHERT, H.C., 2014. ‘Anatolian nominal stems in **(C)o-*’. N. Oettinger, Th. Steer (eds.), 2014. *Das Nomen im Indogermanischen. Morphologie, Substantiv versus Adjektiv, Kollektivum. Akten der Arbeitstagung der Indogermanischen Gesellschaft vom 14. bis 16. September 2011 in Erlangen*. Wiesbaden, Reichert, 205-214.
- , 2017. ‘The source(s) of Indo-European participles in **-e/ont-*’. C. Le Feuvre, D. Petit, and G.-J. Pinault (ed.), 2017. *Verbal Adjectives in Indo-European languages*. Bremen, Hempen, 217-220.
- PINAULT, G.-J., 2012. ‘Sound laws and the suffix of the PIE “middle” participle’. R. Sukač, O. Šefčík (eds.), 2012. *The Sound of Indo-European 2. Papers on Indo-European Phonetics, Phonemics and Morphophonemics*. München, Lincom, 227-251.
- , 2013. ‘Thoughts about the Proto-Indo-European suffix of the “middle” participle’. Paper presented at the *GSAS Workshop on Indo-European and Historical Linguistics*, Harvard University, Dec. 13, 2013.

- RAU, J., 2013. 'Notes on state-oriented verbal roots, the Caland system, and primary verb morphology in Indo-Iranian and Indo-European'. A.I. Cooper, J. Rau, M. Weiss (eds.), 2013. *Multi Nominis Grammaticus: Studies in Classical and Indo-European Linguistics in Honor of Alan J. Nussbaum on the Occasion of his Sixty-fifth Birthday*. Ann Arbor, New York, Beech Stave, 255-273.
- , 2017. 'The derivational history of the perfect participle active in PIE'. C. Le Feuvre, D. Petit, and G.J. Pinault (ed.), 2017. *Verbal Adjectives in Indo-European languages*. Bremen, Hempten, 377-389.
- WEISS, M., 2009. *Outline of the Historical and Comparative Grammar of Latin*. Ann Arbor, New York, Beech Stave Press.

Laura Grestenberger
University of Vienna