

Two types of passive? Voice morphology and allomorphy in Ancient Greek and Sanskrit

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

Carleton University, School of Linguistics and Language Studies, Jan. 27, 2017

1 Introduction

1.1 Types of passives

Cross-linguistic variation in passive constructions (surveys in Shibatani 1988, Fox and Hopper 1994, Abraham and Leisiö 2006, Alexiadou and Schäfer 2013, Kiparsky 2013) makes strong generalizations difficult. Some traditional lines of research:

1. The passive promotes the internal argument, agent-demotion is a by-product (Perlmutter and Postal 1984, Comrie 1988)
2. The passive demotes the external argument/absorbs ACC; object-promotion is a by-product (Baker 1988, Baker et al. 1989)
3. The passive is built on (contains the structure of) the corresponding active (Collins 2005, Bruening 2013) and/or selects transitive input structures
4. (passive) Voice heads attach at different heights in different languages (Alexiadou and Doron 2012, Alexiadou et al. 2015)

1.2 Goals of this talk

- Discuss 3. & 4. based on Sanskrit and Ancient Greek mediopassive & passive verbs
- Argue that both have only one type of Voice head, despite apparently having two types of passives
- Argue that voice morphology (active/non-active) is not valency-reducing, but post-syntactic in Greek & Sanskrit
- Hopefully also say something smart about the Greek future passive

2 Background

2.1 Voice in Greek & Sanskrit

Two languages with a very similar voice system: Sanskrit (Vedic Sanskrit, corpus = Rigveda, ca. 1,400–1,100 BCE) and Ancient Greek (Homeric: 8th century BCE, post-Homeric/archaic 7th–6th, Classical Greek 5th–4th century BCE, Herodotus, Thucydides) both have “bivalent” voice systems, with separate sets of verbal endings for active vs. non-active (= “middle”) voice.

(1) Vedic: Active—non-active endings (non-past/“present”)

	Active			Middle		
	Sg.	Dual	Pl.	Sg.	Dual	Pl.
1	-mi	-vas	-masi	-e	-vahe	-mahe
2	-si	-thas	-tha	-se	-ethe, -áthe	-dhve
3	-ti	-tas	-nti	-te, -e	-ete, -áte	-nte, -re

(2) Greek: Active—non-active endings (past)

	Active			Middle		
	Sg.	Dual	Pl.	Sg.	Dual	Pl.
1	-n, -a	—	-(a)men	-(a)mēn	—	-(a)metha
2	-s, -as	-(a)ton	-(a)te	-ou, -ō	-(a)sthon	-(a)sthe
3	-e(n)	-(a)tēn	-(a)n	-(a)to	-(a)sthēn	-(a)nto

Non-active/“middle” morphology occurs in the same syntactic contexts as in other languages with this type of bivalent voice system (Klaiman 1991, Kemmer 1993, Embick 1998, Kaufmann 2007, Alexiadou and Doron 2012, Alexiadou 2013, Alexiadou et al. 2015 etc.):

- (3) a. Anticausatives
 b. Reflexives/reciprocals
 c. Self-benefactives
 d. Dispositional/generic constructions
 e. **Passives (Mediopassives)**

- Passive is one of the **canonical functions** of non-active morphology in “Greek-type” languages—but not the only one

→ often called “mediopassive”, as opposed to “real” passives whose morphology does not occur in other environments (e.g., Alexiadou and Doron 2012)

Descriptively, the non-active verbs in (3) are usually opposed to a corresponding formally (and syntactically) active construction (= *alternating verbs, oppositional non-active verbs*):

(4) Voice alternations in Modern Greek

Function	Active	Non-active
Anti-causative	<i>sikon-o</i> ‘raise’	<i>sikon-ome</i> ‘rise’
Reflexive	<i>plen-o</i> ‘wash’	<i>plen-ome</i> ‘wash myself’
Self-benefactive	<i>promithev-o</i> ‘supply’	<i>promithev-ome</i> ‘supply myself’
Passive	<i>skoton-o</i> ‘kill’	<i>skoton-ome</i> ‘am killed’

Moreover, both languages have a large number of *media tantum*, verbs that only ever take middle/non-active morphology (non-oppositional non-active verbs). These fall into the following categories (cp. Zombolou and Alexiadou 2014):

- (5) a. Experiencer/psych verbs
 b. Statives
 c. Verbs of motion
 d. Deadjectival and denominal verbs
 e. Transitive agentive verbs

(5e) should be considered “voice mismatch verbs” = **deponents**, in a more narrow definition than the one usually used. I’ve argued for this definition in Grestenberger 2014, 2016, but it’s a story for another day...

2.2 A third voice?

Today’s puzzle: Both Vedic and Greek have an aspectually conditioned trivalent distinction active–middle–passive (Vedic in the imperfective/present stem, Greek in the perfective/aorist):

(6) Vedic

a. present act.	b. present mid./non-act.	c. present pass.
<i>bhár-a-ti</i>	<i>bhár-a-te</i>	<i>bhri-yá-te</i>
carry-V-3SG.PRES.ACT “carries sth.”	carry-V-3SG.PRES.NACT “carries (for) oneself/for one’s own benefit” “*is being carried”	carry-V/PASS-3SG.PRES.NACT “is being carried”

(7) Two types of passive, Vedic (A = augment, past tense prefix):

a. Inflectional (aorist)	b. Derivational (present)
<i>á-sto-ṣ-ṭa</i>	<i>bhri-yá-te</i>
A-praise-AOR-3SG.PAST.NACT “he/she was/got praised”	carry-IPFV.PASS-3SG.PRES.NACT he/she is/gets carried

(8) Greek

a. aorist act.	b. aorist mid./non-act.	c. aorist pass.
<i>é-lou-s-a</i>	<i>e-lou-sá-mēn</i>	<i>e-loú-thē-n</i>
A-wash-PFV-1SG.PAST.ACT “I washed (sth.)”	A-wash-PFV-1SG.PAST.NACT “I washed myself” *“I was washed”	A-wash-PASS.PFV-1SG.PAST.ACT “I was washed”

(9) Two types of passive, Greek

a. Inflectional (present)	b. Derivational (aorist)
<i>theín-o-mai</i>	<i>e-dú-thē-n</i>
strike-V-1SG.PRES.NACT “I am/get struck, hit”	A-sink-PFV.PASS-1SG.PAST.ACT “I was sunk”

→ Remember that the non-active endings of the “inflectional passive” also occur in other (cross-linguistically expected) contexts (cp. (3–4)).

- Status of (9a) vs. (9b)? Are there two different Voice heads in Vedic & Greek?
- Why is PASS restricted to a particular tense/aspect stem in both languages?
- Why does PASS co-occur with non-active morphology in Vedic, (7b), but with active morphology in Greek, (9c)?

3 Properties of the “two passives”

Are the mediopassive (“inflectional passive”) and the passive (“derivational passive”) functionally equivalent?

3.1 Vedic

Inflectional passive compatible with all tense/aspect stems, derivational passive = only imperfective/present

- Vedic also has a “passive aorist” with distinct morphology from that of the middle aorist which makes passives and intransitive anticausatives. It’s morphologically closer to the inflectional passive, but syntactically more like the derivational *-yá-* passive.

(10) Inflectional vs. derivational passive: Vedic

Properties	inflectional	derivational
Acc.obj. → nom.subj.	✓	✓
Demoted agent → adjunct NP, instr. case	✓	✓
Eventive	✓	✓

Passive *-yá-* obligatorily co-occurs with non-active/middle morphology:

- (11) a. *ad-yá-te*
eat-PASS-3SG.PRES.NACT
“is (being) eaten”
- b. *bhri-yá-te*
carry-PASS-3SG.PRES.NACT
“is (being) carried”

Functionalists (e.g., Kulikov 2012) tend to treat this as “overcharacterization” and evidence that the mediopassive function of the non-active endings has “bleached”.

3.1.1 Inflectional passives

- “Inflectional passive” : rare function of non-active (“middle”) morphology, but attested (skeptical: Gonda 1979, Kulikov and Lavidas 2013)
- Jamison 1979: 3 (on the Rigveda):

“There are at least 200 cases in which an instrumental is used with a passive clearly to express agency. About 25 of these are with *-yá-* passives, 10-15 with aor. passives, and about 20 with passively employed formal middles. The remainder, i.e. the majority, are found with past participles.”

- (12) a. RV 10.65.4d:
devá stav-a-nte mánuṣāya sūrāyaḥ
god.NOM.PL praise-V-3PL.PRES.NACT Manu-kind.DAT patron.NOM.PL
“... the gods are praised as patrons to the race of Manu.”¹
- b. Cp. active in RV 8.3.8c-d:
adyá tám asya mahimānam āyávo ánu ṣṭuv-anti
today that.ACC his greatness.ACC Āyu.NOM.PL PRVB praise-3PL.PRES.ACT
“Today the Āyus praise his greatness (...).”

¹All Rigveda translations are taken from Jamison and Brereton 2014.

- c. Note that the *non-active forms* can occur in syntactically active contexts, too: RV 6.20.10b:
prá pūrāva stav-a-nta enā yajñāiḥ
 PRVB Pūru.NOM.PL praise-V-3PL.PRES.NACT this.INSTR sacrifice.INSTR.PL
 “The Pūrus start up the praise with this (hymn) along with sacrifices.”
- (13) a. RV 7.7.3b:
pri-nī-te agnīr īlitó ná hótā
 please-V-3SG.PRES.NACT Agni.NOM invoked.NOM like Hotar.NOM
 “Agni is (being) pleased, invoked like a Hotar, ...”
- b. RV 9.74.4c:
samīcīnāḥ sudānavāḥ pri-n-anti tām
 united.NOM.PL good.drops.NOM.PL please-V-3PL.PRES.ACT him
 “United, possessed of good drops, they please him.”

Eventive passive more probable in (13a) than stative or inchoative (“is/becomes pleased”) because of verbal derivational morphology: \sqrt{pri} ‘be pleased, pleasant’ → *pri-nā/ī-* ‘make pleased, please sbdy.’ (tr. factitive); and context of the hymn: description of proceedings during a ritual.

With instr. agent:

- (14) RV 1.77.5a-b:
evā agnīr gótamebhir (...) a-sto-ṣ-ṭa jātāvedāḥ (...)
 thus Agni.NOM Gotama.INSTR.PL A-praise-AOR-3SG.PAST.NACT Jātavedas.NOM
 “Thus has Agni, (...) the Jātavedas, been praised by the Gotamas, (...).”

3.1.2 Derivational passives

See Jamison 1979, Kulikov 2012.

- (15) a. Finite: RV 9.81.12d:
sāyudhāḥ sotḥbhiḥ pū-ya-te vṛṣā
 with.good.weapons.NOM.SG presser.INSTR.PL purify-V.PASS-3SG.PRES.NACT bull.NOM.SG
 “The bull of good weapons is purified by the pressers.”
- b. Cp. active in RV 9.109.11a-b:
tām te sotāro rāsam mādāya
 that.ACC.SG.M your.GEN/DAT presser.NOM.PL sap.ACC.SG.M exhilaration.DAT
pu-n-ānti
 purify-V-3PL.PRES.ACT
 “The pressers purify that sap of yours for invigoration/exhilaration, ...”
- (16) a. Participle: RV 5.3.8c-d:
samsthé yād agna īyase rayīnām devó
 gathering.LOC when Agni.VOC speed.2SG.PRES.NACT riches.GEN.PL god.NOM
mártair vāsubhir idh-yá-mān-aḥ
 mortal.INSTR.PL good.INSTR.PL kindle-V.PASS-PTCP.NACT-NOM
 “... when, o Agni, you speed amid the gathering of riches as the god being kindled by mortals and by the good (gods).”
- b. Cp. syntactically active participle in RV 8.102.22a-b:
agnīm í<n>dh-ān-o mánasā dhíyaṃ saceta
 Agni.ACC kindle<V>-PTCP.NACT-NOM mind.INSTR thought.ACC follow.3SG.OPT.NACT

mártiṃyāḥi
mortal.NOM

“Kindling Agni with his mind, the mortal should follow his visionary thought.”

Conclusion: inflectional & derivational passive have the same syntactic properties.

3.2 Greek

Inflectional passive compatible with all tense/aspect stems, derivational passive = perfective (aorist, future).

(17) Inflectional vs. derivational passive: (post-Homeric) Greek

Properties	inflectional	derivational
Acc.obj. ² → nom.subj.	✓	✓
Demoted agent → prep. + gen. case	?	?
Eventive	✓	✓

The aorist passive *-thē-* obligatorily co-occurs with *active* morphology (exception: the future passive, see below).

(18) Greek passive aorist:

- a. *e-blē-thē-n*
A.hit-PFV.PASS-1SG.PAST.ACT
“I was hit”
- b. *ēkh-thē-n*
A.drive-PFV.PASS-1SG.PAST.ACT
“I was driven, led”

Problems:

- Greek derivational passive (*-thē-*) also found in intransitive/anticausative contexts, well into Classical Greek
- Inflectional passives are rarely found with demoted agents (in prep. phrases or otherwise, Allan 2003), but there are some cases (Schwyzer 1943, Jankuhn 1969) already in Homer
- Variation in the use of prepositions to express the demoted agent of the derivational passive: *hupó* + gen. ‘from, under’, *apó* + gen. ‘from’, *ek* + gen. ‘out of’, *pará* + gen. ‘from’, *prós* + gen., dat. ‘from, by’, etc.
- Classical Greek generalizes *hupó* (but Modern Greek: *apo*)
- Problem: formally active unaccusatives can also express the agent/cause of the verbal event through with the same prepositions

→ The Greek derivational passive looks a lot more like an unaccusative/stative construction than its Vedic counterpart.

²Dative and genitive objects can also become nominative subjects under passivization, Anagnostopoulou and Sevdali 2014.

3.2.1 Inflectional passives

(19) *Iliad* 21.15f.:

hòs hup' Akhillêos Xánthou bathudinéentos plê-to rhóos
 thus from Akhillês.GEN Xanthos.GEN deep-eddyng.GEN fill-3SG.PAST.NACT stream.NOM
keládōn epimix híppōn te kai andrōn
 sounding.NOM mixedly.ADV horse.GEN.PL. both and man.GEN.PL.

“Thus the sounding waters of the deep-eddyng Xanthos were filled by Akhillês with/of a mix of horses and men.”

Context: Akhillês drives the Trojans into the river Xanthos and proceeds to slaughter them, so he’s probably the agent of the filling-the-river-with-body-parts-event.

(20) *Iliad* 6.56–7:

ê soi árista pepoiē-tai katà oĩkon pròs
 PTCL you.DAT best.NOM.PL.N do.PERF-3SG.PRES.NACT towards house.ACC from/by
Tróōn
 Trojan.GEN.PL

“(So) were the best things done to you in your house by the Trojans?”

(21) No preposition (cp. Vedic): *Iliad* 11.674-5:

hó (...) é-blē-t' en prōtoisin emês apó kheirōs ákonti
 he A-hit.AOR-3SG.PAST.NACT in first.DAT.PL my.GEN from hand.GEN dart.DAT

“He ... was hit among the first ones by a dart from my hand.”

3.2.2 Derivational passives

Derivational passives (-*thē*-) + demoted agent already in Homer:

(22) a. *Iliad* 2.668–9:

trikhthā dē oikē-the-n kataphuladón, ēde
 three.parts.ADV PTCL settle-V.PASS-3PL.PAST.ACT by.tribe.ADV and
phílē-the-n ek Diós (...)
 love-V.PASS-3PL.PAST.ACT of Zeus.GEN (...)

“and they settled in three divisions according to tribe, and were loved of/by Zeus ...”

b. Cp. active in *Odyssey* 15.245:

hōn peri kêri phíl-ei Zeús ...
 whom.REL around heart.DAT love-3SG.IPF.ACT Zeus.NOM

“Whom Zeus loved with all his heart ...”

(23) a. Herodotus, *Histories* 1.87.1:

éi tí hoi kekharisménon eks autoū e-dōré-thē ...
 if anything.NOM.N him.DAT pleasing.NOM of self.GEN A-give-V.PASS.3SG.PAST.NACT

“If anything pleasing had (ever) been given to him_i by him_j ...” (*i* = Apollo, *j* = Croesus of Lydia)

b. Cp. active construction in *Hist.* 5.37.1:

tōi Dareĩos Mutilénēn e-dōré-sa-to
 whom.DAT Darius.NOM Mytilene.ACC A-give-AOR-3SG.PAST.NACT

“... to whom Darius gave (the city) Mytilene.”

dōréomai ‘give’ is a *deponent*, so the non-active forms are always syntactically active.

(24) Passive participle (ex. from George 2005): *Od.* 9.66:

hoi thánon en pediōi Kikónōn hupo
 who.NOM.PL die.3PL.AOR.ACT on plain.DAT Ciconian.GEN.PL from
dēiō-thé-nt-es
 slaughter-V.PASS-PTCP.ACT-NOM.PL

“... who died on the plain, slaughtered by the Ciconians.”

- So both types are already found in Homer (albeit rarely), and throughout post-Homeric Greek. Why, then, are some scholars reluctant to acknowledge passive as a separate function of both types? (e.g., Jankuhn 1969, Kulikov and Lavidas 2013)
- → because *hupó* + agent_{GEN} also occurs with formally active, unaccusative verbs (Jankuhn 1969, George 2005, Kulikov and Lavidas 2013):

(25) Xen. Cyr. 7.1.48:

oud' autoi ge apéthnēiskon hupó hippéōn
 NEG they PTCL die.IPF.3PL.ACT from cavalry.GEN.PL

“They were not killed by any of the [enemy’s] cavalry.”

Conclusion: inflectional & derivational passives in Greek have the same syntactic properties, but the status of the demoted agent is unclear for both.

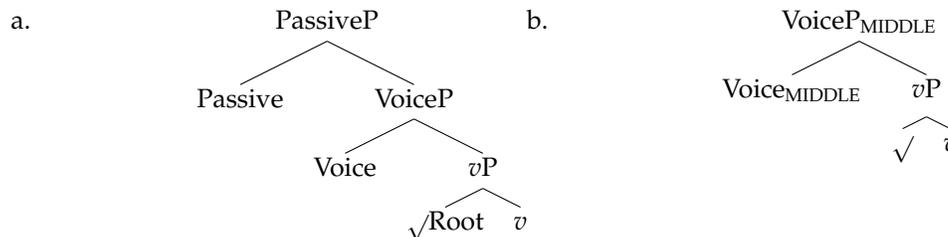
4 Syntactic vs. postsyntactic approaches to non-active voice

- Syntactic: voice morphology = reduces valency in some way (Collins 2005, Bruening 2013, Harley 2013)
- Postsyntactic: not valency-reducing, spells out a [NAct] feature on Voice (Embick 1998, 2004)

This dichotomy has been reformulated recently by Alexiadou and Doron 2012, Alexiadou et al. 2015: “two ways to go passive”

- PassiveP: selects (transitive) VoiceP, same thematic properties as active voice (English, German)
- Voice_{MIDDLE}: syncretic Voice (including “mediopassive”), selects (different types of) *v*P, different thematic properties than active voice (Ancient & Modern Greek, Sanskrit)

(26) Alexiadou et al. 2015: 124



- PassiveP = π , VoiceP_{MIDDLE} = μ (Alexiadou and Doron 2012)
- English: only π , Modern Greek: only μ , Hebrew: μ and π
- Do Ancient Greek & Sanskrit also have both?

4.1 Against a valency-reduction approach to the middle

- μ occurs in a suspiciously large number of syntactic contexts, compared to π
- A non-active/middle marked verb is often ambiguous between different readings, e.g.:
 - Ambiguity between passive and anticausative (from Alexiadou and Doron 2012):

(27) Modern Greek

i times miothikan **apo** to diefthindi/**me** tis nees ekseliksis
 the prices lowered.NACT by the director/with the new developments

“The prices were lowered by the director/went down because of the new developments”

(28) Modern Albanian (from Kallulli 2007):

Dritar-ja u kris nga presion-i/ Xhon-i/ libr-i
 Window-the NONACT crack.AOR.3SG from/by pressure-the John-the book-the

“The window cracked from the pressure/ was cracked by John/the book”

(29) Vedic, RV 7.8.1 :

indhé rájā sám ar;_iyó námobhir
 kindle.3SG.PRES.NACT king.NOM PRVB comrade.NOM reverence.INSTR.PL

“With reverence, the compatriot king (= the fire) is igniting/is kindled” (Kulikov 2006, Jamison and Brereton 2014: “is kindled”)

- Ambiguity between passive and generic/dispositional readings:

(30) Hebrew (from Alexiadou and Doron 2012):

migdal ayfel lo nir'a mi-šam
 tower Eiffel not see.SMPL.MID from-there

“The Eiffel tower was not visible from there/was not seen from there”

(31) Vedic: RV 6.10.4d

śócīṣā dadṛś-e pāvakāḥ
 glow.INSTR see.PERF-3SG.PERF.NACT pure.NOM

“The pure one is visible by his glow / is seen through his glow”

- Ambiguity between reflexive and passive:

(32) Modern Greek *plēnotike* ‘washed himself/ was washed’ (for example, in a hospital)

... and we don’t find this kind of ambiguity in the Germanic/Romance type of passives, nor in the passive of trivalent voice systems (Alexiadou and Doron 2012).

- Not all anticausatives are detransitivized, some are basic intransitives (Alexiadou and Anagnostopoulou 2004, Embick 2004)
- Evidence for an unaccusative analysis of (some?) reflexives (Sportiche 1998, Embick 2004, Rooryck and Vanden Wyngaerd 2011 ...)
- In self-benefactives, no valency reduction takes place—if anything, the opposite.

- (Non-)active morphology = portmanteau with T/Agr, sensitive to Voice[+/-ext.arg.]
- active morphology = “elsewhere”
- ... and therefore conveniently also emerges when Voice is missing, e.g., in obligatorily *active* unaccusatives & statives (Kallulli 2013) → *activa tantum*

(39) Unaccusative *activa tantum*:

- Vedic: *ásti* ‘is’, *éti* ‘goes’, *jívatí* ‘lives’, *tr̥ṇóti* ‘is pleased’, *pátati* ‘flies’, etc.
- Ancient Greek: *eimí* ‘am’, *eími* ‘go’, *zōō* ‘live’, *mímnō* ‘stay’, *rhéō* ‘flow’, etc.
- Modern Greek: *asprizo* ‘whiten’ (tr./itr.), *plateno* ‘widen’ (tr./itr.), *pefto* ‘fall’, *reo* ‘flow’, *meno* ‘stay’, etc.

- Alexiadou and Anagnostopoulou 2004, Schäfer 2008 and Alexiadou et al. 2015: formally active anti-causatives should be analyzed as lacking the Voice layer entirely
- Cp. similar proposals (lack of VoiceP/*v*P) in some verb classes): Kratzer 1996, Embick 1997, 1998, 2004 (*v*[AG] vs. *v*), Chomsky 2001 (ϕ -complete *v** vs. “defective *v*”), Kallulli 2007, 2013, etc.

(40) Distribution of active vs. non-active morphology in a Greek-type voice system (cp. Kallulli 2013: 349):

	+ext.arg.	-ext.arg.
Voice	ACT	NONACT
∅	n/a	ACT

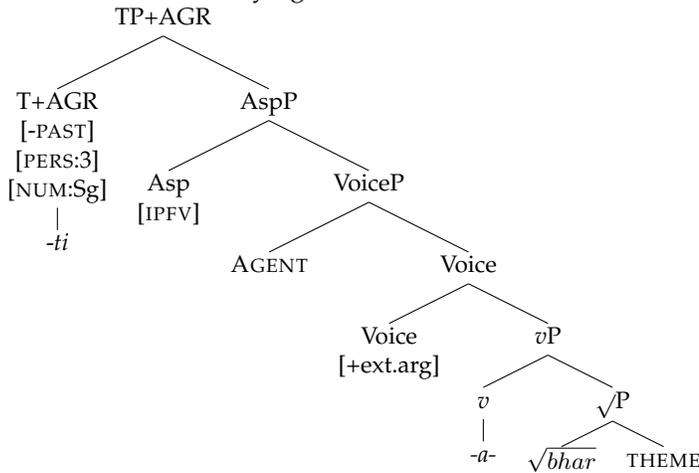
Sample derivation: Vedic active, transitive verb:

(41) a. X Y *bhár-a-ti*

carry-V-3SG.PRES.ACT

“X carries Y, X is carrying Y”

b.



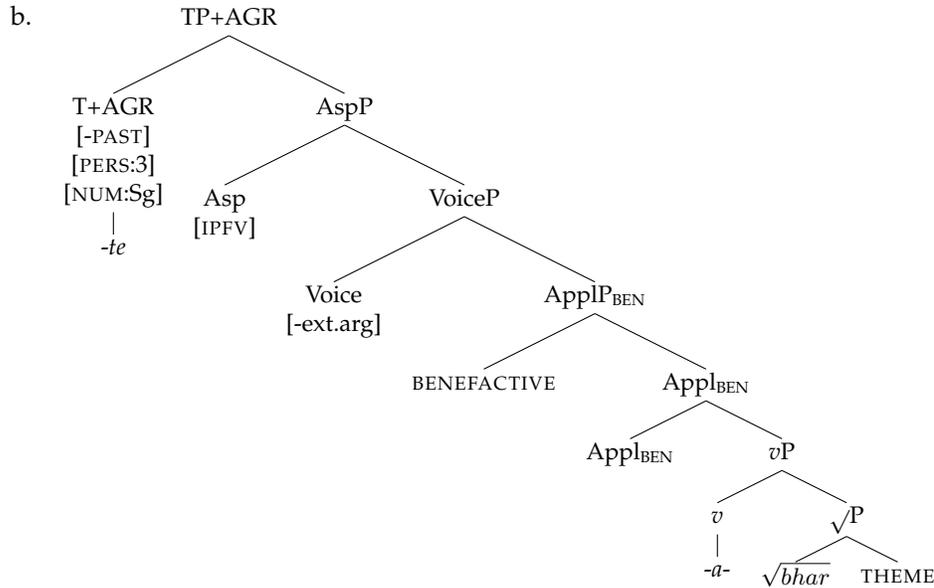
- Because there is an agent DP in the specifier of VoiceP, the condition for non-active voice is not fulfilled → active surfaces (“elsewhere”)

Sample derivation: Vedic (oppositional) non-active verb:

(42) a. X Y *bhár-a-te*

carry-V-3SG.PRES.NACT

“X carries Y for herself, X is carrying Y for herself”



- The beneficent DP is introduced by the projection $\text{ApplP}_{\text{BEN}}$ (Pylkkänen 2008, Bosse et al. 2012) + subsequent movement of this DP to subject position
- Voice does not introduce an external argument → non-active morphology

Does this work for all the contexts in which non-active morphology is found in Vedic/Greek?

(43) Oppositional:

- Anticausatives ✓ (but not all anticausatives are non-active, Alexiadou and Anagnostopoulou 2004, Schäfer 2008, Alexiadou et al. 2015)
- Reflexives/reciprocals ✓ (some version of the unaccusative analysis of reflexives required)
- Self-benefactives ✓ (under an analysis where the beneficent is introduced below VoiceP, as in Pylkkänen 2008, Bosse et al. 2012, and then moves to subject, cp. (42))
- Dispositional/generic constructions ✓ (possibly a function of the passive, “generic passive”)
- Mediopassives/passives ✓**

(44) Non-oppositional/ *Media tantum*

- Experiencer/psych verbs ✓
- Statives ✓
- Verbs of motion ✓ (? some are unergative)
- Deadjectival and denominal verbs ✓ (? some are unergative)
- Transitive agentive verbs ✗ (= deponents, so not our problem right now)

5 Analysis: Middle and passive in Vedic and Greek

- Alexiadou and Doron 2012, Alexiadou et al. 2015: μ & π are different voice heads
 - Different selectional restrictions
 - Different structural positions
 - Different semantics
- Languages can have both heads (e.g., Hebrew according to Alexiadou and Doron 2012), but they should not be able to co-occur
 - Vedic: passive and middle (NAct) co-occur

– Greek: Passive and active co-occur

(45) Voice morphology co-occurs

a. Vedic <i>bhri-yá-te</i> carry-V.PASS-3SG.PRES.NACT “is (being) carried”	b. Greek <i>e-blē-thē-n</i> A-hit-V.PASS-1SG.PAST.ACT “was hit”
---	--

- Active and middle morphology never co-occur → allomorphs of Voice
- Passive morphology = in different structural position than active/middle (can co-occur with active in Greek & with middle in Vedic); complementary distribution with stem-forming morphology (*v*)

5.1 Vedic: PASS = *v*

Proposal: The Vedic passive suffix *-yá-* is an allomorph of intransitive/stative *v*

- It never co-occurs with other stem-forming morphology, even if there are no phonotactic constraints that prevent this
- It never selects verbs with overt transitivity morphology

(46) Vedic nasal & nasal-infix presents and their passives

a. present act.	b. present mid.	pres. pass.
<i>yu<ná>k-ti</i> yoke<V>-PRES.3SG.ACT 'yokes'	<i>yu<n̄>k-té</i> yoke<V>-PRES.3SG.NACT 'yokes for him/herself'	<i>yuj-yá-te</i> yoke-PASS-PRES.3SG.NACT 'is being yoked'
<i>pr-ñá-ti</i> fill-V-3SG.PRES.ACT 'fills (sth.)'	<i>pr-ñī-té</i> fill-V-3SG.PRES.NACT 'fills oneself'	<i>pūr-yá-te</i> fill-V.PASS-3SG.PRES.NACT 'is filled'

(NB **yuhn̄j-yá-te*, **prñ(ī)-yá-te* would be phonotactically ok.)

5.1.1 Diachrony of *-yá-*

- Vedic has two *-ya-* suffixes, 1. passive *-yá-*, 2. unaccented verbalizing suffix *-ya-* which forms non-passive, mostly intransitive present stems (see Kulikov 2012)
- *yá-* passives always take middle morphology, the unaccented intransitive *ya-* presents can take either active or middle endings

(47) Vedic intransitive (non-passive) *-ya-*:

- active: *kṣúd̄h-ya-ti* 'becomes hungry', *gṛd̄h-ya-ti* 'becomes greedy', *júr-ya-ti* 'grows old, ages', *tṛp̄-ya-ti* 'is/becomes satisfied'
- non-active: *pád̄-ya-te* 'falls', *búd̄h-ya-te* 'is awake', *pyá-ya-te* 'fills, swells'

Minimal pairs are occasionally found:

(48) Intransitive vs. passive *-ya-*

a. intransitive <i>-ya-</i>	b. passive <i>-ya-</i>
<i>kṣī-ya-te</i> perish-V-3SG.PRES.NACT 'perishes'	<i>kṣī-yá-te</i> perish-V.PASS-3SG.PRES.NACT 'is destroyed'

Proposal: Diachronic reanalysis $v_{\text{BECOME-}ya-} \rightarrow v_{\text{PASS-}ya-}$

- Ved. $-yá-$ < Proto-Indo-European (PIE) $*-\hat{i}é/o-$, function: stative, anticausative, often denominal/deadjectival
- PIE $*-\hat{i}é/o-$ was compatible with act. & non-act morphology

- (49)
- $*spék-\hat{i}é-$ ‘see, watch for’ > Ved. act. *pásyati* ‘sees’, Lat. act. *speciō* ‘I see’, vs. Gk. non-act. *sképtomai* ‘look around’
 - $*mr-\hat{i}é-$ ‘die’ > Ved. non-act. *mriyáte* ‘dies’, Lat. non-act. *morior* ‘die’
 - $*d^hg^{th}i-\hat{i}é-$ ‘perish’ > Ved. non-act. *kṣíyate* ‘disappears’, Gk. act. *phthíei* ‘dies’ (Hsch.)
 - Greek denominal “contract verbs”, e.g., act. *níkáo* ‘conquer’ < $*nīkā-\hat{i}é/o-$, cp. *níkē* ‘victory’

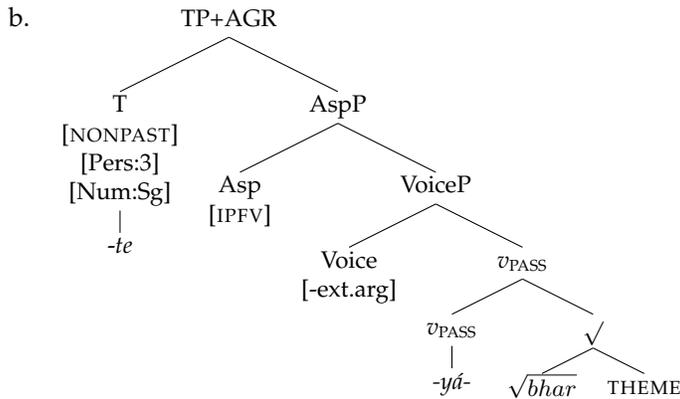
5.1.2 Derivational passive: Vedic

- $v_{\text{PASS}} \approx$ Alexiadou and Doron 2012’s π ?
 - π (Alexiadou et al. 2015: PassiveP) selects Voice; Greek/Vedic v_{PASS} selects roots
- Vedic v_{PASS} is selected by Voice

Sample derivation:

(50) Vedic present passive:

- $Y (X_{\text{instr}}) bhri-yá-te$
 carry-V.PASS-3SG.PRES.NACT
 ‘Y is (being) carried (by X)’

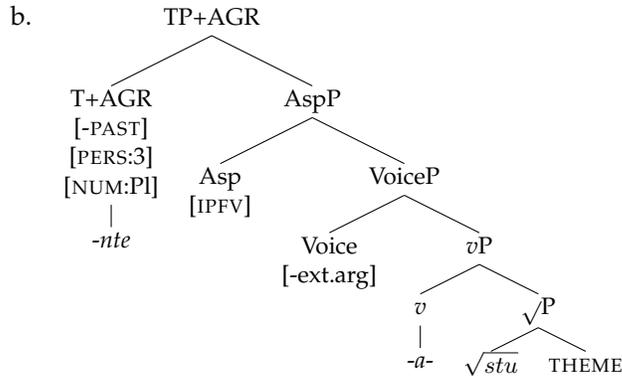


Predicts that passives always co-occur with non-active morphology by (38) → Vedic ✓

→ but not Greek.

(51) Inflectional passive (cp. (42))

- $Y (X_{\text{INSTR}}) stav-a-nte$
 praise-V-3PL.PRES.NACT
 “Y are praised (by X)”



5.2 Greek: PASS = v +Asp

Proposal: Greek passive *-thē-* realizes v +Asp (cp. Merchant 2015 on Modern Greek)

- Unlike the Vedic derivational passive suffix, *-thē-* is never selected by Voice

5.2.1 Diachrony of *-thē-*

Passive use of the *-thē-* already found in Homer, but productive only in post-Homeric Greek. Originally, *-thē-* (& older allomorph *-ē-*, not productive in CG) is a verbal stem-forming suffix and makes intransitive (anticausative or inchoative) aorists (thus still in Homer):

(52) Non-passive *thē-*aorists:

- e-kríph-thē-n*
A-hide-AOR-1SG.PAST.ACT
'I hid (myself)'
- e-phobē-thē-n*
A-flee-AOR-1SG.PAST.ACT
'I fled'
- hēs-thē-n*
A.sit-AOR-1SG.PAST.ACT
'I sat'

(53) *-thē-* is in complementary distribution with other verbal stem-forming morphology (= v):

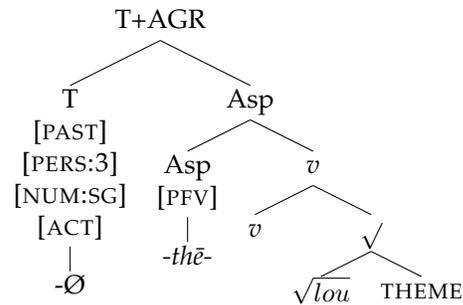
- e-dú-thē-n*
PAST-sink-PASS.PFV-1SG.ACT
'I was sunk'
- dú-n-ō*
sink-PRES-1SG.ACT
'I sink (sth.)'
- é-dū-s-a*
PAST-sink-AOR-1SG.ACT
'I sank (sth.)'

- The origin of "stative" *-thē-* and *-ē-* is contested (no exact equivalents in other IE languages, though suffix **-ē-* has been suspected to occur in other inchoative & stative formations)
- Jasanoff 2004 proposes a (de)nominal origin (reanalyzed instrumental sg. nouns in **-ē-*, cp. Ved. *guhā kr-/bhū-* 'make/become hidden', Lat. *ārē-faciō* 'make hot', etc.)
- No evidence that these denominal forms were ever alternating → they never had a Voice head

(54) Greek aorist passive:

- a. Y *e-loú-thē-∅* (hupó X_{GEN})
 A-wash-V.PASS-3SG.PAST.NACT
 “Y was washed (by X)”

b.



- The Greek *thē*-aorist = a type of unaccusative, no Voice head (cp. the morphologically active unaccusatives in ex. (39)).

(55) Inflectional passive = (51) above.

6 Conclusion

Two types of passive:

- Vedic & Greek non-active morphology = *postsyntactic*, not valency-reducing
- active/non-active = allomorphs of Voice
 - Non-active morphology marks the lack of an agent in Spec.VoiceP in different syntactic environments (anticausative, reflexive...), one of which is the **passive**
 - Inflectional passives behave as such w.r.t. to applicable criteria in both languages
- Vedic & Greek “derivational passives”:
 - A distinct verbal functional head, but unlike Alexiadou et al. 2015’s “high passive”
 - Vedic *-yá-* & Greek *-thē-* select roots (rather than transitive *v*’s)
 - They both developed diachronically from stative/intransitive verbalizing suffixes
 - But they differ in whether or not they co-occur with the higher Voice head (Vedic: yes, Greek: no)
 - a new “low passive”?

Appendix: The Greek future passive

The (post-Homeric) Greek future passive is built on the perfective passive stem (*-thē-*), but obligatorily takes non-active morphology (in Attic-Ionic; the Doric future passive takes the expected active endings).

(56) Classical Greek passives

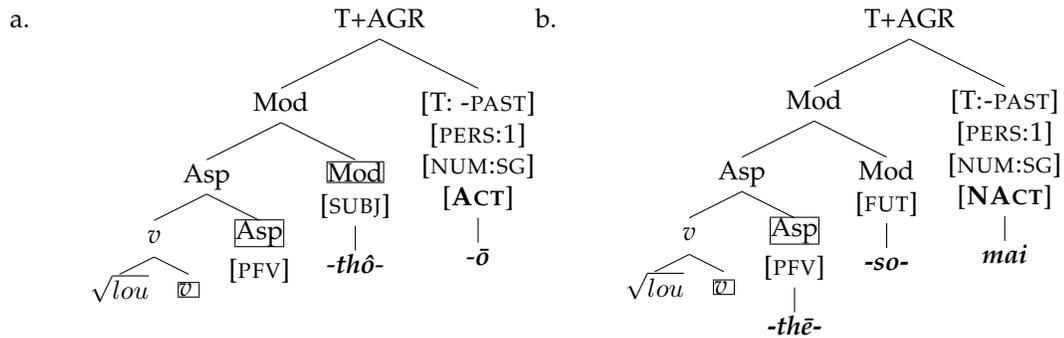
stem	passive	meaning
a. aor.	<i>e-loú-thē-n</i> PAST-wash-PASS.PFV-1SG.PAST.ACT	‘I was washed’
b. aor.subj.	<i>lou-thô</i> wash-PASS.PFV.SUBJ.1SG.NPAST.ACT	‘I may have been washed’
c. aor.opt.	<i>lou-theiē-n</i> wash-PASS.PFV.OPT-1SG.PAST.ACT	‘I might have been washed’

d. fut.	lou- thē-so-mai wash-PASS.PFV-FUT-1SG.NPAST.NACT	'I will be washed'
e. fut.opt.	lou- thē-soí-mēn wash-PASS.PFV-FUT.OPT-1SG.PAST.NACT	'I might be washed'

This is unexpected given the analysis above.

- The intervening future suffix *-so-/-s-* by itself can take either active or NAct morphology, so this alone cannot explain the odd variation
- Span-conditioned allomorphy? (Svenonius 2012, Merchant 2015, Merchant and Pavlou 2016) → triggered by Asp[PFV]¬Mod[FUT]?
 - Arbitrary combination - not all types of ModP cause non-active morphology with *-thē-*, cp. (57a).
- Fusion of Asp+Mod relevant? Expected active morphology surfaces whenever Asp+Mod form a portmanteau, (56b-c).

(57) Structure for (56b) & (56d.): nodes that have fused are boxed.



(58) Linearization for (57a) vs. (57b):

- a. $\sqrt{\text{lou}} \sim v.\text{Asp}.\text{Mod}[\text{thô}] \sim \text{Agr}[-\text{ō}]$ (*v*.Asp+Mod: portmanteau)
 b. $\sqrt{\text{lou}} \sim v.\text{Asp}[\text{thē}] \sim \text{Mod}[\text{so}] \sim \text{Agr}[-\text{mai}]$ (*v*.Asp+ Mod: no portmanteau)

Or is this triggered by the future suffix after all? → *semi-deponents*

(59) CG semi-deponents

Pres.: act.	Fut.: NAct	Meaning
<i>akoú-ō</i>	<i>akoú-so-mai</i>	'(will) hear'
<i>hamartán-ō</i>	<i>hamarté-so-mai</i>	'(will) miss, fail'
<i>baín-ō</i>	<i>bé-so-mai</i>	'(will) walk, go'
<i>aeíd-ō</i>	<i>aeí-so-mai</i>	'(will) sing'
<i>lambán-ō</i>	<i>lép-so-mai</i>	'(will) grasp'

References

- Abraham, Werner, and Larisa Leisiö, ed. 2006. *Passivization and Typology*. Amsterdam/Philadelphia: John Benjamins.
- Alexiadou, Artemis. 2013. Where is non-active morphology? In *Proceedings of the 20th International Conference on Head-Driven Phrase Structure Grammar*, ed. S. Müller, 244–62. CSLI publications.
- Alexiadou, Artemis, and Elena Anagnostopoulou. 2004. Voice morphology in the causative-inchoative alternation: evidence for a non-unified structural analysis of unaccusatives. In *The Unaccusativity Puzzle*, ed. A. Alexiadou, E. Anagnostopoulou, and M. Everaert, 114–36. Oxford University Press.

- Alexiadou, Artemis, Elena Anagnostopoulou, and Florian Schäfer. 2015. *External arguments in transitivity alternations: a layering approach*. Oxford University Press.
- Alexiadou, Artemis, and Edit Doron. 2012. The syntactic construction of two non-active voices: passive and middle. *Journal of Linguistics* 48:1–34.
- Alexiadou, Artemis, and Florian Schäfer, ed. 2013. *Non-Canonical Passives*. Amsterdam/Philadelphia: John Benjamins.
- Allan, Rutger J. 2003. *The Middle Voice in Ancient Greek*. Amsterdam: Gieben.
- Anagnostopoulou, Elena, and Christina Sevdali. 2014. Case alternations in Ancient Greek passives and the typology of case. Ms., University of Crete and University of Ulster. To appear in *Language*.
- Baker, Mark. 1988. *Incorporation: a Theory of Grammatical Function Changing*. Chicago: University of Chicago Press.
- Baker, Mark, Kyle Johnson, and Ian Roberts. 1989. Passive arguments raised. *Linguistic Inquiry* 20/2:219–51.
- Bosse, Solveig, Benjamin Bruening, and Masahiro Yamada. 2012. Affected experiencers. *Natural Language and Linguistic Theory* 30:1185–230.
- Bruening, Benjamin. 2013. By-phrases in passives and nominals. *Syntax* 16/1:1–41.
- Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: a Life in Language*, ed. M. Kenstowicz, 1–52. Cambridge, MA: MIT Press.
- Collins, Chris. 2005. A smuggling approach to the passive in English. *Syntax* 8/2:81–120.
- Comrie, Bernard. 1988. Passive and voice. In *Passive and voice*, ed. M. Shibatani, 9–24. Amsterdam/ Philadelphia: John Benjamins.
- Embick, David. 1997. Voice and the Interfaces of Syntax. Doctoral Dissertation, University of Pennsylvania.
- Embick, David. 1998. Voice systems and the syntax/morphology interface. In *Papers from the UPenn/MIT Roundtable on Argument Structure and Aspect*, ed. H. Harley, 41–72. MIT Working Papers in Linguistics 32.
- Embick, David. 2004. Unaccusative syntax and verbal alternations. In *The Unaccusativity Puzzle*, ed. A. Alexiadou, E. Anagnostopoulou, and M. Everaert, 137–58. Oxford University Press.
- Fox, Barbara, and Paul J. Hopper, ed. 1994. *Voice: Form and Function*. Amsterdam: John Benjamins.
- George, Coulter H. 2005. *Expressions of Agency in Ancient Greek*. Cambridge University Press.
- Gonda, Jan. 1979. *The Medium in the R̥gveda*. Leiden: Brill.
- Grestenberger, Laura. 2014. Feature Mismatch: Deponency in Indo-European. Doctoral Dissertation, Harvard University.
- Grestenberger, Laura. 2016. Reconstructing Proto-Indo-European deponents. *Indo-European Linguistics* 4:98–149. *Indo-European Linguistics*.
- Harley, Heidi. 2013. External arguments and the Mirror Principle: on the distinctness of Voice and v. *Lingua* 125/1:34–57.
- Jamison, Stephanie. 1979. Remarks on the expression of agency with the passive in Vedic. *KZ (= Zeitschrift für Vergleichende Sprachforschung)* 93:196–219.
- Jamison, Stephanie W., and Joel P. Brereton. 2014. *The R̥gveda: The Earliest Religious Poetry of India, vol. I-III*. Oxford University Press.
- Jankuhn, Harald. 1969. *Die passive Bedeutung medialer Formen untersucht an der Sprache Homers*. Göttingen: Vandenhoeck & Ruprecht.
- Jasanoff, Jay. 2004. “Stative” *-ē- revisited. *Die Sprache* 43 (2002-03 [2004]):127–170.
- Kallulli, Dalina. 2007. Rethinking the passive/ anticausative distinction. *Linguistic Inquiry* 38/4:770–80.
- Kallulli, Dalina. 2013. (Non-)canonical passives and reflexives: deponents and their like. In *Non-Canonical Passives*, ed. A. Alexiadou and F. Schäfer, 337–58. Amsterdam/Philadelphia: John Benjamins.
- Kaufmann, Ingrid. 2007. Middle voice. *Lingua* 117:1677–714.
- Kemmer, Suzanne. 1993. *The Middle Voice*. Amsterdam: John Benjamins.
- Kiparsky, Paul. 2013. Towards a null theory of the passive. *Lingua* 125:7–33.
- Klaiman, Miriam H. 1991. *Grammatical Voice*. Cambridge University Press.
- Kratzer, Angelika. 1996. Severing the external argument from its verb. In *Phrase Structure and the Lexicon*, ed. J. Rooryck and L. Zaring, 109–37. Dordrecht: Kluwer.
- Kulikov, Leonid. 2006. The Vedic medio-passive aorists, statives and their participles: reconsidering the paradigm. In *Themes and Tasks in Old and Middle Indo-Aryan Linguistics. Papers of the 12th World Sanskrit Conference*, volume 5, 45–3. Delhi: Motilal Banarsidass.
- Kulikov, Leonid. 2012. *The Vedic -ya-presents. Passives and Intransitivity in Old Indo-Aryan*. Amsterdam/New York: Rodopi.
- Kulikov, Leonid, and Nikolaos Lavidas. 2013. Reconstructing passive and voice in Proto-Indo-European. *Journal of Historical Linguistics* 3/1:98–121.
- Merchant, Jason. 2015. How much context is enough? Two cases of span-conditioned stem allomorphy. *Linguistic Inquiry* 46/2:273–303. *Linguistic Inquiry*.
- Merchant, Jason, and Natalia Pavlou. 2016. A surprising allomorphic span in Cypriot Greek. Ms., University of Chicago.
- Perlmutter, David, and Paul Postal. 1984. The 1-advancement exclusiveness law. In *Studies in Relational Grammar, vol. II*, ed. D. Perlmutter and C. G. Rosen, 81–125. Chicago: University of Chicago Press.
- Pylkkänen, Liina. 2008. *Introducing Arguments*. Cambridge, Mass.: MIT press.
- Rooryck, Johan, and Guido Vanden Wyngaerd. 2011. *Dissolving Binding Theory*. Oxford University Press.
- Schäfer, Florian. 2008. *The Syntax of (Anti-)Causatives: External Arguments in Change-of-State Contexts*. Amsterdam: Benjamins.
- Schwyzler, Eduard. 1943. *Zum persönlichen Agens beim Passiv, besonders im Griechischen*. Berlin: Abh. d. preuß. Akad. d. Wissensch., Jahrg. 1942.
- Shibatani, Masayoshi, ed. 1988. *Passive and Voice*. Amsterdam/Philadelphia: John Benjamins.
- Sportiche, Dominique. 1998. *Partitions and Atoms of Clause Structure: Subjects, Agreement, Case, and Clitics*. New York: Routledge.
- Svenonius, Peter. 2012. Spanning. Ms., CASTL, University of Tromsø.
- Zombolou, Katerina, and Artemis Alexiadou. 2014. The canonical function of the deponent verbs in Modern Greek. In *Morphology and Meaning. Selected Papers from the 15th International Morphology Meeting, Vienna, February 2012*, ed. F. Rainer, F. Gardani, H. C. Luschützky, and W. U. Dressler, 331–44.