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

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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 (Homerid: 8th century BCE, post-Homerid/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”)

<table>
<thead>
<tr>
<th></th>
<th>Active</th>
<th>Middle</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sg.</td>
<td>Dual</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>-mi</td>
<td>-vas</td>
</tr>
<tr>
<td>2</td>
<td>-si</td>
<td>-thas</td>
</tr>
<tr>
<td>3</td>
<td>-ti</td>
<td>-tas</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
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<td>Dual</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>-n, -a</td>
<td>-(a)mên</td>
</tr>
<tr>
<td>2</td>
<td>-s, -as</td>
<td>-(a)ton</td>
</tr>
<tr>
<td>3</td>
<td>-e(n)</td>
<td>-(a)tên</td>
</tr>
</tbody>
</table>

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**

<table>
<thead>
<tr>
<th>Function</th>
<th>Active</th>
<th>Non-active</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anti-causative</td>
<td>sikon-o ‘raise’</td>
<td>sikon-ome ‘rise’</td>
</tr>
<tr>
<td>Reflexive</td>
<td>plen-o ‘wash’</td>
<td>plen-one ‘wash myself’</td>
</tr>
<tr>
<td>Self-benefactive</td>
<td>promithev-o ‘supply’</td>
<td>promithev-ome ‘supply myself’</td>
</tr>
<tr>
<td>Passive</td>
<td>skoton-o ‘kill’</td>
<td>skoton-ome ‘am killed’</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>a. present act.</th>
<th>b. present mid./non-act.</th>
<th>c. present pass.</th>
</tr>
</thead>
<tbody>
<tr>
<td>bhár-a-ti</td>
<td>bhár-a-te</td>
<td>bhri-yá-te</td>
</tr>
<tr>
<td>carry-V-3SG.PRES.ACT</td>
<td>“carries (for) oneself/to one’s own benefit”</td>
<td>“is being carried”</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>a. Inflectional (aorist)</th>
<th>b. Derivational (present)</th>
</tr>
</thead>
<tbody>
<tr>
<td>á-sto-s-ta</td>
<td>bhri-yá-te</td>
</tr>
<tr>
<td>A-praise-AOR-3SG.PAST.NACT</td>
<td>carry-IPFV.PASS-3SG.PRES.NACT</td>
</tr>
<tr>
<td>“he/she was/got praised”</td>
<td>he/she is/gets carried</td>
</tr>
</tbody>
</table>

(8) Greek

<table>
<thead>
<tr>
<th>a. aorist act.</th>
<th>b. aorist mid./non-act.</th>
<th>c. aorist pass.</th>
</tr>
</thead>
<tbody>
<tr>
<td>é-lou-s-a</td>
<td>e-lou-sá-men</td>
<td>e-louí-thé-n</td>
</tr>
<tr>
<td>A-wash-PFV-1SG.PAST.ACT</td>
<td>A-wash-PFV-1SG.PAST.NACT</td>
<td>A-wash-PASS.PFV-1SG.PAST.ACT</td>
</tr>
<tr>
<td>“I washed (sth.)”</td>
<td>“I washed myself”</td>
<td>“I was washed”</td>
</tr>
</tbody>
</table>

(9) Two types of passive, Greek

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

→ 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

<table>
<thead>
<tr>
<th>Properties</th>
<th>inflectional</th>
<th>derivational</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acc.obj. → nom.subj.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Demoted agent → adjunct NP, instr. case</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Eventive</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

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 stava-nte manuṣāya surāyaḥ*
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.”

b. Cp. active in RV 8.3.8c-d:

  *adyā tám asya mahimānam āyavo ānu śtuv-anti*
today that.ACC his greatness.ACC Āyu.NOM.PL PRVB praise-3PL.PRES.ACT

  “Today the Āyus praise his greatness (...).”

---

1 All 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:

prā pūrāva stav-a-nta enā yaṅṇāḥ

PRVB Pūrũ.NOM.PL praise-V-3PL.PRES.NACT this.INSTR sacrifice.INSTR.PL

“The Pūrūs start up the praise with this (hymn) along with sacrifices.”

(13) a. RV 7.7.3b:

prī-nī-te agnir īlitō nā hōtā

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:

sāmičṇāḥ suḍānaṇaḥ prī-n-anti tām

united.NOM.PL good.drops.NOM.PL please-V-3PL.PRES.ACT him

“At, 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: \( \sqrt{\text{prī}} \) ‘be pleased, pleasant’ \( \rightarrow \) prī-nā/-i- ‘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:

eva agnir gōtamebhir (...) a-sto-ṣ-ṭa jātāvedaḥ (...)

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:

saṭṭhāḥ sotṝbhīḥ pū-ya-te vīśā

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:

tāṁ te sotṝro 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:

samsthē yād agna īyase rayṇām devō
gathering.LOC when Agni.VOC speed.2SG.PRES.NACT riches.GEN.PL god.NOM

mārtair vāsubhīr idh-ya-mān-āh

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:

agnīṁ i<n>ṛdh-an-o mānasā dhīyam saceta

Agni.ACC kindle<V>-PTCP.NACT-NOM mind.INSTR thought.ACC follow.3SG.OPT.NACT
márt. yah
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

<table>
<thead>
<tr>
<th>Properties</th>
<th>inflectional</th>
<th>derivational</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acc.obj.2 → nom.subj.</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Demoted agent → prep. + gen. case</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>Eventive</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

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. ἐκθ-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
- 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.:

```
lhôs hup' Akhillês Xânthou bathudinécentos plê-to rhóos
```

thus from Akhillês GEN Xanthos GEN deep-eddying GEN fill-3SG.PAST.NACT stream NOM

```
kedádôn epimix hîpîôn te kî andrôn
```

sounding NOM mixedly ADV horse GEN PL both and man GEN PL.

“Thus the sounding waters of the deep-eddying 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 PTCL soì árista peipoê-tai katà oîkon prôs
```

`you best NOM love-3PL.PAST.NACT towards house ACC from/by

```
Trôôn 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:

```
hô (...) é-blê-t' en prôtoisin emês apô kheîrôs ákonti
```

he 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 (-thê-) + demoted agent already in Homer:

(22) a. *Iliad* 2.668–9:

```
trikhthà dê oîkê-the-n kataphuladón, ëde
```

three.parts ADV PTCL settle-3PL.PAST.ACT by tribe ADV and

```
phîlê-the-n ek Diôs (...)
```

love-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:

```
hôn peri kéri phil-ei Zeûs ...
```

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:

```
ei tî hoi kekharisménon eks autoû e-dôré-thê ...
```

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, by him ...” (i = Apollo, j = Croesus of Lydia)

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

```
tôi Dareîos Mutilênên e-dôrê-sa-to
```

whom DAT Darius NOM Mytilene ACC A-give-AOR-3SG.PAST.NACT

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

dôrêmaı ‘give’ is a deponent, so the non-active forms are always syntactically active.
(24) Passive participle (ex. from George 2005): Od. 9.66:

who. NOM.PL die. 3PL.AOR.ACT on plain. DAT Ciconian. GEN.PL from 
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:

“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)


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) vP, different thematic properties than active voice (Ancient & Modern Greek, Sanskrit)

(26) Alexiadou et al. 2015: 124

a. PassiveP b. Voice$_{MIDDLE}$

\[ \text{Passive} \quad \text{VoiceP} \]
\[ \text{Voice} \quad \text{vP} \]
\[ \text{\sqrt{Root}} \quad v \]

• PassiveP = $\pi$, Voice$_{MIDDLE}$ = $\mu$ (Alexiadou and Doron 2012)

• English: only $\pi$, Modern Greek: only $\mu$, Hebrew: $\mu$ and $\pi$

• Do Ancient Greek & Sanskrit also have both?
4.1 Against a valency-reduction approach to the middle

- $\mu$ occurs in a suspiciously large number of syntactic contexts, compared to $\pi$

- 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

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

    (28) Modern Albanian (from Kallulli 2007):

    "The window cracked from the pressure / was cracked by John / the book"

    (29) Vedic, RV 7.8.1:

    "With reverence, the compatriot king (= the fire) is igniting / is kindled"

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

    "The Eiffel tower was not visible from there / was not seen from there"

    (31) Vedic: RV 6.10.4d

    "The pure one is visible by his glow / is seen through his glow"

    - Ambiguity between reflexive and passive:

    (32) Modern Greek *plenotike* ‘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.
(33) Vedic:
   a. Benefactive: RV 4.20.9d:
      (índraḥ) ... dadhā-ti drāvinām jaritré
      (Indra) place-3SG.NONPAST.ACT wealth.ACC singer.DAT
      “(Indra) installs/arranges wealth for the singer”
   b. Self-benefactive: RV 1.3.11c:
      yajñām dadh-e sārasvatī
sacrifice.ACC place.PERF-3SG.PERF.MID Sarasvati.NOM
      “Sarasvati has arranged/taken the sacrifice for herself”

Cp. (self-)benefactive constructions in German (same for French):

(34) German
   a. Benefactive:
      Die Livia, hat mir, Firefly runtergeladen
      The Livia has me.DAT Firefly downloaded
      “Livia downloaded Firefly for me”
   b. Self-benefactive:
      Die Livia, hat sich, Firefly runtergeladen
      The Livia has REFL Firefly downloaded
      “Livia downloaded Firefly for herself”

• Valency reduction approaches cannot explain the large class of media tantum, since these are in no obvious way “detransitivized” from something else:

(35) States
   b. Greek: keĩmai ‘lie’, aiskhúnomai ‘am ashamed’
   c. Modern Greek: ime ‘be’, dikeume ‘have a right to’, diakime ‘be disposed toward’

(36) Motion
   b. Greek: pétomai ‘fly’, érkhomai ‘come’
   c. Modern Greek: erhome ‘come’, afiknume ‘arrive’

(37) Psych verbs/experiencer verbs/verbs of cognition
   a. Vedic: mányate ‘thinks’, bhándate ‘is happy’, módate ‘enjoys’
   b. Greek: mainomai ‘rage’, húzomai ‘be in awe of’, sébomai ‘fear’
   c. Modern Greek: fovame ‘fear’, gevome ‘taste’, esthanome ‘feel’

4.2 Non-active in a Greek-type voice system

In “Greek-type languages”, “a Voice head is spelled out with non-active morphology [...] if it lacks a specifier.” (Alexiadou et al. 2015 based on Embick 1998, 2004).

• VoiceMIDDLE = Voice without an external argument

(38) Spell-Out condition on non-active morphology (Alexiadou et al. 2015: 101–2)
   Voice → Voice[NonAct]/_ No DP specifier

   "For the morphological realization of Voice, the non-projection of the external argument as a specifier is a necessary and sufficient condition to yield a non-active form, independently of whether Voice has semantic impact or not.” (Alexiadou et al. 2015: 101–2) → “expletive Voice”
• (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:
  c. Modern Greek: asprizo ‘whiten’ (tr./itr.), platenō ‘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

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

<table>
<thead>
<tr>
<th></th>
<th>+ext.arg.</th>
<th>-ext.arg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voice</td>
<td>ACT</td>
<td>NONACT</td>
</tr>
<tr>
<td>Ø</td>
<td>n/a</td>
<td>ACT</td>
</tr>
</tbody>
</table>

Sample derivation: Vedic active, transitive verb:

(41) a. X Y bhār-a-ti
carry-V-3SG.PRES.ACT
"X carries Y, X is carrying Y"
b. TP+AGR
   T+AGR
   [-PAST]
   [PERS:3]
   [NUM:Sg]
   -di
   AspP
   VoiceP
   Voice
   Voice
   vP
   v
   -a-
   Theme
   Agent
   Voice
   V

• 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 bhār-a-te
carry-V-3SG.PRES.NACT
"X carries Y for herself, X is carrying Y for herself"
b. TP+AGR

T+AGR  
[[-PAST]]  
[[-FERS:3]]  
[[-NUM:Sg]]  
|-te  

AspP  
[[-IPFV]]  

VoiceP  
[[-ext.arg]]  

ApplP\textsubscript{BEN}  

BENEFACTIVE  

Appl\textsubscript{BEN}  

Appl\textsubscript{BEN}  

\(\tilde{\text{P}}\)  

\(\tilde{\text{P}}\)  

\(\text{bhar}\)  

THEME

- The beneficient DP is introduced by the projection Appl\textsubscript{P\textsubscript{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:
   a. Anticausatives ✓ (but not all anticausatives are non-active, Alexiadou and Anagnostopoulou 2004, Schäfer 2008, Alexiadou et al. 2015)
   b. Reflexives/reciprocals ✓ (some version of the unaccusative analysis of reflexives required)
   c. Self-benefactives ✓ (under an analysis where the beneficient is introduced below VoiceP, as in Pylkkänen 2008, Bosse et al. 2012, and then moves to subject, cp. (42))
   d. Dispositional/generic constructions ✓ (possibly a function of the passive, “generic passive”)
   e. Mediopassives/passives ✓

(44) Non-oppositional/ Media tantum
   a. Experiencer/psych verbs ✓
   b. Statives ✓
   c. Verbs of motion ✓ (? some are unergative)
   d. Deadjectival and denominal verbs ✓ (? some are unergative)
   e. 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: \(\mu\ & \pi\) 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

<table>
<thead>
<tr>
<th>a. Vedic</th>
<th>b. Greek</th>
</tr>
</thead>
<tbody>
<tr>
<td>bhri-ṣya-te</td>
<td>e-blé-thē-n</td>
</tr>
<tr>
<td>carry-V.PASS-3SG.PRES.NACT</td>
<td>A-hit-V.PASS-1SG.PAST.ACT</td>
</tr>
<tr>
<td>“is (being) carried”</td>
<td>“was hit”</td>
</tr>
</tbody>
</table>

- 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 -ṣya- 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 transitivizing morphology

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

<table>
<thead>
<tr>
<th>a. present act.</th>
<th>b. present mid.</th>
<th>pres. pass.</th>
</tr>
</thead>
<tbody>
<tr>
<td>yuṅa&lt;k-ti</td>
<td>yuṅ&lt;n&gt;k-tē</td>
<td>yuṅj-ṣya-te</td>
</tr>
<tr>
<td>yoke&lt;v&gt;-PRES.3SG.ACT</td>
<td>yoke&lt;v&gt;-PRES.3SG.NACT</td>
<td>yoke-PASS-PRES.3SG.NACT</td>
</tr>
<tr>
<td>‘yokes’</td>
<td>‘yokes for him/herself’</td>
<td>‘is being yoked’</td>
</tr>
<tr>
<td>pṛ-nā-ti</td>
<td>pṛ-ṇ-tē</td>
<td>pūr-ṣya-te</td>
</tr>
<tr>
<td>fill-v-3SG.PRES.ACT</td>
<td>fill-v-3SG.PRES.NACT</td>
<td>fill-v.PASS-3SG.PRES.NACT</td>
</tr>
<tr>
<td>‘fills (sth.)’</td>
<td>‘fills oneself’</td>
<td>‘is filled’</td>
</tr>
</tbody>
</table>

(NB *yuṅj-ṣya-te, *pṛṇ(t)-ṣya-te would be phonotactially ok.)

5.1.1 Diachrony of -ṣya-

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

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


b. non-active: pād-ya-te ‘falls’, ḍūdh-ya-te ‘is awake’, pūr-ya-te ‘fills, swells’

Minimal pairs are occasionally found:

(48) Intransitive vs. passive -ya-

<table>
<thead>
<tr>
<th>a. intransitive -ya-</th>
<th>b. passive -ya-</th>
</tr>
</thead>
<tbody>
<tr>
<td>ksī-ya-te</td>
<td>ksī-ṣya-te</td>
</tr>
<tr>
<td>perish-v-3SG.PRES.NACT</td>
<td>perish-v.PASS-3SG.PRES.NACT</td>
</tr>
<tr>
<td>‘perishes’</td>
<td>‘is destroyed’</td>
</tr>
</tbody>
</table>
Proposal: Diachronic reanalysis $v_{\text{BECOME}}$-$ya$ $\rightarrow v_{\text{pass}}$-$ya$-

- Ved. -$ya$- $<$ Proto-Indo-European (PIE) *-$je$/$o-$, function: stative, anticausative, often denominal/deadjectival
- PIE *-$je$/$o-$ was compatible with act. & non-act morphology

(49) a. *$spék$-$je$- ‘see, watch for’ $>$ Ved. act. $pášyati$ ‘sees’, Lat. act. $speciō$ ‘I see’, vs. Gk. non-act. $sképtomai$ ‘look around’
   b. *$mj$-$je$- ‘die’ $>$ Ved. non-act. $mriyáte$ ‘dies’, Lat. non-act. $morior$ ‘die’
   d. Greek denominal “contract verbs”, e.g., act. $nikáō$ ‘conquer’ $<$ *$nìkā$-$je$/$o-$, cp. $nìkē$ ‘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 $v_{\text{PASS}}$ selects roots
- Vedic $v_{\text{PASS}}$ is selected by Voice

Sample derivation:

(50) Vedic present passive:
   a. $Y$ ($X_{\text{INSTR}}$) $bhri$-$ya$-$te$  
      carry-$V$.$\text{PASS}$-3SG.$\text{PRES}$.NACT
      ‘$Y$ is (being) carried (by $X$)’
   b. $\text{TP}$+$\text{AGR}$
      $T$
      $[\text{NONPAST}]$
      $[\text{Pers:3}]$
      $[\text{Num:Sg}]$
      $[\text{IPFV}]$
      $[-le]$
      $\text{AspP}$
      $\text{Asp}$
      $V_{\text{voiceP}}$
      $[\text{Voice}]$
      $[-\text{ext.arg}]$
      $v_{\text{pass}}$
      $v_{\text{PAss}}$
      $[-ya]$  
      $\sqrt{bhar}$
      $\text{Theme}$

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

$\rightarrow$ but not Greek.

(51) Inflectional passive (cp. (42))
   a. $Y$ ($X_{\text{INSTR}}$) $stav$-$a$-$nte$  
      praise-$V$-3PL.$\text{PRES}$.$\text{NACT}$
      “$Y$ are praised (by $X$)”
5.2 Greek: \textsc{pass} = \textit{v+Asp}

Proposal: Greek passive -\textit{thē}- realizes \textit{v+Asp} (cp. Merchant 2015 on Modern Greek)

- Unlike the Vedic derivational passive suffix, -\textit{thē}- is never selected by Voice

5.2.1 Diachrony of -\textit{thē}-

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

\begin{enumerate}
\item Non-passive \textit{thē}-aorists:
  \begin{enumerate}
  \item \textit{e-kríph-thē-n}  
    A-hide-AOR-1SG.PAST.ACT  
    ‘I hid (myself)’
  \item \textit{e-phob-\textit{thē}-n}  
    A-flee-AOR-1SG.PAST.ACT  
    ‘I fled’
  \item \textit{hēs-thē-n}  
    A-sit-AOR-1SG.PAST.ACT  
    ‘I sat’
  \end{enumerate}
\item -\textit{thē}- is in complementary distribution with other verbal stem-forming morphology (= \textit{v}):
  \begin{enumerate}
  \item \textit{e-di\-\textit{thē}-n}  
    PAST-sink-PASS.PFV-1SG.ACT  
    ‘I was sunk’
  \item \textit{dū-n-\-ō}  
    sink-PRES-1SG.ACT  
    ‘I sink (sth.)’
  \item \textit{é-di\-s-a}  
    PAST-sink-AOR-1SG.ACT  
    ‘I sank (sth.)’
  \end{enumerate}
\end{enumerate}

- The origin of “stative” -\textit{thē}- and -\textit{ē}- is contested (no exact equivalents in other IE languages, though suffix *-\textit{ē}- has been suspected to occur in other inchoative & stative formations)


- No evidence that these denominial forms were ever alternating → they never had a Voice head
(54) Greek aorist passive:
   a. Y e-loú-th¯e-Ø (hupó XGEN)
       A-wash-V.PASS-3SG.PAST.NACT
       “Y was washed (by X)”
   b. T+AGR
      T
      [PAST] [PERS:3] [NUM:SG] [ACT]
      Asp v -th¯e- v lou THEME

   • The Greek th¯e-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 -th¯e- 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 (-th¯e-), but obligatorily takes non-active morphology (in Attic-Ionic; the Doric future passive takes the expected active endings).

(56) Classical Greek passives

<table>
<thead>
<tr>
<th>stem</th>
<th>passive</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. aor.</td>
<td>e-loú-th¯e-n</td>
<td>‘I was washed’</td>
</tr>
<tr>
<td></td>
<td>PAST-wash-PASS.PFV-1SG.PAST.ACT</td>
<td></td>
</tr>
<tr>
<td>b. aor.subj.</td>
<td>lou-thô</td>
<td>‘I may have been washed’</td>
</tr>
<tr>
<td></td>
<td>wash-PASS.PFV.SUBJ.1SG.NPAST.ACT</td>
<td></td>
</tr>
<tr>
<td>c. aor.opt.</td>
<td>lou-theíe-n</td>
<td>‘I might have been washed’</td>
</tr>
<tr>
<td></td>
<td>wash-PASS.PFV.OPT-1SG.PAST.ACT</td>
<td></td>
</tr>
</tbody>
</table>
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.

\[
\begin{align*}
a. & \quad T+AGR \\
& \quad \underline{\text{Mod}} \\
& \quad \underline{\text{Asp}} \\
& \quad v \quad \underline{\text{Asp}}[\text{PFV}] \\
& \quad \sqrt{\text{lou}} \quad \underline{\text{T:}-\text{PAST}} \\
& \quad \underline{\text{PERS:1}} \\
\end{align*}
\]

\[
\begin{align*}
b. & \quad T+AGR \\
& \quad \underline{\text{Mod}} \\
& \quad \underline{\text{Asp}} \\
& \quad v \quad \underline{\text{Asp}}[\text{FUT}] \\
& \quad \sqrt{\text{lou}} \quad \underline{\text{T:}-\text{PAST}} \\
& \quad \underline{\text{PERS:1}} \\
\end{align*}
\]

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

a. \( \sqrt{\text{lou}} \sim v.\text{Asp}.\text{Mod}[\text{thē}] \sim \text{Agr}[-\text{o}] \) \quad (v.\text{Asp}+\text{Mod}: portmanteau)

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

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

(59) CG semi-deponents

<table>
<thead>
<tr>
<th>Pres.: act.</th>
<th>Fut.: NAct</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>akouí-ð</td>
<td>akouí-so-mai</td>
<td>‘(will) hear’</td>
</tr>
<tr>
<td>hamartán-ð</td>
<td>hamartá-so-mai</td>
<td>‘(will) miss, fail’</td>
</tr>
<tr>
<td>bain-ð</td>
<td>bê-so-mai</td>
<td>‘(will) walk, go’</td>
</tr>
<tr>
<td>aíd-ð</td>
<td>aë-so-mai</td>
<td>‘(will) sing’</td>
</tr>
<tr>
<td>lambán-ð</td>
<td>lép-so-mai</td>
<td>‘(will) grasp’</td>
</tr>
</tbody>
</table>

References


Allan, Rutger J. *The Middle Voice in Ancient Greek*. Amsterdam: Gieben.


