Directionality of reanalysis:
ANTICAUSATIVE > PASSIVE, PASSIVE ≯ ANTICAUSATIVE

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DiGS 25

Mannheim, June 25–28, 2024

Directionality

(Relatively) uncontroversial: Unirectionality of reanalysis in syntactic "cycles":

- ▶ lexical verb > AUX > clitic > affix
- ▶ DET > definite article > definite AGR

Do argument & event structure changes also follow directional "grammaticalization paths"? Should we expect them to?

- ▶ Van Gelderen (2018, 2019): argument structure changes follow the same directionality principles as syntactic cycles
  - ▶ resultative > anterior > perfective/past
  - ▶ Obj.exp. verb > Subj.exp. verb > Subj.ag. verb
- ▶ but additional studies that corroborate this are lacking
- ▶ interaction with changes in morphosyntactic marking?

Today's goals

- ▶ I argue that (uni)directionality also holds for changes in the event structure/voice domain
- ▶ Specifically, for the ANTICAUS/INCHOATIVE > PASSIVE reanalysis
- ▶ While anticausative/inchoative morphology can become passive morphology (or rather, syncretic anticausative-passive morphology), the reverse is not true: PASSIVE $\not>$ ANTICAUSATIVE[1]
- ▶ Concrete case: Indo-Iranian anticausatives and passives in *-*ya*-, which have been argued to show evidence for counterdirectionality
  - ▶ both ANTICAUS > PASS and PASS > ANTICAUS (Kulikov 2011, 2012; Hock 2019, 2022)
- ▶ I argue that these forms in fact show only evidence for ANTICAUS > PASS once voice syncretism is taken into account and the relevant diagnostics for each context are adequately identified.
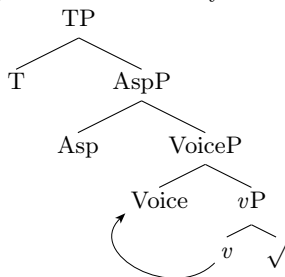
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[1]Cf. Honeybone (2016): θ > f but f $\not>$ θ.

Background

The Voice cycle

▶ Diachronic generalization w.r.t. the rise of new voice-marking strategies: v-related morphology/material base-generated in the vP (light verbs, verbalizers, object reflexives) is reanalyzed as belonging to the VoiceP (Halm 2020, Alexiadou 2021, Grestenberger & Kamil 2023)

  ▶ "Upwards Reanalysis", Roberts & Roussou 2003; Late Merge Principle, van Gelderen 2011; MMM, Biberauer 2017, 2019, etc.

(1)   Upwards Reanalysis and the Voice cycle

```
                    TP
                   /  \
                  T   AspP
                      /  \
                   Asp   VoiceP
                         /    \
                     Voice    vP
                       ↑      /  \
                       ⤶___  v    √
```

Voice syncretism

(2)   Voice Syncretisms: Situations in which distinct syntactic alternations (e.g. passive and reflexive) are realized with identical morphology (Embick 1998)

▶ Voice syncretism is widespread among the world's languages
  ▶ Haspelmath 1990; Kemmer 1993; Alexiadou & Doron 2012; Zúñiga & Kittilä 2019; Bahrt 2021; Inglese 2021; Oikonomou & Alexiadou 2022 ...
▶ **Passive morphology is almost always syncretic**: only 2 out of the 222 languages in the sample of Bahrt (2021) have a non-syncretic passive

(3)   Passive syncretism (Haspelmath 1990; cit. after Bahrt 2021: 57)

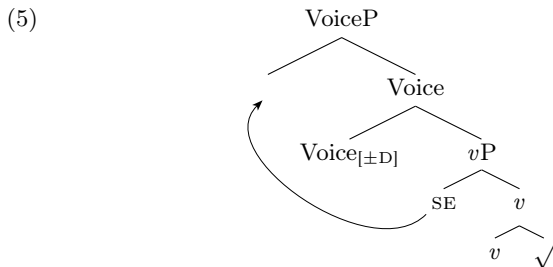|	Marking	REFL	RECP	ANTC	PASS	ANTP
Udmurt	-śk	+	+	+	+	+
Greek	*	+	+	+	+	
'O'odham	*	+	+	+	+	
Tigre	tə-	+	(+)	+	+	
Motu	he-	(+)	(+)	+	+	
Kanuri	tə-, -tə	+		+	+	
Latin	*	+		+	+	
Slave	d-	+			+	
Rukai	ki-	+			+	
Worrorra	-ieŋu	+	+		+	
Tuareg	mə-		+		+	
Danish	-s			+	+	
Uyghur	-il			+	+	
Nimboran	-da			+	+	

Voice syncretism: diachrony

Example: Reanalysis of Lat. $s\bar{e}$ > Romance se from reflexive pronoun/theme > "argument expletive" (Schäfer 2017)

(4) $[_{vP} \ s\bar{e}_{[D,arg]}] \rightarrow [_{Voice_{[expl]}P} \ se_{[D]}] \rightarrow [_{Voice_{agent}P} \ se_{[D]}]$
          reflexive   anticaus   "SE-passive"

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              reflexive   anticaus   "SE-passive"

(5)   VoiceP

                                            Voice

                         Voice$_{[\pm D]}$ vP

                                      SE v

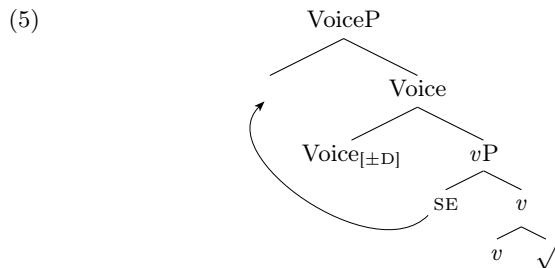 v $\sqrt{}$

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(5)

```
                    VoiceP
                     /\
                       Voice
                        /\
              Voice_[±D]    vP
                          /\
                      SE      v
                             /\
                           v    √
```

▶ Voice syncretism arises diachronically when the innovative construction keeps the older function

   ▶ E.g., Engl. *get* 'obtain' > CAUSE > BECOME > PASS (e.g., Fleisher 2006).

(6)   a.   Sally got angry/confused
      b.   Sally got hit (by a car/by a stranger)

Interim summary

- Voice morphology $<$ v-morphology ("Voice cycle")
- The vast majority of the world's languages uses *syncretic morphology* to mark voice/argument structure alternations
- So ANTICAUS $>$ PASS is actually ANTICAUS $>$ syncretic Voice
- **But** depending on the textual history we should still be able to determine the direction of the change - which function(s) was/were there first, which came later?
    - Cf. Engl. *get*-passive

ANTICAUS > PASS in Indo-Iranian

The Indo-Iranian language family
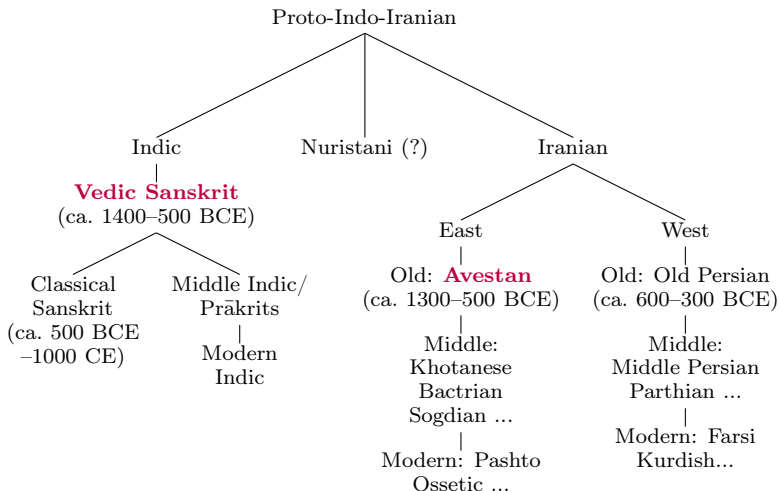
The Indo-Iranian verbal system

▶ PERSON: 1, 2, 3. (infl. endings)

▶ NUMBER: Sg., Dual, Pl. (infl. endings)

▶ VOICE: active/nonactive ("middle"; infl. endings) + other strategies (discussed below)

▶ ASP: imperfective ("present stem"), perfective ("aorist stem"), perfect; marked on the stem via affixation and/or ablaut.

▶ TENSE: past/nonpast (past/present), marked on the infl. endings (+ past tense prefix, "augment" *a-*)

▶ MOD: indicative, future, subjunctive, optative, imperative: suffixes (except ipv.: endings)

▶ "secondary" stems (Aktionsart?): causative, desiderative, intensive, denominal

= mostly synthetic, "fusional" verb forms.

The active/nonactive endings

(7)   Vedic: active/nonactive ("middle") infl. endings

	Active			Nonactive		
	Sg.	Dual	Pl.	Sg.	Dual	Pl.
				Nonpast/"present"		
1	*-mi*	*-vas*	*-mas(i)*	*-e*	*-vahe*	*-mahe*
2	*-si*	*-thas*	*-tha(na)*	*-se*	*-ethe, -áthe*	*-dhve*
3	**-ti**	*-tas*	*-nti*	**-te** /-ta-i/	*-ete, -áte*	*-nte*
				Past		
	Sg.	Dual	Pl.	Sg.	Dual	Pl.
1	*-(a)m*	*-va*	*-ma*	*-i*	*-vahi*	*-mahi*
2	*-s*	*-tam*	*-ta(na)*	*-thās*	*-ethām, -áthām*	*-dhvam*
3	**-t**	*-tām*	*-(a)n; -ur*	**-ta**	*-etām, -átām*	*-ata/-nta*

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2	*-si*	*-thas*	*-tha(na)*	*-se*	*-ethe*, *-ā́the*	*-dhve*
3	**-ti**	*-tas*	*-nti*	**-te** /-ta-i/	*-ete*, *-ā́te*	*-nte*
	Past					
	Sg.	Dual	Pl.	Sg.	Dual	Pl.
1	*-(a)m*	*-va*	*-ma*	*-i*	*-vahi*	*-mahi*
2	*-s*	*-tam*	*-ta(na)*	*-thā́s*	*-ethām*, *-ā́thām*	*-dhvam*
3	**-t**	*-tām*	*-(a)n; -ur*	**-ta**	*-etām*, *-ā́tām*	*-ata/-nta*

▶ The nonactive endings alone can be used to passivize (as in, e.g., Latin, Modern Greek, Albanian, etc.)

▶ But there are also other passivization strategies, including forming a **passive stem** with a root-adjacent suffix *-yá-

IIr. *-yá-

Indo-Iranian *-ya- (Vedic/Ved. -ya-, "class IV"; Avestan/Av. -iia-) is found in four different contexts (relevant here):

1) Root-derived non-alternating middle verbs (= *media tantum*)

Vedic	Avestan	
man-**yá**-te	ma^{i}n-**iie**-tĕ̄	'thinks'
mri-**yá**-te	mir-**iie**-te	'dies'
búdh-**ya**-te	bu̅^{i}δ-**iie**-te	'awakes'
vac-**yá**-te	vaś-**iie**-tē̄	'jumps (out)'
kṣí-**ya**-te	-j-**iia**-	'perishes, disappears'
jā́-**ya**-te	za-**iia**-	'is born'
pád-**ya**-te	pa^{i}δ-**iia**-	'falls, steps down'

► Root (mostly) takes **zero grade**, R(Ø)
  ► basically, the root doesn't contain /a/. Don't be disturbed by the roots in 1) that obviously contain /a/.

► The accent is sometimes on the root, sometimes on the suffix — the latter might reflect the older situation

► This class has solid correspondences between Vedic and Avestan, as well as cognates in other IE languages → inherited

IIr. *-yá-

2) Root-derived non-alternating active verbs (= *activa tantum*)

Vedic		Avestan	
*náś-**ya**-ti*	'disappear'	*nas-**iie**-ⁱti*	'disappear'
*pū́-**ya**-ti*	'become rotten'	*pu-**iie**-ti*	'become rotten'
*ríś-**ya**-ti*	'become damaged'	*ⁱriš-**iie**-ⁱti*	'become damaged'
*tṛ́p-**ya**-ti*	'be(come) satiated'	(*trəf-**iie**-ⁱti*	'steal')
*dṛ́h-**ya**-ti*	'become solid'	*friθ-**iie**-ⁱti*	'become rotten'
*kṣúdh-**ya**-ti*	'become hungry'	-ⁱ*riθ-**iie**-ⁱti*	'die'
*śúṣ-**ya**-ti*	'become dry'		
*púṣ-**ya**-ti*	'bloom'		

▶ Root consistently takes **zero grade**, R(∅)
▶ Accent always on the root
▶ Some Vedic–Avestan correspondences, but more productive in Indic (than Ir.)
  ▶ A few putative cognates outside Indo-Iranian (type reconstructed for PIE in LIV²), but on the whole less convincing than for 1).
▶ Semantically clear subcategory: intransitive (unacc.?) change-of-state/inchoative verbs ('become X')

IIr. *-yá-

3) Syncretic anticausative/passive verbs

a. Vedic			
*múc-**ya**-te*	'gets free'	*muc-**yá**-te*	'is released'
*pác-**ya**-te*	'becomes ripe'	*pac-**yá**-te*	'is cooked'
*chíd-**ya**-te*	'tears' (itr.)	*chid-**yá**-te*	'is cut off'
*kṣī́-**ya**-te*	'diminish, perish'	*kṣī-**yá**-te*	'is vanquished'
*jī́-**ya**-te*	'suffers loss'	*jī-**yá**-te*	'is defeated
*pū́r-**ya**-te*	'become full'	*pūr-**yá**-te*	'be filled (by)'
b. Avestan			
*pir-**iie**-te*	'gets even'	*pir-**iie**-te*	'is paid'

▶ the anticausative reading tends to have root accent, passive reading suffix accent (thus, e.g., Gonda 1951) — but Kulikov (2012) argues that accentuation varies according to manuscript tradition/school rather than meaning.

▶ This ambiguity is only found with causative alternation/achievement verbs

▶ Less well documented in Avestan, but that may be due to the nature of the attestation

▶ Indo-Iranian; anticaus. readings of 3) have cognates outsides Indo-Iranian

IIr. *-yá-

4) Passive verbs

Vedic		Avestan	
*kri-**yá**-te*	'is made'	*kir-**iia**-*	'be made'
*bhri-**yá**-te*	'is brought, carried'	*ba^ir-**iia**-*	'be carried'
*han-**yá**-te*	'is killed'	*jan-**iia**-*	'be killed'
*stri-**yá**-te*	'is dispersed'	*str-**iia**-*	'be dispersed'
*śrū-**yá**-te*	'is heard'	*sru-**iia**-*	'be heard'
*kr̥t-**yá**-te*	'is cut'	*kərəθ-**iia**-*	'be cut'

▶ R(∅), accent canonically on the suffix

▶ Obligatory middle endings in Vedic; Avestan *-iia-* varies between active and nonactive endings, (8).

▶ Indo-Iranian correspondences, but not in other IE branches

Passive -*iia*- in Avestan

(8)   Avestan -*iia*-passives (Kellens 1984: 125–30)

a. active endings		b. nonactive endings	
kir-***iia***- 'be made'	√*kar* 'make'	*ba*ⁱ*r*-***iia***- 'be carried'	√*bar* 'carry"
kərəθ-***iia***- 'be cut'	√*kart* 'cut'	*sru*-***iia***- 'be heard'	√*sru* 'hear'
jan-***iia***- 'be killed'	√*jan* 'kill'	*x*^v*a*ⁱ*r*-***iia***- 'be eaten'	√*x*^v*ar* 'eat'

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*kir-**iia**-* 'be made'	√*kar* 'make'	*ba^{i}r-**iia**-* 'be carried'	√*bar* 'carry"
*kərəθ-**iia**-* 'be cut'	√*kart* 'cut'	*sru-**iia**-* 'be heard'	√*sru* 'hear'
*jan-**iia**-* 'be killed'	√*jan* 'kill'	*x^{v}a^{i}r-**iia**-* 'be eaten'	√*x^{v}ar* 'eat'

▶ Some passive stems are attested with both active and nonactive endings, e.g., the ones from √*kar* 'make', √*star* 'throw down', √*zan* 'beget' ...

▶ It's not always clear which one is older and which is younger

▶ Of the ca. 25 passive stems attested in Avestan, only two are attested already in Old Avestan, and both take the middle endings.

Passive *-yá- & transitive stems

▶ Passive -yá- is root-derived, not stem-derived
▶ In complementary distribution with imperfective verbal stem-forming
   morphology (as opposed to: derived from the transitive stem)

(9)   Vedic -yá-passive (ipfv/present stem only)

a. active	bhár-<u>a</u>-**ti** carry-V/IPFV-3SG.**ACT** 'carries sth.'	yu<<u>ná</u>>k-**ti** yoke<V/IPFV>-3SG.**ACT** 'yokes'
b. "middle"	bhár-<u>a</u>-**te** carry-V/IPFV-3SG.**NACT** 'carries (for) oneself' (*'is being carried')	yu<<u>n</u>>k-**té** yoke<V/IPFV>-3SG.**NACT** 'yokes for oneself' (*'is being yoked')
c. passive	bhri-<u>yá</u>-**te** carry-**PASS**/**IPFV**-3SG.**NACT** 'is being carried'	yuj-<u>yá</u>-**te** yoke-**PASS**/**IPFV**-3SG.**NACT** 'is being yoked'

▶ Designated "passive" stem formant -yá- + obligatory *nonactive* endings

Interim summary

4 types of *-*ya*-:

1) root-derived non-alternating middles (mostly itr. unaccusatives)
2) root-derived non-alternating actives (itr. CoS/inchoatives)
3) syncretic anticausatives/passives (obligatory middle endings)
4) passives (obligatory middle endings in Vedic; variation in Avestan)

Given that all contexts except for passive are found outside of Indo-Iranian, this looks like a clear-cut case of ANTICAUS > PASS reanalysis that resulted in a new, syncretic passive construction in Indo-Iranian.

▶ ANTICAUS/INCHOATIVE > PASSIVE grammaticalization path is well-established in the typological literature (Kuteva et al. 2019; Grestenberger & Kamil 2023)

▶ Therefore it seems plausible that 1) and/or 2) gave rise to 3)–4) through a reanalysis of -*ya*- as a passive marker.

ANTICAUS > PASS?

But there are several problems:

▶ While the verbs in class 2) take the *active* set of endings, consistent with the behavior of intransitive CoS-verbs cross-linguistically (Alexiadou & Anagnostopoulou 2004; Schäfer 2008), 3)–4) always take the *nonactive* ("middle") endings in Vedic.

▶ But 4), the canonically passive class, varies between active and middle endings in Avestan, and it's not clear why.

(10)   Middle *yá*-passives in Vedic vs. active *iia*-passives in Avestan

Vedic   Avestan (both: 3sg.act. *-t(i)*; 3sg.mid. *-te*, *-ta* < *-*ta(i))
*kri-yá-**te**   *kir-iie-ⁱ**ti**   'is made'
*kr̥t-yá-**te**   *kərəθ-iiā̆-**t** (subj.)   'is/shall be cut'

Further problems

▶ Hock (2019, 2022) argues that since it is impossible to determine for each individual stem of type 3) whether the anticausative or the passive reading is the older one, ANTICAUS > PASS vs. PASS > ANTICAUS *of the overall class* cannot be decided/is ambiguous.

▶ Kulikov (2011) argues that there is evidence for a "counterdirectional" development of PASS -*ya*- > ANTICAUS -*ya*- via an intermediate impersonal (passive) stage.

Specific research questions:

▶ Can we disambiguate the passive from the anticausative reading of *-*ya*- and determine which one is older?

▶ Can we confirm that passive -*ya*- became anticausative -*ya*- in late Vedic?
  ▶ specifically, an anticausative *marker*, not just individual "lexicalized" verb stems
  ▶ we are not excluding PASS > syncretic Voice at present (though we probably should; see below) — it is specifically PASS > ANTICAUS that is at stake.

Diagnostics

Diagnostics for distinguishing passives from anticausatives in "voice-syncretism" languages (e.g., Albanian, Modern Greek, Hebrew, cf. Kallulli 2007, Alexiadou & Doron 2012, Alexiadou et al. 2015):

(11)   Passives are compatible with agent adjuncts and instruments, anticausatives are not.
   a.   The ship was sunk by the captain/with a torpedo/#because of the storm
   b.   The ship sank (*by the captain/*with a torpedo/because of the storm)

less useful for IIr.:

(12)   Anticausatives are compatible with "by itself", passives are not.
   a.   The ship was sunk (*by itself)
   b.   The ship sank (by itself)

(13)   Passives are compatible with PRO-control clauses, anticausatives are not.
   a.   The ship was sunk [PRO to collect the insurance money]
   b.   *The ship sank [PRO to collect the insurance money]

(14)   Passives are compatible with agent-oriented adverbs, anticausatives are not.
   a.   The ship was sunk on purpose/intentionally/deliberately
   b.   The ship sunk (*on purpose/intentionally/deliberately)

Problem: instrumental adjuncts

▶ Problem: the instrumental case is used to mark **instruments**, passive **agents** (animate/inanimate) and inanimate **cause(r)s** in Vedic and Avestan

▶ "inanimate agents" vs. instruments (Luraghi 1986):

(15)   la   porta è stata aperta **da**lla / **con** la   chiave / **da** Giovanni
        the door is been opened by.the   with the key   by Giovanni
        "The door was opened by/with the key / by Giovanni"

= all of these would be instrumental DPs in Vedic & Avestan.

(16)   *índo   yád   ádribhih   **su-tá-ḥ**
        drop.VOC when stone.INSTR.PL press-PTCP.PASS-NOM.SG.M
        (RV 9.24.5a)

▶ Jamison & Brereton 2014: "O drop, when **pressed** by the stones ..." (inanim. agent)

▶ Geldner 1951: "O Saft, wenn du mit Steinen **ausgepresst**" (instrument)

Problem: instrumental adjuncts

Cause:

(17)   RV 2.12.1.c–d

    ródasī̆   **ábhyasetām**   *nṛmṇásya*   *mahnā́*
    world.halves.NOM.DU tremble.IPF.3DU.MID manliness.GEN greatness.INSTR

    " ... the world-halves trembled in fear <u>because of the greatness</u> of his
    [Indra's] manliness" (transl. Jamison & Brereton 2014)

Passive agents with *-yá-*passives

Vedic:

(18)   RV 3.1.21a-b:

(...) *jātávedā*   <u>*viśvā́mitrebhir*</u>   **idh-ya-te**
    Jātavedas.NOM.SG   Viśvāmitra.INSTR.PL   kindle-IPFV.PASS.3SG.NACT

á-jasraḥ
NEG-exhaustible.NOM.SG

"Jātavedas, the inexhaustible, **is kindled** <u>by the Viśvāmitras</u>"

(19)   RV 9.81.12d:

s$_u$āyudháḥ   <u>*sotŕ̥bhiḥ*</u>   **pū́-ya-te**   *vŕ̥ṣā*
of.good.weapons.NOM   pressers.INSTR   purify-PASS.3SG.MID   bull.NOM

"The bull of good weapons **is purified** <u>by the pressers</u>."

(transl. Jamison & Brereton 2014)

Passive agents with *-yá-*passives

Avestan:

(20)   Yt. 1.29 (YAv.):

     ārma^i tōiš   <u>*dō^i θrābiia*</u>   **auuā-str-iia-ta**   *ma^i riiō*
     Ārmaiti.GEN eye.INSTR.DU down-throw-PASS.IPV-3SG.NACT villain.NOM

     "le vaurien est abattu par les yeux d'Ārmaiti" (Kellens 1984: 128)/"the
     villain **is brought down** by/through the eyes of Ārmaiti"

▶ No OAv. ex. with animate agents in the passive (but recall there are only two passive
iia-forms attested in OAv.) – in YAv., (20) is closest to an animate agent (though instr.
dual is syncretic with dat. and abl.); a few examples with clear instrument/means
phrases (only with passives, not anticaus.)

Instrument adjuncts with *-yá-*passives

(21)   Vedic, RV 9.85.5a

   kánikradat   *kaláśe*   *góbhir*   **aj-ya-se**
   roar.INT.PTCP.ACT.NOM.SG.M pot.LOC cow.INSTR.PL anoint-PASS-2SG.MID

   "Ever roaring, you **are anointed** [/driven] <u>with cows</u> (= milk, LG) in(to)
   the tub" (Jamison & Brereton 2014)

(22)   Avestan, V. 4.50 (YAv.):

   aiiaŋhaēnāiš   *karətāiš*   *azdibiš*   *paᵢ ti*
   metal.INSTR.PL knife.INSTR.PL bone.INSTR.PL towards.PP
   auua.kərəθ-ii-āt̰
   down.cut-PASS.IPFV-SUBJ.3SG.ACT

   "he **shall be cut down** to the bones <u>with metal knives</u>"

Other diagnostics

Other diagnostics for canonical passive status of *-ya-*/Vedic passives in general
(Grestenberger 2021):

▶ Word order: subj. of passives usually precedes demoted agent/INSTR and verb in
  the majority of cases (Indo-Iranian is SOV), so Subj-INSTR-V (Hock 1982, 1986)

▶ Passive agent controls PRO in nonfinite adjunct clauses (= absolutives,
  converbs) in Vedic prose, (23) (Delbrück 1888: 405; Hock 1982: 131, 1986: 22;
  Tikkanen 1987: 147f.), whereas in anticausatives the controller is the surface
  subject (Hock 2019, 2022)

▶ (Subject of passive binds reflexive adj. *svá-* 'own, self's', Hock 1982)

(23)　　*na*　*vā*　[PRO$_i$ *a-hiṅ-kṛt-ya*　　] *sāma*　　　　**gī-ya-te**
　　　　NEG PTCL　　NEG-hiṅ-make-CVB　sāman.NOM.SG.N chant-PASS-3SG.MID
　　　　"For the sāman is not chanted (by a person$_i$) [PRO$_i$ not having made (the
　　　　sound) *hiṅ*]." (ŚB 1.4.1.1; cit. after Hock 2019)

Not all of these can be used to distinguish passives from anticausatives, but they
show that the nominative DPs in Vedic passives are canonical subjects.

Summary

- Available diagnostics suggest that passive -*ya*- 1) can be distinguished from anticausative -*ya*- (syncretism $\neq$ ambiguity) and 2) is a canonical passive, functionally/syntactially equivalent to nonactive-marked ("synthetic I") passives (Grestenberger 2021)

- Vedic & Avestan agree for the most part, *modulo* the problem of the endings in the Av. -*iia*-passive and the scarcity of attestations of instrumental phrases in general.

Analysis:
Diachrony of ANTICAUS > PASS

ANTICAUS > PASS

Good reasons to assume that passive use of *-ya-* developed from anticausative use of *-ya-*:

▶ Typologically well-established "grammaticalization path" (Kuteva et al. 2019; Bahrt 2021; Inglese 2022, 2023)

▶ Follows from the expected directionality of the voice cycle in the present framework (v/argument alternating morphology → voice morphology), e.g., (24)

▶ suggested by internal reconstruction: passive use of *-ya-* only in Indo-Iranian, intransitive anticausative/CoS verbs in *-ya-* ($< *-i̯e/o-$) reconstructable for PIE.

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What specifically changed in these constructions?

ANTICAUS > PASS

▶ Reanalysis of *-ya-* from *v* marker to voice marker as in (24) actually not very likely
  ▶ *-ya-* still behaves like a stem-forming morpheme both in the anticausative and the passive reading: it selects the root rather than the transitive *stem* and is also compatible with active endings (type 3)/*activa tantum*)
  ▶ the main strategy for marking active vs. nonactive contexts are the inflectional endings — and recall that passivization is also possible through the nonactive endings alone.

(24)
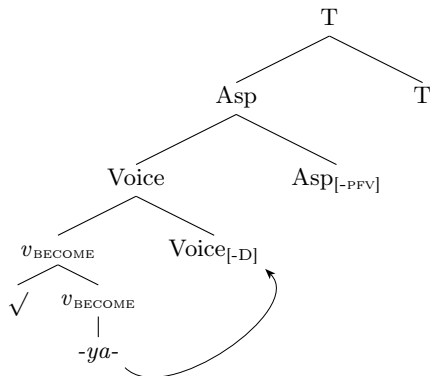
Two types of anticausatives

Alternative: middle- vs. active-marked anticausative & the ambiguity of instrumental adjuncts

Two types of anticausatives

Alternative: middle- vs. active-marked anticausative & the ambiguity of instrumental adjuncts

- ▶ We've seen that -ya- formed two types of anticausatives, formally active ones (type 1)) and formally nonactive ones (type 2)).
  - ▶ "Marked" vs. "unmarked" anticausatives; cf. Alexiadou & Anagnostopoulou 2004; Schäfer 2008; Kallulli 2013; Alexiadou et al. 2015
  - ▶ unmarked/active ones tend to be formed to roots expressing **property concepts** and form CoS verbs (in, e.g., Modern Greek, Alexiadou & Anagnostopoulou 2004; Schäfer 2008)

Marked anticausatives

(25) *múc-ya-te* (NACT) 'becomes free' (act. *muñc-á-ti* 'releases sbdy/sth')
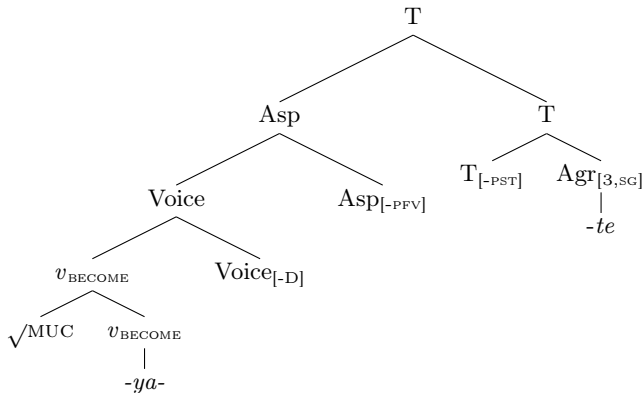
Marked anticausatives

This class surfaces with nonactive morphology through the general Spell-Out condition that holds for the T/Agr endings in Vedic/Indo-Iranian (Grestenberger 2021):

(26) Spell-Out condition on nonactive morphology (Alexiadou et al. 2015: 101–2, Embick 1998, 2004a)
      Voice → Voice[NonAct]/__ No DP specifier

More formally: a condition on the exponence of T/Agr:

(27) Spell-Out condition on nonactive morphology
      $T/Agr[\phi,\pm past,Q] \leftrightarrow T/Agr[\phi,\pm past,\text{NONACT}]/Voice_{[-D]}(...)\frown\_$

▶ active morphology = Elsewhere

▶ in nonactive anticausatives, Voice is semantically empty → "expletive Voice" (Schäfer 2008, 2009, 2017)

Voice: semantics

(28) Voice typology (Alexiadou et al. 2015; Schäfer 2017; Kastner 2020)

    a. Active Voice: $\{\lambda x \lambda e[\text{agent}(e, x)], +D\}$ (active)
- ▶ Canonical active (transitive verb), active morph. in Greek-type languages

    b. Medio-passive Voice: $\{\lambda e \exists x[\text{agent}(e, x)], -D\}$
- ▶ Morphologically nonactive "short passive" in Greek-type languages
- ▶ "unsaturated Voice": introduces an agent θ-role, but no external argument DP to saturate that role → agent = existentially bound, "mediopassive" (generic passive?)

    c. **Medio-marked expletive Voice**: $\{\emptyset, -D\}$
- ▶ Morphologically nonactive anticausatives in Greek-type languages

    d. Passive input Voice: $\{\lambda x \lambda e[\text{agent}(e, x)], -D\}$
- ▶ "unsaturated Voice": introduces an agent θ-role, but no external argument DP to saturate that role
- ▶ → input for "high passive" Voice head (Bruening 2013) with an adjoined agent *by*-phrase which saturates the agent θ-role (Schäfer 2017, based on Bruening 2013) = canonical passive

Unmarked anticausatives

Unmarked anticausatives/CoS verbs have no Voice layer → active morphology by Elsewhere

(29)   *náś-ya-ti* (ACT) 'disappears'
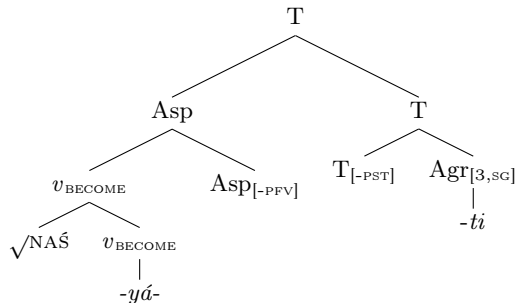
Two types of anticausatives

Both types were compatible with event-modifying instrumental cause/manner DPs:

(30)   <u>śvātréṇa</u>   yát   pitrór   **múc-ya-se**   pári
       swelling.INSTR when father.LOC.DU release-YA-3SG.MID on
       "when you (Agni) **get free** <u>through swelling</u> on your parents (the kindling
   sticks)." (RV 1.31.4c; Hock 2022: 173)

   ▶ Jamison & Brereton (2014): "when through your swelling in your two parents
     [=the kindling sticks] you **are set free**"

(31)   yathā́ phena   <u>udak-ena</u>   (...) **ni-jas-ya-ti**
       as   foam.NOM.SG water-INSTR   PRVB-disappear-V.IPFV-3SG.ACT
       "Just as the foam (...) **disappears** <u>by means of water</u>" (AVP 4.16.6;
       Kulikov 2012: 537)

Reanalysis: instrumental DPs

▶ Proposal: the event-modifying instrumental DP was reanalyzed as adjunct to
  VoiceP → "inanimate agent"

▶ This resulted in type 3), the "*muc*-class" with ANTICAUS/PASS syncretism

(32)   *śvātréṇa* (...) *múc-ya-* 'get free through swelling'/'be released by swelling'
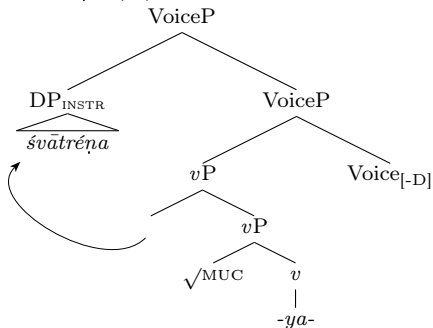
Reanalysis: instrumental DPs & passives

▶ A VoiceP adjunct implies Voice$_{[-D]}$ is present in the structure, hence the obligatory middle endings of this type

▶ Further extension to agentive roots + animate agent instrumental DP → type 4), -*yá*-passives

(33) a. *jánibhiḥ sám* **idh-ya-te**
          female.INSTR.PL   PRVB kindle-YA-3SG.MID
          "he [Agni] **is kindled** by the females" (RV 3.26.3a)

   b.
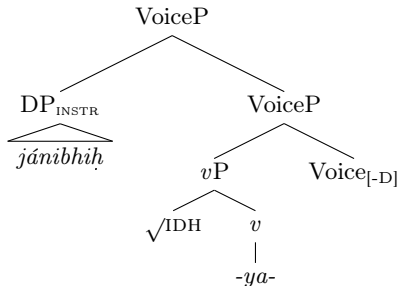
Passive agents in inflectional/middle-marked passives

▶ A minor "extension", since instrumental agent DPs were already independently
   used in inflectional/syncretic I passives, where instr. marking of agents was the
   inherited strategy (Jamison 1979; Grestenberger & Fellner 2023)

(34)   evá agnír   *gótamebhir*   ṛtā́vā́   víprebhir
        thus Agni.NOM Gotama.INSTR.PL truthful.NOM inspired.INSTR.PL
        astoṣ-ṭa   jā̆távedāḥ   (...)
        praise.PFV-3SG.NACT Jātavedas.NOM
        "Thus **has** Agni, the truthful one, the Jātavedas, **been praised**
        by the Gotamas, inspired poets" (Vedic, RV 1.77.5a-b; transl.
        Jamison & Brereton 2014)

(35)   mazdå̃   (...) yā̆   zī̆ **vāˉuuərəz-ōˉi**
        wise.NOM.SG REL.PRON.NOM.ACC.N for do.PF-3SG.NONACT
        pairī̆.ciθī̆t̰   *daēˉuuāˉiš-cā*   *mašiiāˉiš-cā*
        around.consider.2SG.AOR.OPT daēva.INSTR.PL-and mortal.INSTR.PL
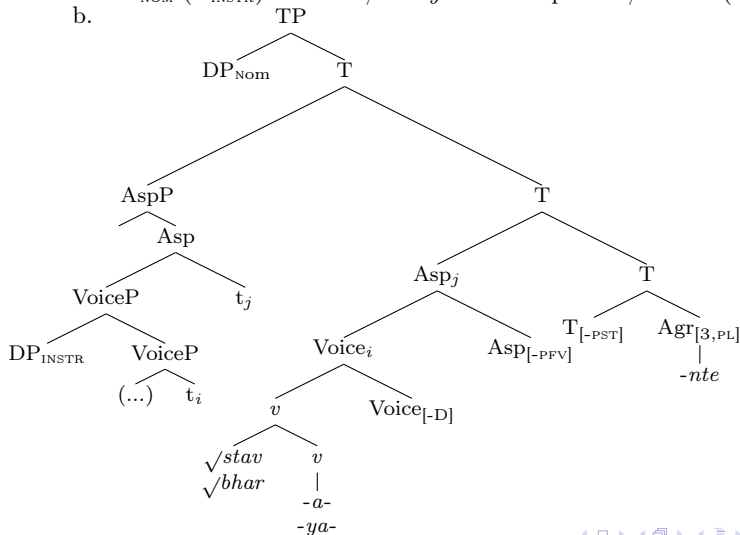   "May the Wise One (...) consider (what) **has been perpetrated** (all)
        around (here) by Daēvas and mortals" (Avestan, Y. 29.4; transl.
        Humbach 1991: 121)

Passive agents in inflectional/middle-marked passives

(36)   Structure of inflectional & -ya-passives, Vedic/Avestan

   a. Y_{NOM} (X_{INSTR}) *stav-a-te*/*bhri-yá-te* "Y is praised/carried (by X)"

    b.

Avestan *-iia-*

- If reanalysis of intrumental DPs in marked anticausatives is the source of the
  *-yá-*passive, this would suggest that the Avestan *active* endings of the
  iia-passive are an innovation
- Possibly the result of loss of the Spell-Out condition of Voice$_{[\pm D]}$ and reanalysis
  of -*iia*- as a designated passive Voice head ($\approx$ PassP of Bruening 2013)

(37)
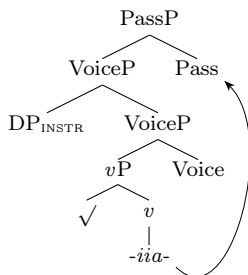
- Parallel development in Old Persian (West Iranian) and Epic Sanskrit/middle
  Indic

Old Persian & Epic Sanskrit *-*ya*-passives

(38)   Old Persian passives (Skjærvø 2020)

          a-kar-iya-Ø   *a-bar-iya-Ø*
          PST-do-PASS-3SG.ACT   PST-carry-PASS-3SG.ACT
          'was done'   'was carried'

(39)   Epic Sanskrit passives (Oberlies 2003)

          pac-ya-ti   *muc-ya-ti*
          cook-PASS-3SG.ACT   release-PASS-3SG.ACT
          'is cooked'   'is released'

▶ In both cases, this coincides with an ongoing loss of the active–nonactive alternation on the endings

PASS > ANTICAUS?

Bahrt (2021) lists only two potential examples of PASS > ANTICAUS (implicitly PASS > syncretic Voice)

▶ Proto-Tungusic *-*bu* PASS & CAUS > Evenki -*v* PASS, CAUS & ANTICAUS (Malchukov & Nedjalkov 2015)

▶ But Bahrt himself points out that this could also be a CAUS > ANTICAUS development (cf. Engl. *get*) via a causative-reflexive stage (cf. Yap & Iwasaki 2003, Yap & Ahn 2019 on CAUS > PASS vs. CAUS > MID)

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- ▶ Vedic -yá- (Kulikov 2011): PASS > ANTICAUS via agentless/impersonal passives of verbs of perception (and motion)

(40)   Anticausatives from passives, Kulikov (2011: 234–41; cit. after Bahrt 2021: 213)

Root		-ya-stem	a. PASS reading	b. ANTICAUS reading
dr̥ś	'see'	dr̥ś-**yá-**	'be seen'	'be visible, appear'
śrū	'hear'	śrū-**yá-**	'be heard'	'be audible, famous'
vid	'find'	vid-**yá-**	'be found'	'be findable, exist'

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śrū̄	'hear'	śrū̄-**yá**-	'be heard'	'be audible, famous'
vid	'find'	vid-**yá**-	'be found'	'be findable, exist'

▶ By Kulikov's own translation, these are not anticausatives.
▶ generic passive or "dispositional middle" (Alexiadou & Doron 2012)

PASS > ANTICAUS?

Hock (2019, 2022): not clear from the passages cited when Kulikov chooses the passive vs. the "anticausative" reading.

(41)   *yát svápne*   *ánnam*   *aśnā́mi*   *ná* *prātár*
       if   dream.LOC.SG food.ACC.SG.N eat.PRS.1SG.ACT NEG morning.ADV
       adhigam-yá-te   *sárvaṁ* *tát*   *astu*   *me*
       find-PASS-3SG.MID all   that.NOM.SG.N be.IPV.3SG me.ACC
       śiváṁ   *nahí*   *tád*   ***dr̥ś-yá-te***   *dívā*
       propitious.NOM.SG.N for.not that.NOM.SG.N see-PASS?-3SG.MID day.ADV
       (AV 7.101.1, cit. after Hock 2019)

▶ Kulikov (2011): "If I eat food in my dream, [and it] is not found in the morning,
  be all that propitious to me, for that **is not seen** by day" (passive)

PASS > ANTICAUS?

(42) *bā́lād*   *ékam*   *aṇīyaskám*   *utá ékaṁ*
      child.ABL.SG.M one.NOM.SG.N minute.COMP.NOM.SG.N and one.NOM.SG.N
      ná   + iva **dr̥ś-yá-te**
      NEG   like see-PASS-3SG.MID
      (AV 10.8.25ab, cit. after Hock 2019)

▶ Kulikov (2011): "One [thing] is minuter than a child, and another is as if **it
  were invisible**." ("anticausative")

PASS > ANTICAUS?

Moreover, the (dispositional) middle reading of perception verbs is

▶ also found in nonactive forms of these verbs that do not take *-ya-*, such as (43), as Kulikov (2011) also notes - so if anything a *lexical* change of specific roots, not of a functional morpheme.

▶ in general a context in which nonactive morphology is used in languages with voice syncretism (Lekakou 2005, Alexiadou & Doron 2012), (44).

(43)   *ádha bahú   cit táma   ū́rmyāyās tiráḥ śocíṣā̄*
       so   dense.ACC.N even darkness.ACC.N night.GEN across glow.INSTR
       dadṛś-e   *pāvakáḥ*
       see.PF-3SG.MID pure.NOM
       "so even across the dense darkness of the night the pure one **is visible with his flame**." (RV 6.10.4d, transl. Jamison & Brereton 2014)

▶ "through night's thick darkness, **made manifest by light**, the Purifier." (Griffith 1895–96)

▶ "Dann **ist** er, der Lautere, auch durch die dichte Finsternis der Nacht hindurch **mit seiner Glut sichtbar**" (Geldner 1951; "is visible with his glow")

PASS > ANTICAUS?

(44)   a.   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"
             (Hebrew, Alexiadou & Doron 2012: 14)

    b.   afto to vivlio diavazete   efkola.
             this the book reads.NONACT easily
             "This book reads easily." (Modern Greek, Alexiadou & Doron 2012: 16)

▶ Crucially, dispositional middles are structurally and semantically distinct from anticausatives (Lekakou 2005; Alexiadou & Doron 2012; Alexiadou et al. 2015)

▶ In dispositional middles "the external argument is eventually bound in the context of a possibility modal" (Alexiadou & Doron 2012: 26) vs. no external argument in anticausatives

Summary: PASSIVE $\not>$ ANTICAUSATIVE

- ► The Indo-Iranian *-yá-* passives are syncretic, but the two relevant readings (anticausative vs. passive) can be disambiguated using the relevant diagnostics
- ► Cross-linguistically, this is behavior is well within the expected range of anticausative-passive syncretism languages (Kallulli 2007; Alexiadou & Doron 2012; Alexiadou 2013; Alexiadou et al. 2015)
- ► The generic or agentless passive and the "dispositional middle" are special functions of the syncretic passive in these languages — but unlike anticausatives, these are formed to verbs whose external argument is an agent.
- ► There is no evidence for PASS > ANTICAUS in Indo-Iranian

Conclusion

▶ Old Indo-Iranian (*)-*yá*-passives as a textbook example of the ANTICAUS > PASS reanalysis, resulting in a descriptively well-established type of **voice syncretism**

▶ Directionality/voice cycle:
  ▶ vP adjunct → VoiceP adjunct/argument (Proto-Indo-Iranian)
  ▶ v → Voice/Pass (Proto-Iranian, or separate innovations of Western and Eastern branches?)
  ▶ Loss of the Spell Out condition triggered by Voice$_{[\pm D]}$ and generalization of the *active* endings in the *ya*-passive (Old Persian, Avestan, Sanskrit)

▶ No evidence for PASS > ANTICAUS once voice syncretism and "dispositional middle" readings are excluded

▶ Suggesting that unidirectionality is a viable hypothesis even in the "messy" domain of voice & argument structure changes

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- ▶ Suggesting that unidirectionality is a viable hypothesis even in the "messy" domain of voice & argument structure changes

Open issues:

- ▶ Isn't PASS > syncretic voice predicted by the theory?
- ▶ What about the accent difference between ´-*ya*-anticausatives and -*yá*-passives?

Thank you!

FWF V850-G "The diachrony of verbal categories and categorizers"
(https://lauragrestenberger.com/categorizers-in-diachrony)

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