

Reconstructing passive syntax in Proto-Indo-European

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1 Introduction

1.1 Passives in PIE?

While there is consensus that Proto-Indo-European (PIE) expressed “passive meaning” through middle morphology (Jamison 1979a, 1979b, Benedetti 2006, Kulikov and Lavidas 2013), the productivity and properties of the “middle” passive are debated, and it has been argued that

1. the passive use of middle morphology does not represent a canonical passive because of the rarity of overt demoted agents in the Indo-European (IE) daughter languages.
2. the expression of the demoted agent varies too much to allow for a PIE reconstruction.
3. the lack of “exact equations” precludes the reconstruction of a PIE passive.

The evaluation of these claims crucially rests on one’s definition of “canonical passive” and the kind of evidence admitted for the purposes of reconstruction.

1.2 Today’s goals

- Give a working definition and examples of canonical passives for (at least) the older IE languages
- Argue that the “middle” passive was indeed canonical, but more restricted in its distribution than passives in, e.g., Modern English
 - “high” vs. “low” passives, Bruening 2013, Alexiadou et al. 2015, Schäfer 2017
- Argue that demoted agents can be reconstructed
- Discuss how the methodology for syntactic reconstruction outlined in Hale 2007, Walkden 2014 can be used to reconstruct (morpho)syntactic alternations in PIE.

1.3 Canonical passives

Core properties of “canonical passives” are controversial (cf., e.g., Abraham and Leisiö 2006, Alexiadou 2013, Shibatani 1988, Fox and Hopper 1994, Abraham and Leisiö 2006, Alexiadou and Schäfer 2013, Kiparsky 2013), but possible consensus revolves around three properties:

- Internal argument → subject (+ subj. case)
- accusative/structural case on object is “absorbed” → *intransitive constructions*

- There's an *implicit external argument* that can (but doesn't have to be) expressed through an adjunct ("by-phrase")

... other "passive-like" constructions would then be "non-canonical" passives (cf. Alexiadou 2013) if they do not fulfill the above criteria and fail the tests that are standardly used to diagnose these properties, e.g.:

- (1) Some "non-canonical" passives
 - a. French (Schäfer 2017): Non-canonical (SE-passive):
Trois maisons **se** sont louées (*par des touristes) hier.
three houses SE are rented by INDEF tourists yesterday
Intended: "Yesterday, three houses were rented by (some) tourists"
 - b. English: *get*-passive (Fox and Grodzinsky 1998):
The ship got sunk [PRO to collect insurance money]
The book got torn (*on purpose).

→ Because of the widespread **voice syncretism** of the older IE languages, non-canonical passives and related constructions can be difficult to distinguish from canonical passives.

2 Voice morphology in Indo-European

2.1 Non-active morphology

- The relevant older IE languages (Vedic Sanskrit, Ancient Greek, Hittite, Tocharian, (Latin)) have a morphologically "bivalent", syncretic Voice system **active—non-active** (a.k.a. active—middle)
 - active and non-active morphology occur with verbs of different valency/argument structure and in different syntactic contexts
 - Problem I: the distinction between morphological exponence and syntactic context is not always consistently upheld in the literature → this causes more problems
 - E.g., Kulikov and Lavidas 2013: 112: "... the existence of the passive pattern can be posited for PIE verbal syntax in spite of the lack of the passive voice *sensu stricto*." ?!
 - Problem II: the identification of canonical syntactic contexts (or "functions") in which a particular exponent ("active", "non-active") is expected to be found
- (2) Canonical contexts of non-active morphology (Gonda 1979, Klaiman 1991, Kemmer 1993, Embick 1998, Allan 2003, Kaufmann 2007, 2013, Alexiadou and Doron 2012, Alexiadou 2013, Zombolou and Alexiadou 2014, etc.)
 - a. (some classes of) anticausatives/inchoatives
 - b. (inherent/natural) reflexives and reciprocals
 - c. autobenefactive verbs (selfbenefactives, "indirect reflexives")
 - d. dispositional or generic constructions (i.e., "middle constructions" of the type Engl. *bureaucrats bribe easily*)
 - e. **passives ("mediopassives")**
 - We'll discuss whether "passive" and "mediopassive" are really two distinct syntactic contexts (as argued by Alexiadou and Doron 2012, Schäfer 2017, ...) below
 - "middle" = a syntactic context, (2d), "non-active" = a particular type of morphology found in (2a-e)
 - (3) Example: canonical functions on non-active morphology: voice alternations in Ancient Greek

a. Function	b. Active	c. Non-active
Anticausative	<i>daí-ō</i> 'burn (sth.)'	<i>daío-mai</i> 'burn' (itr.)
Reflexive	<i>loú-ō</i> 'wash (sth.)'	<i>loúo-mai</i> 'wash myself, bathe'
Autobenefactive	<i>phér-ō</i> 'carry (sth.)'	<i>phéro-mai</i> 'carry (sth.) for myself; win'
Passive	<i>theín-ō</i> 'slay'	<i>theíno-mai</i> 'am slain'

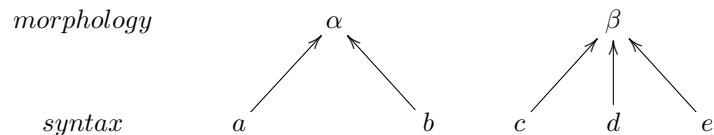
- The verbs in (2) and (3) are **alternating** verbs, i.e., there is a (functional) opposition between active and non-active-marked forms (causative vs. anticausative, etc.). However, non-alternating (non-oppositional) non-active verbs are common as well (cf. Kemmer 1993, Zombolou and Alexiadou 2014), especially in the following classes:

- (4)
- Psych verbs & verbs of cognition
 - Statives
 - (some classes of) verbs of motion
 - (some) deadjectival & denominal verbs (non-active morphology is partially productive here in Latin and Ancient Greek)
 - (some) verbs of speech and communication

→ *Media tantum*, “middle-only” verbs

- often referred to as “deponents”, but that term implies a “mismatch” between the form and the function of these verbs (Lat. *dē-pōnere* ‘lay aside’). However, not all non-alternating non-active verbs show a “mismatch” between form and function (cf. Zombolou and Alexiadou 2014, Grestenberger 2014, To appear).

- (5) Canonical contexts and voice syncretism



- Same morphological exponent in different syntactic contexts = **voice syncretism** (Embick 1998, 2004)

2.2 Distinguishing passives from other canonical contexts in voice-syncretism languages

2.2.1 Passive vs. anticausative

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

- (6) Passives are compatible with agent-adjuncts and instruments, anticausatives are not.
- The ship was sunk by the captain/with a torpedo
 - The ship sank (*by the captain/*with a torpedo)
- (7) Anticausatives are compatible with “by itself”, passives are not.
- The ship was sunk (*by itself)
 - The ship sank (by itself)
- (8) Passives are compatible with PRO-control clauses, anticausatives are not.
- The ship was sunk [PRO to collect the insurance money]
 - *The ship sank [PRO to collect the insurance money]
- (9) Passives are compatible with agent-oriented adverbs, anticausatives are not.
- The ship was sunk on purpose/intentionally/deliberately
 - The ship sank (*on purpose/intentionally/deliberately)

Examples:

- (10) Modern Greek (from Alexiadou and Doron 2012):

i times miothikan **apo** to diefthindi/**me** tis nees ekselisis
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”

- (11) 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”

In older IE languages, these contexts tend to be the most difficult to disambiguate.

(12) Vedic, RV 7.8.1 :

indhé **rājā** **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”)

- Is *námobhir* ‘reverence’ (‘bowing’) the *cause* (suggests an anti-causative) or the *instrument* (suggests a passive)?

2.2.2 Passive vs. dispositional/generic construction

Ambiguity between passive and generic/dispositional readings:

(13) 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”

(14) a. Vedic: RV 6.10.4d

śociṣā **dadrś-e** pāvakāḥ
glow.INSTR **see.PERF-3SG.PERF.NACT** pure.NOM

“the pure one is visible with his flame.” (Jamison and Brereton 2014)

“Dann ist er, der Lautere (...) mit seiner Glut sichtbar.” (“is visible”, Geldner 1951)

b. Vedic: RV 1.135.7d:

ví sūnītā **dadrś-e**
through(out) magnanimity.NOM **see.PERF-3SG.PERF.NACT**

“Liberality has been sighted” (Jamison and Brereton 2014)

“Die Grossmut liess sich sehen” (“Magnanimity let itself be seen”, Geldner 1951)

→ Episodic readings & agent-adjuncts only possible with canonical passives

2.2.3 Ambiguity between reflexives and passives

(15) Modern Greek *plenotike* ‘washed him/herself’ or ‘was washed’ (e.g., in a hospital)

(16) Vedic: RV 9.2.7a–c:

gíras (...) yābhir mādāya **śúmbha-se**
songs.NOM REL.PRON.INSTR.PL exhilaration.DAT **adorn-2SG.PRES.NACT**

“the songs by which you are (in turn) beautified for exhilaration.” (Jamison and Brereton 2014)

“die (...) Loblieder, (...) mit denen du dich zum Rausche schön machst” (“by which you beautify yourself for exhilaration”, Geldner 1951)

3 Methodological issues

3.1 Do we need designated passive morphology?

No. See the evidence of “voice syncretism” languages above.

- NB: Vedic and Classical Greek actually developed an aspectually conditioned *trivalent* voice system active—“middle”—passive (Vedic in the imperfective/present stem, Greek in the perfective/aorist stem)

(17) Vedic: present

a. pres.act.	b. pres.mid.	c. pres.pass.
<i>bhár-a-ti</i>	<i>bhár-a-te</i>	<i>bhri-yá-te</i>
carry-V-3SG.PRES.ACT	carry-V-3SG.PRES.NACT	carry-V.PASS-3SG.PRES.NACT
‘carries (sth.)’	‘carries sth. for oneself’	‘is (being) carried’
	‘*is (being) carried’	

There’s also a designated “passive aorist”, but not all verbs can form one. Those that don’t can passivize with middle morphology only:

(18) inflectional vs. suffixal passive: Vedic (A = augment, marks past tenses)

a. inflectional (aorist)	b. suffixal (present)
<i>á-sto-s-ta</i>	<i>bhri-yá-te</i>
A-praise-AOR-3SG.PAST.NACT	carry-V.PASS-3SG.PRES.NACT
‘was praised’	‘is (being) carried’

(19) Properties of the inflectional & suffixal passive, Vedic

property	inflectional	suffixal
Obj _{ACC} → Subj _{NOM}	✓	✓
Agent → Adjunct NP, instr. case	✓	✓
eventive (episodic)	✓	✓

(20) Classical Greek: aorist

a. aor.act.	b. aor.mid.	c. aor.pass
<i>é-lou-s-a</i>	<i>e-lou-sá-mēn</i>	<i>e-loú-thē-n</i>
A-wash-AOR-1SG.PAST.ACT	A-wash-AOR-1SG.PAST.NACT	A-wash-V.PASS-1SG.PAST.ACT
‘washed (sth.)’	‘washed myself, bathed’	‘was washed’
	‘*wurde gewaschen’	

(21) Inflectional vs. suffixal passive: (post-Homeric) Greek

Properties	inflectional	suffixal
Acc.obj. ¹ → nom.subj.	✓	✓
Demoted agent → prep. + gen. case	?	?
Eventive	✓	✓

Functionalist explanations á la Kulikov 2012, Kulikov and Lavidas 2013, etc., tend to emphasize that designated passive morphemes such as Ved. *-yá-* in (20)–(21) are used to “strengthen” or disambiguate the passive meaning originally expressed through middle morphology alone. But this is problematic:

- Why would Vedic speakers only need to disambiguate in the imperfective stem, and Greek speakers only in the perfective? Why is it still possible to use “inflecting passives” in the other stems? (Kulikov and Lavidas 2013 claims this function is marginal, but see below).
- The Greek aorist passive suffix *-(th)ē-* obligatorily co-occurs with *active* morphology, so clearly no “strengthening” of an older passive function took place.

Rather, what happened was the independent development of inchoative/stative constructions into eventive passives (same with periphrastic passives in both languages & independently in Hittite), cf. Grestenberger Forthcoming.

¹Dative and genitive objects can also become nominative subjects under passivization, cf. Anagnostopoulou and Sevdali 2014.

3.2 How important is frequency?

Agent adjuncts are generally “rare”, which has led to a certain reluctance to reconstruct them:

“Since all the ancient IE languages have a way to express agency, we might expect to be able to reconstruct a formal phrase type for PIE as well, even in the absence of precise equations. (...) In the absence of both word-for-word equations and equations of formal types, even the existence of the category of agency with the finite passive has only been tentatively posited for PIE.” (Jamison 1979b: 217)

- ... but frequency cannot straightforwardly be equated with productivity or grammaticality
 - Cf. standard examples such as *colorless green ideas sleep furiously* (grammatical, but not “frequent” outside of linguistics literature); *deep—depth* (unproductive, but high token frequency) vs. **deep—deepness* (productively formed, but ungrammatical), etc.
- Agent *by*-phrases in passives are “rare” in spoken English (as are passives as such, cf., e.g., Roland et al. 2007), but perfectly grammatical
- Passivization (long/short) is somewhat restricted in Modern Greek—not all agentive and causative transitive verbs passivize (Alexiadou and Doron 2012, Alexiadou et al. 2015):

“... only the following verb classes accept an agentive ‘by’-phrase in Greek but disallow a causer PP and ‘by itself’ (...): Verbs of change of possession (e.g. *dino* ‘give’), verbs of transfer of message (e.g. *leo* ‘tell’), ‘take’ verbs, verbs of instrument of communication (e.g. *tragudo* ‘sign’), ‘remove’ verbs (e.g. *diohno* ‘expel’), and murder and poison verbs (e.g. *dolofono* ‘murder’).” (Alexiadou and Doron 2012: 18)

→ Frequency as such is not very enlightening:

“Studying the relative frequency of the two types of clause (transitive/intransitive) in, e.g., the Vedic corpus, simply tells us how frequently the authors of the relevant texts wanted to express which kind of meaning. This is on the face of it no more ‘syntax’ than is a study of how frequently the authors wanted to express the meaning ‘duck’.” (Hale 2014)

3.3 What are our (syntactic) equations?

= the correspondence problem in diachronic syntax: “sentences” are not entities that are directly transmitted from $G(\text{rammar})_1$ to $G(\text{rammar})_2$ → syntactic change \neq regular in the way phonological change is.

The (minimalist) alternative:

“If we can reconstruct the morphosyntactic features of lexical items and functional heads, and we assume the syntactic computational system is universal and invariant, we can reconstruct output sentences for a protolanguage. They are what gets built when you run the lexical items and functional heads through the syntax.” (Hale 2014: 7, cf. Hale 2007: 157)

= the Borer-Chomsky Conjecture (BCC):

- (22) The Borer-Chomsky Conjecture (Baker 2008: 353, cf. Walkden 2014: 19):
All parameters of variation are attributable to the features of particular items (e.g., the functional heads) in the lexicon.

In order to reconstruct passives, we need to:

1. reconstruct the relevant Voice head(s) and its/their morphosyntactic features
 - Note that in order to do this, it is sufficient to show that verbs of a certain argument structure, e.g., agentive transitive verbs (*cut, hit, destroy, kill, buy...*) can undergo passivization with the relevant properties—these verbs do *not* have to be cognate themselves, since we’re reconstructing the (abstract, underlying) Voice head
 - the realization of this head (= non-active morphology) in the different daughter languages, on the other hand, needs to be cognate → evidence from “distributional patterns of the lexical items in question, i.e. the syntactic environments in which they can be found in the daughter languages” (Walkden 2014: 59)
2. reconstruct which roots (or, even better: verbal stems) could be selected by this/these Voice head(s) in PIE
 - For this part, we do need phonological/semantic correspondence between roots and, ideally, verbal stems. However, morphological/analogical change in the verbal system means we’ll have to accept some “quasi-correspondences” (examples below).

4 Passives in older IE languages

4.1 Vedic

- Passivization = “rare” function of non-active morphology, but attested. Skeptical: Gonda 1979, Kulikov and Lavidas 2013, but cf. Jamison 1979b: 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.”

4.1.1 Implicit agent

- (23) 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.”²

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

adyá tám asya **mahimánam** āyávo ánu ṣṭuv-anti
today that.ACC his greatness.ACC Āyu.NOM.PL PRVB praise-3PL.PRES.ACT

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

The *non-active* forms can occur in other syntactic contexts as well, as expected in voice syncretism language, e.g.:

- (24) RV 6.20.10b:

prá pūrāva stav-a-nta enā yajñáih
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.”

- (25) a. RV 7.7.3b:

prī-ñi-te agnír īlitó ná hótā
please-V.TR-3SG.PRES.NACT Agni.NOM invoked.NOM like Hotar.NOM

“Agni is pleased, invoked like a Hotar, ...”

²All Rigveda translations are from Jamison and Brereton 2014.

b. Cf. active in RV 9.74.4c:

samīcīnáḥ sudánavaḥ pri-ṇ-anti tám
 united.NOM.PL good.drops.NOM.PL please-V.TR-3PL.PRES.ACT him

“United, possessed of good drops, they please him.”

Eventive passive more probable in (25a) than stative or inchoative (“is/becomes pleased”) because of verbal derivational morphology: $\sqrt{prī}$ ‘be pleased, pleasant’ → $prī-nā/i-$ ‘make pleased, please sbdy.’ (tr. factitive); and context of the hymn: description of proceedings during a ritual.

4.1.2 Agent adjunct (instr.)

(26) RV 1.77.5a-b:

evā agnīr gótamebhir (...) a-sto-ṣ-ṭa jātavedāḥ (...)
 thus Agni.NOM Gotama.INSTR.PL A-praise-AOR-3SG.PAST.NACT Jātavedas.NOM

“Thus has Agni, (...) the Jātavedas, been praised by the Gotamas, (...)”

4.2 Greek

Inflectional passive (= passivization through non-act. morphology) compatible with all tense/aspect stems, suffixal passive = perfective (aorist, future).

4.2.1 Implicit agents

(27) *Il.* 19.91–95:

présba Diòs thugatēr Átē, hē pántas aātai, ...
 eldest.F.NOM Zeus.GEN daughter.NOM Ate.NOM who.NOM all.ACC.PL blind.3SG.PRES.NACT
 kai gār dé nú pote Zeùs ásato, ...
 and for really now once Zeus.NOM blind.3SG.AOR.NACT

“The eldest daughter of Zeus is Ate, who blinds all ... and indeed one time (even) Zeus was blinded.”

4.2.2 Agent adjuncts (prep. + dat./gen.)

(28) a. *Il.* 6.56–7:

ê soì árista pepoíē-tai katà oĩkon pròs
 PTCL you.DAT best.NOM.PL.N do.PERF-3SG.PRES.NACT towards house.ACC from/by

Tróōn

Trojans.GEN

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

b. *Il.* 11.309:

hòs ára puknà karéath’ hup’ Héktori dāmn-ato laōn
 so then many.NOM.PL heads.NOM.PL by Hector.DAT subdue-3SG.PAST.NACT men.GEN

“Thus many heads of the men were then subdued by Hector.”

Agent by-phrase + instrument adjunct (dat.):

(29) *Il.* 6.133-5:

hai d’ háma pāsai thústhla khamai kat-ékheuan hup’
 they.PL.F PART together all.F thustla.ACC ground.ADV down-drop.3PL.AOR.ACT by
androphónoio Lukórgou theinó-men-ai bouplēgi
 men-slaying.GEN Lykourgos.GEN strike.PRES-PTCP.NACT-NOM.PL.F ox-goat.DAT

“All together they (= the nymphs who raised Dionysos) dropped their *thusthla* on the ground, struck with an ox-goad by men-slaying Lykourgos.”

- NB the regular deverbal active and non-active participles in Vedic and Greek behave syntactically like the corresponding finite forms (thus already Brugmann 1892, cf. also Grestenberger To appear, Grestenberger 2017, Fellner and Grestenberger To appear). Non-active participles with passive syntax like in (29) can therefore be used as evidence for the passive use of non-active morphology in general (*pace* Kulikov and Lavidas 2013).

4.2.3 Cause or instr. adjunct (dat.)

= Vedic instrumental adjuncts without a preposition.

(30) *Iliad* 11.674-5:

hó d' amúnōn hēisi bóessin é-blē-t' en prótoisin
 he PART protecting.NOM those.DAT cows.DAT A-hit. AOR-3SG.PAST.NACT in first.DAT.PL
 emēs apó kheiròs ákonti
 my.GEN from hand.GEN dart.DAT

“Protecting those cows, he was hit among the first ones by a dart from my hand.”

Problems:

- 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. (Schwyzer 1943, Jankuhn 1969, Allan 2003)
- Formally active unaccusatives can also express the agent/cause of the verbal event through with the same prepositions

4.3 Hittite

Uses mediopassive (= non-active) inflection for passives, also a periphrastic passive (*ant*-participle + finite BE-auxiliary). Both types of passive take demoted agents in the instrumental or ablative case (with prep., usually *IŠTU* ‘from, by’), cf. Neu 1968b, Hoffner and Melchert 2008.

4.3.1 Implicit agent

(31) *karš* ‘cut’, KBo 47.239 III 14-15:

nu-war-at-kan GÌR^{MEŠ} arḫa karš-antat
 PART-QUOT-3PL-PART feet off cut-3PL.PRET.NACT

“Their feet were cut off.”

4.3.2 Agent adjunct

(32) a. *ḫull(e)*- ‘defeat’, KUB XVII 28 IV 45:

mān ERÍN-^{MEŠ}HLA IŠTU LÚKÚR ḫull-antari
 when troops-PL by.(ABL) enemy defeat-3PL.PRES.NACT

“When the troops are defeated by the enemy.”

b. *zāḫ-/zahḫ-* ‘hit, beat’, KUB V 1 IV 72:

KARAS^{ḫHLA}-kan TA DU UL zah-tari
 army-PART by.(ABL) storm.god not beat-3SG.PRES.NACT

“The army is not (going to be) hit/struck by the storm god.”

4.3.3 Cause/inanimate agent or instrument

- (33) a. *damašš-* ‘oppress’: KUB 14.12 obv. 3:
 nu-wa KUR^{URU}Ḫatti **ḫinganaz** arumma mekki **tamaš-tat**
 PART-QUOT land Ḫatti **plague.ABL** highly much **oppress-3sg.pret.NAct**
 “And the land Ḫatti was very much oppressed by the plague.”
- b. *warnu-* ‘burn sth.’: KUB 8.25 i 3,9:
 KUR-yaš^{A.ŠA} kuraš **IZI-it** **warnutari**
 land-GEN field.NOM **fire-INSTR** **burn-3SG.PRES.NACT**
 “The field of the land is/will be burned by/with fire”

4.4 Tocharian

Uses middle / “mediopassive” (non-active) endings for passives. The case of the demoted agent in adjuncts is the *perlative* (in instrumental use); in Tocharian A (TA) the instrumental is used for inanimate causers. Like in Sanskrit and Greek, the middle participle in TB *-mane* TA *-mām* (cognate with Skt. *-(m)āna-*, Gk. *-menos*) can have passive reading.

4.4.1 Implicit agents

- (34) a. TA *klyos* ‘hear’, A 258 a5:
 sām wašem poñcām tri wältsem ārkisoṣṣam **klyosnāš-tār**
 Like/as voice.NOM all three.thousand.fold world.LOC **hear-3SG.PRES.NACT**
 “This voice is heard all over the three-thousand-fold world ...”³ (generic middle?)
- b. TB *yām* ‘do’, THT 305 a7:
 mā yamašälle **yamas-trä** nano
 not do.GER.NOM.SG **do-3SG.PRES.NACT** in.turn
 “The thing not to be done is done in turn.”⁴

4.4.2 Animate agents (perlative)

- (35) a. TB *läk^ā* ‘see’, THT 590 b2:
 mäkte **lk-āntār** ka **ālyaucesa** wnołmi cai
 how **see-3PL.SUB.NACT** indeed **other.PERL.PL** being.NOM.PL this.NOM.PL
 “How indeed are these beings seen by each other?”⁵
- b. TA *yärt^ā* ‘drag’, A 55 b2:
kuṣt-lwākā tā =śśi **yärtār**
predator.PERL.PL where INTERROG **drag.3SG.PRES.NACT**
 “Where is he dragged by the *kuṣt* animals (predators)?”

4.4.3 Causer/inanimate agent in instrumental (only in TA)

- (36) TA *tsäk* ‘burn’, *sik^ā* ‘overflow’, A 14 b1-2:
 kuc ne tām mā **poryo** **tskāms-amtār** mā **wäryo** **sik-amtār**
 which that this not **fire.INSTR** **burn-3PL.PRES.NACT** not **water.INSTR** **overflow- 3PL.PRES.NACT**
 mā lāñcsā pārtsi yāt-eñc mā penu lyäksā kārñätsi yāt-eñc
 not king.PERL take.INF able-3PL.SUBJ.ACT not further thief.PERL steal.INF able-3PL.SUBJ.ACT

³Examples and translation from CEToM unless otherwise indicated.

⁴Transl. by Hannes Fellner.

⁵Transl. by Hannes Fellner.

“that it is not burned with fire, not flooded away by water, [that it] cannot be taken away by kings [and that] further they cannot be stolen by thieves.”

5 Analysis & Reconstruction

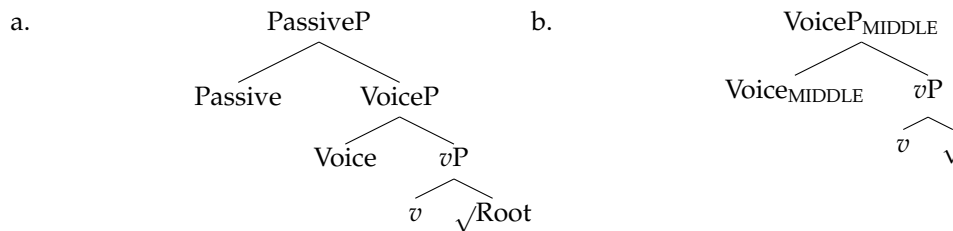
5.1 VoiceP

5.1.1 Syntax

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), cf. Bruening 2013, Harley 2013, Alexiadou et al. 2015, Schäfer 2017
- **Voice_{MIDDLE}**: syncretic Voice (including “mediopassive”), selects (different types of) *v*P, different thematic properties than active voice (Ancient & Modern Greek, Sanskrit), Embick 1998, 2004

(37) Alexiadou et al. 2015: 124



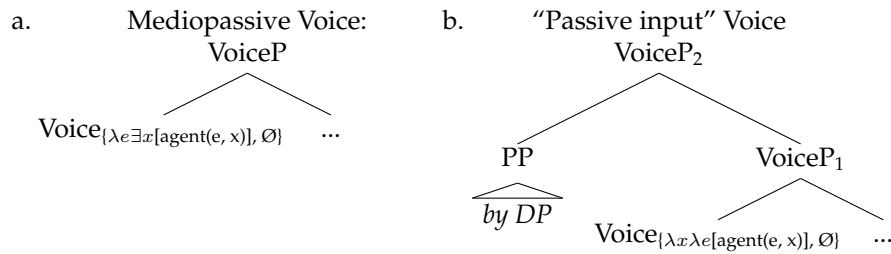
- English, German, etc., have only (37a), Modern Greek has only (37b), Hebrew has both (Alexiadou and Doron 2012)—Vedic, Ancient Greek, etc.?

Alexiadou et al. 2015, Schäfer 2017 ... further distinguish between different types of the above:

(38) Schäfer 2017: Voice heads:

- Active Voice: $\{\lambda x \lambda e [\text{agent}(e, x)], D\}$ (active)
 - Canonical active (transitive verb), active morph. in Greek-type languages
- Medio-passive Voice**: $\{\lambda e \exists x [\text{agent}(e, x)], \emptyset\}$
 - Morphologically non-active “short passive” in Greek-type languages
 - “unsaturated Voice”: introduces an agent θ -role, but no external argument DP to saturate that role \rightarrow agent = existentially bound, “mediopassive” (generic passive?)
- Active expletive Voice: $\{\emptyset, D\}$
 - SE-anticausatives in Romance-type languages
- Medio-marked expletive Voice: $\{\emptyset, \emptyset\}$
 - Morphologically non-active anticausatives in Greek-type languages
- Transitive medio-passive Voice: $\{\lambda e \exists x [\text{agent}(e, x)], D\}$
 - short SE-passives in French
- Passive input Voice**: $\{\lambda x \lambda e [\text{agent}(e, x)], \emptyset\}$
 - “unsaturated Voice”: introduces an agent θ -role, but no external argument DP to saturate that role
 - \rightarrow 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)
 - = generally considered a canonical passive (internal argument \rightarrow subject, no ACC, “demoted” agent)

(39) Short and long passive in Greek-type languages



Based on the analysis in Schäfer 2017 for Modern Greek. In English, German, etc., the external argument in short passives such as (39a) is bound by a higher head Pass that selects Voice with an unsaturated agent and imposes existential quantification on that agent. Long passives have the same structure as (39b), but with an “expletive” Pass head (Collins 2005, Bruening 2013).

5.1.2 Morphology

Additional assumption concerning the distribution of active/non-active morphology: In “Greek-type languages”, “a Voice head is spelled out with non-active morphology [...] if it lacks a specifier.” (Alexiadou et al. 2015).

(40) Spell-Out condition on non-active morphology (Alexiadou et al. 2015: 101–2, Embick 1998, 2004)
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”; also emerges when Voice is missing, e.g., in obligatorily *active* unaccusatives & statives (Kallulli 2013) → *activa tantum*

5.2 Reconstruction

Proposal: The older IE languages under discussion have both configurations in (39) (Mediopassive & “passive input” Voice). It is a reasonable conjecture that PIE also had both heads, as well as (a version of) the Spell-Out condition (40).

(41) Passive equations in PIE (cognate material = **bolded**; segmentation: stem + ending, all forms = 3sg. except where indicated)

	Hittite	Tocharian	Vedic	Greek	meaning	PIE
a.	damaš-tari			dámna-tai	‘is subdued, tamed’	*demh ₂
b.	karš-tari	kärsnā-tār		(témne-to)	‘is cut’	*kers, *temh ₁
c.		^A klyosnāš-tār	śṛṇv-é	klé-e-tai	‘is heard, famed’	*k ^h lew(-s-)
d.		^{BA} ās-tār	(ajyá-te)	áge-tai	‘is led, driven’	*h ₂ aǵ(-e-)
e.	warnu-tari	^A tsäknāš-tār			‘is burned’	—
f.		^B yamas-tār	(ákār-i, kriyá-te)	pepoiē-tai	‘is/was done’	—
g.		^B käskän-tār (?)	(hanyá-te)	theíne-tai	‘is slain/scattered’	*g ^{wh} en
h.		^A pār-tār	(bhriyá-te), bhára-māṇa- (ptcp)	phére-tai	‘is carried, brought’	*b ^h er(-e-)

Note that Latin is excluded because passive became the only productive function of the inherited non-active endings with agentive, transitive verbs (hence the Latin “r-endings” are usually called passive endings). Many of the verbs in (41) have formal/functional cognates in Latin, e.g., *domātur* ‘is tamed’, *agitur* ‘is done’, *fertur* ‘is brought, carried’,

(*dē-*)*fenditur* ‘is driven away’, etc., some of which are likely to be inherited.

- Long passive: DP_{INSTR} in Spec.VoiceP₂ (cf. (39b)) suggested by Vedic, Hittite, Tocharian (perlative); Greek (prep. + dat.) and Latin (abl. inherits uses of instr.) are at least compatible with this.
 - Alternative: cause & instrument = INSTR, causer & agent = ABL (cf. Modern Greek), then merger of both contexts as INSTR (cf. Modern Albanian)?

6 Conclusion

- (eventive) long and short passives can be reconstructed as a “function” (syntactic context) of non-active morphology in PIE
 - Must be kept separate from (later) stative periphrastic constructions in the individual branches
- Syntactic reconstruction is possible despite the “lack of exact equations” (the correspondence problem) if we take the BCC seriously
- Frequency of this construction (and of overt demoted agent) not directly relevant
- Absence of dedicated passive morphology does not mean that passive constructions cannot be expressed → Voice syncretism
- Demoted agents attested in all older IE languages, case originally instrumental

Future work: closer study of case on demoted agent vs. instrument, further tests for distinguishing anticausatives from passives in corpus languages

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