The original mismatch revisited: Deponency between morphology, syntax, and the lexicon

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Introduction

- Deponents – verbs with nonactive/passive morphology but active syntax – have long occupied a central position in the debate around **form-meaning mismatches** and may even be considered the "original mismatch" in Western linguistics (cf. the papers in Baerman et al. 2007)
- They thus play a crucial role in determining "to what extent morphosyntactic structures are mapped onto meaning."
(`https://www.uni-goettingen.de/de/635554.html`)
- However, the definition of deponency and assessment of the *cause* of the perceived mismatch vary wildly, depending on one's theoretical assumptions concerning the morphology-syntax interface
- As "exceptions" (lexical idiosyncracies), it's unclear what (if any) role deponents should play in our theory of the lexicon/the morphology-syntax interface/"grammar"

Today's goals

- Argue for a "narrow" definition of deponency in the verbal system of a particular type of languages (i.e., those with syncretic nonactive voice)
  - Deponency in the narrow sense arises only in verbs with non-canonical "low agents" in which the surface subject is base-generated in the wrong structural position for diachronic reasons.
- Discuss the nature of the selectional relationship between (external) arguments and (deponent) roots, which seems to require root-specific (lexically idiosyncratic) rules that are excluded by standard approaches to locality relations within complex word forms
- Argue that "low agents" *are* compatible with accounts in which argument selection is syntactic & interpretation is strictly local and features percolate freely upon Merge (Zeijlstra 2020)

Overall, we want to reduce the role of root-specific idiosyncrasy in verb meaning as much as possible, even in a domain that is generally considered prototypically exceptional.

Outline of today's talk

1. Introduction
2. Background:
   - What is deponency?
   - Canonical vs. non-canonical uses of voice morphology
3. Deponency and Voice
   - A postsyntactic approach to voice morphology & voice syncretism
   - Locating the mismatch
4. Analysis: deponency and argument structure
   - Proposal: "low agents"
   - Diachrony: deponency as reanalysis
   - Self-benefactives and affected experiencers in "Greek-type languages"
   - Additional evidence: deponency in nonfinite contexts
5. Previous approaches and why they fail to capture the locus of the mismatch
6. Selection and licensing: deponency and the lexicon
7. Conclusion

Background: What is deponency?

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- **voice mismatch** verbs: mismatch between morphological form and syntactic "function" (= context)
- Lat. *dē-pōnere* 'lay aside', sc. the verb's nonactive "meaning"
- A common feature of the voice systems of older Indo-European (IE) languages: Sanskrit, Greek, Latin, Hittite, Old Irish, Tocharian ... and some modern IE languages (Modern Greek, Modern Albanian).

What is deponency?

(1) Latin alternating vs. deponent verbs:

	a. Pres.act.	b. Pres.pass.
Alternating	*am-***ō** 'I love'	*am-***or** 'I am (being) loved'
Deponent		*hort-***or** 'I encourage'

- *hortor* should mean 'I am (being) encouraged' — but it means 'I encourage'
- a lexical idiosyncracy

What is deponency?

(2) **Latin**: *hortor* 'incite, encourage': Plautus, *Mercator* 695–697:

sed ***coquōs***, *quasi in mari solet hortātor*
but cooks.ACC.PL like in sea.ABL be.wont.to.3SG.PRES inciter.NOM
rēmiges hortārier, *ita* ***hortabātur***.
rowers.ACC.PL incite.INF.**PASS** so incite.3SG.IPF.**PASS**

"But just like at sea a rowing-master (lit. 'inciter') is wont to urge the rowers, so he urged the cooks."

Why do we have the intuition that something has "gone wrong" with the voice morphology of these verbs?

What is deponency?

Latin, Ancient Greek, Vedic Sanskrit, Modern Greek, etc. ... have a **bivalent voice system** in which an opposition between active and nonactive voice is expressed through verbal inflection together with tense and agreement features → "Greek-type voice system"

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	Active	Nonactive
1	*-mi*	*-mai*
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- "nonactive" is a cover term for what is usually called "middle" or "mediopassive" morphology in these languages
- Pre-theoretically, we have some notion of the syntactic contexts in which we expect active vs. nonactive morphology

What is deponency?

... but it is easy to find (near-)synonyms with differing voice morphology, e.g.:

(4) Active/nonactive (near-)synonyms in IE languages

Language	Nonactive verb	Active verb	Meaning
Latin	*hortor*	*moneō*	'encourage, incite'
	fūror	*clepō*, *rapiō*	'steal, rob'
Sanskrit	*grásate*	*átti*	'devours/eats'
Hom. Greek	*erúomai*	*phúlassō*	'protect, guard'
Modern Greek	*eborevome*	*adallasso*	'trade'
	katarieme	*anathematizo*	'curse'

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- Why do we find differing voice morphology in apparently identical syntactic contexts?

Identical syntactic contexts

E.g., Latin:

(5) ***hortā-tur*** *ut* *sē* *et* *Appium* ***sequ-ā-ntur***
encourage-3SG.PASS so.that him.ACC and Appius.ACC follow-SUBJ.-3PL.PASS
"He encourages (them) to follow him and Appius ..." (Cic. *Att*. 4.2)

(6) *extrā* *iocum* ***mone-ō*** *tē*, ... *ut* *cum* *virīs* *bonīs*,
without joke urge-1SG.ACT you.ACC that with men.ABL good.ABL.PL
iūcundīs, *amantibus* *tuī* *vīv-ā-s*.
agreeable.ABL.PL loving.ABL.PL you.GEN live-SUBJ-2SG.ACT
"Joking aside, I urge you to surround yourself with good, agreeable and loving friends ..." (Cic. *Fam*. 9.24)

Further examples/arguments in Grestenberger (2023).

Voice mismatches

- What governs the distribution of active vs. nonactive morphology in these languages?
- Can we predict the canonical distribution of active/nonactive morphology?

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- How can we account for voice mismatches and syntax-morphology mismatches in general?

Voice mismatches

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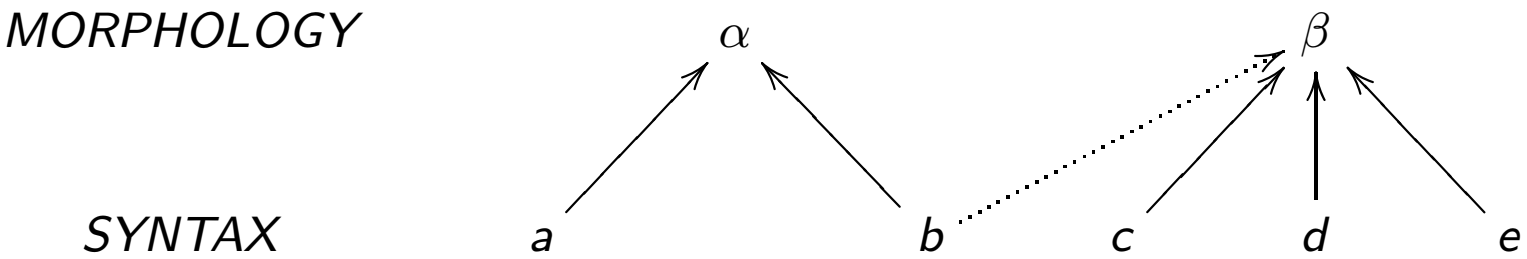
- Can we predict the canonical distribution of active/nonactive morphology?

The broader question:

- How can we account for voice mismatches and syntax-morphology mismatches in general?

(7) Syntax-morphology mismatch



Canonical contexts of nonactive morphology

- Before comparing different solutions that have been proposed, a quick reality check is in order: what are the canonical contexts in which we expect to find the exponents of Latin "passive voice"?
- The endings glossed above as PASS are actually found in a variety of contexts → **voice syncretism** (Embick 1998)

Canonical contexts of nonactive morphology

- Voice syncretism is extremely common (maybe the norm) cross-linguistically
  - Haspelmath 1990; Kemmer 1993; Alexiadou & Doron 2012; Zúñiga & Kittilä 2019; Bahrt 2021; Inglese 2021; Oikonomou & Alexiadou 2022; Grestenberger & Kamil 2024, etc.
- **"passive" morphology is almost alyway syncretic**
  - Only 2 out of the 222 languages studied in Bahrt (2021) have a non-syncretic passive.

$\rightarrow$ this is also the case in Latin, as in the closely related older IE languages with the same inherited active/nonactive distinction on the inflectional endings.

Canonical contexts of nonactive morphology

- Active vs. nonactive endings are found in "canonical" environments (= environments where a particular type of voice morphology is expected)
- Nonactive morphology is found in the same syntactic environments cross-linguistically
  - e.g., Klaiman 1991; Kemmer 1993; Embick 1998; Kaufmann 2007; Alexiadou & Doron 2012; Luraghi 2012; Alexiadou et al. 2015; Grestenberger 2018; Zúñiga & Kittilä 2019; Inglese 2021, 2022, 2023; Bahrt 2021; Oikonomou & Alexiadou 2022.

(8)
a. Anticausatives/inchoatives (i.e., intr. Change of State verbs):
e.g., Engl. *grow*, *darken*, *turn*
b. Reflexives and reciprocals:
e.g., Engl. *wash (oneself)*, *see oneself*; *meet*, *fight*
c. Self-benefactives/autobenefactives/"indirect reflexives":
e.g., Engl. *buy oneself a car*
d. Dispositional/generic constructions:
e.g., Engl. *Bureaucrats bribe easily*
e. Passives/"mediopassives":
e.g., Engl. *is (being) washed*, *is (being) bribed*

Canonical contexts of nonactive morphology

(8) are *alternating* contexts for which a corresponding active-marked verb *from the same stem* exists:

(9) Voice alternations in Ancient Greek

Function	Nonactive	Active
Anticausative	*daío-mai* 'burn, blaze' (itr.)	*daí-ō* 'burn sth.'
Reflexive	*loúo-mai* 'wash myself; bathe'	*loú-ō* 'wash sth.'
Self-benefactive	*phéro-mai* 'carry (away) for myself'	*phér-ō* 'carry, bear'
Passive	*theíno-mai* 'am struck, killed'	*theín-ō* 'kill, strike'

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(10) Voice alternations in Modern Greek

Function	Nonactive	Active
Anticausative	*sikon-ome* 'rise'	*sikon-o* 'raise'
Reflexive	*plen-ome* 'wash myself'	*plen-o* 'wash'
Self-benefactive	*promithev-ome* 'supply myself'	*promithev-o* 'supply'
Passive	*skoton-ome* 'am killed'	*skoton-o* 'kill'

Canonical contexts of nonactive morphology

BUT: *nonactive morphology is also found in* ***non-alternating/non-oppositional*** *contexts*

- (Kemmer 1993, Zombolou & Alexiadou 2014; Grestenberger 2018, 2023; Inglese 2021 etc.)

(11)
a. non-alternating change of state (CoS) verbs
b. reflexives and reciprocals
c. (some) verbs of motion
d. subject experiencer verbs & (psychological) state verbs
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→ *media tantum* ("middle only")

- If non-alternating verbs can be canonically nonactive-marked, then we shouldn't conflate being non-alternating with being "deponent", if "deponent" is defined as "laying aside the canonical function associated with nonactive morphology".

Canonical contexts of nonactive morphology: Latin

(12) Canonical non-alternating nonactive verbs in Latin (cf. Flobert 1975)

a. **Anticausative/inchoative change-of-state verbs**:
morior 'die'; *orior* 'rise, be born'; *dēfetīscor* 'become tired'; *expergīscor* 'wake up'; *īrāscor* 'become angry'; *nāscor* 'be born', etc.

b. **Reflexive/reciprocal verbs**:
amplector, *amplexor*, *circumplector*, *complector* 'embrace'; *aemulor* 'rival, vie with'; *congredior* 'meet with', etc.

c. **Verbs of motion**:
gradior 'walk', *lābor* 'glide, slip', *proficīscor* 'start out', *grassor* 'go, move', etc.

d. **Experiencer verbs, psychological state verbs**:
adsentor 'agree with' (dat.), *cōnspicor* 'see, perceive', *experior* 'experience, undergo', *frūnīscor* 'enjoy', *fruor* 'enjoy' (acc./abl.), *obliviscor* 'forget', *opīnor* 'believe, think', *patior* 'suffer, endure', *reor* 'reckon, believe', *vereor* 'fear, revere', etc.

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These are clearly not "passive" in any sensible use of the term.

Canonical contexts of nonactive morphology

- So what we actually have, descriptively, is a tripartite system where some verbs are active only (Lat. *actīva tantum*), some verbs alternate between active and nonactive, and some verbs are nonactive only (Lat. *media tantum*, " middle only").

(13) Alternating verbs, *actīva tantum* & *media tantum* in Latin

a. Active only	b. Alternating		c. Nonactive only
	Active	Nonact./Passive	
e-ō	*am-ō*	*am-or*	*hort-or*
'go'	'love'	'am loved'	'exhort'
rube-ō	*dūc-ō*	*dūc-or*	*fru-or*
'be red'	'lead'	'am led'	'enjoy'
mane-ō	*mone-ō*	*mone-or*	*mori-or*
'stay'	'admonish'	'am admonished'	'die'

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How common is this system?

Canonical contexts of nonactive morphology

Not only is this system extremely widespread (Inglese 2021; Oikonomou & Alexiadou 2022), it was basically already analyzed this way for Sanskrit in the 5th c. BCE by Pāṇini (*Dhātupāṭha* ≈ 'verb list'):

- *ātmanepadin* ('for oneself-verbs', *media tantum*), Ā-verbs
- *parasmaipadin* ('for somebody else-verbs', *actīva tantum*), P-verbs
- *ubhayapadin* ('both-verbs'), alternating verbs, U-verbs

(14) P-, Ā-, and U-verbs in ancient IE languages (Grestenberger 2023)

	Classical Skt.		Homeric Gk.		Toch. B		Toch. A	
	#	%	#	%	#	%	#	%
P	1,038	51.9	129	36	150	28	148	33.9
Ā	485	24.2	89	25	103	19.2	104	23.8
U	478	23.9	141	39	283	52.8	185	42.3
Total	2,001		359		536		437	

Canonical contexts of nonactive morphology

- Zombolou & Alexiadou 2014: 1,348 verbs out of approx. 5,500 verbs in Modern Greek are Ā-verbs (= take only middle endings") = ca. 20%
  - Reflexive & reciprocals: 33% (*aftoeksipiretume* 'serve oneself', *adelfoskotonome* 'brother-kill each other', ...)
  - anticausatives/inchoatives: 19% (*ekrignime* 'explode', *enilikionome* 'become an adult'...)
  - cognitive verbs: 13% (*fovame* 'fear', *esthanome* 'feel' ...)
  - unaccusatives: 9% (*erhome* 'come' ..)
  - passives: 8% (*iliokeome* 'be burnt by the sun')
  - statives: 7% (*ironevome* 'be ironic', *tsigunevome* 'be stingy' ...)
  - **active-like** (= agentive): 11%, e.g., *metahirizome* 'use', *ekmetalevome* 'exploit' ...

→ Non-alternating canonical Ā-verbs are a stable feature of syncretic voice systems.

Interim summary

- In voice syncretism languages such as Latin, nonactive morphology is found in a variety of "canonical contexts" (still to be defined), some of which alternate while others don't.
- This is a common phenomeon found in other (related and unrelated languages) with a similar voice (marking) system.
- Therefore we must not conflate "non-alternating" with "mismatch" without a clear idea of which morphosyntactic contexts we actually expect to see active and nonactive endings in.

Deponency and Voice

A postsyntactic approach to voice morphology

Formalizing the generalizations concerning *canonical contexts for nonactive morphology*:

(15) alternating

a. anticausative/CoS
b. reflexive/reciprocal
c. self-benefactive
d. (medio)passive

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- a. experiencer
- b. statives
- c. motion verbs
- d. speech act verbs

Is there a unifying generalization for these contexts?

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Is there a unifying generalization for these contexts?
→ Their surface subjects ≠ agents.

Theoretical background: Voice

Because there are are more syntactic contexts (e.g., active, passive, reflexive ...) than there are voice markers (active, nonactive), a promising approach is to define a syntactic-semantic condition in which nonactive/"middle" morphology appears and treat active morphology as "Elsewhere".

- The condition has to be fairly broad because of the many different environments in which we encounter this morphology → "no external argument DP", **[-ext.arg.]/[-D]**.
- essentially, "no agent subject" in the functional projection/piece of verbal structure related to voice alternations (VoiceP; Kratzer 1996)

(17) Spell-Out condition on nonactive morphology
Voice → Voice[NonAct]/_ No DP specifier

(Embick 1998, 2004a, Alexiadou 2013, Kallulli 2013, Alexiadou et al. 2015, Grestenberger 2018, 2021, Kastner 2020, Oikonomou & Alexiadou 2022, etc.)

Theoretical background: Voice

Assume further that this piece of structure ("Voice") can be absent. This gives us the following typology of contexts for active/middle-marked verbs (note that whether or not they are alternating is irrelevant).

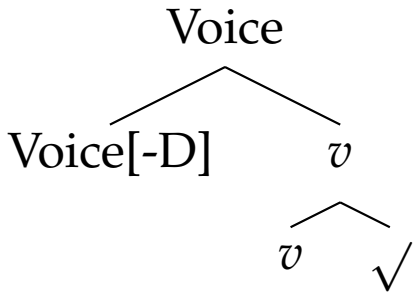
(18) Distribution of active vs. nonactive/middle morphology:

	+ext.arg./+D	-ext.arg./-D
Voice	ACT	NONACT
—	n/a	ACT

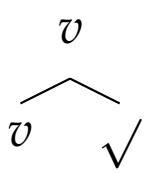
Theoretical background: Voice

This means that we have two available structures for verbs without an external argument (≈ non-agentive verbs), one which will surface with middle/nonactive endings by (17), (19a) and one that will surface with active-as-Elsewhere endings, (19b):

(19) a.



b.



- (19a) = "expletive Voice" (Wood 2014, Schäfer 2017), semantically inert/identity function only
- (19b): e.g., intransitive verbs of the causative alternation ("unmarked anticausatives") (Alexiadou & Anagnostopoulou 2004, Schäfer 2008)

Marked vs. unmarked anticausatives

(20) Marked vs. unmarked anticausatives (Alexiadou & Anagnostopoulou 2004; Schäfer 2008, 2009; Alexiadou et al. 2015)

	marked		unmarked	
French	***s'****agrandir*	'become bigger'	*cuire*	'cook'
	s'*améliorer*	'improve'	*fondre*	'melt'
	se *couvrir*	'become covered'	*grandir*	'grow'
German	***sich*** *vergrößern*	'enlarge'	*schmelzen*	'melt'
	sich *ausdehnen*	'extend'	*kochen*	'cook'
	sich *verändern*	'change'	*austrocknen*	'dry out'
Modern Greek	*kommatiazo-****me***	'tear'	*asprizo*	'whiten'
	*miono-****me***	'decrease'	*kokinizo*	'redden'
	*veltiono-****me***	'improve'	*klino*	'close'

Digression: Voice vs. *v*

The verb stem itself (= *v*) does not introduce the external argument.

(21) Vedic alternating and deponent verb stems

Alternating		Deponent	
Stem	Meaning	Stem	Meaning
várdh-a-$^{\text{act./nonact.}}$	'grow'	*rábh-a-*$^{\text{nonact.}}$	'seize'
bhár-a-$^{\text{act./nonact.}}$	'carry'	*grás-a-*$^{\text{nonact.}}$	'devour'
yáj-a-$^{\text{act./nonact.}}$	'sacrifice'	*trā́-ya-*$^{\text{nonact.}}$	'protect'

More arguments for "voice-splitting" (Harley 2017) in IE: Grestenberger 2022b, Calabrese & Grestenberger 2023.

Flavors of Voice

(22) Alexiadou et al. 2015, Schäfer 2017: Typology of Voice (modified):

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

b. **Medio-passive Voice:** {$\lambda e \exists x$**[agent(e, x)], -D**}
   - 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 → agent = existentially bound

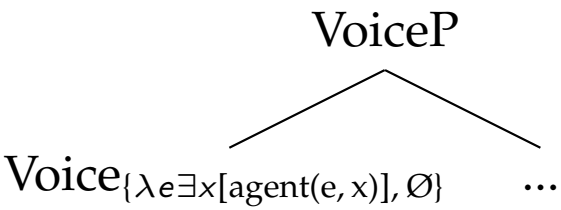
c. **Medio-marked expletive Voice: {Ø, -D}**
   - Morphologically non-active anticausatives in Greek-type languages

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

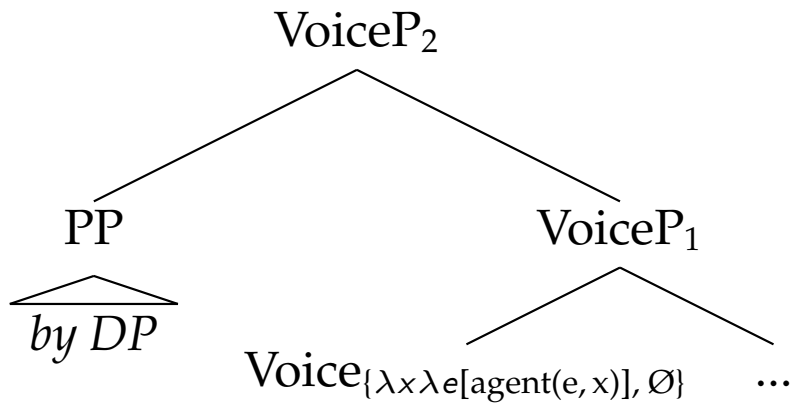
Flavors of Voice

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

a. Mediopassive Voice:



b. "Passive input" Voice



Revising the Spell-Out condition

(24) Spell-Out condition on nonactive morphology, revising (17):
T[ϕ,$\pm$past,Q] $\leftrightarrow$ T[ϕ,$\pm$past,NONACT]/Voice[-D](...)$\frown$_

$\rightarrow$ Q = placeholder variable for phonological exponence (Embick 2015); NONACT = nonactive allomorphs of T/Agr.

Deponents and Voice

- Deponents are "mismatch verbs" because their surface subject is an agent, but they surface with nonactive morphology, apparently violating (24).

(25) Narrow deponency (Grestenberger 2018: 502)
In an active–nonactive voice system, a deponent is a verb with an agent subject that appears in a syntactically active context and is morphologically nonactive.

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(25) Narrow deponency (Grestenberger 2018: 502)
In an active–nonactive voice system, a deponent is a verb with an agent subject that appears in a syntactically active context and is morphologically nonactive.

→ We have now reduced the mismatch to a small class of lexically idiosyncratic verbs, namely the class in (26).

(26) Active/nonactive (near-)synonyms in IE languages

Language	Nonactive verb	Active verb	Meaning
Latin	*hortor*	*moneō*	'encourage, incite'
Sanskrit	*grásate*	*átti*	'devours/eats'
Hom. Greek	*erúomai*	*phúlassō*	'protect, guard'
Modern Greek	*eborevome*	*adallasso*	'trade'

Deponents and Voice

- We have now reduced the apparent mismatch to a specific argument structure property: Deponents (narrow definition) have an agent(ive) subject, that is, they behave like verbs with a canonical external argument:
  - They make agent nouns
  - They are compatible with agent-oriented adverbs
  - They passivize (under specific circumstances)

Cf. Grestenberger 2018, 2023.

Agent nouns

(27) Latin agent nouns from non-deponent and deponent verbs

a. active, non-deponent

verb		agent noun	
mone-ō	'advise	*moni-tor*	'adviser'
vinc-ō	'conquer'	*vic-tor*	'conqueror'
leg-ō	'read'	*lēc-tor*	'reader'

b. deponent

verb		agent noun	
hort-or	'incite'	*hortā-tor*	'inciter'
vēn-or	'hunt'	*vēnā-tor*	'hunter'
tue-or	'follow'	*tūt-or*	'follower'

Agent-oriented adverbs

E.g., Lat. *cōgitātē* 'deliberately, thoughtfully':

(28) Deponent *meditor* 'think, consider', Plautus, *Miles gloriosus* 944:

Ab-eāmus ergō intrō, haec utī ***meditēmur*** ***cōgitātē***
PRVB-go.SUBJ.1PL then inside these so.that consider.1PL.SUBJ deliberately

"Let us go inside, then, so that we may carefully consider these things."

(29) Non-deponent, Plautus, *Poenulus* 1221:

ut pudīcē ***verba*** ***fēcit***, ***cōgitātē*** *et commodē, ...*
how modestly words.ACC make.PRF.ACT.3SG deliberately and properly

"How modestly did she pick her words, deliberately and properly ..."

Passivization

- This is more controversial – deponents are usually said *not* to passivize in Latin, but it's unclear why.
- They do passivize in Sanskrit and Greek, using the same passive morphology as non-deponent transitives.

Passivization

Generalization: Deponents can passivize if passive morphology that is distinct from the morphology triggering the mismatch is available; e.g., Vedic: bivalent system, but a distinct passive suffix is available in the present stem, (30c).

(30) a. Present active:

*bhár-a-**ti***

carry-V-3SG.NONPST.**ACT**

"carries sth."

b. Present middle:

*bhár-a-**te***

carry-V-3SG.NONPST.**NONACT**

"carries oneself/for one's own benefit/*is being carried"

c. Present passive:

*bhri-yá-**te***

carry-PASS-3SG.NONPST.**NONACT**

"is being carried"

Passivization

Deponents behave like active transitive verbs in being able to form a *yá*-passive in their imperfective stem.

(31) Vedic deponent passives

Root	Deponent	Passive
īḍ	*ī́ṭ-**ṭe*** 'praises'	*īḍ-yá-**te*** 'is being praised'
	praise-3SG.NONPST.**NONACT**	praise-PASS-3SG.NONPST.**NONACT**
idh	*ind-**dhé*** 'kindles'	*idh-yá-**te*** 'is being kindled'
	kindle-3SG.NONPST.**NONACT**	kindle-PASS-3SG.NONPST.**NONACT**
rabh	*rábha-**te*** 'seizes'	*rabh-yá-**te*** 'is being seized'
	seize-3SG.NONPST.**NONACT**	seize-PASS-3SG.NONPST.**NONACT**

Passivization: Greek

- Greek: bivalent system, but the aorist stem forming suffix ***-thē-*** develops into a passive marker in (post-Homeric) Greek
- Deponents make passive aorists using this suffix:

(32) Deponent *dōréomai* 'give, endow with', Hdt. *Hist*. 8.85.3:

Phúlakos dè euergétēs basiléos an-e-gráph-ē
Phulakos.NOM PTCL benefactor.NOM king.GEN down-PST-write-PFV.PASS.3SG
kaì khṓrēi ***e-dōré-thē*** *pollêi*
and land.DAT PST-endow-PFV.PASS.3SG much.DAT

"Phulakos was recorded as benefactor of the king and endowed with much land."

→ deponent passive *edōréthē* 'was endowed' : non-deponent passive *anegráphē* 'was recorded'.

Passivization: Latin

- Passive use of forms like *hortor* isn't excluded in this approach → voice syncretism, many-to-one-mapping.
- And occasional cases of passively used deponents are discussed in the literature (Draeger 1878: 156ff., Hofmann 1910: 12ff., 32ff., Flobert 1975, Embick 2000: 194), e.g., (33).
- But they appear to be very rare.

(33) Varro ap. Prisc. II, 387:

ab amīcīs hortā-rētur
by friends.ABL urge-IPF.SUBJ.PASS.3SG

"He was urged by his friends"

Passivization: Latin

- Another passive-like construction that treats non-deponent and deponent agentive transitive verbs alike: the gerundive.
- = a passive necessity modal

(34) *sēd utrum* ***horta-nd-us*** *es* *nōbīs*, *Lūcī*, *inquit*, ...
but ADV urge-GER-NOM.SG.M be.2SG us.DAT Lucius.VOC ask.3SG
"'But Lucius', he asked, 'do we have to urge you,' ..." (lit. "are you for us to be urged"; Cic. *De Fin*. 5.6)

(35) *itaque nōbīs* ***mone-nd-ī*** *sunt* *eī* *quōrum*
thus us.DAT admonish-GER-NOM.PL.M be.3PL they.NOM whose
sermō *imperītus* *incrēbruit*, ...
speech.NOM ignorant.NOM.SG increase.PRF.3SG
"Therefore we have to admonish those whose speech has become increasingly ignorant ..." (lit., "they (whose speech ...) are for us to admonish"; Cic. *Orat*. 7)

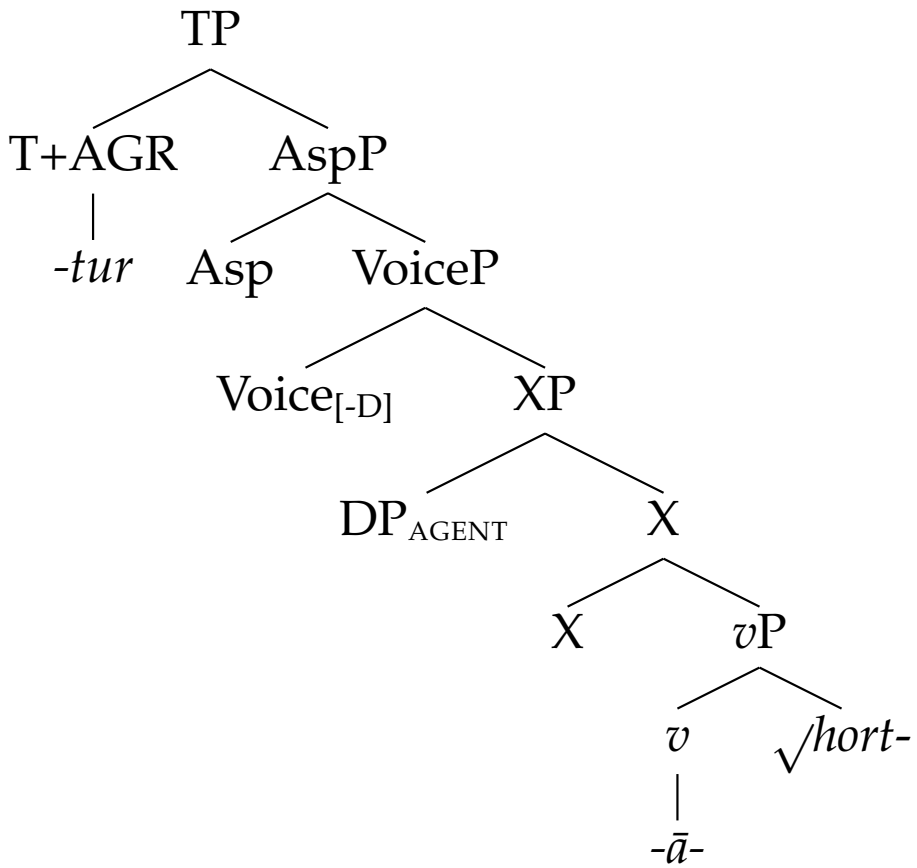
Analysis: Deponency and argument structure

Deponents: analysis

- **Core claim**: Deponents have an agent argument, but it's merged in the "wrong position" — below VoiceP
- Therefore deponents surface with nonactive morphology as predicted by (17).
- Syntactically, they behave like active-marked agentive verbs

Deponents: analysis

(36) Lat. deponent 3sg. *hortātur* 'urges, incites'



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  - The surface subject is base-generated below VoiceP → Voice is spelled out as nonactive because it does not introduce an external argument
- NB: Movement of DP to subject does *not* trigger active morphology
  - Independently needed assumption for intransitive canonical nonactive verbs with nominative subjects, e.g., statives, anticausatives ...
- ... but deponents behave like agentive verbs (they make agent nouns, passives, have agent-oriented adverbs) because they merge a *non-canonical* agent DP.

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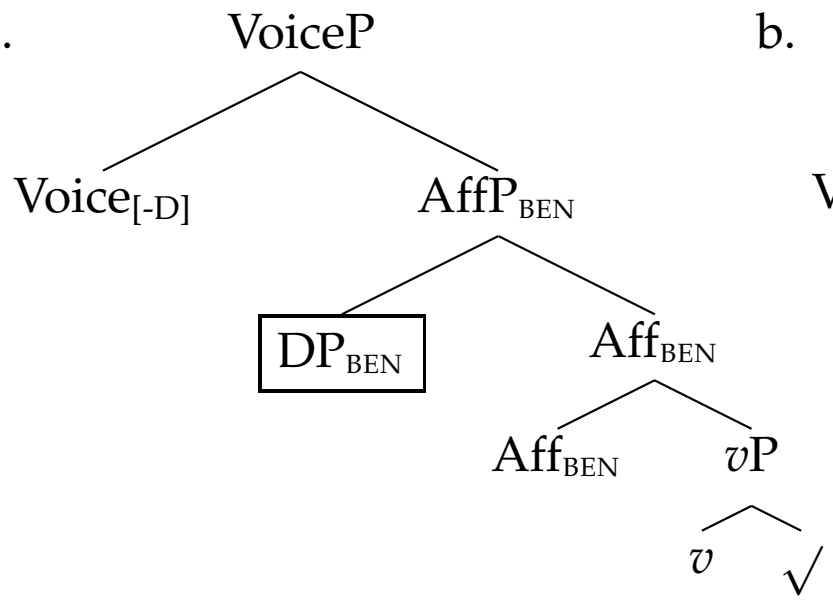
- ... but deponents behave like agentive verbs (they make agent nouns, passives, have agent-oriented adverbs) because they merge a *non-canonical* agent DP.
- Where does this DP come from? What's "XP" in (36)?

Deponency as reanalysis

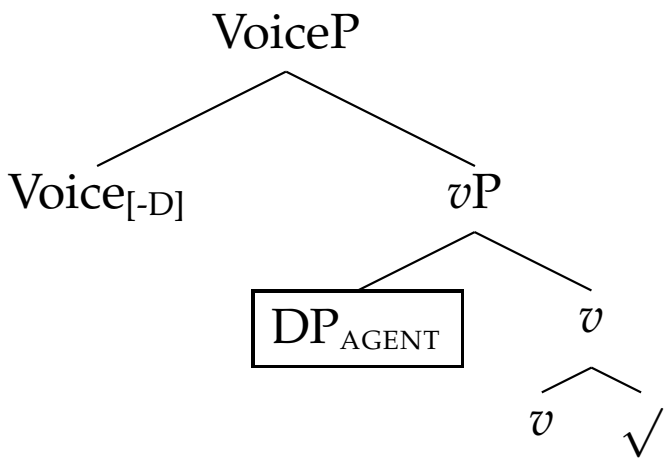
"Deponent reanalysis": a canonical nonactive transitive verb in which the surface subject starts out below VoiceP (e.g., an experiencer or selfbenefactive argument) is reanalyzed as a nonactive transitive verb with an agent subject.

(37)

a.



b.

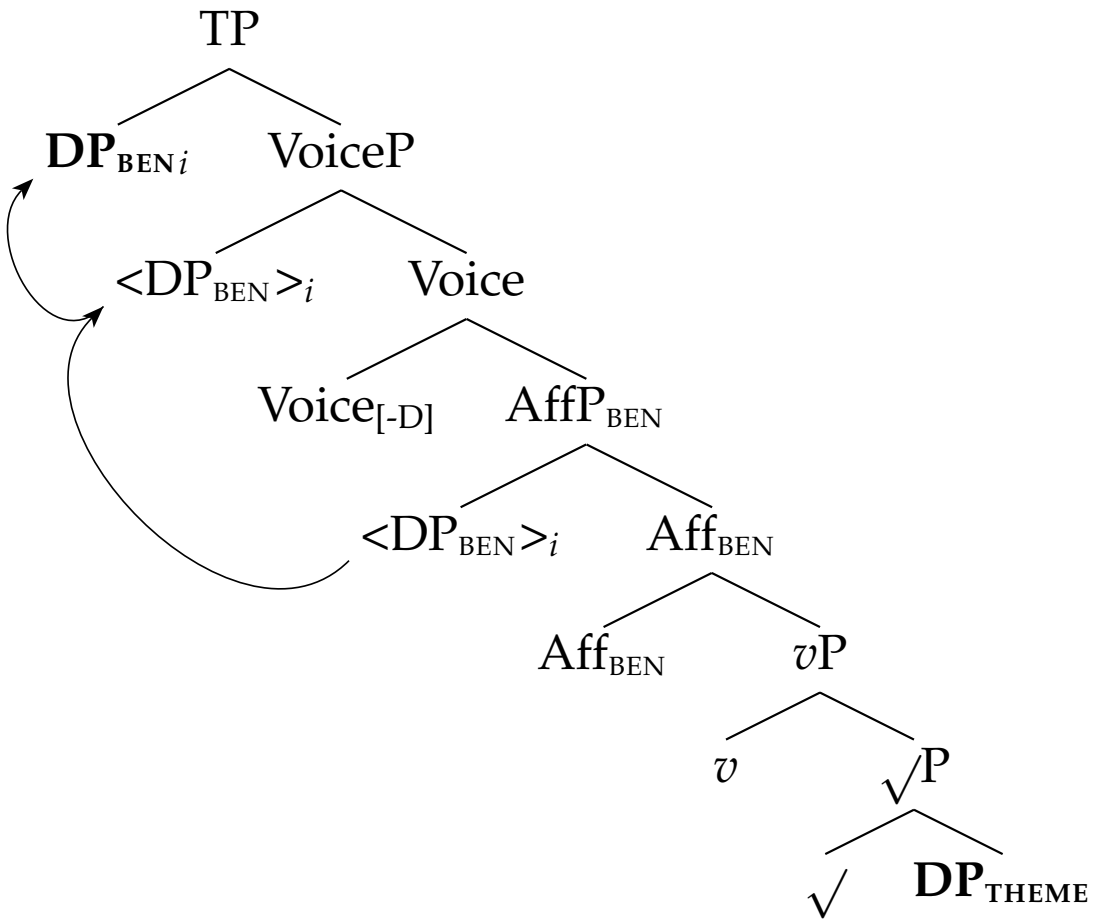


AffP introduces "affected experiencers" (Bosse et al. 2012; cf. Pylkkänen 2008's "low applicatives")

Self-benefactives

Self-benefactives in Greek-type voice systems: surface subject = benefactive/ exp. argument merged by Aff_{BEN} (**movement analysis of self-benefactives**):

(38)



Self-benefactives: Greek

Benefactives and self-benefactives both have nominative subjects and accusative objects—they only differ in their voice morphology:

(39) AG self-benefactive: Hdt., *Hist*. 4.130.1:

taũta *mén* *nun* *epì* *smikrón* *ti*
therefore PART now in small.ACC something.ACC
e-phéro-nto *toũ* *polémou*
PST-bring.IPFV-3PL.**NONACT** this.GEN war.GEN

"Therefore they (the Persians) gained little in this war"

(40) AG benefactive: Hdt. *Hist*. 4.133.2:

ándres *Íōnes*, *eleutheríēn* *hḗkomen* *humĩn*
men.PL Ionian.PL freedom.ACC be.present.1PL.ACT you.DAT.PL
phéro-ntes
bring.IPFV-PTCP.NOM.PL.**ACT**

"Ionians, we are here to bring you freedom"

Self-benefactives: Vedic

(41) Vedic (transl. from Jamison & Brereton 2014):

a. Self-benefactive: RV 1.3.11c

yajñáṃ ***dadh-e*** *sárasvatī*
sacrifice.ACC place.PRF-3SG.PRF.**NONACT** Sarasvatī.NOM
"Sarasvatī has received our sacrifice." (< "has taken/placed for herself")

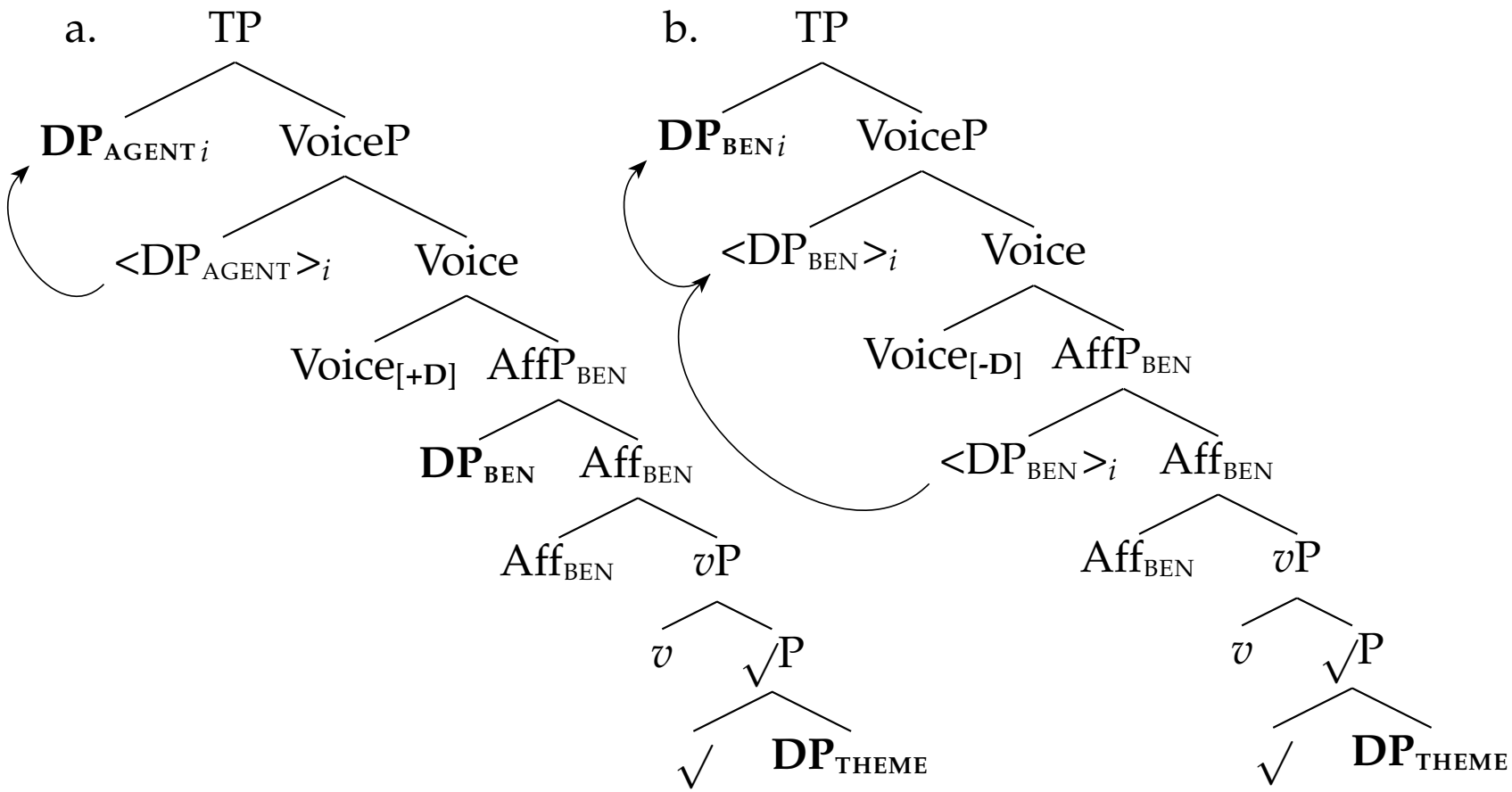
b. Benefactive: RV 4.20.9d

<á>thā ***dadhā-ti*** *drávi̯ṇaṃ* *jaritré*
also+to.PRVB place-3SG.PRS.**ACT** wealth.ACC singer.DAT
"and he establishes material property for the singer."

- The benefactive takes active morphology, the self-benefactive takes nonactive morphology
- Expected if their surface subjects are merged in different positions

Benefactives vs. self-benefactives

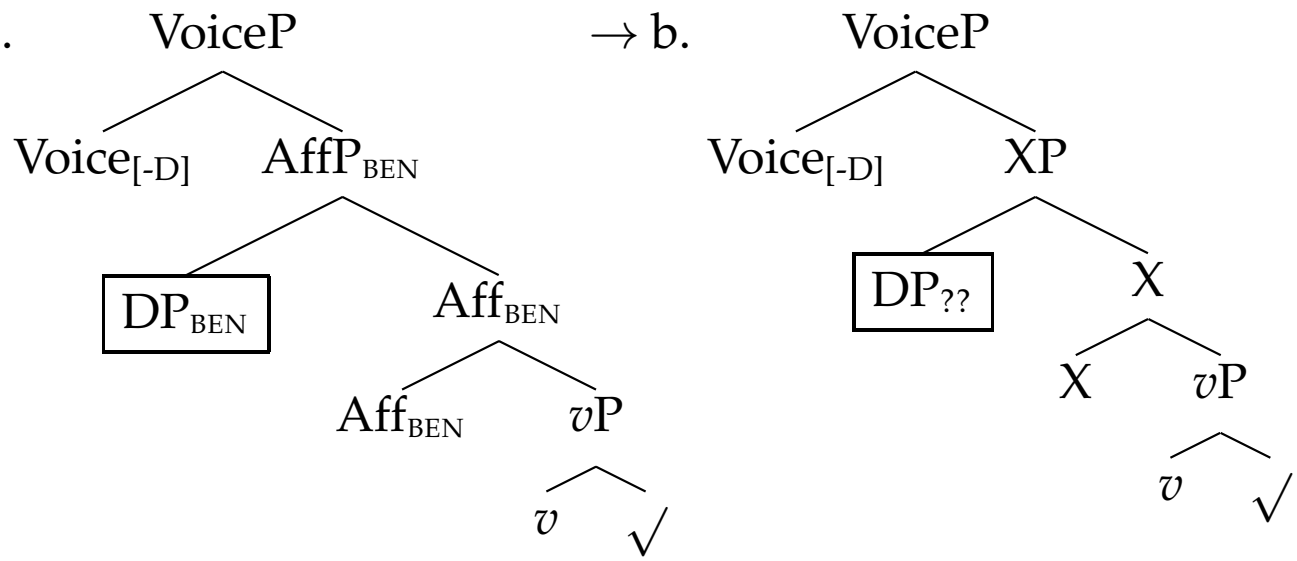
(42) Benefactive vs. self-benefactive



Reanalysis

- Probable starting point/cause of the reanalysis: loss of self-benefactive semantics (= Aff_{BEN})
- Zombolou 2004, 2015, Lavidas & Papangeli 2007, Lavidas 2009: If alternating verbs lose the morphologically active part of their paradigm, the nonactive counterpart becomes vulnerable to reanalysis

(43)



Reanalysis

→ The acquirer is confronted with a transitive, agentive construction with *non-canonical* nonactive morphology. The acquirer either

- "normalizes" the voice morphology, resulting in morphologically active transitive verbs
  - Ex.: Ancient Greek → Modern Greek: non-act. *eksēgeomai* 'I interpret' → act. *eksigo*; non-act. *kharizomai* 'I present with' → act. *kharizo*, etc.

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  or
- acquires a verb with non-canonical voice morphology → **deponent**
  - This seems to have been the preferred strategy in Latin, where the self-benefactive use of the nonactive endings is not synchronically productive.

Reanalysis and "low" agents

Further evidence that a structure such as (43b) would have been a feasible analysis from an L1 acquirer's point of view: "act-like verbs"/**pseudo-agent verbs**

- Denominal verbs from animate noun bases, usually in intransitive and (in Latin) often morphologically nonactive, i.e., "deponent"
- But do not pass the relevant agentivity tests; surface subject may be an experiencer or ACTOR rather than AGENT (cf. Marescotti & Grestenberger 2025)

(44) Latin nonactive pseudo-agent verbs (from Plautus)

nonact. verb		nominal base		
arbitror	'act as witness'	*arbiter*	'witness'	acc/AcI
(h)ariolor	'act as prophet, prophesy'	*hariolus, -a*	'prophet'	—
bacchor	'act like a bacchant, rave madly'	*baccha*	'bacchant'	—
bubulcitor	'be an oxdriver'	*bubulcus*	'oxdriver'	—
per-graecor	'act/live like the Greek'	*Graecus*	'Greek'	—
fūror (sub-)	'steal'	*fūr*	'thief'	acc
interpretor	'act as interpretor; interpret'	*interpret-*	'interpreter'	gen; acc

Variation in deponent participles

- Nonfinite forms of deponents (especially participial ones) provide further evidence that deponency is sensitive to particular *syntactic* configurations, namely those containing **VoiceP**.
- The puzzle: some nonfinite forms of deponents appear to give up the voice mismatch.

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  - Present participles of Latin deponents use the same participial suffix as participles of formally active verbs, (45c.)

(45) Latin alternating vs. deponent verbs: the basic paradigm

	a. Pres.act.	b. Pres.pass.	c. Pres.ptcp.
Alternating	*am-ō* 'I love'	*am-or* 'I am (being) loved'	*ama-**nt-*** 'loving'
Deponent		*hort-or* 'I encourage'	*horta-**nt-*** 'encouraging'

Papangeli & Lavidas 2009, Pesetsky 2009: deponency depends on finite T.

Variation in deponent participles

- A cross-linguistic investigation of various nonfinite forms of deponents in Hittite, Vedic Sanskrit, Homeric Greek, Latin and Modern Greek shows that there is actually variation in whether or not the mismatch is preserved (Grestenberger 2014, 2018, 2023)
- Prediction: deponency surfaces in deverbal formations that include VoiceP
  - ... because that's the locus of the voice mismatch

Mismatch suspended: Agent nouns

- Deponents behave like formally active agentive verbs and form agent nouns, using the same suffix as the regular active verbs.

(46) Vedic agent nouns, suffix *-tár-*:

alternating		deponent	
root	agent noun	root	agent noun
dā 'give'	*dā-tár-* 'giver'	*trā* 'protect'	*trā-tár-* 'protector'
nī 'lead'	*ne-tár-* 'leader'	*īḍ* 'praise'	*īḍi-tár-* 'praiser'
rakṣ 'protect'	*rakṣi-tár-* 'protector'	*kṣad* 'serve'	*kṣat-tár-* 'server'

Baker & Vinokurova 2009: agent nominalizations do not include the Voice head

Mismatch suspended: verbal adjectives

- Vedic, Ancient Greek, Modern Greek, Hittite have "stativizers" that attach directly to the root
  - Ved. *-tá-*, AG *-tós*, MG *-tos*, Hitt. *-ant-*
- Passive reading with transitive verbs, intransitive reading with intransitive verbs

The verbal adjectives of deponents pattern with active transitive verbs in having a passive reading.

(47) Vedic verbal adjectives in *-tá-*

alternating		deponent	
root	verbal adj.	root	verbal adj.
han 'slay'	*ha-tá-* 'slain'	*gras* 'devour'	*gras-itá-* 'devoured'
vac 'speak'	*uk-tá-* 'spoken'	*bādh* 'beset'	*bādh-itá-* 'beset, hemmed in'
pā 'drink'	*pī-tá-* 'drunk'	*labh* 'take'	*-lab-dha-* 'taken' (< **labh-ta-*)

Mismatch suspended: verbal adjectives

Anagnostopoulou (2003), Alexiadou & Anagnostopoulou (2008), etc.: adjectival suffix in MG *tos*-participles ("stative participles") takes a $\sqrt{P}$ complement.

- Only the internal argument is included → "theme-orientedness" of these formations (intransitive subject/transitive object)

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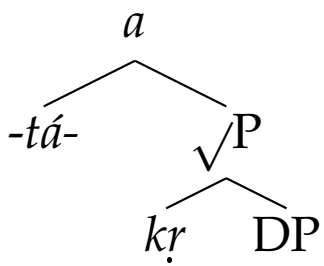
Anagnostopoulou (2003), Alexiadou & Anagnostopoulou (2008), etc.: adjectival suffix in MG *tos*-participles ("stative participles") takes a $\sqrt{P}$ complement.

- Only the internal argument is included → "theme-orientedness" of these formations (intransitive subject/transitive object)
- No verbalizing morphology, no VoiceP → deponents are predicted to pattern with regular transitive verbs

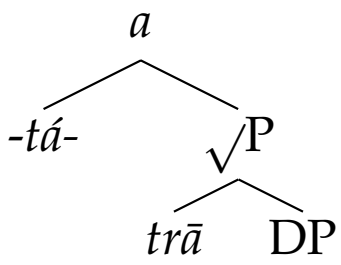
Mismatch suspended: verbal adjectives

Ex.: Vedic verbal adjectives in *-tá-*:

(48) a. non-deponent: *kṛ-tá-* 'made'



b. deponent: *trā-tá-* 'protected'



Besides MG *-tos* and Vedic *-tá-*, this is also the structure of the Ancient Greek *tó*-participle and the Hittite *ant*-participle.

Mismatch continued: Vedic and Greek participles

- Vedic & Greek: active vs. nonactive (middle) participial forms in the present, aorist, and perfect paradigm.
  - Vedic: active *-ant-/-at-*, nonactive *-āna-/-māna-*
  - Greek: active *-(o/e/a)-nt-*, nonactive *-(o/a)-menos*.

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  - Greek: active *-(o/e/a)-nt-*, nonactive *-(o/a)-menos*.
- Deponent participles always select the **nonactive** suffix, as in the corresponding finite forms → the mismatch surfaces in participial forms as well.
  - and in infinitives.

Mismatch continued: Vedic

(49) $\sqrt{}$*day* 'distribute', RV 1.130.7:

atithigvā́ya *śámbaraṃ* *girér* *ugró* *ávābharat*
Atithigva.DAT Śambara.ACC mountain.ABL mighty.NOM down.pushed
mahó ***dhánāni*** ***dáya-māna*** ***ójasā*** (...)
great.ACC prizes.ACC distributing-PTCP.**NONACT**.NOM might.INSTR

"The mighty one pushed Śambara off the mountain for Atithigva, distributing the great prizes with might (...)."

Mismatch continued: Greek

(50) *dízēmai* 'seek sth.': ptcp. *dizḗmenos* 'seeking', Od.1.261-2:

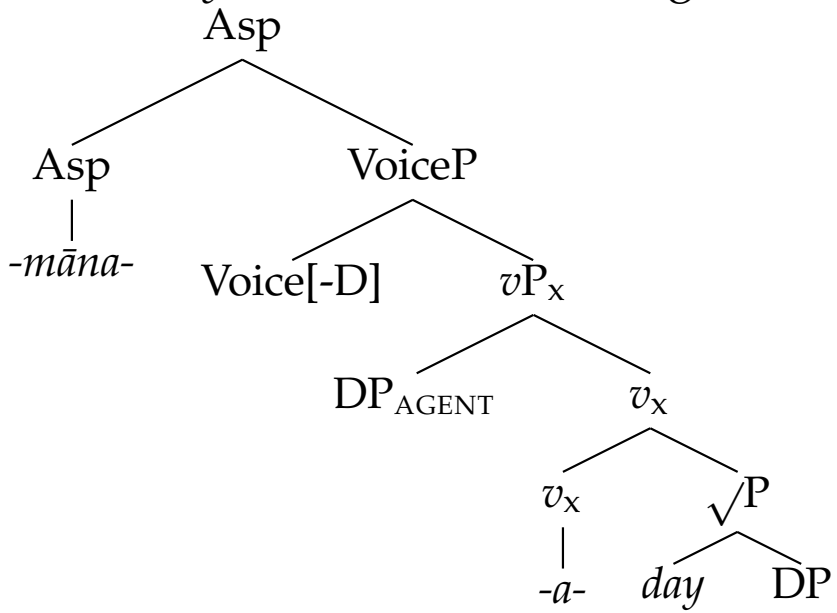
ṓikheto gàr kaì keĩse thoẽs epì nēòs Odusseùs
go.3SG.IPF PART and there swift.GEN on ship.GEN Ulysses.NOM
phármakon androphónon dizḗ-menos
poison.ACC man.slaying.ACC seeking-PTCP.PRS.**NONACT**.NOM

"And then Ulysses went into his swift ship, seeking (some) man-slaying poison."

Mismatch continued: Greek and Vedic participles

Structure for Vedic/Greek deponent participles (participial suffix spells out Asp if there is no verb movement to T, cf. Embick 2000, Bjorkman 2011, Grestenberger 2022a):

(51) Vedic: *dáy-a-māna-* 'distributing'



Spell-Out rules (Vocabulary Items) for Vedic participles:

(52) a. Asp ↔ *-(m)āna-*/Voice[-D]⌢_
b. Asp ↔ *-ant-* (Elsewhere)

Mismatch suspended? Latin

Latin deponents use the same morphology as non-deponents in *some* nonfinite contexts. The mismatch appears to be suspended, e.g., in the present participle.

(53) Latin non-finite forms

	Present			Perfect	
	Pres.act.	Pres.pass.	Pres.ptcp.	Perf.act.	Perf.pass.
Altern.	*am-ō* 'I love'	*am-or* 'I am loved'	***ama-nt-*** 'loving'	*am-āv-ī* 'I have loved'	*amātus sum* 'I was loved'
Dep.		*sequ-or* 'I follow'	***seque-nt-*** 'following'		*secūtus sum* 'I have followed'

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Dep.		*sequ-or* 'I follow'	***seque-nt-*** 'following'		*secūtus sum* 'I have followed'

... but the **perfect** participles of deponents continue the mismatch behavior!

Latin

(54) *sequor* 'follow', perf.ptcp. *secūtus*: Livy, *Ab urbe condita* 4.20.5:

omnēs *ante* *mē* ***auctorēs*** ***secū-tus*** ...
all.ACC before me authors.ACC followed-**NONACT**.PRF.PTCP.NOM

"Having followed all authors before me ..." (not: "having been followed")

- The Latin present "active" participle cannot be used as evidence that deponency is generally suspended in nonfinite contexts

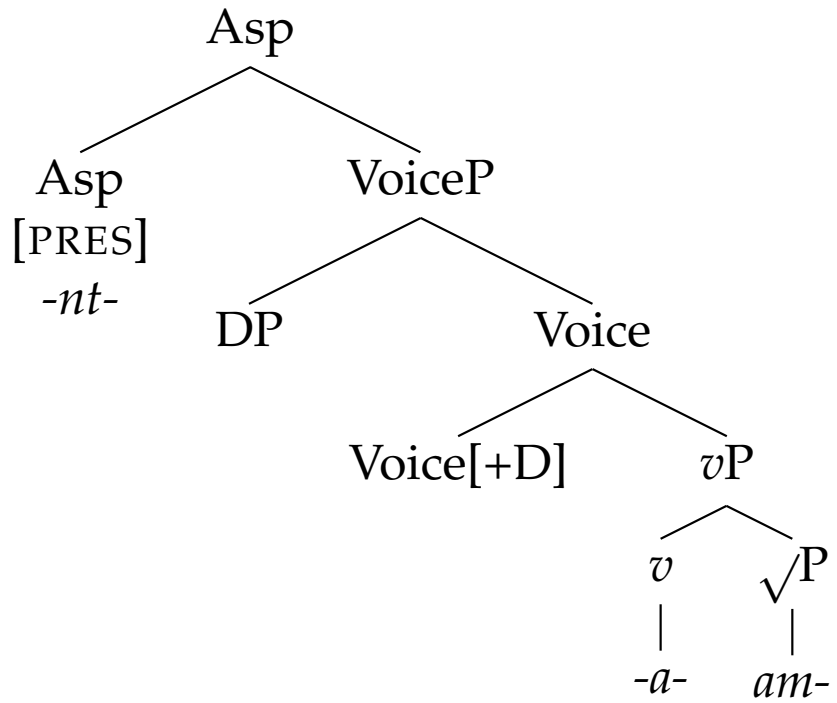
Latin

Additional assumption necessary for Latin *-nt-* (& *-t-*): not sensitive to whether or not Voice has a specifier:

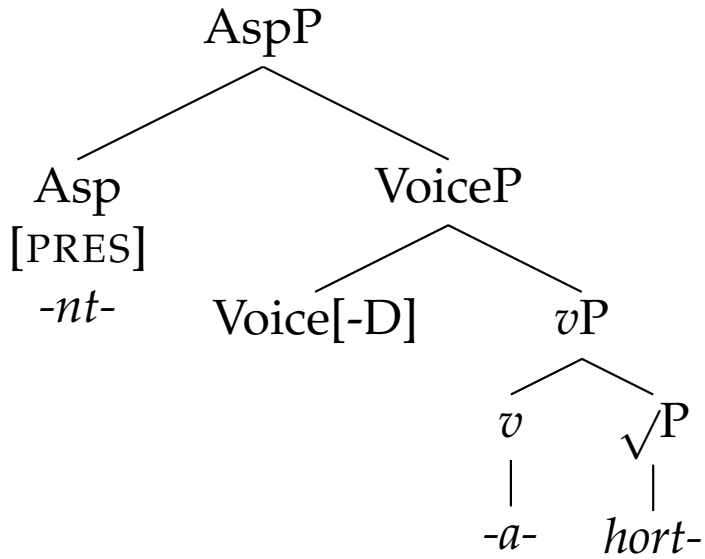
(55) Asp ↔ *-nt-*/[pres]

Syncretism: Asp[PRES] is always spelled out as *-nt-* in nonfinite contexts (Embick 2000: 218).

(56) a. Non-deponent: *ama-nt-*



b. Deponent: *horta-nt-*



Latin

Embick (2000): *-nt-* and *-tus* are allomorphs of Asp; *-tus* = underspecified for both Voice and Asp features, (57).

(57) a. *-nt-* ↔ Asp[PRES]
b. *-t[us]-* (/*-s-*) ↔ elsewhere

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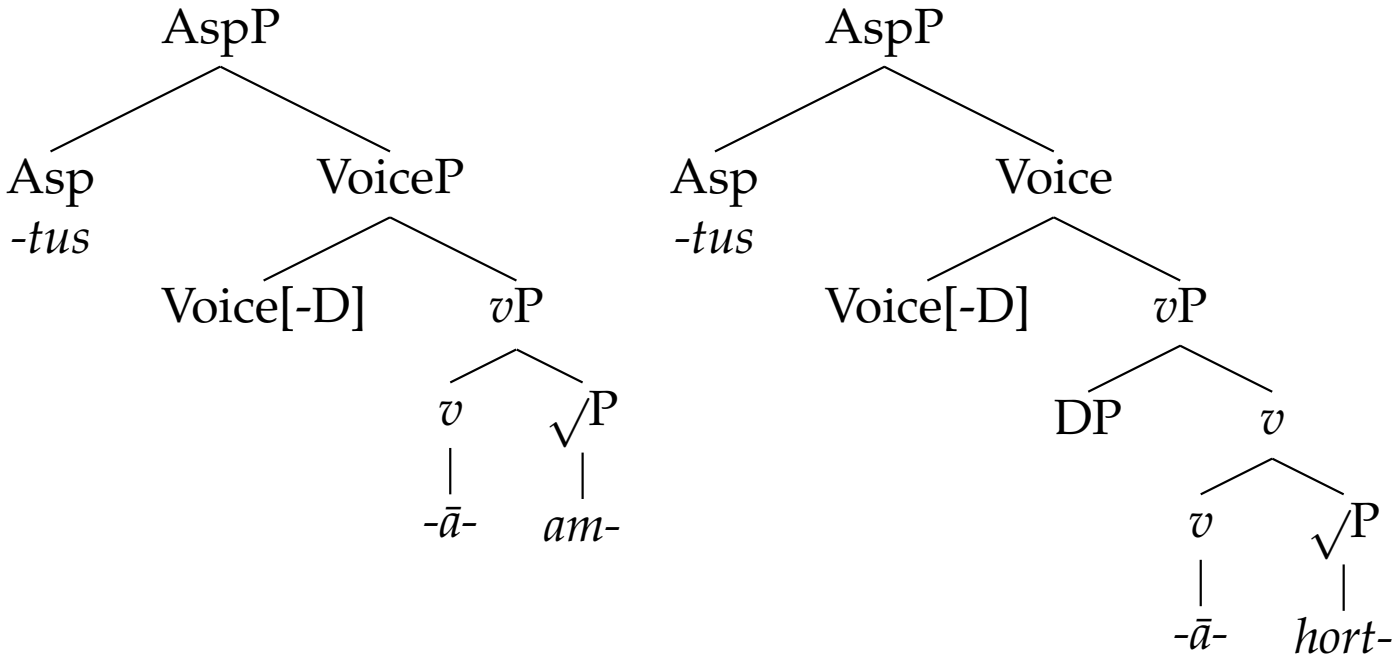
Structure of non-deponent and deponent *tus*-participles:

(58) a. *am-ā-tus* 'loved' b. deponent *hort-ā-tus* 'exhorted'



Latin

Additional evidence that the Latin "active" participle is underspecified for Voice: the present participle of alternating verbs occasionally has the syntactic behavior corresponding to the formally nonactive (rather than active) finite forms.

(59) a. *vertent-* 'turning' (tr./itr.): *vert-ō* 'turn' (tr.) : *vert-or* 'turn' (itr.)
b. *volvent-* 'rolling' (tr./itr.): *volv-ō* 'roll' (tr.) : *volv-or* 'roll' (itr.)
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- And we've already seen that the *-tus* participle is compatible with both active and passive syntax.

Summary

Generalization:
If a nominalizer/participial morpheme in a given language attaches above VoiceP, deponent behavior is preserved in the nominalization. If a nominalizer/participial morpheme attaches below Voice, deponent behavior is suspended in the resulting form.

(60) Morphosyntax of deponent participles in "Greek-type voice systems":

syntax	includes VoiceP	no VoiceP
act.	Gk. *-menos*, Ved. *-(m)āna-*, Lat. *-nt-/-tus*	
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Conclusion: "narrow" deponency is lexically idiosyncratic, but sensitive to the syntactic environment/particular syntactic features.

Interim summary

- Deponents (narrow definition) are agentive
- Their surface subjects start out as "low agents" due to reanalysis of what used to be an experiencer/benefactive argument below VoiceP
- This reanalysis is possible because voice morphology (in Greek-type languages) is not "feature suppression": it just marks the absence of an external argument in VoiceP (postsyntactically)
- Nonfinite forms of deponents show that deponency is contingent on a particular syntactic configuration.

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We have now tied the mismatch to a specific property of the argument structure of deponents. The mechanism that governs the distribution of active vs. nonactive endings is unaffacted by this.

- The intuition that deponency is a *lexical idiosyncracy* remains intact.
- But we are now in a better position to assess alternative approaches.

Previous approaches

Previous approaches

"Broad" definitions of deponency, e.g.:

> *Deponency describes mismatches between morphology and morphosyntax. A mismatch occurs where the word form is used in some function incompatible with its normal function.*
> (Surrey Deponency databases, `https://www.smg.surrey.ac.uk/deponency`, Nov. 1, 2025)

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"... normal function"?

Previous approaches

(61) Deponency in Latin (adapted from Baerman 2007: 2)

a. Deponency is a mismatch between form and function
b. Given that there is a formal morphological opposition
c. between active and passive
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= narrow definition, works for a fairly specific voice system, but not for, e.g., pluralia tantum and similar cases collected in the Surrey Deponency databases & Baerman et al. (2007).

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a. Contrariness of form and meaning
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“defectiveness”? (cf. also Flobert 1975)

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(63) LEX (Müller 2013: 361)
A stem with FCR *[α] cannot be combined with an exponent whose input specification includes [α] (where α is a – possibly singleton – set of morpho-syntactic features).

(64) MATCH (Müller 2013: 361)
The morpho-syntactic features of stem and exponent are identical in the output.

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(65) Rule of referral for Latin deponents & semi-deponents, Sadler & Spencer (2001: 91):
If lexeme L is marked [Class:Deponent], then for all feature sets σ, if ([Class:Deponent:Semi] & [Asp:Perf]) or [Class:Deponent:Full] $\subset \sigma$ then:
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(66) $\text{DEPONENT} \leftrightarrow \sqrt{}[\text{pass}]$

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a. Verb stems
   (i) Unspecified: alternating verbs (e.g., *amō* 'love')
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b. Endings
   (i) Unspecified: indifferent endings (e.g., pres.ptcp. *-ns*)
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"there is no "active meaning" or "passive content", nor indeed any syntactically relevant feature passive in any language" (p. 126).

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"there is no "active meaning" or "passive content", nor indeed any syntactically relevant feature passive in any language" (p. 126).

Problem: Somehow this both *over-* AND *under*generates.

Interim summary

- Previous approaches fail to adequately localize the mismatch because they work with definitions that are either too broad or too narrow.
- In the former case, they overgenerate (everything can be a mismatch), in the latter case, they fail to generalize across languages with similar voice systems (e.g., Stump 2007, “canonical” vs. “non-canonical” deponency)
- Like previous approaches, we have localized the mismatch in the lexicon — but it is tied to a particular argument structure property of specific roots and how this interacts with other morphosyntactic operations.
- But this means that we need to say more about how roots select their arguments.

Deponency: licensing and selection

Roots and arguments

- Ongoing debate: how much (if any) semantic content do roots have and how much (if any) argument structure do they project?
  - E.g., Marantz 1997; Borer 2005a, 2005b, 2013, 2014; Harley 2005, 2014; Alexiadou & Lohndal 2017, etc.

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  - E.g., Marantz 1997; Borer 2005a, 2005b, 2013, 2014; Harley 2005, 2014; Alexiadou & Lohndal 2017, etc.
- Even assuming a fairly generous approach to root ontology like that of Harley (2005), (69), there is consensus at least since Kratzer (1996) that roots do not select their *external arguments* (hence "severing the external argument from its verb").

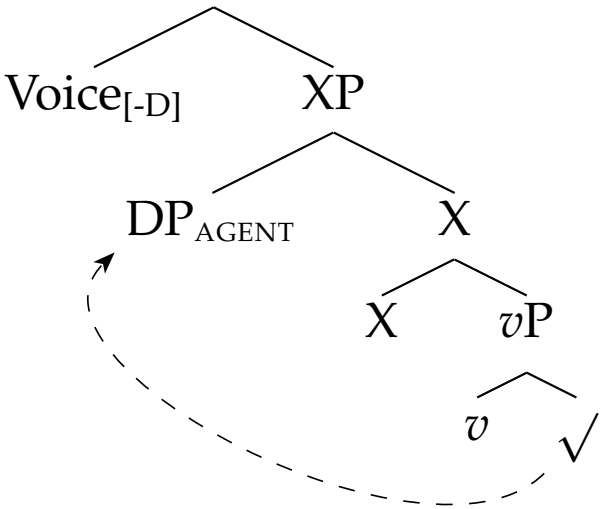
(69) Basic root properties (Harley 2005: 56)

Referent of $\sqrt{}$	no complement		complement	
	bounded	unbounded	bounded	unbounded
Event	*hop*	*sleep*	*kick*	*push*
Thing	*foal*	*drool*	N/A?	N/A?
State	*flat*	*rough*	*clear*	??

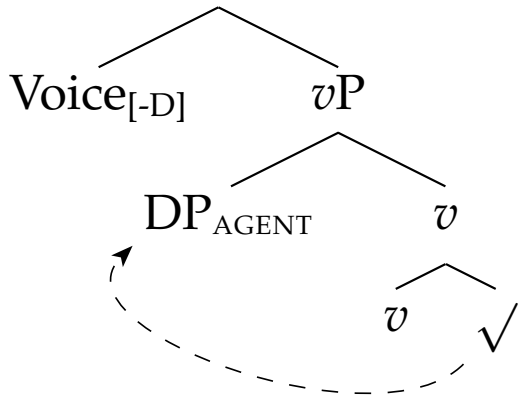
Roots and arguments

... but deponent roots do seem to be able to *syntactically* select an agent argument.

(70) a.



or:



Roots and arguments

The property that triggers the mismatch must be linked to individual lexical items (roots) — cf. Lat. *moneō* vs. *hortor*.

- Two possible solutions (adapting Embick 2000's syntactic solutions)
  - Licensing of "deponent roots" under specific types of verbalizers (those that introduce a "low agent"), (71a) → Late Insertion of $\sqrt{}$
  - A syntactically visible root feature/diacritic, (71b) → Early Insertion of $\sqrt{}$

(71) a. $\sqrt{} \leftrightarrow$ DEPONENT / v[AGENT,+D]$\frown$_

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b. $\sqrt{}$[AG]

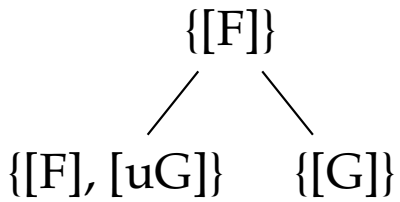
- (71a) essentially works like a filter
- (71b) requires a certain amount of semantic information in the syntax/the lexical entries of roots — but more appealing in light of approaches where unsaturated syntactic features percolate freely.

Selection as projection

(72) *Rule 1* (Zeijlstra 2020: 39): Let A and B be two sets of formal features. If A merges with B, for any pair <[F]–[uF]> such that [F]∈A and [uF]∈B, or [F]∈B and [uF]∈A, neither [uF] nor [F] percolates; all other features do percolate.

(73) Merger and feature percolation (Zeijlstra 2020)

a.



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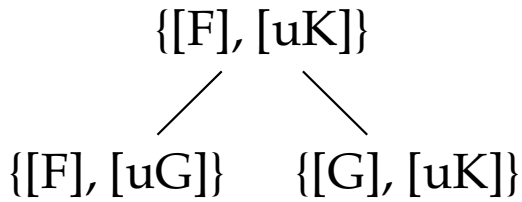
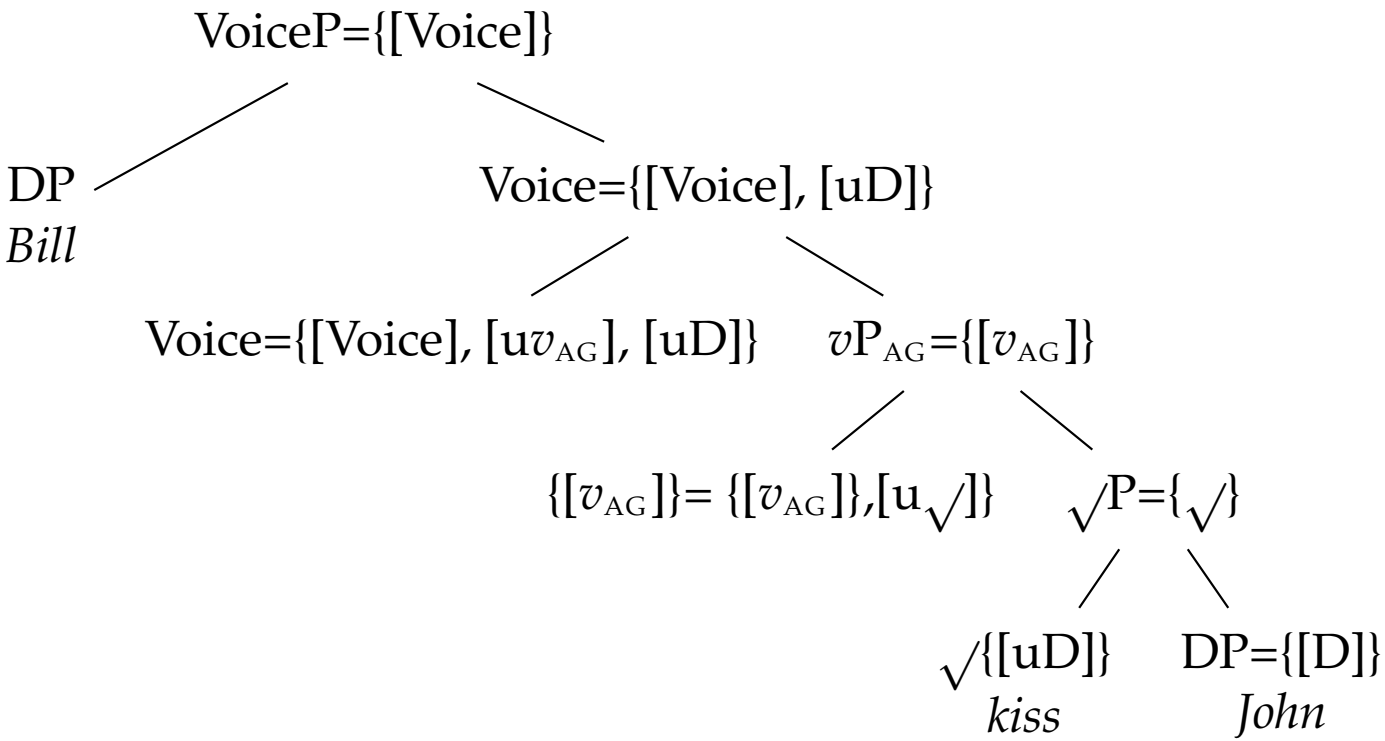


- Merger has to resolve at least one feature dependency (*Rule 2*).
- Unresolved dependent features (e.g., [uK] in (73b)) freely percolate up.

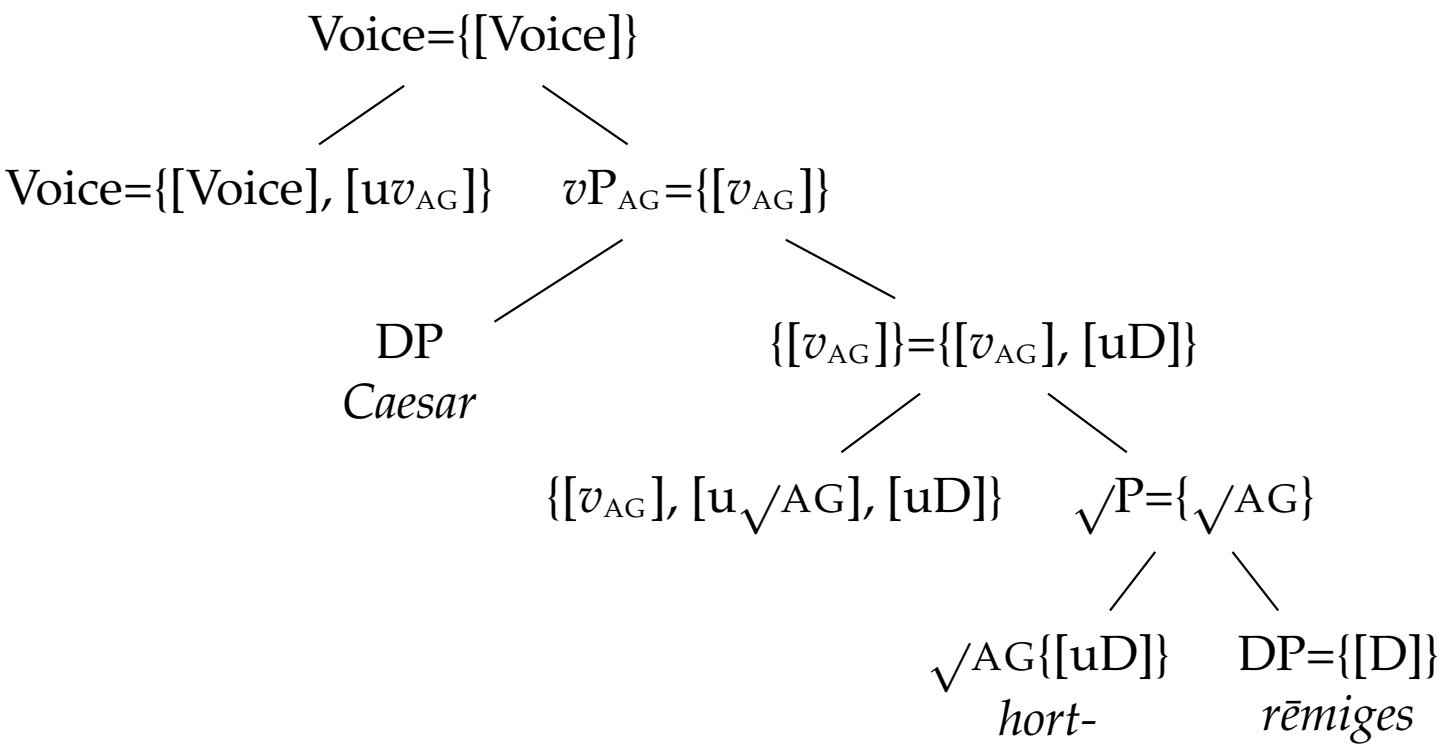
Selection as projection

(74) Transitive unergative verb (modified from Zeijlstra 2020: 49)



Selection as projection

(75) Deponent (modified from (74))



Selection as projection: problems

- Idiosyncratic root property: $\sqrt{\text{AG}}$
  - difficult to eliminate under any approach
- Idiosyncratic "low agent" in v_{AG}
  - The erstwhile AffP/XP – not great, but at least there are *structural* parallels and a clear diachronic reanalysis path.

Conclusion

Summary

- Deponency (in the narrow sense) is a lexical property of certain roots/stems (no way around that)
- But it only surfaces in "verbal" environments (VoiceP must be included)

= deponency is constrained by *synchronic* principles of (Greek-type) voice morphology

Implications

- This approach predicts which kinds of predicates can potentially become deponents — deponency depends on argument structure, it is not random
  - Verbs that can potentially be "misanalyzed" as agentive: (oppositional) self-benefactives; experiencer verbs, speech verbs.
- This explains the cross-linguistic correlations in deponent verb classes: only verbs with a certain argument structure can become deponents.

= deponency is *diachronically* constrained by possible reanalysis paths of (Greek-type) voice systems

Deponent verb class correlations in IE

Vedic	Hittite	Latin	AG	MG	Meaning
trā́yate	*paḫšari*	*tueor*	*erúomai*		‘protect’
bā́dhate			*íptomai*	*epititheme*	‘attack, beset’
		imitor		*mimume*	‘imitate’
		ulcīscor	*tī́numai*	*ekdikume*	‘take revenge on, avenge’
rábhate, *pátyate*		*adipīscor*, *nancīscor*	*aínumai*, *dékhomai*	*sfeterizome*, *karponome*	‘take, appropriate’
		comminīscor, *māchinor*	*mḗdomai*	*skarfizome*	‘contrive, devise’
ī́ṭṭe, *vándate*			*eúkhomai*		‘praise’
		ūtor		*metahirizome*, *kapilevome*	‘use’
kṣádate		*fungor*	*titúskomai*		‘prepare, carry out’
	ḫannari	*perīclitor*	*aitiáomai*, *prokalízomai*		‘challenge, contest, test’

Implications

- This analysis also explains why languages with a voice system like, e.g., English and French do not have deponents: deponency depends on voice syncretism
  - ... because voice syncretism generally allows acquirers to interpret nonactive forms in different ways (anti-causative, reflexive, passive ...)
- It also predicts how deponency interacts with non-finiteness in participial formations, nominalizations, etc.

Outlook

To what extent can the analysis presented here be generalized to other types of form-function mismatches?

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- While not language-specific, the voice mismatch typical of deponency is specific to languages with a particular type of voice system, so it will probably not help with many of the cases discussed under "broad" definitions of deponency.
- But the basic insight underlying this analysis — language-specific, lexically idiosyncratic property interacts with regular rules of exponence of syntactic structure — may be more generally applicable.
  - Cf. Bobaljik 2007's analysis of the Spurious Antipassive (SAP) in Chukchi (Chukotko-Kamchatkan, Siberia), where a (postsyntactic) "filter" on subject-object agreement features in the T-domain with regular rules of morphological exponence in the v-domain.
- The role of diachronic "misanalysis" of morphosyntactic structures by L1 acquirers also deserves further study.

Thank you!

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