Deponency as reanalysis: a diachronic account of voice mismatches

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1 Introduction

Deponents: verbs with "wrong" non-active voice morphology in syntactically active contexts

- Only found in languages with "syncretic" voice morphology, usually **bivalent voice systems**: **active** vs. **non-active** ("middle") voice

- Older IE languages (Hittite, Tocharian, Vedic Sanskrit, Avestan, Greek, Latin, Old Irish), some modern IE languages (Greek, Albanian) → "Greek-type voice system".

- Deponents cannot be synchronically motivated in these languages, they are "exceptions" (they cannot be analyzed in terms of the synchronic canonical functions of non-active morphology)

Goals of this paper:

- Show that there is a diachronic explanation for deponency that explains the synchronic properties of deponents from their origin as canonical non-active verbs

- Make predictions about the kinds of non-active predicates that can develop into deponents

- Explain why deponency is contingent on a certain type of voice system

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2 Background: Voice and voice mismatches

- Active and non-active morphology in Greek-type voice systems occur in certain **canonical contexts** (= morphological exponent matches syntactic function), but:

- we also find verbs whose voice morphology does not match their syntactic context: they take non-active morphology, but are syntactically active → **feature mismatch verbs, deponents**, e.g.:

(1)   a.   Latin: *hortor* 'incite, encourage', *sequor* 'follow', *loquor* 'speak', *fungor* 'perform, carry out', *apīscor* 'obtain', *vēnor* 'hunt'
         b.   Vedic: *ī́ṭṭe* 'praises', *trā́yate* 'protects', *rábhate* 'seizes', *bhádhate* 'attacks'
         c.   Ancient Greek: *dízēmai* 'seek', *tínumai* 'punish', *aínumai* 'take', *líssomai* 'beg, pray', etc.
         d.   Modern Greek: *epititheme* 'attack', *eborevome* 'trade', *metahirizome* 'use', *episkeftome* 'visit', *ekmetallevome* 'exploit'

Transitive, nom subjects, acc objects (passivization possible under certain circumstances), e.g.:

(2)   **Vedic:** Deponent *trā́yate* 'protects': RV 2.23.4a-b:

trā́ya-**se**	jánaṃ	yás	túbhyam	dā́śāt
protect-**2SG.PRES.MID**	man.ACC	who.NOM	you.DAT	worship.3SG.SUBJ.ACT

"You protect the man who worships you"

2.1 Canonical vs. non-canonical uses of non-active morphology

(3) Canonical functions of non-active morphology cross-linguistically (Rivero 1990, Klaiman 1991, Kemmer 1993, 1994, Embick 1998, Kaufmann 2007, Kallulli 2007, 2013, Alexiadou and Doron 2012, Alexiadou 2013, etc.)
    a. Anticausatives
    b. Reflexives & reciprocals
    c. Self-benefactives
    d. (Dispositional/generic constructions)
    e. (Medio)passives

= **voice syncretism** (Embick 1998).
Non-active verbs in these contexts usually alternate with active-marked verbs → **alternating/oppositional non-active verbs**—but non-active morphology is also found in **non-alternating**/**non-oppositional** contexts (cp. Kemmer 1993, Zombolou and Alexiadou 2014):

(4)   a. Experiencer/psych verbs
    b. Statives
    c. (some) verbs of motion
    d. (some) deadjectival and denominal verbs
    e. (some) verbs of speech and communication

Generalization for these contexts: → surface subjects $\neq$ agents.

2.2 A postsyntactic approach to voice morphology

Kratzer (1996): external argument (agent) of transitive verbs is merged in the specifier of a functional projection vP.

(5) Spell-Out condition on non-active morphology (Embick 2004a: 150):
$v \leftrightarrow v$-X/_ No external argument
"Non-active voice is assigned when v does not introduce an external argument"
("-X" = morphological exponence of "non-active" in a given language)

- [ACT] and [NONACT] are not syntactic features, but different ways of spelling out v; [NONACT] = a postsyntactic feature/property of v

- active = "elsewhere" morphology

Two types of v (cp. Kratzer 1996, Embick 1997, 1998, 2004a, Chomsky 2001 (ϕ-complete v* vs. "defective v"), Kallulli 2007, 2013):

- v[AG]: "agentive v", can merge an agent as its specifier, can value ACC on the object

- v: "defective v", no specifier/external argument, no ACC

Definition: canonical uses of non-active morphology: v[AG] does not introduce an external argument

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

	+ext.arg.	-ext.arg.
v[AG]	ACT	NONACT
v	n/a	ACT

Spell-Out rules for active vs. non-active:

(7)   a. NONACT $\leftrightarrow v$[AG][-ext.arg]
    b. ACT $\leftrightarrow$ elsewhere

Deponents are "mismatch verbs" because their surface subject is an agent, but they surface with non-active morphology — not predicted by (6)-(7).

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(8)   Definition of deponency (Grestenberger 2014: 65)
       "In an active—non-active voice system, a deponent is a syntactically active verb whose surface subject is an agent and whose finite forms are morphologically non-active."

- Proposal: Deponents are reanalyzed self-benefactive/experiencer verbs

3 Self-benefactives

Descriptively three-place predicates in which the benefactive argument of an action is identified with the subject of the same action. Morphologically non-active in all languages with a "Greek" voice system, but alternate with:

- transitive two-place predicates (morphologically **active**) or

- benefactive constructions in which the benefactive argument $\neq$ the subject (morphologically **active**)

(9)   Oppositional self-benefactives:
       a.   Greek: act. *phérō* 'bring, carry' : non-act. *phéromai* 'carry for myself, win'
       b.   Vedic: act. *bhárati* 'carries' : non-act. *bhárate* 'carries for oneself'
       c.   Vedic: act. *gr̥bhnā́ti* 'seizes' : non-act. *gr̥bhnīté* 'seizes/takes for oneself'

E.g., Vedic (translations from Jamison and Brereton 2014):

(10)   Non-benefactive: RV 1.125.1a

prātā́ rátnam   prātarítvā   **dadhāti**
early treasure.ACC early-coming.NOM place.3SG.PRES.ACT

"In the early morning, the Early-coming (priest/god) establishes a treasure."

(11)   Benefactive: RV 4.20.9d

<á>thā   **dadhāti**   dráviṇam   jaritré
also+to.PRVB place3SG.PRES.ACT wealth.ACC singer.DAT

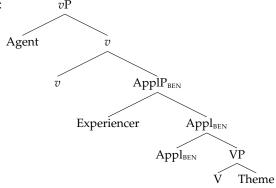"and he establishes material property for the singer."

(12)   Self-benefactive: RV 1.3.11c

yajñám   **dadhe**   sárasvatī
sacrifice.ACC place.PERF.3SG.PERF.MID Sarasvatī.NOM

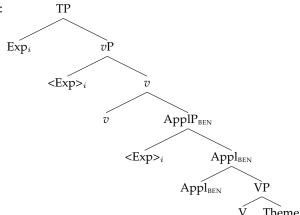"Sarasvatī has received our sacrifice." (< "has taken/placed for herself")

Analysis: difference in voice morphology reflects a difference in the status of the surface subject.
Pylkkänen (2008): in benefactives, an applicative head Appl_Ben located between VP and VoiceP/vP ("low benefactive") introduces the benefactive argument (similarly Bosse et al. 2012 for affected experiencers)

(13)   Benefactive after Pylkkänen 2008:

Self-benefactives in Greek-type voice systems: the surface subject = experiencer/benefactive argument merged by Appl$_{BEN}$ and then moves to the subject position (= **movement analysis of self-benefactives**):

(14)   Self-benefactive in a "Greek-type language":

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                    TP
                   /  \
                Exp_i   vP
                       /  \
                 <Exp>_i    v
                          /   \
                         v    ApplP_BEN
                             /       \
                        <Exp>_i     Appl_BEN
                                   /        \
                              Appl_BEN      VP
                                          /    \
                                         V    Theme
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- The difference in voice morphology between benefactives and self-benefactives is a result of the different status of their surface subjects (agent vs. benefactive/experiencer)

- Only canonical agents in vP trigger active morphology, hence the non-active voice morphology in self-benefactive follows

More evidence: Vedic constructions with inalienably possessed object DPs ("body part DPs") = transitive construction with a body part object DP in the accusative. Verbs in these constructions always take non-active morphology.

(15)   RV 9.15.4:

eṣá   śŕ̥ṅgāṇi   dódhuvac chíśīte   yūth<í>yo   vŕ̥ṣā
This.NOM horns.ACC shaking   sharpen.3SG.PRES.MID of.the.herd.NOM bull.NOM

"This one, the bull of the herd, sharpens his horns, ever shaking them"
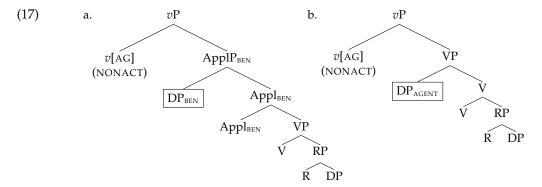
(16)   RV 6.71.1:

úd u   ṣyá   deváḥ   savitā́   hiraṇyáyā   bāhū́   ayaṃsta   sávanāya
up PART this.NOM god.NOM Savitar.NOM golden.ACC.DU arms.ACC.DU raise3SG.AOR.MID impelling.DAT
sukrátuḥ
very.resolute.NOM

"Up has this god Savitar raised his two golden arms for impelling, the very resolute one."

Rooryck and Vanden Wyngaerd (2011): Dutch constructions with inalienably possessed body parts DPs = unaccusatives; both the possessor (the surface subject) and the possessum (the object) are base-generated in the complement of VP (see Grestenberger (To appear) for Vedic).

4   Reanalysis

"Deponent reanalysis": a canonical non-active transitive verb in which the surface subject starts out below vP (an experiencer or self-benefactive argument) is reanalyzed as a non-active transitive verb with an agent subject by an L1 acquirer:

(17)   a.

vP

v[AG]
(NONACT)   ApplP$_{BEN}$

      DP$_{BEN}$ Appl$_{BEN}$

      Appl$_{BEN}$ VP

        V   RP

          R DP

b.

vP

v[AG]
(NONACT)   VP

      DP$_{AGENT}$ V

        V   RP

         R DP

Illustrated for Ved. *rábhate* 'seizes':

(18)   a. X Y *rábh-a-te*
          seize-VB-3SG.PRES.NONACT
       "X seizes Y"

      b.   TP+AGR

    T   Asp

      Asp vP[AG]

        v[AG]   V$_x$
        (NONACT)

          DP$_{AGENT}$ V$_x$

            V$_x$ RP
             |
            -a-   R DP$_Y$
               rabh-

- The derivation of a deponent is structurally parallel to that of an experiencer or self-benefactive construction: v[AG] is spelled out as non-active because it does not introduce an external argument

- Deponents have acc objects, so the starting point for the reanalysis must be a construction containing v[AG]

- Deponents behave like agentive verbs (they make agent nouns, passives, have agent-oriented adverbs) because the verbalizing head *non-canonically* merges a (reanalyzed) agent DP.

- Starting point of reanalysis: loss of self-benefactive semantics (= Appl$_{BEN}$)

- Learner is confronted with a transitive, agentive construction with *non-canonical* non-active morphology. Learner either

    – "normalizes" the voice morpholoy, 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*, non-act. *ktaomai* 'I acquire' → act. *(apo-)kto*, etc. (see Lavidas and Papangeli 2007)

    or

    – acquires a verb with non-canonical voice morphology → deponent

- Explains the observation that voice mismatches/deponency = linked to verbalizing morphology. No mismatch is observed in nominalizations that do not include verbalizing morphology (agent nouns, etc).

(19)   Vedic alternating and deponent verb stems

Alternating		Deponent	
Stem	Meaning	Stem	Meaning
várdh-a-[act./mid.]	'grow'	*rábh-a-*[mid.]	'seize'
bhár-a-[act./mid.]	'carry'	*grás-a-*[mid.]	'devour'
yáj-a-[act./mid.]	'sacrifice'	*trā́-ya-*[mid.]	'protect'

Trigger for loss of benefactive semantics: Semantic bleaching, loss of morphological/semantic opposition in benefactives (cp. (13) & Appendix)

- If the opposition is lost (for whatever reason), self-benefactive meaning of the non-active verb may not be salient to learners any more → reanalysis

Loss of Appl$_{BEN}$ can be understood as "structural simplification" (Roberts and Roussou 2003, Roberts 2007): diachronic reanalysis processes resulting in grammaticalization are a type of 'misanalysis' which

"... results in recategorising a class of lexical elements as inflectional items; (...) Another kind of structural simplification involves reanalysis of an XP, a category with a certain amount of internal syntactic structure, as a simple head X, a category with no internal syntactic structure." (Roberts and Roussou 2003: 16).

NB "standard" economy principles not applicable

- Roberts 2007: reanalysis targets lexical categories and turns them into functional categories → not the case here

- ... and is driven by economy principles (learners choose the "simpler" available structure when confronted with input ambiguity; "simpler" = Merge over Move, heads over phrases, etc., cp. Van Gelderen 2011) → not the case here
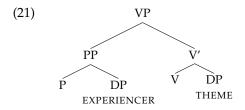
Loss of Appl$_{BEN}$ can be compared to loss of functional projections in the development of modals & auxiliaries, e.g.:

(20)   Development of modals in English (Roberts and Roussou 2003: 40f.)
   a.   biclausal: [$_{TP}$ Sone [$_{TP}$ hit mæi [$_{VP}$ t$_{mæi}$ [$_{TP}$ T [$_{VP}$ ilimpen]]]]] (13th century)
   b.   monoclausal: [$_{TP}$ Soon [$_{TP}$ it may [$_{VP}$ happen]]]

Lexical category → functional category

4.1   Experiencers

Pesetsky 1995, Landau 2010: SubjExp verbs, "class III verbs" are unaccusatives; the experiencer is embedded in a locatival PP below VP:

(21)

Non-active morphology appears as predicted in these predicates (subj = NOM):

(22)   Vedic:
   bháyate 'is afraid of, fears' (+abl); *mṛṣyate* 'forgets' (+ acc); *chandayate* 'likes' (+ acc; loc); *módate* 'is delighted in' (+ instr; loc)

(23)   Greek:
   házomai 'am in awe of, fear' (+ acc); *ágamai* 'admire, envy' (+ acc, dat); *térpomai* 'enjoy' (+ gen); *aídomai* 'am in awe of' (+ acc)

- Experiencer verbs with NOM/ACC alignment are liable to reanalysis as agentive verbs if locatival/experiencer semantics are lost → deponents

- Especially common for speech act verbs, which tend develop out of cognition verbs/verbs denoting a mental event (Kemmer 1993: 133), e.g. Lat. *hortor* 'encourage, incite' < 'desire, like'; Ved. *ī́ṭṭe* 'praises, calls upon' < 'reveres, is in awe of', etc. (see Appendix)

5 Conclusion

- Deponents are synchronically voice mismatch verbs/non-canonical non-active verbs which go back to older canonical non-active verbs

- Reanalysis of a benefactive/experiencer argument below vP as non-canonical agent

- Explains the synchronic properties of deponents: acc case/transitivity, agentive properties (agent nouns, etc), passivization

- Explains the cross-linguistic correlations in deponent verb classes: only verbs with a certain argument structure can become deponents.

(24)　Deponents: verb class correlations in IE

Vedic	Hittite	Latin	Cl. Greek	Modern Greek	Meaning
trā́yate	*paḫša(ri)*	*tueor*	*erúomai*		'protect'
bā́dhate			*íptomai*	*epititheme*	'attack, beset'
		imitor		*mimume*	'imitate'
		ulcīscor	*tínumai*	*ekdikume*	'take revenge on, avenge'
rábhate, pátyate		*adipīscor, nancīscor*	*aínumai, dékhomai*	*sfeterizome, karponome*	'take, appropriate'
		comminīscor, māchinor	*mḗdomai*	*skarfizome*	'contrive, devise'
ī́ḍyate, vándate			*eúkhomai*		'praise'
		ūtor		*(meta)hirizome, kapilevome*	'use'
kṣádate		*fungor*	*titúskomai*		'prepare, carry out'
	ḫannar(ri)	*perīclitor*	*aitiáomai, prokalízomai*		'challenge, contest, test'

- Reanalysis takes place because "cues" for projection Appl$_{\text{BEN}}$ are too weak/lacking (no "benefactive semantics", no oppositional non-benefactive, etc.)

- Not straightforwardly analyzable as economy operation

6 Appendix

Deponents are synchronically isolated and non-oppositional, but their older canonical (sometimes oppositional) meaning can be reconstructed in a few cases based on the comparison with cognates in other languages (given in brackets, based on LIV^2).

(25)　Vedic:
　　a.　*īḍ* 'call, praise sbdy.': experiencer → agent (Gk. *aídomai* 'be in awe of, revere', Goth. *aistand* 'they are afraid, in awe')
　　b.　*dā/day* 'distribute': benefactive → agent (Ved. act. *áva adāt* 'divided, separated' (MS), act. *ava-dyáti* 'separates' (YV))
　　c.　*rabh/labh* 'seize, take': benefactive → agent

(26)　Greek:
　　a.　*aínumai* 'take, gather (together)': benefactive → agent (Toch. B act.subj. *āyu* 'shall give', Hitt. *pāi* 'gives')
　　b.　*dékhomai* 'receive, take up, accept': benefactive/experiencer → agent (Ved. act. *dāṣṭi* 'reveres, pays homage to', Gk. non-act. ptcp. *dégmenos* 'looking for, expecting')

c. *dízēmai* 'seek': experiencer → agent (Ved. act. *yắmi* 'ask, beg for', non-act. *ī́mahe* 'we are begging, asking')

(27) Latin:

a. *hortor* 'exhort, encourage': experiencer → agent (Ved. act. *háryati* 'is fond of', Gk. act. *khaírō* 'am happy')
b. *apīscor* 'obtain, attain': benefactive → agent (Hitt. act. *ēpzi* 'seizes', Ved. act.perf. *ā́pa* 'has obtained sth.', Lat. act.perf. *co-ēpī* 'begun')
c. *fungor* 'am engaged with, perform': benefactive/experiencer → agent (Ved. non-act.subj. *bhójate* 'shall enjoy'; act. *bhunákti* 'causes joy', non-act. *bhuñjáte* 'they enjoy', etc.)

(28) Modern Greek:

a. *epititheme* 'attack' < *epi* + *tithemai* 'set myself against, make an attempt', act. *epitihēmi* 'set up, put up on'
b. *episkeftome* 'visit' < *epi* + *skeptomai* 'look, examine'
c. *diahirizome* 'handle' < alternating *dia-kheirizō* 'handle, manage', non-act. *dia-kheirizomai*

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