Causatives and their Passives in Sanskrit

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1. Introduction

Passive causatives in Sanskrit prove problematic for single cross-linguistically valid models of causativization within the standard LFG framework. We assume the approach to complex argument structures of Butt (2014), integrated with Kibort's (2007) universal valency template.

1. Two Types of Causative to Transitives

'INSTR-ACC': embedded OBJ remains OBJ (ACC); emb. SUBJ becomes OBL (INSTR).

(1) a. devadatto vṛkṣam chinatti
D.NOM wood.ACC cut.PRS.3SG
'Devadatta cuts the wood.'

b. yajñadatto devadattena vṛkṣam chedayati
Y.NOM D.INSTR wood.ACC cut.CAUS.PRS.3SG
'Yajñadatta makes Devadatta cut the wood.'

'ACC-ACC': (some verbs) SUBJ becomes OBJ (ACC), emb. OBJ(?) also in ACC.

(2) a. māṇavako vedaṃ paṭhati
boy.NOM veda.ACC recite.PRS.3SG
'The boy recites the Veda.'

b. Devadatto māṇavakaṃ vedaṃ pāṭhayati
D.NOM boy.ACC veda.ACC recite.CAUS.PRS.3SG
'Devadatta makes the boy recite the Veda.'

2. The 'ACC-ACC' type

Causee becomes SUBJ in passive:

(3) māṇavako vedaṃ pāṭhyate (devadattena)
boy.NOM veda.ACC recite.CAUS.PASS.PRS.3SG D.INSTR
'The boy is made to recite the Veda (by Devadatta).'

Analyze second ACC of CAUSs, i.e. (2b), as OBL arg specified for ACC (Lowe, 2017). Must also account for passivization on this arg in non-CAUS, just like standard OBJs:

(4) vedaḥ paṭhyate (māṇavakena)
veda.NOM recite.PASS.PRS.3SG boy.INSTR
'The Veda is recited (by the boy).'

3. The 'INSTR-ACC' type

A. Passive of type in (1b): SUBJ of embedded verb (OBL in caus.) becomes SUBJ (PC-S):

(5) devadatto vṛkṣam chedyate (yajñadattena)
D.NOM wood.ACC cut.CAUS.PASS.PRS.3SG Y.INSTR
'Devadatta is made to cut the wood (by Yajñadatta).'

B. Pāṇini predicts that emb. OBJ becomes SUBJ in pass. caus. (PC-O); this also widely found:

(6) vṛkṣo devadattena chedyate (yajñadattena)
wood.NOM D.INSTR cut.CAUS.PASS.PRS.3SG Y.INSTR
'The wood is made to be cut by Devadatta (by Yajñadatta).'

2. Mapping Passive Causatives

Butt's (2014) approach requires separate frame for: i. INTRANS verbs (→ arg raising); ii. TRANS verbs (→ arg fusion). Lowe and Birahimani (2019) propose a single process of arg fusion, with 2nd arg of CAUS *unspecified for* [±O/R] *features*, and propose that arg linking proceeds according to arg indices (i.e. arg_1 links first, then arg_2), without considering embedding. – Therefore emend Kibort's (2007) universal valency template, with unspecified arg_4 slot:

(7) New proposed valency template:

⟨ arg_1 [−O/−R] | arg_2 [−R] | arg_3 [+O] | arg_4 [ ] | arg_5 [−O] | … | arg_n [−O] ⟩

Now ACT (8) and PASS (9) of ACC-ACC type CAUS are both unproblematic:

(8)

	CAUSER	CAUSEE		AGENT	THEME
CAUS ⟨	arg_1 [−O] SUBJ	arg_4 [ ] OBJ	*paṭh* 'recite' ⟨	arg_1 ([−O])	arg_5 [−O] OBL_θ ⟩⟩

(9)

	CAUSER	CAUSEE		AGENT	THEME
CAUS ⟨	arg_1 [−O] [+R] OBL_θ	arg_4 [ ] SUBJ	*paṭh* 'recite' ⟨	arg_1 ([−O])	arg_5 [−O] OBL_θ ⟩⟩

ACT CAUS of INSTR-ACC type also unproblematic:

(10)

	CAUSER	CAUSEE		AGENT	THEME
CAUS ⟨	arg_1 [−O] SUBJ	arg_4 [ ] OBL_θ	*chid* 'cut' ⟨	arg_1 ([−O])	arg_2 [−R] OBJ ⟩⟩

Arg linking according to arg indices predicts PC-O PASS (6) for 'INSTR-ACC' type:

(11)

	CAUSER	CAUSEE		AGENT	THEME
CAUS ⟨	arg_1 [−O] [+R] OBL_θ	arg_4 [ ] OBL_θ	*chid* 'cut' ⟨	arg_1 ([−O])	arg_2 [−R] SUBJ ⟩⟩

[Arg_4 mapping to OBL not OBJ: OBJ can't be less embedded than SUBJ.]

To account for PC-S (5), second arg of CAUS (arg_4) must link before the second embedded arg (arg_2). So here, arg linking proceeds not according to arg index, but *left-to-right*:

(12)

	CAUSER	CAUSEE		AGENT	THEME
CAUS ⟨	arg_1 [−O] [+R] OBL_θ	arg_4 [ ] SUBJ	*chid* 'cut' ⟨	arg_1 ([−O])	arg_2 [−R] OBJ ⟩⟩

3. Study and Results

According to previous authors, the type in (6) is barely attested with most verbs, but our corpus search reveals that it is almost as common as (5). Both types are found in different languages (Bubeník, 1987), but Sanskrit is the only language we are aware of that attests both types.

The results presented here (244 tokens from finite and *ta*-participle forms) show a representative subset of the roots studied. Table 1 shows that passivization on the OBJ is not rare; both passivization on the SUBJ and OBJ are widely found. Some verbs show marked preferences (in bold).

Table 1: Passivization on SUBJs and OBJs

Transitive Roots	PC-S	PC-O
dā 'give'	12	12
kṛ 'do'	12	13
bhuj 'eat'	**19**	3
han 'strike'	0	**61**
grah 'seize'	8	3
jña 'know'	**81**	20
TOTAL	132	112

PC-S/O refers to passivization on SUBJ and OBJ resp.

In general with *ta*-participles PC-S is preferred, while finite forms show roughly equal distribution. (Exception is *han*, where only PC-O is found, x60 in ptcc.) There were no clear genre-based trends; we have yet to identify PC-O in Vedic Sanskrit, suggesting this may be a later development.

4. Conclusions

- Order of linking – by arg index vs. left-to-right – only gives different outcomes with passive causative.
- In simple causative, and elsewhere, outcome is the same; this may be the origin of the variation in the passive causative.
- In other languages, one of the two orders is preferred, e.g. Modern Indo-Aryan link according to arg index, and show only PC-O.
- Further principle of linking for (10): linking must be to highest compatible function *that does not prevent more rightward arguments from linking*. (Implementable using OT; cf. Findlay (2016, 322): necessary to model linking anyway.)

5. Uncovering Sanskrit Syntax

Uncovering Sanskrit Syntax will analyze several syntactic phenomena in Sanskrit, based on the largest-scale corpus study on Sanskrit syntax to date. We have collated textual corpora consisting of Vedic Prose, Epics, Purāṇas and Classical Sanskrit (ca. 3.5 million words). We are using computational and statistical methods to identify syntactic generalizations, and differences between genres and periods of texts.

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