The Syntax of Sanskrit Causatives

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February 19, 2020

1 In A Nutshell

The Sanskrit verb has a very productive causative and a very productive passive, and the causative can be passivised:

	Simple	Causative Active	Causative Passive
√ <i>viś</i> 'to enter'	viśati 'enters'	veśayati 'causes to enter'	veśyate 'is caused to enter'
√ <i>bhṛ</i> 'to carry'	bharati 'carries'	bhārayati 'causes to carry'	<i>bhāryate</i> 'is caused to carry'
√ <i>sthā</i> 'to stand'	<i>tiṣṭhati</i> 'stands'	sthāpayati 'causes to stand'	sthāpyate 'is caused to stand'

Both the active and the passive causative can be used with two different **argument structures** (i.e. ways of expressing who causes whom to do what) – detailed illustrations of that below.

Aims of our study

- Look at the syntax of causative usage, focusing specifically on argument structure: a **causer**, an **embedded subject**, an **embedded object**.

– Try to see whether there is a reason for the variation between those two aforementioned argument structures, and whether there is any relation between which structures are found in the active and which in the passive.

2 Our Project, Corpus and Methods

- Uncovering Sanskrit Syntax: three-year Leverhulme-funded project aiming to look at syntax on a large scale

- we do this by means of a ~**5-million-word textual corpus** and **Python code** with which to search the corpus

- the **corpus** consists of Vedic texts (Rg- and Atharvaveda, all Vedic prose texts currently existing in digitised form), a selection of Upanisads and Purāṇas, both Epics, and a variety of Classical Sanskrit texts (from different genres, not in *sūtra* style, available in usable digital format, ideally with a matching translation available)

- texts taken from various online databases (GRETIL, TITUS, Sarit); transliteration unified, reformatted to evenly mark verse/section boundaries

- given there are no extensive tagged corpora of Sanskrit texts yet, we search entirely for morphological features (specific suffixes, or lists of forms containing these suffixes)

- we generate our **search terms** with the help of works such as Whitney's *Roots, Verb-Forms and Primary Derivatives of the Sanskrit Language*, or various online resources such as *The Sanskrit Grammarian*¹ or lists of verbal roots²; we apply the sandhi more or less manually; we over-generate forms and then cut down where needed; usually several thousand terms per search

- the **code**: we use Python to look for the search terms in each domain (i.e. verses and/or paragraphs) and extract them to an Excel output file labelled with the source text/genre, the line within the text for further analysis, and other information relevant to our questions (e.g. if we are looking for a combination of terms, how far removed they are from one another)

- causatives have been our 'trial' topic to see whether our corpus and code work; up next: control and anaphora

¹ sanskrit.inria.fr/DICO/grammar.fr.html

² Comprehensive: wiki.yoga-vidya.de/Sanskrit_Verbal_Roots_List_with_English_Translation

3 Historical Background

3.1 PIE: Suffix -éįe/o- (data taken from	n LIV²)					
- Primary use: added to zero-grade ro	ots (LIV category 1s)					
(1) *sp ^h erh2g- 'zischen, prasse	ln'					
Pres ?*sp ^h rh2g-é-	Ved. (AV) -sphūrjati 'crackles'					
-	? Lat. spargo 'strew, sprinkle' (if orig. meaning 'sprinkle into the fire					
	and thus making it hiss')					
Pres *spʰṛh₂g-éi̯e-	Ved. sphūrjayant- 'hissing (in the fire)'					
	Gr. σφαραγεῦντο 'hiss in the fire'					
- Secondary use: as a causative-iterati	ve suffix added to <i>o</i> -grade roots (LIV type 4a)					
(2) *men- 'einen Gedanken fassen'						
Pres *mṇ-i̯é-	Ved. mányate 'thinks, assumes'					
Pres *mn-néu/u-	Ved. Mid. manuté 'thinks; remembers'					
Caus *mon-éi̯e-	Ved. (AV) mānayati 'honours, esteems'					
	Old Av. mānaiieitī Y. 49.2 'admonished'					
	Lat. <i>moneō</i> , <i>-ēre</i> 'admonish'					
(3) *leuk 'hell werden'						
Pres *léuk-e-	Ved. <i>rócate</i> 'glow'					
Caus *louk-éie-	Ved. <i>rocáyati</i> 'makes glow'					
	YAv. <i>raocaiieiti</i> 'make glow'					
	Old Lat. <i>lūceō</i> , <i>-ēre</i> 'make glow'					
	Hitt. <i>lukkizzi</i> 'kindles'					

3.2 The *-aya*-Suffix in Vedic

Used with some variety (examples from Jamison 1983):

- intransitives: patáyati 'flies' (pátati 'flies')
- transitive, but not causative: *śnatháyati* 'pierces' (*śnáthat* 'pierces')
- non-exclusive causatives: vardháyati and várdhati 'makes increase' (várdhate 'increases')
- causatives: roháyati 'makes ascend' (róhati 'ascends')

Some limitations:

- mostly in present tense
- causatives of transitive basic verbs still comparatively rare (but see e.g. \sqrt{snath} above)
- no causative passives
- limited possible argument structures (see immediately below)

3.3 The -aya-suffix in Classical Sanskrit

- Basically used in two functions: to form Class X present-tense stems, and to form causatives.

1		1
Class X:	\sqrt{kath} 'to tell'	→ <i>kathayati</i> 'tells' (orig. denominal: <i>kathā</i> 'story')
	\sqrt{vr} 'to choose'	<i>→ vṛṇāti</i> 'chooses' (Class IX)
		→ varayati or vārayati 'chooses' (Class X)
Causatives:	√viś 'to enter'	→ viśati 'enters' (Class VI)
		→ veśayati 'causes to enter' (Causative)

- Class X developed from denom. verbs using the suffix -ya- (more than 100 denom. stems found in Rgveda)

- in Classical Sanskrit, the causative develops a distinct aorist, and non-finite forms and is in frequent use

4 Syntax of Sanskrit Causatives

4.1 Active Causatives

- There are two types of argument structure for active causatives formed to transitive verbs: 'accusativeaccusative' (ACC-ACC) in (1b) and 'instrumental-accusative' (INS-ACC) in (1c). (The latter is not found in early Vedic). A large number of attested examples omit the causee/embedded subject, as in (1d).

- - (b)yajñadattodevadattamvṛkṣamchedayatiACC-ACCY.NOM.SGD.ACC.SGwood.ACC.SGcut.caus.PRS.3.SG'Yajñadattamakes Devadatta cut the wood.'
 - (c)yajñadattodevadattenavṛkṣaṃchedayatiINS-ACCY.NOMD.INS.SGwood.ACCcut.CAUS.PRS.3.SG'Yajñadatta makes Devadatta cut the wood.' (Or: 'has the wood cut by Devadatta'.)

o-ACC

4.2 Passive Causatives

Likewise, there are two types of argument structure for passive causatives: passivisation on the embedded subject (PC-S) in (2a) and passivisation on the embedded object (PC-O) in (2b).

(2)	(a)	devadatto	vŗkṣaṃ	chedyate	yajñadattena	PC-S	
		D. _{NOM.SG}	wood. _{ACC.SG}	cut. _{CAUS.PASS.PRS.3.SG}	Y.INS.SG		
		'Devadatta i	is made to cut	t the wood by Ya	jñadatta.'		
	(b)	vrkșo	devadattena	ı chedyate	(yajñadattena)	PC-O	
		wood. _{NOM.SG}	D.INSTR.SG	cut. _{CAUS.PASS.PRS.3.S}	G (Y.INS.SG)		
		'The wood i	is made to be	cut by Devadatta	a (by Yajñadatta).'		

-> **Questions:** Can we account for this variation in active and passive causatives? Is there a relationship between one of the active and one of the passive patterns?

5 Past Scholarship

5.1 Pāṇini

On Active Causatives

- **Default**: a verb with *kartr* agent/subject (by 1.4.54) and *karman* patient/object (by 1.4.49) is causativised without any change in the semantic function of its arguments. During case assignment: *kartr* gets INS case (by 2.3.18), not NOM because the verb agrees with the causer (*hetu*), not the original *kartr*. The *karman* gets ACC (by 2.3.2) (our INS-ACC).

- **Exception**: (a) verbs of motion, perception, eating or producing a sound, and also intransitive verbs make the agent *kartr* of the simple verb the object *karman* in the causative (by 1.4.52) (our ACC-ACC); (b) with \sqrt{hr} 'to take' and \sqrt{kr} 'to do', ACC-ACC is optional (*anyatarasyām*, 1.4.53), i.e. ACC-ACC and INS-ACC are both possible.

On Passive Causatives

Unclear whether the things $P\bar{a}nini$ says about the causative and the passive can be combined in a way that allows inference about what to do with passive causative \rightarrow disagreement in the commentaries.

5.2. Modern/more recent scholarship

On the choice of construction with active causatives: difference in construction based on semantics, not lexicon. <u>Intended Expression</u>: whether the causer acts on the embedded subject (ACC-ACC) or on the embedded object (INS-ACC) (Speyer 1886: 36-37). <u>Affectedness/Agency of Causee:</u> INS-ACC marked in origin, indicating lower agency and/or affectedness of the causee/embedded subject (increase in frequency through interaction with other INS arguments) (Hock 1981, Bubeník 1987). <u>Contactive/Non-Contactive Causation</u>: ACC-ACC contactive vs. INS-ACC non-contactive (Bubeník 1987).

On passive causatives:

Passivisation on embedded object (our PC-O) seen as rare: only two instances known to Speyer (1886:37-38), seen as common only with the verb \sqrt{han} 'to strike, kill' by (Bubeník 1987) (but NB: small corpus). Passive causative not found in early Vedic (Hock 1981)

6 Our study

6.1 Corpus Data

- We extracted finite active and passive forms and past passive participles to all possible causative stems (as listed in Whitney) from our textual corpus, generating ~80,000 hits.

- We focused on a subset of **11 roots** of verbs that are **transitive** (where there thus is a possibility of all three arguments being present in the active, and the choice between PC-S and PC-O exists in the passive) and **semantically regular/productive** (i.e. where the causative form actually has regular causative meaning).

– We thus **excluded** e.g. supposed causatives that show the same meaning as the simple transitive form and that thus appear to be just another (Class X) present-tense form rather than an actual causative (many of which, incidentally, have nasal presents, e.g. \sqrt{krt} (*krntati*) 'cuts', \sqrt{stambh} (*stabhnoti*) 'stops, supports', \sqrt{lup} (*lumpati*) 'breaks', \sqrt{dr} (*drnāti*) 'tears', \sqrt{str} 'spreads' (*strņāti*), \sqrt{vr} (*vrņāti*) 'to cover', \sqrt{vr} (*vrṇāti*) 'to choose').

– Also excluded: idiomatic usages (e.g. $\sqrt{j\tilde{n}\tilde{a}}$ 'to know' $\rightarrow j\tilde{n}\tilde{a}payati$ 'orders, gives an order to sb.' (+ Gen/Dat), ambiguous cases (such as certain forms of the Pass Caus of \sqrt{vah} '(intrans.) to travel; (trans.) to drive' where it is unclear if they derive from transitive or intransitive use of \sqrt{vah}).

(4) saṃvāhyantāṃ ca śakaṭair naukābhir mā vilambatha travel._{CAUS.PASS.IMP.3.PL} and cart._{INS.PL} ship._{INS.PL} don't take._{2.PL}
'and let them 'be caused to travel/'be caused to be carried by carts; do not carry them by means of ships.' (Brahma Purāṇa 47.9)

- Total number of tokens in our study: 978 (465 finite active/429 *ta*-participle/84 finite passive).

7 Results

7.1 Active Causatives: ACC-ACC vs. INS-ACC

– Table 1 shows the number of tokens of active causatives of 10 roots (\sqrt{vah} : no ACT CAUS forms from the transitive base) that are unambiguously ACC-ACC, unambiguously INS-ACC (\sqrt{sru} 'hear' also has GEN-ACC), and those which lack an explicit embedded subject:

Pāņini	ROOTS	NO SUBJ (0/0-ACC)	INS-ACC	ACC SUBJ (ACC-0/ACC-ACC)	TOTAL
_	\sqrt{pac} 'cook'	20 (2/118)	1	o (o/o)	21
INS- ACC only	\sqrt{grah} 'seize'	15 (0/15)	26	16 (4/12)	57
	√ <i>han</i> 'strike'	83 (8/75)	9	2 (0/2)	94
	$\sqrt{d\bar{a}}$ 'give'	24 (1/23)	0	7 (3/4)	31
a:4h an	√ <i>kŗ</i> 'do'	4 (4/0)	6	15 (1/14)	25
either	√ <i>hṛ</i> 'carry'	63 (5/58)	4	5 (0/5)	72
	√ <i>pațh</i> 'read'	3 (1/2)	0	5 (2/3)	8
ACC-	√ <i>bhuj</i> 'eat'	16 (6/10)	0	20 (0/20)	36
ACC	<i>√jñā</i> 'know'	12 (6/6)	1	24 (14/10)	37
only	√ <i>śru</i> 'hear'	54 (30/24)	3 ^x	27 (6/21)	74
	TOTAL	293 (63/230)	50	122 (30/92)	465

Table 1: Active Causatives

^x includes two GEN-ACC (see below)

7.2 Results/possible intepretations of these numbers

– *Contra* Pāņini: ACC-ACC is not as restricted as Pāņini says: examples (5a) and (5b) show the verbs \sqrt{han} 'to strike, kill' and $\sqrt{d\bar{a}}$ 'to give', respectively, in an ACC-ACC pattern; among regular transitive verbs, 8/11 show both constructions. (**But note:** the examples below from pre-Paņinian times/from traditions originating pre-Pāņini.)

(5)	(a)	evaņ	daśa	sutās	tasya	kaṃsas	tān	aghātayat
		thus	ten	daughter. _{ACC.PL}	he. _{GEN.SG}	Kamsa. _{NOM.SG}	they. _{ACC.PL.MASC}	kill. _{CAUS.IMPF.ACT.3.SG}
		'Kams	a caused	d them to kill the	at one's te	en daughters.'	(Brahmāṇḍa P	urāṇa 2,71.182)

(b)	sa	ŗșīn	karam	adāpayat
	he. _{NOM.SG}	seer. _{ACC.PL}	tribute. _{ACC.SG}	give. _{CAUS.IMPV.3.SG}
	'He made t	the Rishis pay	(caused them to g	ive) tribute.' (<i>Mahābhārata</i> 1,70.26)

- NB considerable number of o/o-ACC (i. e. embedded subject unexpressed): it seems that practical purpose of causative not to add another argument, but perhaps to shift focus? E.g.

(6) ghātayāmi kīcakaņ yadi manyase kill._{CAUS.1.SG} K._{ACC.SG} if think._{2.SG}
'I will have Kīcaka killed, if you want it.' (Mahābhārata 4.15.4)

- Correct that INS-ACC is rarer than ACC-ACC, but still much more frequent than described in prior literature. Question: would any/some/many of o/o-ACC (i.e. embedded subject not expressed) underlyingly be INS-ACC? Adjuncts easier to omit than complements; but: discourse always influencing what is/can be omitted \rightarrow need to look at each passage in much larger co- and context to decide.

- 19th/20th-c scholarship: focus on semantic factors deciding between ACC-ACC and INS-ACC, which intuitively seems right; but actual examples far less clear-cut.

 $-\sqrt{sru}$ 'to hear' with GEN-ACC (7a), INS-ACC (7b), ACC-ACC (7c), o-ACC (7d).

- (7) (a) *ānanda-vacanam satvānām śrāvayati* pleasant-speech._{ACC.SG} creature._{GEN.PL} hear._{GAUS.PRES.3.SG}
 'He makes pleasant speech heard by the people.' (*Śiksāsamuccaya* 16) (8th c AD)
 - (b) guruņā tan mantram śravayet teacher._{INS.SG} this._{ACC.SG} mantra._{ACC.SG} hear._{CAUS.POT.3.SG}
 'he who causes the mantra to be heard by the guru' (Mātṛkābhedatantra 12.56) (13th c AD?)
 (c) ye ca itihāsam śrāvayanti dvijottamān

who._{NOM.PL} and history._{acc.sg} hear._{CAUS.3.PL} twiceborn-best._{ACC.PL} '... those who make the best of twice-borns hear the sacred histories' (*Mahābhārata* 13.90.26)

(d)	уа	idaṃ	śrāvayed	vidvān	yaś	са	idam	śṛṇuyān	naraḥ
	which	it	hear	knowing	which	and	it	hear	man
	NOM.SG.MASC	ACC.SG	CAUS.POT.3.SG	NOM.SG	NOM.SG.MASC		ACC.SG	POT.3.SG	NOM.SG

'the man who causes it to be heard (who reads it out) and (the man) who hears it' (*Mahābhārata* 1.56.14)

 $-\sqrt{grah}$ 'to take' with INS-ACC (8a) and ACC-ACC (8b).

(8) (a) vidita-arthastupārthivastvayāduhituḥpāṇimgrāhayişyatibutking.nom.sgyou.ns.sgdaughter.gen.sghand.acc.sgtake.caus.fut.a.sg

'Once the king has been informed of how things stand, he will make you take his daughter's hand.' (*Daśakumāracarita* 11.41)

(b) pitarau (...)tasyādārikāyāyathārheņakarmaņāmāmpāņimagrāhayetāmparents.NOM.DUthat.GEN.SG.FEMgirl.GEN.SGappropriate.INS.SGaction.INS.SGI.ACC.SGhand.ACC.SGtake.CAUS.IMPF.POT.3.DU

'(My father and mother were more than delighted. They looked at the man of despicable character, placed him under confinement, and) arranged for me to take the hand of that young lady in marriage with the appropriate rites.' (*Daśakumāracarita* 9.107)

7.3 Passive Causatives: Passivisation on the Embedded Subject (PC-S) and the Embedded Object (PC-O)

- We found considerable variation in preference for passivisation on the embedded subject (PC-S) vs. the embedded object (PC-O). Table 2 shows variation in the preference of 513 tokens from finite passive and *ta*-participle forms of 11 roots.

– The general preference for PC-S is more pronounced with the *ta*-participles, and the past participles are much more common than finite verbs, accounting for 70% of the forms shown in Table 2.

	Total		PC-S	Fin	ite	PC-S	ta-Par	ticiple	PC-S
ROOT	PC-O	PC-S	Proportion	PC-O	PC-S	Proportion	PC-O	PC-S	Proportion
\sqrt{path} 'read'	0	4	1	0	1	1	0	3	1
√ <i>bhuj</i> 'eat'	4	20	.83	2	1	.33	2	19	.91
<i>√jñā</i> 'know'	18	75	.81	14	9	.39	4	66	.94
\sqrt{vah} 'carry'	12	36	.75	12	5	.29	0	36	1
\sqrt{grah} 'size'	6	13	.68	2	1	.33	4	12	.75
√ <i>śru</i> 'hear'	18	35	.66	1	1	.5	17	34	.67
√dā 'give'	10	10	.5	3	4	•57	7	6	.46
\sqrt{kr} 'do'	86	46	.35	13	8	.38	73	38	.34
\sqrt{hr} 'carry'	31	2	.06	3	2	.4	28	1	.03
√ <i>han</i> 'strike'	74	0	0	1	0	0	73	0	0
√ <i>pac</i> 'cook'	7	0	0	1	0	0	6	0	0
TOTAL	266	247	.48	52	32	.38	214	215	.5

Table 2: Passivisation on Subjects (PC-S) and Objects (PC-O)

7.4 Results/possible intepretations of these numbers

– Prior scholarship saw passivisation on the embedded object (PC-O) as rare; our study demonstrates that it is found in just under half of passive causatives of transitive verbs. (It is of course not possible in intransitive verbs, which do not have an (embedded) direct object that a verb could passivise on.)

- Again, some variation within individual verbs can be explained by their pragmatics:

i) \sqrt{han} entirely PC-O: again 'is caused to be killed' omission of both agent and subject possible, focussing just on the (soon to be) dead person

(9) sthāpitā buddha-mudrāh sam-ud-ghātitāh sarva-mārāh stand._{caus.pass.ptc.nom.pl.masc} Buddha.seal.nom.pl.masc kill._{caus.pass.ptc.nom.pl.masc} all-Māra._{nom.pl.masc}

'The seals of the Buddha (were) established, all Māras (were) caused to be killed.' (Śikṣasamuccaya 19)

ii) \sqrt{hr} 'to carry' mostly PC-O: similar to \sqrt{han}

iii) \sqrt{kr} 'to do' part PC-O, part PC-S: semantically fairly empty, can be used for all sorts of expressions: (10) shows passivisation on the embedded object of \sqrt{kr} 'to do', (11) passivisation on the embedded subject.

 (10) vivāhaḥ kārito mayā marriage.NOM.SG do.CAUS.PASS.PTCL.NOM I.INS SG
 'I had the marriage carried out (lit. 'the marriage was caused to be done by me').'

(Brhatkathāślokasamgraha 14.118) PC-O

(11) candrāsannair hi nakşatrair lokah kāryāņi kāryate
 moon-conjunction._{INS.PL} indeed star._{INS.PL} world._{NOM.SG} duty._{ACC.PL} do._{3.SG.CAUS.PASS}
 'The world is caused to do the things that need to be done by/according to the constellations in conjunction with the moon' (*Bṛhatkathāślokasaṃgraha* 15.6) PC-S

iv) $\sqrt{j\tilde{n}\tilde{a}}$ 'to know' and \sqrt{sru} 'to hear' (12) and some other verbs: PC-S with people (make someone hear/know/etc), PC-O with things (make something heard/known/etc).

(12)	(a)		<i>amātya-sandeśaṃ</i> minister-message. _{acc.sg}	stanakalaśaḥ S. _{NOM.SG.MASC}
	'S	Stanakalaśa was caused to	o hear the minister's me	ssage.' (Mudrārākṣasam) PC-S

(b)	kena	punar	idānīņ	sa	lekhaḥ	śrāvitaḥ
	$who_{\cdot_{INS,SG}}$	again	now	this. _{NOM.SG.MASC}	letter. _{NOM.SG.MASC}	hear. _{CAUS.PASS.PTC.NOM.SG.MASC}
'by	whom was	this lette	er caused t	to be heard (i.e	. read out) again	?' (Priyadarśikā) PC-0

7.5 Relationship between Active and Passive Causatives

- Comparing figures for the passive causatives with those for the active causative is problematic: embedded subject often not explicit in the active causative, leaving the construction ambiguous between ACC-ACC and INS-ACC causatives; and obviously with a corpus of an ancient language, we have to make do with the material we find and cannot fill gaps by eliciting sentences from speakers.

	Pass Fin_PCS	Pass Fin_PCS	Pass ta_PCS	Pass ta_PCO	Act o	Act o-Acc	Act Acc-o	Act Acc-Acc	Act Obl-Acc
Pass Fin_PCS	1	0.88	0.74	0.1	-0.13	-0.43	0.6	0.16	-0.18
Pass Fin_PCO	0.88	1	0.83	0.18	-0.11	-0.38	0.56	0.2	-0.08
Pass Ta_PCS	0.74	0.83	1	-0.02	0.33	-0.48	0.81	0.57	-0.12
Pass Ta_PCO	0.1	0.18	-0.02	1	0.1	0.47	-0.33	-0.08	0.15
Act o	-0.13	-0.11	0.33	0.1	1	0.16	0.24	0.58	-0.16
Act o-ACC	-0.43	-0.38	-0.48	0.47	0.16	1	-0.34	-0.38	0.14
Act ACC-o	0.6	0.56	0.81	-0.33	0.24	-0.34	1	0.24	-0.03
Act ACC-ACC	0.16	0.2	0.57	-0.08	0.58	-0.38	0.24	1	0.09
Act OBL-ACC	-0.18	-0.08	-0.12	0.15	-0.16	0.14	-0.03	0.09	1

Table 3: Correlation Matrix

- numbers indicate how closely linked the appearance of one variable is to that of another; 1 = 100%- correlations between to passives or two actives don't matter (the more frequent a verb is, the more likely the numbers for all possible constructions are to go up)

- the one active-passive correlation with a high value we found is that between Active ACC-0 and PC-S with *ta*-participles – so, if a specific verb has more than one, it will have more of the other; p-values for this table confirm that this figure is statistically relevant \rightarrow this provides support to the traditional claim that the PC-S passive causative functions as the passive of the ACC-ACC causative

– no statistical proof for link between PC-O and INS-ACC

8) Various points

8.1 The Instrument in the Causative: origin of INS-ACC?

- Instrumental-case causer or instrument in Vedic active causatives (Hock 1981).

(14) *índram ná* yajñaíś citáyantah
I._{ACC.SG} like sacrifice._{INS.PL} notice._{CAUS.PRES.PTC.NOM.PL}
'Making Indra take notice (of us) with our sacrifices like...' (*Rgveda* 1,131.02)

- The instrumental case can indicate causer (15a) or embedded subject (15b), or be ambiguous (15c).

 (15) (a) *devair* vijñāpyate ca idam god._{INS.PL} know._{CAUS.PASS.3.SG} and it._{NOM.ACC.NEUT}
 'And it is caused to be known by the gods.' (Vișņu Purāņa 5,37.20)

 (b) śeşam āryayā jñāpyatām remainder._{NOM.SG} lady._{INS.SG} know._{CAUS.IMP.3.SG}
 'Let the remainder be made known by the lady.' (*Bṛhatkathāślokasaṇŋgraha* 4.37)

(c)	upadeśo	тата	ару	eșa	yuşmābhir	dāpyatām				
	advice. _{NOM.SG.MASC}	$I_{\cdot,\mathrm{GEN.SG}}$	also	this. _{NOM.SG.MASC}	you. _{INS.PL}	give. _{CAUS.PASS.IMPV.3.SG}				
'Let this my advice be caused to be given by you.' (Kathāsaritsāgara 3,6.106)										

8.2 Animacy

- Animacy: tendency for PC-S with +animate/+human, PC-O with -animate/-human. But note: animal PC-S in (16a), women PC-O in (16b).

(16)	(a)	na	vyāpāra-śatena	api	śukavat	pāṭhyate	bakaḥ		
		no	actions-hundred. _{INS.SG}	even	like-a-parrot	recite. _{CAUS.PASS.3PL}	heron. _{NOM.SG}		
		'The heron cannot be taught to speak like a parrot, even by a hundred repetitions.' (<i>Hitopadeśa</i> 0.42)							

(b) *gandhārva-vivāhena* **sā vivāhitā** gandharva-marriage._{INS.SG} she._{NOM.SG} lead-away._{CAUS.PTC.NOM.SG.FEM} 'She was married (lit. 'caused to be led') by/in a gandharva-marriage.' (*Pañcatantra* 1.225)

8.3 Compounds

Past passive participles can also present the relevant patterns in compound formation: PC-O in (17a) and PC-S in (17b).

(17) (a) *sarvaṃ tan <u>manyu</u>-kāritam* all._{NOM.SG.NTR} this._{NOM.SG.NTR} rage-done._{CAUS.PTCL.NOM.SG.NTR} 'All this is caused to be done by your rage.' (*Mahābhārata* 5,73.11)

(b) <u>mātali</u>-vāhito rathaḥ M.-carried._{CAUS.PTCL.NOM.SG} chariot._{NOM.SG} 'The chariot that was caused to move by Mātali.' (*Abhiṣekanāṭakam* 6)

8.4 The passive in Sanskrit

- Unlike in e.g. English, the passive in Sanskrit often is an unmarked or even the preferred way of expressing something

(18) bidālo mayā drṣṭaḥ cat._{NOM.SG.MASC} I._{INS.SG} see._{PAST.PASS.PTC.NOM.SG.MASC} (lit.) 'The cat was seen by me' = 'I saw the cat.'

- Interesting interactions between active and passive semantics:

(i) *ta*-participles are passive if semantically possible, otherwise active: e.g. *bhūta-* 'having been'
(ii) infinitives exist only in the active; passivity expressed by passive governing verb:

- (19) (a) khāditum śaknoti eat._{INF} can._{ACT.3.SG} 'he can eat'
 (b) khāditum śakyate
 - eat._{INF} can._{PASS,3.SG} 'he can be eaten'

- Any link between this and the ability to interpret these causative forms as, for all intents and purposes, active and passive?

9 Conclusions

- Passive causatives are more complicated than one might think

– Many causatives, and passive causatives, appear more like transitive verbs than true causatives; seems especially common beside transitive nasal presents.

- Causatives, and passive causatives, do not work as Pāņini says they should.

- The variation between ACC-ACC and INS-ACC, and between PC-S and PC-O, is complex, and varies according to verb.

– There does seem to be a correlation between ACC-ACC and PC-S, but further correlations are more difficult to establish.

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