

The Development of Perfective Auxiliaries in Indo-Aryan

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1 Outline

- Sanskrit had a primarily inflectional tense/aspect system.
- One well-known exception is the perfective auxiliary construction, formed with *kr* ‘do’, *bhū* ‘be’ and *as* ‘be’.
- Modern Indo-Aryan languages generally exhibit mixed tense/aspect systems.
- **Likely Hypothesis:** the Sanskrit perfective auxiliary construction paved the way for the development of a mixed inflectional tense/aspect system.
- **Problem:** The modern periphrastic constructions appear to be descended from several different participials, not the perfective auxiliary constructions.

• Alternative Proposal:

- The Sanskrit “perfective auxiliary” construction was actually subdivided into two different types of syntactic creatures: a control, and a N-V complex predicate.
- The ancestors of the modern periphrastic tense/aspects were participles with either *bhū* ‘be’, *as* ‘be’ or *sithā* ‘stand’.

2 Sanskrit

2.1 Inflected Tenses

- The past tenses of Sanskrit are the imperfect, perfect and aorist.
- All of these tenses are inflectional.
- The following examples and descriptions are taken from Kiparsky (1998); the examples are from the R̥gveda.

– The aorist serves as a general past tense.

- (1) *prá maṇḍúkā avādiṣuḥ*
Pref frog-Pl.Nom Aug-speak-Aor-3Pl
‘The frogs have spoken.’ [in chorus] (7.103.1)

– The imperfect and the perfect are used for a remote or historical past.
– The perfect is furthermore restricted to events not witnessed by the speaker.
– It is generally formed via reduplication of the stem.

- (2) *tuvám jigeṭha ná dhána ruroditha*
you.Nom win-Perf-2Sg not prize-Pl.Acc retain-Perf-2Sg
‘You have [always] won and not kept the booty.’ (1.102.10)

2.2 Perfective Auxiliaries

- In addition to the inflectional past tenses, Sanskrit made use of a periphrastic construction.
- The oldest (Vedic) construction involved *kr* ‘do’.
- Classical Sanskrit used *as* ‘be’ (and very rarely *bhū* ‘be’).
- The traditional grammars propose that this construction was formed with those roots which could not form a perfect via reduplication.

• This included

- Primary roots with long vowels

(3) *ās-ām cakre*
sit.Pres.Stem.Acc do.Perf.Mid.1/3.Sg
‘I sat’ ($\sqrt{ās}$ ‘sit’)

- Derivatives: causatives, denominatives

(4) *toṣ-ay-ām āsa*
be satisfied.Pres.Stem-Caus-Acc be.Perf.Act.1/3.Sg
‘I satisfied (somebody)’ ($\sqrt{toṣ}$ ‘be satisfied’)

- (5) *sa sam-nti-mantri-ay-ām-āsa*
Dem.Nom.3.Sg.M with-down-speech-Denom.Pres.Stem-Acc-be.Perf.Act.1/3.Sg
mahipālān-viśām
prince.Acc.Pl-nation.Gen.Pl
‘He invited the princes of the nations.’ (\sqrt{mantr} -ay(Denom.) ‘think’)
(Nalopākhyāna II,8)

— Verbs of the 10th class

(a verb class whose present stem is derived with *i*, Dhatu-Pāṭha (Pāṇini))

- (6) *nṛpatir-bhīmo* ... *cintay-ām-āsa*
king.Nom.Sg.M-Bhima think.Pres.Stem-Acc-be.Perf.Act.1/3.Sg
tat-kāryam

Dem.Acc.Sg-do.Part.Nec.Acc.Sg

‘The king Bhima thought about what to do.’

√*cint* ‘think’ (10th Class) → *cintay-* (Pres.Stem)
(Nalopākhyāna II,6)

- Note that the syntax is unusual.
- The old grammarians were not quite sure what to do with these constructions and were therefore uncharacteristically reticent.

3 Modern Perfective Auxiliaries

3.1 Possible Path of Grammaticalization

- A reasonable hypothesis would be that Sanskrit perfective auxiliaries paved the way for the modern Indo-Aryan periphrastic tense/aspect constructions.
- Indeed, the older grammars (Speijer 1886, Whitney 1879) propose that the constructions with ‘be’ are modeled on the earlier *kt* ‘do’ construction.
- The next logical step would be further grammaticalization that leads to the modern system of periphrastic auxiliaries not only in the perfective, but also in other tenses/aspects.

3.2 Examples from Modern Indo-Aryan Languages

The modern Indo-Aryan languages indeed use descendants of both *as* ‘be’ and *bhū* ‘be’.

Bengali and Urdu/Hindi provide good examples because they can be taken to represent the Western and Eastern branches of Indo-Aryan.

3.2.1 Auxiliaries in Urdu/Hindi

- Urdu/Hindi uses *rah* ‘remain’ and descendants of Sanskrit *sthā* ‘stand’ and *bhū* ‘be’.

- These auxiliaries interact with the tense/aspect system as shown in (7).

(7)

Pres	Past	Fut	Impf	Perf	Prog
			Pres/Past	Pres/Past	Pres/Past
mara	marega	marta(+be)	mara (+be)	mar <i>raha</i> (+be)	

mar- ‘hit’ -3.Sg.

(8)

Urdu ‘be’ Auxiliaries		
Form	Meaning	Defective Cells
<i>ho-na:</i>	to be	Pres/Fut/Impf/Perf Past
<i>t^h-a/i/e/ī</i>	be (Orig. stand)	All Others

- The *be* auxiliaries are commonly thought of as belonging to the same paradigm.
- In this paradigm, *t^h*- functions as the past form.
- However, this is really a case of two paradigms in complementary distribution. The auxiliaries derive from two different verbs and as a consequence inflect differently:

1. *ho* inflects according to person and number because it comes from the verb ‘be’.

2. *t^h* inflects according to gender and number because it comes from an adjective past participle of the Sanskrit verb *sthā* ‘stand’.

3.2.2 Bengali Auxiliaries

In Bengali, a descendent of the Sanskrit verb *as* ‘be’ (Bengali *aiḥ*) was pressed into service for the perfect and the progressive.

(9)

	Pres	Past	Fut	Impf	Perf	Prog
				Pres/Past	Pres/Past	Pres/Past
Bengali	mare	marlo	marbe	maro	meret ^{[^he/}	mar ^{[^he/}
				(Past only)	meret ^{[^hlo}	mar ^{[^hlo}

mar (Bengali) ‘hit’ – 3.Sg.

- The perfect and the progressive differ in that an emphatic clitic (*o*) can be introduced between the stem and the *-t^h* in the perfect, but not in the progressive.

(10) a. mere-o-t^{[^he}

b. *mar-o-t^{[^he}

- This and other differences make sense under an analysis (Labiri to appear, Butt and Lahiri 1998) in which

- the progressive $-(a)/i^h$ has been reanalyzed as a piece of derivational morphology
- the auxiliary $-(a)/i^h$ has retained its status as an independent prosodic word in the perfect

3.3 Historical Origin of the Periphrastic Constructions

3.3.1 Urdu/Hindi

Origin and Usage

- The perfect verbal forms in Urdu/Hindi (e.g., *mara* ‘hit’) are derived from the Sanskrit deverbal adjectival past participle in *-ta* (Chatterji 1926, Kellogg 1893, Beames 1872).
 - An example of typical Sanskrit usage of participle as past tense form is given in (11).
- (11) *evam-uk-tā tu hamsena damayantī*
 so-say-Pass.Past.Part then goose.Inst.Sg Damayantī.Nom.Sg.F
 ‘Then Damayantī was spoken to like that by the goose.’ (Nalopākhyāna I,30)
- This participle could already be used as a past tense form in Sanskrit (Späjer 1886:255,294).
 - The agreement between the past participle and the patient is still reflected in Urdu/Hindi today in terms of object agreement.

Historical Development

- The *-ta* affix had the morphophonological forms *-ta*, *-ita*.
- The *i* was used more frequently in the Prakrit dialects and eventually took on the quality of a semi-vowel: *y*.
- The *-t*, on the other hand, was either voiced (*d*), or lost altogether.

(12) From Participle to Perfect

Sanskrit	<i>ta</i> and <i>ita</i> >
Middle Indo-Aryan	<i>a</i> and <i>ia</i> >
Urdu/Hindi	<i>-y-</i> in verbs ending with a vowel
(Chatterji 1926, Beames 1872:132–133, Kellogg 1893:339)	

- The modern perfect form inflects for gender and number. This is due to a (nominalizing) affix *ā* that inflected for number and gender.

3.3.2 Bengali

- The Bengali perfect form (e.g., *mere* ‘hit’) comes from the Sanskrit absolutive *iva*.
- An example of typical Sanskrit usage is given in (13).

(13) *tam dṛṣ-tvā . . .*
 Pron.3.Sg.Acc see-having
 ‘Having seen him, . . .’ (Nalopākhyāna II,27)

(14) From Participle to Perfect

Sanskrit/Pali	<i>ivā</i> and <i>yā</i> >
Prakrit	<i>ia</i> >
	<i>i</i> and <i>a</i> >
Bengali	<i>e</i>
(Chatterji 1926, Kellogg 1893:341)	

3.4 Summary

- The Sanskrit perfective auxiliary construction thus is not the ancestor of the modern periphrastic tense/aspect constructions.
 - The original periphrastic perfective auxiliary construction was formed with verbal accusative nominals.
 - The modern constructions are formed with descendants of various Sanskrit participials, which already had past tense use in Sanskrit.
 - Thus, there is a clear continuity between the use of the Sanskrit participles and the modern periphrastic constructions.
- With respect to the perfective auxiliaries, on the other hand, the only property common is that the verbs *as* ‘be’ and *bhū* ‘be’ are involved.
 - Note that the *kr* ‘do’ forms no part of the modern tense/aspect systems.

- Glassman (1986) cites these constructions as denoting “imminent action”.

(20) a. *ḍakṭar saḥb bol-ne=ko t^he*
 Pron.3.Sg doctor saḥb.M.Nom speak-Inf.Obl=Acc be.Past.M.Subj
 ‘The doctor was about to speak.’

b. *mem-sahiba cae bama-ne=ko t^hī*
 Madam.F.Nom tea.F.Nom make-Inf.Obl=Acc be.Past.F.Subj
 ‘Madam was just about to make tea.’
- We propose to analyze both of these constructions as instances of control in which the finite ‘be’ verb takes two arguments: a subject and an (verbal noun) complement.

(21) a. **Urdu:** [Madam_i [PRO_i tea V]-ACC be.Past]

b. **Sanskrit:** [He_i [PRO_i princes V]-ACC be.Perf]

- Note that while the Sanskrit construction denoted perfectivity, the Urdu construction appears to be ingressive.
- The semantic component here has changed, however, what the constructions have in common is that they are both used to denote a temporal/aspectual distinction.

5 Conclusion

Facts

- The perfective auxiliaries in Sanskrit did not give rise to modern Indo-Aryan periphrastic tense/aspect systems.
- The development of modern periphrastic constructions involves a straight-forward grammaticalization scenario which identifies Sanskrit participles as the ancestral construction.

Speculations

- However, the “perfective auxiliaries” were possibly not dead-ends: parallel constructions can be identified in modern Urdu/Hindi.
- We propose that the *kr*-construction might be a type of N-V complex predicate and that the ‘be’ perfective auxiliaries might be a control construction.
- Butt and Lahiri (1998) argue that complex predicates constructions are relatively stable in terms of historical change — our findings would appear to support this.
- Under our proposal, the differences in usage between the *kr* ‘do’ and the ‘be’ perfective auxiliaries could be taken to follow from differing underlying syntactic structures.

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