

The imperfective-perfective contrast in Middle Indo-Aryan

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ABSTRACT

This paper examines the distribution of two morphological paradigms inherited from Old Indo-Aryan in Middle and New Indo-Aryan languages – the Old Indo-Aryan Present (labeled PRES) and the Past Participle (labeled PERF). It is argued that these forms, contra standard assumptions, do not realize the present and past tenses, but rather the imperfective and perfective aspects with no tense specification. This hypothesis provides an explanation for the puzzling occurrences of the Present and the Past Participial forms with past and future reference in Middle Indo-Aryan. It also makes sense of some distributional patterns of these paradigms in New Indo-Aryan. This, in turn, supports the idea that the Middle Indo-Aryan proto-system that gave rise to the New Indo-Aryan languages was an aspect-based system with no present-past distinction.

1 Introduction

Sanskrit morphologically marks the contrast between the present and the past, and so do the New Indo-Aryan languages. The former system, however, is inflectional, while the latter is characterized by tense auxiliaries in combination with (mostly) non-finite perfective and imperfective forms. The basis of the innovated New Indo-Aryan verb system must lie in the properties of some intermediate system between New Indo-Aryan and Old Indo-Aryan — most plausibly, that of Middle Indo-Aryan. The goal of this paper is to investigate how the organization of the Late Middle Indo-Aryan tense-aspect system might bear on the analytic marking of tense and aspect in the New Indo-Aryan languages. The particular hypothesis that I explore is that Late Middle Indo-Aryan, unlike Old Indo-Aryan, did not morphologically contrast the present and the past tenses. Rather, the Late Middle Indo-Aryan system morphologized only the imperfective-perfective contrast in the non-future domain, the same aspectual contrast which underlies the innovated tensed periphrastic systems of most New Indo-Aryan languages.

The particular paradigms involved in this reorganization are the bold-faced forms in (1-a) and (1-b), which belong to the Old Indo-Aryan Present paradigm and the Past Participial paradigm respectively. The examples in (1) contain their cognates from the Middle Indo-Aryan period and come from the 6th century text, the *Vasudevahimṇī*. Throughout the paper, despite changes in their distribution, these two paradigms will be labeled and glossed PRES and PERF respectively in order to be able to track them over time.¹

¹Note that whenever a category represented by a gloss is capitalized, it refers to the standard name for an Indo-Aryan morphological paradigm with Indo-European cognates, and whenever it is not capitalized, the gloss stands for universal grammatical categories. PRES = Old Indo-Aryan Present; PERF = Old Indo-Aryan Perfective Passive Participle; PFCT = Old Indo-Aryan Perfect; IPFCT = Old Indo-Aryan Imperfect; AOR = Old Indo-Aryan Aorist; FUT = Old Indo-Aryan Future; PART = Imperfective Participle; IMPF = imperfective aspect; PST = past tense; PRS = present tense; IMP = imperative mood; CAUS = causative; 1 = first person; 2 = second person; 3 = third person; NOM = nominative; ACC = accusative; INS = instrumental; DAT = dative; GEN = genitive; LOC = locative; VOC = vocative; PTCL = particle; M = masculine; F = feminine; N = neuter; SG = singular; DU = dual; PL = plural; INF = infinitive; NEG = negation marker; ACT = active voice marker; PASS = passive voice; GER = gerund; EXCL = exclusive clitic.

- (1) a. nipphala-ṃ duma-ṃ pakkhīṃ-o vi **paricchaya-nti**
 fruitless-ACC.SG tree-ACC.SG bird-NOM.PL also abandon-PRES.3.PL
 Even birds *abandon* a fruitless tree. (VH.DH 31.24-25)
- b. **pat-to** ya Senīyo rāyā ta-m paesa-m.
 reach-PERF.M.SG and S.NOM.SG king.NOM.SG that-ACC.SG place-ACC.SG
 And King Seniya *reached* that place. (VH.KH. 17.1)

Because they constitute the basic compositional building blocks of the early New Indo-Aryan system, it is crucial to establish the status of the PRES and PERF paradigms within the Middle Indo-Aryan tense/aspect system, i.e. the system that gives rise to the tensed New Indo-Aryan grammar. The claim advanced here is that the distribution and interpretation of the Middle Indo-Aryan forms in (1-a) and (1-b) and their cognates in New Indo-Aryan languages, best supports their analysis as aspectual operators rather than tense operators. That is, the verb form in (1-a) realizes imperfective aspect, rather than the present tense, while the verb form in (1-b) realizes the perfective aspect, rather than the past tense.

Within Indo-Aryan historical linguistics, this claim (especially regarding the paradigm represented by (1-a)) would be considered surprising. The implicit and explicit assumption in the Indo-Aryan literature has been that tense is a consistently expressed morphological category across Indo-Aryan diachrony. Although the loss of individual tense/aspect markers and paradigms of Sanskrit in Middle and New Indo-Aryan has been carefully documented in Indo-Aryan historical grammars (Pischel 1900; Beames 1872–79; Bloch 1914, 1965; Chatterjee 1926; Kellogg 1893; Singh 1980; among others), this loss has mostly been understood in terms of the loss of specific paradigms, rather than in terms of the reorganization of the larger tense/aspect system along aspectual lines. Masica (1991:262) observes that the category of aspect is at the heart of the New Indo-Aryan verbal system, citing Lienhard (1961:27) who suggests that the rebuilding of the New Indo-Aryan system proceeds by establishing aspectual distinctions, to which the refinements of tense (and mood) were only later added. While this view is correct, it must be pointed out that it has not been determined exactly when and how such an aspectual system emerges in Indo-Aryan diachrony. Moreover it has not been debated whether the verbal system at every stage of Indo-Aryan morphologically distinguishes between the present and the past tenses. This paper offers a reinterpretation of the Late Middle Indo-Aryan and Early New Indo-Aryan facts: these point to a broad trajectory from the overt realization of tense operators in Old Indo-Aryan, to the loss of overt tense marking in Late Middle Indo-Aryan and its later re-emergence in the form of innovated present and past tense auxiliaries in New Indo-Aryan. Crucially, the aspectual distinctions that are at the heart of the New Indo-Aryan system, as Masica (1991) says, are structurally inherited from the Late Middle Indo-Aryan system.

A brief note about future tense marking is in order here. Middle Indo-Aryan and some New Indo-Aryan languages (e.g., Gujarati, Marwari) inherit the sigmatic future paradigm from Sanskrit. Others innovate (e.g., Marathi, Bengali) future marking from periphrastic constructions and Sanskrit non-finite modal forms. However, I leave inherited and innovated future morphology out of the discussion in this paper, given the meta-physical and epistemological asymmetry between non-future and future meanings more generally. While the past and (to some degree) the present are factual and decided, any assertion about the future is accompanied with some degree of indeterminacy.² Correspondingly, future morphology is distinct from present/past morphology in that the former typically expresses both tense and modality. The present paper, therefore, restricts its scope to the past/present temporal opposition, leaving the integration of future marking to later research.

For readers unfamiliar with the basic diachrony of the Indo-Aryan languages, the table in (2) provides the timeline. The scope of this paper is restricted to the later Middle Indo-Aryan period (i.e. not the earlier dialects of Pāli or Ashokan Prakrits) since my primary concern here is to determine the tense/aspect properties of the proto-system that underlies the New Indo-Aryan grammars. Although a much more nuanced examination of the distinct diachronic layers of the Middle Indo-Aryan languages is essential to establishing the loss of the

²Futurity has to do with plans, intentions, obligations, and predictions, notions which all have to do with mood and modality and are inherently non-factual. Empirically, this raises the question of whether *any* future marking serves purely the purpose of expressing temporal oppositions within a language. Crosslinguistic surveys have revealed that forms that realize future time reference are often used atemporally and have functions associated with mood and modality, such as possibility or probability (e.g., Kiwai, Zapotec), intention (e.g., Garo, Zapotec, Pawnee), desire or volition (e.g., Goajiro, Quileute) (Ultan, 1978; Dahl, 1985; Bybee et al, 1994).

morphological category of tense in Middle Indo-Aryan, this is beyond the scope of the current paper. My goal here is simply to demonstrate that if we allow for the assumption that the Old Indo-Aryan tensed system, contrasting the present and the past tenses, was reorganized in Middle Indo-Aryan as an aspectual system, contrasting the imperfective and the perfective aspects, we have a better explanation for the distribution and interpretation of certain inherited tense/aspect forms of Late Middle Indo-Aryan and their cognates in New Indo-Aryan. Further, this assumption accounts for the innovation of the tense auxiliary based periphrastic paradigms of the New Indo-Aryan languages; these innovation patterns are mysterious if the verbal forms of the parent system are assumed to already encode tense information.

(2) The Chronology

TIMELINE	STAGE	LANGUAGE	SOURCE USED
1900 BCE–1100 BCE	I	Early Vedic	Ṛgveda (RV)
1000 BCE–350 BCE	I	Late Vedic	
100 BCE–400 CE	II	Epic and Classical Sanskrit	Mahābhārata, Rāmāyaṇa
300 BCE–500 CE	III	Middle Indo-Aryan	Vasudevahiṃḍi (VH 500CE)
500 CE–1100 CE	III	Apabhraṃśa	Paumacariu (PC 800CE)
1100 CE–present	IV	New Indo-Aryan	native intuitions, fieldwork, grammars

(Approximate dates from Witzel (1999), Jamison and Witzel (2002), Alsdorf (1936))³

The organization of the paper is as follows. In §2, I introduce the notions of tense and aspect in the context of tenseless languages. §3 briefly describes the relevant Old Indo-Aryan temporal paradigms, which demonstrate the well-established fact that Old Indo-Aryan contrasts the present and the past tenses morphologically. In §4, I provide evidence that the forms associated with the present and past tense categories in Middle Indo-Aryan are better interpreted as exponents of the imperfective and perfective aspects respectively. §5 provides further evidence from New Indo-Aryan languages in support of this claim.

2 Tense and Aspect

The terms tense and aspect are used in at least two distinct ways in typological and semantic literature. As *morphological categories*, they refer to grammaticalized, obligatorily encoded distinctions that express temporal properties of situations. As abstract *semantic categories*, they refer to temporal properties of propositions that may or may not have a morphological reflex in a given language. The semantic categories are universal in that they are implicated in both the grammar and the discourse of many languages and also find robust morphosyntactic expression in several unrelated languages. In the context of this paper, the claim is that Middle Indo-Aryan lacks tense as a *morphological category* and the information corresponding to the *semantic category* of tense is obtained via contextual cues and aspectual morphology.

Tense, on the traditional view, is a deictic temporal category that involves a precedence relation between the time of the situation described by a sentence and some deictic center, most often the speech time. Language-specific tense expressions are grammaticalized markers that constrain the location of situations in time with respect to the deictic center. Given an utterance, overt tense markers restrict its temporal reference, i.e. the time at which the eventuality description it contains can be understood to hold. Languages like English and Hindi contain obligatorily present overt morphological material that restricts the temporal reference of an utterance. Neither the English sentence in (3-a) nor the Hindi sentence in (3-b) can be interpreted as making reference to a time overlapping with or following the time at which they are uttered.

- (3) a. John lov-**ed** Mary.
 b. Rām Rādhā-ko cāh-tā **thā**
 Rām.NOM Rādhā-ACC love-IMPF.M.SG PST.M.SG
 Rām loved Rādhā.

³These are approximate periods and the first of these, especially, only gives the broad window within which Northern and North-west India were settled (Jamison and Witzel 2002, p.6).

In tenseless languages, which lack such grammaticalized restrictors of temporal reference, discourse context, optional temporal adverbs, as well as the aspectual properties of predicates may serve to determine the temporal reference of utterances. A substantial literature has accumulated over the past decade investigating closely how grammatical, lexical, and contextual factors contribute to establishing present, past, and future reference in such languages (Bohnmeyer 2002; Bittner 2005, 2008; Lee & Tonhauser 2010; Tonhauser 2011). For instance, in a language like Yucatec Maya, (4-b) would be an appropriate answer to any one of the questions in (4-a). The reference time of (4-b) is thus constrained, not by overt tense morphology, but rather by contextual information or by the presence of optional overt temporal adverbs as exemplified in (4-c).

- (4) a. What did you do yesterday?/What are you doing right now?/What will you do tomorrow?
 b. Táan inw=óok'ot
 PROG A 1SG=dance.INC
 I was/am/will be dancing.
 c. Ho'leake' /Be'òoraa' /Sàamle' táan inw=óok'ot
 yesterday now tomorrow PROG A 1SG=dance.INC
 Yesterday/Now/Tomorrow I was/am/will be dancing.⁴ (Tonhauser 2011)

Aspect is a term that has been employed to refer to properties relating to eventuality structure — lexical aspect, inner aspect, actionality, aktionsart, on the one hand, and to temporal relations on the other — grammatical or viewpoint aspect. The notion of lexical aspect makes reference to the telic–atelic opposition which is sensitive to whether a predicate has divisive/cumulative reference (atelic) or not (telic). Grammatical aspect has been construed as describing relations between the time at which a situation holds and some salient reference time without making any direct reference to the utterance time.⁵ The fundamental opposition between imperfective and perfective aspect is between bounded and unbounded predicates (i.e. whether the reference interval contains the eventuality interval or whether it is contained in it).

The aspectual and temporal reference of clauses is determined by the interaction of their lexical aspect properties and overt morphological marking. In languages with a grammaticalized imperfective-perfective contrast, aspectual morphology obligatorily constrains the aspectual reference of clauses regardless of the telicity of the predicate in its scope, while in a language with grammaticalized tenses, tense morphology obligatorily constrains the temporal reference of clauses regardless of the (im)perfectivity of the predicates in its scope. More interesting is the interaction in languages that lack tense or aspect marking or both. First, in languages without grammatical aspect marking, lexical aspectual properties provide inferential defaults for grammatical aspectual reference (Smith 1991, 2008). Thus, in aspectually unmarked sentences, telic predicates are interpreted by default as perfective while atelic predicates are interpreted imperfectively (e.g., Bohnmeyer & Swift 2004 for German, Inuktitut, and Russian). Further, in the absence of tense marking, perfective predicates are by default interpreted as making reference to completed eventualities in the past while imperfective predicates tend to be interpreted as overlapping with speech time (Smith 2008; Bohnmeyer 2002 for Yucatec Maya; Shaer 2003 for West Greenlandic; Bittner 2005, 2008 for Kalaallit). Contextual information, however, can always override these interpretive defaults.

Yet another way in which aspectual distinctions are implicated in temporal reference has to do with temporal anaphora. It has been recognized since Kamp (1979), Partee (1984) and Hinrichs (1986) that perfective (eventive) and imperfective (stative) sentences interact differently with reference time in narrative discourse: events occur within the reference time established in discourse, while states hold at the reference time. Aspect also affects the update of reference time. In narratives, sentences containing eventive predicates show a strong tendency to “push” reference time forward, so that the following sentence tends to be understood to hold at a later reference time, while sentences containing stative predicates do not do so.

This paper employs these basic ideas about how temporal reference can be conveyed in the absence of tense in order to establish that the past and present tenses are not morphosyntactically expressed categories in Middle Indo-Aryan. The larger goal, that of establishing the various ways of conveying temporal reference

⁴Glosses used in (4): A 1SG = set A first person singular, PROG = progressive aspect, INC = incomplete status.

⁵Reference time (Reichenbach 1947) or Topic time (Klein 1994) refers to the temporal interval that is under discussion at any given point in a discourse.

in Middle Indo-Aryan, is far beyond the scope of this paper and must await further research. Before delving into the Middle Indo-Aryan data, §3 contains a brief description of the Old Indo-Aryan tense/aspect system, one which does morphosyntactically contrast past and present tenses.

3 The present-past distinction in Old Indo-Aryan

The Old Indo-Aryan verbal system consists of several paradigms marking distinct intersections of temporal, aspectual, and modal categories (Delbrück 1888; Whitney 1889, 1892; a.o.). The discussion here is restricted to the present and past tense forms of the indicative mood. The distribution of the relevant forms is summarized in Table 1. Each italicized form is the third person singular form of the tense-aspect configuration that it represents for the verb *gam* ‘go’. The term below the form lists the label for the paradigm in the Indo-European tradition. The cell that a form occurs in indicates how the distribution of that paradigm may be best (although not perfectly) classified in terms of language-neutral semantic categories. Neutral aspect indicates that the paradigm is not aspectually specified and is compatible with both perfective and imperfective readings (despite the misleading name for the neutral past tense form — the Imperfect).

TENSE	ASPECT			
	neutral	imperfective	perfective	perfect
present		<i>gaccha-ti</i> Present		
past	<i>a-gaccha-t</i> Imperfect		<i>a-gā-t</i> Aorist	<i>ja-gā-ma</i> Perfect

TABLE 1 Present and Past tense forms in Old Indo-Aryan

3.1 Vedic

3.1.1 The Old Indo-Aryan Present

The Old Indo-Aryan Present paradigm (glossed PRES here and throughout the paper despite changes in its interpretation) morphologically realizes the present tense in Vedic. It is aspectually imperfective and gives rise to event-in-progress and continuous stative readings. In (5-a), the PRES form refers to an ongoing episode of axe-sharpening, temporally located by the adverbial *nūnám* ‘now’. In (5-b), PRES marking occurs with a lexical stative predicate.

- (5) a. *ṣīṣī-te* *nūnám* *paraśú-ṃ* *suāyasá-ṃ*
sharpen-PRES.3.SG now axe-ACC.SG iron-ACC.SG
Now, he *is sharpening* his axe, made of iron. (RV 10.53.9c)
- b. *tvám* *hy* *àgn-e* *divyá-sya* *rāja-si*
you.NOM.SG PTCL A-VOC.SG heaven-GEN.SG reign-PRES.2.SG
Agni, you (are the one who) *reigns* over the heaven. (RV 1.144.6a)

3.1.2 The Old Indo-Aryan Imperfect

Cognate to the Greek and Latin Imperfect, the Old Indo-Aryan Imperfect inflection consists of the prefix-like augment *a* marking past temporal location and the secondary person-number suffixes. Like in ancient Greek and Latin, the Imperfect realizes past tense but unlike them, it is aspectually neutral and allows for both imperfective (6-a) and perfective (6-b) interpretations.

- (6) a. *vīṣṇo* *vádhi-ḥ* *pratimánaṃ* *búbhūṣan* *purutrá* *vṛtró*
virile.GEN.SG emasculated-NOM.SG counterpart wanting to be everywhere V.NOM.SG
a-śay-at *víasta-ḥ*
lie-IPFCT.3.SG dismembered-NOM.SG
Emasculated yet wanting to be virile, thus *Vrtra lay* with scattered limbs dismembered.
(RV 1.32.7.c-d)

- b. **á-han** áhi-m ánu apás tatard-a prá vakṣánā
 kill-IPFCT.3.SG dragon-ACC.SG up water-ACC.PL open-PFCT.3.SG forth cavity.ACC.PL
a-bhina-t párvatā-nām
 cut-IPFCT.3.SG mountain-GEN.PL
 He *slew* the Dragon, then *opened up* the waters, and *cut* cavities through the mountains.
 (RV 1.32.1c-d)

3.1.3 The Old Indo-Aryan Aorist

For Proto-Indo-European, the Aorist has been reconstructed as the marker of perfective aspect in opposition to the imperfective Imperfect. Within Vedic, it has been notoriously difficult to establish this contrast based on the uses of the Imperfect and Aorist (Gonda, 1962:258-261; Delbrück, 1888; Hoffman, 1967).⁶ As we have seen, the Imperfect has both imperfective and perfective readings which is why it is analysed as an aspectually neutral past tense in Vedic. The distribution of the Aorist is complex but it most frequently denotes culminated, completed events located in the past time as in (7-a.). The Aorist is also used in referring to an immediate past time, paralleling the ‘recent past’ use of the English Perfect, where the event denoted by the base predicate is interpreted as having occurred just before speech time (7-b).

- (7) a. **ná-tari-d** asya sámṛti-m vadhánām
 NEG-bear-AOR.3.SG he-GEN impact-ACC.SG weapon-GEN.PL
 He *did not withstand* (failed to withstand) the impact of his weapons.
 (RV 1.32.6; translation from Kiparsky 1998:ex.3a)
- b. idá hí vo dhiṣánā devy áhn-ām **á-dhāt** pītí-m
 now PTCL you.DAT.SG D.NOM.SG goddess.NOM.SG day-GEN.PL set-AOR.3.SG drink-ACC.SG
 sám mádá **a-gma-tā** vaḥ
 together gladdening go-AOR.3.PL you.ACC.SG
 This day, now, the Goddess Dhiṣanā *has set* forth the drink for you. The gladdening draughts *have reached* (united with) you. (RV 4.34.1.c)

3.1.4 The Old Indo-Aryan Perfect

The Perfect, like the Aorist, is reconstructible for Proto-Indo-European as an aspectual category with result stative value (Renou 1925).⁷ With a class of predicates (e.g., *vid* ‘know’, *cit* ‘think’, *sthā* ‘stand’), the Perfect has a result stative interpretation and may be coordinated with the Present, which has present time reference. The perfect form of the verb *bhi* ‘fear’ is *bibhāya* and it is used in this context to refer to the state of having become scared, which holds at reference time (the present).

- (8) ká īśa-te tujyá-te kó **bibhāya**
 who flee-PRES.3.SG rush-PRES.3.SG who fear-PFCT.3.SG
 Who *is fleeing* and *rushing*, who is afraid? (RV 1.84.17; translation from Kiparsky 1998:ex.6)

However, the Perfect also has a past eventive reading as illustrated by the examples in (9).

- (9) a. **á dad-e** vas trí-n yukt-án
 to give-PFCT.1.SG you-DAT.PL three-ACC.PL yoked-ACC.PL
 I *received* three (chariots) in harness for you.
 (RV 1.126.5.a-b; translation from Kiparsky 1998:ex.14a)

⁶Hoffman (1967) has been able to demonstrate that within the sub-system of prohibitive injunctives, the augmentless Imperfect and Aorist forms correspond to an imperfective and perfective interpretation respectively, suggesting that the original PIE contrast might be visible only in this sub-system at the Vedic stage.

⁷For a full description of the uses of the Perfect, I refer the reader to Renou (1925) which is devoted to the Vedic Perfect and a more concise summary in Kiparsky (1998).

- b. urú kṣáyā-ya cakrir-e
wide.ACC.SG dwelling-DAT.SG make-PFCT.3.PL
[They conquered heaven, earth, and the waters] They *made* themselves a wide homeland.
(RV 1.36.8.a-b; translation from Kiparsky 1998:ex.14c)

3.2 Epic Sanskrit

There are two main points of distinction between Vedic and the later Old Indo-Aryan Epic Sanskrit stages in the categories for present and past time reference according to existing grammatical descriptions.

- a. The Imperfect, the Aorist, and the Perfect may be used interchangeably for past time reference and often occur together (Oberlies, 2003:152-154; Brockington, 1998:352; Speijer, 1886). The distinction between the Present and the three past tenses is nevertheless maintained.⁸
- b. A new participial form — the PERF form — becomes available for referring to past, culminated events.

3.2.1 The PERF form in Epic Sanskrit

PERF is the label for the Indo-Aryan cognate of Proto-Indo-European deverbal, resultative, adjectival (participial) morphology with the **-tol/*-no* affix that attaches to verb roots.⁹ This morphology is not part of the finite verbal paradigm of Vedic (which inflects for person-number-mood features) but overlaps with the verbal system due to its aspectual properties. In Vedic, the PERF morphology is stative and realizes the resultative aspect as seen in the example in (10).¹⁰

- (10) **stīr-ṇám** te barhí-ḥ **su-tá** indra sóma-ḥ
strew-PERF.N.SG you.DAT.SG B-NOM.N.SG extract-PERF.M.SG I.VOC.SG S-NOM.M.SG
kr-tá dhān-á át-tave te hári-bhyām
prepare-PERF.M.PL barley-NOM.M.PL eat-INF you-GEN.SG bay-horse-DAT.DU
Strewn is the Barhis (grass) for thee; O Indra, *extracted* is the Soma. *Prepared* are the barley grains for thy two bay-horses to eat. (RV 3.35.7 (cited in Jamison, 1990:5))

The stative PERF form has a wider distribution in Epic Sanskrit (Oberlies 2003; Speijer 1886). The form exhibits an eventive reading and may refer to past culminated events.¹¹ Evidence for the availability of an eventive interpretation for PERF comes from its use with past-referring temporal adverbials, and coordination of PERF clauses with other past tense clauses. The examples in (11-a-b) show that the bare PERF morphology is compatible with past-time adverbials which locate the event (as opposed to a state) denoted by the PERF

⁸For the purpose of showing that the present and the past tenses are morphologically contrasted in Epic Sanskrit, it is not crucial to know the real distribution of the three forms. Specifically, the claim that I have to make pertains to Middle Indo-Aryan, which does not inherit any of them from Old Indo-Aryan. However, I want to point out that it is problematic to assume that the Imperfect, the Aorist, and the Perfect are interchangeable with no real distinction between them at the Epic Sanskrit stage. Moreover, as far as I know, it has not been substantiated through a close linguistic and statistical study of the distribution of the three forms. It is not clear whether the Imperfect, Aorist, and Perfect forms are available for every verb or whether there are semantic restrictions (or tendencies) for preferred paradigms for particular verbs. Further, while it is known that all three forms are restricted to past eventive interpretations, it is unknown whether all of them are also compatible with past stative interpretations (a highly unlikely possibility). This question can only be resolved through textual studies directed by semantically sophisticated research questions.

⁹This is cognate to the English past participial morphology *-ed/-en*.

¹⁰It has been claimed that the PERF morphology has an eventive (past time) interpretation in Vedic, but Jamison (1990) shows that PERF is uniformly stative at the earliest Vedic stage.

¹¹PERF originates as a stative adjective and its complete inflectional paradigm is based on the nominal categories — number, gender, and case. As a sentential predicate, PERF agrees with the nominative marked theme argument in number, gender, and case. The construction is passive, so the agentive argument appears in the instrumental case. The nominative case forms of the PERF paradigm in all genders and numbers are the constitutive forms for the PERF paradigm when it gets incorporated into the verbal system of Old Indo-Aryan.

The PERF paradigm	PERSON	SG	DUAL	PL
	MAS	ga-taḥ	ga-tau	ga-tāḥ
	FEM	ga-tā	ga-tau	ga-tāḥ
	NEU	ga-tam	ga-te	ga-tāni

predicate at a specific time in the past.¹²

- (11) a. **purā devayug-e** ca eva **dr̥ṣ-ṭam** sarv-aṃ mayā
 formerly god.age-LOC.SG and PTCL see-PERF.N.SG everything-NOM.N.SG I-INS.SG
 vibho
 lord-VOC.SG
 Lord, formerly, in the age of the Deva (Gods), I *saw* everything. (Mbh. 3.92.6a)
- b. **hr̥-tā** gau-ḥ sā **tadā** t-ena prapāta-s tu na
 steal-PERF.F.SG cow-NOM.F.SG that-NOM.F.SG then he-INS.3.SG fall-NOM.M.SG PTCL NEG
tark-itaḥ
 consider-PERF.M.SG
 Then he *stole* that cow, but *did not consider* the fall (consequences). (Mbh. 1.93.27e)

Further, sentences with PERF-inflected predicates can be coordinated with the Imperfect (12-a), the Aorist (12-b), and the Perfect (12-c), the three past tense paradigms attested in Epic Sanskrit. In each of the cases, PERF is interpreted as referring to a past event and not a result-state.

- (12) a. **yadā** tu rudhir-eṇa aṅg-e **parisr̥ṣ-ṭo** bhrgūdvaḥ **tadā**
 when PTCL blood-INS.SG body-LOC.SG touch-PERF.M.SG great.energy-NOM.M.SG then
a-budhya-ta tejasvī. . . ca idam **a-bravī-t**
 rouse-IPFCT.3.SG radiant.NOM.SG and this say-IPFCT.3.SG
 And when the (preceptor Rama) of great energy, *was touched* in the body by the blood, then,
 the radiant one woke up, and. . . said this. (MB 12:3:10 a-d)
- b. **yadā** pūrvam **gata-ḥ** kṛṣṇa-ḥ śamārtha-m kaurav-ān prati na ca tam
 when before go-PERF.M.SG K-NOM.M.SG peace-ACC.SG K-ACC.PL to NEG and that
 lab-dha-vān kāma-m tato yuddha-m **a-bhū-d** idam
 obtain-PERF-ACT.M.SG desire-ACC.SG therefore battle-NOM.SG be-AOR.3.SG this
 When, in the past, Kṛṣṇa *went* to the Kauravas for peace, he did not obtain that desired goal,
 and therefore, this battle *happened*. (Mbh. 9.62.2)
- c. taylor aṅḍ-āni **nidadh-uḥ** prahr̥ṣ-ṭāḥ paricārikā-ḥ. . . tataḥ
 their egg-ACC.PL deposit-PFCT.3.PL joyous-PERF.F.PL maid-servant-NOM.F.PL then
 pañcaśat-e kāl-e kadrūputr-ā **vinīḥṣṭ-tāḥ**
 500-LOC.SG time-LOC.SG K.son-NOM.M.PL burst.out-PERF.M.PL
 The happy maidservants *deposited* their eggs. . . then after five hundred years, the sons of Kadru
burst out. (Mbh. 1.14.13-14)

(11) and (12) thus show that the participial form PERF expands in its distribution from Vedic to Epic Sanskrit, overlapping in its functions with the Imperfect, Perfect, and the Aorist in referring to past time events (also see Condoravdi & Deo 2008). This fact is particularly relevant for Middle Indo-Aryan, which inherits only two of temporal/aspectual paradigms discussed thus far — the PRES and the PERF paradigms. The next section is concerned with establishing the correct semantic categorization for these morphological paradigms. Specifically, in the Indo-Aryan linguistic tradition, PRES and PERF are considered to be the markers of present and past tense respectively. I will argue that, in fact, PRES and PERF realize the imperfective and perfective aspects in Middle Indo-Aryan.

4 Middle Indo-Aryan

The changes from the inflectional system of verbal contrasts in Old Indo-Aryan to the relatively morphologically impoverished inflectional system of Middle Indo-Aryan have been described in terms of ‘erosion’

¹²In all the glosses involving PERF forms, gender information is given only for those NPs with which PERF agrees, because PERF contrasts with other paradigms in agreeing with the nominative NP in number and gender.

or ‘simplification’, primarily because many of the rich conjugational paradigms and the semantic categories they expressed were lost in Middle Indo-Aryan (Bloch 1965; Bubenik 1996; Pischel 1900; Vale 1948; and others). The Middle Indo-Aryan tense/aspect system inherits only the PRES, the PERF, and the Sigmatic Future paradigms from Old Indo-Aryan.¹³ The rich system of past tense markers is lost. Pischel (1900), on the basis of careful textual study, reports that the Imperfect, the Aorist, and the Perfect occur in Middle Indo-Aryan texts only as a few scattered forms for a few verbs.¹⁴ From among the past-referring forms of Epic Sanskrit, only the PERF paradigm remains and it is used regularly to refer to past time events in Middle Indo-Aryan. Further, the distribution of the PRES paradigm appears to undergo an unexpected change from Old Indo-Aryan to Middle Indo-Aryan. PRES marks the imperfective present tense in Old Indo-Aryan; in Middle Indo-Aryan it extends to past time reference as well. How are these changes to be interpreted? What is the correct characterization of the Middle Indo-Aryan tense/aspect system?

4.1 The imperfective-perfective contrast

My interpretation of the above facts is as follows: The present-past opposition realized in Old Indo-Aryan by distinct present and past tense morphology is lost in Middle Indo-Aryan. Instead, the PRES and PERF paradigms realize the aspectual contrast between the imperfective and the perfective aspects. The extension of the PRES paradigm to past-time reference is not random or determined by narrative function, but rather is grammatically determined. PRES must always be interpreted imperfectively regardless of whether the intervals it refers to overlap with speech time or precede it. Similarly, I will show that there is no evidence that the PERF paradigm realizes an aspectually neutral past tense; rather it realizes the perfective aspect. This interpretation contrasts with the standard understanding about the semantic values for these two paradigms in Middle Indo-Aryan, which is the present *tense* and past *tense* respectively (Bloch 1914, 1965; Chatterjee 1926; Pischel 1900; Vale 1948; Singh 1980; and others). The table in (13) gives the two competing proposals for tense-aspect contrasts in Middle Indo-Aryan.

(13)

Paradigm	Received view	My proposal
PRES	<i>present tense</i>	<i>imperfective aspect</i>
PERF	<i>past tense</i>	<i>perfective aspect</i>

Despite classifying PERF and PRES as the past and present tenses respectively, none of the scholars listed above fails to document the ubiquitous use of the PRES paradigm for past time reference. As a clear example, consider Beames’ (1872–79:101–102) discussion of the PRES form in the modern languages:

“... in form, preserves clear traces of its origin, though, as in its abraded condition it now no longer indicates with sufficient clearness present time; it has wandered away into all sorts of meanings, and is given by grammarians under all sorts of titles. Considering the very vague meanings which it now expresses, especially in regard to the note of time, it has seemed to me that the Greek term “aorist” more accurately describes this tense in its modern usage than any other. The fact that it is a present, *no matter what additional indefinite meanings may be attached to it, is, however, necessary to be borne in mind.*” [italics mine]

Pischel also observes that the past ‘tense’ is productively expressed either by the PERF or the PRES forms. Bloch (1914:247), in his study of Marathi, refers to the ‘temporal indeterminacy’ of the PRES morphology (by which he means its use in past situations) that has been inherited by modern Marathi from Middle Indo-Aryan. Chatterjee (1926:949-54) describes in detail the use of the PRES paradigm for the past in Old and Middle Bengali. In the next section, §4.2, I will offer arguments for my position based on Middle Indo-Aryan textual data from the archaic Mahāraṣṭrī text *Vasudevahiṃḍī* (cir. 500CE) and the later Apabhraṃśa

¹³Middle Indo-Aryan also inherits other non-finite participial forms (the potential participle and the imperfective participle) which are incorporated into the finite tense/aspect systems in New Indo-Aryan languages. However, the constructions that these forms participate in are innovated in Middle Indo-Aryan or in New Indo-Aryan and cannot be said to be directly inherited from Old Indo-Aryan.

¹⁴The single instance of the Imperfect retained in Middle Indo-Aryan is the Imperfect form of the verb *as* ‘be’ (Pischel 1900:421-22). The Aorist occurs relatively more frequently (Pischel 1900:422-24), while the Perfect is preserved only as an archaism for a few verbs. Bloch (1965:228-233) reaches the same conclusion.

text *Paumacariu* (Late Middle Indo-Aryan; cir. 800CE).¹⁵

A note about the sourcing of examples and their identification: For the *Vasudevahiṃḍī* (abbreviated as VH) I have used the edition published by Atmananda Jainagranthamala (vol 80–81) in 1929–30. The textual references against each example give the subsection and the page number followed by the line number where the example occurs. Thus, VH:DH 31.24 refers to the 24th line on page 31 of the *Vasudevahiṃḍī* in the section called the *Dhammillahiṃḍī*. For the *Paumacariu* (abbreviated as PC), I have used the H.C. Bhayani edition published by the Bharatiya Vidya Bhavan between 1953 and 1960. The text is available in searchable electronic format, input by Eva De Clercq at Ghent University. The sequence of numbers indicates the location of the example in the following form: chapter:subchapter:stanza:line. Thus PC 1.1.14.4 refers to the fourth line in the 14th stanza of the first subchapter of the first chapter in the *Paumacariu*.

4.2 The PRES-PERF opposition in Middle Indo-Aryan

In order to demonstrate that the PRES and PERF paradigms realize the imperfective-perfective aspectual contrast in Middle Indo-Aryan, and not the present-past tense contrast, one must show that the distribution of these paradigms is characterized by certain systematic properties. Specifically, one must show that:

- (14) a. Unlike the present tense, the PRES paradigm is NOT constrained to present time reference but may also be used to make reference to past and future eventualities.
 b. In its past uses, the PRES paradigm systematically has imperfective reference. Sentences containing lexically atelic predicates tend to appear with PRES inflection and telic predicates are interpreted as progressive or habitual/generic with PRES.
 c. Unlike the past tense, the PERF paradigm obligatorily has perfective reference. Sentences containing lexically telic predicates tend to appear with PERF inflection.
 d. The PERF paradigm is not constrained only to past time reference but may refer to culminated, completed eventualities (or their result states) obtaining in the past, present, or future.

If all these facts hold for the Middle Indo-Aryan stage, then the correct characterization of the Middle Indo-Aryan system must be in terms of an aspectual, rather than tense, contrast. In other words, only an imperfective aspect marker and not a present tense marker would be expected to be systematically constrained to imperfective reference in its past usage. Similarly, a perfective aspect marker, and not a past tense marker, would be constrained to perfective reference and be used to describe both events and result states. The correct characterization of the Middle Indo-Aryan system is thus dependent on whether the data really corresponds to the scenario in (14-a-d). The possibility that these paradigms have both aspectual and temporal value is ruled out here, at least as far as the present-past opposition is concerned. As will be shown, the fact that the PRES paradigm is compatible with past, present, and future reference indicates that it cannot be specified for present tense. Similarly, the PERF paradigm is compatible with both past, present, and future time reference in Middle Indo-Aryan, indicating a lack of tense specification.

4.3 Middle Indo-Aryan: PRES as imperfective

The Middle Indo-Aryan cognate of the Old Indo-Aryan Present paradigm can certainly convey present time imperfective reference. (15-a) is a generic imperfective sentence, while (15-b) contains a lexical stative predicate *jāṇ* ‘know’ and a habitual (passivized) predicate — both imperfective.

- (15) a. nipphala-ṃ duma-ṃ pakkhiṇ-o vi **paricchaya-nti**
 fruitless-ACC.SG tree-ACC.SG bird-NOM.PL also abandon-PRES.3.PL
 Even birds *abandon* a fruitless tree. (VH.DH 31.24-25)

¹⁵The corpus of Middle Indo-Aryan literature is vast and spans a period of over a millenium. The two texts selected are part of the Jaina narrative literature and represent some of the most important published material in Middle Indo-Aryan (Jain 1981). The *Vasudevahiṃḍī* of Sanghadāsagaṇi Vācaka has been (rightly) claimed to be a very good specimen of archaic Mahāraṣṭrī Prākṛit by Alsdorf (1936). The *Paumacariu* is one of the two important Apabhraṃśa texts written by Svayambhudeva (cir. 800 CE), the most celebrated of the Apabhraṃśa poets. It can be safely assumed that these texts together give a reasonable picture of the fundamental tense/aspect facts of the Middle Indo-Aryan system.

- b. e-ṇa tumam na **jāṇa-si** kiṃ pi kajja-ṃ **kīr-ai**
 this-INS.SG you NEG know-PRES.2.SG what PTCL use-NOM.SG do.PASS-PRES.3.SG
 Do you not *know* what use *is made* of this? (VH.DH 32.13)

On the other hand, PRES is often used to convey past time reference as well. Consider the short narrative in (16), from *Vasudevahiṃḍī*, which reports a past episode about a monkey who entered a mountain cave and mistook some sticky liquid tar to be water. He tried to drink it and got his face and hands caught in it (and ultimately perished in the cave). Some verbs are inflected with PRES while others are inflected with the PERF paradigm. Notice that the lexical predicates *reach* and *stick* are telic achievements and carry PERF inflection while the lexical predicates *flow*, *touch*, and *spread* are atelic and carry PRES inflection.¹⁶

- (16) a. sa . . . ekka-m pavvayaguha-m **pat-to**
 he.NOM.SG one-ACC.SG cave-ACC.SG reach-PERF.M.SG
 He *reached* a cave. (VH.KH 6.10)
- b. tattha ya silājau-m **parissava-ti**
 there and bitumen-NOM.SG flow-PRES.3.SG
 There, some bitumen (tar) *was flowing* (from the walls of the cave). (VH.KH 6.10)
- c. so . . . jalaṃ ti mannamāṇo . . . muha-ṃ **chubbha-ti**
 he.NOM.SG water thus thinking mouth-ACC.SG touch-PRES.3.SG
 Thinking it to be water, he *touch*ed (his) mouth to it. (VH.KH 6.11)
- d. taṃ **baddha-ṃ** . . . hatth-e **pasār-ei** te vi **baddh-ā**
 it stick-PERF.3.SG hand-ACC.DU spread-PRES.3.SG they also stick-PERF.M.PL
 It *got stuck*. (He) *spread* his hands. They also *got stuck*. (VH.KH 6.12)

(16-a-d) is representative of how the PRES and PERF inflected forms are interspersed throughout the *Vasudevahiṃḍī*. The set of sentences in (17) contains a short narrative fragment from the *Paumacariu*, the later Apabhraṃśa text, whose grammar is virtually identical to that of the *Vasudevahiṃḍī* with respect to the distributional facts of interest. The fragment clearly illustrates how the aspectual properties of the sentences within a narrative affect interpretation about temporal location. Specifically, PERF marked sentences tend to describe events and advance the reference time forward (Partee 1984; Dowty 1986; Hinrichs 1986). In contrast, the PRES marked sentences tend to describe unbounded states and are interpreted as holding at the reference time, rather than advancing it.

The preceding context in the text in (17) describes the beauty of Maruevi, the queen of a king called Nabhirāja to whom a glorious child, Rśabhadeva, is to be born. The narrative in (17) tells us that goddesses sent by Indra arrived (PERF) on Earth to serve her (17-a) and reached (PERF) her abode (17-b). The next five lines (entirely composed with PRES verbs) describe the events in progress after the goddess' arrival. They elaborate on how the goddesses were serving and entertaining Queen Maruevi. The final line of this stanza introduces the dream of Maruevi, carrying the narrative forward: as she was sleeping on her bed, she dreamt (PERF) a series of dreams.

- (17) a. to etthantare māṇavaves-eṃ **āi-u** dev-iu indāeseṃ
 then later human.form-LOC arrive-PERF.F.PL goddess-NOM.PL indra.command-INS.SG
 Then, later, at the command of Indra, the goddesses arrived there in human form. (PC 1.1.14.1)

¹⁶The elided material (. . .) here and elsewhere contains relative clauses and other modifiers that are not relevant to the aspectual structure of the sentences.

- b. sapparivāra **ḍhukka** tettahe s̄a maruevi bhaḍārī jettahe
with.family reach.PERF there she Maruevi.NOM.SG adorable.NOM.SG where
With their families, they reached there where the adorable Maruevi was (located). (PC 1.1.14.3)
- c. kā vi viṇou kiṃ pi **uppāy-ai paḍh-ai paṇacc-ai**
some PTCL recreation some PRT make-PRES.3.SG study-PRES.3.SG dance-PRES.3.SG
gāy-ai vāy-ai
sing-PRES.3.SG play.instrument-PRES.3.SG
Someone made some sport, someone studied, someone danced, someone sang, someone played
an instrument. (PC 1.1.14.4)
- d. Someone offered betelnuts (PRES), someone offered ornaments (PRES), someone fanned with
the fly-whisks (PRES), someone washed her feet. . . (PC 1.1.14.5-8)¹⁷
- e. varapallaiṅk-e pasuttiya-e suviṇāvali **ditṭh-ī**
excellent.bed-LOC.SG sleeping.INS.SG dream.series-NOM.F.SG see-PERF.F.SG
(Maruevi), sleeping on an excellent bed, saw a series of dreams. (PC 1.1.14.9)

This distribution of PRES and PERF forms in Middle Indo-Aryan is inexplicable on the assumption that PRES encodes the present tense and PERF the past tense. If these forms provide information about temporal location with respect to speech/coding time, it is strange that the sentences in (16) and (17) do not occur with the same tense marking, since they all report eventualities located within a specific time in the past. The use of PRES to make reference to past time eventualities has been observed for Indo-Aryan starting with Sanskrit and has been described as the historical present function of PRES. The historical present refers to a crosslinguistically well-attested use of the present tense in which eventualities occurring in the past are presented as if they were occurring in the present in order to make the narrative more vivid.

Scholars of both Old Indo-Aryan and New Indo-Aryan have suggested that the use of PRES for past time reference can be understood as arising from an idiosyncratic narrative device to vivify narrative description, rather than grammatical properties of the Indo-Aryan tense/aspect system.¹⁸ Consider, for instance Speijer's (1886:244) observation that PRES is often used in relating past actions in Sanskrit. He labels this use the Historical Present use and goes on to note (§327) that the most common employment of the historical present is that of expressing facts when "going on". He suggests that this use of the present may derive from the absence of an imperfective marker in the past tense, observing that PRES forms may be used even when the surrounding context contains past marking. MacDonnell (1927:204) also notes that the historical present use is much more common in Sanskrit than in English, especially "to express the durative sense that the Sanskrit Imperfect lacks." For New Indo-Aryan, Beames (1872-79:107) notes the past-oriented use of PRES in Marathi and notes especially for Bengali that it conveys a "historic present".

Thus, the few scholars who have observed that PRES tends to be used with imperfective reference still maintain the historical present hypothesis for the distribution of PRES. §4.3.1 shows that this hypothesis is untenable for Middle Indo-Aryan and that the PRES-as-imperfective analysis accounts for the facts much better. That is, Speijer's and MacDonnell's observations about the use of PRES in a durative sense hold almost categorically for the Middle Indo-Aryan stage.

4.3.1 The 'historical present' hypothesis

Cooper (1986:31) describes the historical use of the present tense as a rhetorical device to 'relocate discourse to some past location.' In other words, the deictic center for temporal location, which is the speech/coding

¹⁷The unglossed text is as follows:

kā vi **de-i** tamvolu sa-hattheṃ savvāharāṇu kā vi sahūvattheṃ (PC 1.1.14.5)

pād-ai kā vi camaru kama **dhov-ai** kā vi samujjalu dappaṇu **dhov-ai** (PC 1.1.14.6)

ukkhaya-khagga kā vi **parirakkh-ai** kā vi kiṃ pi akkhāṇa **akkh-ai** (PC 1.1.14.7)

kā vi jakkhakaddameṇa **pasāh-ai** kā vi sarīru tāhe **saṃvāh-ai** (PC 1.1.14.8)

¹⁸I have been able to find no reference that explicitly describes the historical present function of PRES only for the Middle Indo-Aryan grammatical system. Most such references occur in the context of the evolution of the New Indo-Aryan languages.

time by default, is shifted to the past in order to achieve a particular narrative effect. (18) provides an example of the historical present use of the English Present as a rhetorical device, in describing past-time eventualities.¹⁹ The situation under discussion belongs to a historical moment in the past (July 1812), yet is narrated as if occurring in the present.

- (18) (07-28-1812) . . . As the sun rises, Napoleon *sees* that the Russian army has withdrawn. Napoleon *gives up* on catching the Russian army. Napoleon and French army *enter* Moscow, peopled by only a few thousand Russians. Fires *break out* across Moscow, burn for four days, and *leave* the city in ruins.

There are two ways to determine whether the use of PRES for past-time reference in Middle Indo-Aryan is determined by non-semantic aspects of narrative structure or by the meaning of PRES:

- a. by examining the class of predicates with which PRES typically occurs and its interpretation in context;
- b. by examining whether the perspectival shift effected by the supposed historical present use of PRES is consistent within a narrative.

First, if the use of PRES for past time reference is a narrative device, then we expect that PRES should not be restricted to predicates of a particular aspectual class. Notice, for instance, that in (18), the English Present tense marking appears on atelic predicates (e.g., *see*) as well as eventive predicates (*give up*, *enter*) and gives rise to an eventive interpretation in both cases. That is, we interpret this discourse as narrating successive events that occurred in the past. Further, consecutive sentences, if they contain eventive predicates, advance reference time. So the entry into Moscow is understood to take place after Napoleon gives up on catching the Russian Army and the fires in Moscow are understood to take place following the entry into Moscow.

Second, we also expect on the historical present hypothesis that for a piece of narrative in which the deictic center has been relocated to a past location, the tense marking should remain consistent, assuming that all eventualities within that narrative are understood to overlap with the shifted perspectival center or the shifted ‘present’ of the narrative.

Neither of these expectations is met in the Middle Indo-Aryan corpus. When it refers to past time eventualities, PRES can only be interpreted imperfectively, appearing with lexical stative, progressive, and habitual/generic predicates. In particular, it does not exhibit an eventive reading (unlike the English Present in (18)). Further, narratives are not uniformly shifted to a past time location where all clauses — both eventive and stative — are inflected in the PRES paradigm. Within any given narrative, PRES-inflected forms are interspersed with PERF-inflected forms and seem to refer to ongoing situations rather than completed events.

Consider the narrative fragment in (19) from *Vasudevahimḍī*.²⁰

- (19) a. **pat-to** ya Seniyo rāyā ta-m paesa-m.
 reach-PERF.M.SG and S.NOM.SG king.NOM.SG that-ACC.SG place-ACC.SG
 And King Seniya *reached* that place. (VH.KH. 17.1)
- b. **vand-io** ṇe-ṇa viṇay-eṇam
 greet-PERF.M.SG he-INS.SG humility-INS.SG
 He *greeted* (the monk) with humility. (VH.KH. 17.1)

¹⁹<http://www.txdirect.net/users/richard/napoleo1.htm>

²⁰A short note about the glossing of ergative subject arguments for the Middle Indo-Aryan and later data is in order here. As has been well-noted, Old Indo-Aryan did not have an active, ergative construction (Andersen 1986, Butt 2001, Butt & Deo 2003). The original construction that gave rise to the ergative clause in the New Indo-Aryan languages was, in Old Indo-Aryan, a passive construction based on the PERF form with oblique agents in the instrumental case. It has not been established beyond debate that Middle Indo-Aryan transitive PERF clauses, such as those in (19-b) are ergative. I therefore uniformly gloss the subject argument in Middle Indo-Aryan as having instrumental rather than ergative case marking. For New Indo-Aryan, however, subjects of PERF clauses are glossed as ergative. Note that the verb *patta* (Skt. *prāpta*) is exceptional in that it requires nominative rather than instrumental/ergative marking on subjects.

- c. **piccha-i** ṇa-m jhānanicca-m
gaze-PRES.3.SG that-ACC.SG meditation.unmoving-ACC.SG
(He) *gazed* at the meditation-engrossed one. (VH.KH. 17.1)
- d. **pat-to** titthayasamīva-m
reach-PERF.M.SG monk.close-ACC.SG
He *reached* (came) close to the monk. (VH.KH. 17.3)

The predicates in (19) *reach that place* and *greet the monk* are telic and have PERF inflection.²¹ The predicate in (19-c) has PRES inflection. Suppose this PRES inflection does mark a perspectival shift and relocates the deictic center to the past reference time of the discourse in order to achieve a stylistic effect. Then it is unexpected that the very next sentence (19-d) should appear with PERF inflection, rather than continuing with the PRES marking that characterizes the previous sentence. The hypothesis that the present tense marker, PRES, performs a narrative historical present function when it refers to past time eventualities is untenable given this kind of distribution for PRES in discourse. Further, if we examine the aspectual class of the predicate in (19-c), we see that *gaze at the meditation-engrossed one* is an atelic (stative), non-eventive predicate. This coincidence, that PRES in its so-called historical present function, appears with the only stative predicate in this fragment begs for a more general account of PRES distribution.

(20) offers yet another example where PRES appears with stative predicates without introducing any perspectival shift that is then maintained in the later discourse. The predicate *notice a well* in (20-a) is eventive and the verb is inflected in the PERF paradigm. The predicates in (20-b-c) *observe the man* and *stand* are lexically atelic and the verbs are inflected in the PRES paradigm.

- (20) a. t-eṇa palāyamāṇ-eṇa purāṇakuv-o taṇadabbhaparichinn-o
that-INST.SG running-INST.SG old.well-NOM.M.SG grass.covered-NOM.M.SG
diṭṭho
notice-PERF.M.SG
That running one *noticed* an old well covered with grass. (VH.KH. 8.6)
- b. tattha ayagar-o mahākā-o vidāriyamuh-o gāsiukām-o
there python-NOM.SG gigantic-NOM.SG open.mouthed-NOM.SG hungry-NOM.SG
ta-m purisa-m **avaloe-i**
that-ACC.SG man-ACC.SG observe-PRES.3.SG
There a giant python, baring its mouth, eager to eat, *observed* the man. (VH.KH. 8.8-9)
- c. sapp-ā bhīsaṇ-ā aṣiukām-ā **ciṭṭha-nti**
snake-NOM.PL fearsome-NOM.PL eat.desiring-NOM.PL stand-PRES.3.PL
Fearsome snakes, eager to bite, *stood* (in the well). (VH.KH. 8.9)

The *Paumacariu* exhibits a similar pattern that cannot be attributed to the shift of the deictic center. This is illustrated here with the fragment in (21).²² The story here describes a prince Bhāmaṇḍala who was afflicted by passion for Sītā. The preceding context describes his condition and elaborates on how he displayed all the symptoms of a pining lover. In (21-a), the author concludes that Bhāmaṇḍala was indeed suffering (PRES) from the pain of separation which would not subside (PRES). Both sentences contain stative predicates. The following sentences (21-b-d) contain eventive predicates and the verbs, which relate successive events, are uniformly inflected with PERF: He stood up (PERF) like a lion, advanced (PERF) with his equipment and army,

²¹I am not assuming a one-to-one correspondence between the telicity of a predicate and its grammatical aspect inflection. Rather the idea is that in narratives where the primary purpose of the discourse is to report a sequence of events, telic predicates will tend to describe successive events and therefore exhibit a strong tendency to appear with PERF inflection. The appearance of atelic predicates with PRES inflection in a narrative context together with the surrounding context suggests that they must be imperfective rather than perfective.

²²Some non-crucial parts of the contiguous text have not been included in this fragment in the interest of a briefer exposition.

and reached (PERF) the city of Viyaḍḍhapura. It is difficult to reconcile this pattern of the distribution of PRES and PERF forms with the ‘historical present’ hypothesis.

- (21) a. **vāh-ijj-ai** virahe-ṃ dūsah-eṇa ṇa
afflict-PASS-PRES.3.SG pain of separation-INS.SG intolerable-INS.SG NEG
phiṭṭ-ai k-eṇa vi osah-eṇa
subside-PRES.3.SG any-INS.SG PTCL medicine-INS.SG
He *was afflicted* by the intolerable pain of separation; it *would not subside* with any medicine.
(PC 2.22.5.6)
- b. ṇīsāsu mue-ppiṇu dīhu-dīhu puṇaravi **th-īu** thakk-evi jema
sigh.NOM.PL have-GER long.NOM.PL then become-PERF.M.SG stand-GER like
sīhu
lion.NOM.SG
He sat there giving deep sighs, then *stood up* like a lion. (PC 2.22.5.7)
- c. **ṇīsar-īu** sa-sāhaṇu
advance-PERF.M.SG with.equipment.NOM.SG
He *advanced* forward with his equipment. (PC 2.22.5.8)
- d. **pat-tu** viyaḍḍhapuru
reach-NOM.SG viyaḍḍhapur.PERF.M.SG
He *reached* Viyaḍḍhapura. (PC 2.22.5.9)

Thus, we see that unlike a present tense marker, PRES is not restricted to present time reference but may systematically be used to make reference to past eventualities. PRES forms refer to eventualities located in the past, not because of a perspectival shift driven by narrative/rhetorical goals, but rather, because the PRES paradigm realizes the (temporally unspecified) imperfective aspect in Middle Indo-Aryan. In the absence of a present-past opposition in the language, the Middle Indo-Aryan PRES has both past and present imperfective reference.

The next section demonstrates that besides being used with lexically atelic predicates PRES also derives progressive and habitual/generic predicates. All the sentences in the following examples make reference to a past temporal interval and this is disambiguated by the surrounding textual material (which is not always transcribed here for brevity).

4.3.2 The imperfective readings of PRES

(22-a-b), taken from the *Vasudevahiṇḍī*, contain the lexically stative verbs *parivas* ‘live’ and *suṇ* ‘hear’ with PRES inflection.

- (22) a. egam-mi kira nayar-e kā vi gaṇiyā rūvavati
one-LOC.SG some town-LOC.SG some PTCL courtesan.NOM.SG beautiful.NOM.SG
guṇavati **parivas-ai**
skilled.NOM.SG live-PRES.3.SG
In some town, there *lived* a beautiful and skilled courtesan. (VH.K. 4.12)
- b. **suṇ-anti** ya bhayavay-o vayaṇa-ṃ . . . dhammakahāsaṃsia-ṃ
listen-PRES.3.PL and monk-GEN.SG speech-ACC.SG religious.story.filled-ACC.SG
And they *listened* to the speech of the monk, filled with religious stories. (VH.K. 5.5-6)

(23-a-b), taken from the *Paumacariu*, contain the lexically stative verbs *vas* ‘live’ and *icch* ‘desire’ with PRES inflection.

- (23) a. **g-a** vandanahatti-e ta-m paesu jahñ **vas-ai**
 go-PERF.M.SG adoration.DAT.SG that-sc acc.sg place.ACC.SG where live-PRES.3.SG
 mahārisi saccabhūi
 great.sage.NOM.SG Saccabhūi.NOM.SG
 He *went* to that place for adoration where the great sage Sacchabhūi *lived*.²³ (PC 2.22.7.1-2)
- b. uvarambha ña **icch-ai** daha-vayaṇu
 Uvarambha.NOM.SG NEG desire-PRES.3.SG ten-headed.NOM.SG
 The ten-headed one *did not desire* Uvarambhā. (PC. 1.15.15.8)

In (24-a-b) from *Vasudevahimṇī*, PRES appears on eventive verbs and gives rise to a habitual/generic reading. In (24-a), the predicates *give food-drink* and *offer a goat* are eventive, and the sentence receives a habitual reading. The predicate in (24-b) *perform Yoga* is also eventive with a habitual reading for the sentence.

- (24) a. so ya bambhaṇo varisevaris-e tam-mi devayā-e
 he.NOM.SG and brahmin.NOM.SG year.year-LOC.SG that-DAT.SG deity-DAT.SG
 . . .anna-pāṇa-m **d-ei** chagala-m ca **nived-eti**
 food.drink-ACC.SG give-PRES.3.SG goat-ACC.SG and offer-PRES.3.SG
 And that Brahmin, year after year, *used to give* food and drink and *used to offer* a goat to the deity. (VH:KH 29.20)
- b. tato aham aṇṇayā kayāi āyariyagiharukkhavāḍiyā-e joga-m
 then I.NOM.SG other some time teacher.house.tree.garden-LOC.SG yoga-ACC.SG
kar-emi
 do-PRES.1.SG
 Then, sometimes, I *would perform* Yoga in the orchard at my teacher's house. (VH:DH 37.1)

The diachronically later counterpart of this use of PRES, from the *Paumacariu*, is illustrated in (25). (25-a) describes the life of people who had joined the reign of King Indra. The context preceding (25-b) describes the birth of Rāvaṇa and his childhood exploits. He used to pluck the tusks of elephants and sometimes touch the hoods of serpents with his bare hands. (25-b) recapitulates this part of his childhood and is interpreted habitually.

- (25) a. kappu ña **di-nti** **ja-nti** sirigāra-hñ ā²⁴ ña
 tax.NOM.SG NEG give-PRES.3.PL possess-PRES.3.PL wealth-INS.PL command-NOM.SG NEG
kara-nti viṇāhaikāra-hñ
 do-PRES.3.PL arrogance-INS.PL
 They *used to give* no tax, (although) they were wealthy; they *did not obey* the royal command, because they were arrogant. (PC 1.8.2.3)
- b. āyae līlae rāmaṇu **ram-ai** ṇaṃ kālu vālu
 these sports Rāmaṇa.NOM.SG play-PRES.3.SG like God.of.death.NOM.SG boy.NOM.SG
 hoe-vi **bham-ai**
 become-GER roam-PRES.3.SG
 Rāvaṇa *would play* such sports; he *roamed* (around) like the God of death in the form of a boy.
 (PC 1.9.3.9)

²³Here and elsewhere there is often no overt accusative marking on objects, a characteristic of the Late Middle Indo-Aryan period where the nominative and the accusative cases were syncretized. For instance, *paesu* carries no accusative marking but the demonstrative *tam* is so marked. The glossing method I have adopted here considers an expression to have accusative marking if some other expression in the NP contains overt accusative marking. If there is no other accusative marker in the NP, the NP is glossed as nominative in the absence of overt marking.

²⁴from Skt. *ājñā*

PRES also gives rise to an event-in-progress reading. In (26-a), the sentence with the PRES inflected verb provides a ‘temporal frame’ (very much like the progressive) for the event of the spat-out betel leaf falling. The eventuality of going is seen as ongoing at the time of this event. In (26-b), the event of playing is construed as being ongoing at the time of the event of noticing. Both examples in (26) are from *Vasudevahimḍī*.

- (26) a. so ya diṇḍī . . . bhavaṇa-ssa āsaṇṇeṇa **gaccha-ti**
 he.NOM.SG and worshipper.NOM.SG house-GEN.SG near go-PRES.3.SG
 dhaṇasiriya-e tambola-m nicchudha-m **paḍi-yam**
 Dhaṇasiri-GEN.SG leaf-NOM.N.SG spat.out-NOM.N.SG fall-PERF.N.SG
 diṇḍi-ssu-vvarim
 worshipper-LOC.SG-on
 And the worshipper *was going* from near that house. Dhaṇasiri’s spat-out (betel)-leaf *fell* on the worshipper. (VH.D. 51.12-14)
- b. so vi laliyāgoṭṭhi-e samaṃ gaṅgā-e **khella-i** t-eṇa ya
 he-NOM.SG also friend.group-GEN.SG with river-LOC.SG play-PRES.3.SG he-INS.SG and
 khellant-eṇa patta.cchejja-m **di-tṭham**
 playing-INS.SG leaf.bed-ACC.N.SG notice-PERF.N.SG
 And he *was playing* by the river with his group of friends. And the playing one *noticed* the seat made from leaves. (VH.D. 58.18)

Paumacariu contains comparable examples given in (27). The bathing event in (27-a) is the backdrop against which the event of spotting the dead wasp occurs. As expected, the verb *bathe* is inflected with PRES while the verb *fall* is inflected with PERF. (27-b) occurs within the description of a battlefield that forms the backdrop for the narrative: warriors were rushing towards the sound of the elephants and the horses; they had placed the arrow on the bowstring and men were uttering the *hum* sound (a battlecry). The final line of the stanza locates an event against this temporal frame: streams of blood started to flow (PERF) like rivers from the temples of the great elephants.

- (27) a. kīlaṇavāvih-e parimiunāri-hñ **ṇhā-i** (. . .) **ṇivaḍi-ya** tā-su
 sport.pond-LOC surrounded.damsels-INS.PL bathe-PRES.3.SG fall-PERF.F.SG that.LOC.PL
 diṭṭhi taṇṇ avasare jahñ muu mahuyaru kamal-abbhantar-e
 gaze.FEM.SG that time where dead wasp lotus-inside-LOC.SG
 At the time when he *was bathing* in the sporting pond, surrounded by damsels, his gaze *fell* on a dead wasp inside a lotus. (PC 1.5.14.7-8)
- b. jettahe dhaṇuhara guṇaḡahiyasara jettahe huṅkāra
 where warrior.NOM.PL string.placed.arrow.NOM.PL where hum.sound.NOM.SG
mua-nti ṇara
 utter.PRES.3.PL men.NOM.PL
 Where the warriors had placed the arrows over the bowstring, where men *were uttering* the *hum* battlecry. (PC. 4.66.2.9).

4.3.3 Futurate readings of PRES

Finally, PRES may also be used to make reference to future eventualities. Although the Middle Indo-Aryan stages corresponding to both the *Vasudevahimḍī* and the *Paumacariu* retain the Old Indo-Aryan Sigmatic Future, PRES sometimes has future reference in matrix clauses. Although this is more of an inheritance from the Old Indo-Aryan distribution pattern, rather than an innovation, it supports the general claim that PRES cannot be treated as a temporally restricted present tense encoding category. I only give examples from the later *Paumacariu* here but these are available quite robustly in the *Vasudevahimḍī* as well. In (28-a) the King asks Bhīma to take care of the kingdom while he himself plans to leave to take up monastic ordination (*pravrajya*). The boldfaced verbs carry PRES inflection but must be interpreted as having future reference. In

(28-b), the PRES inflected verb in both the subordinate and the matrix clauses has future temporal reference, clearly conveyed by the use of the temporal adverbial.

- (28) a. pabhaṅ-iu bhīma ho-hi diḍhu rajjah-o haū puṇu
say-PERF.M.SG Bhīma.NOM.SG become-IMP.2.SG established kingdom-GEN.SG I PTCL
j-āmi th-āmi ṇiya-kajjaho
go-PRES.1.SG take.up-PRES.1.SG self-business.GEN.SG
He said to Bhīma: “Become firmly established in your kingdom. Now I *will proceed* forth and *take up* my own business. (PC 1.5.14.1)
- b. jai kallae tāya laṅkā-ṇayari ṇa paisara-mi to ṇiyaya-jaṇeri
if tomorrow father.VOC Laṅkā-city.ACC.SG NEG enter-PRES.1.SG then self-mother.ACC.SG
indāṇī kara-yal-e **dhar-ami**
Indāṇī.ACC.SG hand-palm-LOC hold-PRES.1.SG
O father, if I do not enter the city of Laṅkā tomorrow, then I *will place* my mother Indāṇī on the palm of my hand. (PC 1.7.12.9)
- c. paḍhamu kar-eppiṇu valivihāṇu puṇu pacchae dhaṇaya-ho **mal-ami**
initially, do-GER sacrifice.ACC.SG and then Dhaṇaya.GEN.SG shatter-PRES.1.SG
māṇu
pride.NOM.SG
After having first sacrificed you, then I *shall shatter* the pride of Dhaṇaya. (PC 1.10.8.9)

4.3.4 Summary

The assumption that PRES encodes the present tense fails to hold under closer scrutiny of the distribution of PRES in Middle Indo-Aryan texts. The textual facts suggest that PRES is better analyzed as the exponent of imperfective aspect with no tense specification. PRES-as-imperfective accounts for the past temporal reference expressed by PRES much more accurately than the ‘historical present’ hypothesis, which is inaccurate for two reasons. First, it does not explain the tendency for atelic predicates to appear with PRES marking in past referring contexts. Second, it does not explain why the perspectival shift, supposedly initiated by PRES, does not continue via PRES marking in contiguous sentences within a narrative. As §4.3.2 shows, PRES appears with both lexical stative and lexical eventive verbs; in the latter case, it gives rise to event-in-progress or habitual/generic readings. The more plausible generalization for Middle Indo-Aryan is that PRES-inflected sentences are interpreted imperfectively. The futurate readings available to PRES further strengthen the hypothesis that PRES does not directly encode tense information.

4.4 Middle Indo-Aryan: PERF as perfective

That PERF in Middle Indo-Aryan (already in later Old Indo-Aryan), allows reference to completed eventualities in the past is not a matter of debate. The question is whether PERF realizes an aspectually neutral past tense or whether it must be considered to be an exponent of the perfective aspect. If the latter, it must be further determined whether PERF is semantically *past perfective*, i.e. encoding perfective aspect restricted to past temporal reference or whether it carries no tense specification and allows for past interpretation only by inference in context. The predictions about the distribution of PERF are clear on either of these three hypotheses:

- A. If PERF realizes the aspectually neutral past tense, it should be compatible with both eventive and stative past reference.
- B. If PERF realizes the past perfective, it should be restricted to describing completed eventualities located in the past with respect to speech time.
- C. If PERF realizes perfective aspect and carries no tense specification, it should be compatible with past, present, and future reference given the right contexts of interpretation.

The traditional view among Indo-Aryan grammarians on this matter was that PERF realizes the simple past tense (hypothesis A) although scholars have rightly noted that both PRES forms and the Present Participial forms are also used robustly in past referring clauses (Chatterjee 1926; Bloch 1965; Vale 1948; Sen 1953; 1960). Contemporary Indo-Aryan linguists tend to go with the more restrictive hypothesis B that limits the distribution of PERF to descriptions of past events and their result states obtaining in the present (Masica 1991; Bubenik 1998, 2007). On the basis of the distributional facts of Middle Indo-Aryan, I propose that the most accurate analysis of PERF is as a purely aspectual operator (hypothesis C). PERF carries no tense specification; i.e. it does not realize the combination of past tense and perfective aspect, but rather, perfective aspect simpliciter.

Evidence that PERF does not realize the simple past tense partly comes from the systematic distribution of PRES and PERF in narrative discourse presented in §4.3. There we saw that atelic and derived progressive and habitual predicates within a contiguous past narrative appear with PRES marking rather than PERF. This is entirely unexpected on the PERF-as-past hypothesis because if PERF encoded the aspectually neutral past tense, it would be compatible with both perfective and imperfective reference. The following sections provide more evidence that PERF morphology, while clearly showing the distribution of perfective marking, cannot be taken to directly encode past tense meaning. In §4.4.1, we see that sequences of PERF sentences are understood to describe sequences of events and result systematically in the advancement of the reference time — the discourse moves forward in time with each successive sentence. This type of narrative effect is associated with perfective aspect rather than the past tense. §4.4.2 shows that PERF sentences may also be interpreted as describing result states that hold in the past or the present. Finally, in §4.4.3, we see clear examples of PERF being used in matrix clauses to make reference to future events and result states, with future adverbial modifiers. Taken together, these facts considerably weaken the case for any account that analyzes PERF as encoding past tense meaning.

4.4.1 PERF-based sentences uniformly advance reference time

In a contiguous sequence of PERF sentences, each sentence describes a successive event and updates the reference time for the discourse to the time after the occurrence of the event. That is, an eventuality described by the later sentence is understood to occur after the eventuality described by the prior sentence. A representative example from the *Vasudevahimā* is given in the narrative fragment in (29). The main predicate in each of the sentences in (29) is a PERF-inflected form. The story describes the events before the sacrifice of a goat, beginning with the departure of the family (with their friends and relatives) to the sacrificial stake. Every following sentence is understood to describe an eventuality that took place later in time, each of them ordered with respect to each other.

- (29) a. tato te mittabāndhavasahiā. . . **ga-yā**
 then they.NOM.PL friends.relatives.with.NOM.PL go-PERF.M.PL
 Then they *went* there with their friends and relatives.’
- b. chagalo vi ya maṇḍe-uṃ tatth-eva **ni-o**
 goat.NOM.M.SG also and decorate-INF there-PTCL take-PERF.M.SG
 And the goat also *was taken* there to be decorated.
- c. gandhapupphamallapuyāvises-eṇa ya **acchi-yā** devayā
 sandal.flower.garlands.worship.ingredients-INS.SG and worship-PERF.M.PL god.NOM.M.PL
 The Gods *were worshipped* with sandalwood paste, flower garlands, the ingredients of worship.
- d. gharamahattar-ehi ya **bhaṇi-yam** chagala-o āṇ-ijj-au
 house.elders-INS.PL and say-PERF.N.SG goat-NOM.SG bring-PASS-IMP.3.SG
 And the house elders *said*: “Let the goat be brought.”

- e. tato tassa putto . . . chagalaya-m āṇe-uṃ **ga-to**
 then his son.NOM.M.SG goat-ACC.SG bring-INF go-PERF.M.SG
 At that, his son . . . *went* to bring the goat. (VH:D 29.25-28)

Within this fragment, PERF sentences only have eventive reference and successive sentences describe successive events in the past.²⁵ The later text, *Paumacariu*, maintains this pattern, as is illustrated by the narrative in (30).²⁶ The preceding context describes how the brother of the ten-headed one (the demon Rāvaṇa) entered the country of Vaiśravaṇa and started fighting. This led to the sequence of events in (30). First, the populace went (PERF) to the king to complain. The king got angry (PERF), sent (PERF) a messenger, who entered (PERF) the ten-headed one's court. The messenger was welcomed somewhat (PERF) and he then commenced his speech. Each PERF sentence in the narrative describes an event and moves the narrative forward temporally.

- (30) a. **ga-ya** paya kūvar-eṃ kou **hū-u**
 go-PERF.F.SG populace.NOM.F.SG prince-LOC.SG anger.NOM.SG become-PERF.SG
 The populace *went* to the king; (he) *became* angry. (PC 1.10.7.6)
- b. **pes-iu** Vayaṇalaṅkāra dūu
 send-PERF.M.SG Vayaṇalaṅkāra.NOM.SG messenger.NOM.SG
 (He) sent a messenger named Vayaṇalaṅkāra. (PC 1.10.7.6)
- c. dahavayaṇaṭṭhāṇu **paiṭṭh-u** gampī
 ten.headed.place.NOM.SG enter-PERF.M.SG go-GER
 Having gone, he (Vayaṇalaṅkāra) entered the place (court) of the ten headed one. (PC 1.10.7.7)
- d. te-hi mi **k-iu** abbhutthāṇu kiṃ pi
 he.INS.SG also do-PERF.M.SG welcome.NOM.SG some also
 He (the ten headed one) also made some welcome (to him). (PC 1.10.7.7)
- e. **pabhaṇ-iu** sumāli.pahu de-hi kaṇṇu
 speak-PERF.M.SG Sumāli.lord.VOC give-IMP.2.SG ear.NOM.SG
 He (Vayaṇalaṅkāra) said: “Lord Sumāli, give your ear (listen carefully).” (PC 1.10.7.8)

4.4.2 The stative readings of PERF

One of the uses of PERF inherited from the Old Indo-Aryan period is to mark result states (Jamison 1990). This use continues to obtain in Middle Indo-Aryan (Condoravdi & Deo 2008). PERF sentences, in addition to allowing reference to completed eventualities, may also allow reference to the states resulting from the culmination of prior eventualities. The temporal location of these states remains lexically unspecified and gets disambiguated by the temporal context. If PERF is treated as specified for the past tense, i.e. as past perfective morphology, the present and future oriented stative readings of PERF remain unexplained.

The examples in (31) contain a short narrative from the older *Vasudevahimṇī*. The context is as follows: the queen and her maidservant are standing at the window of the palace looking down at the street below. The maidservant notices that her mistress has stood still with her eyes fixed on something. (30-a) is the maidservant's thought described by the narrator. The PERF inflected form describes this state which is understood as overlapping with speech time (from the maidservant's perspective). In (30-b), the PERF inflected forms are from the perspective of the narrator and describe the actions of the maidservant. These sentences are eventive, rather than stative, and have past temporal reference. The final instance of a PERF-form in (30-c) *nivesiyā* 'has rested' is part of a sentence with present time reference. It describes a thought of the maidservant and asserts that the mistress has rested her gaze on somebody at the coding/speech time.²⁷

²⁵The observation is of course more general. See VH:KH 3.10-17, VH:KH 7.7-11, VH:KH 23.8-12, VH:D 29.19-23, and VH:D.31.1-8, VH:D. 34.18-25 as examples in support of the claims that PERF sentences have eventive reference and advance reference time.

²⁶Also see PC 1.6.16, 1.7.13, and PC 1.16.14 as more illustrations of this pattern.

²⁷Both anonymous reviewers point out that the states described by PERF in (31) appear to be more ongoing or progressive than result

- (31) a. kim mann-e devī passamāñī . . . nicchal-acchī
 why think-PRES.1.SG lady.NOM.SG looking.NOM.SG unmoving-eyes.NOM.SG
ṭhi-yā
 stand-PERF.F.SG
 I wonder why the watching lady *has stood* with an unmoving gaze?
- b. tiy-e vi **avaloi-o** **di-tṭho** ya ṇā-e so
 she-INS.SG also look-PERF.M.SG notice-PERF.M.SG and she-INS.SG that.NOM.SG
 puriso cakkhuraṃaṇo
 man.NOM.SG eye-beautiful.NOM.SG
 She (the maidservant) also *looked*, and she *noticed* that man, attractive to the eye.
- c. **cinti-yam** ca ṇā-e asaṃsayam eyam-mi puris-e **nivesi-yā**
 think-PERF.N.SG and she-INS.SG undoubtedly this-LOC.SG man-LOC.SG rest-PERF.F.SG
 ṇā-e diṭṭhi
 her-FEM.SG gaze.NOM.F.SG
 And she *thought*: “undoubtedly, she (the lady) *has rested* her gaze on this very man.”
 (VH:K:9.7-9)

(32) contains a passage from the *Paumacariu* in which PERF denotes a result state that must be located in the *past* rather than the present. The context describes the setting out of the army towards the city Lanka at daybreak with the beating of drums. After the beating of drums, the army marched (32-a). (32-b) contains a PERF sentence but it describes the state of the army personnel. Some were mounted on elephants while some on horses. The mounting event had taken place earlier, before the reference time provided by (32-a). What holds at the reference time in the past is the result state of that event, which can be described by a PERF sentence. (32-c) again describes an event that shifts the reference time forward: the army surrounded the city they wished to conquer.

- (32) a. **saṃcall-īu** sāhaṇu ṇiravasesu
 march-PERF.SG army.NOM.SG entire.NOM.SG
 The entire army *marched out*. (PC 1.7.13.2)
- b. **ārūḍh-a** ke vi ṇara gayavar-esu tura-esu ke vi
 mount-PERF.PL some PTCL man.NOM.PL elephant-LOC.PL horse-LOC.PL some PTCL
 Some of the men *were mounted* on elephants, some on horses. (PC 1.7.13.2)
- c. **parivedh-īya** laṅkā-ṇayari teḥñ
 surround-PERF.F.SG Lanka.city.NOM.F.SG they.INS.PL
 They *surrounded* the city of Lanka. (PC 1.7.13.4)

These examples illustrate the result stative uses of PERF. Crucially, the temporal location of the result-state is not lexically specified by PERF but rather is determined by the surrounding context. These facts are incompatible with the PERF morphology carrying past tense specification. On the other hand, they cohere well with the categorization of PERF as perfective morphology with no tense specification.

states. However, this is simply an effect of the particular verbs appearing in the examples. Verbs like *stand* and *rest* can refer to both the event of coming to be in a posture and to the state of being in a particular posture. *ṭhiyā* ‘has stood’ and *nivesiyā* ‘has rested’ refer to the result of a standing or a resting event which is to be in a state of standing or resting. In English, this state tends to be described using the Progressive (*is standing, is resting her gaze*) or the Perfect Progressive (*has been standing, has been resting*). In Middle Indo-Aryan and in many of the New Indo-Aryan languages, these states are preferentially described using PERF morphology rather than PRES or other imperfective morphology. Regardless of the choice of marking, the fact remains that the states described in (31-a) and (31-c) must be construed as states that arise from a prior eventuality.

4.4.3 Eventive uses of PERF in future temporal contexts

The clincher for the lack of tense specification for PERF comes from the use of PERF forms in describing events that must be interpreted as being located after the speech/coding time. Such examples are not numerous but they are systematic in nature. Significantly, we do not find examples of such usage in the older *Vasudevahimḍī* but they are locatable in the *Paumacariu*.²⁸

Consider the examples in (33). In (33-a), the population approaches the king and expresses their suffering from starvation. The people are not yet dead, but will be so if no measures are taken. The form used to express this future eventuality is PERF. In (33-b) is described the consequence of a present eventuality in the form of prophecy, which must necessarily take place in the future. In (33-c), the first PERF form denotes a current result state (resulting from the past eventuality of gathering), while the second PERF form appears with the temporal modifier *kallae* ‘tomorrow’ and denotes a future eventuality (a future battle).

- (33) a. ekka divas-e **ga-ya** paya kūvār-eṃ deva-deva **mu-a**
 one day-LOC go-PERF.SG subject.NOM.SG prince-LOC.SG lord die-PERF.PL
 bhukkāmār-eṃ
 starvation-INS.SG
 One day, the subjects went to the prince (and said): “O Lord, we *will die* from starvation.”
 (PC 1.2.8.2)
- b. tuha sāsāṇu duhaṇāsaṇu evahñ uṇṇai **caḍi-ya** j-eṃ
 your reign.NOM.SG misery.destroying.NOM.SG now high ascend-PERF.SG which-INS.SG
 hont-eṇa pahavanteṇa jagu saṃsār-eṇa **padi-ya**
 being-INS.SG influence-INS.SG world.NOM.SG cycle-INS.SG liberate-PERF.SG
 Your rule is misery-destroying; now it has ascended to its heights. By this influence, the world
will be liberated from the cycle (of birth and death). (PC 1.3.8.10)
- c. avarehi mi sama **samāvaḍ-iu** pekkhe-sa-hi kallae **abbhiḍ-iu**
 others also like gather-PERF.M.SG see-FUT-2.SG tomorrow fight-PERF.M.SG
 Others have also gathered. You will see, he *will fight* (you) tomorrow. (PC 2.30.1.8)

(34) makes the point even more strongly. It describes the tail end of the war between Ravana and Rama and lists the future-oriented predictions being made by Ravana as he vows to destroy Rama on the final day of the battle. The entire discourse is future-oriented and uses PERF and PRES forms. Either Ravana’s or Rama’s pride will have been shattered (34-a). Either Ravana’s wife Mandoari will weep (PRES) or Rama’s wife Sita will grieve (PRES) due to the death of one of the men (34-b). Either Ravana or Rama will enter the cremation fire (34-c). Either Ravana or Rama will take the path taken by Khara et al. (34-d) and either one of them will embrace victory (34-e). PERF used in (34-a), (34-c), (34-d) and (34-e) is clearly part of a future oriented discourse and must be interpreted as describing future events or result states.

- (34) a. kallae taho vi mahu vi ekkantaru jimva taho jimva mahu
 tomorrow he.GEN and I.GEN and one.difference.NOM.SG either he.GEN or I.GEN
bhag-gu maḍappharu
 shatter-PERF.SG pride.NOM.SG
 Tomorrow there will be only one difference between him and me; either for him or for me, pride
will have been shattered. (PC 4.67.10.4)

²⁸Note that the *Paumacariu* represents the Apabhraṃśa stage, closer to the New Indo-Aryan system and that the inherited Sigmatic Future is lost in most New Indo-Aryan languages. The use of PERF to express futurity in this text may possibly indicate an ongoing reorganization of the system of future marking as the sigmatic future falls out of use and new future paradigms get innovated. I leave a closer scrutiny and interpretation of the distribution of the Sigmatic Future and PERF in Apabhraṃśa to future research.

- b. kallae jimva mandoari **rov-ai** jimva jānai appāṇa **sov-ai**
 tomorrow either Mandoari.NOM.SG weep-PRES.3.SG or Jānai herself grieve-PRES.3.SG
 Tomorrow either Mandoari (Mandodari) will weep or Jānai (Jānaki) will grieve. (PC 4.67.10.6)
- c. kallae huavaha-dhagadhagamāṇa-ho jimva so jimva haū **ḍhukk-u** masāṇa-ho
 tomorrow fire-burning-GEN.SG either he or I enter-PERF.SG cemetery-GEN.SG
 Tomorrow, either he or I *will enter* the burning fire of the cemetery. (PC 4.67.10.8)
- d. jima mañ jimva t-eṇa **ṇihāl-īu** khara-dūsaṇa-samvukka-pahu
 either I.INS.SG or he-INS.SG follow-PERF.SG khara-dūsaṇa-samvukka-path.NOM.SG
 Either he or I *will take* the path taken by Khara, Dūsaṇa and Samvukka. (PC 4.67.10.9)
- e. jima mañ jimva teṇa **ālīṅ-īya** kallae raṇ-e
 either I.INS.SG or he.INS.SG embrace-PERF.SG tomorrow battlefield-LOC.SG
 jayalacchivahu
 victory.goddess.NOM.SG
 Either he or I *will embrace* the goddess of victory. (PC 4.67.10.10)

Finally, I note that Singh (1980:136) briefly discusses the use of PERF in future temporal contexts citing examples like those in (35) from texts other than the ones examined here. He offers no explanation for this distribution of PERF and only points to the fact that such use anticipates the future-oriented use of PERF in the New Indo-Aryan languages.

- (35) a. iha **āga-ya** jaṇaṇi-e kahahi vatta
 soon come-PERF.M.SG mother-DAT tell-FUT.1.SG news.ACC.SG
 (I) will soon come tell the news to mother. (*Paumasiricariu* 2.115)
- b. tam ajju pavitti nisi-bhoyaṇu **parihar-īu** mā
 then today from night-food.ACC.SG give.up-PERF.M.SG I.INS.SG
 Then from today, I will give up my night meal. (*Bhavisattakahā* 320.12)

4.4.4 Summary

The assumption that PERF carries temporal specification (encoding past tense or past perfective) fails to hold under closer scrutiny of its distribution in Middle Indo-Aryan texts. The textual facts suggest that PERF is better analyzed as the exponent of perfective aspect with no tense specification. That PERF is aspectually perfective is clearly seen from the fact that the past tense domain is systematically divided between PERF and PRES. Sequences of PERF sentences uniformly advance the reference time, carrying a narrative forward as illustrated by the examples in §4.4.1. The perfect-like result stative uses of PERF also support its aspectual semantics. Further the result states denoted by PERF can be temporally located both in the present and the past depending on context (§4.4.2), suggesting that PERF cannot carry past tense specification. Finally, §4.4.3 demonstrates that PERF is frequently used to make reference to future completed eventualities, a use that is entirely incompatible with past tense specification.

4.5 Middle Indo-Aryan and the “tense bias”

The empirical claim that Middle Indo-Aryan does not morphologize a contrast between the present and past tenses has never been made explicitly in the existing literature on Middle Indo-Aryan. However, as I have pointed out, grammars do not fail to mention the free use of the PRES paradigm in referring to past times, the durative sense associated with its past usage in Sanskrit (Speijer 1886; MacDonnell 1927), and to a much lesser extent the future-oriented use of PERF (Singh 1980). Why should it be that previous research on Middle Indo-Aryan has not brought to light the clear fact that the present-past opposition from Old Indo-Aryan gives way to an aspectual imperfective-perfective opposition in Middle Indo-Aryan? I believe that two factors could

have contributed to this. First, Middle Indo-Aryan has been first and primarily analyzed by speakers of tensed languages such as Germanic and New Indo-Aryan in the late nineteenth and early twentieth century. The notion that languages may not directly encode a crucial semantic category such as temporal location was foreign to these scholars (and to linguistics more generally) at the time that they were investigating Middle Indo-Aryan grammar. It is only recently that the “tense-bias” in the analysis of systems of temporal and modal expressions has been overcome, in large part due to the crosslinguistic semantic work of Bohnemeyer (2002, 2009), Bittner (2005, 2008), Tonhauser (2011) and others. The Middle Indo-Aryan facts add to this developing body of knowledge about the nature of tenseless systems crosslinguistically.

The second, Indo-Aryan-specific factor for why the tenselessness of the Middle Indo-Aryan system has never been noted in the literature is that Middle Indo-Aryan was always analyzed as a linguistic system intermediate between two tensed language systems — Old Indo-Aryan and New Indo-Aryan. Research on Middle Indo-Aryan has always been either backward-looking (evolution from Old Indo-Aryan) or forward-looking (examining the proto-New Indo-Aryan aspects visible in Middle Indo-Aryan). The tensed-lenses from which Middle Indo-Aryan was analyzed served to obfuscate the actual organization of the temporal-aspectual system of the language and perpetuated the assumption that Middle Indo-Aryan also realizes a morphological contrast between the present and the past tenses.

5 Evidence from New Indo-Aryan

Modern New Indo-Aryan languages retain some pieces of evidence that further support the claim that the PRES and PERF paradigms carry aspectual but no tense specification. New Indo-Aryan languages differ from Middle Indo-Aryan in that tense information (in most languages and almost always) is directly realized by present and past tense auxiliaries. The verb is inflected for imperfective or perfective aspect. As mentioned in the introduction, scholars like Masica (1991) and Lienhard (1961) have observed that the category of aspect is at the heart of the New Indo-Aryan verbal system. While the paradigm for perfective aspect is uniformly PERF (and its cognate variants) across New Indo-Aryan, the imperfective aspect is realized using one of two morphological exponents — PRES or the (cognate of) the Old Indo-Aryan Present Participle in *-ant* (glossed as PART here). Not all New Indo-Aryan languages inherit the PRES paradigm. In some languages, both PRES and the Present Participle are employed as markers of imperfectivity in different constructions (e.g., Gujarati). Before I turn to the New Indo-Aryan evidence, some discussion of this third key player in the Middle Indo-Aryan aspectual system is essential.

5.1 The Present Participle in *-ant* in Middle Indo-Aryan

In Late Middle Indo-Aryan, the present participle in *-ant* often occurs as the finite verb in main clauses. Sen (1953:112) reports that this form is compatible with reference in the past, the present, and the future. Some examples from the *Paumacariu* are given in (36). In (36-a), a character in the story lists the bad omens that appear as he is starting to prepare his army for war.²⁹ (36-b) narrates an episode in which the Jina R̥śabha, the first of the Jaina Tirthankaras, after achieving supreme knowledge, is seated for a discourse before a divine and human crowd. The sentence is part of a larger description of the worship going on — people bowing, introducing themselves and their lineages, shouting slogans of victory and reciting hymns. The temporal reference is clearly to the past of the narrator’s perspective or utterance time. (36-c) is part of a larger list of actions that Hanumāna vows to undertake on the battlefield against his opponent the following day. All of these actions, oriented towards the future, use the bare Present Participle.

- (36) a. pekkh-u **phur-antu** vāma loyaṇu
 look-IMP twitch-PART.M.SG left eye.NOM.SG
 Look, the left eye *is twitching*. (PC 1.8.3.2)

²⁹The twitching left eye is a standard bad omen; the list includes howling jackals, cawing crows, and a crying woman (PC. 1.8.3), all with the template: Look, X is happening.

- b. sayala vi jayajayakāru **kar-antā** sayala vi thottasay-āñ
 all PTCL victory.slogan.ACC.SG do-PART.M.PL all PTCL hymn.hundred.ACC.PL
padh-antā
 recite-PART.M.PL
 All of them *were chanting* slogans of victory; all of them *were reciting* hundreds of hymns.
 (PC 1.3.7.8)
- c. diḍha guḍa **toḍ-antu** turaiṅgam-ā-hā paravalu vali **de-ntu**
 strong rein break-PART.M.SG horse-PL-GEN enemy.army.NOM.SG sacrifice give-PART.M.SG
 vihaiṅgam-ā-hā
 bird.PL-GEN
 I will break the strong reins of the horses; I will give the enemy army in sacrifice to the birds.
 (PC 4.58.7.7)

The distribution of the Present Participle in Middle Indo-Aryan includes its default use to express the habitual past tense and its use in both the antecedent and the consequent of counterfactual conditional clauses (Singh 1980; Sen 1953, 1960; Bubenik 1998). Discussing all these uses in detail is beyond the scope of this paper, but ultimately essential for establishing how this participial form becomes the building block for realizing imperfectivity in several New Indo-Aryan languages. The goal here is to simply introduce this form as an alternative imperfective marker in finite clauses, which, similar to the PRES paradigm, remains unspecified for tense, receiving temporal reference only in context.

5.2 Pawri: The Middle Indo-Aryan configuration

Pawri (ISO [bfb]; population 175,000) is a non-literate Indo-Aryan language spoken by the tribal Pawra community in parts of Northern Maharashtra and Madhya Pradesh.³⁰ Pawri is crucial from the perspective of the claim being made here for Middle Indo-Aryan, because unlike most standard New Indo-Aryan languages, it lacks obligatory present/past tense marking. In other words, Pawri seems to retain the archaic Middle Indo-Aryan pattern, as realized by the Present Participial paradigm discussed in §5.1. Pawri has been noted and described in Grierson's survey in his volume on the Bhili and Khandeshi dialects (vol. IX–III). The facts reported here are based on Deo (2006). The imperfective aspect in Pawri is realized by an extended variant of the Middle Indo-Aryan Present Participle — let us call this the Pawri Imperfective paradigm.³¹ The Pawri Imperfective lacks temporal specification and is compatible systematically with both past and present temporal reference. The Pawri Imperfective paradigm for the verb *khā* 'eat' is in (37).

(37) Pawri Imperfective paradigm

	SG	PL
M	khā-ta-lu	khā-ta-lā
F	khā-ta-li	khā-ta-lyā
N	khā-ta-la	khā-ta-le

The temporal reference of clauses containing the Pawri Imperfective is most often only recoverable from the context and, in some cases, from the presence of optional adverbs. The examples in (38) illustrate the use of Pawri Imperfective (glossed PART) in habitual contexts and with lexically stative verbs, while (39) gives some examples where the form gives rise to event-in-progress readings. (38-a) exemplifies the present habitual reading of the Pawri Imperfective. In (38-b), the second sentence refers to a past habit, but this is determined by the tense of the optional auxiliary *otu* 'was' in the preceding clause, not by any morphology

³⁰All data for Pawri is based on my own findings during the fieldwork that I conducted between 2003-05 in Nandurbar district of Maharashtra. I would like to thank Gulabsingh Pawra, Bhaisingh Pawra, and Barfi Pawra (Pawri) of Maal village in Dhadgav tehsil for sharing their language, culture, and life with me and their careful and patient efforts to teach me aspects of their languages.

³¹Grierson (1907) speculates that these endings are older adjectival endings encoding number/gender information similar to the *-l* endings attested for the PERF form in Late Middle Indo-Aryan, Marathi, and the Eastern Indo-Aryan languages.

in the clause with the Imperfective itself. (38-c) contains an example of the Imperfective with a stative verb *roy* ‘live’ and past reference, supported by the presence of the adverb *pel* ‘earlier’.

- (38) a. chyū kāyam ārhā-m svotā-hā=j **bāl-ta-lu**
 he.NOM always mirror-LOC self-ACC-EXCL look-PART-M.SG
 [Context: Describing a friend who is self-obsessed] He always *looks* at himself in the mirror.
- b. āgyāḍvāji bānge-n talapi ot-u. chyū kāyam bāng
 āgyāḍvāji.NOM hemp-GEN addict.NOM be-PST.M.SG he.NOM always hemp-NOM
pi-ta-lu
 drink-PART-M.SG
 Agyāḍvāji was a hemp addict. He *would* always *drink* hemp.
- c. chyī pel nandurbār **roy-ta-li**
 she.NOM earlier Nandurbar live-PART-F.SG
 Earlier, she *lived* in Nandurbar.

(39-a) describes an event in progress with present temporal reference. In (39-b), the temporal adverbial clause contains an imperfective-marked verb *rovtali*, while the main clause contains the perfective verb *lāgyu*, which receives a past time interpretation by default. The imperfective-marked verb is also interpreted in the past in this context, despite no overt expression of the past tense such as a tense auxiliary. It is the default reference of the PERF form in the main clause that provides the temporal reference for the imperfective form.³² Likewise for (39-c.)

- (39) a. Dhanirāyā, āpu kāy kādav **khā-ta-lā**
 D-VOC you-NOM.HON what mud-NOM eat-PART.M.PL
 Dhanirāyā, *are you eating* mud?
- b. mi **rov-ta-li** tevī mehe senḍu lāg-yu.
 I.NOM play-PART-F.SG then I-ACC.SG ball.NOM hit-PERF.M.SG
 When I *was playing*, a ball hit me.
- c. Vārirāyā_j jangalbāri-daryā-m **phir-ta-lu**. tevī chyū_i tināhā_j **hād-yu**.
 V.NOM forest-valleys-LOC wander-PART-M.SG then he.NOM he-ACC call-PERF.M.SG
 Vārirāyā_j *was wandering* in the forests-valleys. At that time, he_i called out to him_j.

Pawri thus synchronically realizes a temporally unspecified imperfective marker, while all other surrounding languages (Marathi, Gujarati, and Hindi) are characterized by periphrastic constructions built on the Present Participle or the PRES paradigm with overt tense marking. This is not to say that Pawri does not have *any* morphological means of marking the past-present distinction. Pawri does have tense auxiliaries that are cognate to the auxiliaries of Gujarati; however, unlike in the other languages, these auxiliaries are not obligatory and are rarely expressed in discourse (except in non-verbal predicative clauses as in (38-b)).³³

The distribution of the Pawri Imperfective is special from the viewpoint of Indo-Aryan languages. None of the standard, literate Indo-Aryan languages exhibit a system where temporal reference fails to be directly encoded in imperfective clauses. Yet if the findings from Late Middle Indo-Aryan, described in §4 and in §5.1 are accurate, then such a pattern can easily be interpreted as the retention of the archaic aspectual situation, the

³²An anonymous reviewer wonders whether the default inference associated with PERF means that PERF is tense marked. This is clearly not what is being said here. Temporal location defaults for aspectually marked clauses only associate past temporal reference with perfective morphology in the absence of overriding contextual information (Smith 1991, 2008). If the context supports a non-past interpretation PERF may be interpreted as non-past. Default patterns of temporal reference do not provide evidence for considering PERF to be overtly tense-marked.

³³Most of the examples with overt tense auxiliaries that I have for Pawri are elicited translations of Marathi or Gujarati sentences, rather than sentences from spontaneous discourse.

proto-system that gives rise to the surrounding tense-encoding systems. On this view, the Pawri Imperfective, because it lacks tense specification, is crucial to reconstructing the diachrony of the Indo-Aryan tense/aspect system. Further research into its precise organization can contribute to shedding light on the proto-system that evolved into the surrounding New Indo-Aryan languages.

5.3 PRES in Modern Gujarati

Although in the case of Gujarati, most finite clauses carry overt tense encoding, there persist some sub-domains of the tense-aspect system in which tense information is not obligatorily encoded. I describe here the distribution of the PRES paradigm, which may be used with both present and past temporal reference (an inheritance from its Middle Indo-Aryan use).³⁴ Imperfective aspect in Gujarati may be realized by either the PRES paradigm or the cognate of the Present Participle. The Present Participle is the general imperfective form which forms periphrastic constructions with tense and modal auxiliaries. The PRES paradigm, in periphrasis with the present tense auxiliary, realizes the present imperfective. In the modern language, tense auxiliaries are typically considered obligatory in indicative clauses, but they may be omitted in a small set of contexts.

Most commonly, in a sequence of clauses headed by a tensed clause (either present or past), the bare PRES form may be used to convey present or past temporal reference. In (40-a), for instance, the speaker describes her daily schedule with a series of habitual sentences. The temporal context (present) is introduced in the first clause by the tense auxiliary *che*. The verbs in the following clauses carry PRES inflection and the clauses lack any tense specification. The interpretation is uniformly present. (40-b) also contains a PRES form and has past reference that is determined by the presence of the temporal adverb *nānpaṇ-mā* ‘in childhood.’ In (40-c), the temporal reference of both the antecedent and consequent clauses comes purely from contextual knowledge that the speaker is referring to her childhood.

- (40) a. māro divas em **jā-e** **ch-e**. hū savār-e **uṭh-u**,
 my day.NOM thus go-PRES.3.SG PRS-3.SG I.NOM morning-LOC wake-PRES.1.SG
nhā-u, pachi puṣā **kar-u**, pachi bājār-mā **jā-u**
 bathe-PRES.1.SG then prayer.NOM do-PRES.1.SG then market-LOC.SG go-PRES.1.SG
 My day goes thus: I wake up, bathe, then pray, then go to the market . . .
- b. hū nānpaṇ-mā sanskrit **bhaṇ-u**
 I-NOM childhood-LOC sanskrit.NOM study-PRES.1.SG
 I used to study Sanskrit in my childhood.
- c. hū jyāre-jyāre Sanskrit **bhaṇ-u** tyāre-tyāre bā ma-ne
 I.NOM whenever sanskrit.NOM study-PRES.1.SG then mother.NOM I-ACC.SG
 lāḍu **āp-e**
 sweet.NOM give-PRES.3.SG
 Whenever I would study Sanskrit, my mother would give me a sweet.

The fact that bare PRES forms occur in finite clauses and receive temporal reference in context provides further evidence that PRES is not specified for tense. Given the facts of Middle Indo-Aryan, it is much more likely that this lack of tense specification is not an innovation in Gujarati but rather reflects an inheritance from Middle Indo-Aryan.

5.4 PRES in other New Indo-Aryan languages

The distribution of PRES in other standard New Indo-Aryan languages also supports the idea that its non-present uses are inherited from Middle Indo-Aryan rather than innovated within new Indo-Aryan. For in-

³⁴The status of the PRES paradigm in the New Indo-Aryan languages appears to parallel the status of the Injunctive in Vedic (Kiparsky 2005). This form is unspecified for tense and, in the absence of tense auxiliaries, is compatible with both a present, a past, and (in some cases) a subjunctive/irrealis interpretation. The hypothesis that the proto-system for New Indo-Aryan articulated only an imperfective-perfective contrast and lacked the present-past tense distinctions is also parallel to the reconstruction of the Proto Indo-European system as primarily being aspectual in nature.

stance, Bloch (1914:245f) observes that PRES is used chiefly in Modern Marathi to denote an action repeated in the past (a habitual past tense). There is absolutely no reason for why the present tense paradigm from Old Indo-Aryan would evolve into a habitual past marker in Marathi unless the path involves a stage at which the paradigm ceases to encode tense and starts encoding purely aspectual meaning — the pattern claimed for Middle Indo-Aryan here. Bloch indirectly verifies the existence of such a path when he notes with examples that in Old Marathi (texts from *cir.* 1200CE) the same paradigm has “the sense of present, future, or past depending on context.” Bloch’s conclusion is that the temporal sense of PRES is extremely secondary in Marathi.

Beames (1872–1879:107) also notes that the PRES paradigm “has become vague and in modern times is often used in both a future and a past sense.” In addition to the Marathi facts, he observes that in Punjabi and Hindi PRES is used as an indefinite future. Trumpp (1872) labels the PRES paradigm as the Sindhi Potential based on its future-oriented use. In Bengali, PRES is used to express habitual/generic present meaning (the language has distinct periphrastic progressive aspect marking) and is also used with no tense marking in past referring negative declaratives. The full details of the evolution of PRES in each New Indo-Aryan language and their theoretical implications for the development of tense in New Indo-Aryan deserve a much closer scrutiny. I only point out here that the diversity of uses exhibited by PRES in the modern languages, and particularly its restriction to certain non-overlapping contexts of use (e.g., only habitual past in Marathi vs. only indefinite future in Hindi and Punjabi) remains bewildering unless we assume that this distribution derives from an originally unified aspectually based parent system — the system proposed for Middle Indo-Aryan.

5.5 The future readings of PERF in New Indo-Aryan

I close by considering some uses of PERF in New Indo-Aryan languages which are incompatible with the hypothesis that PERF is specified for past tense in the modern languages. §4.4.3 has already shown that in Middle Indo-Aryan PERF may allow for future temporal reference, referring to events that are believed to occur with certainty. This use of PERF survives in the New Indo-Aryan languages — at least in Gujarati, Hindi, Marathi, and Bengali. The examples here are from Hindi (41) and Marathi (42) and based on native speaker intuitions.

- (41) āp yahī ruki-ye. māī pāc miniṭ-me ā-yā
 you.HON.NOM here wait-IMP.HON.2.SG I.NOM.SG five minute-LOC come-PERF.M.SG
 You sit here. I *will come* back in five minutes.

- (42) a. **Context:** Watching an election candidate’s mediocre speech
 b. hyā varśī hā nakki khāli paḍ-lā
 this.OBL year.LOC he.NOM definitely down fall-PERF.M.SG
 This year, he *will* definitely *fall down* (lose in the elections).

Additionally, PERF is the default form of the verb used in the antecedent of conditionals. The examples in (43) are from Hindi but the facts hold for Marathi as well.

- (43) a. māī bambai ga-ya to tumhārā kām kar-uṅgā
 I.NOM Bombay go-PERF.M.SG then your work.NOM.SG do-FUT.1.SG
 If I *go* (lit. went) to Bombay, I *will* do your work.
 b. us-ne agar paḍhāi k-ī to vah agli kakśā-mein jā-egā
 he-ERG if studies.NOM.F.SG do-PERF.F.SG then he.NOM next class-LOC go-FUT.3.SG
 If he studies then he *will* go to the next grade.

These patterns of distribution provide further support to an aspectual rather than tense-specified meaning for PERF, in turn lending support to the hypothesis that PERF does not realize the past tense in Middle Indo-Aryan.

6 Conclusion

A closer look at Middle Indo-Aryan facts indicates that the traditional classification of two morphological paradigms inherited from Old Indo-Aryan must be revised. PRES, the Old Indo-Aryan present tense, and PERF, the Old Indo-Aryan past participial form, do not denote the present and the past tense in Middle Indo-Aryan, but rather realize the imperfective and the perfective aspectual categories respectively. The distribution of the two paradigms in narrative discourse in the archaic Mahāraṣṭrī text *Vasudevahimḍī* (cir. 500CE) and the later Apabhraṃśa text *Paumacariu* (cir. 800CE) demonstrate that modulo contextual factors, the two paradigms are compatible with past, present, and future temporal reference. Further evidence that this categorization of PRES and PERF is on the right track comes from the New Indo-Aryan languages. Pawri provides evidence in the form of imperfective morphology (the Present Participial paradigm) which lacks temporal specification. The similarity between the two diachronically related systems is more simply accounted for as inheritance rather than innovation within Pawri. Gujarati illustrates the temporally unspecified nature of PRES in some of its sub-domains where temporal reference may be disambiguated by context. Other New Indo-Aryan languages retain the use of PRES in non-overlapping subdomains that indicates an earlier wider distribution of the form. Finally, the use of PERF in immediate future and conditional contexts in the New Indo-Aryan languages echoes such attestations in Middle Indo-Aryan (§4.4.3) supporting the idea that these phenomena are inherited rather than innovated.

There is thus strong support for the hypothesis that Middle Indo-Aryan does not morphologize the contrast between past and present tenses, but relies on an aspectual contrast and contextual disambiguation to distinguish the temporal location of eventualities with respect to speech time. This pattern is not typologically uncommon and is instantiated in languages as diverse as Arabic, Navajo, and Chinese. If Middle Indo-Aryan is classified as a similar aspectual system lacking a present-past contrast, then the rise of periphrastic tensed constructions in New Indo-Aryan acquires a functional significance. The proto-system on which New Indo-Aryan is based lacks grammaticalized morphologically expressed tense information in finite clauses. The innovation of tense auxiliaries and periphrastic constructions involving these is a functionally motivated change in New Indo-Aryan that introduces tense information as an obligatory morphosyntactic element in the clause. If it is maintained that Middle Indo-Aryan always encoded the contrast between the past and present tenses morphosyntactically, then the introduction of periphrastic paradigms of tense-aspect marking that are central to the New Indo-Aryan languages remains unmotivated. The aspectual hypothesis thus makes better sense than the tense hypothesis of three types of facts: (a) the Middle Indo-Aryan distribution of PRES and PERF; (b) some puzzles in the distribution of PRES and PERF in New Indo-Aryan; and (c) the rise of periphrastic constructions with tense auxiliaries in New Indo-Aryan. In this way, it points out a promising direction for further systematic research in Middle Indo-Aryan and New Indo-Aryan tense/aspect diachrony.

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