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 Participle paradigm respectively. The examples in (1) contain their cognates from the Middle Indo-Aryan period and come from the 6th century text, the Vasudevahimdhī. 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.\footnote{Note 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.}
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 aspccntual 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; Beamess 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 aspccntual 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 aspccntual 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 aspccntual 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 aspccntual 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 sichtig 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 metaphysical 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. 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

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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) (Uitlan, 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

<table>
<thead>
<tr>
<th>TIMELINE</th>
<th>STAGE</th>
<th>LANGUAGE</th>
<th>SOURCE USED</th>
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<tr>
<td>1900 BCE–1100 BCE</td>
<td>I</td>
<td>Early Vedic</td>
<td>Ṛgveda (RV)</td>
</tr>
<tr>
<td>1000 BCE–350 BCE</td>
<td>I</td>
<td>Late Vedic</td>
<td></td>
</tr>
<tr>
<td>100 BCE–400 CE</td>
<td>II</td>
<td>Epic and Classical Sanskrit</td>
<td>Mahābhārata, Rāmāyaṇa</td>
</tr>
<tr>
<td>300 BCE–500 CE</td>
<td>III</td>
<td>Middle Indo-Aryan</td>
<td>Vasudevahimāṇḍi (VH 500CE)</td>
</tr>
<tr>
<td>500 CE–1100 CE</td>
<td>III</td>
<td>Apabhramśa</td>
<td>Paumacariu (PC 800CE)</td>
</tr>
<tr>
<td>1100 CE–present</td>
<td>IV</td>
<td>New Indo-Aryan</td>
<td>native intuitions, fieldwork, grammars</td>
</tr>
</tbody>
</table>

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

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 love-M Mary.
    b. Rām Rādhā-ko cāḥ-tā thā
        Rām.NOM Rādhā-ACC love-IMPF.M.SG PST.M.SG
        Rām loved Rādhā.

These 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 (Bohnemeyer 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 A1SG=dance.INC  
      I was/am/will be dancing.  
   c. Ho’leake’ /Be’òoraa’ /Sàamle’ táan inw=óok’ot  
      yesterday now tomorrow PROG A1SG=dance.INC  
      Yesterday/Now/Tomorrow I was/am/will be dancing.  

(4)  

Nutley used in (4): A1SG = set A first person singular, PROG = progressive aspect, INC = incompletive status.

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. 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., Bohnemeyer & 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; Bohnemeyer 2002 for Yucatek Maya; Shaer 2003 for West Greenlandic; Bittner 2005, 2008 for Kalaallisut). 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

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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).

<table>
<thead>
<tr>
<th>TENSE</th>
<th>ASPECT</th>
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<tbody>
<tr>
<td></td>
<td>neutral</td>
</tr>
<tr>
<td>present</td>
<td>gaccha-ti</td>
</tr>
<tr>
<td>past</td>
<td>a-gaccha-t</td>
</tr>
</tbody>
</table>

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 nūnām ‘now’. In (5-b), PRES marking occurs with a lexical stative predicate.

(5) a. s.ís. te nūnām parašū-ṁ suāyasā-ṁ
    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. tvāṁ by āgn-e divyā-sya rája-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. víṣṇo vádhri-ḥ pratimānam būbhūṣan purutrā vrtrō
    virile.GEN.SG emasculated-NOM.SG counterpart wanting to be everywhere V.NOM.SG
    a-śay-at vasta-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 vakṣāṇā kill-IPFCT.3.SG dragon-ACC.SG up water-ACC.PL open-PFCT.3.SG forth cavity.ACC.PL
a-bhina-t pārvatā-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. nā-tari-d asya sāmṛti-m vadānām
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 hi vo dhiśāṇā devy áhn-ām á-dhāt pīti-m
now PTCL you.DAT.SG D.NOM.SG goddess.NOM.SG day-GEN.PL set-AOR.3.SG drink-ACC.SG
sám mādā a-gma-ta vah
together gladdening go-AOR.3.PL you.ACC.SG
This day, now, the Goddess Dhisāṇā 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) kā īśa-te tujyā-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 tṛi-n yukt-ān
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).
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-nām te barhí-h su-tá indra sóma-h
  strew-PERF.N.SG you-DAT.SG B-NOM.N.SG extract-PERF.M.SG l-VOC.SG S-NOM.M.SG
  kr-tá dhān-ā āt-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

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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.

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<table>
<thead>
<tr>
<th>The PERF paradigm</th>
<th>PERSON</th>
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<td>MAS</td>
<td>ga-tāḥ</td>
<td>ga-tāu</td>
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<tr>
<td></td>
<td>FEM</td>
<td>ga-tā</td>
<td>ga-tāu</td>
<td>ga-tāḥ</td>
</tr>
<tr>
<td></td>
<td>NEU</td>
<td>ga-tam</td>
<td>ga-te</td>
<td>ga-tani</td>
</tr>
</tbody>
</table>
predicate at a specific time in the past.  

(11) a. purā devayug-e ca eva dṛṣ-taṁ sarv-aṁ mayā
formerly god.age-LOC.SG and PTCL see-PERF.N.SG everything-NOM.N.SG I-INS.SG
vibho
lord-VO.C.SG
Lord, formerly, in the age of the Deva (Gods), I saw everything. (Mbh. 3.92.6a)
b. hr̥-tā gau-ḥ sā tada 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-itāḥ
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 the result-state.

(12) a. yada tu rudhir-ena aṅ-ę parisṛṣ-ṭo bhṛgūdvaha-ḥ tada
when PTCL blood-INS.SG body-LOC.SG touch-PERF.M.SG great.energy-NOM.M.SG then
a-budhya-ta tejasvi . . . ca idam a-bravi-ta
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. yada pūrvaṁ gata-h kṛṣṇa-h śāmārtha-m kaurav-ān prati na ca tām
when before go-PERF.M.SG K-NOM.M.SG peace-ACC.SG K-ACC.PL to NEG and that
lab-dha-van 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. tayor ānī nidadh-ūḥ praḥṛṣ-ṭāḥ paricārikā-ḥ . . . tataḥ
their egg-ACC.PL deposit-IPFCT.3.PL joyous-PERF.F.PL maid-servant-NOM.F.PL then
pañcaśat-e kāl-e kadṛuputra-ā vinīṣṭ-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.\textsuperscript{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.\textsuperscript{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.

\begin{center}
\begin{tabular}{|c|c|c|}
\hline
Paradigm & Received view & My proposal \\
\hline
PRES & present tense & imperfective aspect \\
PERF & past tense & perfective aspect \\
\hline
\end{tabular}
\end{center}

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 Maharāṣṭri text Vasudevahim. dh. (cir. 500CE) and the later Apabhraṃśa

\textsuperscript{13}Middle 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.

\textsuperscript{14}The 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).\(^\text{15}\)

A note about the sourcing of examples and their identification: For the *Vasudevahim. d.* (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 *Vasudevahim. d.* in the section called the *Dhammillahim. d.* 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 *jan* ‘know’ and a habitual (passivized) predicate — both imperfective.

(15) a. nipphala-ṇ duma-ṇ pakkhin-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)

---

\(^{15}\)The corpus of Middle Indo-Aryan literature is vast and spans a period of over a millennium. 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 *Vasudevahim. d.* of Sanghadassagāni Vacaka has been (rightly) claimed to be a very good specimen of archaic Mahārāṣṭrī Prākrit by Alsdorf (1936). The *Paumacariu* is one of the two important Aphaśrama texts written by Svayambhudeva (cir. 800 CE), the most celebrated of the Aphaśrama 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-en aja-si kim pi kajja-m kir-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 Vasudevahim'di, 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 pavvaghu-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 nilajau-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... jalam ti mannamāṇo... muha-m chubbha-ti
he.NOM SG water thus thinking mouth-ACC SG touch-PRES.3 SG
Thinking it to be water, he touched (his) mouth to it. (VH.KH 6.11)

d. tam baddha-m... hatth-e pasār-ei te vi baddh-a
it stick-PRES.3 SG hand-ACC.DU spread-PRES.3 SG they also stick-PERF M.DU
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 Vasudevahim'di. 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 Vasudevahim'di 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 Nabhiraja 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-em āi-u dev-īu indāsem
then later human.form-LOC arrive-PERF M.PL goddess-NOM.M.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 dhukka tetthe sā maruevi bhādārī jettehe 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 kim pi uppāy-ai paḍh-ai paṇacc-ai some PTCL recreation some PRT make-PRES.3.SG study-PRES.3.SG dance-PRES.3.SG
gay-ai vay-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. varapallaṁk-e pasuttiya-e suvināvali diṁṭh-i 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
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-hattham savāharaṇu kā vi saḥvattham (PC 1.1.14.5)
pad-ai kā vi camara kama dhov-ai kā vi samujjala dappāṇu dhov-ai (PC 1.1.14.6)
ukkha-ukkhā kā vi parirakkh-ai kā vi kim pi akkhāna akkh-ai (PC 1.1.14.7)
kā vi jakkhakaddameṇa pasah-ai kā vi saṁrīru tāhe saṁvāh-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 Vasudevahimńḍr.20

(19) a. pat-to ya Senijo räyä 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-na viñay-enam
greet-PERF.M.SG he-INS.SG humility-INS.SG
He greeted (the monk) with humility. (VH.KH. 17.1)

19http://www.txdirect.net/users/rrichard/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.
The predicates in (19) reach that place and greet the monk are telic and have PERF inflection. 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.

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). The story here describes a prince Bhāmaṇḍala who was afflicted by passion for Sītu. 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 Viyadhapura. It is difficult to reconcile this pattern of the distribution of PRE and PERF forms with the ‘historical present’ hypothesis.

(21) a.  

<table>
<thead>
<tr>
<th>vyāh-ai</th>
<th>virāhe-m</th>
<th>dūsah-en</th>
<th>na</th>
</tr>
</thead>
<tbody>
<tr>
<td>afflict-PASS-PRES.3.SG</td>
<td>pain of separation-INS.SG</td>
<td>intolerable-INS.SG</td>
<td>NEG</td>
</tr>
</tbody>
</table>

He was afflicted by the intolerable pain of separation; it would not subside with any medicine. (PC 2.22.5.6)

b. n. ēsāsu mue-ppin. u  

<table>
<thead>
<tr>
<th>th-īu</th>
<th>thakk-evi</th>
<th>jema</th>
</tr>
</thead>
<tbody>
<tr>
<td>sigh.NOM.PL</td>
<td>have-GER</td>
<td>long.NOM.PL</td>
</tr>
</tbody>
</table>

He sat there giving deep sighs, then stood up like a lion. (PC 2.22.5.7)

c.  

<table>
<thead>
<tr>
<th>niśar-ū</th>
<th>sa-sāhāpu</th>
</tr>
</thead>
<tbody>
<tr>
<td>advance-PERF.M.SG</td>
<td>with.equipment.NOM.SG</td>
</tr>
</tbody>
</table>

He advanced forward with his equipment. (PC 2.22.5.8)

d.  

<table>
<thead>
<tr>
<th>pat-ū</th>
<th>viyāḍhapuru</th>
</tr>
</thead>
<tbody>
<tr>
<td>reach-NOM.SG</td>
<td>Viyadhapura.PERF.M.SG</td>
</tr>
</tbody>
</table>

He reached Viyadhapura. (PC 2.22.5.9)

Thus, we see that unlike a present tense marker, PRE is not restricted to present time reference but may systematically be used to make reference to past eventualities. PRE forms refer to eventualities located in the past, not because of a perspectival shift driven by narrative/rhetorical goals, but rather, because the PRE 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 PRE has both past and present imperfective reference.

The next section demonstrates that besides being used with lexically atelic predicates PRE 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 PRE

(22-a-b), taken from the Vasudevahimdi, contain the lexically stative verbs parivas ‘live’ and sun ‘hear’ with PRE inflection.

(22) a.  

<table>
<thead>
<tr>
<th>egam-mi</th>
<th>kira nayar-e</th>
<th>kā vi ganīyā</th>
<th>rūvavati</th>
</tr>
</thead>
<tbody>
<tr>
<td>one-LOC.SG</td>
<td>some town-LOC.SG</td>
<td>some PTCL courtesan.NOM.SG</td>
<td>beautiful.NOM.SG</td>
</tr>
<tr>
<td>parivas-ai</td>
<td>skilled.NOM.SG</td>
<td>live-PRES.3.SG</td>
<td></td>
</tr>
</tbody>
</table>

In some town, there lived a beautiful and skilled courtesan. (VH.K. 4.12)

b.  

<table>
<thead>
<tr>
<th>sun-anti</th>
<th>ya bhayavay-o</th>
<th>vayaṇa-m</th>
<th>dhannakahāśamsia-m</th>
</tr>
</thead>
<tbody>
<tr>
<td>listen-PRES.3.PL and monk-GEN.SG</td>
<td>speech-ACC.SG</td>
<td>religious.story.filled-ACC.SG</td>
<td></td>
</tr>
</tbody>
</table>

And they listened to the speech of the monk, filled with religious stories. (VH.K. 5.5-6)

(23-a-b), taken from the Paumacaria, contain the lexically stative verbs vas ‘live’ and icch ‘desire’ with PRE inflection.
(23) a. \textit{g-a vandaṇahatti-e ta-ṃ paesu jahō vas-ai} go-PERF.M.SG adoration.DAT.SG that-sc acc.sg place.ACC.SG where live-PRES.3.SG mahārisi saccabhuī great.sage.NOM.SG Saccabhuī.NOM.SG

He went to that place for adoration where the great sage Saccabhuī lived.\textsuperscript{23} (PC 2.22.7.1-2)

b. uvarambha ṃa icch-ai dāha-vayāṇu 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 \textit{Vasudevahimdi}, PRES appears on eventive verbs and gives rise to a habitual/generic reading. In (24-a), the predicates \textit{give food-drink} and \textit{offer a goat} are eventive, and the sentence receives a habitual reading. The predicate in (24-b) \textit{perform Yoga} is also eventive with a habitual reading for the sentence.

(24) a. so ya bāmbhaṇo varisevaris-e tam-mi devayā-e he.NOM.SG and brahmin.NOM.SG year.year-LOC.SG that-DAT.SG deity-DAT.SG . . . anna-paṇa-m d-eī 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, \textit{used to give} food and drink and \textit{used to offer} a goat to the deity. (VH:KH 29.20)

b. tato aham anṇāyaṇā kayāi āyariyagiḥarukkhaṇavāyī-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 \textit{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 \textit{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 Rāvana 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.


They \textit{used to give} no tax, (although) they were wealthy; they \textit{did not obey} the royal command, because they were arrogant. (PC 1.8.2.3)

b. āyae lilae rāmaṇu ram-ai ṇaṃ kālū vālu these sports Rāmaṇa.NOM.SG play-PRES.3.SG like God.of.death.NOM.SG boy.NOM.SG

hoe-\textit{vi} bham-ai become-GER roam-PRES.3.SG

Rāvana \textit{would play} such sports; he \textit{roamed} (around) like the God of death in the form of a boy. (PC 1.9.3.9)

\textsuperscript{23}There 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, \textit{paesu} carries no accusative marking but the demonstrative \textit{təm} 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.

\textsuperscript{24}from Skt. \textit{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 Vasudevahimīḍī.

(26) a. so yā diṇḍī... bhaṇaṇa-ssa āśaṇeṇa gacca-ti
he.NOM.SG and worshipper.NOM.SG house-GEN.SG near go-PRES.3.SG
diṇḍi-ssu-vvarim Dhanasiri-GEN.SG leaf-NOM.N.SG spat.out-NOM.N.SG fall-PERF.N.SG
And the worshipper was going from near that house. Dhanasiri’s spat-out (betel)-leaf fell on the worshipper. (VH.D. 51.12-14)

b. so vi lalīyāgoṭhi-e samaṇ 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-en. a āśaṇeṇa patta.ccheja-m diṭṭhaṃ 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 hūṃ 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. kilaṇāvāih-e parimiuṇāri-hāṁ niḥā-i (…) niṇḍi-ya tā-su
sport.pond-LOC surrounded.damsels-INS.PL bathe-PRES.3.SG fall-PERF.F.SG that.LOC.PL
diṭṭhi tahi avasare jahāṁ muu mahuyaru kamal-abhantar-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. jettehe dhanuḥara guṇagaḥiyasara jetteha huṅkāra
where warrior.NOM.PL string.placed.arrow.NOM.PL where hūṃ.sound.NOM.SG
muu-nṭi nāra utter-PRES.3.PL men.NOM.PL
Where the warriors had placed the arrows over the bowstring, where men were uttering the hūṃ 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 Vasudevahimīḍī 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 Vasudevahimīḍī 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. pabhan-iu bhimu ho-hi didhu rajah-o haũ puṇu
   say-PERF.M.SG Bhīma.NOM.SG become-IMP.2.SG established kingdom-GEN.SG I
   j-ami niya-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 na paisara-mi to ṇiyaya-jañeri
   if tomorrow father.VOC Laṅkā-city.ACC.SG NEG enter-PRES.1.SG then self-mother.ACC.SG
   indāṇi kara-yal-e dhar-ami
   Indāṇi.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 Indāṇi on the palm of my hand. (PC 1.7.12.9)

c. padhamu kar-eppinu valivihānu puṇu pacchae dhanaya-ho mal-ami
   initially, do-GER sacrifice.ACC.SG and then Dhaņaya.GEN.SG shatter-PRES.1.SG
   mānu pride.NOM.SG
   After having first sacrificed you, then I shall shatter the pride of Dhaņaya. (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 Vasudevahim. d. 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 mittabándhavasahiā... ga-yā
    then they friends.relatives.with go-PERF.M.PL
    ‘Then they went there with their friends and relatives.’

b. chagalo vi ya maṇḍe-um tath-eva ni-o
    goat also and there-Ptcl be-taken PERF.M.SG
    And the goat also was taken to be decorated.

c. gandhapupphamallapuyāvises-ena 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 bhāṇi-yām 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.”
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 Vaiśraṇa 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 kuvar-em kou hu-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. dahavayaṇatāthānu paitth-u gambi
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 abbhutthānu kim 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 kāṇnu
    speak-PERF.M.SG Śumāli.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 *Vasudevahimṇḍi*. 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) *nivesīyā ‘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.\(^{27}\)

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\(^{25}\)The 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.

\(^{26}\)Also see PC 1.16.16, 1.7.13, and PC 1.16.14 as more illustrations of this pattern.

\(^{27}\)Both anonymous reviewers point out that the states described by PERF in (31) appear to be more ongoing or progressive than result
(31) a. kim man-e devi passamañi... nīcchał-acchi
why think-PRES.1.SG lady.NOM.SG looking.NOM.SG unmoving-eyes.NOM.SG
thī-ya
stand-PERF.F.SG
I wonder why the watching lady has stood with an unmoving gaze?

b. tiy-e vi avaloi-o di-ṭṭho ya nā-e so
she-INS.SG also look-PERF.M.SG notice-PERF.M.SG and she-INS.SG that.NOM.SG
puriso cakkuramana
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 nā-e asamsayam eyam-mi puris-e nivesi-ya
think-PERF.N.SG and she-INS.SG undoubtedly this-LOC.SG man-LOC.SG rest-PERF.F.SG
nā-e diṭṭhi
her-FEM.SG gaze.NOM.SG
And she thought: "undoubtedly, she (the lady) has rested her gaze on this very man."

(32) contains a passage from the Paumacaria 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. samcall-iu sāhanu ṇiravasesu
march-PERF.SG army.NOM.SG entire.NOM.SG
The entire army marched out. (PC 1.7.13.2)

b. arudh-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-iya lānkā-ṇayari tehṇ
surround-PERF.F.SG Lanka.city.NOM.F.SG they.NOM.PL
They surrounded the city of Lanka. (PC 1.7.13.4)

These examples illustrate the resultative 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.
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 Vasudevahimidi 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-em deva-deva mu-a
   one day-LOC go-PERF.SG subject.NOM.SG prince-LOC.SG die-PERF.PL
   bhukkhamār-em
   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 sāsānu duhaṇaśaṇu evahā unnai caḍṭi-ya j-em
      your reign.NOM.SG misery.destroying.NOM.SG now high ascend-PERF.SG which-INS.SG
      hont-enā pāhavanteṇa jagu saṃsār-enā padī-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 samavaṇ-īu pekkhe-sā-hi kallae abbhiṇ-īu
      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 jīmva taho jīmva mahu
   tomorrow he GEN and I GEN and one difference.NOM.SG either he GEN or I GEN
   bhag-gu māḍappharu
   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 Apabhramśa 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 Apabhramśa to future research.
b. kallae jimva mandoari rov-ai jimva jānai appaṇa 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 (Janaki) will grieve. (PC 4.67.10.6)

c. kallae huavaha-dhagadhagamāna-ho jimva so jimva haū dhukk-u maśaṇa-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 nihal-iu kharā-duṣaṇa-samvukkapa-hu
either LINS.SG or he-INS.SG follow-PERF.SG karha-duṣaṇa-samvukka-path.NOM.SG
Either he or I will take the path taken by Khara, Dūṣaṇa and Samvukka. (PC 4.67.10.9)

e. jima mañ jimva teṇa aliṅg-iyā kallae raṇ-e
either LINS.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 ājju pavitti nisi-bhoyanu parihar-iu maī
then today from night-food,ACC.SG give.up-PERF.M.SG LINS.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. (36-b) narrates an episode in which the Jina Rśabha, 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-anta sayala vi thottasay-añ
all PTCL victory.slogan.ACC.SG do-PART.M.PL all PTCL hymn.hundred.ACC.PL
padhi-anta
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. didha 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 Participle 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

<table>
<thead>
<tr>
<th></th>
<th>SG</th>
<th>PL</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>khā-ta-lu</td>
<td>khā-ta-lā</td>
</tr>
<tr>
<td>F</td>
<td>khā-ta-li</td>
<td>khā-ta-lyā</td>
</tr>
<tr>
<td>N</td>
<td>khā-ta-la</td>
<td>khā-ta-le</td>
</tr>
</tbody>
</table>

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

30 All 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.

31 Grierson (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. chyu käyam áhrá-m svotá-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. āgyādvājī bāng-e-n talapi ot-u. chyu käyam bāng
   āgyādvājī. NOM hemp-GEN addict.NOM be-PST.M.SG he.NOM always hemp-NOM
   pi-ta-lu
drink-PART-M.SG
   Āgyādvājī was a hemp addict. He would always drink hemp.

c. chyi 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 āguyu,
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 käy 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 tevi mehe sendu āg-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. Vārīrāyāj, jangalbārī-daryā-m phir-ta-lu. tevi chyu, tināhā, hād-yu.
   V.NOM forest-valleys-LOC wander-PART-M.SG then he.NOM he-ACC call-PERF.M.SG
   Vārīrāyāj was wandering in the forests-valleys. At that time, he called out to him.

Pawri thus synchronically realizes a temporally unspecified imperfective marker, while all other surround-
ing 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

\(^{32}\) An 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.

\(^{33}\) Most 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). 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 nānpan-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 āe ch-e, hū sav-e uth-u, my day.NOM thus go-PRES.3.SG PRS-3.SG I.NOM morning-LOC wake-PRES.1.SG
   nha-u, pachi pujā kar-u, pachi bājār-mā jā-u bath-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 nānpan-mā sanskrit bhaṅ-u I-NOM childhood-LOC sanskrit.NOM study-PRES.1.SG
   I used to study Sanskrit in my childhood.

   c. hū jyāre-jyāre Sanskrit bhaṅ-u tyāre-tyāre bā ma-ne I.NOM whenever sanskrit.NOM study-PRES.1.SG then mother.NOM I-ACC.SG
   lādu 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-

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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 \textit{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 \textit{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 \textit{PRES} is extremely secondary in Marathi.

Beames (1872–1879:107) also notes that the \textit{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 \textit{PRES} is used as an indefinite future. Trumpp (1872) labels the \textit{PRES} paradigm as the Sindhi Potential based on its future-oriented use. In Bengali, \textit{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 \textit{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 \textit{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 \textit{PERF} in New Indo-Aryan

I close by considering some uses of \textit{PERF} in New Indo-Aryan languages which are incompatible with the hypothesis that \textit{PERF} is specified for past tense in the modern languages. §4.4.3 has already shown that in Middle Indo-Aryan \textit{PERF} may allow for future temporal reference, referring to events that are believed to occur with certainty. This use of \textit{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.

\begin{enumerate}
\item[(41)] \textit{\textit{āp}} \textit{yahī ruki-ye. maī pac mništ-me ā-ya} \textit{You sit here. I will come back in five minutes.}
\item[(42)] a. \textbf{Context:} Watching an election candidate’s mediocre speech
b. \textit{hyā varśi hā nakki khāli pad-ša} this.OBL year.LOC he.NOM definitely down fall-PERF.M.SG This year, he will definitely fall down (lose in the elections).
\end{enumerate}

Additionally, \textit{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.

\begin{enumerate}
\item[(43)] a. \textit{maī bāmbai ga-ya to tumhārā kām kar-unga} 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.
\item[(43)] b. \textit{us-ne agar padhāi k-ī to vah āgī kakšā-ši mein ja-ša} 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.
\end{enumerate}

These patterns of distribution provide further support to an aspectual rather than tense-specified meaning for \textit{PERF}, in turn lending support to the hypothesis that \textit{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 Vasudevahimīṇḍi (cir. 500CE) and the later Apabhramśa text Paumacariu (cir. 800CE) demonstrate that modul 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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References


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