# The Vedic Injunctive: Historical and Synchronic Implications

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## 1. The nature of the injunctive

Early Vedic possesses a chameleon-like verb form called the injunctive, whose uses partly overlap with, and alternate with, those of the subjunctive, optative and imperative moods, and with the past and present tenses. Being morphologically tenseless and moodless, the injunctive has attracted interest from a comparative Indo-European perspective because it appears to be an archaic layer of the finite verb morphology. Its place and function in the verb system, however, remains disputed. In Kiparsky 1968 I argued that it is tenseless and moodless not only morphologically but also functionally, and that injunctive forms acquire modal and temporal interpretations only contextually. The injunctive's only intrinsic grammatical features are aspect, voice and person/number. This paper provides new evidence for that view (section 1), and goes on to argue that such underspecified forms in paradigms support morpheme-based theories of morphology over realizational theories such as Paradigm Function Morphology (section 2), and that the rise and loss of the injunctive is connected to other changes in the pre- and post-Vedic aspect, tense, and mood system (section 3).

Table (1) provides a synopsis of the Vedic Sanskrit aspect/tense/mood paradigm. The cited forms are of *kr̥* 'do' and *cit* 'think, perceive' in the 3.Sg. Active (2.Sg. in the case of imperatives).

(1)

| | Present stem | Aorist stem | Perfect stem |
|---|---|---|---|
| Present | kr̥-ṇó-ti | — | ci-két-a |
| Past | á-kr̥-ṇo-t | á-kar-*ṡ*t | á-ci-ket-*ṡ*t |
| **Injunctive** | **kr̥-ṇó-t** | **kár-*ṡ*t** | **ci-két-*ṡ*t** |
| Subjunctive | kr̥-ṇáv-a-t(i) | kár-a-t(i) | ci-két-a-t(i) |
| Optative | kr̥-ṇu-yā́-t | kur-yā́-t | ci-kit-yā́-t |
| Imperative | kr̥-ṇu(-hí/-tā́t) | kr̥-dhí | ci-kid-dhí |
| Future | kar-iṣya-ti (separate stem) | | |

Formally, the injunctive forms (boldfaced in (1)) are past forms minus the past prefix *a-*, or equivalently present forms minus the final *-i*. Significantly, both *a-* and *-i* sit at the word edge and show fairly little morphophonological interaction with the rest of the verb.[1]

The injunctive is usually classified as a mood (Avery 1885, Delbrück 1888:353-360, Macdonell 1916:351, Renou 1952 ¶431). But the same authorities also observe that it lacks any specific modal function. In Macdonell's words, it denotes "an action irrespective of tense or mood, the context showing which was meant" (1916:351). Thus, the traditional view of the injunctive contains a contradiction between form and function.

[1]This is obvious for *a-*; the morphophonological independence of *-i* is apparent from Vedic accentuation.

Hoffmann (1967) recognized this contradiction and developed a new theory of the injunctive to overcome it. He reasoned, quite correctly, that if the injunctive is a mood, then it must have some modal function which is distinct from that of the other moods. He proposed that it is "memorative" mood, by which he meant that it functions to MENTION (rather than to assert or narrate) eventualities, or to "remind" someone of what they already know (Hoffmann 1967).[2]

Hoffmann's theory of the injunctive does not fully resolve the theoretical problems raised by the traditional view. First, as can be seen from (1), the injunctive lacks any morphological mark of mood or tense. How does the absence of morphology create a mood with a specifically "memorative" function? In fact, the injunctive, on this interpretation, would be the sole exception to the generalization that Sanskrit forms each of its moods from a distinct modal stem which is specific to that mood.[3] If the injunctive is a mood, why does it have the indicative stem?

Hoffmann's analysis also raises a new problem of its own: the "memorative" is not a cross-linguistically motivated category. There seem to be no languages with a mood whose function is "mentioning" or "reminding". Insofar as such typological considerations serve as a reality check on grammatical analyses and reconstructions, they tell against Hoffmann's view.

Attempts to amend Hoffmann's analysis by alternative positive characterizations of the injunctive's function face similar problems. That includes notably Strunk's (1968) proposal that it marks non-present time, and Mumm's 1995 suggestion that it marks "verbal definiteness".[4]

In Kiparsky 1968 I proposed to reconcile the contradiction between the injunctive's form and function in the opposite way: instead of treating it as a mood or tense and trying to devise a modal or temporal meaning for it, I argued that that *the injunctive is neither a mood nor a tense*. It has no intrinsic modal or temporal meaning at all. Such modal or temporal interpretations as it receives come from the sentential and discourse context. Its only inherent grammatical features, then, are aspect, voice and person/number. This view was endorsed by Szemerényi 1991:282-285 and by Sihler 1995:450-451, and was also reached independently by Kuryłowicz 1977:108, Stempel 1999, and Praust 2003.[5]

The key point is that injunctives are not merely *unmarked* for tense and mood, as the present and indicative are, they are *unspecified* for those categories. The difference between unmarked and unspecified status is that forms which are unmarked for a feature or category receive a default specification for that feature or category, while forms which are unspecified for a feature or category do not register it at all. Injunctives remain lexically unspecified for tense and mood, just as they remain unspecified for, say, evidentiality, or frustrativity, or whatever other morphological categories play no role in the language.

This interpretation is in fact typologically unexceptionable. Verb forms which are unspecified for tense and mood, and which get temporal and modal interpretations in context, are well attested.[6]

[2]The cited monograph was devoted entirely to the synchronic function of the injunctive in Rigvedic, but Hoffmann 1970 suggested that Proto-Indo-European had essentially the Rigvedic categories of verb inflection, including the injunctive.

[3]The same is true for the other Indo-European languages where verbs inflect for mood, and for their tenses and aspects as well, of course.

[4]From another era, let us mention that Gonda (1956) called it a "relic of 'primitive' mental structure".

[5]Praust adds the interesting point that the copula has no injunctive forms; their place is taken by the null copula.

[6]See Kiparsky 1968 for examples from a variety of languages. Within Indo-European itself, West 1989 has suggested an interesting parallel. According to him, early Greek (Hesiod) uses augmentless finite verbs in a temporally unspecified function to express habitual actions.

For the synchronic system of Vedic, it makes for a better fit between morphology and meaning. Since injunctives have no morphological mark of tense or mood, it is not surprising that they are inherently tenseless and moodless, with their only inherent grammatical meaning coming from their aspect, voice, and person/number endings. They can assume virtually any temporal and modal value in context. Injunctive forms can pick up their tense/mood reading from a fully specified verb in the discourse, or from the situational context. *No* modal or temporal meaning is sufficiently indeterminate to cover the varied uses of the injunctive. A brief summary of the Rigvedic data will make this clear.

Injunctives alternate with **imperatives** in commands and requests. They also supply any missing forms in the imperative paradigm (Hoffmann 264, 269).

(2) **píbā** imám, édám barhíḥ **sado** máma
drink-Imp. this-Acc on-this-Acc grass-Acc sit-AorInj2Sg my
'drink (Imp.) it, sit down (Inj.) on my grass' (8.17.1)

They alternate with **subjunctives** in a prospective function:

(3) kadā́ nú antár váruṇe **bhuvā́ni** … kadā́ mr̥ḷīkáṃ sumánā abhí **khyam**
'when now near Varuṇa-Loc be-Subj1Sg … when mercy-Acc joyfully Prt see-AorInj1Sg.
'when will I approach (Subj.) Varuṇa? … When will I joyfully see (Inj.) his mercy?' (7.86.2)

They alternates with **optatives** and **precatives** in wishes:

(4) só asmai cā́ruś **chadayad** utá **syā́t**
he him-Dat pleasant-Nom seem-Inj3Sg and be-Opt-3Sg
'may he seem (Inj.) and be (Opt.) pleasant to him' (10.31.4)

They alternate with **present** tense in sentences with no specific time reference, to express habitual or regular eventualities, implicitly quantifying over eventualities.

(5) a. r̥tám **píparti** ánrtaṃ ní **tā́rīt**
truth-Acc fill-3Sg falsehood Prt pass-Inj3Sg
'he promotes (Pres.) truth, dispels (Inj.) falsehood' (1.152.3)

b. yā́ ni **cyávam** índra ít **ī́śa** eṣā́m
what-AccPl Prt impel-Inj3Sg Indra-Nom Prt rule-Pres3Sg that-GenPl
'whatever I set in motion, Indra takes control of' (1.165.10)

c. divé-dive sū́riyo darśató **bhū́t**
day-Loc-day-Loc sun visible become-AorInj3Sg
'every day the sun appears' (6.30.2)

d. ví sádmāni urviyā́ sukrátur **dhā́t**
Part settlements widely wise-ordainer set-AorInj3Sg
'The wise ordainer has established settlements over a wide area.'

e. tuvā́ṃ vikṣú pradívaḥ **sī́da** āsú
you peoples-Loc continually sit-Inj2Sg these-Loc
'You continually sit among these peoples.' (6.5.3)

They also alternate with **present** tense in performatives and self-reports.[7]

[7]Daniel Baum (indo_iranian@yahoogroups.com, 18.1.2003) points out that injunctives like that in (6b) get their force from the associated particle *nú*.

(6) a. subaddhā́m amútas **karam**
well-tied-Acc from there make-AorInj-1Sg
'I hereby tie her firmly from there.' (10.85.25) [wedding liturgy]

b. índrasya nú vīríyāṇi prá **vocam**
Indra-Gen now deeds Prt proclaim-AorInj
'I (hereby) proclaim Indra's heroic deeds' (1.32.1)

They alternate with **imperfect** (past) tense in narratives (Renou 1952:369, Mumm 188).

(7) a. **ádhvānayad** duritā́ **dambháyac** ca
smoke-out-**Impf**-3Sg fortresses-Acc sack-**Inj**-3Sg and
'He smoked out the fortresses and sacked them.' (6.18.10)

b. ví **akhyann**, ā́d íd rátnaṃ **dhārayanta**
around look-**Aor**-3Pl, then Part treasure-Acc hold-**Inj**-3Sg
'They looked around and held on to the treasure.' (4.1.18)

c. mātárā … **ávāsayad** **rujád** ádriṃ
mother-DuAcc … illuminate-Impf3Sg break-Inj3Sg rock-Acc
'he illuminated (Impf.) the two mothers, he cracked (Inj.) the rock open' (6.32.2)

This is not to say that injunctives and other verb forms are freely interchangeable. One context in which the injunctive is obligatory is **prohibitions**. The particle *mā* is joined with the present injunctive to prohibit an ongoing event ("inhibitive" prohibitions), and with the aorist injunctive to prohibit a future event ("preventive" prohibitions, Hoffmann 1967, Ch. 2).

(8) 10.34.13a akṣaír mā́ **dīvyaḥ** (PresInj.) 'don't play dice'

Such injunctives get their modal force from the particle *mā* that obligatorily accompanies them.

In narration, injunctives seem to be obligatory for telling events in the "wrong" sequence (Hoffmann 177, 201). The regular narrative tense, the imperfect, always advances the narrative. This could be seen as a consequence of the fact that the imperfect has an independent deictic time reference but the injunctive does not.

On the other hand, the injunctive occurs rarely in recent past ("hot news") contexts. (A few examples are cited in in Hoffmann 228 and Mumm 188). Aorist tense is normal here. It is also rare in subordinate clauses. Presumably the temporal reference in these cases is not readily supplied by the context.

The "memorative" function hardly begins to cover these many uses, modal, temporal, and nondescript, mostly documented carefully by Hoffmann himself. "Mentioning" doesn't explain the prohibitive use of the injunctive with *mā*. Obviously the hearer doesn't have to already know the prohibition, or anything about the prohibited action. The point is rather that because the modal force resides in the particle, the verb requires no further mark of modality. And if the injunctive's function is to remind people of what they already know, why does it occur in yes/no questions? The answer is that it tends to occur precisely the kinds of questions where its temporal/modal force can be contextually supplied. Moreover, there is no reason why positively specified tenses and moods should be coordinated with forms of a "memorative" mood, but there is an excellent reason why they should be coordinated with unspecifed forms which receive their interpretation contextually from those specified forms.

The distributional characteristics of injunctives in co-ordinated structures provide a new compelling argument for their unspecified status. Vedic imposes a strict parallelism requirement on

conjunction of verbs with *ca* ‘and’. The conjuncts must be either *(a)* different verbs in the same tense/mood, or *(b)* different tense/mood forms of the same verb (Klein 1985:82).

(9) a. **addhí** indra **píba** ca
eat-Imper Indra-Voc drink-Imper and
‘eat (Imper.), Indra, and drink (Imper.) (10.116.7)

b. **jaghā́na jaghánac** ca nú
smash-Perf3Sg smash-Subj-3Sg and now
‘he has smashed (perf.) and will smash (subj.) now’ (9.23.7)

The only exception to this parallelism requirement is that *an injunctive verb can conjoin with a different verb in any tense and mood*.

(10) a. **saném̥a** ní ca **dhīmahi**
win-Opt1Pl Prt and put-Inj1Pl
‘May we win (Opt.) and keep (Inj.) it’ (1.17.6)

b. imáṃ kā́mam **mandayā** … **papráthaś** ca
this-Acc desire-Acc satisfy-Imper … spread-Inj2Sg and
‘Satisfy (Imper.) this wish and extend (Inj.) it’ (3.30.20)

c. **ásvāpayan** nigútaḥ **sneháyac** ca
sleep-Caus-Impf3Sg Nigut-PlAcc stick-Caus-Impf3Sg and
‘he put the Niguts to sleep (Impf.) and stuck them (Inj.) (to the ground)’ (9.97.54)

d. sám **airayaṃ** ródasī **dhārāyaṃ** ca
Prt set-in-motion-Impf1Sg world-DuAcc support-Inj1Sg and
‘I created (Impf.) the two worlds and sustained (Inj.) them’ (4.42.3)

Our explanation for the fact that an injunctive form may conjoin with any tense/mood form is that it is non-distinct from any specified tense/mood.

The order of conjoined verbs is subject to a telling restriction. The injunctive *follows* the verb with marked tense/mood, invariably so in verbal conjunction cases like (10), and usually also in sentential conjunction such as (7) (35 out of 45 cases in the data in Hoffmann 1967:130,213, 261). This ordering restriction would be inexplicable if the function of the injunctive is mentioning (or marking non-present time, or verbal definiteness). It is however unsurprising if the injunctive has no modal or temporal function at all. In that case, it can only be assigned a modal or temporal interpretation in discourse, and it is well know that prior discourse is a more common contextual cue for the interpretation of anaphoric elements than following discourse is.

In line with the generative theory of its time, the interpretive mechanism posited in Kiparsky 1968 was essentially syntactic (“conjunction reduction”). While this works for the majority of examples, it obviously does not do justice to that fact that in clausal conjunction, the order of injunctive and specified verbs is much freer than in verb conjunction. As the cited data illustrate, it is even possible for a discourse to *begin* with an injunctive, followed by an identifying fully specified verbal predicate. A syntactic process such as “conjunction reduction” or “gapping” of tense/mood morphology should operate within sentences, and left to right. Moreover, syntactic processes do not normally delete material below the word level.

Therefore, it is preferable to assimilate the deployment of injunctive forms to such phenomena as discourse anaphora and the ellipsis of topically salient material. The temporal/modal interpretation of injunctives is analogous to determining the antecedent of a pronoun, a process in which the hearer relies not only on the local syntactic environment, but also on the discourse context, and on the common ground shared between hearer and speaker.

## 2. The injunctive and morphological theory

We have concluded that injunctive forms are finite verbs whose only grammatical features are the ones that they are morphologically marked for: aspect (marked by the choice of present/aorist/perfect stem), voice (marked by middle and passive morphology), and person/number (which in the injunctive are by definition marked by means of the secondary, non-present endings). Such featurally underspecified forms raise questions about the nature and role of paradigms in morphology. So-called realizational theories of morphology require that inflected forms be fully specified for all relevant morphological features. This requirement stems from an approach in which inflectional systems are defined in paradigmatic terms and inflectional forms are derived as realizations of independently generated bundles of paradigmatic features. Paradigm Function Morphology makes this explicit by defining a paradigm as follows:

(11) "The PARADIGM of a lexeme L is a set of CELLS; each such cell is the pairing $< Y, \sigma >$ of an inflected form Y of the lexeme L with a complete set $\sigma$ of morphosyntactic properties for L." (Stump 2001:43).

But we have just seen that the Vedic verb paradigm includes a set of lexemes with incomplete morphosyntactic properties. Such underspecified word forms are incompatible with (11). They are, however, compatible in principle with morpheme-based non-realizational morphological theories — at least with those that have an appropriate theory of paradigm formation. All non-realizational theories have a Blocking principle (called the Subset Principle in Distributed Morphology), but this alone is not enough to account for the fact that injunctive forms freely alternate with more highly specified tensed and modal verb forms. I argue here that such variation manifests the conflicting demands of morphological economy and explicitness, in a familiar pattern which can be rather naturally modeled in OT.

The OT way to frame the question is in terms of morphological choice: given two productive ways of expressing something, which is preferred? Wunderlich 1996 proposes that a grammar consists of two components, a generative (combinatoric) component and a filter. The generative component specifies the potential expressions of the language and their potential interpretations. The filter consists of a blocking mechanism which selects the language's actual expressions and their actual meanings from this set. The blocking mechanism operates by resolving the competition between the potential expressions whose meaning is compatible with a given input meaning (think of it as the 'intended' meaning). It offers a straightforward account of the constitution of paradigms.

The theory, then, consists of a specification of input representations given by UG, a specification of output representations from the (overgenerating) morphology and syntax of the language, and a set of bidirectionally interpretable correspondence constraints (cf. Wunderlich 1996, Koontz-Garboden 2002, Kiparsky 2005).

(12)
- *Input*: grammatical and lexical-semantic feature structures.
- *Output*: interpreted grammatical expressions of the language.
- Correspondence:
  a. Given an input, what is the optimal output?
  b. Given an output, what is the optimal input?

Here we'll consider just case (a) of the correspondence problem.

The Consider the set of expressions which are compatible with an input $M_1$ (technically, which satisfy DEP). Assume that the choice among them is determined by two constraints:[8]

(13) a. EXPRESSIVENESS: express all features of $M_1$.

b. ECONOMY: say nothing.

The best satisfaction of EXPRESSIVENESS is achieved by maximizing the explicit featural content of the output expression. The best satisfaction of ECONOMY is achieved by minimizing its complexity; for present purposes we can define the simplest, most economical output as the one with the fewest morphemes.

EXPRESSIVENESS and ECONOMY are antagonistic constraints. Assume they are freely ranked. Then there will be four cases:

(14) a. Case 1: Among equally simple expressions, the most expressive is optimal.

b. Case 2: Among equally explicit expressions, the simplest is optimal.

c. Case 3: Among equally explicit and simple expressions, these constraints make no decision. The system predicts "free variation" (unless other constraints apply).

d. Case 4: When EXPRESSIVENESS and ECONOMY conflict, their ranking decides. If they are freely ranked, the system again predicts free variation (each ranking gives a different winner).

Cases 1 and 2 are the standard types of BLOCKING: semantic blocking and morphological blocking, respectively. Cases 3 and 4 yield two kinds of free variation. Sanskrit examples of each type cases follow.

Case 1 (semantic blocking) can illustrated by the Vedic tense/aspect system. The Vedic "aorist" and "perfect" both correspond to the English perfect. They stand in a blocking relationship (see Kiparsky 1998 for the argument and examples). The aorist functions specifically as a resultative/recent past perfect. It is obligatory in this meaning with all verbs whose morphology allows an aorist to be formed at all. The Vedic perfect is the "elsewhere" perfect, which expresses all other meanings of that category, namely the universal perfect ("I have known Max since 1960"), the existential perfect ("Fred has been to Paris"), the stative present ("I have got something to tell you"), and even the resultative/recent past perfect itself with those verbs that for morphological reasons can't form an aorist.

Case 2 (morphological blocking) is responsible for the familiar pattern whereby portmanteau forms block synonymous morphologically complex forms, and morphologically derived forms in turn block synonymous periphrastic forms. A familiar English example of the first type of case is the blocking of plural **foots* by *feet*. The Sanskrit perfect system provides an illustration of the second type (for the details, see Kiparsky 2005). Sanskrit has two classes of Perfect forms, morphological, e.g. *ca-kā́r-a* 'has done', and periphrastic. The latter are formed from derived verbs, and from simple verbs of certain phonological shapes, which don't allow morphological perfects, e.g. *mr̥gāyā́ṃ cakre* 'has hunted', *āsā́ṃ cakre* 'has sat'. They are blocked exactly when the morphological perfect is allowed (**kr̥ṇavā́ṃ cakre* 'has done').

An interesting Sanskrit example of morphological blocking has been discovered by Jamison 1984. Jamison points out that the gerundive regularly supersedes the passive optative. The gerundive is formed by a suffix *-ya* which marks passive and obligation in a single portmanteau form, while the passive optative expresses those functions by two separate morphemes.

[8]The competition holds only with respect to meaning features which are paradigmatically expressed in the language by morphological means. This remains a stipulation for now.

(15) a. sumnám **bhikṣeta** (act.opt.) mártyaḥ ‘a mortal should beg favor’ (8.7.15)

b. yo **hūyate** (pass. indic.) … yo **havyaḥ** (gerundive) ‘the one who is invoked … the one who should be invoked” (1.101.6)

c. *yo **hūyeta** ‘the one who is invoked’ (pass. opt. blocked by gerundive)

d. sa yád vānaspatyáḥ **syāt** (opt.) **prádahyeta** (pass. opt.) ‘if it were wooden, it would be burned’ (ŚB 14.2.2.54) (gerundive does not compete with epistemic passive optative)

In (15b), the gerundive **havyaḥ** ‘to be invoked’ supersedes the passive optative by blocking; (15c) is thus not used. In striking contrast, the passive optative is freely available in its epistemic function, for in that meaning it is not blcked by any competing simpler form (see (15d)).

Case 3 is where the forms tie on both constraints, in which case free variation is predicted (insofar as other constraints do not fix the choice, of course). An example is the variation between participial clauses and temporal adverbial clauses (headed by “absolutives”).

(16) a. apaśyan puroḍā́śaṃ kūrmáṃ **bhūtvā́** sárpantam
see-Impf-3Pl cookie-Acc tortoise-Acc become-Abs crawl-PrsPrt-Acc
‘they saw the sacrificial cookie crawling away having become a tortoise’
(*ŚB* 1.6.2.3)

b. ét puroḍā́śaṃ éva kūrmáṃ **bhūtáṃ** sárpantam
‘lo cookie-Acc Part tortoise-Acc become-PresPart crawl-PrsPrt-Acc
‘lo the sacrificial cookie crawling away having become a tortoise’
(*TS* 2.6.3.3)

A very similar example of case 3 is the alternation of modal infinitives like (17a) with gerundives like (17b) to express prescriptions and prohibitions (Deshpande 1991).

(17) a. tasmād brāhmaṇena na **mlecchitavai**
therefore Brahmin-Instr not speak-barbarously-Inf
‘therefore a Brahmin should not speak with a foreign accent’ (Mbh. I, 2)

b. tásmād etéṣām paśū́nāṃ nā **’śitávyam**
therefore these-GenPl animals-GenPl not eat-Grdv
‘therefore one should not eat of these animals’ (ŚB 1.2.3.9)

It seems unlikely that EXPRESSIVENESS nor ECONOMY would be freely ranked across the board for the whole language. Morpheme-specific constraint rankings may well turn out to be necessary, as in morphology.

The injunctive, finally, is an instance of case 4: the competition between forms that optimize ECONOMY and forms that optimize EXPRESSIVENESS. In cases where the two constraints are freely ranked, the result is variation. The competition between injunctives and marked verb forms is an instance of just this type: injunctives are morphologically unmarked, tense/mood marking is more explicit. Notice that such underspecified forms in paradigms can *only* surface when ECONOMY outranks EXPRESSIVENESS; hence the proposed theory predicts that such forms will always be morphologically simpler than their specified counterparts.

## 3. Towards an interpretation of the history

How did this feature of early Vedic verb morphology come about? And why did it disappear so abruptly in the post-Rigvedic language?

The answer offered in Kiparsky (1968) amounts to this: in pre-Vedic stage, and residually in Rigvedic, tense and mood were *optional*. I suggested that this optionality reflects an earlier stage where they functioned as *adverbs* — or, to update the formulation, as *specifiers*, rather than as functional heads or as inflectional categories. The subsystem of tenseless and moodless verb forms co-occurs in Rigvedic with verbs fully specified for tense and mood. Being tenseless and moodless, injunctives receive no default tense and mood, as explained above (that is, they are not assigned present and indicative features). The set of output expressions therefore includes forms which are unspecified for tense and mood, and forms which bear marked or unmarked tense/mood features.

(18)

| | | |
|---|---|---|
| kr̥-ṇó-t | Injunctive | (tenseless) |
| kr̥-ṇó-ti | Present | (unmarked tense) |
| á-kr̥-ṇo-t | Past | (marked tense) |

Immediately after the Rigvedic period, tense and mood were grammaticalized as obligatory inflectional categories. This shift entails the categorical loss of the injunctive.

What caused this shift? One triggering factor may have been the drastic enrichment of the tense system. In Indo-European, tense was restricted to past and present, respectively marked by the prefix ("augment") **e-* and the suffix *-i* (at least in the branch to which Sanskrit belongs). Aorist and perfect were not yet tenses but belonged to the aspect system, and the future seems to have belonged to the modal system. By the earliest Vedic, however — the stage summarized in (1) — the aorist and perfect had changed from aspects to *relative tenses*, which together cover the range of perfect meanings (Kiparsky 1998). In later Vedic and Pāṇinian Sanskrit, aorist and perfect further evolve into *absolute (deictic) tenses*, which respectively denote recent and remote past. A consequence of the restructuring is that the relation between the injunctive's form and function becomes opaque: once aorist and perfect change from aspects to tenses, aorist and perfect injunctives appear as morphologically tensed, which cannot be reconciled with their injunctive function.

A fundamental fact about the Indo-European system was that tenses and moods did not cross-classify. Therefore, the augment *e-* and the present tense morpheme *-i* are restricted to the indicative. Since tense and mood were mutually exclusive, the lack of either of those markers resulted in forms that are not only tenseless, but moodless.

The aspects (imperfect, aorist, and perfect) did of course come in the scope of mood. When the aspects turned into tenses, the result was a massive reorganization of the verb system. The former morphological aspect-mood combinations were sorted out in three different ways: they were either reinterpreted as new modal categories, retained with the tense's original aspectual function, or simply lost (e.g. perfect optatives).

In the first of these developments, the new tenses are recruited for temporal differentiation in the irrealis modal domain. In Rigvedic, no tense distinctions are expressed in wishes and conditionals. For example, in (19), the Optative refers respectively to present, future, and past eventualities.

(19) a. yád agne **syā́m** ahám tváṃ tváṃ vā́ ghā́ **syā́** ahám **syúṣ** ṭe
if Agni-Voc be-Opt1Sg I-Nom you-Nom you-Nom or Prt be-Opt2Sg I-Nom be-Opt3Sg your
satyā́ ihā́śíṣaḥ
true-PlNom here-wishPlNom
'if I were you, Agni, or you were me, your wishes would be fulfilled right here' (8.44.23)

b. yác **chuśruyā́** imáṃ hávaṃ durmárṣaṃ **cakriyāḥ**
if hear-PerfOpt2Sg this-Acc invocation-Acc memorable-Acc do-PerfOpt2Sg
'if you were to hear this invocation, you would do something memorable' (8.45.18)

c. **jakṣīyā́d** dhānā́ utá sómam **papīyāt**
eat-PerfOpt3Sg barley-PlAcc and soma-Acc drink-PerfOpt3Sg
'he could have eaten barley grains and drunk soma' (10.28.1)

In the post-Vedic language, the irrealis domain is differentiated by two new composite categories: a past of the future, which marks counterfactual conditionals, and an aorist of the optative, which marks wishes for the future.[9]

(20) a. yád eváṃ **nā́vakṣyo** mūrdhā́ te vy **àpatiṣyat**
if so not speak-Cond2Sg head-Nom your open burst-Cond3Sg
'if you hadn't said (Cond.) that, your head would have (Cond.) exploded' (ŚB 5.5.4.8)

b. áhavyavāḍ evā́háṃ tubhyaṃ **bhūyāsam**
non-sacrificer just I-Nom you-Dat be-Prec1Sg
'I wouldn't want to be (Prec.) a sacrificer to you (in the future)'

The grammaticalization of tense and mood as obligatory inflectional categories is also manifested in the development of agreement processes. In Rigvedic, the mood/tense of a subordinate clause is independent from that of the main clause.

(21) a. yát **kṣáyathaḥ** … pátayaḥ **syāma**
when rule-Indic2Du … lord-NomPl be-Opt1Pl
'when you two rule (Indic.), may we be (Opt.) lords' (9.95.5)

b. yáthā **váśanti** devā́s táthéd **asat**
as want-Indic3Pl god-PlNom so-Prt be-Subj-3Sg
'as the gods want (Indic.), so may it be (Subj.) (8.28.4)

Later Vedic prose develops a type of sequence of mood. If the main clause is non-indicative, then the subordinate clause must agree with it in mood:

(22) a. sá yadā tám **ativárdhā** átha karṣúṃ **khātvā** tásyām mā **bibharāsi**
that when it-Acc outgrow-Subj1Sg then hole-Acc dig-Abs that-Loc me put-Subj2Sg
'when I outgrow (Subj.) it, you should dig (Abs.) a hole and put (Subj.) me in it' (ŚB 1.8.1.3)

b. kathám ajanáṃ **syād** yátrāhaṃ **syām**
how unpopulated-Nom be-Opr3Sg where I be-Opt1Sg
'how could (Opt.) the place where I am (Opt.) be unpopulated?' (ŚB 11.5.1.4)

This is evidently a morphological agreement process, hence diagnostic of an obligatory inflectional category.

## 4. Conclusion

The Rigvedic injunctive occurs conjoined with, and in the meaning of, every other tense/mood category, and save for prohibitions with *mā*, there is no environment where it occurs exclusively. This indicates that it has no tense/mood features, as opposed to merely having the unmarked values of

[9] Krisch 1986 argues that counterfactual conditionals originally used the injunctive.

those features. Thus, being non-distinct from all tense-mood categories, injunctives are compatible with all of them. Formally, this means that tense and mood are optional inflectional categories in Rigvedic. This analysis can be naturally expressed in morpheme-based theories of morphology, and the competition between unspecified and specified verb forms can be modeled in OT implementations of such theories. On the other hand, the analysis appears to be incompatible with some paradigm-based morphological theories. Finally, on the historical side we saw how the injunctive testifies to the relatively recent grammaticalization of mood and tense as inflectional categories in Indo-European, and how its loss goes hand in hand with the enrichment of the tense system through the conversion of the original aspects into tenses.

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