

Performative Sentences and the Morphosyntax-Semantics Interface in Archaic Vedic

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ABSTRACT

Performative sentences represent a particularly intriguing type of self-referring assertive clauses, as they constitute an area of linguistics where the relationship between the semantic-grammatical and the pragmatic-contextual dimension of language is especially transparent. This paper examines how the notion of performativity interacts with different tense, aspect and mood categories in Vedic. The claim is that one may distinguish three slightly different constraints on performative sentences, a modal constraint demanding that the proposition is represented as being in full accordance with the Common Ground, an aspectual constraint demanding that there is a coextension relation between event time and reference time and a temporal constraint demanding that the reference time is coextensive with speech time. It is shown that the Archaic Vedic present indicative, aorist indicative and aorist injunctive are quite compatible with these constraints, that the basic modal specifications of present and aorist subjunctive and optative violate the modal constraint on performative sentences, but give rise to speaker-oriented readings which in turn are compatible with that constraint. However, the imperfect, the present injunctive, the perfect indicative and the various modal categories of the perfect stem are argued to be incompatible with the constraints on performative sentences.

1 Introduction

Performative sentences represent a particularly intriguing type of self-referring assertive clauses, as they constitute an area of linguistics where the relationship between the semantic-grammatical and the pragmatic-contextual dimension of language is especially transparent. Hence our understanding of the interface between semantics and pragmatics may be significantly enhanced by studying the morphosyntactic peculiarities of performative utterances in different languages.¹ This paper examines the system of performative sentences in Archaic Vedic, the oldest stage of Indo-Aryan, which belongs to the Indo-Iranian branch of the Indo-European language family. This language has a particularly rich inventory of distinct morphosyntactic types of performative sentences and thus provides a range of interesting data which may enhance our understanding of the semantics of performativity.

It should be noted from the outset that I take performative sentences to have three slightly different, yet interrelated properties. First, we may note that the utterance of a performative sentence results in what may be called a purely linguistic event, i.e. the addition of a new sentence to the Common Ground. Elaborating on a suggestion by Portner (2004, 2007), I take this to be the basic

¹I refer the reader to Bary (2007, 2008), Rogland (2001) and Weninger (2000) for a discussion of the peculiar morphosyntactic encoding of performative sentences in Classical Greek, Classical Syriac and Classical Ethiopic, respectively. A cross-linguistic study of the morphosyntax of performativity remains a desideratum.

function of assertive clauses in general and hence regard it as a defining characteristic of the general clause type of which performative sentences form a subtype. Second, performative sentences are self-referring, in the sense that they typically contain a first person form of a speech act verb or an equivalent construction which at the same time denotes the sentence and represents an instance of the sentence. Third, the utterance of a performative sentence simultaneously causes what may be called an extra-linguistic event, i.e. an event which is outside the realm of linguistics proper. Following scholars like Austin (1962), Ginet (1979), Harnish (1988/1993, 2007) and Searle (1989 and elsewhere) I take this latter function to be the defining characteristic of performative sentences as opposed to other types of self-referring, assertive clauses. Section 2 contains a brief overview of the Archaic Vedic sources and the system of performative sentences found in this language.

2 Performative sentences in Archaic Vedic

The primary data constituting the empirical basis of the discussion in the present paper are gathered from the two oldest attested stages of Indo-Aryan, which are commonly referred to as Old and Early Middle Vedic (cf. Witzel 1989, 1995). In the present context, I take Old Vedic to be represented by the language of the oldest books (books II-IX) of the Rigveda (RV), whereas Early Middle Vedic is understood as the language of the later books of the Rigveda (books I and X) and the language of the Atharvaveda (AVŚ, AVP). As there is a close correspondence between these two stages of Vedic, I chose to treat them as one linguistic unit here, for which I have chosen to adopt the label ‘Archaic Vedic’.²

The primary sources considered here exclusively consist of metrically composed hymns. The hymns constituting the Rigveda are mostly addressed to one or more of the various gods belonging to the Vedic pantheon and therefore typically consist of a praise of their mythical deeds, an invitation to come and participate in the sacrificial ritual, a request to grant a wish of the speaker or an emphasis on the previous merits of the speaker with respect to the addressee. The hymns constituting the Atharvaveda, on the other hand, mostly comprise magical spells for various non-ritual purposes, including charms against various types of diseases, incantations for luck in love or erotic affairs and various sorts of curses. As indicated by the nature of these sources performative sentences represent a particularly well attested sentence type and one may therefore reasonably assume that the actually attested sample of performative sentences in Archaic Vedic is fairly comprehensive, reflecting the synchronic grammar of these stages in a reliable manner, so that, say, the absence of a given category in performative sentences may be taken as a reflection of the fact that it is incompatible with the semantic notion of performativity rather than a reflection of an accidental gap in the corpus.

We may distinguish at least seven morphologically distinct types of performative sentences in Archaic Vedic, which may be illustrated by the examples in (1a) through (1g) respectively.

- (1) a. prá tát te adyá śipiviṣṭa náma
 forth this.ACC you.GEN.SG today pervaded.by.rays.VOC.SG name.ACC
 aryáḥ śaṃsāmi vayúnāni vidvān
 pious.man.GEN extol.1SG.PRS sacred.customs.ACC knowing.NOM.SG
 ‘O you who are pervaded by rays, knowing the sacred customs of a pious man I extol your name’ (RV VII 100.5)
- b. námo divé bṛhaté ródasibhiyām
 reverential.salutation.ACC heaven.DAT great.DAT.SG two.earths.DAT
 mitraya vocaṃ varuṇāya mīḥuṣe
 Mitra.DAT address-1SG.AOR.INJ Varuṇa.DAT bountiful.DAT.SG
 sumṛīkāya mīḥuṣe
 gracious.DAT.SG bountiful.DAT.SG
 ‘I address a reverential salutation to the great heaven, to the two earths, to Mitra, to Varuṇa, the bountiful, the gracious, the bountiful’ (RV I 136.6)

²There are in fact a few morphosyntactic differences between Old and Early Middle Vedic, but as they do not seem to have impact on the system of performative sentences, they can be safely disregarded in the present context.

- c. *yāvati* *dyāvāpṛthivī* *varimṇā*
 as.great.as-NOM.DU heaven.and.earth-NOM.DU width.INS
yāvāt *saptá síndhavo* *viṭaṣṭhiré*
 as.much.as seven rivers.NOM spread.out.3PL.PRF
vācam *viśasya* *dūṣaṇīm* *tām* *itó* *nír avādiṣam*
 spell.ACC poison.GEN destroying.ACC.SG this.ACC from.here out speak-1SG.AOR
 ‘As great as heaven and earth are by their width, as much as the seven rivers have spread
 out, I speak out from here this poison-destroying spell’ (AVŚ IV 6.2)
- d. *índram* *stavā* *nṛtamaṃ* *yásya* *mahnā*
 Indra.ACC praise.1SG.PRS.SBJ most.heroic.ACC who.GEN greatness.INS
vibabādhé *rocanā* *ví* *jmó* *ántān*
 drive.asunder-3SG.PRF bright.skies.ACC asunder earth.GEN ends.ACC
 ‘I will praise the most heroic Indra, who with his might has driven asunder the bright skies,
 (has driven) asunder the ends of the earth’ (RV X 89.1)
- e. *tá* *vām* *adyá* *sumatábhīḥ* *śubhaspatī*
 these.ACC you.two.ACC today devotion.INS lords.of.splendor.VOC.DU
áśvinā *prá* *stuvīmahi*
 Aśvins.VOC.DU forth praise.1PL.PRS.OPT
 ‘With devotion we wish to praise the two of you today, o Aśvins, lords of splendor’
 (RV VIII 22.6)
- f. *prá* *nú* *vocā* *sutéṣu* *vām*
 forth now call-1SG.AOR.SBJ soma.libation.LOC.PL you.two.GEN
vīriyā *yáni* *cakráthuḥ*
 heroic.deeds.ACC which.ACC.PL make-2DU.PRF
 ‘With soma-libations I will now call forth the heroic deeds of you two, which you have
 done’ (RV VI 59.1)
- g. *áchā* *voceya* *śúsucānám* *agnīm*
 hither call-1SG.AOR.OPT shine-PRF.PRT.ACC.SG god.of.fire.ACC
hótāraṃ *viśvábharasaṃ* *yájiṣṭham*
 sacrificial.priest.ACC all.nourishing.ACC.SG most.worshipping.ACC.SG
 ‘I wish to call hither the shining god of fire, the all-nourishing, most worshipping sacrificial
 priest’ (RV IV 1.19)

In all these cases, the sentences represent self-referring, declarative statements which denote a situation partly consisting in the very utterance of the sentence and partly in some extra-linguistic change of state and the sentences may accordingly be characterized as performative.

The seven inflectional categories found in performative sentences have fundamentally different aspectual, temporal and modal properties, something which poses a serious challenge for any attempt to give a unified semantic analysis of performative sentences, at least in Archaic Vedic. The remainder of this paper attempts to clarify how a single, well-defined clause type can have up to seven alternating morphosyntactic expressions in one and the same language. In section 3, I propose some general constraints on performative sentences, examining how lexical semantics, morphosyntax and pragmatics interact in sentences of this type. In section 4, I examine how the various Archaic Vedic inflectional categories satisfy these constraints. Section 5 contains a summary and a conclusion.

3 Lexical and Sentential Components of Performativity

This section aims at clarifying the notion of Performativity which will be assumed to consist of a lexical and a sentential dimension. I will first discuss some elements of meaning which are relevant at the level of verb phrase meaning and then distinguish some elements of meaning which are relevant at the level of the clause.

As a preliminary, we may note that the definition of performative sentences as self-referring and assertive entails that the speaker must be included in the reference of the subject argument, that

the situation must take place at speech time and that the sentence has a neutral or unmarked modal force. This cluster of properties represents a necessary, but not sufficient condition for a sentence to qualify as performative. Consider the following examples:

- (2) a. I hereby name this ship 'Queen Elizabeth'.
 b. We hereby name this ship 'Queen Elizabeth'.
 c. *I hereby persuade you that he is innocent.

I take it as uncontroversial that sentences like those in (2a) and (2b) are typically used with the intention of bringing about a unique change of state in the world by their very utterance according to a set of extra-linguistic conventions. In contrast, the sentence in (2c) clearly cannot be used with this intention and hence appears to be semantically ill-formed on the performative reading. It is reasonable to assume that the difference between the two sets of sentences may be traced to a semantic difference between the verbal predicates *name this ship 'Queen Elizabeth'* and *persuade you that he is innocent* and in order to understand the semantics of performativity we need to identify the lexical semantic features that determine whether a given verbal predicate may be used with a performative meaning or not (cf. McCawley 1977 for a similar view).

It is well-known that the English Simple Present has a performative as well as a habitual reading, but it appears that individual verbs vary considerably as to whether both these readings are available or not and to which of the readings is most natural. Thus this particular morphosyntactic category seems to provide a useful heuristic tool for delimiting the class of verbal predicates which may be used in performative sentences in English. Consider for instance the following sentences:

- (3) a. I (hereby/?always) name this ship 'Queen Elizabeth'.
 b. I (hereby/?always) sentence you to four years in prison.
 c. I (hereby/always) invoke the name of the holy God.
 d. I (hereby/always) curse him.
 e. I (?hereby/?always) build this house.
 f. I (?hereby/always) injure you.
 g. I (*hereby/always) persuade you that he is innocent.
 h. I (*hereby/always) hate you for that.

First, sentences like those cited in (3a) and (3b) may under given circumstances assume a habitual reading, but nevertheless appear odd when combined with habitual adverbs like '*always*'. Sentences of this type rather tend to receive a performative interpretation by default. On the other hand, sentences like those in (3c) and (3d) are perfectly compatible with either a performative or a habitual reading and it is not evident that either of these readings is more natural. In contrast, the sentences in (3e) and (3f) are decidedly odd when coerced into a performative reading, although they do seem better than the sentence in (3g) and (3h). It is likely that the acceptability differences can be traced to lexical semantic differences between the different verbal predicates and in the following I attempt to identify some properties which appear to be particularly relevant in this respect.

As the performative reading represents the default reading of first person simple present forms of verbal predicates like *name the ship 'Queen Elizabeth'* and '*sentence you to four years in prison*', these predicates may be regarded as prototypically performative. It is generally accepted that predicates of this kind presuppose that the speaker intends the utterance of the sentence to cause a unique change of state in the world of evaluation by some extra-linguistic convention (cf. e.g., Austin 1962, Ginet 1979, Searle 1989, Bach and Harnish 1992, Reimer 1995). Note that I intend the notion of extra-linguistic convention to have a fairly strict meaning here, representing the particular lexical property of verbs like *name*, *sentence* and others like them which renders an utterance of the type 'I hereby name/sentence' forceless unless the speaker has the proper authority to carry out the situation named by the verb. For instance, unless the speaker of (3a) is the owner of the ship or is appointed by the owner of the ship, his mere utterance of the sentence will not have any practical consequences — at least not with regard to the ship's name. In this respect, these verbal predicates

differ from other speech act verbs like *invoke* or *curse*, which clearly presuppose that the speaker intentionally uses the sentence to accomplish a change of state in the outer world, but the event thereby denoted need not be unique nor need it be licensed by any extra-linguistic conventions. As the verbs under discussion lack these features, they do not qualify as prototypically performative, but they are perfectly compatible with a performative reading.

Consider now the verbal predicates *build* and *injure* which are definitely odd on the performative reading. An important semantic difference between these verbs and those just discussed is that they do not denote a speech act, but only a change of state in the outer world. It is tempting to ask, however, whether these verbs tend to defy a performative reading because of a particular lexical semantic property or because of world knowledge (cf. also Searle 1989, 554). For instance, a performative reading of a sentence like (3e) or (3f) would be more readily acceptable if uttered in a world where the speaker were capable of building a house or injuring somebody just by stating the very sentence, for instance in a world of magic. This is exactly the kind of world which forms the cultural background of the Atharvaveda and it is therefore not surprising that we do indeed find some examples of performative sentences where the predicate does not denote a speech act, but only a change of state. Consider the following examples:

- (4) a. *tám tvā yaumi*
 this.ACC you.ACC bind.1SG.PRS
bráhmaṇā divya deva
 mantra.spell.INS heavenly.VOC.SG god.VOC
 ‘You here I bind with a mantra spell, o heavenly god’ (AVŚ II 2.1)
- b. *saptá prāṇā aṣṭáu majjñás*
 seven vital.organs.ACC eight marrows.ACC
tāms te vṛścāmi bráhmaṇā
 those.ACC you.GEN cut.off.1SG.PRS mantra.spell.INS
 ‘The seven vital organs, the eight marrows, those I cut off from you with a mantra spell’
 (AVŚ II 12.7)

In themselves, the verbal predicates *tvā yaumi* ‘I bind thee’ and *tāms vṛścāmi* ‘I cut them off’ only denote extra-linguistic events. However, in the above contexts the situations denoted by the verb are clearly taken to be caused by the mere utterance of the sentence, as indicated by the instrumental-marked noun *bráhmaṇā* ‘with a mantra spell’. The speaker clearly presupposes that there is a causal relationship between the utterance of the sentence and some lexically specified, extra-linguistic event. If this interpretation of the above passages is correct, it is reasonable to assume that sentences like those cited in (3e) and (3f) may lend themselves to a performative reading under given circumstances and therefore seem slightly better on the performative reading than (3g) and (3h). This begs the question, however, as to how this difference may be accounted for in a principled way.

As far as I can see, one may distinguish two mutually independent reasons why the predicates *persuade you that he is innocent* and *hate you for that* both fail to get a performative reading. Recall that a prototypically performative verb presupposes that the speaker intends the utterance to cause a change of state in the outer world. Among other things, this definition may be taken to imply that a situation eligible to be picked out by a performative sentence must be conceptualized as a change of state and as being within the realm controlled by the speaker. Although the verbal predicate *persuade you that he is innocent* clearly denotes a situation consisting in a change of state, it is equally clear that the speaker cannot strictly speaking control whether the change of state obtains or not. I suggest that the semantic oddity of a sentence like **I hereby persuade you that he is innocent* may be traced to this lack of speaker control. The predicate *hate you for that*, on the other hand, denotes a type of situation which is conceptualized as a more or less permanent state in which the speaker happens to be and thus does not entail a change of state.³ In view of the above

³This is not to say, however, that state predicates like *hate you for that* are incompatible with a change-of-state reading. For instance, punctual adverbs like *suddenly* tend to induce a reading of this kind, as illustrated by a sentence

discussion it is tempting to suggest that the semantic inacceptability of a sentence like **I hereby hate you for that* may be traced to the lack of the change of state feature.

In the course of the previous discussion I have identified four distinct lexical semantic features which may be taken to constitute prototypical performativity. Prototypically performative verbs lexically entail that the speaker intends an utterance of the type specified by the verb to cause a change of state in the outer world by some extra-linguistic convention, i.e. they denote a speech act [+VERBUM DICENDI], a change of state [+CHANGE OF STATE], which is unique [+EVENT UNIQUE-NESS], speaker control [+CONTROL] and some extra-linguistic convention [+EXLING CONV]. The data discussed above suggest that a verb lacking one or more of these features nevertheless may assume a performative interpretation. A straightforward way of accounting for this fact would be to assume that these four features are binary and privative, in the sense that a verbal predicate lacking a given feature is in principle compatible with that feature, so that the feature could be supplied by the context. On this assumption, one might further suggest that verbal predicates are organized in a hierarchical manner with prototypically performative verbs in the most prominent position and other verbs ordered downwards according to their respective lexical entailments. Along the lines of Dahl (2008a) I would like to propose that their hierarchical ordering assumes the form of a lattice structure, as illustrated in Figure 1.

I assume as a working hypothesis that a structure of the kind represented in Figure 1 underlies the semantic domain of performativity which I take to be universal. Moreover, I assume that verbal predicates which are situated at the top end of the lattice assume a performative reading by default in all languages. However, one may expect languages to differ with regard to what other types of predicates they allow in performative sentences - at which level of the lattice they draw the line, so to speak. We have already seen that Archaic Vedic is more inclusive than Present-Day English in this respect and it would be surprising if this proved to be the only pattern of variance to be found in this field. However, a more thorough typological investigation along these lines is far beyond the scope of the present paper.

Having distinguished a set of lexical semantic features which are relevant for the complex notion of performativity, I now turn to a discussion of the more general semantic constraints on performative sentences distinguished above. I noted that sentences of this type entail that the speaker is included in the reference of the subject argument, they are typically modally neutral and express that the change of state denoted by the verbal predicate takes place at speech time. I will discuss each of these properties in turn.

The first constraint follows directly from the claim that performative sentences represent a subtype of self-referring clauses, a general clause type which at the very least presupposes that the speaker at the same time denotes and performs a situation of the type specified by the verbal predicate. The sentences in (5) are not self-referential and are therefore excluded from assuming a performative interpretation, although the verbal predicates qualify as prototypically performative:

- (5) a. You hereby name this ship ‘Queen Elizabeth’
 b. He hereby sentences you to four years in prison.

Turning now to the second constraint, we need to clarify exactly what the modal neutrality of performative sentences consists in. Searle (1989, 539) notes that ‘performative utterances are self-guaranteeing in the sense that the speaker cannot be lying, insincere or mistaken about the type of act being performed’, although he adds the proviso that this does not necessarily entail that the speaker is not lying or insincere about the propositional content of the speech act. In other words, it is possible to use a performative utterance like ‘I apologize’ without being sincere about the full lexical content of the verb, which in the present case among other things typically implies an acknowledgement of the impropriety of one’s behaviour. Nevertheless, by uttering a sentence of

like *Suddenly, I hated him*. The fact that state predicates in general seem to be excluded from performative sentences, at least in English, might rather reflect that they represent a semantically underspecified predicate type which lack too many of the relevant lexical semantic features characteristic of prototypically performative verbs.

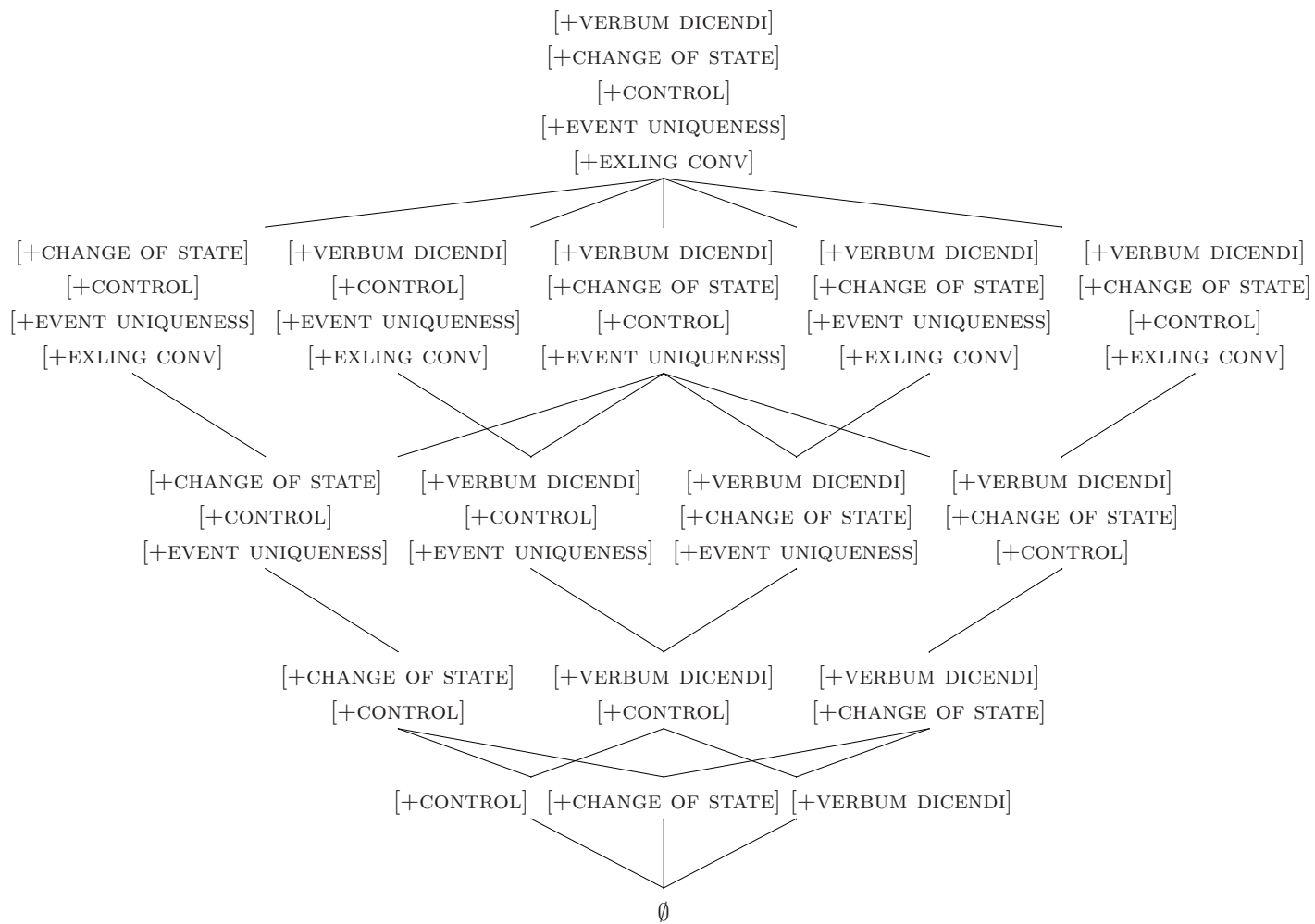


Figure 1: Performativity properties organized via a lattice

this type the speaker implicitly takes for granted that the sentence represents a token of the situation type labelled by the verb, irrespective of whether he sincerely means what he says or not.

The semantic domain of modality comprises a set of notions specifying the speaker's attitude to the content of the proposition denoted by the sentence. Along the lines of Kratzer (1981) I assume that the interpretation of epistemic modals may be understood in terms of different relations between a so-called *Modal Base* and an *Ordering Source*. The Modal Base (MB) represents a conversational background which determines the worlds or sets of propositions which are partly or fully compatible with the discourse context. It comprises the set of background presuppositions which the speaker assumes to be shared by himself and the audience, the so-called *Common Ground* (CG). The Ordering Source (OS), on the other hand, represents the stereotypical background, which imposes an ordering on the set of accessible worlds by implementing the CG as the default standard of measure, thus qualifying other worlds or sets of propositions as more or less distant from this standard. Within this framework, Realis may be defined as a relation between MB and OS which qualifies a proposition p as fully in accordance with CG. Irrealis, on the other hand, may be defined as a relation between MB and OS which qualifies a proposition p as compatible with, but more or less distant from the CG. If the proposition p is relatively close to the CG, the Irrealis relation may be labelled 'probability'. If it is relatively distant from the CG, on the other hand, the Irrealis relation may be labelled 'possibility'. Given that these considerations are correct, one may characterize Realis as a neutral or unmarked type of modality notion, whereas Irrealis may be characterized as a marked type of modality notion. Keeping Searle's claim about speaker sincerity in mind, we may hypothesize that performative sentences in general cannot contain Irrealis markers, as the occurrence of a marker of this type would signal that the speaker did not regard the content of the proposition as in accordance with the Common Ground and hence that he were explicitly insincere about the type of act being performed. This constraint would provide a straightforward explanation of the fact that sentences like ones cited in (6a) and (6b) cannot assume a proper performative reading, even though they contain prototypically performative verbs. The sentences in (6c) and (6d), on the other hand, seem ok, although each of them contains a modal verb.

- (6) a. ?I might hereby name the ship 'Queen Elizabeth'
 b. ?I would hereby sentence you to four years in prison
 c. I will hereby express my gratitude
 d. I hereby wish to apologize

The difference between the above sentences may reflect the fact that the modal verbs cited here give rise to different ranges of speaker-oriented uses. By stating a sentence of the type illustrated by (6a) or (6b) the speaker implies that it would be possible for him to carry out the situation, given that some other condition holds. Sentences like (6c) or (6d), on the other hand, do not carry any implications of this type and can be used simply to express the present intention of the speaker, which among other things may involve carrying out a certain situation at speech time. Performative sentences of the latter type are often referred to as 'hedged performatives', a term I shall adopt in the following.

Finally, performative sentences typically express that the change of state denoted by the verbal predicate is completed at the time of utterance. It should be noted, however, that this constraint concerns two distinct semantic dimensions, namely a temporal and an aspectual dimension. The temporal dimension of this constraint demands that a performative sentence must have present time reference, whereas the aspectual dimension demands that the change of state denoted by the verbal predicate must be represented as completed.

In order to clarify the relationship between these two semantic dimensions we need a model for analyzing temporal and modal notions. The two-dimensional framework developed by Hans Reichenbach (cf. Reichenbach 1947) has proven illuminating for the study of tense and aspect categories in many languages and in the present context I will rely on a modified version of his framework. For one thing, I assume that sentences in natural language refer to four distinct temporal parameters,

namely speech time (t_S) or the time of the utterance, event time (t_E) or the run time of the situation, reference time (t_R) or the time spoken about and perspective time (t_P) or the temporal perspective of the speaker. In the default case, speech time and perspective time coincide, but in cases like the historical present perspective time is clearly distinguished from and located prior to speech time. As the main topic of this paper is performative sentences, where speech time and perspective time coincide, this distinction, albeit theoretically important, will not play any great role in the following (cf. also Kamp and Reyle 1993).

Moreover, I assume that the values of the four temporal parameters are intervals, points being regarded as minimal intervals, and that various relations may hold between them, for instance precedence, coextension, inclusion, proper inclusion and overlap for which I use the symbols ($-$), ($=$), (\subseteq), (\subset) and (\otimes) respectively. Following Klein (1995), Kiparsky (1998), Kratzer (1998) and others I define *tense* as a relation between perspective time and reference time and *aspect* as a relation between reference time and event time.

This brief discussion enables a more precise characterization of the temporal and aspectual constraints on performative sentences. The temporal constraint may be taken to demand that the reference time, the time spoken about is located at speech time and not at some other time. The aspectual constraint, on the other hand, may be taken to demand that reference time and event time are coextensive. This aspecto-temporal relation may be schematically represented as follows:

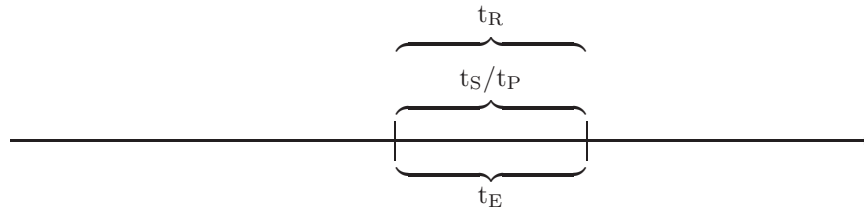


Figure 2: The time-relation underlying performative sentences

This constraint rightly precludes sentences like the following from having a performative reading:

- (7) a. *I hereby named this ship ‘Queen Elizabeth’
 b. ?I shall hereby sentence you to four years in prison
 c. ?I am hereby naming the ship ‘Queen Elizabeth’

The semantic oddity of the last example in (7) illustrates an intricate problem regarding the morphosyntax of performative sentences in English. Whereas performative sentences as a rule have the simple present, the progressive present is sometimes, though not always, acceptable as well, as shown by the following examples:

- (8) a. I am hereby asking you
 b. ?I am hereby apologizing to you
 c. ?I am hereby naming this ship ‘Queen Elizabeth’

The preference of performative sentences for the simple present may be regarded as a consequence of the fact that the present progressive represent a semantically specific imperfective category which within the present framework may be taken to denote the aspectual relation ‘reference time properly included in event time’ ($t_R \subset t_E$), focussing a preterminal interval of the situation denoted by the verbal predicate. Hence the present progressive does not represent the change of state denoted by the verbal predicate as completed at reference time. Note, incidentally, that the hierarchical notion of performativity developed in this paper provides a straightforward way of accounting for the morphosyntactic divergence illustrated in (8), namely that the relative acceptability of the present progressive in performative sentences depends on the relative inherent performativity of the verbal predicate. For instance, a verb like ask is underspecified with regard to several of the relevant lexical semantic features, above all the change of state feature. Along the lines of Krifka (1998) and Rothstein (2004), I understand the change of state feature in terms of non-homogeneity. A homogeneous verbal

predicate like *fight* denotes a type of situation such that any subpart of the situation counts as a full instantiation of the situation, whereas a non-homogeneous verbal predicate like *defeat* denotes a type of situation such that a subpart of the situation does not necessarily count as a full instantiation of the situation. It is well known that past progressive forms of homogeneous predicates differ significantly in their entailments from the corresponding forms of non-homogeneous predicates (cf. e.g., Dowty 1979, Parsons 1990, Landman 1992 among others). For instance, a sentence like *he was fighting* entails the sentence *he fought*, whereas a sentence like *he was defeating his demons* does not entail the sentence *he defeated his demons*. In a similar manner, a present progressive form of a homogeneous predicate like *ask you* locates a subpart of the situation which at the same time represents a full instantiation of the situation at speech time, whereas a present progressive form of a non-homogeneous predicate like *name this ship 'Queen Elizabeth'* locates a proper subpart of the situation which does not represent a full instantiation of the situation at speech time.

In the course of this section I have argued that performative semantics partly involves a lexical dimension and partly a sentential dimension. As regards the lexical dimension, I claimed that verbal predicates which denote a speech act and entail that the speaker intends the utterance to cause a unique change of state in the world of evaluation by some extra-linguistic convention represent prototypically performative predicates. Moreover, I suggested that the lexical semantic domain of performativity may be understood as a lattice structure with prototypically performative predicates in the most prominent position and less inherently performative predicates organized downwards according to their relative inherent performativity. As regards the sentential dimension, I claimed that performative sentences must have a first person subject, that they are incompatible with irrealis modality in the sense that they presuppose that the proposition denoted by the sentence is fully in accordance with the Common Ground and that they denote the aspecto-temporal relation 'event time equals reference time, reference time equals speech time' ($t_E = t_R$, $t_R = t_P/t_S$). I assume as a working hypothesis that these constraints are universal in the sense that they reflect the core semantic properties of performative utterances. In the next section, I discuss to what extent this hypothesis can account for the variegated system of performative sentences in Archaic Vedic.

4 Morphosyntax and Performativity in Archaic Vedic

In the preceding section I claimed that performative sentences presuppose that the proposition is fully in accordance with the Common Ground and that a coextension relation holds between speech time, event time and reference time. In this section I examine to what extent the various verbal categories in Archaic Vedic satisfy these constraints, with particular emphasis on why just the present indicative, the aorist injunctive, the aorist indicative, the present subjunctive, the present optative, the aorist subjunctive and the aorist optative are found in performative sentences.

In general, the inflectional morphology of the Archaic Vedic verb has a strictly compositional semantics.⁴ The tense/aspect/mood system is based on a morphological distinction between three different stems, namely the present stem, the aorist stem and the perfect stem, each of which has a fixed aspectual meaning which combines with present tense, past tense and various modal notions in a synchronically transparent and predictable way, the present stem having a general imperfective meaning, the aorist stem a perfective meaning and the perfect stem an anterior meaning (cf. Dahl 2008a). Table 1 contains a survey of the tense and mood categories which are most relevant for our present purposes. I cite the third person singular active form of the indicative, injunctive, subjunctive and optative and the second person singular active form of the imperative. The bold-faced forms represent the categories which are alternately used in performative sentences.

⁴It should be noted that some of the claims about the semantics of the Archaic Vedic inflectional categories which I make in the following are, at least to some extent, controversial, in particular the claim that there is an aspectual difference between the present indicative and the aorist indicative (cf., e.g., Gonda 1962, Hoffmann 1967, Tichy 1997, Kiparsky 1998, Mumm 2002 and Dahl 2008a).

KAR- ‘do, make’

	Indicative		Injunctive	Imperative	Subjunctive	Optative
	Non-past	Past				
Present stem kr̥no-/kr̥nu	kr̥noti	akr̥not	kr̥not	kr̥nu	kr̥navati	kr̥nuyāt
Aorist stem kar-/kr-	-	akar	kar	kr̥dhi	karat	kriyāt
Perfect stem cakār-/cakar-/cakr-	cakāra	acakrat	cakrat	cakr̥dhi	cakarat	cakriyāt

Table 1. The inflectional categories of the Archaic Vedic verb

As illustrated by this table, Archaic Vedic has five modal categories, namely the indicative, the injunctive, the imperative, the subjunctive and the optative. The indicative is the default mood in neutral assertive clauses. The injunctive represents an underspecified modal category, which is compatible with a broad range of modal and temporal notions, including assertive and directive clauses. The imperative is exclusively used in directive clauses. The subjunctive expresses probability, whereas the optative expresses possibility. Both the latter categories are used in assertive and directive clauses alike.

Moreover, we may note that there is a morphological distinction between past and non-past tense in the indicative mood. Adhering to the convention in the philological literature I refer to the non-past form of the present stem of the type *kr̥noti* as ‘present indicative’, the past form of the present stem of the type *akr̥not* as ‘imperfect’, the past form of the aorist stem of the type *akar* as ‘aorist indicative’, the non-past form of the perfect stem of the type *cakāra* as ‘perfect indicative’, the past form of the perfect stem of the type *acakrat* as ‘pluperfect’ and the various non-indicative modal categories of the various stems as ‘present injunctive’, ‘aorist injunctive’ and so forth. The pluperfect represents a rather marginal category in the verbal system and will be left out of the following discussion. The imperative, on the other hand, is generally restricted to directive clauses and is therefore irrelevant for the following discussion as we are concerned with a subtype of assertive clauses here.

I briefly noted above that the present stem denotes the imperfective aspect, that the aorist stem denotes the perfective aspect and that the perfect stem denotes the anterior aspect. Moreover, I noted that the three aspect stems combine with temporal and modal notions in a compositionally transparent manner. In the following I elaborate on the framework outlined in section 4 to arrive at a coherent definition of the various temporal, aspectual and modal notions relevant in the Archaic Vedic verbal system.

Within the Reichenbachian framework adopted here the two-way distinction between past and non-past time reference may be defined in terms of precedence and overlap between reference time and speech time. More specifically, past tense may be understood as a precedence relation between reference time and speech time such that reference time precedes speech time ($t_R - t_P/t_S$). Non-past tense, on the other hand, may be understood as a general overlap relation between reference time and perspective time ($t_R \otimes t_P/t_S$).

In Table 1 the so-called present indicative is defined as a non-past indicative category of the present stem, i.e. it combines realis modality, non-past time reference and imperfective aspect. Just like the English present progressive, the present indicative often expresses that a situation is in progress at speech time. Above, I suggested that the progressive denotes the aspectual relation ‘reference time properly included in event time’ ($t_R \subset t_E$). It is significant, however, that the Vedic present indicative unlike the English present progressive can also be used to denote a habitually recurring situation and to denote a sequence of situations, each of which is completed at speech time, a reading akin to the so-called ‘sport-reporter’s present’ of the English simple present. These three readings may be illustrated by the following examples:

- (9) a. agnír jāgāra tám u sāmāni *yanti*
 Agni.NOM awake.3SG.PRF.IND he.ACC now hymn.NOM.PL go.3PL.PRS.IND
 ‘Agni is awake, the hymns are now going towards him’ (RV V 44.15)
- b. divé-dive dhúnayo *yanti* ártham
 day.by.day roaring.NOM.PL go.3PL.PRS.IND goal.ACC.SG
 ‘Day by day the roaring (rivers) go to their goal’ (RV II 30.2)
- c. prá rájā vācam janáyann asiṣyadad
 forth king.NOM speech.NOM produce-PRS.PRT.NOM flow.3.PL.AOR
 apó vāsāno abhí gā *iyakṣati*
 waters.ACC wear-PRS.PRT.NOM.SG towards cows.ACC go.3SG.PRS
gṛbhñāti riprám ávir asya tánuvā
 take.3SG.NOM dirt.ACC soma.strainer.NOM he.GEN woven.NOM.SG
 súddhó devānām *úpa yāti* niṣṅtám
 cleansed.NOM.SG gods.GEN to go.3SG.PRS meeting.ACC
 ‘The King (Soma) has flown forth, producing speech. Clothed in water he approaches the cows (i.e. the milk). The woven strainer removes his impurity. Cleansed he goes to a meeting with the gods’ (RV IX 78.1)

From a typological perspective, the fact that the present indicative can be used to express these three different time-relations strongly suggests that it cannot be characterized as a present progressive category, but that it rather has a general imperfective or ‘neutral’ meaning which within the present framework may be understood as a general overlap relation between event time and reference time ($t_R \otimes t_E$) (cf. Grønn 2004).

From this brief semantic description it is clear that the present indicative fully satisfies the proposed constraints on performative sentences. It has a neutral modal specification, the indicative representing the default expression of realis modality in Archaic Vedic. Moreover, it denotes present tense and general imperfective aspect, which within the framework developed in this paper amounts to saying that it expresses the aspecto-temporal relation ‘reference time overlaps with event time, reference time overlaps with speech time’ ($t_R \otimes t_E, t_P/t_S \otimes t_R$). As the coextension relation represents one subtype of the more general overlap relation, the performative reading of the present indicative may be straightforwardly analyzed as a context-dependent realization of its basic aspectual and temporal semantics ($[t_R \otimes t_E, t_P/t_S \otimes t_R] \subseteq [t_R = t_E, t_P/t_S = t_R]$).

The imperfect, on the other hand, is inherently encoded for past tense and imperfective aspect ($t_R - t_P, t_R \otimes t_E$). Among its typologically relevant readings we find a salient remote past reading, a past sequential reading, a past overlapping reading and a past habitual reading, as illustrated by the following examples:

- (10) a. índrāvaruṇā yád ṛṣībhyo manīṣā vācó
 Indra.and.Varuṇa.VOC when sages.DAT wisdom.ACC speech.ACC
 matīm śrutám adattam *ágre*
 determination.ACC sacred.knowledge.ACC bestow.2DU.PRS beginning.LOC
 yāni sthānāni aṣjanta dhírā
 which.ACC.PL regions.ACC spread.out.3PL.IPF wise.NOM.PL
 yajñam tanvānās tāsasā abhy ápaśyam
 sacrifice.ACC performing.NOM.PL religious.austerity.INS see.1SG.IPF
 ‘O Indra and Varuṇa, by religious austerity I saw to which regions the sages spread out when you two bestowed wisdom, speech, determination and sacred knowledge upon them in the beginning’ (RV VIII 59.6)
- b. ásataḥ sád *ajāyata* tád
 not.being.ABL.SG being.NOM.SG be.born.3SG.IPF that.ACC.SG

áśā́ ánv ajāyanta
 quarters.of.heaven.NOM.SG after be.born.3PL.IPF
 ‘From not-being, being was born. The quarters of the heavens were born after it’
 (RV X 72.3)

- c. tuvāṃ síndhūṃr ávāsṛjo (. . .)
 you.NOM.SG river.ACC.PL release.2SG.IPF
 áhann áhim
 kill.2SG.IPF dragon.ACC.SG
 ‘You killed the dragon, releasing the rivers’ (RV X 133.2)
- d. utá u ghā té puruśíyā íd āsan
 and also indeed they.NOM.PL human.NOM.PL indeed be.3PL.IPF
 yésām pūrveśām áśṛṇor íṣṇām
 who.GEN.PL earlier.GEN.PL listen.2SG.IPF Ṛṣi.GEN.PL
 dhā ahám tvā maghavañ jōhavīmi
 therefore I.NOM you.ACC.SG bountiful.VOC.SG invoke.1SG.PRS.IND
 ‘And also the earlier Ṛṣis whom you listened to were human, therefore I invoke thee, o
 bountiful one’ (RV VII 29.4)

Although the imperfect has the same basic modal and aspectual value as the present indicative and thus in principle satisfies the modal and aspectual constraints on performative sentences, its inherent past time reference clearly violates the temporal constraint, something which may be taken to explain why the imperfect does not occur in performative sentences in Archaic Vedic (see also the discussion around (12)).

The aorist indicative denotes realis modality, past tense and perfective aspect. Within the present framework, perfective aspect may be understood as a general inclusion relation between event time and reference time such that event time is included in reference time ($t_E \subseteq t_R$). Among the readings of the past perfective aorist indicative we find a salient recent past reading, a simple past reading. Furthermore, it should be noted that aorist indicative forms of state predicates may either be used to focus the entry into or the exit from the state named by the verb, two readings which may be labelled ‘inchoative-ingressive’ and ‘terminative-egressive’ respectively. These four readings may be illustrated by the following examples:

- (11) a. asmā́bhir ū nú pracákṣiyā abhūd
 we.DAT just now visible.NOM.SG.FEM become.3SG.AOR.IND
 ‘She (the goddess of dawn) has just now become visible to us’ (RV I 113.11)
- b. sá pravolhṛñ parigátyā dabhīter
 he.NOM abductor.ACC.PL encircled.GER Dabhīti.GEN
 víśvam adhāg áyudham
 whole.ACC.SG burn.3SG.AOR.IND weaponry.ACC.SG
 ‘Having encircled Dabhīti’s abductors he burned the whole weaponry’ (RV II 15.4)
- c. ugrá iva praváhantaḥ samāyamuḥ
 strong.NOM like carry.forwards-PRS.PRT.NOM.PL come.hither.3PL.AOR
 sākām yuktá víṣaṇo bíbhrato dhúraḥ
 together yoked.NOM.PL bulls.NOM carry-PRS.PRT.NOM.PL loads.ACC
 yác chvasánto jagrasāná árāviṣuḥ
 when snort-PRS.PRT.NOM.PL eat-PRF.PTC.NOM.PL bellow.3PL.AOR
 śṛṇvá eśām prothátho árvatām iva
 be.heard.3SG.PRS they.GEN panting.NOM horses.GEN like
 ‘Like strong (draught animals) driving (the wagon) forwards the bulls who are yoked to-
 gether have come hither carrying loads. Like panting of horses their panting is heard when
 they, breathing, have started bellowing after having eaten’ (RV X 94.6)

- d. hári nú ta indra vājáyantā
 bay.horses-NOM.DU now you.GEN Indra.VOC contending-NOM.DU
 ghṛtaścútam svārám asvārṣṭām
 ghee.dripping.ACC.SG sound.ACC sound.3DU.AOR
 ví samanā bhúmir aprathiṣṭa
 apart evenly earth.NOM spread.3SG.AOR
 áramsta párvataś cit sariṣyán
 be.calm.3SG.AOR mountain.NOM even move-FUT.PRT.NOM.SG
 'Your two bay horses, contending for the ghee-dripping (price) have quit their sound (lit.: 'sounded a/the sound'), the earth has spread out evenly, even the mountain which was about to move has become calm' (RV II 11.7)

From this semantic definition of the aorist indicative it is far from clear that it satisfies all the relevant constraints on performative sentences. Like the present indicative and imperfect, it represents a situation as fully in accordance with the Common Ground and thus satisfies the modal constraint. Moreover, the definition of the perfective aspect as 'event time included in reference time' ($t_E \subseteq t_R$) clearly satisfies the aspectual constraint on performative sentences, as the coextension relation represents a subtype of the more general inclusion relation ($[t_R = t_E] \subseteq [t_R \subseteq t_E]$). However, the inherent past time reference of the aorist indicative creates serious difficulties, as it is far from clear how a precedence relation could give rise to a coextension relation, as briefly noted in the above discussion of the imperfect.

At this point it seems appropriate to mention that there are relatively few examples of aorist indicative forms in performative sentences in Archaic Vedic.⁵ Even though the use of a past perfective category in this type of sentences at first glance may appear somewhat odd, the existence of parallel cases in other languages, for instance, the so-called tragic aorist in Classical Greek (cf. Bary 2007, 2008, 18–19), suggests that past perfective categories in fact are compatible with a performative reading and a theory about the semantics of performativity should be able to account for these cases as well. It remains unclear, however, to what extent the semantic properties of the aorist indicative may be taken to satisfy the proposed constraints and we therefore might need to reconsider the constraint that reference time must be coextensive with speech time. On the other hand, if this temporal constraint does not hold, we need to explain why the imperfect does not give rise to a performative reading.

I think, however, that the problem may be solved without discarding the assumption that performative sentences presuppose that reference time and speech time coincide. For instance, one could assume that performative sentences contain an implicit adverb picking out a reference time interval conceived of as a minimal interval or point. As the perfective aspect demands that the event time does not last longer than the reference time interval, the event time would be conceived of as a minimal interval as well. Moreover, the aorist indicative in some cases denotes a situation which has begun at some indefinite time in the past and ends exactly at speech time, as illustrated by (12).

- (12) bahvīḥ sámā akaram antár asminn
 Many.ACC years.ACC work.1SG.AOR within this.LOC
 índram vṛṇānáḥ pitáram jahāmi
 Indra.ACC choose.PRS.PRT father.ACC leave.1SG.PRS
 'For many years I have worked here. Choosing Indra, I am leaving my father' (RV X 124.4)

In this example, the aorist indicative form *akaram* 'I worked, have worked' is modified by the durative adverbial phrase *bahvīḥ sámāḥ* 'for many years' yielding the reading that there is a coextension relation between event time and reference time and that reference time ends exactly at speech time.

⁵Apart from the form *avādiṣam* (*VAD*- 'speak') cited in (1c) above, the following aorist indicative forms may in my opinion be plausibly ascribed a performative reading in Archaic Vedic: *astoṣi* (*STAV*- 'praise, eulogize' RV I 122.1, RV VIII 39.1, possibly also RV V 41.10), *asṣkṣi* (*vacasyām*) (*SRAJ*- (*vacasyām*) 'pour forth (eloquence)' and *akāriṣam* (*KAR*²- 'praise, speak highly of' AVŚ VII 7.1).

In cases like this, an implicit punctual adverb might among other things give rise to the interpretation that speech time constitutes the endpoint of a reference time interval which only comprises a minimal interval, so that speech time and reference time are identified despite the inherent time reference of the inflectional category. The aspecto-temporal relation expressed by this constellation might be schematically represented in the following manner:

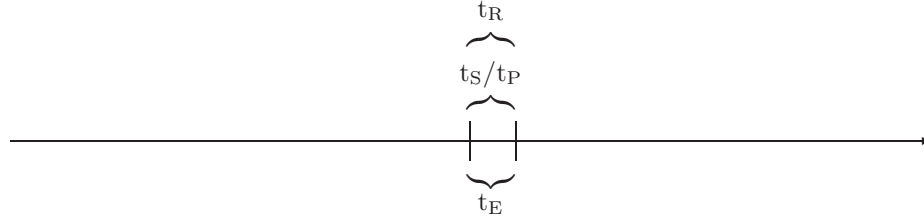


Figure 3: The time-relation expressed by the performative aorist indicative

If this explanation is correct, we still need to account for the fact that the imperfect does not occur in performative sentences, especially because its aspectual reference is perfectly compatible with a punctual interpretation, which would represent a subtype of the general overlap relation. I believe, however, that this fact is intimately related with the well-known remoteness distinction associated with the imperfect and the aorist indicative in Archaic Vedic (cf. also Delbrück 1876, 1888, Hoffmann 1967, Tichy 1997). I noted above that the imperfect has a salient remote past reading and that the aorist indicative has a salient recent past reading both of which I take to arise from the basic aspectual differences between the two past tense categories. It is likely that this remoteness system can be analyzed as a kind of blocking relation, where the semantically more specific aorist indicative blocks the semantically less specific imperfect (cf. Kiparsky 1998, Dahl 2008b). As the imperfect is generally excluded from recent past contexts, it is hardly surprising that it is not used to express the pragmatically rather marked relation illustrated in Figure 3, which among other things presupposes recent or immediate past time reference.

The perfect indicative denotes realis modality, non-past tense and anterior aspect (cf. Kümmel 2000, Mumm 2002). Within our Reichenbachian framework, the anterior aspect may be defined as a precedence relation between event time and reference time such that event time precedes reference time ($t_E - t_R$). Accordingly, perfect indicative forms can be used to express that a state resulting from a past event holds at perspective time, a reading which is commonly labelled ‘resultative’, to express that a situation has occurred at least once in the past or that a situation has extended through the past to the present and that it still holds at speech time/perspective time. The former reading is often referred to as *existential*, whereas the latter is referred to as *universal*. These readings may be illustrated by the following examples:

- (13) a. *úpa nūnám yuyuje vṛṣaṇā hārī*
 together now yoke.3SG.PRF.IND horse.ACC.DU bay.ACC.DU
á ca jagāma vṛtrahá
 hither and come.3SG.PRF.IND Vṛtrakiller.NOM.SG
 ‘Now the Vṛtrakiller has yoked his two bay horses and has come hither’ (RV VIII 4.11)
- b. *tám u stuṣa índaram (...)*
 he.ACC now praise.1SG.PRS.IND Indra.ACC
yásmín purá vāvṛdháh
 who.LOC.SG formerly thrive.3PL.PRF.IND
 ‘That Indra I indeed praise, that Indra I invoke, by whom people have formerly thrived’
 (RV II 20.4)
- c. *śásvad dhí vaḥ sudānava ádityā*
 continuously for you.GEN.PL bounteous.VOC.PL ádityas.VOC.PL

ūtíbhīr vayám purá nūnám *bubhujmáhe*
 help.INS.PL we.NOM formerly now prosper.1PL.PRF.IND
 ‘For both formerly and now we have continuously prospered with your help, o bounteous
 Ādityas’ (RV VIII 67.16)

Although the perfect indicative satisfies the modal and temporal constraints on performative sentences, its aspectual specification is in direct conflict with the aspectual constraint, as a precedence relation cannot give rise to a coextension relation. This may clearly be taken as the reason why the perfect indicative is excluded from performative sentences in Archaic Vedic.

Apart from the indicative, we find three modal categories which are used in assertive clauses in Archaic Vedic, namely the so-called injunctive, the subjunctive and the optative, each of which will now be discussed in turn. It has been shown elsewhere that the non-indicative categories of the aspect stems have the same basic aspectual values as their indicative counterparts and this will be tacitly assumed in the following, unless otherwise noted (cf. Dahl 2008a for a more thorough discussion of these matters).

From Table 1 it appears that there is a certain asymmetry in the distribution of the three relevant modal categories. Above all, non-indicative forms of the perfect stem are generally excluded from performative sentences. Moreover, somewhat surprisingly the present injunctive does not occur in this type of sentences either. Again I wish to stress that it is unlikely that the lack of a given category in the relevant type of sentence is due to an accidental gap in the corpus, as performative sentences represent the a particularly well-attested clause type in Archaic Vedic. On the other hand, injunctive forms of the aorist stem and subjunctive and optative forms of the present and aorist stems do occur in sentences of this type and in the following I will discuss to what extent the semantic properties of these categories satisfy the constraints on performative sentences.

The so-called injunctive may be regarded as a radically underspecified modal category which does not have any inherent temporal or modal value, but picks up its temporal and modal reference from the immediate discourse context (cf. Kiparsky 1995). In many respects, the injunctive simply represents a tense- and moodless aspect form. The aspectual difference between the aorist injunctive and the present injunctive is above all observable in prohibitive sentences, where the basically perfective aorist injunctive is typically used to exhort the referent not to let a given situation happen in the future, whereas the basically imperfective present injunctive is used to exhort the referent to discontinue a situation which holds at speech time (cf. Hoffmann 1967, 43ff.). Consider the following examples:

- (14) a. úruśaṃsa mā́ na áyuh *prá moṣīḥ*
 widely.praised.VOC.SG not we.GEN life.ACC.SG take.away.2SG.AOR.INJ
 ‘O you who are praised by many, do not take our lives away’ (RV I 24.11)
- b. ví uchā duhitar divo mā́
 forth shine.2SG.PRS.IMP daughter.VOC.SG heavens not
 cirám *tanuthā* ápaḥ
 longer protract.2SG.PRS.INJ work.ACC.SG
 ‘Shine forth, o daughter of heaven, do not longer protract your work’ (RV V 79.9)

The fact that the prohibitive present injunctive is almost exclusively used with a progressive-processual meaning, as illustrated by example (18b) is significant, as prohibitive sentences represent the only context type where the injunctive cannot be replaced by other morphosyntactic categories. Thus the progressive-processual reading of the prohibitive present injunctive may be assumed to be particularly entrenched compared with its other contextually determined readings, in the sense that this particular category is more strongly associated with a present progressive-processual reading than the other categories of the present stem. As the progressive relation ‘event time properly included in reference time’ generally does not give rise to a coextension relation, this could be the reason why the present injunctive tends to be excluded from performative sentences at this stage.

According to the above semantic description, the aorist injunctive only expresses the aspectual

relation ‘event time included in reference time’ ($t_E \subset t_R$), a relation which is perfectly compatible with the proposed aspectual constraint on performative sentences ($t_E = t_R$). As the aorist injunctive is inherently underspecified with regard to tense, it is perfectly compatible with the temporal constraint on performative sentences ($t_R = t_S/t_P$).

The subjunctive, on the other hand, denotes the probability relation, i.e. it expresses that the proposition is not fully in accordance with, but still fairly close to the Common Ground. This reading is common to the present and aorist subjunctive and may be illustrated by the examples in (15) (cf. also Tichy 2006).

- (15) a. *prajā́ te devā́n haviṣā́*
 offspring.NOM.SG you.GEN.SG god.ACC.PL oblation.INS.SG
yajā́ti suvargá u tvám
 sacrifice.3SG.PRS.SBJ heaven.LOC.SG indeed you.NOM.SG
ápi mādayāse
 but enjoy.2SG.PRS.SUBJ
 ‘Your offspring will be sacrificing to the gods, but you will be enjoying heavenly bliss’
 (RV X 95.18)
- b. *yán na índro jujuṣé yác ca váṣṭi*
 what.ACC we.GEN Indra.NOM enjoy.3SG.PRF what.ACC and want.3SG.PRS
tán no mahán karati
 that.ACC we.DAT great.NOM.SG make.3SG.AOR.SBJ
śuṣmí á cit
 strong.NOM to also
 ‘What of ours Indra has enjoyed and what he wants, that he will requite us, the great, strong one’ (RV IV 22.1)

Although both the present subjunctive and the aorist subjunctive in principle satisfy the aspectual constraint on performative sentences, their inherent modal specification is at apparent odds with the modal constraint. Interestingly, the basic probability meaning of the subjunctive not infrequently gives rise to a reading where the speaker expresses a present intention of his, as illustrated by (16).

- (16) *jyeṣṭhá āha camasá dvá karā íti*
 oldest.NOM speak.3SG.PRF ladle.ACC.DU two make.1SG.AOR.SBJ thus
kānīyān trín kṛṇavāma íti āha
 younger.NOM three.ACC make.1PL.AOR.SBJ thus speak.3SG.PRF
kaniṣṭhá āha catúras karā íti
 youngest.NOM speak.3SG.PRF four.ACC make.1SG.AOR.SBJ thus
 ‘The oldest spoke thus ‘I will make two ladles’. The younger spoke thus ‘Let us make three’.
 The youngest spoke thus ‘I will make four’. (RV IV 33.5)

The fact that the subjunctive may be used to express a present intention of the speaker provides a straightforward way of accounting for its use in performative sentences, in that the speaker may use a subjunctive form of a performative verbal predicate to express his intention to accomplish a situation of the type picked out by the predicate and at the same time perform an instance of the situation. The first element of meaning is provided by the subjunctive, the second element is specified by the verbal predicate. Thus the performative use of the subjunctive may be plausibly regarded as a kind of ‘hedged performative’, similar to the use of certain English modal verbs.

We may now turn to the optative which typically denotes the the possibility relation, i.e. it expresses that the proposition is not in accordance with and relatively distant from the Common Ground. This reading is found with optative forms of the present and aorist stems alike, as illustrated by the examples in (17).

- (17) a. *sómāpūṣaṇāv ávataṃ dhíyam me*
 Soma.and.Puṣan.VOC favour.2DU.PRS.IMP prayer.ACC I.GEN

yuvābhyāṃ vísvāḥ pṛtanā jayema
 you.two.INS all.ACC battles.ACC win.1PL.PRS.OPT
 ‘O Soma and Puṣan, favour my prayer. With you two we may win all battles’ (RV II 40.5)

- b. yuṣmākaṃ devīr ávasā sanema
 You.GEN.PL goddesses.VOC help.INS win.1PL.AOR.OPT
 sahasrīṇaṃ ca śatīnaṃ ca vājam
 thousandfold.ACC and hundredfold.ACC and booty.ACC
 ‘O goddesses, with your help we may win thousandfold and hundredfold booty’
 (RV I 124.13)

Now, both the present and aorist optative satisfy the aspectual constraint on performative sentences, but at the same time they apparently violate the modal constraint, expressing that the proposition is relatively distant from the Common Ground. It is significant, however, that the probability relation denoted by the optative in some cases gives rise to a reading where the speaker expresses a present wish, as illustrated by example (18).

- (18) bhadráṃ kárṇebhiḥ śṛṇuyāma devā
 good.ACC.SG ear.INS.PL hear.1PL.PRS.OPT god.VOC.PL
 bhadráṃ paśyema akṣábhīr yajatrāḥ
 good.ACC.SG see.1PL.PRS.OPT eye.INS.PL sacrifice.worthy.VOC.PL
 ‘May we hear good things with our ears, o gods, may we see good things with our eyes, o you who are worthy of sacrifice’ (RV I 89.8)

It is tempting to link the performative use of the optative to the use as an expression of a present wish of the speaker. In that case, one might assume that the speaker may use an optative form of a performative verbal predicate to express that he wishes to accomplish a situation of the type picked out by the predicate and at the same time perform an instance of the situation. The first element of meaning is provided by the optative, the second element is specified by the verbal predicate. Thus the performative use of the optative may be plausibly regarded as a kind of ‘hedged performative’, similar to the use of the subjunctive and of certain English modal verbs.

Finally, we need to consider why the non-indicative forms of the perfect stem are excluded from performative sentences in Archaic Vedic. I believe that this is at least partly due to the fact that they are inherently encoded for anterior aspect, a relation which is basically incompatible with the aspectual relation presupposed by performative sentences, as briefly noted above. It should also be noted that non-indicative modal forms of the perfect stem are extremely rare and that they tend to have a rather specialized function. For instance, the perfect optative is typically used with a counterfactual meaning, which arises from the combination of possibility and anterior aspect, as illustrated by the passage in example (19).

- (19) víśvo hí anyó arír ājagāma
 Every.NOM.SG for other.NOM.SG nobleman.NOM come.hither.3SG.PRF
 máma íd áha śvásuro ná á jagāma
 I.GEN indeed yet father.in.law.NOM not hither come.3SG.PRF
 jaksīyād dhānā utá sómam papīyāt
 eat.3SG.PRF.OPT grains.ACC and soma.ACC drink.3SG.PRF.OPT
 súāśitaḥ púnar ástaṃ jagāyāt
 well.saturated.NOM.SG again home.ACC go.3SG.PRF.OPT
 ‘Although every other nobleman has come hither, my father-in-law has not come yet. He could have eaten the grains and could have drunk the soma, he could have gone home well saturated’
 (RV X 28.1)

5 Summary and Conclusion

In this paper I have examined how the notion of performativity interacts with different tense, aspect and mood categories. One may use seven distinct morphosyntactic categories with fundamentally different temporal, aspectual and modal properties in performative sentences in Archaic Vedic, something which poses a serious difficulty for any attempt to provide a unified account of performative sentences. I claimed that one may distinguish three slightly different constraints on performative sentences, a modal constraint demanding that the proposition is represented as being in full accordance with the Common Ground, an aspectual constraint demanding that there is a coextension relation between event time and reference time and a temporal constraint demanding that the reference time is coextensive with speech time. These constraints are assumed to be universal and are taken to ensure that a sentence containing a first person form of a verbal predicate sufficiently highly located at the performativity lattice receives a performative meaning. Moreover, I argued that the Archaic Vedic present indicative, aorist indicative and aorist injunctive are quite compatible with these constraints, although I noted that the performative reading of the aorist indicative can only be accounted as a pragmatically marked interpretation of its basic aspecto-temporal properties, something which is also reflected in the fact that we only find very few aorist indicative forms with a performative reading in this language. However, the basic modal specifications of present and aorist subjunctive and optative violates the modal constraint on performative sentences, but they give rise to speaker-oriented readings which in turn are compatible with that constraint.

Moreover, the imperfect, the present injunctive, the perfect indicative and the various modal categories of the perfect stem were argued to be incompatible with the constraints on performative sentences. For one thing, the inherent past time reference of the imperfect violates the temporal constraint, but the crucial factor appears to be the fact that the imperfect is generally blocked from recent past contexts by the aorist indicative, so that a performative reading is excluded. I also claimed that the present injunctive is strongly associated with a present progressive-processual reading at this stage because of its salient prohibitive use, a reading which violates the aspectual constraint. As regards the perfect indicative and the various non-indicative categories of the perfect stem, I argued that their basic anterior value violates the aspectual constraint on performative sentences and that they therefore are excluded from sentences of this type.⁶ These observations may be taken to suggest that the satisfaction of the aspectual constraint on performative sentences in general is more important than the satisfaction of temporal and modal constraints. However, more detailed research is needed to substantiate the generality of the claims made in this paper.

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⁶A referee points out to me that anterior categories are not generally incompatible with a performative reading. For instance, a sentence like *I have (hereby) declared war on Schwarzenegger* seems perfectly ok. Nevertheless it appears to me that the use of the present perfect in performative sentences in English is restricted to cases where the verb lexically entails a change of state and that this change of state is represented as punctual and immediately preceding speech time. For instance, it is not clear to me that a sentence like *I have (hereby) asked you* is equally acceptable. This could be taken to suggest that the performative use of the present perfect is restricted to a particular area of the performativity lattice. Future research will show whether an explanation along these lines is viable.

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