Ritual speech, Performativity, and Modality



Alexander Maxim Frangulov

Balliol College

University of Oxford

A thesis submitted for the degree of
Master of Philosophy

Trinity 2023

Ritual speech, Performativity, and Modality

1 Introduction

The power of the word to affect change in the world beyond one's immediate conditions has long been ruminated by scholars of philosophy, theology, and anthropology. Hitherto, no study has been done in a formal semantic framework to model what it is that people are trying to do when they attempt to speak into existence an event or state of affairs which they may not be regularly thought to be in control of. This thesis attempts to fill this theoretical gap. It explores the semantic and pragmatic mechanisms which a speaker harnesses when they perform a ritual, spell, curse, charm, incantation, blessing, hymn, or mantra. Not only does the present endeavor deepen our scientific understanding of the human language behavior of ritual speech, but this thesis will show that the exclusion of this type of speech from previous research on performative theory, in particular, has skewed the data and therefore limited the formal theories of and broad generalizations about the class of speech acts. This thesis will also investigate these questions in part through exploration the ancient ritual corpora of the Vedic hymns of the *Rigveda* and the collection of Hittite ritual tablets.

The central thread to this thesis is a number of observations around the generalization that a performative utterance may not have a quantified subject determiner phrase (DP)[1](such as *most students*) without the presence of the word *hereby* (Eckardt 2012). The data put forth and the reasoning offered will show the generalization to be false when ritual and magic performative speech is considered. Further, since the theory of performativity which this thesis primarily analyses, that of Eckardt (2012), is formulated to account for exactly that generalization, the data presented in this work will suggest certain adjustments to that formal analysis of performative utterances. Specifically, Eckardt (2012) posits that quantified subjects of sentences without *hereby* prevent the self-referentiality which she claims is necessary for performative interpretation. This self-reference which allows performative interpretation is a pragmatic process by which the speaker-hearer attempts to equate the event of the performative verb with the event of the ongoing transfer of information. If this equivalence can be made then the utterance may be interpreted as performative. The key observation of the present work is that sentences without *hereby*, with quantified subject DPs, do seem to be interpretable as performative utterances when they contain modals such

1 This work follows Eckardt (2012) in referring to such subjects as 'quantified subject DPs' as opposed to 'Quantifier Phrase (QP) subjects'

as *may* and *shall*. This thesis, in response, puts forward an account of quantified subject DPs in performatives by positing that the 'default speech event' (the assertion event) of modal utterances of Hacquard (2010) can attract the inference of self-referentiality away from the root event, thus circumventing the agent uniqueness problem which Eckardt (2012) identifies lies at the source of the quantification problem which prevents performative interpretation.

The sections of this thesis will be laid out as follows: §2 will provide background of ritual and magic speech, performative utterances, and the data used in this thesis. Then, §3 will summarize Eckardt's (2012) events-based account of performativity and show where it falls short in describing the data put forth. Finally, §4 will offer a synthesis of Eckardt's (2012) events-based account of performativity and Hacquard's (2010) events-based account of modals to provide an account of the data found in ritual and magical speech.

2 Background

A performative utterance is an expression of what one is doing by means of uttering that sentence (Gruber 1975) and it is (at least in part) the means by which that action is performed (Austin 1962). A classic performative utterance can be seen in the utterance of (1).

(1) *I hereby promise to find the ring.*

The speaker of an utterance of (1) is not simply describing a state of affairs. They are performing the action expressed in the sentence and stating, in a self-referential way, that that is what they are doing by uttering that sentence. Sentences with *hereby* are invariably interpreted as performative utterances. However, a sentence need not contain *hereby* to be used in a performative utterance.

(2) *I promise to find the ring.*

An utterance of (2) can be a performance of a promising event. It can, through its utterance create a true promising event or state of promise. Eckardt (2012), Gruber (1975), propose that an utterance without *hereby* becomes performative through the assumption that the utterance is self-referential. It is held as a common generalization of performative utterances, for example by Eckardt (2012), that without *hereby* to force a performative interpretation, it is not possible to have a performative reading of an utterance with a quantified subject DP such as *most, some, many students....* Eckardt (2012) argues that this is because the quantified subject DP blocks the inference of self-referentiality.

The key observation of the present work is that, despite this generalization, sentences without *hereby*, with quantified subject DPs, do seem to be interpretable as performative utterances when they contain modals such as *may* and *shall*. Take for instance the two sentences below.

(3) *Two students thank you!*

(4) *Two gods shall protect you!*[2]

An utterance of (3) behaves as Eckardt (2012) would predict, as it does not seem possible to interpret the utterance as itself being a performance of a thanking; rather it seems to be a description of one. An utterance of (4), on the other hand, seems to be able to do more than simply describe an eventuality. If said by the right speaker in the right context, for example in the context of a ritual, it may be understood by the hearers of such an utterance that the speaking of (4) performs an action by directly and self-referentially expressing that utterance. In other words, upon being spoken with the proper authority and circumstance the utterance, by nature of the fact that it was spoken in such a way that the performative event can be identified with the speaking event, the utterance can be understood to have been made true by being performed.

There should be a feeling that (4) can (purport to) be used to perform an action, or make a state now true, whereas (3) may only be used to describe an event or state. It is important to note, as will be discussed further in §2.4, that whether one thinks an utterance may realistically perform such an action should not cloud the judgement that it it is being used to attempt to do such a thing. Searle (1989) delimits this case with his example of "I hereby fry an egg" which evidently fails to perform the action it tries to do. He notes, however, that it is not the semantics the prevents the verbs from being used performatively, but the facts of the world. This thesis shows that deeper consideration of the cases which conflict with our understanding of the world elucidates various aspects of performativity. One of these aspects which is brought under the microscope by this analysis is the mechanism which Eckardt (2012) proposes for the establishment or self-referentiality of performative utterances and the prohibition of quantified subject DPs

Eckardt (2012) posits that quantified subjects of sentences without *hereby* prevent the self-referentiality which she claims is necessary for performative interpretation. Compare (5) or (6) to (3):

2 Many performative sentences seem to be more easily heard as performative utterances when they are said with exclamative force (represented in English with the exclamation mark: -*!*-). This is an interesting aspect of performative utterances and especially performative utterances in ritual speech which cannot be explored in the present work. See Castroviejo (2020) for more on this type of sentence.

(5) *I thank you!*

(6) *The students hereby thank you!*

By uttering (5) or (6) a speaker may perform the action of a thanking in the very utterance of the words. Eckardt (2012) claims that the main characteristic of an utterance like (5) is that the utterance asserts that there is an event of a thanking while at the same time being a suitable candidate to be that thanking event. This self-reference which allows performative interpretation is a pragmatic process by which the speaker-hearer attempts equate the event of the performative verb with the event of the ongoing transfer of information. Eckardt's argument centers around showing how quantification in the subject DP blocks that association between the speaking event and the performative event. However, the data presented in this thesis, like (4), suggest that the generalization is false when ritual and magic performative speech are considered.

In the rest of this section, the reader will become familiar with what it means for an utterance to be performative, and why ritual speech is considered performative. §2.1 will outline a background of performativity that focuses on the main intuition: that the utterance makes something true in the world by being spoken. It will introduce the reader to performative utterances and the particular intuitions and tests I will employ throughout this thesis. §2.2 will discuss some of the history of writing on ritual and magical speech and performativity as well as why we should consider (certain)[3] ritual and magical speech to be performative. §2.3 will explore the criteria of a felicitous use of a performative utterance and, in a discussion of the only prior formal semantic work on spells and performativity, it will examine the felicity conditions Diesing & McConnell-Ginet (2012) propose for the magic spells of J.K. Rowling's *Harry Potter* series, and investigate to what extent they can be applied to the historical and contemporary ritual and magical speech behaviors examined in this thesis. I will also note many of the limitations of the current study, though others will come in later, more relevant, sections.

2.1 The performative intuition

Various objective criteria for performativity have been proposed, which are discussed here in §2.1 and in §3, but all such criteria ultimately stem from the intuition language speakers about have about which utterances are performative. The present section will endeavour

3 Much of ritual speech involves non-performative utterances alongside the performative. These utterances often serve to praise an entity, describe a situation or procedure, or, in what Frankfurter (2017) refers to as a *historiola*, to narrate a mythological story whose circumstances mirror those of the ritual, with the intention that as the situation was resolved in the narrative, so to shall it be solved in the present.

to give the reader a feel for the performative intuition, as well as introduce the attempts at creating said objective criteria for performatives. This section will cite linguistic and anthropological thought on ritual and magical speech and will show through semantic argumentation that ritual speech is performative.

Austin (1962) was the first to notice a class of utterances which seemed different from other assertions in that they seemed to do moreso than describe.[4] For example, *I hereby knight you* is not just a description of the speaker's action. Instead the function of those words is to perform said action rather than or moreso than describing it. Sentences which describe the world, that is, declarative sentences, are analyzed as having *truth conditions*. Davidson (1967) first showed that a Tarskian truth-based model of meaning could be applied to natural language[5]. Formal semantics as a field has largely adhered to that framework and considered the meaning of sentences to be a function which takes language material and maps it onto certain conditions of the world, such that an assertion is true if and only if the corresponding world conditions are met.[6] Since the meaning of an utterance must map the utterance to either true or false, every interpretable sentence should be either true or false, and never neither. This is referred to as having a *truth value*. Performatives are unique in that they look like assertions but cannot felicitously be said to be true or false. Eckardt (2012) describes this as the *yes/no test* of performativity. For example, the following exchanges would be infelicitous:

(7) *I promise to find the ring.*
   a. # *Yes, that's true.*
   b. # *No that is incorrect.*

The infelicity of both response questions whether the meaning of a performative sentence is connected truth value. The question of the truth value of performative utterances is debated but this thesis takes the stance which Eckardt (2012) does, which is that they do have a truth

4 Austin is also well known for investigating the idea that there might be a grammatical criterion for performatives. §3 of this thesis will address this criterion.

5 Natural languages are the kind which humans use socially whereas formal languages encompass all systems which have a set of vocabulary items and rules for combining those items. Andrei Tarski created the framework for a mathematical definition of truth in formal languages in his work *Pojęcie prawdy w językach nauk dedukcyjnych* (1933).

6 While the mainstay of traditional philosophy of language, cognitive scientists such as Knowlton et al. (2021) argue that psychological concepts intervene in the relationship between language and the world. In their view, meaning is the relationship between (function from... to...) language and concepts. This is evidenced by cases in which the apparent truth conditions of a sentence differs depending on the concepts which a particular speaker holds.

value and that the infelicity arises for pragmatic reasons (Jary 2007)[7] and that, as claimed by Szabolcsi (1982), the utterance of a performative leads to a change in the facts of the world.[8] Other types of assertion which lack a truth value are utterances with reference failure ("The king of France is bald")[9] and utterances with presupposition failure ("Jane Goodall stopped being an astronaut today")[10]. Austin showed that, although performatives don't seem truth-conditional in the way that assertion is believed to always be, they are nonetheless perfectly felicitous and regularly used by language speakers.

More than just being a puzzle for truth-conditional semantics, Austin used performatives as a jumping off point of speech act theory and pragmatics. His was the first real effort to build on top of the truth-conditional understanding of meaning, to describe the functions of language beyond just describing the world. Performatives are the prototypical example of language that does things. They are referred to as such because they are utterances which, through the act of speaking them, perform an action, i.e. make an event or state (eventualities as an umbrella term[11]) true or cause a change-of-facts such that the eventuality is now true.[12] The following will expand on these points by walking through some examples of performative utterances.

Take for instance a part of the concerning tradition of American school-children: the first sentence of the *Pledge of Allegiance*.

7 Jary (2007) argues that to agree or disagree with the descriptive content of a performative is infelicitous because the event is self-verifying and self-evident. This argument seems weaker in the face of ritual performatives which may not be immediately verifiable but which are still equally infelicitous to question. For example if one goes to a healer who performatively utters: *You are healed* it would be infelicitous for the individual to respond "No I'm not, that's why I'm here. I'm sick".

8 Eckardt (2012) backs off supporting this fully as she points out issues with equating the meaning with the change-of-fact. Namely, if such an equivalence is made she claims that she would not be able to investigate misfires or event the success of performative interpretation(Eckardt 2012: p. 29). In the full scheme of Eckardt's account the status of the truth value of the performative sentence is not paramount. Rather it is the self-referentiality and definition which play the main roles in creating performative interpretation for Eckardt

9 This is only neither true or false on some views. It is the view of Russell (1905) that definite descriptions are uniqueness conditions. The sentence is therefore paraphrased as "There exists one and only one salient king of France and he is bald". Given that there is no such individual, the reference fails and the sentence is therefore false in his view. On the Fregean view Frege (1892), Strawson (1950) the sentence represents a presupposition failure and therefore fails to express a proposition. In these circumstances it is argued that the sentence does not have a truth value but that a person may still reason about what the sentence would mean if the definite description did have a proper reference.

10 An utterance of this sentence causes a presupposition failure because the sentence assumes as true the proposition 'that Jane Goodall was previously an astronaut'. Since this premise is false, there are no conditions in which the sentence is either true or false (Strawson 1950).

11 see Bach (1986)

12 See §2.4 on truth and the conditions of the world as they relate to performativity. In this work, it is assumed that, within a particular speech community, if an utterance is believed to have made a change in the conditions of the world, then it is, in that speech community, a performative utterance.

(8) *I pledge allegiance to the flag of the United States of America.*

There two different ways any *performative sentence* can be used. Any given performative sentence can either perform an eventuality or simply describe that eventuality. The contexts given below can prime both of these interpretations; (9) suggests a performative interpretation and (10) suggests a descriptive interpretation.

(9) With your hand on your heart you look to the flag and say:
I pledge allegiance to the flag of the United States of America.

(10) You ask your child what they do every morning before class begins and they say:
I pledge allegiance to the flag of the United States of America.

In this way, each performative sentence can yield either of two types of utterance, depending on the context. An utterance is a particular real or hypothetical instance of a saying of the corresponding sentence. An utterance always lives in a context while the sentence lives abstractly. A performative sentence is a sentence which can be used in a performative utterance. There is, therefore, a four-way distinction between sentence and utterance and within each of those, a distinction between descriptive and performative. The matrix verb in a performative sentence is the performative verb of the sentence (Searle 1989). While a descriptive sentence can only be used in a descriptive utterance, a performative sentence can be used either descriptively or performatively depending on the context of the utterance. In this case, the sentence above is of the right form to be used performatively (The requirements for a performative sentence are addressed in §3), therefore it is a performative sentence. Since it is a performative sentence, it can be used either in a performative utterance or in a descriptive utterance. Below are some contexts which prime this.

(11) With your hand on your heart you look to the flag and say:
I hereby pledge allegiance to the flag of the United States of America.

(12) You ask your child what they do every morning before class begins and they say:
I hereby pledge allegiance to the flag of the United States of America.

In the context described in (9) an utterance of the performative sentence (9) would almost certainly be a true performance of a pledging (perhaps leaving aside the question of whether a child can really pledge without any idea of what it means to do so.) Contrast this with the descriptive use of the same sentence. In the context (10) an utterance of (10) is

likely not a spontaneous and conversationally uncooperative[13] pledging to a flag. Instead it is a description of a repeated action. It is a report of the performative utterance which the child does every morning. The description of habitual performative action is one of the many ways in which a performative sentence can be used in a descriptive utterance. The distinction between the performative and descriptive use of a sentence and the way this distinction intuitively feels is key to this thesis. Another key fact is that there is a particular word that locks out descriptive use of a performative sentence: *hereby*. Take the same sentences and contexts as before but with *hereby* added:

One should be able to feel a strong difference between (10) and (12). Even in the descriptive context of (12) an utterance of (12) cannot be interpreted as a description of a performative, but must be interpreted as a performative utterance. This leads to the quite strange pragmatic interpretation in (12), in which the child, instead of answering the question, has decided now is the time to perform a pledging. Later, in §3 I will examine the semantic effect that *hereby* and similar phrases make on the interpretation of sentences and why they force performative interpretation.

To make the performative intuition clearer we shall now turn to another aspect of performative utterances: that is, that they cannot felicitously be said to be either true or false. Consider the sentence:

(13) *I hereby apologize.*

Barring accusations of insincere utterance, there is no sense in which it can be said that an utterance of (13) is false. This is called the *yes/no test* of performativity (Eckardt 2012). It is not a sufficient test for performativity because, as discussed at the beginning of §2.1, many other types of utterance may lack a truth value. However, since all performatives will display this property, so it appears to be a *necessary* condition for performative interpretation. If one can respond to an utterance with either "Yes, that's correct.", or "No, that's not correct." then the utterance is not performative. When this thesis speaks of performativity throughout this work it thus means the ease with which one can imagine a context where the utterance performs an action and where it would be infelicitous to agree or disagree with the descriptive content of the utterance.[14] For example, take the following sentences which, by my judgement, decrease in performativity as we move down the list.

13 Also described by Grice, the conversation principle of cooperativity is the mutual assumption of conversation participants that each other participant be acting in good faith to achieve shared communication goals (Grice 1975).

14 It is possible to disagree with the descriptive content of a performative sentence, used descriptively, but not a performative utterance of a performative sentence. For example it is perfectly felicitous to disagree with an utterance of (10)

(14) a. *We hereby promise to take the ring to Mordor*
b. *We promise to take the ring to Mordor*
c. *Frodo and Sam hereby promise to take the ring to Mordor*
d. *These two hobbits hereby promise to take the ring to Mordor*
e. *Two of the hobbits hereby promise to take the ring to Mordor*
f. *Two hobbits hereby promise to take the ring to Mordor*
g. *Frodo and Sam promise to take the ring to Mordor*
h. *These two hobbits promise to take the ring to Mordor*
i. *Two of the hobbits promise to take the ring to Mordor*
j. *Two hobbits promise to take the ring to Mordor*

One should notice that around (14f) it starts getting hard to picture the scenario in which an utterance of the given sentence is itself a performance of a promising. An utterance of the last sentence (14j) should be very difficult to hear as anything other than a description; i.e. a report about the promises that two hobbits took. The reason for this gradient, which I will discuss in what follows, is the effect of quantifiers on performativity.

The last main descriptive generalization about performatives I will discuss is that they cannot have quantified subject determiner phrases (DPs), that is unless the utterance contains an explicit *hereby*.[15] Examples of such subjects are *Most/several/two/some/all - students/teachers*. We see the effect of these quantifiers on performativity in the examples in (14). One should notice, too, that performativity sharply improves particularly when a determiner such as, *the* or *these*, is added to the quantifier. Further, *hereby*, as in (12), forces a performative interpretation, even if it is hard to picture. I will in §3 describe how Eckardt (2012) models both the way that quantified subject DPs block performativity and the way that *hereby* circumvents this prohibition.

In sum, performative utterances are utterances which necessarily[16] perform an action.

15 There are two other significant generalizations about performatives, the first is that they cannot exist under the scope of negation. This is covered in depth in Eckardt (2012) so I will not be touching it here. The other common generalization is that performatives cannot be embedded. I will not be using this generalization in this thesis as it is not true. Performatives can occur both under the scope of control predicates (I wanted to hereby apologize for my actions) and raising predicates (it seems I am hereby indebted to you for saving my life), as well as sententially, under a propositional attitude verb ("I believe I am hereby indebted to you for saving my life"). Notably, in the last two examples *hereby* may refer not to the words, but to the situation. If this is the case, then the presence of *hereby* does not make the embedded clause self-referential and therefore does not make it performative. Rather, the utterance describes an action that just happened. In this sense *hereby* would be more like "by virtue of the fact you just saved me" rather than "by these words"

16 There are felicity conditions for the successful performance of a performative utterance. I will discuss this when discussing the felicity conditions of spells in §2.2

Performative utterances cannot felicitously responded to with agreement or disagreement and this can be used as a test of a performative utterance. A performative sentence can become either a performative or a descriptive utterance, unless it contains *hereby*, in which case it can only create a performative utterance. Finally, quantified subject DPs block the performative interpretation of an utterance unless an explicit *hereby* reinforces the performativity of the sentence. This last generalization will be the focus of this thesis. I will show in the next section that that generalization appears to not hold in examples taken from ritual speech. I will then justify the interpretation that ritual and magical speech involve performative utterance and set the stage for my analysis.

2.2 Spells, blessings, rituals, and performativity

As introduced above, we do not expect to be able to interpret utterances with quantified subject DPs as performative utterances unless *hereby*[17] is present Eckardt (2012). This thesis will argue that there are counter examples for this generalization in ritual speech. This argument is based on the view that ritual speech is performative - a view which was first made in the formal semantic literature by Diesing & McConnell-Ginet (2012) and which this thesis will defend. Urbanová & Cuzzolin (2016) also provide a speech act account of magical speech which they reach in their analysis of Greek and Latin curse tablets (Lt. *tabella defixionis* Gk. κατάδεσμος). It is possible that this type of speech has been thought of as an edge case of performativity but this section will hopefully convince the reader that these are not edge cases in range or frequency of use either in performative language, and, in particular, in the question of what types of subjects performative utterances can have, these utterances should be considered vital data. This is because performative utterances attempt to make something true through the act of speaking; something which, for typical performatives, is presumed to be limited to those actions for which the speaker can also be the agent or for which the speaker is given the authority or consent to perform on behalf on another/others. For example in *I promise to find the ring* the speaker is the agent, and in *The students thank you*, the group of students is the agent of the thanking, and the speaker must have the consent of that group or authority to perform the thanking on their behalf.

The range of possible agents and therefore possible (and attested) subjects, is thus restricted by only considering realistic performatives. Ritual and magical utterances are not limited in which agents they can purport to affect. This is especially relevant as the agents of typical performatives, the speaker and individuals or groups of individuals known to the

17 Generalizations in this thesis about *hereby* likely also extend to equivalent adverbial phrases, such as "by these words...", "through this ritual...", and "by saying this...". The literature generally discusses *hereby* so my examples will follow suit, but the reader may try substituting the adverbial phrases if an example does not seem natural to them.

speaker, are not typical targets of quantification. First person subjects cannot be quantified as they always involve a pronoun[18] and a pronoun, already being a Determiner Phrase is not a valid target for quantification (cf. **most the students eat lunch at 11:30*).

It is therefore perhaps accidental to the data hitherto examined that previous scholarship should not find quantified subject DPs in performative utterances. It may be natural to assume that a speaker should only have the power to perform utterances in which the agent of the performative event is themselves, a group they are a part of, or an individual or group they are speaking on behalf of. But this has not always been the case and this is the novelty of this thesis. In ritual and magical speech, speakers can purport to perform actions with agents who are not themselves, with or without that agent's permission or knowledge, and potentially without even knowing if such an agent exists or what their identity is. For example, the purchaser of a curse tablet may use it to curse the unknown thief of their wine. By examining ritual speech and magical utterances, we therefore have a test environment where it would be possible to see quantified subject DPs in performative utterance without *hereby*.

Contrary to our expectations, data from spells, blessings, and ritual speech suggest that there are more ways than just using *hereby* to circumvent the performative prohibition effect of a quantified subject DP. We expect, as seen in the utterances in (14), that quantified subjects would reduce the ease with which we can interpret the sentences as performative utterances. Unexpectedly upstaging *hereby*, *may*, *let*, and *shall* can also reinforce the performativity of a sentence. Examine the contrast in (15):

(15) a. *Many gods favour you.*
b. *May many gods favour you.*

An utterance of (15a) seems like a report, one which we can felicitously deny or affirm as a descriptive utterance. On the other hand, (15b) cannot be a description: it is unclear when it would be true or false and it seems to perform an action, namely a blessing or a favoring. We can imagine a context of a ritual in which the person of interest is blessed by that utterance. In that case, the speaking of those words is believed to make a genuine change in the world such that some amount of gods now or will in the future favour the addressee. Given this, (15b) seems to be a performative containing a quantified subject DP (*many gods*) but which does not contain *hereby*. §3 and §4, will discuss how to account for the fact that *may* can circumvent the block on performativity from quantified subject DPs. If

18 If the subject is pronounced, that is. English sentences such as "Hope you get well" may have an omitted first person subject pronoun and many languages (called null-subject languages, associated with the pro-drop parameter in the framework of Chomsky (1993)) don't require subject pronouns under most circumstances.

this distinction is hard to feel, it is perhaps because the performativity of this type of speech is not trivial. The next part of this section will give evidence for the performativity of ritual speech and practice the performative intuition along the way.

After the publication of Austin (1962), many authors have applied his concept of performativity to human ritual practices. Rituals are referred to as involving performative speech in Della Casa (2021), Frankfurter (2019), Tambiah (1968), Wheelock (1982), among others. That ritual speech should be seen as performative is unsurprising. Performative utterances purport to change the world by being spoken. In the same way, many cultures believed ritual speech to have the power to change the world. No work on language or the religions of the world fails to mention the ancient belief in the magical power of the word (Tambiah 1968). (Tambiah 1968: p. 182) elaborates on the ancient belief in the power of the word:

> "The Vedic hymns speculated on *vac* (the word) and asserted that the gods ruled the world through magical formulae; the Parsi religion states that in the battle between good and evil it was through the spoken word that chaos was transformed into cosmos; ancient Egypt believed in a God of the Word; the Semites and the Sumerians have held that the world and its objects were created by the word of God; and the Greek doctrine of *logos* postulated that the soul or essence of things resided in their names."

In fact Greek and Latin curse tablets (Lt. *tabella defixionis* Gk. κατάδεσμος) generally involved only the inscription of the target's name on the tablet, though there was likely a spoken ritual associated with the creation of the tablets, less frequently tablets included a curse verb or gods appealed to (Urbanová & Cuzzolin 2016). The venerated position of language and its magical association is seen in many ways. 'Abracadabra' represents the Latin belief that the delimiting of characters was thought to have magical power and English 'glamour' (first meaning enchanting) had its origin in 'grammar'(Macleod & Mees 2006). People have thus commonly believed that the world could be changed through words, paralleling the way performatives change the world.

Urbanová & Cuzzolin (2016) positioned curses as being both what Austin (1962) calls 'behabitive' in that the utterance expresses the speakers attitude towards the cursed individual, and also what he calls 'exercitive' because the curse purports to form a directive (Urbanová & Cuzzolin 2016).

Diverse linguistic aspects tend to be employed in ritual and magical speech. Ritual speech may be found with verbs in a variety of moods including indicative, optative[19],

19 The most common way modality is employed in English ritual speech is in the form of the optative. The

imperative, and subjunctive. Hittite, for instance, primarily uses the imperative in its rituals (Della Casa 2021), and the *tabella defixionis* largely used forms which were likely subjunctive (Urbanová & Cuzzolin 2016). Ritual situations can involve transformations in which the ritual speaker purports to be talking as a divine actor or identifies parts of themselves with a deity, for example a Vedic priest may utter “I look at you with the eye of Mitra”(Wheelock 1982: p. 58). Della Casa (2021) writes “All in all, the very idea of a ritualist identifying with a goddess of magic brings us back to the topic of the authority of the speaker, the “I” pronouncing the words, on whom relies the very force of the directive utterances.”. Frankfurter (2019) calls this a "mythological redefining of things in the ritual space". This mythological redefining is familiar to Catholics, who believe that during the sacrament of the Eucharist the bread becomes the body of Christ. The mythological re-contextualization of the space is reflected in the practice of the *historiola*; in which a mythological story is recounted which parallels the current situation usually ending with a *similia similibus*: as it happened then so it happens now (Della Casa 2021). In these ways, we see that ritual contexts involve augmenting the power of the ritual speaker. A performative utterance in this context is believed by that community to be able to do things such as heal or bless.

Searle (1989) notes supernatural performatives but places them under declarations, does not think they have a performative element. He writes that

> "When God says, "Let there be light!", that I take it is a declaration. It is not a promise; it doesn’t mean, "When I get around to it, I’ll make light for you." And it is not an order; it doesn’t mean, "Sam over there, turn on the lights." It makes it the case by fiat that light exists. Fairy stories, by the way, are full of declarations performed by witches, wizards, magicians, etc. We ordinary humans do not have the ability to perform supernatural declarations, but we do have a quasi-magical power nonetheless of bringing about changes in the world through our utterances; and we are given this power by a kind of human agreement." (Searle 1989: p. 549)

While "Let there be light!" is certainly not a promise, Searle’s summation that such utterances are not performatives is not as clear. The distinction he draws between declarations and performatives lies in what sort of event they create. Performatives, for Searle, create linguistic events such as promises orderings or statements whereas declarations, as the broader category which contains performatives, produces linguistic or non-linguistic events. Prototypical examples of declarations for him being marriage, war, or adjournment (Searle 1989). The work of Eckardt (2012), Diesing & McConnell-Ginet (2012), and the reasoning

semantic nuances of this form compared to other modalities is not the topic of the thesis but an analysis of the ancient greek optative and its status as a psedo-directive by Bianconi & Magni (2022) may interest the reader.

presented below support the view that the event created in a performative utterance need not be a linguistic event. Eckardt (2012) specifies that a performative need only be self-referential and speaker-defined as performative, while Diesing & McConnell-Ginet (2012) view the spells of the JK Rowling's *Harry Potter* series as being performative. The distinction between linguistic and non-linguistic entities which can be declared is not clear upon close inspection. War is no less a social object than a promise. It is arguably easier to perform a promise with no linguistic event (such as a promise within one's own heart), than it is to perform a war without a linguistic declaration/performative event. The discussion in §2.4 will further question whether it cannot be the case that speech communities may define what we may think of as non-linguistic events such as a healing event, as an event which can be a linguistic event in their community. Such that a healing is something that can be performed by speaking words. The distinction Searle draws between language and the world is not one which nor one which this thesis believes is reflected in the mechanisms of performative speech. It is the benefit of performative speech that it may purport to create non-linguistic entities which is the reason for its popularity in ritual and magical speech. This thesis therefore equates declarations and performatives and will refer to the category of speech act as performatives and further shows that this is a fruitful endeavor.

Far from being limited to the domain of the arcane, ritual and magical speech is used everyday, as in the common sayings: "Rain rain go away.", "(May you) get well soon!", "take care", and "Let it snow". Forming spells remains a productive language capacity and thus we can tap our own intuitions on the matter. Taking the *yes/no* test described in §2.1 we can see that it would be infelicitous to challenge the description a ritual utterance appears to be saying. One cannot, for example, respond to "May you get well soon" with "that's not true" or "yes, that's correct". Yet, "May you get well soon" is a natural phrase to say. This suggests that it is a performative utterance. Additionally, ritual speech seems, at first glace, to have the same quantified subject DP prohibition described of performatives. An exorcist would not be able to say "most demons leave this body" in order to perform an exorcism. However, if they said it with *hereby* (or indeed may or *shall*) it would indeed be purporting to perform an exorcism (albeit an incomplete one): "Most demons shall now leave this body!"

This thesis grounds itself in real and natural examples of the use of this type of speech. The data primarily used comes from two corpora: the *Rigveda*, one of the four Vedic sacred texts, it is entirely composed of hymns intended to be performed by a ritual priest; and the Hittite ritual texts, which contain instructions on the preparation of the ritual followed by the words the priest is to say to perform the ritual. The *Rigveda* data is parsed from the morphologically annotated VedaWeb (2023) corpus and the Jamison & Brereton (2014) English translation is used for any passages reproduced here. The Hittite data is parsed from the morphologically annotated festenrituale corpus (HFR-Team 2023) and from online CTH

repository of prayers and rituals on Hethport (G.G.W Mueller 2002-2023, Ch.W Steitler 2021-2023). It involves string searches of the the combined exemplars of each sub-corpus. Search strings used for the nominative forms of the Hittite quantifiers were obtained from the list of forms in the *Chicago Hittite Dictionary L-N* (Guterbock & Hoffner 1982), in the *Hittite Etymological Dictionary* (Puhvel 1984), and in the *Etymological Dictionary of the Hittite Inherited Lexicon* (Kloekhorst 2007). Translation of any Hittite passages is my own work.

Throughout this thesis all invented examples will be paired with lines from historical rituals which parallel their form. For clarity this thesis will remain as consistent as possible with the examples in the main line of argumentation but the historic parallels should assure the reader that the forms are genuine performatives a ritual speaker could have said.

For example, look back to (15b). It may seem pragmatically unusual to not bless someone with the protection or similar effect of either some specific gods or all of the gods. While quantified forms are not as ubiquitous as those alternatives, forms like this are still relatively common in the historic data. Compare the Hittite examples: CTH 757 §12-75 – (S. Görke (ed.) 2014)

(16) *LIM* DINGIR.MEŠ *azzikandu*
"Let the thousand gods eat!"

As well as CTH 372 §6-49 – E. Rieken et al. (ed.) (2017)

(17) *nu miewaš=tiš karippandu*
"Let your four eat"

In these examples, performative utterances with quantified subject DPs are clearly seen, through because the nominative possessive clitic *=tiš* places 'four' as the subject of the imperative sentence such that it is not acting as a quantifier.

For a more quantitative analysis this thesis has performed an analysis of the *Rigveda* which relies on the online annotated corpus Kiss et al. (2019). The corpus is then searched by the lemma of the quantifiers, *viśva-* "All, every"; *bahu-* "much, many"; *dva-* "two"; and the *dual* case; *tri-* "three"; *catur-* "four"; all specified for nominative case. Nominative case does not guarantee, in Vedic, that the quantifier phrase is the subject of a sentence, particularly for neuters whose form is morphologically NOMINATIVE/ACCUSATIVE. For this reason,

results are filtered by hand[20] for performative utterances with a quantified DP subject by using the translations: Jamison & Brereton (2014), Griffith (1889), Geldner et al. (1952), Elizarenkova (1999) and the morphological glosses provided by the University of Zurich for *VedaWeb*. As it is sometimes difficult to distinguish between praise and performative, the method used here was to filter out the sentences which were definitely only descriptive. As such, the data may represent an overestimation of quantifiers. Given that my analysis is relative where it is quantitative this should not be an issue, as the frequency of forms given here is only meaningful in comparison to other forms and other corpora. For *viśva*, the dual, Indra, Varuna, and Agni, which each had more than one hundred appearances in the nominative case, the present work surveyed only the first 100 entries of each. This method may skew the ratio as the different *mandalas* may differ in narrative vs ritual content. For instance Indra was appeared many times a quite descriptive narrative section of the first mandala.

(18) *Performative utterances per quantifier DP subject in the Rigveda*

	viśva	*bahu*	*dva*	[dual]	*tri*	*catur*
Performative	13/100	5	0	9/100	11	4
Total	411	13	27	1113	50	15

We see that in the *Rigveda* there are indeed performative utterances with quantified DP subjects. This supports my general claim that ritual speech, if it is performative, challenges the above stated generalization. We may still wonder if there is evidence that quantified subject DPs are less used in performatives compared to other subjects. As an initial point of reference the same search was performed for a number of the individuals/entities who are regularly called upon in the hymns, namely Indra, Agni, Varuna, and Soma, as subjects of performative utterances. This thesis predicts that, if the generalization of performatives holds true of ritual speech in the Rigveda, then the proper names of the two gods could have a higher proportion of performative utterances.

(19) *Performative utterance per proper name in the Rigveda*

	Agni	Indra	Varuna
Performative	22/100	26/100	35/100
Total	388	511	170

As expected the proper names are much more frequent than quantifiers and seem to be performative a greater proportion of the time. Interestingly, although many performatives

20 My speadsheet of said results (link)

may have multiple agents, for example often calling on Indra and Agni or Varuna and Mitra together, they rarely employ quantification to do so, even when the same passage describes or praises them using such quantification.

Taking the anthropological and linguistic data together, it seems that ritual speech should be considered in the same category as other performative speech. Looking ahead, §3 will carry this idea further and apply Eckardt's formal semantic framework of performatives to ritual speech. It will show where ritual speech behaves as predicted within her account, and where it does not. Finally, §4, attempts to show that the Hacquard (2010) account of modality can explain how the modal *may* can bypass the quantified subject DP restriction on performative utterances. Before moving on to the main line of semantic argumentation about quantified subject DPs I will first address two other important aspects of performativity: felicity conditions and truth conditions. The following section argues that ritual and magical speech provides unique insight into these two topics. It will the address these concerns and finish the laying of the groundwork necessary to begin the formal analysis.

2.3 Felicity conditions of spells: what (else) it takes to be performative

It should not be thought that the only thing that makes a performative is that it fails the *yes/no* test and seems to perform some action (§2.1). Other speech acts may behave similarly, such as greetings like "hello" which are neither true nor false and perform the act of greeting. There is therefore a desire to define what is performative and what is not. Though performative sentences are often defined, for example by the Stanford Encyclopedia of Philosophy, as "in the first person, present tense, indicative mood, active voice, that describes its speaker as performing a speech act" (Green 2021), Austin, who coined the term however, says that this form only "seems to deserve our favour" and that "there was certainly no one criterion of this kind [based on grammar or vocabulary]" (Austin 1962: p. 67). Eckardt provides the hypothesis which will support the argument of this thesis, that there are just two requirements for performatives: that they are self-referential and that they "comprise the speaker's act of defining the category of the utterance"(Eckardt 2012). Both of these requirements will be discussed at length in §3. Diesing & McConnell-Ginet (2012) provides examples of performatives that do not fit the mould described by The Stanford Encyclopedia of Philosophy, They show that the variety of grammatical forms of spells of J.K. Rowling's *Harry Potter* world exceed the limits suggested above. The data introduced in this thesis suggest that first person, present.. etc. should not be understood as the archetype of performatives. With incantations included, which are a major aspect of human communication in our history, performatives can come in any number of combinations of grammatical form. Performatives should therefore be understood under Eckardt's principles

of self-referentiality and *definition* rather than any grammatical criterion.

Even if a sentence meets the requirements described above in order to be a performative utterance, it may still fail to do so for other reasons. Austin (1962) called these the *felicity conditions* of performatives. He says that an attempted performative which fails to meet the felicity requirements 'fizzles out' or 'misfires'. A misfire might occur for example if one performs a knighting while lacking the authority required to do so, namely being a monarch. In this case despite an utterance such as *I hereby knight you* being both self-referential and speaker defined as performative, if the speaker lacks the prerequisite conditions then such a action as described would fail to take place.

Austin, lays out four felicity conditions and two insincerity conditions for a performative sentence to be used as a performative utterance.

> (A. i) There must exist an accepted conventional procedure having a certain conventional effect, that procedure to include the uttering of certain words, by persons in certain circumstances, and further
>
> (A. 2) the particular persons and circumstances in a given case must be appropriate for the invocation of the particular procedure invoked.
>
> (B. 1) The procedure must be executed by all participants both correctly and (B. 2) completely.
>
> (r. 1) Where, as often, the procedure is designed for use by persons having certain thoughts or feelings, or for the inauguration of certain consequential conduct on the part of any participant, then a person participating in and so invoking the procedure must in fact have those thoughts or feelings, and the participants must intend so to conduct themselves, and further
>
> (r. 2) must actually so conduct themselves subsequently
>
> (Austin 1962)

Violations of conditions A and B lead to what he calls "misfires" because the action fails to take place. Violations of r he labels "abuses" because the act takes place but it was not carried out with the intentions the act should carry with it. (Austin 1962)

Take for instance the sentence (20) below.

(20) *The students welcome you to the college.*

An utterance of (20) may fail to be performative if it is said to you by a fisherman at sea (condition A. 2), or if the proper person says it, but fails to say it loud enough for anyone

to hear (B. 1). The performative may be performed but 'insincerely' if the students hold protests in their hearts (r. 1), or carry out those protests and boycott the welcome (r. 2).

It is reasonable to think there may be additional requirements which a speaker must accomplish in order to successfully perform a ritual or magic performative. Diesing & McConnell-Ginet (2012) expands on Austin's felicity requirements for a performative utterance and provide five felicity requirements for the spells of the *Harry Potter* world.

(21) a. Only wizards and witches can perform spells.
b. Incantations generally have conventional forms that must be produced correctly and completely.
c. Wand movement must be executed properly and wands must be in good working order.
d. Intentions must be appropriate.
e. Concentration is required.
(Diesing & McConnell-Ginet 2012)

Of these requirements (b) and (c) seem to fall under Austin's (A. 1) and (B) conditions, (a) falls under condition (A. 2), and (d) is covered by condition (r. 1). The fifth felicity requirement, (e), is perhaps the most unique requirement to spells as described by Diesing & McConnell-Ginet (2012). While in a typical performative the concentration of the speaker makes little difference so long as the conditions described by Austin hold, in the spells of the *Harry Potter* world Diesing & McConnell-Ginet (2012) argue that concentration is an addition factor for proper performance of the spell. A lapse in concentration, they argue, could lead to an unintended effect occurring during the casting of the spell, such as teleporting to the wrong location. A lapse in concentration in a performance of a marriage would not, for example, marry an unintended person. While many of these requirements of successful spells in the *Harry Potter* world can apply to current and historical traditions of magic discussed in the present work, which combination of these requirements applies depends on the tradition, with many cultures expressing many of these requirements as a *should* requirement rather than a *must*. It is these conditions which describe why a particular magic or ritual performative utterance may fail to perform the spoken action. The examples used throughout this thesis should be considered as if whatever the relevant felicity conditions of that culture's practice hold at the time of speech. These conditions account for the practical ways that performatives may fail but there is another more abstract discussion to be had on whether performatives which claim to perform an eventuality not immediately or tangibly verifiable should be considered failed performatives.

2.4 On the truth actuality of performative utterances

Despite their performative behavior in *yes/no* tests and the fact that many have claimed spells to be performative there is a key theoretical caveat. Performatives in their original formulation are not about sentences which seem to do or try to do, but utterances which necessarily perform an action if their felicity conditions are met (Austin 1962). Szabolcsi (1982) claims that performatives cause a change of fact in the world. In truth-conditional semantics language is directly evaluated against the conditions of the world. Performatives are those sentences which by their utterance purport to make something true in the world. For example, a sincere utterance of "I promise to find the ring" creates an event of a promising which is self evident and immediately verifiable. An event which, if performatives have truth-conditional content, would be the truth maker of the descriptive aspect of the utterance.

The issue with spells is that whatever the language-to-world evaluator is, it claims to evaluate the conditions of the world objectively to determine the truth of the sentence. Where this is a problem for the study of ritual speech is that, though purporting to create eventualities through utterances, the effect of spells and blessings are not verifiable in the same way that normal performatives do so automatically. Jary (2007) writes that performatives are self-verificational, but this is not clear with spells. A believer of a spell may believe themselves to be cured, for example, by the words "I hereby heal you", but the facts of the world may not agree with that. From the objective perspective, it is still a correct performance of a blessing, but a misfire of a healing. From the subjective, internalist, perspective, if the entire speech community considers such an utterance to make the statement true, then no-one would consider the performative utterance a misfire. Put another way, a semanticist living in the speech community which believes that healing objectively takes place upon completion of a ritual would evaluate that a healing event did occur by the speaking of the utterance. This begs the question of performativity and truth, which is that the human behavior of making eventualities true by speaking utterances is defined in terms of the objective conditions of the world. Conditions which are ultimately still interpreted by humans as being true or false.

Take a classic performative: I do (take this person as my lawfully wedded spouse). The event of the marriage is performed by saying those words. This is because the speech community defines marriage as an event which involves necessarily the speaking of those words. This is not set in stone however, over the years the speech community has widened and narrowed what constitutes the performance of a marriage. If a speech community defines the performance of a healing to involve a specific utterance, whether or not the subject is truly healed of their medical ailment, they have still been the subject of a healing as defined by the speech community. Do we then consider this case a ‘misfire’ as no biophysical healing occurred, in which case we attribute essentially a language ‘mistake’ to a widespread human behavior. Or do we consider that a speaker-defined healing or a community concept

of healing is what the performative is evaluated against; and whether or not a biophysical healing occurred be irrelevant to the performance of that performative.

It does not seem that a particular utterance's status as a performative should depend on the knowledge of the linguist doing the theoretical analysis. Many cultures have certainly believed that the utterance of a ritual did really make the proposition true. A trained truth-conditional semanticist in that culture would evaluate it as such, believing that they were using externalist criteria. It is therefore more logical to evaluate the behavior of a performative utterance by just that, its behavior; not the metaphysically fraught objective conditions of the world. As a behavior it should be evaluated based on the concepts and intentions of the speakers. If a speech community believes that saying a phrase prevents the volcano from erupting then they must believe that utterance to be performative one.

This thesis does not rely on an interalist account of meaning, but will use the considerations raised in the present discussion to elaborate Eckardt's "speaker-defining" requirement for felicitous performatives. For the purpose of this thesis there are a few options. One is to assume we are evaluating the utterances in a world where words objectively do have the power to change all aspects of the world, as ritual speakers purport to do. The second option, is to consider in the evaluation of the performative whether a proposition is now believed to be true by the hearer, and thus place a more pragmatic criterion on performativity. Another consideration and possible avenue towards the appropriate description of ritual and magical performatives is that regardless of whether the healing or a healing spell is a misfire or not there is always a true event of a blessing (or cursing). The fact that any performance of a healing is also a performance of a blessing will be compatible with the events-based account presented in §3 and §4 which use default speech/ assertion event in their formulation. In this case the ever-present assertion event is the performative utterance with blessing describing those benevolent ritual or magical performative assertions and curse describing the malevolent ones. With quantified subject DPs the performativity of the healing fails either because of the quantifier, or the words did not bio-physically heal, but the utterance remains performative because the assertion is performed. A blessing in this view is therefore the performance of an assertion for benevolent purposes. Thus, while whether "I hereby heal you" is a healing or not depends on the belief of the evaluator, any evaluator would consider it to always be a true performance of a blessing.

Perhaps then, in ritual speech we are working with heal* and protect* which are different from their non-star counterparts in that they were defined in their speech community to be events not specifically tied to scientific therapeutic measures or outcomes but which could also be performed just by speaking certain words. Austin's felicity conditions leave room for this interpretation as they only specify that a convention exist and if the convention for heal* be speaking then healing* can be performative in exactly the way Austin described.

This is not so far-fetched. Consider the psychological and psycho-somatic portions of a child's injury which is instantly healed by a parent's kiss[21] or the Spanish: "sana, sana colita de rana, si no sana(s) hoy sanar(a/ás) mañana" - "heal heal frog's tail, if it doesn't heal today it will heal tomorrow". The placebo is an important fact to consider. It is well studied that performing an action under the assumption that it will help, even by someone aware of the effect, can have a real impact on health outcomes. In this way there is a true sense in which the words "You are hereby healed" did in fact truly heal countless people. For people in the speech community with heal*, in the event of a performative misfire, i.e. when a healing would fail, they could place the blame of the misfire not on the assumed relationship between words and the conditions of the world in that speech community, but on aspects of the performance or skill of the performer. Since the placebo did work for many, when it did not work it was often assumed that the intervention was just not performed correctly. Look to blood-letting, whose failures were explained as a failure to have done enough blood-letting.

For these reasons it does not seem clear that the status of an utterance as a performative should rest on the best current scientific knowledge. This would have non-trivial implications. For example, Roman Catholics, who believe in transubstantiation, hold that when a priest, repeating Jesus's words at the last supper, holds up the host (bread) and says "This is my body..", that that bread does actually become Christ's body. A linguist analyzing the truth-conditions of such a performative with the objective conditions of the world would, if scientific knowledge is the best approximation of the conditions of the world, have to say that the Catholic sacrament of the Eucharist is a 'misfire' at a minimum, and if they take the stance that performatives have truth values, they would have to say that the utterance is false. A contentious position to be sure, but one which I think, whether technically correct or not, misses the point and fails to capture the phenomenon of performative utterances. The thread that unifies the human speech behavior is not that they truly make an objective change in the world by their utterance, but that they are believed to do so by their utterance. By this definition, at the very least, whether a particular historical utterance was performative or not, should not change as knowledge does.

A counter-argument to the arguments offered above is that what I have described is not what performative analysis aims to capture. In the views of Searle (1989) and Jary (2007), performatives are only those events which are self-verificational and linguistic. i.e. they purport to create a promising event and at the same time necessarily do so as a promising is defined to be performed by saying certain words. A healing, on the other hand, even if defined to include a speech act as a healing act, presumably includes other sub-events as well which are not speech events. This view of performativity aims to narrow the scope of

21 There is also evidence that kissing provides true, non-placebo healing due to the wound-healing properties of saliva (Torres et al. 2017).

performatives to only events which are exclusively verbal events, i.e. events which only ever consist of one person saying or otherwise communicating to another person.

A counter to this speaking-event only line is that these events are not necessarily speech events. A promising can occur with just the locking of pinky fingers and a thanking may occur with a simple nod.

I will take the stance in this thesis that these actions are defined in their speech communities to be actions which can be performed by speaking certain words. Defined this way, a healing, for example, much like a blessing or a promise, may be considered to be an action which is performed by speaking certain words. The problem, therefore, of the non-performativity of "I hereby fry an egg" is not really that the words do not have the power to perform that action, but that our speech community does not consider them to have that power. Certain speech communities believe that "This is my blood" turn wine to blood and it seems that that action should be included in what we refer to as performatives. It is technically therefore possible to picture a speech community where all members believe that words can fry eggs. In that world "I hereby fry an egg" would be performative. As Searle (1989) states it is not the semantics, i.e. the relation between those words and the world, which prevent the utterance from being performative, it is the facts of the world.

If the world were a fictional magical world where a magic user could perform that action through speaking those words it will not be because the semantics of "I hereby fry an egg" has changed but because the world is such that the event of frying may be made true through the utterance of a particular phrase. This is really important because the contrasting position would be that it is the semantics (the mapping from world to world) of particular verbs which allow them to be used performatively. It is not that "fry" somehow have a different meaning, a different word to world mapping, than promise. Both, in the compositional semantic view, contribute an event predicate which takes certain arguments. "I hereby fry an egg" and "I hereby thank you" do not represent different relationships between language and the world. Both represent an utterance which claims that there is an event and further claims that the speaking event is that event. It is not contained within the semantics of "I hereby fry an egg" that frying an egg is *not* something performed by speaking, if this were the case it would not be possible to imagine the fictional world where with those words and the wave of a wand someone could fry an egg. Any particular sentence cannot be said to be performative without the speech community which defines it to be so. Imagine a community in which thanking can *only* be done through the giving of a small gift. In that community speaking the utterance "I hereby thank you" does not achieve the performance of the thanking because in that community a thanking is not a linguistic event. The sentence has the same meaning as usual, the truth conditions are the same, it is still true if and only if there is a thanking event which is co-referential with the speaking event

and whose agent is the speaker and whose patient is the addressee. However, the ability to be interpreted as performative has changed because of the community's belief of what a thanking event is.

Therefore I conclude that, indifferent to the actual change of state in the real world, but still bound by the same felicity requirements applied to typical performatives, ritual speech can use performative utterances to purport to perform actions in the world. I have shown that not only is it well motivated to believe this type of speech can be performative but it has already used the exploration of that question to examine some of the tenets and conclusions of performative theory. How quantified subject DP are possible in ritual performative speech still remains to be seen. The next section will take a step towards answering that question by introducing the semantic framework which will enable this investigation: Eckardt's 2012 events-based account of performativity.

In summary, this thesis provides the following elaboration of Eckardt's definition of performative utterance which will be used for the remainder of this work.

(22) a. The utterance is Self-Referential - The performative event (e) is identified with the ongoing transfer of information (ε)
   b. The performative event (e) is Speaker Defined to be performative and;
      i. The performative event is believed by the speech community to be of the type such that it may be performed, wholly or in part, through self-referential speech.

This definition reconciles the views cited above which treat ritual and magic speech as performative with the view of Searle (1989) that performatives are only those declarations which create new linguistic facts such as promises, orders, and statements. With this definition ritual and magic speech may be performative rather than simply declarative because the speech community may define acts which Searle may consider to be non-linguistic, as linguistic acts (as in the instance of heal*). In the summary of Gruber (1975) "A performative sentence is a direct expression of what one is in fact doing by means of the utterance." This thesis adds that what a sentence can purport to be doing is not limited to only linguistic acts.

3 Eckardt's events-based account of performativity

We do not expect to see quantified subject DPs (*most, some, several, two...* NP) in sentences which we can think of as performative utterances, unless there is an explicit *hereby*. However,

exactly this is seen in the example below.

(23) *May two gods favor you!*

As discussed in §2, an utterance of sentence (23) appears to be performative; it seems to be doing an action, namely a blessing. It does not seem to be describing a state of affairs and, furthermore, it cannot be felicitously said to be true or false. Yet it contains a quantifier ('two') and no *hereby*. To attempt to explain the unexpected performativity of (23), This thesis employs Eckardt's (2012) events-based account of performativity. This section will show, however, that her model cannot account for the performativity of sentences which have quantified subject DPs like (23). In fact, Eckardt's account was designed to rule-out sentences with quantified subject DPs. Eckardt's theory is designed to account for that prohibition, and so, makes the wrong predictions about ritual speech. Therefore, the counterexamples provided from ritual speech should seem to suggest Eckardt's account needs adjustment. However, its important to note that what differentiates (23) from other examples we've seen is that it has a modal. This thesis will suggest that the theory need not be adjusted, but that the unexpected data can be accounted for within Eckardt's view, if we spell out the semantic contribution of modals under the events-based approach to modality of Hacquard (2010).

Eckardt's account centers around two mechanisms: the mechanism of *self-referentiality* and the mechanism of *defining*. These two mechanisms each generate a corresponding key characteristic of performative utterances. Eckardt posits these two characteristics form the necessary and sufficient conditions for a performative utterance. Her account amounts to a model theoretic solution to the question Austin (1962) first asked: is there a grammatical criteria for performativity?[22] This section will now briefly summarize Eckardt's key characteristics of performatives and the rest of this section will walk through the two mechanisms she posits which will generate the characteristics in the appropriate contexts. Lastly, the end of this section will apply the Eckardt account to some spells and blessings to validate the theory, at first, and then to show where it makes the wrong predictions. Thereafter, §4 will offer a solution by incorporating the Hacquard (2010) semantics of modals.

22 Eckardt is not the first to attempt to provide a criteria for performativity. Naturally, Austin (1962) was the first to hypothesise a criteria but other major attempts to define this criteria include Searle (1989), Bach & Harnish (1992), Truckenbrodt (2009), Portner (2004, 2007), Condoravdi & Lauer (2010, 2019), Searle & Vanderveken (1985); Vanderveken (1990). Austin came to the conclusion that whatever the criteria might be, it can't be as simple as first person, present, indicative, active. Despite his conclusion, that form is often cited as prototypical of performatives (for example, in the *Stanford Encyclopedia of Philosophy* entry by Green (2021)). Data from spells and rituals however casts doubts on that form being the prototype, as spells may occur in a variety of persons, tenses, aspects, and voices. See Diesing & McConnell-Ginet (2012) for the variety of forms performatives utterances take in the spells of the world of J.K. Rowling's *Harry Potter*.

3.1 The key characteristics: *self-referentiality* and *defining*

Eckardt selects the characteristics of *self-referentiality* and *defining* as criteria for performative utterances. Self-referentiality, first noted by Austin (1962), refers to the fact that performative utterances always, in some way, make reference to, or identify themselves with, the ongoing speaking, or more precisely, information transfer, event. The performative adverbs *hereby, by these words*, or *in saying this*, all point to this; that the speaking event is identical to the performed event. In other words, the speaking and the promising *are* the same event, and in order for the utterance of both to be interpreted as a single performative event, it must be possible for the two to be one and the same.

Searle (1989), Jary (2007), and Szabolcsi (1982) position *self-referentiality* to be the sufficient condition of performativity but Eckardt shows that another ingredient is necessary: *defining*. According to Eckardt, the speaker must also *define* the sentence they are speaking as an instance of that performative action, in order to make a simply self-referential statement into a performative one.[23] In order to be speaker defined as a performative, the performative utterance must, in addition to being self-referential, "comprise the speaker's act of defining the category of the utterance."(Eckardt 2012: p. 47). This requirement serves to rule out utterances which are self-referential but are still not performative.[24] Take for example:

(24) *I hereby produce sounds*

This sentence may certainly be self-referential and true, but it is not performative since the speaker does not define the information transfer ε to be a producing (of sound). It is a trivial truth of the action of the speaking event rather than another event which is made true by speaking the words which the speaker defines to be of the type of event which is performed by uttering it. The hearer, therefore cannot understand the above utterance to be performative.

3.2 Third-party performatives

While the ongoing transfer of information (ε_s) is generally equivalent to the speaking event (e_s), the distinction becomes necessary in cases of third party performatives like (25). In this scenario the king, in the court, has told the messenger that he hereby promises farmer John

23 Eckardt notes this condition corresponds to Searle's 'declaration' requirement.

24 For other types of self-referential utterances which are not performative see Johansson (2003) "Antiperformatives".

three cows. The messenger then goes to the farmer and, either on behalf of, or as official representative of the king promises:

(25) *The king hereby promises you three cows* (spoken by the messenger to the farmer)

Here, the promising is done by the king *via* the messenger *via* an overarching transfer of information from king to farmer, rather than a single speaking event.

This thesis notes however that this seems to be more than simply a transfer of information. Instead, it is vital for the performative that there also be a transfer or power, or consent to perform on behalf of. This is evident if we compare the same scenario as (25) but instead of the messenger saying (25), a bystander in the court hears the kings promise and rushes to the farmer reporting the same sentence before the messenger arrives:

(26) *#The king hereby promises you three cows* (spoken by eavesdropper to farmer)

In this case the same sentence with the same information being transferred fails to be performative. No promise can be said to have taken place during the speaking of that utterance. It seems that it is not enough for the information be transferred by anyone, or in any circumstance. Rather, the bearer of the information must be permitted to perform the action on behalf of the agent (the king, in this example). In examples presented later in this thesis it is seen that in a thanking event the agent or agents may consent or delegate another to perform the thanking event. This transfer of power is, ultimately, a felicity condition on any performative which uses a transfer of information. This means that, while it is important in building the context of a felicitous performative, it does not need to be incorporated into Eckardt's formulation of the mechanism of self-referentiality in performatives which is presented below.

What this transfer of power *does* represent for the present analysis is a second hurdle for the performativity of sentences with quantified subject DPs, as these inevitably involve performing actions on behalf of others. In this way performatives with quantified subject DPs not only have to find a way to circumvent agent-uniqueness (discussed below) to become self-referential (such as with an explicit *hereby*), but the context must provide that the speaker may speak on their behalf. It is thus important to keep in mind that in quantified subject DP performative sentences there are two factors which restrict performativity: one semantic interpretation condition (self-referentiality) and one felicity condition (transfer of power).

The next parts of this section (§3.3) will develop Eckardt's picture of the mechanism of self-referentiality first with *hereby*, then without in §3.4.

3.3 The Mechanism of self-referentiality

Eckardt formulates self-referentiality in terms of Davidsonian (Davidson 1967) event-semantics. She states that when an utterance is self-referential it is because the event parameter of the verb (e) has been equated with the variable representing the ongoing transfer of information (ε_s). Eckardt posits *hereby*, the adverb, does this identification function explicitly. The compositional role of *hereby* is therefore that it equates the event of the information transfer to the event of the main verb. In terms of the variables, *hereby* contributes an identity function: $e = \varepsilon_s$.[25] In general, Eckardt's self-referentiality mechanism can be paraphrased as describing a representation of performativity where the event that the verb is describing *is* the event of the speaking of those words. For example, in a performance of a promising: the event of the speaking of a promising *is* the event of the promising (Eckardt 2012).

To show how Eckardt implements this mechanism into a formal system, I'll start with an example of a performative utterance, namely (27).

(27) *The President and Vice-President hereby thank you!*

The context for this example is that the addressee has been invited to speak at the student union and has just finished. The student president, vice-president, and secretary, who hosted the event, sit at a table. They have just taken the microphone back to thank the speaker and welcome the guests to enjoy post-talk refreshments. With the consent of the president and vice-president, the secretary reports (27). The secretary, in this way, performs a thanking, on behalf of the president and vice-president.

To highlight the mechanism at play, examine the form provided below, in (28), an LF of (27) as if *hereby* were not present.

(28) THANK(President & Vice-President, e, Addressee)[26]

25 Presumably this extends also to adverbial phrases 'like by these words...', or 'by this ritual...' and similarly extends to 'thereby' except anaphoric, identifying the event of the verb with *that* information transfer or speaking event. Note that, because the utterance is not referring to itself, but to another utterance or action, 'thereby' does not make the current utterance performative but it can make another utterance performative.

26 Eckardt uses possible worlds semantics and an extended Reichenbachian tense system (Reichenbach (1966), Kamp & Reyle (1993)). Tense and aspect in this system are represented in terms of reference time 'R' speech time 'S' and the time of the event τ(e). This framework has the benefit of separating the event argument of the verb from the temporal reference times, facilitating the operations we are concerned about, which target specifically the event argument (Eckardt 2012). These factors play no role in my treatment so have been left out to improve the clarity of my argument.

"A thanking of which The President & Vice-President are the agents, the thanking is an event, and you are the patient/beneficiary of the thanking."

Now including the contribution of *hereby* to the LF, namely that *hereby* explicitly equates the event parameter of the verb to the event of the ongoing transfer of information ($e = \varepsilon_s$).

(29) THANK(President & Vice-President, ε_s , Addressee)

I'll give an English paraphrase of this LF below in (30), with bolding to represent the essential contribution of *hereby*.

(30) "A thanking of which The President & Vice-President are the agents, **the event of the thanking is the ongoing information transfer**, and you are the patient/beneficiary of the thanking."

We see, in this way, that self-referentiality, the identification of the event of the verb with the speaking event, comes directly from *hereby*. Given this, and assuming the sentence is also speaker-defined as a performative, we see that *hereby* almost guarantees the performativity of the utterance. This part of the mechanism of self-reference is fairly straightforward. However, it is only the first part. What complicates the mechanism is that performatives can, and mostly do, occur without an explicit *hereby* or similar adverbial phrase. Further, the mechanism still must be able to predict the non-performativity of performative utterances with quantified subject DPs. The next part of the mechanism of self-reference is deriving the performativity of utterances which do not have an explicit *hereby* to make them self-referential. This is what the next section will lay out.

3.4 Self-referentiality without *hereby*

So far, this section has discussed how the performativity of an utterance depends on that utterance referring to itself. The most straightforward way an utterance can be self-referential is by using the word *hereby*. However, many performatives, including the utterance this section started with, (23), don't contain *hereby*. So how do they obtain self-reference? Eckardt posits a mechanism, which utilizing the variable assignment function *g*, represents the hearer pragmatically mapping the ongoing information exchange event onto the event of the performative verb. This will be represented as $g(e/\varepsilon_s)$, the function assigning ε_s to e.

This is more intuitive than it looks in overall function. For a broad idea of this concept, take for example (31).

(31) *I promise to find the ring.*

In an utterance of this sentence the speaker asserts a promising event. Then, the hearer guesses that the utterance just spoken, which contains the word necessary to perform a promising, i.e. *promise*, is itself the promising event that the speaker was referencing. In this way self-reference is inferred from the performative verb and the suitability of the speaking of the utterance which contained the verb to be an instance of such an event.

Below is a more detailed example which will show how self-reference is obtained including an explanation of existential closure of the event argument and the variable assignment function *g*. Note that this sentence (32) is simply (27) but without *hereby*. We will assume the same context as (27): someone has just given a talk and the secretary thanks them on behalf of the student president and vice-president.

(32) *The President and Vice-President thank you!*

In this context (32) is a performative utterance. The secretary is performing a thanking by uttering the sentence in (32). However, unlike earlier, we do not have 'hereby' to account here for the performativity and therefore, self-referentiality, of the utterance. Eckardt accounts for the self-reference of (32) by suggesting the hearer substitutes the ongoing information transfer for the event of the performative verb. In order to be able to represent this process a few steps are needed. Below is provided an LF for (32). Note particularly that the verb takes the event argument *e* just as was seen in (28). The lambda calculus here represents a function that takes an event argument, abstracts over it and for each event returns the string to the right of the lambda with those arguments in the co-indexed variable position.

(33) λe(THANK(President & Vice-President, e, Addressee))

The next step here is to apply *existential closure* Parsons (1990). Existential closure of the event variable takes λe, our function over events, and replaces it with $\exists$e. This means the effective interpretation changes from 'for a given event e' to 'there exists an event e'. This will be important later for the hearer to be able to infer that e is the ongoing transfer of information. Applying existential closure gives the following LF.

(34) ∃e(THANK(President & Vice-President, e, Addressee))

Now, according to Eckardt, the hearer attempts to verify the existential statement by using the most salient suitable event. In the case of an utterance of (32) the event of that utterance is a valid candidate for the existential. To test if it is one and the same the event, That ongoing information transfer is then substituted into the event parameter in the performative sentence with the function $g(e/\varepsilon_s)$. A conflict in the denotations derived with this function would lead to a crash in the derivation, signifying an impossible semantic representation. If there is no issue with interpreting the resulting existential statement as true, then the two events can be identified as one. From that self-referentiality, it then follows the sentence can be interpreted as a performative utterance. The full form of this derivation is laid out below.[27] (Eckardt 2012)

> Let ε_{32} be a (sincere) utterance of (32). Then
>
> $[\![\exists e(\text{THANK}(\text{President \& Vice-President, e, Addressee}))]\!]^{(M,g)} = 1$ because
>
> $[\![\exists e(\text{THANK}(\text{President \& Vice-President, e, Addressee}))]\!]^{(M,g)e/\varepsilon_{32}} = 1$
>
> "for assignment $g(e/\varepsilon_{32})$ like g except that e is mapped to $[\varepsilon_{32}$.] Both speaker and addressee should be aware of this reason for [(32)] being a true utterance. Hence, a sincere utterance of [(32)] is self-referential in an indirect way. It does not denote a proposition where it literally occurs as one of the arguments of the verb. Instead, the utterance denotes a proposition about the existence of a certain kind of event and, at the same time, might be such an event." (Eckardt 2012)

An intended consequence of this line of analysis is that it accounts for the interaction of a performative sentence/utterance's with scope and quantified subjects. In the next section §3.5 this thesis shows that in spells, just as in other performatives, quantified subjects interfere with the interpretation of the sentence. This section has shown that the event would have to undergo existential closure in order for it to be interpreted as a performative utterance without *hereby*). However, this is not enough to make the utterance performative. Quantified subjects do not block existential closure. However, §3.5 will show that they *do* block the assignment function $g(e/\varepsilon_s)$ because of the agent uniqueness requirement. This prevents the ongoing information transfer from being identified with the event of the verb. Meaning that a quantified subject in a spell, without the explicit self-reference of 'hereby', prevents self-referentiality and thereby performativity by conflicting with the principle of agent uniqueness. §3.5 will now lay out what the agent uniqueness requirement is and show why it stops performative interpretation.

27 Double square-brackets represent the denotation of the symbolic logic form and M represents a particular set of denotations which the function g can add interpretations to.

3.5 Quantified subject DPs and self-referentiality

Before moving to the effects of quantified subjects on performativity *sans hereby* it is necessary to understand the *agent uniqueness* principle. Dowty (1989) argued that events are fundamentally delimited by the fact that they have unique agents or group of agents (expanded by Landman (2000)). Every event has a unique agent, and that is how we differentiate events. For this reason, one event cannot have multiple independent agents. It is from this rule the Eckardt derives the prohibition of performative sentences with quantified subject DPs. Eckardt's account uses this to show that the assignment function $g(e/\varepsilon_s)$ fails to produce an interpretable derivation because the quantification over agents of a quantified subject DP conflicts the identification of the event variable with the ongoing transfer of information.

The ongoing transfer of information is a singular event and therefore requires a single unique agent, but the quantification of the subject can't provide the single agent in that case, blocking the self-referentiality and therefore the performative interpretation. The fundamental problem of quantified subject DPs is therefore that the ongoing transfer of information, as a single event, has a single agent, and the event of the verb, in the case of a verb with a quantified subject DP, does not. Since the ongoing transfer of information cannot be identified with each agent's event, the self-referential interpretation fails and performative interpretation is not obtained. The next section will walk though an example of a sentence minimally different to my previous examples, but which contains a quantified subject DP and show step-by-step how the agent uniqueness principle prevents self-referentiality.

Consider now sentence (35). The context is again the same. Someone has just given a talk and they hand back the microphone. The secretary, with the consent of the president and vice-president reports (35). This sentence seems very similar to (32); in all cases where the descriptive content of (32) is true the descriptive content of (35) is also true. These two sentences seem at face value to be similar so it might be expected that since (32) can be used performatively, (35) should be able to as well. However, (35) cannot be used as a performative utterance. This sentence can only be heard as describing a thanking event (or two). It can't be heard as thanking them on behalf of anyone. It would seem more appropriate to respond "thanks for letting me know" than "you're welcome." This contrast guides Eckardt's account. It is largely designed to capture this fact.

(35) *Two students thank you!*

To understand where the derivation crashes the following will expand the LF, denotation, and paraphrase. In the below form existential closure of the event variable has already

been applied.

(36) $\text{TWO}_x\text{STUDENT}(x)[\exists e(\text{THANK}(x, e, \text{Addressee}))]$

The operator TWO_x contributes 'true' if it there are two or more individuals who are have the property ascribed of x, in this case being students. This LF can be paraphrased as below. Note the difference that the quantification over agents inherently has over the event. For each unique agent there is a separate event.

(37) "For two (or more) x where x are students. each x is such that they are each agents in a thanking, each thanking is an event, and the patient of each thanking is you"

This is the fundamental problem with quantified subject DPs: there are multiple unique agents and only one performative event. To show this, the same method to test the self-referentiality of the utterance with the replacement function $g(e/\varepsilon_s)$ is applied below. If the ongoing transfer of information can be the event of verb, then it is possible for the utterance to be performative. However this LF does not allow for a singular event as TWO specifies that there are at least two agents, and this form does not allow the agent of the event to be the plurality of the two students. This means that the event variable *e* cannot be identified with the information transfer event ε_s because it violates the agent uniqueness principle. This is shown in the following:

Let ε_{35} be a (sincere) utterance of (35). Then
$[[\ \text{TWO}_x\text{STUDENT}(x)[$
$\exists e(\text{THANK}(x, e, \text{Addressee})]\ ]]^{(M,g} = 1$ because
$[[\ \text{TWO}_x\text{STUDENT}(x)[$
$(\text{THANK}(x, e, \text{Addressee}))]\ ]]^{(M,g)e/\varepsilon_{35}} = 1$
for assignment $g(e/\varepsilon_{35})$ like g except that e is mapped to ε_{35}.

This (failed) interpretation can be paraphrased as

"for Two (or more) x where x are students. each x is such that they are each agents in a separate thanking, the event of the thanking is the ongoing information transfer, and the patient of the thanking is you."

This clarifies the crash in the derivation. If the ongoing transfer of information is suggested as a candidate to instantiate the event parameter of (35) there would only be one thanking to be an agent of. Since we have two (or more) agents such an interpretation would violate agent uniqueness by trying to give one event two agent roles.

Its worth noting that when *hereby* is present it is possible to have performatives with quantified subject DPs. They can be harder to hear as performative than others. Eckardt suggests that when *hereby* makes explicit that e = ε_{35} the hearer adopts a "charitable reinterpretation" of the quantified subject DP. She assumes a pluralistic reading of quantified subject in this case 'some given group of two or more students' as seen below. This circumvents the uniqueness problem as the group is now considered one agent.

(38) *Two students hereby thank you*

(39) $\exists$X(STUDENT)*(X) $\wedge$ 'X is a group of two or more students' $\wedge$ (THANK(X, ε_{55} ,Addressee)]

Eckardt's analysis so far has highlighted how quantification in the logical form of a sentence without *hereby* prevents that sentence from becoming a performative utterance by creating an agent uniqueness conflict when the speaker-hearer attempts to identify the performative event with the ongoing transfer of information. The type of quantification examined here and by Eckardt is quite narrow, only being standalone scalar quantifiers combining with NPs but another type of DP which contributes quantification to the derivation is possible: definite and indefinite articles. The indefinite behaves as expected, neither *A god favors you* or *a student thanks you* sound performative. The definite article, which on the Russelian view involved quantification, namely: !$\exists$X ϕX - "There exists a unique (one and only one) X such that ϕX", does not behave according to our expectation of performativity. A sentence such as "The king thanks you" is easily interpreted as performative despite the quantification involved in the definite article. Preserving the Russelian account it may be posited that the fact that the Russelian formulation of the definite description also includes the quantification: *one and only one* means that there can can never be more than one agent in the step of the derivation where agent uniqueness is checked. Interestingly the indefinite article gives a clue as to where in the derivation the performative hypothesis of the speaker-hearer is tested (g(e/ε_0. Since the use of the indefinite article also generates an implicature that there may only be one, it may be expected that the agent uniqueness problem may be circumvented as it is in the definite. However, this is not the case. Even in a context where such an implicature is strongly generated such as *A current prime minister of India thanks you*, performative interpretation is still not possible, suggesting either that the agent uniqueness violation rules out a performative interpretation *before* the implicature that there be only one such subject is generated or that the inference occurs at a different level of interpretation than LF.

§4 will show however that Eckardt's mechanism is challenged by the data from spells and rituals. It is particularly the utterances with modals which seem to circumvent the agent uniqueness requirement, or enable their performativity by some other means. §4 will go through the data from spells and rituals, show where it counters generalizations, show where it behaves well with Eckardt's account of performativity, and where it breaks down the mechanisms. After that, it will outline how the Hacquard (2010) events-based approach to modality can work with Eckardt's account to account for this data.

4 Modality and performativity: enabling self-referentiality without *hereby* despite quantified subject DPs

Circling back to (23), which is reproduced below in (40), exactly what one would expect not to find; a performative, without *hereby*, with a quantified subject DP, is seen. The context of this utterance is again a ritual whose completion lends the beneficiary the favor of two gods.

(40) *May two gods favor you!*

In view of the generalizations about performatives and Eckardt's derivation above, one would anticipate that without *hereby*, the single event of the information transfer would fail to identify with two favoring events and the utterance would fail to be self referential and therefore fail to be interpretable as a performative utterance. Yet, this *is* performative utterance as evidenced by the arguments in §2. An utterance of (40) seems to perform an action and cannot be felicitously said to be true or false. This presents a problem for the performative generalization and possibly for Eckardt's account. Preserving Eckardt's account (for now), there are two possibilities, either *may*, used this way, represents a similar contribution as *hereby*, in that it explicitly identifies the event of the verb with the speaking event; or, we may posit that the modality of *may* provides a route to circumvent the agent uniqueness problem which blocks the self-referentiality. This section will briefly discuss both possibilities but settle on the former proposition as the current line of inquiry.

The idea that there is something about *may* which has a performativizing semantic contribution akin to *hereby*, is desirable for two reasons. The first is that, if this particular use of *may*, differentiated by it syntactic position, can be said to provide the required self-referentiality, then this allows us to account for the fact that *may*, when it is not in this 'optative' position, does not provide the same effect of enabling performativity. Compare (40) above to (41) below to see this.

(41) *Two gods may favor you!*

This sentence, despite having the same modal, cannot be interpreted as performative, but only descriptive. This suggests that the position of *may*, which is thought to differentiate the modal use from the optative use, is a key factor in the performative interpretation, or lack thereof, of the above utterances. The second reason this approach may be desirable is that if the optative *may* is taken as it appears syntactically in English: akin to an imperative with auxiliary inversion (as in the phrase: *don't you touch that button!"*), then the phenomenon of imperative spells may be unified with English spells in *may*. Spells of this type include *let it snow, rain, rain, go away*, and many spells in other languages, such as Hittite, which makes frequent use of third, first, and second person imperatives in ritual speech (Della Casa 2021).

While this approach is equally possible to the other, a proper treatment of it is beyond the scope of this work and there are reasons, which this thesis presents below, to be equally interested in the former approach.

This thesis will pursue the idea that modality can provide an alternative pathway to self-referentiality for sentences with quantified subject DPs. This not only would account for the performative enabling effect of *may* but would also account for spells in *shall*, which was historically English's necessity modal. This modal is seen in example (42), which does, by the tests described in §2, seem to be performative despite its quantified subject DP and lack of *hereby*.

(42) *Two gods shall favor you!*

This account will be able to provide an answer as to why the position of *may* is vital, as we see in (41). This account should not over-predict the existence of performative utterances where there should not be any (i.e. in all utterances which contain a modal), as the speaker must still *define* their utterance as a performative. This section will attempt to unify the events-based accounts of Eckardt (2012) and Hacquard (2010) to account for why it is possible to see quantified subject DPs in utterances with *may* and *shall*.

4.1 The modals in question

To see why the present treatment prefers the account of modality that Hacquard (2010) gives, this section will first develop a picture of the role of modality and modals in performative utterances. Then this section will introduce the modals which are commonly used in English ritual and magical speech, show the striking similarities between epistemic modals and performative utterances, and show how Hacquard's events-based account of modality and Eckardt's events-based account of performativity can work together to provide a mechanism

by which the performative utterances which are seen in ritual and magical speech may have quantified subject DPs without an agent uniqueness violation. The solution presented is by no means the only way of solving this problem and the end of this section there will be a brief exploration of some of the others ways it may be possible to account for the data uncovered in this thesis.

The importance of these modals within the argument of this thesis is that it is with these modals that it is possible to see quantified subject DPs in ritual and magical performative speech. The utterances in (43), much like those in (14), descend in ease of performative interpretation.

(43) a. *God A and God B hereby favor you!* (performative)
b. *God A and God B shall favor you!* (performative)
c. *May two gods favor you!* (performative)
d. *God A and God B favor you!* (performative or descriptive)
e. *Two gods favor you!* (descriptive)
f. *Two gods may favor you!* (descriptive)

Notice that while *hereby* strongly produces performative interpretation, *may* and *shall* are able to do so as well. *Hereby*, *shall*, and *may* are all able to produce performative interpretation even when a quantified subject DP is present as in (43c) and (43b). It is seen again in (43e) that without *hereby*, *shall*, and *may* a sentence with a quantified subject DP will not be interpretable as a performative utterance.

It seems that quantified subjects are allowed in performative utterances when modals are present. While the quantified subject blocks performativity as in (43e), the use of the modal in the subject inverted position allows the spell to be performed again. This position for *may* is called the *optative* use. It is notable that when *may* is in the typical position for an auxiliary verb in assertion, as in, (43f), the sentence fails to be interpretable as performative. The question then is why 'may' should be used for this function in English; and how it can license the performative interpretation. Before moving into the analysis which will show one mechanism by which modals could allow for the performativity of the sentences above, the next section will discuss some of the suggestive similarities between performativity and modals, particularly epistemic modals, which provide additional incentive to connect the two.

4.2 Haquard's account

One of the key problems Hacquard's account of modality has to grapple with is that modals, cross-linguistically, seem to behave as if there are at least two separate classes of modals, be it deontic vs epistemic, epistemic vs root, root vs non-root, epistemic vs circumstantial (Kratzer 1981), low (scope below aspect) vs high (scope above tense) (Cinque 1999), S-level vs VP-level (Feldman 1986), and some such as Brennan (1993) further split deontic modals into ought to be deontics, which are raising predicates, and ought to do deontics, which are not. To further complicate matters these class divides often split a single vocabulary item into two apparent uses. For example, English *must* can be used with deontic necessity force (having to do with obligations): "You must clean your room this instant!"; or with epistemic necessity force (having to do with what knowledge you have available): "It must be raining".

While it is desirable to have both uses of *must* be derived from the same lexical entry, previous attempts at this, Hacquard claims, fall short. Kratzer's influential (1981, 1991) possible worlds account of modality manages to provide a single lexical entry for each modal, namely that a modal's semantic contribution is quantification over possible worlds, either universal (*must, have to*) or existential (*may, might*). Each modal's range of meanings (often called modal "flavors") is therefore determined in part by the conversational environments in which they reside, which Kratzer claims consists of an utterance's *modal base* and *ordering source*. *Modal bases* may be epistemic or circumstantial and each returns a corresponding set of "accessible" worlds; providing, respectively, the set of worlds which are consistent with some information or knowledge, and the set of worlds which are consistent with the some set of ideals. The *ordering source* then ranks the set of worlds provided by the *modal base* outputting the most ideal world of the set.

The benefit of the Hacquardian approach is that it provides a Kratzer like unification of the epistemic and deontic into single lexical entries of each modal but instead of appealing to the conversational context as the determiner of modal flavor, Hacquard (2010) uses the syntactic context to determine the meaning, using the closest event binder to determine the meaning. This approach unifies both the semantic desiderata of single lexical entry with derived uses, with the syntactic desiderata of accounting for the scopal properties of the different types of modals such as the observation by Cinque (1999) that modals scoping below aspect are interpreted as root modals while modals scoping above tense are interpreted as epistemic.

It is in the very scopal phenomena that drove Hacquard's theory that we see the striking resemblances between modals and performative utterances. Semblance does not make an argument but does inspire the present work to attempt to unify the events-based accounts of Eckardt (2012) and Hacquard (2010). Seeing later the success of this may provide impetus

in the exploration of the connection and or interaction between modality and performativity. A connection between modality and performativity or speech act theory generally has been offered by many. von Fintel & Gillies (2007) claim that epistemic modals contribute both quantification over possible worlds but also an additional speech act of "proffering". Portner (2009) goes beyond epistemics claiming further that deontics carry a speech act of a command and roots contribute an assertion which accounts for actuality entailments.

It is therefore interesting that modals should have such similarities to performatives. The section above noted that *shall* gains its present meaning through performative modality but ended by noting that finding utterances with *shall* which are not performative on that view seems to be difficult. This thesis notes that it is not reasonable to assume all modals are performative unless all modality is to be thought to be ultimately circumstantial modality, with the other modal flavors being results of either positional or pragmatic interpretation.

Further interest for investigating the interaction between performativity and modality comes from the similarities between the two. Epistemic modals in particular like performative utterances resist embedding. They do not generally scope under tense, negation, or quantifiers, nor can they be used in the formation of questions, conditional antecedents, or attitude verb complements Hacquard (2010), Eckardt (2012). A side effect of necessarily scoping over tense means that performatives, just as epistemics, are always evaluated at the speech time. *He might have left* is an expression of what the speaker can say given their current knowledge, not their knowledge at the moment the individual in question left. In the same sense an utterance of *You hereby have been healed!* cannot describe that someone was healed before the utterance, despite the fact that use of the present perfect tense allows such a time interval to be the reference. Rather a performance is understood to at the moment of utterance healed the individual.

Responding to the observations above Hacquard proposes an events-based account of modality. As opposed to Kratzer's account which positions modals as relative to a world of evaluation, Hacquard's account relates modals, specifically modal bases, to an event of evaluation. Modal bases in her account are locally bound to an event pronoun (e) and otherwise keep their Kratzerian lexical entries (universal or existential quantification). Hacquard handles the differing modal behaviors by proposing that modals can bind either to a default speech event λe_0 or to aspect. This characterization accounts for the differing syntactic behaviors of root and epistemic modals and largely corresponds with the Cinque (1999) proposed hierarchy. These two event binders yield three events which modals can stand in relation to: the speech event e_0, attitude events e_1, and VP events e_2. The default speech event functions as an assertion in declarative sentences. (Hacquard 2010)

Hacquard's claim that there is a second, high scoping, event involved in binding non-root modals is not uncontroversial. This theory that the speech act is represented in the

syntax is known as the performative hypothesis and has been proposed and supported by Ross (1970), Rizzi (1997), Ambar (1999), Ginzburg & Sag (2000), Krifka (1999), and Tenny & Speas (2003). It holds that every sentence contains an implicit "I declare../I assert.." type structure. Although she recognizes that the proposal is controversial (particularly among syntacticians) Hacquard (2010) says the performative hypothesis is regaining popularity among semanticists. Aside from the generative pitfall syntacticians note, claiming that the default speech event is associated with the force of the assertion would correctly predict that epistemic modals alter the force of the assertion (I assert, based on what I know, that..) and at the same time the fact that modals modify the force of the assertion would support the links proposed between epistemic modals and evidential marking by Westmoreland (1998) and Drubig (2001). Hacquard adopts a framework which she derives from the performative hypothesis in which there is a speech event in the topmost syntactic position whose role is to determine the type of utterance, be it assertion, question, or command (Hacquard 2010).

The advantage of Hacquard's theory is that through the different syntactic positions of the binding events, the syntactic behaviors of the flavors of modality can be modeled without resorting to positing homophony. Hacquard accounts for the lack of epistemic modals in embedded contexts by reformulating the epistemic modal base as providing the set of worlds which are compatible with the 'content' of the event which binds it, rather than being connected to the speaker's knowledge. She stipulates that because non-attitude VP events are content-less they cannot therefore be an argument of an epistemic base.

With this account Hacquard determines the following paradigm of possible combinations of modal base and binding event. (reproduced from (Hacquard 2010: pg. 40)) She notes however that despite their theoretical possibility, half are unattested.

(44)
a. Speech event, epistemic: *given what I know now...*
b. *Speech event, circumstantial: *given the circumstances of the speech event...*
c. Attitude event, epistemic: *given what the attitude holder knows at the attitude time...*
d. *Attitude event, circumstantial: *given the circumstances of the attitude event...*
e. *VP event, epistemic: *given what the subject knows at the VP time...*
f. VP event, circumstantial: *given the circumstances of the VP event...*

As discussed above Hacquard claims (44e) is not attested, but Hacquard can't give such a reason for why we should not ever see (44b). As there are no conditions which limit the well-definedness of circumstantial modal bases, as there are in the epistemic case, there is no account for why they seem to be absent from high modals. Hacquard's best explanation for why the mystery gap she uncovered exists is that the circumstances of the speech event

may be taken as the conversational context including the speakers beliefs and knowledge, thus making the circumstantial modal base equivalent to the epistemic in interpretation. The account this thesis develops in this section will show that circumstantial modal interpretation can occur with a high modal (one bound by the default speech event and scoping over tense). It is in fact precisely this interpretation which we see in the modality in performatives in magical and ritual speech.

4.3 Integrating the two accounts

Both Eckardt's and Hacquard's theories therefore incorporate an idea of a speech event which is additional to the root event of the explicit verb of the sentence. This, uniquely to other theories of modality, provides a point at which performative utterances and modals can interface. While Hacquard proposes that the default speech event scopes over the root event, Eckardt does not make this explicit for her "ongoing transfer of information" but assumes that it exists in the context set as a salient event which can, either through *hereby* or pragmatic inference, be identified with the event parameter of the root verb. From this discrepancy there arise two possibilities for this current effort of combining the theories.

The first possibility identifies Hacquard's default speech event with Eckardt's ongoing transfer of information, placing the default speech event into the pragmatic domain where it is ready to be identified with the root event if necessary, as in a performative utterance. This approach lacks the binding facts of Hacquard's which account for the syntactic differences between epistemic and root modals. It is further unclear how this account would help explain how modality helps sentences with quantified subject DPs become performative. To make this account work a mechanism would have to be devised in which the modal introduces quantification over events during the pragmatic identification of the speaking event with the root event (the $g(e/\varepsilon_0)$ assignment function step from the derivations above). No such mechanism exists, nor would introducing another layer of quantification solve the agent uniqueness problem which was caused by the quantification in the subject DP.

Rather this thesis takes the other direction, identifying in performatives the ongoing transfer of information of Eckardt's account with Hacquard's default speech event; a high scoping event variable (above TP) present in the compositional semantics of the utterance, rather than in the pragmatics.

What this thesis will show through the examples below is that by shifting the identification of the ongoing transfer of information from the root verb to the default speech event, the agent uniqueness problems presented in performative utterances with quantified subject DPs may be circumvented. In this account the presence of a high scoping default

speech event (e_0) in utterances with modals allows an alternative performative association to occur. Instead of the utterance becoming performative by associating the ongoing transfer of information with the root verb, the performative association is between the default speech event (i.e. assert) and the ongoing transfer of information. Since the agent of the speech event is never quantified (it is always the speaker (I assert..)), the quantification which may exist over the agent of the root verb cannot effect the association. In this view the default speech event, which is modified by the modal, is in turn identified as the performative event of the utterance (I hereby assert...).

The only downside of this approach is that it loses the attractive feature of Eckardt's view in which, in a performative utterance, the speaking event is itself the root event (i.e. this ongoing transfer of information *is* a promising). This, however, is actually desirable for magical utterances and ritual speech because we would potentially like to say, if we don't find the heal* theory convincing, that in "May you be protected" the speaking is not itself a protecting. It is rather a blessing which in turn grants protection. It is still possible to save the performative association to the main verb if we posit, like in the application of the assignment function (e/ε_0), that the events can still be pragmatically identified with each other with the assignment function. In this way the speaker can make the inference, just as under Eckardt's view, that the present ongoing transfer of information, as an assertion that there is a promising/protecting, may at the same time be such a promising/protecting. In such a way, if permitted under the constraint of agent uniqueness, the ongoing transfer of information may be performatively identified both as an assertion and as a promising. This happens to capture both the view of Austin (1962) that performative utterances do not assert their content and the view of Szabolcsi (1982) and Jary (2007), that they do.

Alternatively, extending the logic of *shall* above, this thesis argues that the performative use of *may* creates an obligation to the truth of the proposition through the circumstantial modality. Namely the performance of the circumstantial possibility modal says that the world is now potentially compatible with the circumstances of this utterance, with that circumstance being the proposition that you are protected, if the world is now potentially compatible with circumstances of the utterance. In this way *may* does not necessarily create the eventuality but does change the world such that the eventuality is now possible.

This effect does not seem strong enough at first glance, but the world changing effect they claim can still be quite strong, only preserving some agency for the ritual subject. For example, in the meaning of a ritual utterance with *may* the world is now changed such that the wind is able to be at your back, however if one stays inside then such an effect does not take place. Similarly a healer may through an utterance change the world such that you are now able to walk, if you do not exercise that new ability then the event does not happen. This is why *may* is still used despite the stronger *shall* existing, the weaker *may* still enacts

a change in the world but. As an illustration consider a healing ritual that someone such as Jesus could have performed for someone previously unable to walk. Should Jesus say "From this moment forth, you may walk!" That seems like quite a gracious blessing. On the other hand if Jesus said "You shall walk from this moment forth!", taken literally, the subject is now obligated to walk continuously from that moment, or with some pragmatic leniency, obligated to walk wherever there is a choice of motion. Despite healing the subject's condition, the strength of *shall* seems to be able to present unintended obligations due to it strength. It is perhaps for this reason that *may* should be used frequently in ritual and magic speech despite contributing possibility modality rather than necessity modality.

4.4 An anthropological discussion

There is perhaps an interesting reason why a speaker should want to employ circumstantial modality in their spells and blessings. Circumstantial interpretation is readily available even where no agentive subject is present. For example, in Hackl (1998): "A lot of people can jump in this pool." According to Hacquard it is the circumstances of the event participants which matter, rather than those of the agent Hacquard (2010). The lack of an agentive focus of circumstantial modality may be advantageous to the creator of a blessing, such as "May the wind be always at your back", who wants a good thing to happen but does not want to get into the details of who is making said thing happen. This is one of the key advantages of performative utterances in ritual and magical speech. Rather than asking a divine entity for some effect to take place ritualists take matters into their own hands, purporting to mechanistically, through the use of language, make certain things true in the world [28]. Perhaps the view that language or ritual itself has the power to effect the world coincides with the regular use null agentive performatives in magical and ritual speech. On the other hand perhaps it is the availability of performative sentences with no agents provided by the language, or the structure of the mind which allow us to reason about effects with no agents which this language reflects, which encourages this line of reasoning.[29]

In a similar line of reasoning, it may not be unreasonable to assume that it is the

28 Sutton (2016) argues that this mechanistic non-deiestic view of rituals is what was held by the Vedics.

29 (Tambiah 1968: p. 202) argues that it is an underestimation of the human mind to presume that magical utterances arise from verbal fallacies but rather that it is the expressive and metaphorical properties of language which one employs within the technical procedures they employ to carry out tasks and that these are ultimately mediated by ritual substances. This thesis claims ritual speech is not a misunderstanding of language but it is an extension of the abilities of language into the realm of magic and myth that can be seen in this ritual speech. Whether one believes that that use is simply metaphor or if it truly has the power to change the world as it purports to do, is up to the individual. I maintain for example that it would be an under-representation of "May you get well soon" to claim that it is a metaphorical expressive part of a wishing well ritual, as if the utterance is simply the lights and sounds rather than the very substance of the ritual itself.

linguistic ability to form sentences which purport to change the conditions of the world directly, with no agent involved in the eventuality they purport to make true that inspires the belief that language can directly change the world. For, when one can speak of non-agentive effects, on a particular view of cognition, it is arguable that the speakers are then capable of reasoning about non-agentive action or effects. It may also be thought that the question of what is performing the effects purported to be performed by agent-less performative utterances is what leads early people to posit divine or supernatural agents. Agents which may be called upon through ritual speech are seen as the doers of the ritual events much as people are the doers of human events. The creation of gods in this line of reasoning would be a reconciliation of the fact that language can speak of and create effects with no apparent agent and the human preference for events to have agents.

Rossano (2006) places the human capacity of agency detection and overextention of assigning agency to supernatural forces as the second step in the development of religion (the first step for Rossano (2006) being group estatic experiences, a phenomena which Harrod (2011, 2014) shows that many non-human species exhibit today). Specifically he posits that the Upper-Paleolithic societies developed the highly adaptive ability to attribute agency to another (something which Tomasello & Call (1997) has argued separates humans from primates). However, the cognitive faculty, being evolutionary predisposed to over-apply (it is a more costly mistake to under-apply), lent itself for extension to the supernatural. Rossano (2006) writes that

> Natural processes with no obvious explanation—storms, illness, animal behavior, and so forth—were all prime candidates for the actions of a supernatural agent. The notion of powerful natural, animal, and human/animal spirits is nearly universal in traditional, shamanistic religions ((Hayden 2003: pp. 57-60); McClenon (1997); Winkelman (1990)). Evidence from Upper Paleolithic (UP) cave paintings suggests that these ideas may extend back tens of thousands of years (Clottes & Lewis-Williams (1998); Dickson (1990); Leroi-Gourhan (1968)). Animal or ancestral spirits who monitor people's actions for moral integrity and punish those who offend (often through acts of nature) are equally common motifs (Atran (2002); Boyer (2001);Hayden (2003)).

Further supporting the view that cognitive/linguistic advances drive religious thought, he writes "Furthermore, supernatural agency appears to require an ability to engage in second-order theory of mind reasoning ("I know that you know that I know"), something that emerges only in later childhood (seven year olds as opposed to five year olds, see Bering (2005), p. 433)." (Rossano 2006). Dow (2007) positions the same behavior as the first of his three modules of religious behaviour:

> The earliest module, a cognizer of unobservable agents, has been proposed by Atran

> (2002). Humans have a mental capacity to create images of unobservable agents who cause real things to happen. There are countless examples of unobservable agents, gods, ghosts, witches, angels, spirits, dead ancestors, patron saints, demons, extraterrestrials, culture heroes, etc. in religion. The idea actually goes back to Tylor's theory of souls. Souls are animating agents. The idea of agents could be a pre-human adaptation to predators. The animal who imagined a predator lurking in the bushes would have a better chance of survival than one who did not.

It may be of interest to proponents of these views of the development of religion that performative speech should have the power it does to purport make agent-less effects on the world. Future scholarship could potentially investigate what age agent-less performatives may develop in children and what concepts they have of those utterances as they develop.

Consider *May the wind be at your back*. Who is making that eventuality happen? By the reasoning of this thesis, the answer should be that the utterance makes it now true that the world is such that the wind is at your back. But people rarely reason about the conditions of the world changing. If pressed on this question they are more likely answer that God is making it happen. The conditions of the world seem to be called upon when one utters "Damn it!". Who is doing the damning in this utterance? It does not seem to naturally be the speaker or "I damn it" would have the same effect, it could be a god but the utterance could felicitously be spoken by a atheist. Instead it seems that the the utterance has a force something like "May the conditions of the world be such that it is now damned". It goes further than this too for the same question may apply to the object of the damning. When I questioned a colleague's parents as to what is being damned, for example, after someone stubs their toe and utters "Damn it". They both replied the table is the object of the damning but the next question made them less sure. If someone trips over their friend and says "Damn it, Stacy" they are not damning Stacy. For one, they likely do not wish such a fate on their friend and second they would say "Damn you, Stacy" in that case. Instead *it* is a filler for something else, much more that being a grammatical insertion as proposed by syntacticians, *it* seems to be able to refer to the general conditions of the world. Pressed on this scenario, people say that it refers to the fact that the speaker tripped over Stacy. This is evident in a common exchange between people in separate rooms. One may yell "Damn it" the other may respond "What is it" and the first responds "I dropped the bowl". Here it seems *it* is anaphoric for an entire state of affairs. This thesis positions performatives as uniquely adept at effecting states of affairs or conditions of the world without the need of an agent, though speech communities may like to position divine or supernatural entities as the agents of these agent-less effects on the state of the world. This helps to explain the use of expletives in blessings such as "May it be an evening star shines down upon you".

This may also account for the positional difference of 'optative' *may*. It is possible

that the optative *may* is not another auxiliary verb homophounous with the possibility modal, but rather an instance of the Eckardt's theoretical high circumstantial modal. Neatly accounting for both *it*'s position and the particular meaning that it has. *May*, in those cases, would therefore describe what is possible (which worlds are accessible) with regards to the circumstances of the speech event. If the speech event is performative, then it purports to, through the speech event, put a new eventuality into the world. For a given world to be compatible with the circumstances of that speech event, the eventuality which it purported to make true, must be possible in that world.

The answer this thesis presents to the agent uniqueness problem is therefore that the agent of the asserting is always unique, it is always the speaker. So when the modal brings with its interpretation the default speech event or assert operator, it becomes possible to the performative association to occur between the ongoing transfer of information and the speech event.

4.5 Back to integration

This section shows the formal derivation of the above reasoning. It first presents the formula and LF diagrams which Hacquard (2010) uses to show the account she develops for modals. This section then applies the structures Hacquard gives to ritual performative speech with quantified subject DPs.

Hacquard (2010) posits that the default speech event necessary in her account of modals may be ASSERT operator formulated by Alonso-Ovalle & Menéndez-Benito (2003, 2015). She summarizes that "ASSERT is an implicit universal modal operator, which quantifies over the speaker's epistemic/doxastic alternatives and combines with a proposition" Hacquard (2010). The denotation of this operator is represented below in symbolic logic.

(45) $[\![\text{ASSERT}]\!]^c = \lambda p.\lambda w.\forall w' \in \text{DOX}_{\text{speaker of c}}(w)\text{: } p(w') = 1$
"Given a proposition p and a world w, for all accessible worlds w' which are doxastic alternatives of the speaker of language c in world w, the proposition p is true in each of those worlds w'.

The benefit of this formulation is that it captures the fact that assertions are reflections of the knowledge and beliefs of the speaker. Hacquard modifies this to put the operator in event terms by specifying that the 'content' of the default speech event (i.e. the assertion operator) is picked out by the content function. This 'content' is the set of propositions that gives the set of worlds which are quantified over. In the case of ASSERT this is the doxastic

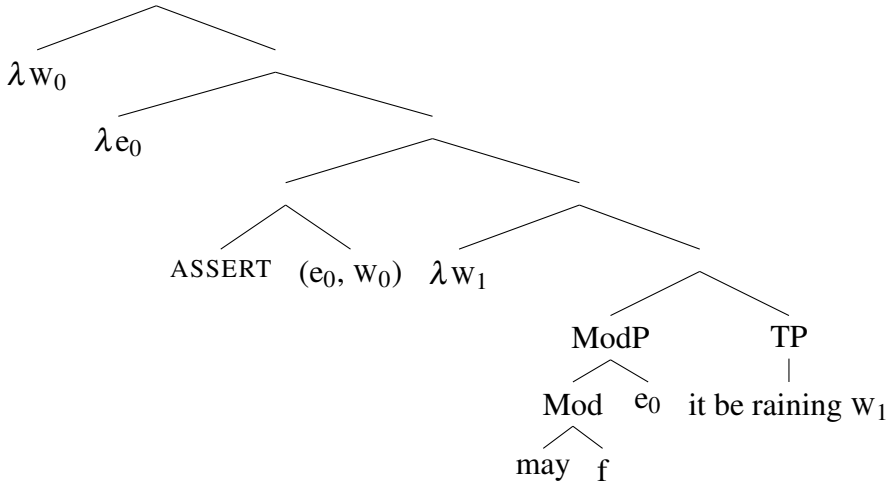
alternatives of the speaker. The resulting denotation given by Hacquard is reproduced below in (46). (Hacquard 2010)

(46) $[\![\text{ASSERT } e_0]\!]^c = \lambda p.\lambda w.\text{Assert'}(e_0, w)$ & $\forall w' \in \cap\text{CON}(e_0)$: $p(w') = 1$
where $\cap\text{CON}(e_0) = \text{DOX}(\iota x\ \text{Holder}(x,e_0), w)$; $\iota x\ \text{Holder}(x,e_0) = \text{speaker}$
"Given a proposition p and a world w, e_0 is an assertion' in that world, and, in all worlds w' which are members of the set of worlds compatible[30] with the content of e_0, the proposition p is true in those worlds w';
where the set of worlds compatible with the content of e_0 is equivalent to the set of worlds which are doxastic alternatives which are held by a given individual in speech event e_0 and where that individual who holder of those doxastic alternatives is the speaker."

Note that the speaker in this derivation asserts only what is compatible with what they know about the proposition. Manifesting these formulations of modality and ASSERT in the following phrase structure diagram in (47) Hacquard demonstrates how the meaning of the sentence "It may be raining" is composed.

(47) a. It may be raining

30 The notation $\cap\text{CON}(e_0)$, and $\cap f_{circum}(w)$, which will be used later, both seem to represent half of an intersection set relation. The notation used here and adopted from Hacquard (2010) is meant to represent the "intersection of the set of propositions accessible from w; it picks out the set of worlds in which all propositions of the modal base hold"(Hacquard 2010: p. 10). This thesis will take the notation as representing the set of worlds which are content-fully or circumstantially accessible from w, or those worlds w' which are compatible with the content or circumstances of w. This thesis notes however that it does not understand what this is an intersection of. The only possibility seems to be the intersection of the set of all worlds and the set of worlds which are compatible with the content or circumstances of w; an intersection which simply returns the later set. This thesis also lacks the capacity to understand why this concept is represented with a one sided set intersection.



b.

c. Assert'(e_0, w) & ∀w'∈ ∩ CON(e0): ∃w''∈ ∩ CON(e0): [it is raining in w'']

Which Hacquard paraphrases as follows in 48:

(48) Assert'(e_0, w) & ∃w''∈ ∩ CON(e0): [it is raining in w'']
"In some world compatible with the content of e_0 (the speaker's beliefs) it is raining." (Hacquard 2010)

This formulation accurately represents the epistemic use of may but does not seem like the correct representation of blessings such as "May the wind be always at your back". If a speaker had this meaning in mind they would say "The wind may always be at your back (or it may not, I don't know)". It seems that in the case of a blessing such as the above, we should not say that the utterance is a statement about the utterer's beliefs or knowledge. Instead this may be an example of the high circumstantial modal which Hacquard theorized.

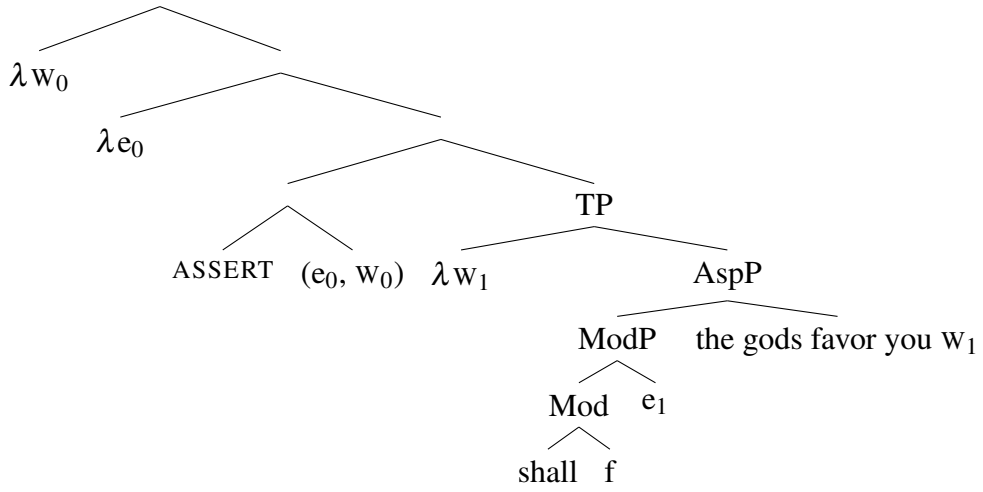
To show this I will first reproduce Hacquard's formulation for a normal circumstantial modal.

(49) (Last night) Mary had to take the train (to go to Paris).
[T [Asp_1 [Mod f e_1 [VP(e_1)]]]]
∃e_1[e_1 in w & ∀w' compatible with the circumstances of e_1: [Mary take the train(e_1, w')]] (Hacquard 2010)

This formulation correctly places the circumstantial modality in a relation to the VP event. The modal quantifies over what is compatible with the circumstances of the event itself, in

this case of the train taking. In what follows the Haquard representation will be applied to ritual performative. Below is a representation of the same low VP bound modal structure as (49) but with a ritual performative.

(50) a. The gods shall favor you

b. 

c. λe_0 ASSERT (e_0) [TP T [AspP [Asp_1 [ModP Mod f e_1 [VP V(e_1)]

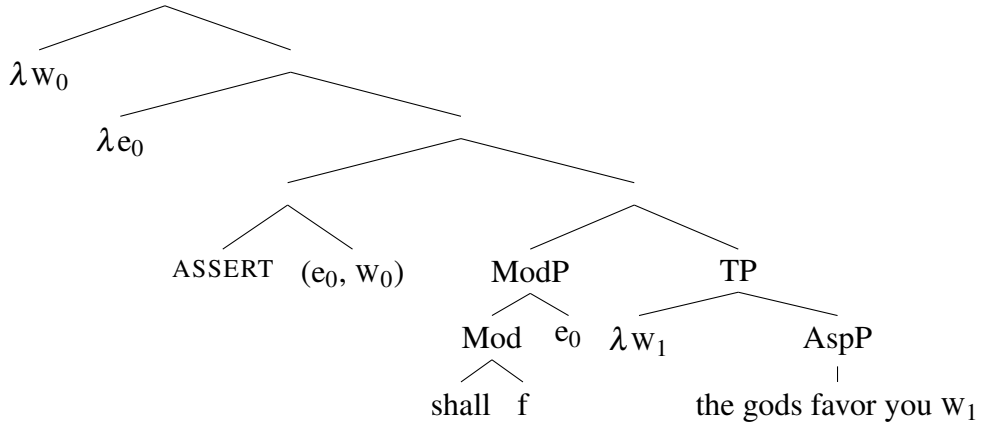
d. $\exists e_1$[e_1 in w & $\forall$w' compatible with the circumstances of e_1: [the gods favor you(e_1, w')]][31]

The paraphrase of (50d) does not seem to represent the right proposition. It says: "for all the worlds compatible with the circumstances of event of the favoring, the event of the favoring happened". This meaning fits if the goal is to say that the circumstances are such that the gods have to favor you, such a meaning would be appropriate in the sense of "In order to pass through the forest alive the gods have to favor you". This however is not the intended meaning, nor is it one which we can even get when using *shall*. Instead in the correct phrase structure diagram of the utterance the modal should refer to the circumstances of the speech event, the ongoing transfer of information, as represented below.

(51) a. The gods shall favor you

31 Existential closure has been applied as an extra step

b.



c. λe_0 ASSERT (e_0) [ModP Mod f e_0 [TP T [AspP Asp_1 [VP V(e_1)]

d. Assert'(e_0,w) & ∀w' compatible with the circumstances of e_0: [the gods favor you(e_1, w')]]

e. 'In all worlds compatible with the circumstances of the speech event the gods favor you'

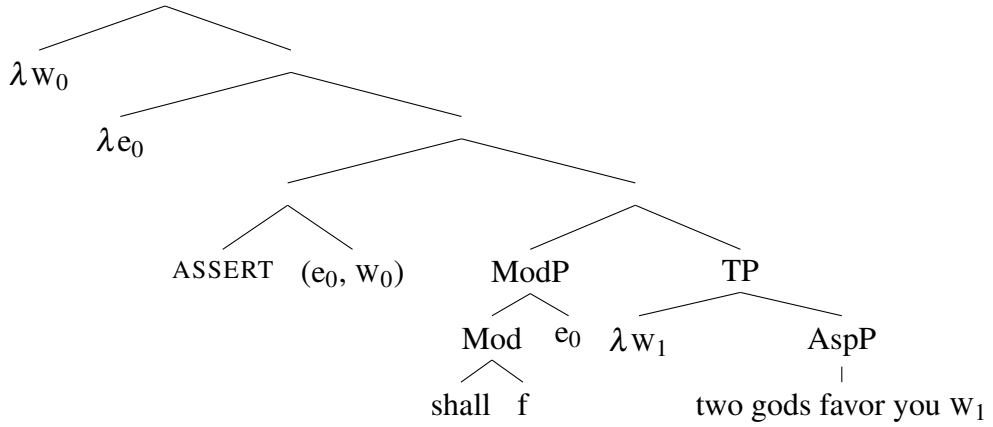
This seems like a much better approximation of the intended meaning. When one performs a ritual blessing such as the above the aim is a change of fact of the world. The utterance on in this formulation represents an assertion that every world which is possible given the circumstances of this utterance, the intended result is true. This not only captures the intended meaning but shows how ritual speech fills the theoretical gap which Hacquard (2010) notes in finding the circumstantial modal which is relative to the speech event.

The default speech event present in these modal utterances is the key to avoiding the agent uniqueness violation in performative utterances with modals and quantified subject DPs without *hereby*.

The inference of self-referentiality, the substitution of the ongoing transfer of information (ε_s) for an event, allows for that event to be the default speech event and that event never has a quantified subject. It is the assertion which is identified as performative rather than the VP event. Therefore in an utterance of *Two gods shall favor you* what is performed is a blessing, a speech event, and the favoring is not performed through the speaking but the speaking purports to create a change of state of the world such that it is now true that two gods favor you. This is a notable difference the performative does not create the event of the favoring, because speech is speech and favoring it is not, but it does purport to change the facts of the world such that there is a true favoring. Performatives in this way purport to make eventualities true not through performing them but through imposing conditions

upon agents or the state of the world through asserting that those propositions are now true if the world is to be compatible with the present utterance. Below is a representation of the avoidance of the agent uniqueness violation as derived.

(52) a. Two gods shall favor you

b. 

c. λe_0 ASSERT (e_0) [ModP Mod f e_0 [TP T [AspP Asp_1 [VP $V(e_1)$]

d. Assert'(e_0,w) & ∀w' compatible with the circumstances of e_0: [Two gods favor you(e_1, w')]]

e. 'In all worlds compatible with the circumstances of the speech event two gods favor you'
With the addition of the inference of self-referentiality which Eckardt gives, g(ε_s/e)

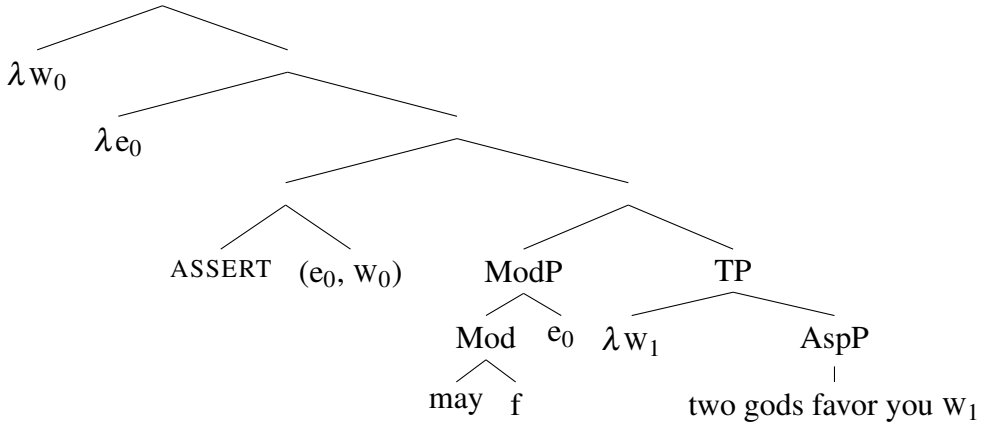
f. Assert'(ε_s,w) & ∀w' compatible with the circumstances of ε_s: [Two gods favor you(e_1, w')]]

g. 'In all worlds compatible with the circumstances of the ongoing transfer of information two gods favor you'

We see therefore that the inference of self-referentiality which is required for performative interpretation is not blocked by the quantified subject because the association of the ongoing transfer of information is not to e_1 which has a quantified agent, but to e_0 which does not. We see therefore that the use of modals allows for the self-referentiality and therefore performativity of utterances with quantified subject DPs without the presence of *hereby*.

Applying this to the possibility modal, *may*, we find that following formulation:

(53) a. May two gods favor you



b.

c. λe_0 ASSERT (e_0) [ModP Mod f e_0 [TP T [AspP Asp_1 [VP V(e_1)]

d. Assert'(e_0,w) & ∃w' compatible with the circumstances of e_0: [Two gods favor you(e_1, w')]]

e. 'In some world(s) compatible with the circumstances of the speech event two gods favor you'
With the addition of the inference of self-referentiality which Eckardt gives, g(ε_s/e)

f. Assert'(ε_s,w) & ∃w' compatible with the circumstances of ε_s: [Two gods favor you(e_1, w')]]

g. 'In some world(s) compatible with the circumstances of the ongoing transfer of information two gods favor you'

Although we can correctly account for why utterances with *may* can avoid the agent uniqueness problem, comparing this structure to (47) it is not possible to offer an explanation why 'optative' *may* and epistemic *may* should have different positions. They are both associated with the speech event (e_0) and both are already thought by Hacquard to scope above TP. Further work is therefore needed to understand the syntactic position of the different uses of *may*.

4.6 On *shall* and deontics generally

Specific to English are the vocabulary items, in particular the modal auxiliaries, which the language uses in the production of performative ritual and magical speech. Common in English writing and English translation of this type of speech are the modal auxiliaries *may*

and *shall* (which was historically the necessity modal of English[32]). Instances of ritual speech with these modals are provided below.

(54) *May the gods grant your wish*

(55) *Your lover shall be returned to you safe from harm*

Both of these utterances are performative, as §2 supports, they purport to make an eventuality true through the speaking of those words in the ritual context. It is notable that these two uses of the modal auxiliaries are not generally described as involving modality. Modals (the auxiliary verbs which can carry modality) do not always contribute modality to the sentence. Likewise sentences can have modality without modals through the use of adverbs like *probably*. The modals used in (54) and (55) are said to be homophonous with the modality granting modals of the same form. In these above instances, (54) is a use of the optative *may* and (55) is a use of *shall* in what Huddleston et al. (2002) describes as a future with an additional aspect of a guarantee[33]. It is in fact this use of *shall* which is taken as the primary use in English today. The modal use of *shall* as described above is now an archaic use. However, given that rituals are extremely linguistically conservative because of the perceived importance of the exact wording, it is not unreasonable to assume that the use of *shall* in the examples described in this thesis involve modality.

It may be wondered why these particular modals should be used in the performatives of English and whether there may be modality at play in these performatives or whether the auxiliaries *may* and *shall* contribute no modality to the meaning of the sentence. Compare briefly other modals which are not commonly found in performative utterances. For example, *must* can form good performatives (esp with *hereby* but it is strangely uncommon. It is possible that *must* is simply out-competed in the ritual and magical performative space by

32 Oxford English Dictionary (2023) *shall* 4.a "In Old English and occasionally in Middle English used to express necessity of various kinds"; 4b. "In stating a necessary condition"

33 Compare Oxford English Dictionary (2023) *shall* 8.

> As a mere auxiliary, forming (with present infinitive) the future, and (with perfect infinitive) the future perfect tense. In Old English the notion of the future tense was ordinarily expressed by the present tense. To prevent ambiguity, *wile* (will) was not unfrequently used as a future auxiliary, sometimes retaining no trace of its original sense. On the other hand, [...] a. In Old English *sceal*, while retaining its primary sense, served as a tense-sign in announcing a future event as fated or divinely decreed. Hence shall has always been the auxiliary used, in all persons, for prophetic or oracular announcements of the future, and for solemn assertions of the certainty of a future event.

shall, particularly because magical and ritual utterances tend to (attempt to) preserve their traditional formulations (Macleod & Mees 2006: p. 136). To see the effect of this compare the sentences provided below.

(56) a. *Students must hereby cease the destruction of library books*
b. *Students shall hereby cease the destruction of library books*
c. *The gods must hereby protect you*
d. *The gods shall hereby protect you*
e. *The gods hereby have to protect you*

Despite the apparent equivalence in meaning (assuming modal *shall*), *shall* appears more natural in the ritual example while in the 'student' examples both modals are natural. Further evidence that *must* is simply out-competed by *shall* comes from Italian, where magical and ritual speech can be formed with the Italian necessity modal *dovere* as in the magical spell of a Neapolitan "Malocchio man" example provided below.

(57) chi vuo' male a 'sto signore deve andare nel bidone,
rel want.3SG bad upon this.M man must.3SG go.INF in=the bin
quello là dell'umido
that there of=the damp(refuse)
"Who hates this man must go in the trash, the organic one"
(Vincenzo's Plate 2022) (Translation his)

In the 'student' examples, to my ear, *must* potentially provides a more deontic interpretation while shall provides a more circumstantial interpretation. Compare *students must be silent at all times* vs. *students shall be silent at all times*. In my understanding, the former puts more of an onus on the student to adhere to the deontically accessible worlds while the latter seems more impersonal and less direct, as if the world is obligated to adhere to the words and the student is to understand that as a less than fully agentivized individual in that world they are obligated or bound to the maintenance of that action or state.[34]

These views potentially are supported by the formulation given later of performative modals. This aligns with the explanation given by Huddleston et al. (2002) in which they say that *shall* is in essence a statement of the future and if one has the authority to make such

34 Oxford English Dictionary (2023) *shall* 6. In the second and third persons, expressing the speaker's determination to bring about (or, with negative, to prevent) some action, event, or state of things in the future, or (occasionally) to refrain from hindering what is otherwise certain to take place, or is intended by another person.

a statement true then it is taken as a guarantee of the eventuality coming to be true.[35] Going a bit further this thesis may argue that if future tense be the primary contribution of *shall* then the guarantee arises from the performative aspect of the utterance. By performatively asserting a future event, the speaker purports to make the future event true, i.e. *by the speaking of these words it is now the case that X will happen*. Put another way, the event described by the sentence is, by nature of the speaking of these words, now true in some part, be it only the 'planing phase' Copley (2005) of the event[36]. This accounts for the instantaneous effect of an utterance such as, *through these words the demon shall be banished from your soul*. The instant of banishment seems contemporaneous with, possibly at the latest, the end of the speech event. If *shall* is to be understood as contributing future tense, then it is quite a small future, stretching simply from some point during the speaking event to the end of the event. This can be accounted for by taking a complex event structure, so that the future event includes some current planing phase which is made true as the utterance is spoken. The future orientation of *shall* would then be taken as an inference from the assertion that the event is now underway and the hearer's perceptual evidence that the event is not yet tangibly underway or completed. In this way the future reference of *shall* may exist as an inference much as the present tense is used in futurates in reference to the future (Copley 2005, Rullmann et al. 2022).

Taken together, the correlation of the lack of representation of other modals and the secondary meanings of *may* and *shall*, seem to suggest that it is not the modality of these two modals that is important but the other aspects of the auxiliaries, namely the optative use of *may* and the guaranteed future use of *shall*

Despite this apparent conclusion, this thesis shows that it is an elucidating exercise to take modality as the feature which allows performative interpretation of sentences with quantified subject DPs. This thesis will argue, in fact, that both the optative interpretation of *may* and the guaranteed future interpretation of *shall* are consequences of the performative use of those modals.

Correspondingly and more suitably to the facts of interpretation which will be presented, this thesis proposes that *shall* carries a primary contribution which matches its

35 Huddleston et al. (2002) suggests: "The deontic use of will is a matter of implicature: if I predict your agentive actions (or someone else's) in a context where I have the authority to require them, I will be understood as tacitly invoking that authority." (Huddleston et al. 2002)

36 Rullmann et al. (2022) positions the 'Planning phase' as being a pragmatic object rather than part of the semantics of events. This thesis takes the position that events, as far as language is concerned, may contain any amount of sub-events including but not limited to the state of affairs which precede the tangible portion of an event. For example, when a child insists that they *are* cleaning their room despite still being in bed they are not lying but are expressing that the event of the room cleaning is truly underway, its just in the pre-tangible or planning phase.

heritage, that is, that it contributes necessity modality to the sentence. The 'guarantee' described by Huddleston et al. (2002) then arises not from a prediction from a speaker of authority, but from a performative use of *shall* which purports that the circumstances of the speech event necessitate that the utterance be true and which, as a performative, requires the speaker to have the necessary authority to perform such speech acts. The future aspect assumed of *shall* is therefore pragmatic; the tense information of the sentence is only non-past and the interpretation of whether the event is now true or now will be true at some point in the future comes down to what power a hearer believes the speaker to have and/or the view of the structure of events which our theory contains. If everything which leads up to an event is part of the event, as discussed above, then there is no distinction between an event now being true and the circumstances of the world now being such that the event will be true.

Shall in an utterance is therefore not a kind of future tense auxiliary, its use in a performative assertion necessitates that the eventuality must now be true. The deontic interpretation of *shall* is derived from this one.

As a thought experiment on deontic interpretation arising from performance one can think of a posted sign such as one which reads "Students shall be quiet in the library". A sign, is a performative utterance, but when that performative utterance takes place is less clear[37]. If it takes place upon the hanging of the sign, signs would have a quite interesting property that they act as a permanent performative. Each time a new student reads the sign they are made aware that such a performative was performed, and that, if they respect the power of the sign writer to make them part of the experiencer of the continuous event of being quiet in the library, then they understand themselves to have been obliged to remain silent from the moment they entered the door. This aligns with the reality of posted rules, which every person has at some point found out, apply to you whether you have read them or not. This conflicts, however, with the Eckardt formulation of an 'ongoing transfer of information'. Eckardt's view would be more compatible with the idea that a sign should perform a performative each time it is read, perhaps this view of signs is even more akin to magical objects, for on this view the object would produce a performative event each time a new person read it.

This is because, for Eckardt, an utterance without *hereby* is made performative when the hearer hears(well, reads) an utterance of performative sentence and, understanding that the speaker has 'defined' the verb as performative, hypothesizes that the utterance is self-referential, that the event described is identifiable with the ongoing transfer of information. While there is certainly a continuous ongoing transfer of information which sub-terminates

37 This line of reasoning should apply to laws too, but the question becomes are the performed when they are written, ratified, or each time they are read.

in each new student who reads the sign, the timeline of the reading and the effect do not line up. For if the reading of the sign makes the performative utterance, then the student should not be obliged to the state described until they have read it. It may be argued that they are not, and it is others, who have already completed the performative action by reading the sign, who understand the new student to be bound by the utterance, but in truth the writer intends all potential agents of that state to abide by it.

Intuitively, When a sign says *shall* it is not saying that state is guaranteed to hold at some point in the future. It is saying from this point forth this statement must hold if this world is one in which obligations are upheld. This is not to say that *shall* necessitates that the eventuality be true at and from the instance spoken, only that the world is now such that if it is a world compatible with the circumstances of the utterance, the eventuality is true or is in the process of becoming true. This is seen in the felicity of (58) but infelicity of (59).

(58) *You shall be healed but not right now.*

(59) #*Students shall be quiet in the libraries but not right now*

Healing is a transition from one state to another and is therefore telic. As a telic description of an event, although the performative made the event now true, what part of the event whether it be 'planning phase' or the instant of accomplishment, is not specified. Due to the ambiguity and structured nature of the event, as is shown by futurates (you heal tomorrow and I'll come along), performed telic events leave open the possibility that the tangible completion of the event occur in the future. *Students shall be quiet in the library* performs a state which must hold in perpetuity, it is atelic. In order for the world to be compatible with the circumstances of the utterance students must be quiet in the library from the point the performative occurs until the point it is overwritten or canceled.

The resulting view of this thesis is therefore that *shall* does not contribute a future orientation with a flavor of guarantee but carries its historical modal force, specifically circumstantial modality which, when used in a performative utterance, carries the interpretation that the circumstances of the utterance necessitate that the content of the sentence be true, if this is a world which is compatible with the the circumstance of the utterance. That circumstance again being that the proposition described be made true through the action of speaking it. Therefore, it is apparent why *shall* should be used in performatives and particularly magical performatives; when a sentence with *shall* is performed the speaker reinforces the performative. It says: not only is this proposition true by nature of speaking it, but it must be true due to the circumstances of its utterance. The affirmation that the proposition is now required to be true is what gives the sense of a 'guarantee' which Huddleston et al. (2002) describes.

It may be wondered if *shall* reinforces the attainment of the performative action, or if it, itself, creates performative interpretation. As discussed above *may* and *shall* each license quantified subject DPs in performative utterances much like *hereby* and, as stated above, there are two possibilities for how. Either they, like *hereby*, are explicitly performative and cause a reinterpretation of the quantification to recover the interpretation, or their modality, by some means, allows the performative association of g(ε/e) to circumvent the agent uniqueness dilemma. If shall is explicitly performative then it should be expected that all utterances with *shall* are simply always explicit performatives.

This thesis argues that *may* and shall used circumstantially are always performative. This accounts for positional difference of 'optative' may (again this thesis argues that the 'optative' interpretation is derived from performative circumstantial modality) but does not account for the position of *shall*. Perhaps this is related to the fact that *shall* lacks, perhaps uniquely among necessity modals, epistemic interpretation (only *can* the possibility modal shares this distribution). It may be thought that if both *shall* and *hereby* are explicit performativizers, then it may be redundant to use both in one utterance, however this does not appear to be too redundant for use. Although, it may also be thought that performatives by nature are not averse to redundancy in assuring the creation of their effect.

Nonetheless, finding sentences with *shall* that are clearly not performative proves difficult, lending credence to the suggestion that shall is always performative. It could be the case that *shall* serves as an explicit performativizer or this fact may suggest only that this modal is preserved in the production of performatives but is elsewhere superceded by *must, have to, and got to*.

The deontic interpretation of this modal stems not from a deontic modal base, in which the accessible worlds are those in which all rules are followed. Instead deontic is a second order or phantasmal relation which arises from the performance of circumstantial modality. This has the benefit of more narrowly selecting the relevant worlds, only those which are compatible with circumstances of the utterance need be accessible, rather than the worlds in which *all* obligations are upheld. This approach reduces need for an ordering source, which Kratzer (1981), posits to account for the apparently conflicting obligations in deontic modality under her analysis. If the relevant worlds are those in which all obligations are upheld, then there must be some way to order the worlds so that the more relevant obligations are prioritized over other obligations which may hold. Her evidence for this is the fact that if, in a world where all obligations are upheld, a law which says a murderer shall serve twenty years prison applies vacuously for the law which forbids murder is also upheld and there are no murderers to speak of. Kratzer's ordering source deals with the conflicting obligations by ordering them. But if, instead of talking about worlds in every obligation is upheld, the modality of a particular law is connected to those worlds which are compatible

with the circumstances of that utterance then the existence of other laws does not conflict with the apparent obligation to follow that one. This is because the obligation is a secondary effect of the performance of the circumstantial modal. The performative makes it now true that in order for this world to be compatible with the circumstance of the utterance, the eventuality described must hold. Persons subject to the law understand that, if they believe the speaker has the authority to make them agents of the law through the performative, then, if they are to act in accordance with the law spoken, then they must work to make the world one in which is compatible with the circumstance of the law. With that circumstance being that the proposition is made true through the utterance of the law, they must work to uphold the truth of the proposition.

In this way obligations are held virtually and to every individual law rather than all laws at once, so that the law which forbids murder applies first but when an individual fails to uphold the state which the law has performatively made them an agent of, the next law applies, for they are now the agent of the law that a murderer shall get twenty years imprisonment. The application of the law involves taking such individuals who fail to uphold primary states and forcibly making them individuals the agents/experiencers of the secondary states namely, the experiencers of prison or the payers of fines. Even a prison sentence, in just places, is performative (*You are hereby sentenced to twenty years in prison*), the caveat being that the guards help the prisoner fulfill their agent-hood if they are reluctant to do so.

Therefore obligation in modality is not derived from ordering worlds in which all obligations hold, but from each individual's understanding that, lest they face becoming the agents of further, more restricting, utterances, they must act to make the world such it is compatible with the utterances of the laws by acting as the agents of the utterances of which laws apply to them.

The conclusion which this thesis has reached on performative utterances with *shall* may be of interest in the study of metaethics. This thesis has derived the effect of a duty or obligation without reference to right or wrong, or an ideal world. Rather this thesis shows that laws are states which are asserted as truly holding at the point of ratification. Obligations are derived from each individual's understanding that they are agents of a certain set of laws and if they fail to be the agent of those laws they may be forced to be the agents of more restrictive laws. Interestingly breaking the law on this view amounts to an exercise of agency. As a corollary each law abiding individual sacrifices some degree of agency. Of course the reason this sacrifice is made is not because of a sense of duty but because individuals understand that they will be forced to sacrifice more agency if they fail to maintain the state which the authority has made them an agent of.

Laws are only one arm of duties and obligations. This approach can also apply to

uncodified norms and obligations. For example, "Everyone should vote" may be seen as a duty which is not an instance of a state performatively making individuals the agents of an eventuality. This, however, is not so different. Someone said the utterance above and in doing so, expressed that if the world is compatible with their utterance then each person in the world votes. An individual who respects the authority of the speaker positions themselves as an agent of that eventuality and acts in correspondingly. Should a political pundit assert "British citizens must accept austerity measures" those individuals who do not act as agents of that utterance, do so, not because they are not part of the group which the speaker performatively asserts are the agents of the action, but because they do not cooperate with their inclusion as agents of that eventuality.

The question this leaves open is why do individuals make such statements or think of such propositions which place themselves and others as agents of eventualities. Surely this points to a non-performative origin of ethics duty or obligation. It could be reasoned that each moral statement is made to further the goal of another which the speaker is an agent of. So that someone who see themselves as an agent of the utterance "Everyone should vote" may also see themselves as the agent of the utterances "people should spread awareness about voter registration". In this way each obligation which is created or concluded can be thought of as being created or concluded as a result of acting as the agent of another prior utterance. This reflects the reality of many norms, which may exist simply because they are spoken. For example, a superstition such as avoiding stepping on cracks in pavement is followed not because of an larger ethical principle, or because of tangible consequences, but simply because people (particularly children) regularly state that it is bad to do so.

Deriving obligation from the way performatives purport to change the facts of the world, and the way individuals accommodate or reject their roles as agents of those new states, is advantageous to those who are skeptical about the concept of duties. Duties this way are illusory, they are in reality a linguistic behavior-asserting that others or oneself are now the agents of a particular eventuality and a resulting behavior of the supposed agents, either in accordance with the state asserted or against it.

Hume (1739) observed a gap in reasoning often presented in ethics. He observed that moral arguments often seamlessly flow from statements of what is to statements of what ought to be, when upon close inspection there is no logical connection between what *is* and what *ought to be*. For Hume if an individual only has access to factual premises, they cannot infer the truth of moral statements. More broadly, this can be construed as part of the *fact-value* distinction which claims that it is not possible to infer evaluative statements from non-evaluative statements. (Cohon 2018) This observation can be accounted for in the above derived account of deontic statements. The truth of a deontic statement is not inferred, it is asserted, and it is up to the hearer to decide if they shall act to uphold the truth

of the sate they may have performatively been made the subject of.

Insights which followed from Hume's observation led to what Anscombe (1958) describes as a considerable service of showing that the notion of "morally ought" has no content. She laments that the same philosophers have attempted to supply more dubious content to "ought" in an attempt to retain the "psychological force of the term" It is her claim that the notion of "morally ought" ought to be dropped in favor of more descriptive categorization such as "untruthful" "unjust" or "unchaste". She notes that it is hardly possible of course to speak at all without regular use of ought, must, and should, something which might encourage someone to think that the terms do have content and quite important content at that. However she argues that the terms used represent "brute relatives". In Anscombe's example, *he supplied me with potatoes* has the relative "brute facts" of *he had potatoes carted to my house* and *they were left there*. In the same way she finds statements of obligation, though themselves contentless, to describe the overall character of a set of processes.

This thesis provides a mechanism that underpins this "brute relative" of statements of obligation. It is not as robust moral realism has it that "Moral propositions are true when actions and other objects of moral assessment have the relevant moral properties (so that the relevant moral facts obtain)" Sturgeon (1984). It is rather that moral propositions are performatively asserted to be true and they purport to make a change of the facts of the world. This is not exactly what cognitivists would call "truth-apt" because it is not that the proposition is true only that it is asserted to now be such. This can account the dilemma which Jørgensen (1937) puts forward. Jørgensen's dilemma presents a problem for deontic logic which exposes the apparently contradictory premises.

(60) Logical inference requires that the elements (premises and conclusions) have truth-values
Normative statements do not have truth-values
There are logical inferences between normative statements
Jørgensen (1937)

By claiming that normative statements do have truth values and that they are performatively asserted in the hope that the agents of the proposition now act as such, the second premise is cancelled and there exists no problem drawing inferences between normative statements. Normative reasoning therefore includes the assumption that the hypothetical agent try to act as the agent of the normative premises involved.

This is important because the Frege-Geach problem (61) shows that when the philosopher who does not have to accept the agent-hood in stating a premise of a hypothetical as

a hypothetical agent presumably would, states a hypothetical premise, they do not engage themselves as the agent of the hypothetical performative moral statement and therefore do not find that the conclusion of the syllogism should apply to themselves.

(61) It is wrong to tell lies.
If it is wrong to tell lies, then it is wrong to get your little brother to tell lies.
Therefore, it is wrong to get your little brother to tell lies.
Geach (1965)

Moral reasoning generally take a hypothetical performance of moral premises, and a hypothetical moral actor, one who would sincerely try to act as the agent of each performed moral premise, is used to test the interaction. The problem with the Frege-Geach puzzle is that in the breaking of the fourth wall, the philosopher is not the hypothetical moral actor, nor are they sincerely performatively asserting the premises. In short they do not see themselves as agents of the premises so when by *modus ponens* they are made the agent by the conclusion they establishment of them as agent of that proposition is illogical. In their example the failure of reasoning happens in the second premise which attempts move from a hypothetical performative, to a real one.

Likely not every moral statement is made in following with a the action prescribed by acting as the agent of a previous moral statement. Particularly as if that were the case what would have been the original moral statement whose following spawned all the rest. No rather the initial and many ongoing moral statements are much like spells, self-interested attempts to control another though the presumed power of speech. The first moral statements could have been particularly could have been seen as such. Whoever first uttered the equivalent of *Thou shall not kill* did so guided by survival instincts or otherwise evolutionarily advantageous survival promoting prosocial behaviors. With the presumed power which language has over others the individual utters such does so with the hope that it will reduce the chance that the hearer kill them. In this way "Thou shall not kill" is not a moral statement, it is not a statement of obligation, it is an assertion that the individual in question is now, though the utterance of this sentence, if the world is compatible with the circumstance of the utterance, the agent of the state of not killing. An action, which by placing the individual as the agent, lets them decide if it is in their own self interest to act as the agent of that eventuality. This is in essence equivalent to *May you not kill* and *You hereby do not kill*. The steps this thesis derives are "brute relations" which can be summarized as "obliged". Importantly this is derived, not from any notion of moral, evaluation, but from self-interested and prosocial attempts to make another behave as you desire, and self-interested and prosocial decision to act or not act as agent of that utterance. In this way moral statements ultimately derive from desire, or want statements, something which may fit into the view of ethical naturalists. This is not to say however

that individuals only act out of self interest, It is in the decisions to act as the agents of moral utterances with little consequence to ignore that individuals exercise virtue. This is ultimately similar to Universal prescriptivism, which claims that moral statements are like universalized imperative sentences, i.e. *Thou shall not kill* is equivalent to *Don't kill!* but with the intention to apply universally rather than to the individual addressed (Hare 1963, 1965, 1981). The account of this thesis is also similar to the view quasi-realism which holds that ethical statements project emotional attitudes as though they were real properties (Blackburn 1993).

Thus the is-ought gap is bridged because deontic statements are underlying "it **is** advantageous for me to attempt to make others do X" and "it **is** advantageous for me to act as the agent of P".

As a consequence of this line of reasoning and the discussion in §4.4, it is possible that moral statements only evolutionary arose after the agent displacement described by Rossano (2006) developed in upper-neolithic society. This proposed anthropological development aligns with the stages of moral development posited by Kohlberg (1958) which places punishment avoidance followed by self interest as the first principles which guide moral thought (notably he does not claim this applies behavior) in children ages 3 to 7 years. The stage theory put forward by Kohlberg has been widely criticized however, with a myriad of studies showing no evidence of staged development, and providing evidence for distinct modes of social thought existing simultaneously, and from a young age (Smetana & Yoo 2022: p. 19).

A consequence of this is that the moral development and the understanding of "deontic" (which this thesis argues is circumstantial) modality in children may be linked to the ability to perform the agent displacement necessary to interpret performative utterances. It may be wondered if the delayed development of false-belief moral judgements (Lagattuta & Kramer 2022) in children may be attributed not to a fact of development of mental state ascription, but to the capacity to reason about performative moral statements and agent-hood.

This is not to say that morality is transmitted, but to posit a mechanism by which moral knowledge is. Despite the fact that very young children behave prosocially, it is not until they develop the capability to understand and enforce moral and conventional norms that their social interactions reflect morals (Smetana & Yoo 2022: p. 21). Despite this 4-5 year old children still primarily reason that about the emotional outcomes of others in moral scenarios based on their desires whereas older children referred more frequently to rules or the consequences of an action. It is worth noting however that an in task with reduced cognitive-processing demands 4-5 year olds were able to show sensitivity to the influence of rules in predicting the emotions of an individual in a moral scenario. Showing that children as they develop connect psychological evaluation with sociomoral or deontic evaluation

(Lagattuta & Kramer 2022: p. 310).

Samland et al. (2016), Kalish & Cornelius (2007), Wang et al. (2011), have show that children age 5 - 7 don't account for an individual's ignorance of a rule in judging them as wrong for breaking the rule even though children are able to pass false-belief tasks years earlier, typically developing the ability to perform the task between 4 and 5 years of age (Wellman et al. 2001). This suggests that children providing those moral judgements may not do so solely out of a lack of understanding of the mental state and intention of the ignorant rule breaker, but that they may do so as a result of a non-adult like understanding of the mechanism by which moral statements do or do not make those who are not aware of the statement the agents of those states. This may be one factor which contributes to the findings of Cournane & Pérez-Leroux (2020) in which 5 year old children show a non-adult like preference for epistemic uses of *must* in sentences where the flavor is ambiguous, despite receiving more much more deontic input than epistemic (van Dooren et al. 2022). Taking the account provided by this thesis, it is possible that the difficulty with "deontic" modality stems from the complexity of the inferences posited above. In the moral judgement tasks the child must be able to reason whether the individual highlighted ought to[38] be criticised if they fail to behave as though they are they agent of an proposition which the performative asserts they are, if they are not aware that they have been asserted to be as such. In a similar vein the avoidance of the deontic use of modals can be evidence of children's lack of confidence in the multi-step inferences this thesis posits underlie moral statements. Comparing this to epistemic modals which only have the inference about what is compatible with the speakers knowledge (Hacquard 2010), it seems evident that there is a cognitive load difference between "deontic" and epistemic modality.

In summary this thesis takes the position that the semantic contribution of *shall* is circumstantial necessity modality and that it is through performative use that deontic and guaranteed future interpretation. We have seen that this account has interesting implications of questions of metaethics and moral development.

5 Conclusion

In the examination of the facts of performativity in ritual speech this thesis has shown that, through the consideration of this type of data, many insights into performative speech may be made. Navigating the many questions that arise in such an investigation, the present work has provided workable frameworks for thinking about performative utterances which are not solely of the form *first person, present, active.. etc.* The discussions presented here

38 Note here that the use of *ought to* here carries with it another layer of moral reasoning.

have given cause to believe that the behavior associated with the performative utterances be paramount to the characterization of the linguistic phenomena. Centering the account of performative utterances on what they aim to achieve rather than what they tangibly bring into the world, has led to more tangible account of what the utterances do. In fusing the events-based accounts of modality of Hacquard (2010) and of performativity of Eckardt (2012), we have seen not only that modals and performative utterances may be more connected than previously thought, but a detailed account of how it is possible to have quantified subject DPs in utterances without *hereby*, if modals are present, was put forward.

The quantification problem presented is shown to be avoidable when modality is involved. Specifically, the default speech event, which Hacquard (2010) posits, can be the target of the self-referential inference that the event is the ongoing transfer of information of Eckardt (2012), allowing the assertion to be self-referential and therefore performative without encountering the problem of the quantification on the agent of the matrix verb.

This thesis has filled a theoretical gap by investigating the formal mechanisms that may be at play in ritual speech, performative utterances, and modality. It has done so primarily through semantic reasoning but has also made as many connections as possible to philological, philosophical, anthropological, and developmental scholarship. Incorporation of historical data from the ritual corpora of the *Rigveda* and Hittite ritual tablets, has not only enriched the quality of analysis through quantitative analysis, but it also provided catalysts for many of the discussions raised.

References

Alonso-Ovalle, Luis & Paula Menéndez-Benito. 2003. Some epistemic indefinites, .

Alonso-Ovalle, Luis & Paula Menéndez-Benito. 2015. Epistemic indefinites : exploring modality beyond the verbal domain, .

Ambar, Manuela. 1999. Aspects of the syntax of focus in portuguese, .

Anscombe, G. E. M. 1958. Modern moral philosophy. *Philosophy* 33. 1 – 19.

Atran, Scott. 2002. *In gods we trust [electronic resource] : the evolutionary landscape of religion* Oxford scholarship online. Oxford: Oxford University Press.

Austin, J. O, J. L *How to do things with words* William James lectures. Oxford: Clarendon Press.

Bach, Emmon. 1986. The algebra of events. *Linguistics and Philosophy* 9. 5–16. http://dx.doi.org/10.1007/BF00627432.

Bach, Kent & Robert M. Harnish. 1992. How performatives really work: A reply to searle. *Linguistics and philosophy* 15(1). 93–110.

Bering, Jesse. 2005. The evolutionary history of an illusion: Religious causal beliefs in

children and adults. *Origins of the Social Mind. Evolutionary Psychology and Child Development* .

Bianconi, Michele & Elisa M. Vaz Magni. 2022. The survival of the optative in new testament greek. *Journal of Greek Linguistics* .

Blackburn, Simon. 1993. *Essays in quasi-realism*. Oxford University Press.

Boyer, Pascal. 2001. *Religion explained : the evolutionary origins of religious thought* acls humanities e-book. New York: Basic Books.

Brennan, Virginia. 1993. Root and epistemic modal auxiliary verbs, .

Castroviejo, Elena. 2020. *Exclamatives* 1–31. John Wiley Sons, Ltd. http://dx.doi.org/https://doi.org/10.1002/9781118788516.sem020. https://onlinelibrary.wiley.com/doi/abs/10.1002/9781118788516.sem020.

Chomsky, N. 1993. *Lectures on government and binding: The pisa lectures* Studies in generative grammar. Mouton de Gruyter. https://books.google.co.uk/books?id=l08tpkOOdNQC.

Cinque, Guglielmo. 1999. *Adverbs and functional heads: A cross-linguistic perspective*. Oxford University Press.

Clottes, Jean & J. David Lewis-Williams. 1998. *The shamans of prehistory : trance and magic in the painted caves*. New York ; London: Harry N. Abrams.

Cohon, Rachel. 2018. Hume's Moral Philosophy. In Edward N. Zalta (ed.), *The Stanford encyclopedia of philosophy*, Metaphysics Research Lab, Stanford University Fall 2018 edn.

Condoravdi, Cleo & Sven Lauer. 2010. Speaking of preferences: Imperative and desiderative assertions in context, .

Condoravdi, Cleo & Sven Lauer. 2019. Performative verbs and performative acts. *Proceedings of Sinn und Bedeutung, Vol 15 (2011)* 15. 149–164. https://ojs.ub.uni-konstanz.de/sub/index.php/sub/article/view/369.

Copley, Bridget. 2005. *Futurate meanings*. https://repository.upenn.edu/pwpl/vol11/iss1/3.

Cournane, Ailís & Ana Teresa Pérez-Leroux. 2020. Leaving obligations behind: Epistemic incrementation in preschool english. *Language Learning and Development* 16(3). 270–291. http://dx.doi.org/10.1080/15475441.2020.1738233.

Davidson, Donald. 1967. Truth and meaning. *Synthese* 17(1). 304–323. http://dx.doi.org/10.1007/bf00485035.

Della Casa, Romina. 2021. The power of human speech in hittite anatolia, performance and performativity of telipinu's mugawar (cth 324). *Altorientalische Forschungen* 48(1). 65–75. http://dx.doi.org/doi:10.1515/aofo-2021-0004. https://doi.org/10.1515/aofo-2021-0004.

Dickson, D. Bruce. 1990. *The dawn of belief : religion in the upper paleolithic of southwestern europe*. University of Arizona Press: Tucson.

Diesing, Molly & Sally McConnell-Ginet. 2012. How to do things with wands and words: The pragmatics of magic. *available under:*

http://linguistics.cornell.edu/people/upload/DiesingMcCG.pdf .
Dow, James. 2007. A scientific definition of religion. *Anpere* .
Dowty, David R. 1989. On the semantic content of the notion of 'thematic role', .
Drubig, Hans. 2001. On the syntactic form of epistemic modality .
E. Rieken et al. (ed.). 2017. Cth 372 - hymne und gebet an die sonne (Šamaš). https://www.hethport.uni-wuerzburg.de/txhet_gebet/intro.php?xst=CTH%20372&prgr=&lg=DE&ed=E.%20Rieken%20et%20al.
Eckardt, Regine. 2012. Hereby explained: an event-based account of performative utterances. *Linguistics and philosophy* 35(1). 21–55.
Elizarenkova, Tatjana Ja. 1999. *Rigveda*. Nauka.
Feldman, Fred. 1986. *Doing the best we can : an essay in informal deontic logic / fred feldman*. D. Reidel Pub. Co Dordrecht ; Boston.
von Fintel, Kai & Anthony S. Gillies. 2007. An opinionated guide to epistemic modality. In Tamar Gendler & John Hawthorne (eds.), *Oxford studies in epistemology: Volume 2*, 32–62. Oxford University Press.
Frankfurter, David. 2017. Narratives that do things. *Religion: Narrating Religion* 95–106.
Frankfurter, David. 2019. *Chapter 22 spell and speech act: The magic of the spoken word* 608 – 625. Leiden, The Netherlands: Brill. http://dx.doi.org/https://doi.org/10.1163/9789004390751_023. https://brill.com/view/book/edcoll/9789004390751/BP000036.xml.
Frege, Gottlob. 1892. Über sinn und bedeutung. *Zeitschrift für Philosophie und philosophische Kritik* 100. 25–50.
Geach, Peter. 1965. Assertion. *Philosophical Review* 74(4). 449–465. http://dx.doi.org/10.2307/2183123.
Geldner, Karl F, Charles Rockwell Lanman & Johannes Nobel. 1952. *Der rig-veda* Harvard oriental series ; v. 33-36. Cambridge, Mass.: Harvard University Press.
G.G.W Mueller 2002-2023, Ch.W Steitler 2021-2023. 2023. Hethitologie portal mainz. https://www.hethport.uni-wuerzburg.de/HPM/index.php.
Ginzburg, J. & I.A. Sag. 2000. *Interrogative investigations: The form, meaning, and use of english interrogatives* CSLI lecture notes. CSLI Publications. https://books.google.co.uk/books?id=qu8YAQAAIAAJ.
Green, Mitchell. 2021. Speech Acts. In Edward N. Zalta (ed.), *The Stanford encyclopedia of philosophy*, Metaphysics Research Lab, Stanford University Fall 2021 edn.
Grice, H. P. 1975. *Logic and conversation* 41 – 58. Leiden, The Netherlands: Brill. http://dx.doi.org/https://doi.org/10.1163/9789004368811_003. https://brill.com/view/book/edcoll/9789004368811/BP000003.xml.
Griffith, R.T.H. 1889. *The hymns of the rigveda* (The Hymns of the Rigveda v. 1). E. J. Lazarus. https://books.google.co.uk/books?id=ApYRAAAAYAAJ.
Gruber, Jeffrey S. 1975. Performative-constative transition in child language development. *Foundations of Language* 12(4). 513–527. http://www.jstor.org/stable/25000872.

Guterbock, Hans Gustav & Harry Angier Hoffner. 1982. The hittite dictionary of the oriental institute of the university of chicago. *Journal of Biblical Literature* 101. 428.

Hackl, Martin. 1998. On the semantics of "ability attributions", .

Hacquard, Valentine. 2010. On the event relativity of modal auxiliaries. *Natural Language Semantics* 18(1). 79–114. http://dx.doi.org/10.1007/s11050-010-9056-4.

Hare, R. M. 1963. *The Language of Morals*. Oxford University Press. http://dx.doi.org/10.1093/0198810776.001.0001. https://doi.org/10.1093/0198810776.001.0001.

Hare, R. M. 1965. *Freedom and Reason*. Oxford University Press. http://dx.doi.org/10.1093/019881092X.001.0001. https://doi.org/10.1093/019881092X.001.0001.

Hare, R. M. 1981. *Moral Thinking: Its Levels, Method, and Point*. Oxford University Press. http://dx.doi.org/10.1093/0198246609.001.0001. https://doi.org/10.1093/0198246609.001.0001.

Harrod, James. 2014. The case for chimpanzee religion (2014). *Journal for the Study of Religion, Nature and Culture* 8. 8–45. http://dx.doi.org/10.1558/jsrnc.v8i1.8.

Harrod, James B. 2011. A trans-species definition of religion. *Journal for the Study of Religion, Nature and Culture* 5(3). 327–353. http://dx.doi.org/10.1558/jsrnc.v5i3.327. https://journal.equinoxpub.com/JSRNC/article/view/4704.

Hayden, B. 2003. *Shamans, sorcerers, and saints: A prehistory of religion*. Smithsonian. https://books.google.co.uk/books?id=5gVPEAAAQBAJ.

HFR-Team. 2023. Das corpus der hethitischen festrituale: Basiscorpus der festritualtexte. https://www.hethport.uni-wuerzburg.de/HFR/bascorp_idx1.php.

Huddleston, Rodney, Rodney Huddleston & Geoffrey K. Pullum. 2002. *The verb* 71–212. Cambridge University Press. http://dx.doi.org/10.1017/9781316423530.004.

Hume, David. 1739. Treatise of human nature/book 3: Of morals/part 1/section 1 — wikisource, selby-bigge edition of 1888. [Online; accessed 4-May-2023]. https://en.wikisource.org/w/index.php?title=Treatise_of_Human_Nature/Book_3:_Of_morals/Part_1/Section_1&oldid=12359575.

Jamison, Stephanie W. & Joel P. Brereton. 2014. *The rigveda : the earliest religious poetry of india* South Asia research (New York, N.Y.). New York.

Jary, Mark. 2007. Are explicit performatives assertions? *Linguistics and Philosophy* 30. 207–234. http://dx.doi.org/10.1007/s10988-007-9015-9.

Johansson, Ingvar. 2003. Performatives and antiperformatives. *Linguistics and Philosophy* 26(6). 661–702. http://www.jstor.org/stable/25001906.

Jørgensen, Jørgen. 1937. Imperatives and logic. *Erkenntnis* 7. 288–296.

Kalish, Charles W. & Rebecca Cornelius. 2007. What is to be done? children's ascriptions of conventional obligations. *Child Development* 78(3). 859–878. http://dx.doi.org/https://doi.org/10.1111/j.1467-8624.2007.01037.x. https://srcd.onlinelibrary.wiley.com/doi/abs/10.1111/j.1467-8624.2007.01037.x.

Kamp, Hans & U. Reyle. 1993. *From discourse to logic : introduction to modeltheoretic semantics of natural language, formal logic and discourse representation theory* Studies

in linguistics and philosophy ; v. 42. Dordrecht ; London: Kluwer Academic.
Kiss, Börge, Daniel Kölligan, Francisco Mondaca, Claes Neuefeind, Uta Reinöhl & Patrick Sahle. 2019. It takes a village: Co-developing vedaweb, a digital research platform for old indo-aryan texts. In *Twintalks@dhn*, .
Kloekhorst, Alwin. 2007. *Etymological dictionary of the hittite inherited lexicon*. Leiden, The Netherlands: Brill. https://brill.com/view/title/12608.
Knowlton, Tyler, Tim Hunter, Darko Odic, Alexis Wellwood, Justin Halberda, Paul Pietroski & Jeffrey Lidz. 2021. Linguistic meanings as cognitive instructions. *Annals of the New York Academy of Sciences* 1500(1). 134–144. http://dx.doi.org/https://doi.org/10.1111/nyas.14618. https://nyaspubs.onlinelibrary.wiley.com/doi/abs/10.1111/nyas.14618.
Kohlberg, L. 1958. *The development of modes of moral thinking and choice in the years 10 to 16*. University of Chicago. https://books.google.co.uk/books?id=StsQAQAAIAAJ.
Kratzer, Angelika. 1981. *The notional category of modality* 38–74. Berlin, Boston: De Gruyter. http://dx.doi.org/doi:10.1515/9783110842524-004. https://doi.org/10.1515/9783110842524-004.
Kratzer, Angelika. 1991. *Modality* 639–650. Berlin • New York: De Gruyter Mouton. http://dx.doi.org/doi:10.1515/9783110126969.7.639. https://doi.org/10.1515/9783110126969.7.639.
Krifka, Manfred. 1999. Quantifying into question acts. *Natural Language Semantics* 9. 1–40.
Lagattuta, Kristin Hansen & Hannah J. Kramer. 2022. *Theory of mind and moral cognition - developmental changes in integrating mental states and moral judgements* chap. 19. New York: Routledge. http://dx.doi.org/https://doi.org/10.4324/9781003047247. https://www.taylorfrancis.com/books/edit/10.4324/9781003047247/handbook-moral-development-melanie-killen-judith-smetana.
Landman, Fred. 2000. *Events and plurality: The jerusalem lectures*. Kluwer Academic Publisher.
Leroi-Gourhan, André. 1968. The evolution of paleolithic art. *Scientific American* 218(2). 58–73.
Macleod, Mindy & Bernard Mees. 2006. *Runic amulets and magic objects*. Boydell amp; Brewer.
McClenon, James. 1997. Shamanic healing, human evolution, and the origin of religion. *Journal for the scientific study of religion* 36(3). 345–354.
Oxford English Dictionary. 2023. shall v. https://www.oed.com/view/Entry/177350?rskey=xxti4e&result=2&isAdvanced=false#eid.
Parsons, Terence. 1990. Events in the semantics of english: A study in subatomic semantics, .
Portner, P. 2009. *Modality* Modality. OUP Oxford. https://books.google.co.uk/books?id=VPgTDAAAQBAJ.
Portner, Paul. 2004. The semantics of imperatives within a theory of clause types. *Proceed-*

ings from Semantics and Linguistic Theory 14. 235.
Portner, Paul. 2007. Imperatives and modals. *Natural language semantics* 15(4). 351–383.
Puhvel, J. 1984. *Hittite etymological dictionary* (Hittite Etymological Dictionary v. 8). Mouton. https://books.google.co.uk/books?id=NbtNAQAAIAAJ.
Reichenbach, Hans. 1966. *Elements of symbolic logic*. New York : London: Free Press ; Collier-Macmillan.
Rizzi, Luigi. 1997. The fine structure of the left periphery. *Haegeman* http://dx.doi.org/10.1007/978-94-011-5420-8_7.
Ross, J.R. 1970. On declarative sentences. In Roderick A Jacobs & Peter S Rosenbaum (eds.), *Readings in english transformational grammar*, Waltham, Mass ; London: Ginn.
Rossano, Matt J. 2006. The religious mind and the evolution of religion. *Review of General Psychology* 10(4). 346–364. http://dx.doi.org/10.1037/1089-2680.10.4.346. https://doi.org/10.1037/1089-2680.10.4.346.
Rullmann, Hotze, Marianne Huijsmans, Lisa Matthewson & Neda Todorović. 2022. Why Plain Futurates are Different. *Linguistic Inquiry* 54(1). 197–208. http://dx.doi.org/10.1162/ling_a_00435. https://doi.org/10.1162/ling_a_00435.
Russell, Bertrand. 1905. II.—ON DENOTING. *Mind* XIV(4). 479–493. http://dx.doi.org/10.1093/mind/XIV.4.479. https://doi.org/10.1093/mind/XIV.4.479.
S. Görke (ed.). 2014. Das ritual des zarpiya aus kizzuwatna gegen seuche im land (cth 757). https://www.hethport.uni-wuerzburg.de/txhet_besrit/intro.php?xst=CTH%20757&prgr=&lg=DE&ed=S.%20G%C3%B6rke.
Samland, Jana, Marina Josephs, Michael R. Waldmann & Hannes Rakoczy. 2016. The role of prescriptive norms and knowledge in children's and adults' causal selection. *Journal of experimental psychology. General* 145 2. 125–30.
Searle, John R. 1989. How performatives work. *Linguistics and Philosophy* 12. 535–558.
Searle, John R & Daniel Vanderveken. 1985. *Foundations of illocutionary logic*. Cambridge: Cambridge University Press.
Smetana, J.G & H.N Yoo. 2022. *Development and variation in moral and social-conventional judgements - a social domain theory approach* chap. 2. New York: Routledge. http://dx.doi.org/https://doi.org/10.4324/9781003047247. https://www.taylorfrancis.com/books/edit/10.4324/9781003047247/handbook-moral-development-melanie-killen-judith-smetana.
Strawson, P. F. 1950. III.—ON REFERRING. *Mind* LIX(235). 320–344. http://dx.doi.org/10.1093/mind/LIX.235.320. https://doi.org/10.1093/mind/LIX.235.320.
Sturgeon, Nicholas. 1984. Moral explanations. In David Copp & David Zimmerman (eds.), *Morality, reason and truth*, 49–78.
Sutton, Nick. 2016. Yoga and hinduism. https://youtu.be/Gagk0KOPuPc.
Szabolcsi, Anna. 1982. Model theoretic semantics of performatives. In Ferenc Kiefer (ed.), *Hungarian general linguistics*, Benjamins.
Tambiah, Stanley Jeyaraja. 1968. The magical power of words, .

Tarski, Alfred. 1933. Pojęcie prawdy w językach nauk dedukcyjnych, .

Tenny, Carol & Peggy Speas. 2003. Configurational properties of point of view roles http://dx.doi.org/10.1075/la.57.15spe.

Tomasello, M. & J. Call. 1997. *Primate cognition*. Oxford University Press. https://books.google.co.uk/books?id=CUC1kQEACAAJ.

Torres, Pedro, Jorge Díaz, Maximiliano Arce, Patricio Silva, Pablo Mendoza, Pablo Lois, Alfredo Molina-Berríos, Gareth I. Owen, Verónica Palma & Vicente A. Torres. 2017. The salivary peptide histatin-1 promotes endothelial cell adhesion, migration, and angiogenesis. *The FASEB Journal* 31(11). 4946–4958. http://dx.doi.org/https://doi.org/10.1096/fj.201700085R. https://faseb.onlinelibrary.wiley.com/doi/abs/10.1096/fj.201700085R.

Truckenbrodt, H. 2009. *Performatives and agreement. ms*. Humboldt University, Berlin.

Urbanová, Daniela & Pierluigi Cuzzolin. 2016. Some linguistic and pragmatic remarks on the tabellae defixionum. *Journal of Latin Linguistics* 15(2). 313–345. http://dx.doi.org/doi:10.1515/joll-2016-0011. https://doi.org/10.1515/joll-2016-0011.

van Dooren, Annemarie, Anouk Dieuleveut, Ailís Cournane & Valentine Hacquard. 2022. Figuring out root and epistemic uses of modals: The role of the input. *Journal of Semantics* 39(4). 581–616. http://dx.doi.org/10.1093/jos/ffac010.

Vanderveken, Daniel. 1990. *Meaning and speech acts*. Cambridge: Cambridge University Press.

VedaWeb. 2023. Vedaweb, online research platform for old indic texts. https://vedaweb.uni-koeln.de/.

Vincenzo's Plate. 2022. Eating the best street food in naples italy for 24 hours. https://youtu.be/Q3EGPHEmb1s?t=609.

Wang, Fei, Liqi Zhu & Kan Shi. 2011. How do children coordinate information about mental states with social norms? *Cognitive Development* 26(1). 72–81. http://dx.doi.org/https://doi.org/10.1016/j.cogdev.2010.09.002. https://www.sciencedirect.com/science/article/pii/S088520141000064X.

Wellman, Henry M., David R. Cross & Julanne Watson. 2001. Meta-analysis of theory-of-mind development: the truth about false belief. *Child development* 72 3. 655–84.

Westmoreland, Robert Ralph. 1998. Information and intonation in natural language modality.

Wheelock, Wade T. 1982. The problem of ritual language: From information to situation. *Journal of the American Academy of Religion* 50(1). 49–71. http://www.jstor.org/stable/1462155.

Winkelman, MJ. 1990. Shamans and other margicoreligious healers - a cross-cultural-study of their origins, nature, and social transformations. *Ethos (Berkeley, Calif.)* 18(3). 308–352.