Covert Modals in Root Contexts

by

Despina Oikonomou

MA, University of Crete (2010)

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Signature redacted

Author ............... Department of Linguistics and Philosophy

Signature redacted

Certified by .................. September 9, 2016

Sabine Iatridou
Professor of Linguistics
Thesis Supervisor

Signature redacted

Accepted by ........................................... September 23, 2016

David Pesetsky
Professor of Linguistics, Department Head
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Abstract

In this thesis, I examine two related constructions, Imperatives and Greek Root Subjunctives. I argue that Imperatives and Root Subjunctives should be studied in parallel, as this comparison reveals their individual properties better.

The first puzzle that I address is the known ambiguity of these constructions between a possibility and a necessity reading. I provide evidence in favor of an existential analysis of these constructions and I argue that the necessity reading can be derived as an Implicature by exhaustifying over focus alternatives. This also allows us to better understand the prosodic differences between Imperatives and Root Subjunctives which convey permission on the one hand, and Imperatives and Root Subjunctives which convey command/request on the other hand.

Furthermore, by treating Imperatives on a par with other Root constructions we can reformulate the question regarding the core characteristics of these constructions. We observe that both Imperatives and Root subjunctives have a covert bouletic modal operator with performative character. The fact that these constructions share these properties not only in Greek but also cross-linguistically is the second puzzle that we want to explain. I argue that we can account for these commonalities, if we analyse the Imperative as another subvariety of Subjunctive mood. Under this view, Imperatives and Root Subjunctives are treated as moodPs with a [+SUBJ] feature which will require the insertion of a modal operator with certain properties on top of the mood phrase.

Further issues regarding the differences between the two constructions concerning their syntax and semantics are addressed showing that despite their similarities the two constructions should not be treated as identical. Finally, we discuss some deviating patterns which look like exceptions but in fact they provide further evidence for the present analysis.

Thesis Supervisor: Sabine Iatridou
Title: Professor of Linguistics
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Chapter 1

Introduction

This thesis explores root constructions which appear to have a modal interpretation without the presence of an overt modal operator. In particular, we will look at the syntax and the semantics of two constructions which give rise to the same kind of modal interpretation when they are found in so-called ‘root’ (unembedded) contexts. The first construction is the well-known Imperative, like the English sentence in (1a) and the Greek one in (1b), which, depending on the context, can be interpreted as a command/request/permission:

(1)    a. Open the window!    \textit{English}
      b. Anikse to parathiro!    \textit{Greek}
          Open.IMP the window!
          ‘Open the window!’

Similarly to the Imperative, subjunctives in Greek give rise to a command/permission reading when they are used in an unembedded environment like the one in (2):

(2)    Na aniksis to parathiro.
      \textsc{subj} open.2SG the window
      ‘Open the window!’

In this work, I make two theoretical proposals around which the discussion evolves. First, I argue that both Imperatives and Root Subjunctives involve a modal operator with the same properties; it is a bouletic modal expressing the Speaker’s desires. Crucially, however, I argue that this modal is
not an integral part of the Subjunctive or the Imperative form. Rather, I treat Imperatives and Root Subjunctives as being subvarieties of a general mood-Phrase characterized as subjunctive. The modal operator combines with these forms to generate the desired interpretation. Secondly, I argue that the modal operator involved both in Imperatives and Root Subjunctives has existential force and that the stronger readings (commands/requests) arise as an Implicature via a strengthening mechanism.

There are long-standing questions regarding the Imperative constructions that we will reconsider here by investigating them on a par with Root Subjunctives. Where does the meaning of Imperatives come from? Is there a modal operator in the semantics or the “directive” force is only due to their special pragmatic function? This is one of the core questions in the literature of Imperatives and still an open debate.

Broadly, we can distinguish among two types of analyses; According to the first one, Imperatives involve no modal operator in their semantics and their ‘directive’ meaning comes from the pragmatics, from the special function imperative speech act has. This is referred to as the minimal approach because there is no modal operator in the semantics and its directive interpretation is accounted for in a dynamic pragmatic framework. This analysis is defended in a series of works by Paul Portner (Portner (2004a), (2007), (2012)) and more recently by Roberts (2015a,b), Starr (2011), von Fintel and Iatridou (2015). The second approach takes Imperatives to be modalized propositions and I will refer to this approach as the modal approach. Under this view, the Imperative contains a modal which is responsible for the command/request reading we get in Imperatives. Magdalena Kaufmann has developed, in a series of works (Schwager (2006), Schwager (2005), Kaufmann (2012), Kaufmann (2016)), an analysis along these lines arguing that Imperatives involve a universal modal. Other modal approaches include Han (2000), Condoravdi and Lauer (2012), Grosz (2009, 2011, 2012).

The title of this dissertation already suggests the direction that I will take in this debate. I will argue that there is a modal operator present in the semantics of both Imperatives and Root Subjunctives. In Chapter 2, I will provide evidence for this via its interaction with other quantificational operators. However, as it will turn out, I will argue that this modal operator is not part of the semantics of the Imperative form itself, that is, it is not an ingredient of the Imperative, but it is inserted in order to satisfy the properties of the Imperative or the Subjunctive proposition. In
this sense, our analysis shares with the minimal approach the idea that the imperative form itself does not involve a modal operator but it also shares with the modal approach the idea that there is a modal operator in the semantics of Imperative or Subjunctive propositions. It is just that the modal operator comes on top of the Imperative and the Subjunctive, which as I will argue in Chapter 4 represent mood phrases.

Turning now to the properties of the modal operator involved in root contexts three major questions arise:

i. What is the quantificational force of this operator?

ii. What is the flavor of the modality (the properties of the modal base and the ordering source) and finally

iii. Why does the modal operator have the same properties both in Imperatives and Root Subjunctives?

Chapter 2: The force of the operator

The first puzzle, the quantificational force of the modal, arises from the fact that both Imperatives and Root subjunctives can be used to express command/request or to provide permission. In the first case, it is suitable to paraphrase with a universal modal to capture the intuition that the sentence expresses a requirement. In the second case, it is appropriate to paraphrase with an existential modal since the utterance only conveys a possibility:

(3) a. The boss tells his employee: Open the box!
   b. A mother tells her kids who look at a wrapped gift: Open the box.

This ‘ambiguity’ in the force of the modal operator can be explained in various ways. In general, we take modal operators to have a dual character; that is, we have a split between existential modals and their universal counterparts. However, as Deal (2011) discusses, there are cases of modal operators which seem to lack a dual. In other words, they do not have a necessity and a possibility counterpart but they can express both necessity and possibility. The case of Imperatives and Root Subjunctives seems to fall into this category since they can express both command/request
(strong reading) and permission (weak reading). Kratzer (2012) points to three different possible alternatives to account for the interpretation of such non-dual modals.

i. One possible hypothesis is that they involve a possibility modal which can be strengthened to encode necessity.

ii. The second possibility is that we are dealing with a necessity modal which can be weakened to encode possibility in some environments.

iii. Finally, Kratzer points to a third alternative that the operator is neither universal nor existential but instead is a degree expression covering the upper end of a scale of degrees or probabilities or preferences (upper end degree modals).

Of course, there is a fourth possibility to account for modals which can convey both possibility and necessity, namely, that they are truly ambiguous between an existential and a universal interpretation. Grosz (2009) for example, argues in favor of such a hypothesis for Imperatives.

Of all these four possibilities here, I will argue in favor of the first one suggesting that in Imperatives and Root Subjunctives there is a possibility modal which lacks a necessity counterpart and therefore it can get a strengthened necessity interpretation via the mechanism of exhaustification over alternatives. This will be the topic of Chapter 2, where I will provide evidence not only that there is a modal operator in the semantics but also that this operator is existential. Having shown this, I will develop an analysis for the derivation of the stronger readings (commands/requests, etc) as an Implicature derived by considering certain focus alternatives.

**Chapter 3: Prosody and meaning**

In chapter 3, I will show that the prosody is a critical factor determining whether an Imperative or a Root Subjunctive in Greek is to be understood as conveying permission or requirement. I will show that in both languages, the strong reading is derived by having broad-focus intonation on the imperative/subjunctive forms whereas permissions are derived when there is stress on the verb. In addition, we will be able to explain the ‘ambiguity’ of root subjunctive questions by the same reasoning of focus-related inferences. As I will show, polar root subjunctive questions have a possibility interpretation, and a necessity interpretation arises only when a constituent is F-marked.
Turning now to the second puzzle of what exactly the properties of the modal base and the ordering source of this modal are, we have a dual task. The first one is to observe the distribution and the interpretation of Imperatives and Root Subjunctives and decide what exactly their meaning is. This is not an easy task, something that is also evident from the different proposals which are present in the literature. Although everybody seems to agree that Imperatives have a priority character (the term priority was introduced by Portner (2000) as a cover term for root modals with a bouletic, deontic or teleological conversational background), there is disagreement as to whether the modal in Imperatives can be any sort of priority modal (Schwager (2006)/Kaufmann (2012)) or whether it is a bouletic modal (Condoravdi and Lauer (2012)).

In line with Condoravdi and Lauer (2012), I will take Imperatives but also Root Subjunctives to always have a bouletic interpretation, that is, I will assume that they always convey that the prejacent is compatible with the Speaker’s desires. As I will discuss in detail in Chapter 4, the notion of desire is a rather complicated notion and we need to figure out what exactly we mean by saying that the prejacent is consistent with the Speaker’s desires. The bouletic modal in Imperatives as well as in other root constructions is a special one in that it is always performative. We discuss two accounts of performativity; Condoravdi and Lauer (2012) and Kaufmann (2012, 2016). Both of them make reference to the fact that the operator is action-related either via its meaning (C&L 2012) either via the presuppositions it carries. This raises some questions regarding the performative character of non-action related uses of imperatives such as wishes or past imperatives (cf. Mastop (2011)). Although, we derive no conclusion regarding the source of performativity, it will become clear that this should not be associated to a particular clause type or construction. On the contrary, the hope is that we can derive it from the special meaning that this covert modal operator gets in Root environments.

The second section of this chapter attempts to answer a different question, namely why not only Imperatives but also Root Subjunctives (and other root constructions cross-linguistically) have the same sort of bouletic flavor. This question didn’t arise for the previous analyses because they were concerned solely with Imperative forms and so there was an assumption that there is a special meaning or function for the Imperative form. However, by considering root subjunctives as well as
root infinitival forms cross-linguistically, we observe that the covert modals have the same flavor in these contexts. Therefore, the answer cannot be that it is something special about Imperatives that they convey a bouletic interpretation and they have a performative character, because root subjunctives and root infinitives to the extent that they are available in languages convey the same sort of modality. Instead, if we were to make a generalization it would be that covert modals in root contexts convey a performative bouletic interpretation. Why is this so?

I argue that Imperatives and Root subjunctives are subvarieties of the general category of verbal subjunctive mood. The meaning of the modal operator involved in Imperatives and Root Subjunctives will be shown to be dependent on the requirements created by the Subjunctive mood. For this, I will follow Villalta’s (2008) analysis of Subjunctive mood as positing a requirement for a non-null ordering source. This requirement, paired with the syntactic position of the modal operator which merges above moodP, and therefore above TP, derives the right properties for the modal operator in these root constructions. In particular, building on Hacquard’s (2006/2009) analysis, I show that the modal base of the operator in root environments can only be epistemic/doxastic since, as I argue, the modal base is relativized to an individual anchored to the Perspective center (PC). This property combined with the requirement of the imperative/subjunctive mood provides an explanation for the doxastic character of the modal base and the bouletic character of the ordering source.

Of course, treating root subjunctives as being embedded under a covert modal operator doesn’t come as a big surprise since we find the same subjunctive forms being embedded under all sort of overt operators (bouletic, deontic, etc.). But treating Imperatives as being embedded under an operator raises the question of why we don’t find Imperatives in the same contexts or at least in a subset of environments which overtly embed subjunctives. This problem is discussed in Chapter 5, along with other differences between Imperatives and Root Subjunctives in Greek.

Chapter 5: Differences between Imperatives and Root Subjunctives

The two core claims of this thesis are i) that the force of the modal operator in Imperatives and Root Subjunctives is existential and ii) that both forms represent subvarieties of the general subjunctive mood and that a modal merges on top of the moodP to satisfy the subjunctive-mood requirements. Yet, despite the general overlap between Imperatives and Root Subjunctives, there are also differ-
ences between the two of them and Chapter 5 comes to discuss these differences.

The first difference concerns the restricted embeddability of Imperatives which I mentioned in the previous section. I will argue that this is a syntactic restriction of the Imperative which due to a special [+ADDR] feature that the Imperative mood has and needs to be in local agreement with a [+ADDR] feature on the speech act head. In addition to this restriction, I discuss the incompatibility of the imperative form with negation in Greek (Rivero & Terzi (1994), Han (2000), Zeijlstra (2006)) arguing that it is also a syntactic issue due to a blocking effect between the verb and the mood head. As I show in Subjunctives the verb does not move to mood, so there is no interaction with the negation. Finally, I address the issue of the lack of Imperative questions as opposed to the availability of matrix subjunctive questions and I suggest that it is also due to the addressee restriction posited by the mood-head.

Aside from the syntactic distributional differences between Imperatives and Root Subjunctives in Greek, we also find semantic differences between them. These are discussed in the second part of Chapter 5. I show that Imperatives, as opposed to Subjunctives, in Greek cannot be used for wishes arguing that this is due to a presuppositional restriction in Greek Imperatives that the prejacent must be under the control of the Addressee. I also discuss other differences between root subjunctives and imperatives that stem from independent properties not related to the meaning of the modal operator.

Chapter 6: Deviating patterns

In the last Chapter, we return to the issue of the force of the modal operator involved in Imperatives and Root Subjunctives. I show that Imperatives and Root Subjunctives can combine in Greek with two quantificational adverbs, neither of which expresses a possibility modal. The first one is a universal quantificational adverb and the second is the comparative better. I discuss their meaning and I conclude that they don’t challenge the existential analysis and, in addition, they present evidence in favor of the dissociation of the modal operator from the Imperative and the subjunctive form.

Finally, I present two deviating patterns in which an Imperative doesn’t convey a bouletic interpretation. The first one is our well-known conjunction of Imperatives and Declarative (IaDs) which gives rise to a conditional interpretation. I analyse these as containing an uninterpretable
mood-feature overwritten by the feature in the conditional, therefore cancelling the requirement of
the Imperative for an operator with a non-null ordering source. The second environment is one that
gives rise to a totally different interpretation, namely that the content of the prejacent is difficult
to be fulfilled. I take this as further evidence that Imperatives, just like Root Subjunctives, are just
mood-Phrases with certain requirements. Moreover, showing that there is no performative effect in
these environments confirms our original account of performativity as stemming from the bouletic
character of the modal. The moment the modal does not anymore have a bouletic interpretation,
Imperatives do not have a performative effect.

To some extent, the chapters can be read independently. The claim that Imperatives and Root
Subjunctives are only mood-Phrases with the modal operator merging on top of them is indepen-
dent from the claim that the quantificational force is existential. I will start the discussion by
discussing the existential force of the operator taking it as given that there is a bouletic modal in-
volved. Only in chapter 4 will I explain why this operator is bouletic and why it has a performative
effect.

The ideas developed here are not a reconciliation among different approaches but they have
greatly benefited from previous works, especially of Paul Portner, Magdalena Kaufmann and Con-
doravdi & Lauer. In some sense, it borrows ideas from all of these approaches. On the one hand,
I treat Imperatives and RS as not containing any modal since they are just mood-phrases, in this
sense the approach shares the same insight with Portner's minimal approach. On the other hand,
however, I argue that there is a modal operator in the semantics, and in this sense I follow Kauf-
mann who argues in favor of a modal approach to Imperatives. Finally, I have followed Condoravdi
& Lauer regarding the bouletic character of the modal.

The fact that I take the literature on Imperatives as a starting point is practical because there
is a considerable understanding of Imperative constructions, but there is very little written about
Root Subjunctives or other root constructions which convey a modal interpretation. Also, in some
cases, the term Imperative is used across-the-board for root constructions which seem to have a
"directive" interpretation. The goal of this work is also to show that not all root constructions
conveying command/permission should be treated the same like Imperatives, but there should be
definitely a comparison between the two in order to explain why they share the properties they share
and in what respects they are different. I believe that by comparing Imperative with other similar
constructions cross-linguistically we can form a better understanding not only of Imperatives but of root modality and performativity in general.
Chapter 2

Imperatives are existential modals: Deriving the strong reading as an Implicature

2.1 Introduction

The variety of meanings found in Imperatives has been a long-lasting puzzle in the literature (Wilson and Sperber (1988), Han (2000), Schwager (2006)/Kaufmann (2012), Portner (2007), Grosz (2009), Condoravdi and Lauer (2012), von Fintel and Iatridou (2015)). The same Imperative can get different interpretations depending on the context, as shown in (1a-e):

(1) Sign this paper

a. Command/request: The chief says to the employee.
b. Plea: A child begs his mother for a school document that allows participation in school trips.
c. Advice: As an answer to the question ‘What can I do to get out of prison?’
d. Permission: O.k. sign this paper, but you should know that I don’t agree...
e. Indifference\(^1\): Sign this paper, burn this paper, eat this paper... I don’t really care...

Whereas command, request, advice can be explained by introducing different conversational back-

\(^1\) von Fintel & Iatridou (2015) introduce the cover term acquiescence for permission and indifference readings. As I will discuss later I distinguish indifference from permission.
grounds (Schwager (2006), Portner (2007)), accounting for the permission reading always requires some additional assumptions. Intuitively, command, request, and advice pattern together in that they seem to require of the Addressee to take action. On the contrary, permission and indifference is different in that it allows the addressee to take action.

So far, the general trend in explaining this discrepancy is by suggesting a general mechanism for the derivation of command, request, advice and then a special mechanism for the derivation of permission. In this work, I go the opposite way; I argue that Imperatives are modalized propositions (Schwager (2006)/Kaufmann (2012)) which involve an existential modal and therefore the permission interpretation is derived for free. The universal reading is derived on the basis of two factors; i) lack of a stronger scalar counterpart as opposed to overt modals (Deal 2011) and ii) strengthening via an Implicature derived in the presence of certain Focus Alternatives. Independent evidence for the existential character of the operator in Imperatives is provided by scope interactions of the operator with other quantificational elements.

The following section discusses the present analyses to Imperatives focusing on the way permissions are derived under each framework. In section 3, I provide an analysis of Imperatives as involving an existential modal and I provide evidence for this from scope ambiguities. In Section 4, I show how we can derive the strong reading as an Implicature and in Section 5, I discuss the relevance of prosody for the derivation of the stronger meaning as well as the correlates between prosody and interpretation.

### 2.2 Previous approaches to Imperatives

In this section, I focus on the way the different analyses explain the variety of interpretations in Imperatives and mostly the distinction between permissions and the rest of interpretations. This discussion will be necessary in order to test the predictions that these theories make in view of the scope data presented in section 4.

#### 2.2.1 Minimal Approach

The essence of a minimal approach to Imperatives is that there is no operator in the semantics of an imperative clause (Portner (2004a, 2007), Pak et al. (2008), Mastop (2005), von Fintel and
Iatridou (2015), Starr (2011), Roberts (2015b)). An imperative clause denotes a property or a proposition. The ‘directive’ force of Imperatives comes from the pragmatics. Here there are differences among the minimal approaches about the exact mechanism that is responsible for turning a property/proposition into a ‘directive’. Portner in a series of works (2004, 2007, 2014) has developed an analysis in which Imperative is a different clause type (different from Declaratives and Interrogatives) and its function is to update the Addressee’s To-Do-List (we will come to explain this shortly). Starr (2011), who also argues for a minimal approach, has an entirely different mechanism which is based on speaker’s preferences. Von Fintel and Iatridou (2015) largely follow a Portnerian analysis but they suggest some amendments that will be critical for the discussion to follow. In the following, I will discuss Portner’s analysis.


Portner (2004, 2007) suggests that the Imperative is a different clause type along with Declaratives and Interrogatives. Following the Stalnakerian notion of Common Ground (CG), Declaratives serve as updates of the information in the CG. Portner suggests a parallel function for Imperatives; Imperatives add properties to another stack dubbed To-Do-List for each Addressee (A). We will talk in detail in Chapter 4 about what exactly this type of analysis achieves in capturing the performative character of Imperatives. For this section however, it is enough to understand the exact meaning and the pragmatic function of the Imperative according to Portner.

The denotation of the Imperative is just a property which holds of the Addressee, as shown in (2) for an Imperative clause like ‘Open the window.’

(2) **Imperative is a property restricted to the Addressee:**

\[
[[\text{Open the window}]] = \lambda w. \lambda x: x = \text{Addressee}. x \text{ opens the window in } w.
\]

Similarly to the way in which a declarative proposition adds its content to the Common Ground (CG), and Interrogatives to the Question Stack (Q), a successfully uttered Imperative adds its content to A’s To-Do-list (T). In (3) I provide formalization of this function suggested in Portner (2007):

(3) **Pragmatic Function of Imperatives**
a. The To-Do-list function \( T \) assigns to each participant \( a \) in the conversation a set of properties \( T(a) \)

b. The canonical discourse function of an imperative clause \( \phi_{imp} \) is to add \( \[\phi_{imp}\] \) to \( T(\text{addressee}) \). Where \( C \) is a context of the form \( (CG,Q,T) \):

\[
C + \phi_{imp} = (CG,Q,T[\text{addressee}]\langle T(\text{addressee})\rangle \cup \[\phi_{imp}\])
\]

In addition, the To-Do-list imposes an ordering on the worlds compatible with the \( CG \) as shown in (4a). The Agent’s commitment principle in (4b) guarantees that the Addressee will try to fulfill as many properties as he can from his To-Do-List.

(4) **Ordering pragmatics for imperatives**

a. **Partial ordering of worlds:** For any \( w_1, w_2 \in \cap CG \) and any participant \( i, w_1 <_i w_2 \)

iff for some \( P \in T(i), P(w_2)(i) = 1 \) and \( P(w_1)(i) = 0 \), and for all \( Q \in T(i): \) if \( Q(w_2)(i) = 1 \), then \( Q(w_1)(i) = 1 \).

b. **Agent’s commitment:** For any participant \( i \), the participants in the conversation mutually agree to deem \( i \)'s actions rational and cooperative to the extent that those actions in any world \( w_1 \in \cap CG \) such that \( w_1 < w_2 \).

Now that we have set up the basic components in Portner’s analysis we can turn to the question of how the different interpretations of Imperatives are accounted for in this framework. Portner compares the Common Ground with the modal base and the To-Do-List with the ordering source. The difference is that the modal base and the ordering source introduced in Kratzer (1981) can be taken to be part of the semantics of the modal operator whereas the \( CG \) and the To-Do List operate at the pragmatic level. This parallelism allows Portner (2007) to make a direct comparison between what he calls priority modals and Imperatives. In a similar fashion that the conversational backgrounds restrict the interpretation of the ordering source in modals, imperatives depend on conversational backgrounds in the context to get their bouletic, deontic or teleological flavor. The exact mechanism that this is achieved in the framework of the To-Do List is described in Portner (2007) and it is not relevant here. What matters is that in the To-Do List every property that is added will be defined for its flavor depending on the conversational background.
Crucially, permission readings cannot be explained simply by reference to conversational backgrounds. Portner acknowledges this problem and he suggests a special treatment of permissions in Portner (2010). The idea in a nutshell is that permission readings arise from conflicting requirements on the To-do List (Portner 2009, 2010). Building on the general idea that permissions arise "in the context of a countervailing prohibition" (Kamp (1979)), Portner argues that the context in which an imperative is interpreted as a permission typically contains a prohibition. So A's To-Do List before the speaker utters the imperative in (5) should be the one in (6):

(5)  Take an apple! (invitation)

(6)  To-Do-List of addressee before uttering (5):
    a.  A doesn’t take an apple.
    b.  A cleans the kitchen, etc.

After uttering (5), the property ‘take an apple’ is added to A’s To-Do List and we get the updated version in (7):

(7)  To-Do List of addressee after uttering (4):
    a.  A doesn’t take an apple
    b.  A cleans the kitchen
    c.  A takes an apple, etc.

The new To-Do List is inconsistent and therefore offers a choice to take or not take an apple. By the ordering introduced in (4a) the worlds in which the Addressee takes an apple and the worlds in which he doesn’t take an apple are equally good, therefore there is no preference over the one or the other option. We could imagine that indifference readings are derived in a similar fashion. Usually, indifference readings come about when a speaker lists contradictory imperatives as in the example in (1f). We could then imagine that by adding all these, we get an inconsistent To-Do List and the Addressee has the right to choose any of these properties to fulfill. One question that arises is whether the Addressee has to fulfill any of the contradictory imperatives. What for example, if he gives the letter to somebody? This sounds fine. Or we could imagine other possibilities,
consider a modified example from the literature and the Addressee’s answer in (8):

(8)  a. A: Hide this letter, burn this letter, post this letter... I don’t care...
b. B: o.k. I’ll upload it on facebook!
c. A: Even this... I don’t care. / Not this! This is the only thing I wouldn’t like.

Both answers are felicitous. Therefore it is possible that the Addressee can just ignore all the inconsistent imperatives but this is not what we derive by applying Portner’s mechanism; The Addressee is offered the possibility to choose among inconsistent actions but not to ignore them altogether. There is another problem discussed in von Fintel & Iatridou concerning conflicting Imperatives readings. Below I discuss the problem and their suggested amendment to Portner’s analysis.

von Fintel & Iatridou (2015)

von Fintel & Iatridou notice that in many cases conflicting requirements do not suggest that there is a possibility of choosing among them. To provide a different example if I have a class at 2.00 that I’m committed to attend and at the same time I have committed myself to go with my sister to the doctor, I’m in trouble. The fact that there are two conflicting requirements in my To-Do-List doesn’t offer me the right to choose among the two without facing the consequences of not fulfilling one of the two. Portner (2010), himself, also acknowledges a similar problem in the following example:

(9) Bring beer to the party tomorrow! Actually, bring wine!

The imperatives in (9) are inconsistent but they do not provide a real choice to the Addressee as to whether he brings wine or beer. In order to solve this problem Portner suggests that in order to induce a choice among conflicting requirements the Imperative has to be marked as being permission. In other words the default is that Imperatives are interpreted as requirements but in some cases imperatives can be marked (by intonation, or by an overt expression like if you want, or by a morpheme in some languages) as permissions. As we will see, in the next section this idea is quite similar to the one developed by Kaufmann in Schwager (2006)/Kaufmann (2012) for the
permission uses.

This idea is criticized in von Fintel & Iatridou (2015) as abandoning the core component of the minimal approach. Indeed, since an additional requirement/permission ‘feature’ is necessary, the approach largely loses its advantage over analyses that assume a covert operator. Von Fintel & Iatridou propose an amendment to Portner’s analysis. They keep everything intact but they suggest that the property is not added automatically to the Addressee’s To-DoList but rather “it is put on the table as a possible addition to the Addressee’s To-Do List” (see also Condravdi & Lauer (2012) on this point). As they say the level of endorsement can vary in different contexts. The default case is that Speakers fully endorse what they say. However, they provide examples even in declaratives in which the speaker clearly is not entirely sure whether the information he provides is true (pace Farkas and Bruce (2009), Malamud and Stephenson (2015)). For example, a rising intonation or a cleft can signal uncertainty on part of the speaker as in (10):

(10) John left, didn’t he?

Similarly, Imperatives can express lower endorsement via a raising intonation or by clearly stating that the speaker has no preference (“I don’t care.”). At this point it’s worth mentioning that Portner (2015) discusses weak and strong Imperatives in the same spirit and suggests that intonation is critical for the level of commitment of the Speaker. I will discuss this in the next chapter, after I will have introduced my analysis and the importance of intonation. I will show that we can have a high level of commitment and yet get a permission reading. Summarizing the minimal approach, we should keep in mind that it keeps the semantics of the Imperatives very minimal and develops a pragmatic mechanism which is responsible for the function of Imperatives, as suggestions/commitments for the Addressee to perform a certain action. As we saw, under this approach deriving permission or acquiescence readings is far from easy. In the next section, we will discuss the modal approach, mainly from Kaufmann (2012).

2.2.2 Modal Approach

The common thread in modal analyses of Imperatives is that they incorporate a modal operator into the semantics of an Imperative clause (Han 1998/2000, Schwager 2006/ Kaufmann 2012, Crnič &
Trinh 2009, Grosz 2009, Condoravdi & Lauer 2012). The exact character of this operator as well as its position differ across the different approaches. For example, Han (1998) assumes that there is an Imperative operator at C⁰ with a ‘directive’ and ‘irrealis’ feature that provides Imperatives with their directive force. Schwager (2006)/ Kaufmann (2012) argues that there is a universal modal operator whereas Grosz (2009) argues for an ambiguity approach under which Imperatives sometimes involve a possibility and sometimes a necessity modal. Condoravdi & Lauer (2012) develop a different analysis under which the operator in Imperatives encodes effective preferences. The major point in Condoravdi & Lauer’s approach is that Imperatives encode preferences and it is not so important whether there is an operator or not in the semantics. For this reason, I will deal with their analysis in a separate section. In this section, I will summarize Kaufmann’s approach to Imperatives and show how she can derive the permission reading. In this part, I will not be concerned at all as to how the performative character of Imperatives is captured under a modal approach. I will talk in detail about this issue in Chapter 4, when I will deal with this problem myself.

Schwager (2006)/ Kaufmann (2012)

Schwager (2006)/ Kaufmann (2012) analyzes the Imperative operator as a universal modal. Under this approach the meaning of the Imperative is identical to that of a universal modal as shown in (11):

(11) \( \forall \text{-Modal approach:} \)

\[ [[\text{Open the window!}]]^w = \forall w' \in \cap f(w) [A \text{ opens the window in } w'] \]

The fact that there is a modal operator in the semantics allows Kaufmann to use all the machinery introduced by Kratzer (1981) in order to account for the variety of interpretations in Imperatives. Roughly, by employing different conversational backgrounds for the ordering source, Kaufmann derives wishes \( (g = \text{what the speaker wants}) \), requests/commands \( (g = \text{what the speaker orders}) \) and advice \( (g = A's \text{ preferences, or what is considered to be generally preferred}) \) (see Kauffmann 2012, section 4.1). However, permission and acquiescence readings once more present a puzzle because it is not a matter of a variable ordering source but of weaker force.
Kaufmann (2012) distinguishes among three different types of possibility-like Imperatives. Examples are given below:

(12) a. All right, don’t come then! (if you think you’re so clever) *Concessive*
    b. Come earlier if you like! *Permission*
    c. Stop buying cigarettes for example! *For example-Advice*

Kaufmann provides a way to account for the *Concessive* and *Permission* Imperatives in (12a) and (12b) without abandoning the universal semantics for the modal operator. The ultimate idea is that *concessives* and *permissions* are analyzed as a necessity with respect to *Addressee’s desires/goals*, similar to some of *advice* cases. However, what Kaufmann considers particularly tricky are the *for-example* cases, in which the meaning is clearly a possibility and not a necessity. This is illustrated by (12c) in the context of a question like ‘How could I save money?’ For cases like this Kaufmann suggests that the universal modal should be reduced to an existential one. The mechanism she suggests is of particular interest for the analysis I pursue here because in some sense it provides a mirror picture of the mechanism I propose.

In a series of works (Schwager (2005, 2006); Kaufmann (2012)) Kaufmann develops an analysis of examples like in (12c) as inexhaustive possibilities. This means that she considers the default Imperative as an instance of exhaustive possibility. Below is an example of hers with an overt existential modal that intuitively constitutes an instance of an exhaustive possibility:

(13)  A. What could I possibly do to stop smoking?
    B. The only thing you can do is stop buying cigarettes.

Building on Zimmermann (2000), Kaufmann shows that an exhaustified possibility amounts to a necessity. Under this idea, an Imperative is treated as a possibility which is obligatorily exhaustified thus being equivalent to a necessity. Kaufmann (2012) treats the *EXH*-operator as being part of the semantics of the modal operator. The question is then what blocks exhaustification in the *for-example* uses in which we get a possibility reading. Kaufmann (2012) argues that expressions like *for-example* act as anti-exhaustifiers, thus removing the *EXH*-operator and licensing a possibility reading. As Kaufmann herself points out the nature of this exhaustive operator as well as the
conditions under which anti-exhaustification occurs require further investigation. Moreover, this analysis raises the question why Imperatives should always combine with an Exh-operator. An attractive idea would be to consider as a possible hypothesis that all necessity modals are derived by exhaustified possibility operators. However, as Kaufmann discusses, when for example combines with a universal modal, the force of the modal does not weaken to a possibility modal. Therefore there must be something unique to Imperatives different than all other possibility and universal modals in being an exhaustified possibility.

The idea I pursue here is, in fact, very similar to Kaufmann’s idea of exhaustified possibilities. The difference lies in that I take this exhaustification operator to be the result of the general mechanism in the generation of Implicatures in the presence of alternatives. Under this view, exhaustification will apply when there are certain alternatives which depend on the focus-marking. I start off with a possibility modal to explain permission readings and then I exhaustify to derive the stronger command, request readings. Before getting to my analysis, let me briefly introduce Condoravdi & Lauer’s approach to Imperatives as Effective Preferences, as it will be relevant for the meaning I assign to the Imperative operator.

**Condoravdi & Lauer (2012)**

Condoravdi & Lauer (2012) analyse Imperatives as preferential attitudes. The general idea is that Imperatives express a speaker’s preference ordered with respect to other preferences. As C&L put it, every individual has a set of desires, moral codes, obligations, which can be ranked with respect to their importance. They define this as a preference structure:

\[
\text{(14)} \quad \text{A preference structure relative to an information state } W \text{ is a pair } \langle P, \leq \rangle \text{ where } P \subseteq \wp(W) \text{ and } \leq \text{ is a partial order on } P.
\]

Whereas a preference structure is possible to consist of contradictory preferences, the moment an Agent has to act he needs to resolve these conflicts. In other words, he needs to make his preference structure consistent. The formal definition of a consistent preference structure is given in (15).

\[
\text{(15)} \quad \text{A preference structure } \langle P, \leq \rangle \text{ is consistent iff for any } X \subseteq P, \text{ if } \cap X = \emptyset, \text{ there are } p, q \in X \text{ such that } p < q.
\]
An Imperative sentence expresses the speaker’s Effective Preference at time \( t \) (= utterance time). An Effective Preference is the preference which is ranked higher in a consistent preference structure. Therefore an Imperative like Open the window will have the interpretation, in (16) which means that the speaker is committed to the Effective Preference that A opens the window in world \( u \).

(16) \[ [\text{Open the window}]^c = \lambda w. [PEP_w (Sp, \lambda u [A \text{ opens the window in } u])] \]

From this meaning a number of things follow regarding the Addressee’s commitment to act as if he has the same effective preference as the speaker, etc. What is relevant for the discussion that follows is the preferential character of Imperatives on the one hand and the Speaker orientation on the other hand. These two properties will also be integral components in my analysis, as I analyse the Imperative operator as involving a bouletic modal expressing the speaker’s desires. However, as I will show in the next section, a weaker existential meaning for Imperatives as well as for Root Subjunctives in Greek, makes better predictions with respect to the interaction of the modal operator with other quantificational elements than treating Imperatives as conveying ranked preferences. Moreover, as I will show in the last chapter, there is an overt element better which when combined with Imperatives conveys an effective preference and in this case, it becomes obvious that plain imperatives do not have inherently such an interpretation.

### 2.3 An existential analysis of Imperatives

The analysis I pursue here can be classified under the Modal approaches, since I argue that there is a modal operator in the semantics. Differently than Kaufmann and Condoravdi & Lauer, I analyse the Imperative operator (\( \text{Imp} \)) as an existential modal. I will first provide a basic meaning for this operator and then I provide evidence from scope facts for such an analysis.

#### 2.3.1 The meaning of the Imperative operator

For now, we hardwire everything into the meaning of the modal operator, as if we have an operator that has an invariably bouletic interpretation with existential force. The denotation of \( \text{imp} \) is
evaluated with respect to a world \( w \) (type \( s \)) and a context \( c \), which for now we take it to be a tuple containing the Speaker and the Addressee \((c:\langle S,A\rangle)\). It takes as its argument a proposition \( q \) of type \( \langle st \rangle \) and it states that \textit{there is a world } \( w' \text{ compatible with Speaker's desires in } w \text{ and } q \text{ is true in world } w' \). In other words (17), says that \( q \) is consistent with the Speaker's desires.

(17) Meaning of the modal operator in Imperatives (and RSs):
\[
[\text{Imp}]^{w,c} = \lambda q \in D_{\langle st \rangle}. \exists w' \in W \text{ such that } S_c's \text{ desires in } w \text{ with respect to the } A_c's \text{ actions are satisfied in } w' \text{ & } q(w') = 1
\]

In chapter 4, I will elaborate on this part and show that the modal base is restricted by the speaker's desires by default based on the syntactic position of the operator and Hacquard’s theory of modal anchoring. It is important to keep in mind that the meaning I provide here is bouletic, about the speaker's desires, much similar to Condoravdi & Lauer's Effective Preferences. However, given that it has existential force, it is much weaker than their Effective Preference Operator.

Another question that arises from this analysis is how we get from the meaning in (17) to the performative character of Imperatives. In other words, we are still missing a critical component regarding the function of the Imperatives. As I mentioned before, this issue deserves a section on its own and it will be discussed in Chapter 4, along with the other properties of this operator. That said, the meaning for an Imperative like ‘Open the window!’ is provided in (18):

(18) \([Open \text{ the window}]^{w,c} = \exists w' \in W. S_c's \text{ desires in } w \text{ are satisfied in } w' \land A_c \text{ opens the window in } w'\).

With this meaning we can account for all permission readings, without any additional assumptions. Maybe we can also account for pure advice readings\(^2\). But what about commands, requests and wishes? What about the so-called default directive force of the Imperative? In section 4, I will provide an analysis of how we get the strengthened reading of Imperatives but first I will provide some evidence from scope facts showing that there must be an operator in the semantics and that this operator must have existential force.

\(^2\)The reader might wonder at this point how the bouletic meaning of imperatives we have provided captures cases of Imperatives providing disinterested advice like in directions (e.g. \textit{Take the A-train.}) or even permission readings in which the speaker doesn't really endorse the content of the prejacent. We will discuss these cases in Chapter 4 when we will disentangle the meaning of the modal operator involved both in Imperatives and Root Subjunctives.
2.3.2 Scope ambiguities as evidence for the existential character of Imperatives

Haida & Repp (2011) observe that an Imperative containing *only* as in (19) is ambiguous; in context A, we get the reading that *A is allowed to not paint the other tables* whereas in context B, *A is allowed to paint the round table but he is not allowed to paint the other tables*:

<table>
<thead>
<tr>
<th>Context A</th>
<th>Context B</th>
</tr>
</thead>
<tbody>
<tr>
<td>You’ve asked me to paint those tables but I’m really tired and don’t feel like doing something really useful today.</td>
<td>Oh, I feel like doing something really useful today. I think I’ll paint the tables over there.</td>
</tr>
</tbody>
</table>

(19) Only paint the round table.

I will argue that the ambiguity in (19) is best explained as a scopal ambiguity. To do so, I present data from Modern Greek, where overt focus movement is shown to resolve scope ambiguities, arguing that the ambiguity can be explained only if we treat the Imperative modal operator as an existential modal. As I show below, Imperatives behave just like overt existential modals with respect to scope ambiguities with *only*.

Evidence from overt movement in Greek

Overt focus movement in Greek seems to resolve scopal ambiguities in general. Consider for example the following pairs with and without movement. For convenience, I also provide a pair of contexts foregrounding either wide or narrow scope. We observe that when the quantifier remains

---

3 Haida and Repp (2011) don’t consider this to be a scopal ambiguity, they attempt to evaluate Portner’s and Schwager’s account for Imperatives in view of what they predict for the particular example. I will return to Haida & Repp’s discussion of the facts when I will discuss the predictions that the other analyses make with respect to these data. Notice, however, that in footnote (1) Haida & Repp mention the possibility for the ambiguity to be scopal.

4 Tsimpli (1995) presents an analysis of Focus in Modern Greek as involving movement (covert when it remains in-situ, overt when it is preverbal) to a Focus projection at the left periphery. Gryllia (2009) presents the differences between fronted and in-situ focus arguing that the differences are related with the discourse role of the focused constituent. What is of special interest here is the way focus movement can affect scope relations between the focused constituent and quantifiers in the sentence. Baltazani (2002) shows that focus is relevant for the scope readings we get, showing that in general a focused constituent takes wide scope. However, she is not considered with cases where the focused constituent is associated with a focus operator like *only*.
in situ, it can have either wide or narrow scope interpretation but when it appears in a preverbal focus position it only gets a wide scope interpretation.

In the following example, when the quantifier *liga* 'a few' appears in a preverbal position (above the modal *is allowed to* as in (20b)), the sentence is only felicitous under the wide-scope context B. On the contrary, when *few* appears in-situ (20a) it’s compatible both with the narrow and the wide-scope reading.

Contex A (Narrow scope)

In Nick's class they had to choose between making a painting and reading a few books or just read many books. Nick chose the first assignment, so luckily . . .

(20) a. o Nikos epitrepete na diavasi liga vivlia. the Nick is-allowed SUBJ read.3SG few books 'Nick is allowed to read a few books'
   b. liga vivlia epitrepete na diavasi o Nikos. few books is-allowed SUBJ read.3SG the Nick

OK in both Contexts

OK only in Context B

When we have a universal modal like *hriazete* 'have to' we observe again that we get two different interpretations depending on whether *liga* 'few' scopes above or below the modal. When *liga* remains in-situ it is compatible with both contexts, as expected, since it can be interpreted above or below the universal modal. When *liga* 'few' moves, the sentence is felicitous only in Context B, which foregrounds a wide-scope interpretation. This provides the mirror picture of the previous example, showing that overt focus movement both with existential and universal modals results in a wide-scope reading.

Contex A (Narrow scope)

Nick generally loves reading. However, this time his professor made him promise that he would read a few books. So this time, unfortunately . . .

Context B (Wide Scope)

In Nick's class they had to choose between making a painting and reading a few books or just reading many books. Nick chose the first assignment, so luckily . . .
I have shown independent examples that overt focus movement resolves scope ambiguities. The same pattern can be exemplified with overt modals and the scope of *only*. For the same contexts that Haida & Repp provide (see (19)), we see that (22a), in which the *only*-phrase remains in situ, is compatible with both contexts, whereas (22b) in which the *only*-phrase moves only the wide-scope survives and, therefore, the sentence is good only under context B.

Now I will show that when an Imperative interacts with a quantifier it behaves exactly as an Existential Modal. First, I just take Haida & Repp’s example with *only* but I will show the same facts for *few* as well. In (23a), when the *only*-DP remains in situ, both the narrow-scope (*only* below the operator) and the wide-scope (*only* above the operator) reading is available. This is shown by the fact that (23a) is good under both contexts, just like the English example in (19). On the contrary, in (23b) where the *only*-DP undergoes focus movement only the wide-scope reading where *only* takes scope above the imperative operator survives. As we can see, (23b) is compatible only with Context B yielding the interpretation that *A is not allowed to paint the other tables*:
You’ve asked me to paint those tables but I’m really tired and don’t feel like doing something really useful today. I think I’ll paint the tables over there.

(23) a. Vapse [mono to strogilo trapezi].
    Paint only the round table.
    → OK in Context A: ◦ > only
    → OK in Context B: only > ◦

b. [mono to strogilo trapezi] vapse.
    Only the round table paint.
    → Bad in Context A: *◦ > only
    → OK in Context B: only > ◦

The scope ambiguity is not specific to the interaction with only, it is also attested with degree quantifiers such as few, fewer than (thanks to Irene Heim for suggesting to further check with degree quantifiers). Similarly, we can utter (24a) under both Contexts A & B, whereas (24b) is only compatible with Context B. When few is interpreted below Imp, the interpretation is that A is allowed to paint few tables (and it is o.k. to not paint them all) whereas when few takes wide scope the interpretation is that there are few tables that the A is allowed to paint (the rest of them he is not allowed to paint):

(24) a. Vapse liga trapezia!
    Paint few tables
    ‘Paint few tables.’
    → OK in Context A: ◦ > only
    → OK in Context B: only > ◦

b. Liga trapezia vapse!
    few tables paint
    → Bad in Context A: *◦ > few
    → OK in Context B: few > ◦

In the following, I show how the scope ambiguity is derived by assuming that the modal is existential and I show that a universal modal derives the wrong predictions. If there is no operator at
all, it becomes impossible to account for the scope interaction with overt syntactic movement.

**Deriving the scope ambiguity**

For the purposes of the discussion here, I follow a version of Horn’s (1969) analysis to *only* as a presupposition element; *only* takes as its argument a proposition $p$ and presupposes that $p$ is true and asserts the negation of all alternatives of $p$. Following Rooth (1992), the alternatives of $p$ are computed by substituting the focused constituent ROUND with the relevant alternatives (i.e. SQUARE/TRIANGLE). When *only* has narrow scope, it will attach to the prejacent yielding the LF in (25a) and the corresponding alternatives in (26a). When *only* has wide-scope, it merges above the modal operator, deriving the LF in (26a) and the alternatives in (26b):

(25)  
\[ \text{a. LF} (\text{only} > \circ): [\circ_{imp} [[\text{only}(C) \text{ round}_F \text{ table }] [\lambda x [\text{you paint } x]]]] ] \]

\[ \text{b. LF} (\text{only} > \circ): [\text{only}(C) \text{ round}_F \text{ table }] [\lambda x [\circ_{imp} [\text{you paint } x]]]] ] \]

(26)  
\[ \text{a. Focus Alternatives (25a) =} \]

\[ \begin{cases} 
A \text{ paints the RND table in } w \\
A \text{ paints the SQR table in } w. \\
A \text{ paints the TRG table in } w 
\end{cases} \]

\[ \text{b. Focus Alternatives for (25b) =} \]

\[ \begin{cases} 
\exists w' \in W. S's \text{ desires in } w \text{ are satisfied in } w' \land A \text{ paints the RND table in } w'. \\
\exists w' \in W. S's \text{ desires in } w \text{ are satisfied in } w' \land A \text{ paints the SQR table in } w'. \\
\exists w' \in W. S's \text{ desires in } w \text{ are satisfied in } w' \land A \text{ paints the TRG table in } w'. 
\end{cases} \]

When *only* is interpreted below the existential modal (Context A), we get the meaning in (27a) that *there is a world consistent with S’s desires and A doesn’t paint the square/triangle table in this world*. When *only* takes scope above the existential modal (Context B), we get the interpretation in (27b) that *there is no world consistent with S’s desires in which A paints the square/triangle table*:

41
(27)  a.  $\exists w' \in W. S's$ desires in $w$ are satisfied in $w' \land \neg [A$ paints the SQR/TRG table in $w']$. 
    $\rightarrow A$ is allowed to not paint the other tables.
  
b.  $\neg \exists w' \in W. S's$ desires in $w$ are satisfied in $w' \land A$ paints the SQR/TRG table in $w'$. 
    $\rightarrow A$ is not allowed to paint the other tables.

The data from Greek show that when the only-DP overtly moves, we get a wide scope reading and the interpretation derived can only be explained if there is a covert existential operator. Before moving on to see why a universal or an ambiguous analysis of Imperatives does not fit the data presented, let me address an independent question that concerns the ability of only to exhibit inverse scope in general.

As I discussed above, when the only-DP appears in-situ, we get an ambiguous interpretation. This was explained as the result of two possible LFs; i) only taking scope below the existential operator and ii) only being interpreted above the existential operator and taking wide scope. However, the availability of inverse scope readings with only seems to be quite restricted. This is illustrated in the following example from Crnič (2013), where only the reading in which only is interpreted below the quantifier survives:

(28)  a.  Every student only read the textbook.
   
b.  Someone is only married to Sue.
   $\rightarrow$ every/some > only
   $\rightarrow$ # only > every/some

Crnič (2013) argues that the data in (28), as well as other environments in which inverse scope of only is not available, should not be used to argue in favor of a general ban on inverse scope of only. As he shows, there is considerable evidence that the only-phrase can get scope over another operator. In particular, he shows that in environments with Antecedent Contained Deletion (ACD), only can associate with an element hosting ACD.

(29)  a.  To win the championship, we are required to only beat ONE team that our opponents are.
   
b.  The dean demanded that we only be on the COMMITTEES that I thought he would.
As Crnič (2013) discusses, the most salient reading in (29) is one in which *only* and its associate is interpreted above the matrix verb, as in (30).

(30)  
   a. We are only required to beat ONE team that our opponents are.
   b. The dean only demanded that we be on the COMMITTEES that I thought he would.

The wide-scope of *only* in these environments can only be explained if there is movement of the focused phrase at LF, as shown in (31):

(31)  
   [only(C) the committees \( \lambda x \) [I thought he would (demand that we be on \( x \))] \( \lambda y \) [the dean demanded that we be on \( y \)]

Crnič (2013) concludes that these facts support an association by movement analysis of *only* at LF and he moves on to show that with certain modal auxiliaries we can also see that the movement-analysis makes the right predictions. These are exactly the cases of the existential and universal modals that we discussed above. Given our analysis of Imperatives as involving an existential modal, it is not surprising at all that when *only* is in-situ, the interpretation is ambiguous between wide and narrow scope.

Finally, it is important to notice that Crnič (2013) shows that degree-quantifiers exhibit a parallel behavior with *only* with respect to the availability of inverse scope readings when they are in-situ. As we showed above, the examples with degree quantifiers provide us with the same conclusions as the *only*-examples regarding the quantificational force of the modal operator.

Of course, it remains an open question what is responsible for the restricted availability of inverse scope with *only* and the degree quantifiers when they are in-situ, but for the purposes of the argument here it suffices that there is independent evidence for the focused phrase associating with *only* being able to covertly move and take wide scope. In the following, we see why a universal-analysis makes the wrong predictions and why a minimal analysis cannot account for the scope facts.
2.3.3 Scope facts under a universal analysis of Imp

Under a universal analysis of the modal operator, we can derive the expected interpretation for the a-examples in which *only* is in-situ, but we derive the wrong reading for the examples in which the quantifier moves overtly. When *only* or *few* surface in-situ both readings are licensed for context A & B as shown in (32):

(32) Vapse mono to strogilo trapezi!
    Paint only the round table!
    \[ \rightarrow \Box > only: A \text{ is required not to paint the other tables.} \]
    \[ \rightarrow only > \Box: A \text{ is not required to paint the other tables.} \]

When the *only/few*-phrase moves only wide scope (*only/few > \Box*) is expected to survive. However, this would predict the wrong interpretation under Context B (*Oh, I feel like doing something really useful today. I think I’ll paint the tables over there.*), because we derive the interpretation that that *A is not required to paint the other tables*.

Similarly, under an ambiguous analysis of Imperatives (Grosz 2009, 2015), we would expect two possible readings for the *b*-example with overt focus movement:

(33) [mono to strogilo trapezi] vapse!
    Only the round table paint!
    \[ \rightarrow only > \Box: A \text{ is not required to paint the other tables.} \]
    \[ \rightarrow only > \Diamond: A \text{ is not required to paint the other tables.} \]

The absence of reading (a) suggests that the modal can only have an existential interpretation here. Unless there is some strange condition under which overt movement blocks the universal reading, it’s hard to explain the interpretation of (33) assuming an ambiguity analysis.

2.3.4 Scope facts under a minimal approach

Under the minimal approach in which there is no operator in the semantics, it is not possible to explain the facts as a scope ambiguity. Haida & Repp (2011) attempt to explain the ambiguity of the English data not as a scope ambiguity but as an ambiguity which arises by the Imperative being interpreted as a command or as a permission. The Greek data clearly show however that the
ambiguity is scopal in nature.

However, I will use some of the machinery in Haida & Repp (2011) to show that if we assume a speech act operator (something that would be closer to Portner’s approach but still an operator in the semantics (Portner p.c.), then we can possibly make sense of the scope facts. In the end, I will exclude this possibility based on what we know about scoping over speech acts. For convenience, I repeat below the two contexts and the Imperative clause:

<table>
<thead>
<tr>
<th>Context A</th>
<th>Context B</th>
</tr>
</thead>
<tbody>
<tr>
<td>You’ve asked me to paint those tables but I’m really tired and don’t feel like doing something really useful today.</td>
<td>Oh, I feel like doing something really useful today. I think I’ll paint the tables over there.</td>
</tr>
</tbody>
</table>

(34) Only paint the round table.

The derivation of reading (a) in which Addressee is given permission to not paint the other tables is fairly straightforward to derive; Before uttering (34), A’s To-Do List contains, among other things, the properties listed in (35):

(35) 
- Paint all the tables. / ∨tab[Paint(A, tab)]
- Paint the round table. / Paint(A, round-tab)
- Paint the square table. / Paint(A, square-tab)
- Paint the triangle table. / Paint(A, triangle-tab)

After uttering (34) the Addressee’s To-Do List is updated to include the following properties as well:

(36) 
- Paint all the tables. / ∨tab [Paint(A, tab)]
- Paint the round table. / Paint(A, round-tab)
- Paint the square table. / Paint(A, square-tab)

---

5I follow Portner (2007) who argues that a property which contains a universal quantifier can be expanded into distinct properties for each individual x. Alternatively, Portner suggests that we could imagine that the universal quantifier scopes above the update operator (but in this case, we would already need an operator in semantics – something that Portner tries to avoid.)
- Paint the triangle table. / Paint(A, triangle-tab)
- \(\neg\) Paint the square table. / \(\neg\)Paint(A, square-tab)
- \(\neg\)Paint the triangle table. / \(\neg\)Paint(A, triangle-tab)

Now, the updated To-Do-List contains two pairs of contradicting properties for the addressee, therefore, by the ordering that Portner imposes on the worlds (introduced above in (4a)), we correctly get the interpretation that the best world is the one in which the Addressee paints the round table and the worlds in which the Addressee paints or doesn’t paint the square/triangle table are equally optimal.

Turning to the interpretation that we get under context B in which the Addressee is prohibited from painting any other tables except the round one, things get more complicated. Since, the addressee explicitly says that he will paint all the tables, it is reasonable to assume that A’s To-Do List contains already the properties ‘paint the round/the square table’. Therefore, A’s To-Do-List would be identical to the one in (35) and therefore we would derive the exact same reading as in context A. We need to take A’s To-Do List to not contain any table-painting properties. We could argue that this is the case; suppose that the addressee hasn’t added paint round/square/table in his To-Do List. In a sense, he expresses his will to add these actions to his To-Do List but he anticipates the Speaker’s approval\(^6\). Under this view, A’s to To-Do List doesn’t contain any relevant property:

(37) A’s To-Do List before uttering (34) under context B:
- Pay the bills.
- Visit your friend.
- etc.

Now after uttering (34) the updated To-Do List would look like this:

(38) A’s To-Do List after uttering (28) under context B:
- Pay the bills.
- Visit your friend.
- Paint the round table. / Paint(A, round-tab)

\(^6\)Something similar is argued in Kaufmann (2012) with dialogues like I’ll go swimming – yes, go!

46
Now this updated list correctly accounts for the interpretation that it’s prohibited to paint the square/triangle table. Still, however, it posits a wrong requirement for painting the round table. The intuition is that the addressee has no obligation to paint the round table and that the Speaker doesn’t “force” him to do so. There are two possible ways out of this problem. The first one would be to consider more carefully the presupposition part of only. Maybe the property ‘Paint the round table’ is taken to be a presupposed property for the Addressee and therefore the only new updates that the Speaker adds in the To-Do-List is –Paint(A, square-tab)/ –Paint(A, triangle-tab). Under this view, the property ‘Paint the round table’ may be part of A’s To-Do-List or not. However, as I showed, the same ambiguities arise with degree quantifiers like few, therefore anyway we need a different explanation to account for a broader range of data.

An alternative solution which would explain permission readings like the one in (34), would be to say that in these cases from the moment the property is agreed on between the Speaker and the Addressee it becomes part of A’s To-Do-List. Therefore, it becomes one of A’s requirements. This would give the right to the Speaker to complain if A doesn’t fulfill p. This is a possibility in context B, but certainly it’s not obligatory.

(39) A. I’ll cook pasta.
    B. Yes, cook.

Even if an explanation along these lines for the English data is considered satisfactory, it is not sufficient to explain the data in Greek, where movement disambiguates in favor of the wide scope. This analysis has nothing to do with the scope facts which are evident in the case of Greek focus movement. The only way to provide an explanation for the movement data is to make a compromise between the minimal approach and the strong approach and assume that there is in fact an operator in the semantics of Imperatives. The closest such element to Portner’s approach that I can think of is an Update Speech-Act Operator. Krifka (2001, 2004) argues for the presence of speech act operators in the semantics and specifically he draws evidence for their presence by detecting scope ambiguities. Therefore it’s worth trying to see whether such a modification in Portner’s
analysis would be sufficient to account for the relevant data.

For the narrow scope, we can keep the analysis presented above for the English data, nothing changes. The update operator just adds to the To-Do-List the properties ‘–Paint the square table’, ‘–Paint the square table’. The reasoning is the same as above, the conflicting properties result in a permission reading. What is of interest is the wide scope reading. Assuming now that there is a Speech act operator in the semantics we can try an account in which there is scope over speech acts (Krifka 1999, 2001, 2004). Krifka (2004) argues for two instances of scoping above speech acts:

1. Conjunction over speech acts

2. Topics over speech acts

According to Krifka (2001) only universal quantifiers can scope above speech acts because they can be analysed as conjunction. Crucially, Krifka (2001) explicitly says that the quantifier has to be a Topic. He explicitly says that Focus cannot scope above a speech act. This makes sense because, we know that Topics appear always higher than Focused constituents. Therefore, if we follow Krifka (2001, 2004) we cannot account for the data in Greek, unless we assume that there is an operator in the semantics and not just a speech act operator.

2.3.5 Take-home message from scope facts

The scope facts, especially in Greek where Focus movement resolves scope ambiguity, clearly show that there is a covert Existential modal in Imperatives. As I showed, a universal modal (and for the same reason an ambiguous modal) would make the wrong predictions for the wide scope reading. The minimal approach, on the other hand, cannot account for the scope facts unless it abandons its core assumption that there is no operator in the semantics. Even in this case however, we saw that it is difficult to understand how exactly an imperative speech act operator, represented in syntax along the lines suggested in Krifka, can interact with a focused quantifier.

Therefore, an existential approach not only can handle permission readings without any additional assumptions but it is also independently motivated by the observed scopal ambiguities. In the following I present two more arguments in favor of the existential character of the modal;
the first one from the interaction of the imperative with a scalar additive particle in Greek and the second one from considering the interpretation of Free Choice Items with the Imperatives.

2.3.6 Interaction of Imperatives with ‘scalar additive particles’

Another environment in which the existential nature of the modal operator is revealed is when there is a scalar additive operator in the sentence. In this case, I show that the additive can scope above or below the existential modal deriving the desired interpretation. The scalar additive particle in Greek is *akomi ke* or just *ke‘even’*. (see Giannakidou (2007) for a detailed discussion of *even*-items in Greek). Crucially, *akomi ke*, differently than the English *even*, obligatorily has an additive presupposition. As Chatzikyriakidis et. al. (2015) notice, *ke* necessarily appears right before its associate, as illustrated in (40) below:

(40) O Nikos kalese *akomi ke* ton Papa.
   The Nick invited even the Pope.
   ‘Nick invited even the POPE.’

Following the traditional analysis of *even* (Karttunen and Peters 1979, but see also Wagner (2013)), *akomi ke* can be treated as a propositional operator which gives rise to two presuppositions; it presupposes that i) the proposition is less likely than its alternatives (scalar presupposition) and ii) some proposition from the contextual alternatives is also true (existential presupposition). Following Rooth’s analysis of focus the sentence in (40) has the ordinary semantic value in (41a) and the focus value in (41b). Based on this, the two presuppositions are stated in (42):

(41) a. 
   \[ [34]^w = \lambda w. \text{Nick invited the Pope in } w \]
   \[ [34]^f,w = \{ \text{Nick invited x in } w: x \text{ is an individual.} \} \]

(42) a. Scalar presupposition: The pope is the least likely to be invited by Nick.

7 Plain *ke* can also function as a plain additive (like *also*) but a plain additive is very difficult to scope above the imperative operator. In chapter 4, I will introduce the contribution of the Imperative and Subjunctive as requiring a comparative relation, therefore I suspect that for this reason the additive will always get a scalar interpretation in imperatives. This is something requiring further investigation, but I will not discuss it here.

8 In Greek there is a distinct particle *edo* (which otherwise means *here*) which only has a scalar likelihood presupposition and has no additive presupposition. This might be related to the fact that *akomi ke* cannot associate with a VP but it can only associate with an NP. Wagner (2013) suggests that NP-*even* is necessarily additive but VP-*even* is not. See Wagner (2013) for an account.
b. Additive presupposition: Someone else other than the Pope has been invited by Nick.

Now that we have set up the basic ingredients for analyzing the scalar additive particle in Greek, we can move on to show how the meaning it gets with Imperatives provides evidence for the existential character of the operator.

The scalar additive particle can be inconsistent with predicates like vote and marry which given their meaning and certain world knowledge/culture require that only one of the members of the set of alternatives can be true. For example, we cannot say (43) since we know that we can only vote for one party.

(43) #Se aftes tis ekloges i Ana psifíse akomi ke Clinton.
   In these the elections the Ana voted even Clinton
   #‘In these elections, Ana voted even for Clinton.’

However, once we add a modal operator with these predicates, the additive can take wide scope and the sentence becomes fine. In (44) we have a modal, which in the given context is interpreted as providing permission or consent.

Context: Mary is a socialist and she tries to convince people to vote for the socialist party instead of the democrats or the republicans. However, given the situation in these elections, she tells John that even Clinton is an option (the important thing is that John doesn’t vote for Trump or just abstain from voting):

(44) Se aftes tis ekloges borís na psífísi akomi ke Clinton.
   In these the elections can.2SG SUBJ vote.2SG even Clinton
   ‘In these elections, you may vote even for Clinton.’

The sentence conveys that:

i. There is a possible world compatible with the speaker’s desires in which the addressee votes for Clinton (Assertion)

ii. Clinton is the least likely person such that there is a possible world compatible with the speaker’s desires in which the Addressee votes for her (scalar presupposition)

iii. There is another person different from Clinton such that there is a possible world compatible
with the speaker’s desires in which the Addressee votes for this person (additive presupposition)

With Imperatives in Greek we can express the same meaning as in (44).

(45) Se aftes tis ekloges psifise akomi ke Clinton.
    ‘In these elections, vote for Clinton even.’

A continuation like “Only don’t vote for Trump” or “just vote for someone” might be optimal in (45) but it is not necessary. The intuition is that by uttering (45) the Speaker conveys that i) it is consistent with his desires for the Addressee to vote for Clinton and moreover that ii) this option is indeed the least expected for him to consent and iii) that there are certainly other persons that the Speaker would not mind if the Addressee voted for them.

Assuming that Imperatives involve a possibility modal, we can easily account for the felicity and the interpretation of (45) parallel to (44). On the contrary, under a universal modal hypothesis it is very hard to account for the data. As expected, a universal modal operator is bad in this context. Both must/should and want are not compatible with the intended interpretation and they are not felicitous as shown in (46):

(46) #Se aftes tis ekloges prep/ tha-prepe / thelo na psifisis akomi ke Clinton.
    ‘a. #In these elections, you must/should vote even for Clinton.’
    ‘b. #In these elections, I want you to vote even for Clinton.’

One could wonder whether an analysis of Imperatives as ambiguous between a universal and an existential modal (as in Grosz 2009), would work in this case. Indeed, if we take the modal to be ambiguous we could explain the felicity of (46) but as I showed in the previous section a modal hypothesis is not supported by the scope facts. We get a similar effect with the verb marry. Imagine a context in which a mother is trying to convince her son to get married and finally she tells him:

(47) Pantrepsu akomi-ke tin Persefoni. Den me pirazi!
    ‘Marry even Persephone! I don’t mind.’
It is clear that Persephone is probably the least likely person that his mother would like him to marry and yet she says that this is also a valid option. Notice that it is not necessary that the Speaker wants one of the alternatives to be realized, she could be indifferent (but of course not against it). The context in (48) indicates that the speaker is indifferent as to whether finally the addressee will marry somebody:

(48)   a.  A. Can I marry John?
        b.  B. Ne ame, patrepsu akomi ke ton Petro. Den me niazi.
            ‘Yes sure, marry even Peter. I don’t care.’

A final question arises regarding the interpretation of the scalar additive particle in contexts in which the speaker wants to convey that something is necessary. For example, consider a context in which a very difficult exam is coming up and then the teacher says:

(49)  Diavaste akomi ke tis iposimiosis.
      Read.IMP even the footnotes.
      ‘Read even the footnotes.’

Clearly the reading we get here is a necessity one and the sentence can be paraphrased as “You must read even the footnotes”. In this case, the meaning we have for the modal operator is rather weak because it only conveys that it is consistent with the teacher’s desires for the students to read the footnotes whereas the reading we get is that in all worlds in which the teacher’s desires are satisfied, the students read the footnotes. However, as I will argue in the next section the meaning can be strengthened to convey necessity. In this particular case, it is already contextually given that the students must read virtually everything so (49) will not just be interpreted as permission but as command or strong urge/advice.

Another environment in which the additive particle seems to outscope the modal operator is contexts in which the Speaker clearly expresses his indifference as to what Addressee is about to do\(^9\). Imagine a couple-fight context in some village in Greece. The woman threatens that she will leave and go to Athens and the man responds with (50B) suggesting that even her going to America

\(^9\)The meaning we get here can be also described as a concessive, like *Even if you go to America, I don’t care*. See Davies (1986) for discussion.
is consistent with his desires.

(50) A: Θα πάω στην Αθήνα.
   FUT go.1SG to-the Athens
A: ‘I’ll go to Athens.’

   B: Πηγενε κε στην Αμερική. Δεν με νιάζει.
   Go to America even. I don’t care.

The data presented in this section correlate with our conclusions from the discussion of only-data. One point that will need to be clarified is how exactly we get a strengthened necessity interpretation with even when this is possible. Moreover, we still need to explore and provide an account for the interaction of Imperatives with other operators (see Crnic (2013)).

2.3.7 Free Choice Items and Imperatives

Imperatives license Free Choice Items (FCI) as shown below:

(51) a. Pick any flower!
   b. Read any book!

Given that unmodified FCIs are licensed with existential (52) but not with universal modals (53), the compatibility of FCIs with Imperatives can be taken as a supporting argument for the present analysis of imperatives as existential modals and against an approach that treats Imperatives as involving uniformly a universal operator.

(52) a. You may pick any flower!
   b. You may read any book!

(53) a. *You must/should pick any flower!
   b. *You must/should read any book!

However, such a conclusion is disputed by the advocates (Han (2000); Kaufmann (2012)) of the universal approach, who argue that in fact the data are more complex than they seem in the beginning, claiming that the data support the universal approach. I will discuss their points showing that
the first impression that Imperatives behave as involving an existential modal in these contexts, is the right one. Before proceeding to the crucial data, I present the basic facts about FCIs.

The distribution of Free Choice Items

Free Choice Items (e.g. *any* in English, *qualunque* in Italian, *opjospipote* in Greek) have attracted linguists’ interest trying to account for their distribution as well as for their interpretation as universal quantifiers in some contexts and as existential in others (Carlson (1981), Kadmon and Landman (1993), Dayal (1997, 2004, 2012), Giannakidou (2001), Horn (2000), Jayez and Tovena (2005), Aloni (2003, 2007); Aloni and Van Rooij (2007), Condoravdi (2008), Chierchia (2006, 2013)). Following the discussion in Dayal (2012), FCIs are classified into i) partitive, ii) unmodified and iii) subtrigged FCIs.

Partitive FCIs are licensed only when there is a possibility modal as shown in (54):

(54)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>*Any of these students works hard.</td>
</tr>
<tr>
<td>b.</td>
<td>Bill may read any of these books.</td>
</tr>
<tr>
<td>c.</td>
<td>*Bill must read any of these books.</td>
</tr>
<tr>
<td>d.</td>
<td>*Bill read any of these books.</td>
</tr>
</tbody>
</table>

[Dayal 2012; (4)]

Unmodified FCIs are licensed in environments with a generic operator or a possibility modal:

(55)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Any student works hard.</td>
</tr>
<tr>
<td>b.</td>
<td>Bill may read any book</td>
</tr>
<tr>
<td>c.</td>
<td>*Bill must read any book.</td>
</tr>
</tbody>
</table>

[Dayal 2012; (5-6)]

And finally, subtrigged FCIs (FCIs with post-nominal, prepositional phrases, relative clauses, etc.) are licensed in all environments:

(56)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Any student who wants to succeed works hard.</td>
</tr>
<tr>
<td>b.</td>
<td>Bill may read any book he finds.</td>
</tr>
<tr>
<td>c.</td>
<td>Bill must read any book he finds.</td>
</tr>
</tbody>
</table>
d. Bill read any book he found.

The table below, from Dayal (2012), summarizes FCI-distribution in Generic (GEN), possibility modal (⊕), necessity modal (□) and episodic environments:

<table>
<thead>
<tr>
<th>FCI</th>
<th>GEN</th>
<th>⊕</th>
<th>□</th>
<th>EPISODIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>partitive</td>
<td>*</td>
<td>√</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Unmodified</td>
<td>√</td>
<td>√</td>
<td>*/√</td>
<td>*</td>
</tr>
<tr>
<td>Subtriggered</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
</tbody>
</table>

An analysis of FCIs has to account not only for their distribution but also for their interpretation depending on the environment they appear in. The analyses of FCIs vary treating them as universal quantifiers (Dayal (2004)), indefinites (Kadmon and Landman (1993), Chierchia (2006), (2013), Dayal (2012)), existential quantifiers (Giannakidou 2001) or as operators introducing alternatives (Aloni (2007)). Here I don’t want to commit myself to a particular theory of FCIs\(^\text{10}\), my goal is to show that Imperatives pattern with existential modals in licensing FCIs and that the alternative ways which have been proposed to account for the licensing of FCIs do not account for the whole range of facts.

**The behavior of Imperatives**

Kauffman (2012) argues that an Imperative involving a FCI is not in fact interpreted as the corresponding sentence with an overt existential modal. In particular, she analyses an example like (57) as having the interpretation that *A must pick a flower* and that the Speaker is indifferent as to which flower A will pick.

(57) Pick any flower.

≈ You must/will pick a flower but I’m indifferent as to which one you pick.

\(^{10}\)If the reader wants to have in mind a particular theory of FCIs to evaluate the data discussed below, I would suggest Chierchia’s approach to FCIs as indefinites which trigger (sub-)domain alternatives and which in turn are exhaustified deriving a stronger universal FC-Implicature. Under this view the FCI must scope above a modal operator to derive the desired interpretation. Dayal’s (2012) approach introduces an additional constraint, the viability constraint, requiring that there is a modal base which will allow the alternatives to be live possibilities.
However, this intuition is contradicted by the following examples in which the continuation clearly indicates that the prejacent of the Imperative is not a necessity:

**Context:** A boy has just earned some money and he is in a bookstore with his parents. Then his mother, who knows that her son likes books, says:

(58) Buy any book! Of course you don’t have to buy a book. You can keep your money.

(59) Agorase opjodipote vivlio! Fisika boris na min agorasis ke tipota ke Buy.IMP any book. Ofcourse, can.2SG SUBJ not buy.2SG and anything and na kratisis ta lefta su. SUBJ keep.2SG the money your

In this example, it becomes clear that the parents impose no obligation to the child buying a book and yet the FCI Imperative is perfectly fine in this context.

The existential character of the Imperative becomes even clearer when a FCI combines with an exceptive as in (60). In this example, it is clear that the Speaker would prefer that A doesn’t sing at all as is clear from the continuation. The meaning is clearly that the Addressee is allowed to sing any song except a particular one. It cannot mean that he is obliged to sing a song.

(60) a. Please, sing any song except this one. And even better keep your mouth shut.
   
   b. Se parakalo, traguda opjodipote tragudi ektos apo afto. Ke tha tan please sing.imp any song except from this and FUT be.PAST.3SG akomi kalitera an den tragudages tipota. even better if not sing.PAST.2SG anything.

Notice that the corresponding universal modal is not good with FCI combined with an exceptive phrase. This suggests that the exceptive phrase doesn’t behave as a subtrigger for FCIs, otherwise we would expect (61) to be fine under the reading ‘you must sing every song except this one’.

(61) a. #You must sing any song except this one.
   
   b. #Prepi na tragudisis opjodipote tragudi ektos apo afto. must SUBJ sing.2SG any song except from this

A possibility modal is, of course, compatible and the interpretation is very similar to the one we get with Imperatives:
(62)  
  a. You can sing any song except this one.
  b. mporis na tragudisis opjodipote tragudi ektos apo afto.
    Can.2SG SUBJ sing.2SG any song except from this

These examples suggest that the Imperatives have really an existential modal which interacts with the FCI as predicted by the theory of FCIs. However, it is noticed in many works (Kaufmann 2012, Dayal 2012, Chierchia 2013, Aloni 2007) that with subtriggered FCIs, Imperatives really have a universal interpretation. Since subtriggered FCIs are licensed with necessity modals, they also argue that even unmodified FCIs can be contextually restricted by a modifier therefore licensing them in imperatives. Dayal (2012) provides the following example, arguing that even without the subtrigger we can have contextual subtriggering and that the meaning is clearly 'you must write any word you don’t know'.

(63)  Write any word (you don’t know)!

However, we find that the exact same example can also give rise to a possibility-reading as it becomes clear from the following context. Imagine I have a bet with somebody that I know better English than him. By uttering (64), I clearly mean that for every word that he doesn’t know, he can write it down and I will translate it.

(64)  a. Write any word you don’t know. I will translate it for you.
  b. Grapse opjadipote leksi den kseris. Tha su tin metafraso!
    Write any word not know.2SG FUT you.DAT it translate.1SG

Similarly, in the following context we have a subtriggered FCI which clearly behaves as if there is an existential modal and not a universal in the structure:

(65)  a. Take any dress that is in the blue closet, just leave me one to wear it tomorrow.
  b. Pare opjodipote forema kremete stin ble dulapa ala ase mu ena gia na
    Take any dress is hanging in-the blue closet but leave me one for
    foreso avrio.
    to wear.1SG tomorrow

As illustrated by the contrast in (66a)-(66b) only an existential is licensed in these contexts (similar facts obtain in Greek):
a. You can take any dress that is on the blue closet but leave me one so that I can wear it tomorrow.

b. #You must take any dress that is on the blue closet but leave me one so that I can wear it tomorrow.

The data discussed suggest in this section that the compatibility of FCIs with Imperatives is not exceptional as it is usually believed due to the long-held assumption that Imperatives are universal modals. Imperatives license FCIs because they involve an existential modal. This doesn’t mean that there are not interesting facts to discuss about the interaction of FCIs and Imperatives; depending on the analysis of FCIs one chooses, we might want to see what sort of alternatives we can derive, at which level exhaustification can apply, etc. but I will leave this task for future work.

Of course, once more, in order to be fair, it should be mentioned that the data can be also accounted by assuming an ambiguity approach to Imperatives. In this case, we would simply say that FCI are licensed because the modal operator can in some cases be existential. However, a non-ambiguous analysis accounts better not only for the scope facts in section 2.3.2 but also for the interaction between prosody and meaning which is presented in the next chapter. Since we find independent evidence for the need to have an existential modal, I take to be theoretically more elegant to derive the strengthened meaning from the existential one instead of positing an ambiguity analysis. Keeping this in mind, I will provide in the next section a way to account for the strong-readings of Imperatives.

### 2.4 Deriving the strong-reading

The term strong-Imperatives includes all Imperative uses that are dubbed as *commands, requests, pleas, wishes*. Similar to the problem that an analysis of Imperatives as universal modals faces when it comes to explain permission, the present analysis has to account for the following examples for which a possibility modal does not capture their strong meaning.

(67) a. Translate this document! \hspace{2cm} Command
    b. Give me some chocolate! \hspace{2cm} Plea
    c. Open the door, please! \hspace{2cm} Request
2.4.1 Conditions for strengthening

First, for a stronger interpretation to arise, a necessary condition is that this interpretation is not blocked. We know for example, that overt possibility modals cannot be strengthened. The sentence in (62) cannot mean ‘You must open the door.’

\[(68) \quad \text{You can open the door.}\]

This is explained as a conversational scalar implicature that we derive considering the fact that the Speaker didn’t use the stronger scalar counterpart to the existential modal, the universal modal \textit{must}. The exact mechanism for the derivation of the Implicature varies depending on the theory one favors. For now, it is not important whether one favors a pragmatic (neo-Gricean approach: Spector (2007); Van Rooij and Schulz (2004); Sauerland (2004); Chemla (2008)) or a grammatical (Chierchia (2006, 2013); Chierchia et al. (2012, 2009); Fox (2007)) view for the derivation of scalar implicatures. However, for ease of exposition I will stick to the grammatical approach as outlined in Chierchia et al. (2009).

Under this approach, there is an Exhaustivity operator (EXH) that negates the alternatives and is responsible for the generation of the Implicature. The EXH-operator states that the proposition S is true and that the only members of ALT that are true are those entailed by S (Chierchia et al. (2009); p.4). The formal definition is given in (63):

\[1^\text{Notice however that in some specific contexts such as a queen-context as in (i), the utterance can be understood as a command rather than permission. Even if it is not a queen but let’s say a professor and you are in her office, if she utters (i) you are inclined to interpret this as a command.}\]

\[(i) \quad \text{You may leave now my room.}\]

Given the exceptional character of these environments, they will not concern us here. For all the other cases with overt possibility readings, we will assume that the scalar implicature is always present, therefore blocking a stronger interpretation.
The alternatives in the case of the example in (68) will be the propositions derived by substituting can with its horn-scalemate must. By applying EXH to the alternatives, we derive the Implicature that it’s not the case that you must open the window.

Now the question which arises is how come the Imperatives don’t give rise to a similar Implicature, since we analysed them as possibility modals. I propose that no such Implicature arises because the Imperative Operator does not have a stronger scalar counterpart at first place. The idea that there are existential operators which lack a stronger scalemate is not a new one. In the domain of modality, Deal (2011) suggests that modal suffixes in Nez Perce are existential in character but they are not part of the Horn scale, they don’t have a stronger counterpart. According to Deal (2011) the absence of an Implicature is a key-point in explaining why these suffixes can be used in contexts where a universal modal could appear. This idea gains ground in explaining other instances of quantifiers with apparently ambiguous force. For example Bowler (2014) argues that in Walpiri there is a disjunction operator which lacks a conjunction counterpart and therefore, in some environments, it can be strengthened to a conjunction operator. Bar-Lev and Margulis (2013) argue that a quantifier kol in Hebrew is existential in nature but it lacks a stronger counterpart and therefore it can be interpreted as universal. A similar idea is employed in Bassi and Bar-Lev (2016) to explain the mixed behavior of bare conditionals. The idea I employ here is essentially the same, the Imperative operator does not have a stronger scalar counterpart and therefore we can get a stronger interpretation.

There remains one question as to why there is no stronger scalar counterpart. One could wonder why must for example is not a legitimate candidate. A first response is that the meaning of the Imperative Operator is necessarily different from that of a universal modal like must or should. However, I will be able to elaborate more at this point in the next section, when I will discuss the nature of this modal as a bouletic one.

Now the question is what forces the universal interpretation. In all the works I have mentioned, strengthening happens in a different way. Here I will pursue the idea that strengthening is the result of an Implicature derived by certain Focus Alternatives. I suggest that the strong-reading is the result of an implicature derived when the alternatives are generated by substituting the prejacent
(p) with its negation (¬p). I argue that this happens when the prejacant is broadly focused.

Following Rooth (1992), the alternatives of p can be any proposition of type \( \langle st \rangle \). When an Imperative \( (\circ_{imp} p) \) is uttered in an out-of-the-blue context I take the only contextually salient proposition to be \( \neg p \), thus deriving the alternatives in (71) for the Imperative in (70) ‘Open the window!’:

(70)    Open the window!

(71)    Focus Value for (70):

\[ \llbracket (70) \rrbracket_{f,w} = \{ \begin{array}{l}
\exists w' \in W. S's \text{ desires in } w \text{ are satisfied in } w' \land A \text{ opens wnd in } w'. \\
\exists w' \in W. S's \text{ desires in } w \text{ are satisfied in } w' \land \neg [A \text{ opens wnd in } w'].
\end{array} \}
\]

The Focus Alternatives are then evaluated by the EXH-operator, introduced above, and all non-weaker alternatives are negated, thus deriving the Implicature in (72):

(72)    \( \neg \exists w' \in W. S's \text{ desires in } w \text{ are satisfied in } w' \land \neg [A \text{ opens wnd in } w'] \)

By exhaustifying the alternatives we get the interpretation that there is no world that is compatible with S's desires in which A does not open the window. This is equivalent to saying that A must open the window, thus capturing the strong-reading of the Imperatives when they are intended as commands, requests, wishes, etc. The reader can see now how this analysis presents the mirror picture of the analysis presented in Kaufmann (2012). For her, the Imperative operator is a universal modal composed from an existential modal and an Exhaustifier. In some specific contexts (for-example-advice) the Exhaustive operator is removed and therefore, a possibility reading arises. In the analysis I present here, the Imperative involves just a possibility modal. Exhaustification applies in certain environments upon the emergence of Alternatives. There is nothing to be said about this Exhaustification mechanism because it is a mechanism that is independently available for the derivation for all sort of Implicatures. Whether we use the EXH-operator that as introduced by CF&S (2009) here or a pragmatic mechanism for the derivation of the Implicature, the result will be the same. The point that deserves attention is the derivation of the Alternatives.

The first point that needs to be clarified is the requirement that a strong Imperative arises when an Imperative is broadly focused. This predicts that an Imperative which has a distinct prosodic
pattern (i.e. narrow focus on some constituent) will not give rise to a strong interpretation. This is something that we will discuss in detail in the following chapter, where I present the prosodic patterns of Imperatives arising in different contexts. As I will show, it appears indeed that a strong Imperative arises with a broad focus. But now the critical question is why the alternatives of a broadly focused Imperative are generated by substituting the prejacent p with its negation \(-p\). In other words how do we license a negated (and therefore more complex) form as an alternative?

At first, just applying Rooth's mechanism for the derivation of the alternatives, we would expect any proposition of type \((st)\) to be a vital alternative to p. This means that when a speaker utters an Imperative ‘Open the window!’ we could derive an infinite set of alternatives including ‘Play the guitar’, ‘swim’, ‘sit down’, ‘kiss the frog’, etc. In other words we could consider all possibilities as alternatives, and exhaustify over them much like the way that is suggested in Kaufmann (2012). This could definitely be the case when there are relevant possibilities in the context; when the context provides a relevant set of possibilities then an Imperative can definitely exhaustify over these possibilities. For example, in the following example, the Imperative could possibly be interpreted as command/request derived by exhaustifying over relevant possibilities. Imagine a context in which an entrepreneur is faced with bankruptcy and he has three ways in which he can avoid this; selling his house, getting a new loan or marry his main opponent. In this context, his father tells him:

(73) Marry your opponent.

In this context, we should definitely consider ‘sell the house’ and ‘get a new loan’ as vital alternatives which will be exhaustified, deriving the interpretation that there is no world compatible with the Speaker’s desires in which the Addressee sells his house or gets a new loan. In this case, we don’t even need the alternative \(-marry your opponent\). But what about cases, in which an Imperative is uttered in an out-of-the-blue context? What if the context provides no other possibilities?

In cases in which an Imperative is uttered without any relevant context preceding, it seems that we want the only relevant alternative to be the negation of the prejacent and not to exhaustify blindly over an infinite set of possibilities to derive a strong interpretation. Consider for example, a case in which a mother returns from work and she says to her kids ‘By tomorrow clean your rooms.’ By uttering this, the mother doesn’t exclude other things that the kids are allowed to do,
she only tells them that it’s necessary to clean their rooms. This can be easily captured, if we take the alternative to be derived by substituting the prejacent with its negation. So far, so good, but although the claim that the alternative is derived by substituting \( p \) with its negation is compatible with Rooth’s original analysis, it runs into problems when we consider the broader picture of alternatives computation.

Fox and Katzir (2011) suggest a theory for the Computation of Alternatives which does not allow alternatives which are structurally more complex than their prejacent. Clearly, the negation of a proposition \( p \) is structurally more complex than \( p \). Fox & Katzir’s analysis provides a solution to a more general problem, the symmetry problem in the computation of Implicatures and therefore we don’t want to discard their theory. However, there is a way out of this problem. In the definition for the calculation of alternatives, Fox & Katzir allow more complex alternatives as long as they are imposed by the context as relevant alternatives. I argue that the negation of a proposition \( p \) is always a contextual salient alternative when \( p \) is broadly focused. This not only allows us to derive the right meaning for strong Imperatives but it also captures the intuition that an Imperative expresses a preference between \( p \) and \( \neg p \).

We are not yet done however. Assuming that the negation of the prejacent can be contextually relevant and therefore part of the alternatives, raises an important issue for the instances of overt existential modals\(^{12}\). If we allow both the Scalar alternative and the Focus alternative which involves the negation of the prejacent then we are faced with a symmetry problem, since the two alternatives contradict each other:

\[(74) \quad \text{You can open the window.} \]
\[\rightarrow \text{SA: You must open the window.} \]
\[\rightarrow \text{FA: You can [not[open the window]].} \]

Given this situation we would expect that at least in some environments (when the prejacent is broadly focused) we would derive no scalar implicature. However, this doesn’t seem to be the case. It seems that we always derive a scalar Implicature with an overt possibility modal (except for cases mentioned in Footnote 11). To account for this intuition and in parallel to keep as close

\(^{12}\)Thanks to Irene Heim for bringing up this question and also providing valuable comments regarding the ways it can be addressed.

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as possible to Fox & Katzir’s idea of structural formal alternatives, I would like to suggest that the more complex alternative, which involves the negation of the prejacent, is introduced only when there is no other formal alternative. Therefore, in the presence of a scalar alternative, the negation of the prejacent will not be part of the formal alternatives even if the prejacent is broadly focused. That is why, we always derive a scalar non-must Implicature with overt possibility modals and not a must-implicature as in Imperatives\textsuperscript{13}. This is a stipulation of course but I think a necessary one at this point.

Let me conclude this section by comparing the analysis presented here with two analyses of Imperatives which in some sense involve Alternatives as well; Condoravdi and Lauer (2012) and Starr (2011).

The present approach captures the intuition that in Imperatives we compare different alternatives but crucially the alternatives are derived naturally as Focus Alternatives. The effective preference operator introduced in Condoravdi & Lauer requires always the presence of at least two alternatives, the proposition and another proposition that has to be contextually salient in the context. In their analysis as well, in many cases, the alternative is the negation of the prejacent. As also discussed in von Fintel & Iatridou (2015), the problem with assuming that alternatives always arise and consequently ranked in terms of which is higher in the set of effective preferences, is that in permission readings it is not clear that the Speaker always have a preference for the prejacent over its negation. The example in (1f), repeated below, is indicative for such readings:

\begin{equation}
(75) \quad \text{Sign this paper, burn this paper, eat this paper. I don’t really care.}
\end{equation}

A similar problem arises for the analysis pursued by Starr (2011). He also proposes to analyse Imperatives as preferential structures but in a framework in which a conversation is analysed in terms of game theory and decision theory. In his view, “imperatives promote alternatives.” Roughly, he suggests that Imperatives introduce pairs of what is preferred over what. For example an imperative like ‘Open the window’ expresses a preference of \textit{opening the window} over \textit{not opening the window}. Although, in some cases such as in commands, requests, wishes, etc. this is indeed the

\textsuperscript{13}This raises further questions regarding the obligatoriness of contextual alternatives. Fox & Katzir mention that contextual alternatives seem to be optional at least in some cases. Here, we see that a more complex alternative introduced by the context is obligatory only if there are no other alternatives and otherwise it is not introduced. It remains to further check exactly how this idea works in other environments.
case, permission readings cannot be explained. Under the analysis I pursue here, the intuition that in some cases the Imperative expresses that a preference of the prejacent over its negation is captured, but it is not overgeneralized in cases where this doesn’t seem to be the case.

At last, sometimes treating Imperatives as ranked preferences derives a weaker meaning than the one which is actually conveyed by the Imperative. To illustrate, consider the following pair; in the first case we have an Imperative, the second is a structure which I will discuss extensively in Chapter 6, but for now it suffices to stick to our intuitions that the sentence in (76) expresses a preference of staying over leaving.

(76) a. Leave! #But of course you can stay as well, but it’s your responsibility.
   b. Better leave! ?But of course you can stay as well, but it’s your responsibility.

Assuming that the speaker utters (76a) in an out-of-the-blue context, the result is stronger than the sentence in (76b) in which the speaker clearly ranks the two preferences but he doesn’t implicate that A’s staying goes against his desires. This is shown by the continuation which I find much more acceptable in the case of (76b) than in (76a).

To summarize, the idea that in Imperatives different alternatives are evaluated with respect to Speaker’s desires is part of my analysis, but differently than Condorovdi & Lauer (2012) and Starr (2011), it is not an integral part of the semantics or of the pragmatic function of Imperatives. In the next chapter, I will discuss how alternatives emerge as the result of Focus Alternatives and how in the cases of permissions there are no alternatives to be exhaustified.

2.5 Summary and discussion

In this chapter, I presented an analysis of Imperatives as existential modals. I showed that in this way we can account for free for permission readings as opposed to analyses which relate the imperative with a universal modal or with a function that updates the context. Moreover, I showed that an existential analysis is independently motivated by the scope facts presented in section 2.3. However, an existential analysis faces the question of how strong Imperatives are derived.

I showed that a strong Imperative can be derived by the strengthening mechanism we use in computing conversational Implicatures. The input to this mechanism is the set of Focus alterna-
tives. Of course, we could also imagine different ways of deriving the strengthened interpretation. I already discussed the suggestion in Schwager (2005)/Kaufmann (2012) in which the universal reading can be viewed as exhaustification over possibilities. We saw that this analysis however doesn’t work for several cases. Another possibility would be to apply recursive exhaustification over domain alternatives as suggested in Bassi & Bar-Lev (2016) for conditionals and Bar-Lev & Margulis for the quantifier kol in Hebrew. However, a strong motivation for deriving the strengthened interpretation by exhaustifying over Focus Alternatives is that the Focus placement appears to be tightly connected to the interpretation of the Imperative as will see in the next chapter. Abandoning the idea of Focus Alternatives would force us to think of a different way in order to account for the correlation between the prosody and the meaning.

Indeed, there is an emerging interest in the prosody-meaning mapping in the domain of Imperatives. Portner (2015) suggests that the melody of Imperatives is relevant to their interpretation. However, the hypothesis he undertakes is very different from the one pursued here. Much like the idea presented in von Fintel & Iatridou (2015), Portner (2015) argues that the melody of an Imperative can indicate the level of commitment of the Speaker to the update he conveys. In particular, he argues that much like what has been observed for declaratives (Gunlogson (2004)), falling intonation signals that the speaker is committed to the Imperative’s content whereas rising intonation suggests the addressee’s commitment to treating the Imperative’s content as a priority. von Fintel & Iatridou (2015) suggest that a rising intonation signals a low level of endorsement. I think that some version of this idea is necessarily correct. However, I think that rising intonation is a marked prosodic pattern which can apply equivalently to all types of Imperatives to encode uncertainty/level of endorsement etc. but it doesn’t differentiate the permissions from the commands. As we will see in the next chapter, both in English and in Greek, permissions and commands are realized with a falling boundary tone; they differ primarily in Focus placement and not in their melody. Therefore, the difference between permission and strong Imperatives cannot be reduced to a difference in the level of endorsement or in whether it conveys Speaker’s as opposed to Addressee’s commitment.

Finally, we shouldn’t forget that other constructions which convey modality without the presence of an overt modal (see introduction) seem to pattern with Imperatives in that their interpretation correlates with a certain prosodic pattern. Root subjunctives in Greek (77b) have a similar
interpretation with Imperatives and their meaning varies between command/permission depending on their intonation in a similar fashion to Imperatives.

(77)  
   a. Katharise to trapezi!  
       Clean the table!  
   b. Na katharisis to trapezi.  
       Subj clean.Prf the table.  
           ‘Clean the table.’

Let me close this chapter by pointing to some obvious issues that arise from the present analysis and which I discuss in the following chapters. First, a major argument against an existential approach to Imperatives is the ban on the conjunction of conflicting Imperatives (von Fintel & Iatridou 2015, ex. (71)):

(78)  
   a. #Go left and go right! I don’t care.  
   b. you could go left and you could go right. I don’t care.  
   c. Go left. Go right! I don’t care.

While an existential analysis accounts for (78c), the data in (78a) remain problematic in view of the well-formedness of (78b). As mentioned in von Fintel & Iatridou (2015), one apparent but not satisfactory explanation for (78a) could be that we have the conjunction of the two propositions \( p \) & \( q \) and that there is a single Imperative operator (\( Imp \)) taking scope over the conjunction. Since a sentence like ‘You could go left and go right.’ is infelicitous we provide a parallel explanation for (78a). However, this doesn’t seem to be the case. As I show in (79), it is possible to have the conjunction of two imperatives which seem to vary in their quantificational force. If we assume that there is a single operator then it is very difficult to explain why we can have a conjunction of permission and a command as shown below.

(79) Run (if you want) but eat well!

I will return to the data in (78) in chapter 5, explaining the infelicity of (78a) as the result of the meaning of the imperative after I will have introduced the necessary background in Chapter 3.
Chapter 3

The role of prosody in the interpretation of Imperatives and Root Subjunctives

In the previous chapter, I presented an analysis of the strong reading of Imperatives as being derived via exhaustification over focus alternatives. I argued that the relevant alternative which gives rise to the strong reading (command/request) is the negation of the prejacent and it is generated when the entire prejacent is F-marked, bearing broad focus. Therefore, under the present analysis, intonation is a critical factor in the interpretation of Imperatives because it reflects the focus alternatives which in turn are responsible for the strengthened meanings.

In the following, I will present the readings which emerge under different prosodic patterns in Imperatives in English and in Greek and in Root subjunctives in Greek, which as I mentioned in the previous chapter behave like Imperatives with respect to their force. In the first part, I will discuss the intonation of commands/requests, then I will turn to permissions and finally I will discuss what happens when we have narrow focus on a constituent. The second part deals with Root Subjunctive Questions, showing that under the present analysis we can also explain their dual behavior with respect to the reading we get (weak vs. strong).

3.1 Commands/requests: Broad Focus

One of the biggest motivations for analyzing Imperatives as universal modals comes from the observation that their default interpretation is a command/request reading. But what do we mean
by default interpretation? Usually, default refers to *out-of-the-blue* contexts, in which Imperatives have a *command/request* interpretation. Under the present approach, this is explained since broad focus correlates with new information and it occurs in an *out-of-the-blue* context. It follows then that when an Imperative is uttered without any previous context, it will get a strong-reading.

The next step is to examine exactly the prosodic pattern of imperatives when they have a strong-reading and see if it correlates with our assumption that they bear broad focus. In order to check this, I constructed 10 pairs of Imperatives which were embedded under two contexts, one giving rise to *permission* and the other to *command/request*. The exact contexts and the sentences can be found in Appendix 1. The felicity of the contexts was double-checked by asking native speakers to paraphrase the Imperatives with an overt modal such as *can* or *should/must*. After this, the sentences were recorded by 5 native English Speakers. The subjects were asked to utter the Imperatives as naturally as they could in the given context. I followed the same procedure for Greek Imperatives, where 4 speakers (including myself) recorded the sentences. I then looked across the different speakers for each *command* and *permission* context. The findings suggested that indeed there is a different intonation pattern between *commands* and *permissions* and that *commands/requests* patterned with the broad focus intonation.

Before moving on to the actual recordings, let me point out a general observation that Imperatives seem to have no special melody (i.e. as opposed to Interrogatives vs. Declaratives). This was already noticed by Grosz (2008) who showed that Imperatives in English pattern with declaratives concerning their melody and it was replicated in this study. Having said this, the prevailing pattern that I found across the recordings is that Imperatives intended as *commands* or *requests* surface with broad focus which is realized with a high Nuclear Pitch Accent (NPA) followed by low boundary tone ((H*) H* L-L%)\(^1\), similar to broad focus declaratives (see Pierrehumbert (1980); Beckman et al. (2004); Beckman et al. (2004) for a discussion on the evolution the ToBI framework. The basic elements that we will use for the transcription of the prosodic patterns are i) Pitch Accents (e.g. H*, L*, etc.), ii) Phrase Tones (H-, L-) and iii) boundary tones (H%, L%). The pitch accents (which can be a high (H*) or a low (L*) pitch accent or a combination of the two tones (L+H*) mark prosodic prominence, which aligns with the stressed syllables that are prominent in a sentence. The phrase and boundary tones mark the edge of a phonological domain; phrase boundaries mark the edge of a Phonological Phrase within a sentence whereas Boundary tones mark the edge of an intonational phrase which can include one or more phonological phrases. Here we will have small intonational phrases with a single phonological phrase. For the transcription of the Greek sentences I take as basis the discussions in Arvaniti and Baltazani (2000, 2005); Balazani (2002); Baltazani and Jun (1999) which provide a detailed description of the accents and tones in Greek.

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\(^1\)I follow the ToBI system for the transcription based in a series of theoretical studies in Pierrehumbert (1980); Beckman et al. (2004); Ladd (1983) a.o. Beckman et al. (2004) for a discussion on the evolution the ToBI framework. The basic elements that we will use for the transcription of the prosodic patterns are i) Pitch Accents (e.g. H*, L*, etc.), ii) Phrase Tones (H-, L-) and iii) boundary tones (H%, L%). The pitch accents (which can be a high (H*) or a low (L*) pitch accent or a combination of the two tones (L+H*) mark prosodic prominence, which aligns with the stressed syllables that are prominent in a sentence. The phrase and boundary tones mark the edge of a phonological domain; phrase boundaries mark the edge of a Phonological Phrase within a sentence whereas Boundary tones mark the edge of an intonational phrase which can include one or more phonological phrases. Here we will have small intonational phrases with a single phonological phrase. For the transcription of the Greek sentences I take as basis the discussions in Arvaniti and Baltazani (2000, 2005); Balazani (2002); Baltazani and Jun (1999) which provide a detailed description of the accents and tones in Greek.
Pierrehumbert and Hirschberg (1990); Selkirk (1995) a.o. for the intonation declaratives).

Below, I present the pitch track of the Imperative sentence ‘Drive this Lamborghini’ in a request/command context as it was given to the speaker:

(1) **Context:** John is an employee in a car company. A new Lamborghini arrived so the chief tells him:

Drive this Lamborghini. We need to test if everything works fine.

![Sample Contour for Command-Imperative in English](image)

As shown below, there is a prenuclear accent on the verb (drive) but the NPA falls on the last stressed syllable (Lamborghini) followed by a low boundary tone (L-L%).

Although, the (H* L-L%)-pattern is the prevailing one, I have also found deviating patterns. For example, in a few cases there was a rising tone in the end. As I will discuss below such deviations are expected given that in declaratives we also find deviating patterns from the default melody. Aside from such discrepancies, overall we can conclude that a command/request-Imperative is associated with a broad focus intonation. The same conclusions can be drawn by the recordings of
the Greek Imperatives. Imperatives which are intended as commands or requests exhibit the same pattern as broad focus declaratives in Greek. As has been shown by Arvaniti et al. (1998), Baltazani and Jun (1999), Baltazani (2002), a declarative sentence with broad focus has the NPA on the last stressed syllable followed by a low boundary tone. The prenuclear pitch accents are L*+H which is the default realizations of prenuclear pitch accents in Greek. As we can see, the tune of a broad focus imperative in Greek has the same pattern as the one described for declaratives. Under the context in (2), the imperative ‘open the window’ gets a prenuclear L*+H pitch accent on the verb and then a High NPA on the last stressed syllable followed by a low boundary tone (L-L%).

(2) **Context:** The teacher says to a student when he enters the classroom:

a. *Anikse to paráthiro.*

   Open.IMP the window

However, in Greek I found a second prevailing pattern for commands in which there is a rising melody in the end. This is particularly common when the Speaker is very authoritative. For example, some speakers in the same context as in (2) produced an Imperative with a rising tone
in the end. One possibility to explain this pattern, pointed out to me by Irene Heim, is that the rising melody in the end hides a threatening continuation (or I’ll...). This seems to be a possible hypothesis, since when such a threat is overt this is the pattern we get. I will leave the issue open as to why a raising melody is possible in strong commands in Greek.

Root Subjunctives instantiate the same pattern; in the same context as in (2), the Root Subjunctive (RS) in (3) also has a broad focus intonation with the NPA realized at the last stressed syllable:

(3)  **Context:** *The teacher says to a student when he enters the classroom:*

a. Na aniksis to parathiro.
   SUBJ open.2SG the window
   ‘Open the window’

![Sample Contour for Command-RSs in Greek](image)

Now, that we have seen that commands/requests are realized with broad focus intonation, the next step is to see what happens when we have a permission reading.
3.2 Permission

Unlike commands, permissions are expected to have an intonation pattern such that does not yield the same alternatives. Indeed, we find that in a context where an Imperative has a permission interpretation, it is typically realized with high NPA on the verb followed by de-accenting. This is the prevailing pattern across all permission readings. The imperative in (4), in the given context, was realized by most speakers with a NPA on ‘drive’ followed by de-accenting. In Figure 3-4, I illustrate a typical example of such a realization.

(4) Context: John has visited a car exhibition and he looks at a very expensive, luxurious Lamborghini wishing to try it... Then the staff tells him:

Drive this Lamborghini. Nobody will object.

Figure 3-4: Sample Contour for Permission-Imperative in English

The facts in Greek are exactly the same, there is a NPA on the verb and then de-accenting of the rest of the utterance. The example in (5) parallels the command in (2) and the reader can see that there is a big difference between the command and the permission reading with respect to the
intonation pattern of the sentence.

(5) **Context:** Mary is clearly hot but she knows that Ana doesn’t want the windows open. Then Ana who understands Mary’s desire says:

a. Anikse to parathiro. Den me pirazi.
   Open the window. I don’t mind.

![Figure 3-5: Sample Contour for Permission-Imperative in Greek](image)

Similarly, RSs that encode a permission reading have the same prosodic pattern the stress falls on the verb and then everything that follows is deaccented:

Just by comparing *permissions* and *commands* we can see that there is a big difference in the prosodic pattern of the two. Now the question is how we can account for this difference. The quick answer is that the prosodic pattern reflects F-marking and therefore depending on the intended alternatives, we get a distinct intonation pattern. Below I elaborate on this idea.
3.3 Accounting for commands vs. permissions

Having defined the basic prosodic patterns in commands/requests vs. permissions we can now proceed to explain what this prosodic pattern means. In order to do so, it is necessary first to consider the syntactic structure of an Imperative clause and second to understand the way in which syntax and phonology interact. Abstracting away from the internal structure of the modal operator (the representation of the modal base and the ordering source), we can represent an Imperative and a Root Subjunctive as consisting of a covert modal operator (Op) and its complement proposition p. The syntax of Imperatives and Root Subjunctives will be discussed in the next two chapters. What is important at this point is that the modal operator is above the TP-domain and below the CP-domain (see Rivero and Terzi (1995); Han (1998, 2000); Kaufmann (2012); ?; Stegovec (2016)). Minimally, the syntax of an Imperative like ‘Open the window’ is represented in (6). In Greek, the verb moves to Asp-head and then to the Imperative Operator. In English as we discuss in the next chapters the verb remains in-situ. Aside from this difference, we can take for now the configuration below as the basic syntactic representation of Imperatives in English and Greek.
Now, we need to introduce some basic principles concerning the relationship between prosodic marking at the phonetic level and F-marking at the syntactic level. This issue is addressed in many works (Jackendoff (1972); Rooth (1992, 1996); Truckenbrodt (1995, 1999); Selkirk (1995); Schwarzschild (1999); Samek-Lodovici (2005); Büring et al. (2009); Büring (2013); Kabagema-Bilan et al. (2011)) but here I will confine myself to the discussion in Büring (2013) who presents a version of the analysis in which the interaction between the syntax and the phonological component is mediated by the prosodic structure building on Truckenbrodt (1995) and later work in the same direction. It is widely held and I have been assuming this in the discussion so far that Focus is a feature associated with a constituent x in the syntax. In addition to the F-feature, Büring also posits a Givenness feature G and provides the following two mapping constraints:

(7)  

a. **FOCUS PROMINENCE** (a mapping constraint)  
An [F]-marked constituent contains the nuclear stress (in its focus domain)  

b. **GIVEN NON-NUCLEAR** (a mapping constraint)  
A [G]-marked element doesn’t contain the nuclear stress (unless it is [F]-marked)  

These two constraints in combination with the general prosodic constraints (see Truckenbrodt (1995); Büring (2013)) guarantee that i) the last pitch accent within a prosodic constituent is on
the head of that constituent (STRESS-TO-ACCENT PRINCIPLE) except if the head has a complement (then the pitch accent is on the complement) and ii) the rightmost accent within a complex prosodic phrase will be the strongest (following the HEAD-RIGHT rule according to which the rightmost prosodic phrase is the head) can help us understand how the different prosodic patterns of Imperatives affect their interpretation.

The case of commands/requests, that we present first, is quite straightforward. The NPA is on the last stressed syllable and this can be translated into F-marking on the stressed constituent (narrow focus) or as VP-focus or as broad TP-focus or as Focus on the entire proposition. The narrow-focus cases as well as VP-focus will be discussed in the following section. What is of relevance here is the possibility of the entire prejacent in the Imperative being F-marked.

As already discussed in the previous chapter, the strong reading arises when the set of alternatives involves the negation of the prejacent. This alternative arises when the prejacent is broadly focused and there are no other relevant alternatives in the context. Therefore, in all the examples that we discussed as being broadly focused, we take the F-marked constituent to be the complement of the modal operator, as shown in (8a) for an Imperative clause like ‘open the window’, thus deriving the alternatives in (8b):

\[
\begin{align*}
\text{(8) a. } & \text{ Op [AspP pro open the window]}_F \\
\text{b. Alternatives for (8a) } & = \left\{ \begin{array}{l}
\text{Op pro opens wnd in w'}. \\
\text{Op } \neg[\text{pro opens wnd in w'}].
\end{array} \right\}
\end{align*}
\]

By negating the non-weaker alternative in (8b) we derive the interpretation that there is no world compatible with S’s desires in which A doesn’t open the window. From this it follows that when we have broad focus on the prejacent, we can derive a strong reading (unless the context suggests that we are dealing with narrow or VP-focus).

In a permission context, we see that the NPA falls on the verb. Looking at the syntax of Imperatives and given the constraints we have introduced three possibilities arise; i) that the verb itself is F-marked, therefore the alternatives would be derived by substituting the verb with another verb (i.e. open, close), ii) that the Aspectual head is F-marked; in this case the alternatives would be derived by substituting perfective with imperfective aspect, and finally iii) that the modal operator is focused representing an instance of verum focus. Whereas possibilities i) and ii) are also valid
and we can see them in corrective contexts for example, when there is no context that foregrounds either narrow focus interpretation of the verb or on the aspect, we are left with the third possibility that what is really F-marked is the modal operator.

Now a critical question arises which, as far as I know, has not been addressed in the literature. Namely, how F-marking on a covert operator is reflected on the phonological component? For Greek, in which there is considerable evidence that the verb moves to this operator, it is reasonable to assume that the NPA will be realized on the verb. For English, however, in which the verb remains in-situ a question arises as to how a covert F-marked constituent can affect the phonology of the utterance. In this case, a possible solution is that the NPA is aligned with the verb which follows the covert operator. Certainly, there is much more to be said about this issue. Another hypothesis would be that everything following the covert operator is given (as it usually the case in permissions) and therefore the NPA is aligned to leftmost stressed syllable and everything following is deaccented since it will be G-marked. As we will see, this might be the case in English but not in Greek where even in contexts in which the prejacent is not given, we get NPA on the verb is we have a weak (permission/invitation) reading.

I will first show how we can account for permission readings (when the NPA is on the verb) by taking the covert operator to be F-marked. After that, I will talk more about Givenness. The alternatives derived by focusing the Imperative operator in an imperative clause like ‘open the window’ will be its negation as shown in (9) (verum focus), therefore no Implicature is derived, because the alternative contradicts the assertion.

(9)  
\begin{enumerate}
  \item [Op]_{F} [AspP pro open the window]
  \item Alternatives for (9a) = \{  
    \begin{align*}
      Op & \text{pro opens wnd in w'} \\
      \neg Op & \text{[pro opens wnd in w']}
    \end{align*}
  \}\.
\end{enumerate}

The meaning for a sentence like (9a) will only be that there is a world compatible with the Speaker’s desires in which the Addressee opens the window, which captures our intuition about the weak interpretation of the imperative in this context.

Turning now to the issue of Givenness, it is expected that everything following the verb will be de-accented in these permission contexts since it is usually given that realizing the prejacent \(p\) is prohibited or it is given that \(p\) is desirable for the Addressee. This raises a question as to whether
the difference between the intonation of command and permission Imperatives can be reduced to
givenness. If permission always requires givenness of \( p \), we expect the prosodic pattern in which
everything following the verb is deaccented, whereas out-of-the-blue Imperatives are expected to
be broadly focused. Crucially however, based on the examples that I recorded, it can be shown that
the prosodic difference between the different types of Imperatives cannot be reduced to givenness
constraints. In the contexts that I provided the subjects with, in many cases \( p \) was equally given
for permission and command cases. Compare, for example, the two contexts below; in both cases
the action play with the ball is salient in the context.

\textbf{(10)} \hspace{1cm} \textbf{A.} George is sitting on Peter’s desk and he’s playing with Peter’s anti-stress ball. Peter
comes in and he sees George who tries to apologize\ldots. Then Peter says:

Play with the ball. It’s o.k.

\textbf{B.} Peter just invented a new anti-stress ball and he wants to check if it works. Then George
his colleague comes in and Peter tells him, I made this ball and I need somebody to play
with it. Please\ldots

Play with the ball. I need to see if it works.

Despite the fact that in both cases playing with the ball is given, in (10A) we get the NPA on the
verb \((\text{play})\) whereas in (10B) we get the NPA on the object \((\text{ball})\) suggesting that the prejacent
is broadly focused. This shows that independently of whether the prejacent is given or not when
we want to convey a command/request we will use broad-focus intonation to indicate that what is
F-marked is the entire prejacent. This way we indicate the intended alternatives and consequently
the strengthened meaning arises via exhaustification. This can be seen in the following example
from Greek as well; the prejacent is given in the preceding context, yet when we want to convey
that something is obligatory we have to use broad-focus intonation. Stressing the verb is not an
option:

\textbf{(11)} \hspace{1cm} \textbf{Context:} John doesn’t want to call Nick. However, his sister Mary believes that it’s im-
portant to call Nick in order to inform him about something. So, she insists and she tells
her brother:
a. Pare ton Niko TIEFONO. Prepi na tu milisis.
Take the Nick telephone must SUBJ CL.DAT.3SG talk.2SG
‘Call NICK. You must talk to him.’

b. #PARE ton Niko tilefono. Prepi na tu milisis.
Take the Nick telephone must SUBJ CL.DAT.3SG talk.2SG
‘CALL Nick. You must talk to him.’

We observe the reverse pattern in a context in which Nick expresses his will to call Nick and Mary simply expresses that this is fine with her:

(12) a. #Pare ton Niko TIEFONO. Den me pirazi.
Take the Nick telephone not CL.ACC.1SG bothers
‘Call NICK. You must talk to him.’

b. PARE ton Niko tilefono. Den me pirazi.
Take the Nick telephone not CL.ACC.1SG bothers
‘CALL Nick. You must talk to him.’

These data suggest that what really matters is what the alternatives are intended to be and therefore the role of intonation is really critical in the interpretation of the Imperatives as conveying just permission or a stronger requirement reading.

However, the question remains regarding environments in which the prejacent is not given and the imperative has a weak reading. These cases arise in invitation-contexts, e.g. ‘Have a drink!’, ‘Eat an apple’. In these cases we observe a split between Greek and English.

In Greek, invitations are realized with NPA accent on the verb. All the speakers I recorded, stressed the verb in the invitation context as shown in the following spectrogram for an invitation like Eat an apple.

(13) Out-of-the-blue context: Somebody comes into the kitchen and on the table there is basket of apples, then the speaker tells him:

a. Fae ena milo.
Eat.IMP an apple

Crucially, an invitation-Imperative in Greek must be obligatorily realized with a NPA on the verb. Native speakers judge as odd imperatives in invitation contexts with broad focus intonation.
This seems to be consistent with the analysis presented here that NPA on the verb has the result that no strengthening applies because we have verum focus. However, it is still puzzling that new-information is de-accented and therefore marked as given based on our rules.

On the other hand, in English, invitation-Imperatives, in which the prejacent is not given, exhibit a different pattern. From the five speakers that recorded the sentences in English two of them in the invitation context (eat an orange) stressed the verb whereas three of them stressed the last word. The data are too restricted to draw any safe conclusions. However, it is clear that the prosodic pattern of invitation-Imperatives is different in English and that, contrary to Greek, it seems that givenness plays important role in the tune that we get. Further investigation of the melody of invitation-Imperatives in Greek and English is necessary in order to understand in what respect the two languages differ.

Let me only add a final piece to the puzzle, pointed out to me by Edward Flemming. It seems that the differences between Greek and English in the prosodic realization of Imperatives in these contexts might be due to different prosodic constraints (or different ranking between these constraints) in the two languages (see for example Samek-Lodovici (2005)) for an optimality account.
of the different prosodic patterns in the realization of focus cross-linguistically). For example, the striking fact that in Greek non-given material can be deaccented in permissions correlates with the fact that the default prosodic pattern of polar questions in Greek is to align the NPA with the verb and de-accent everything that follows (Baltazani (2002, 2007)). This is despite the fact that in many cases, in polar questions all constituents are new. We will talk more about questions in the second part of this chapter but we are not going to provide any explanation for the contrast between the two languages.

The issue of how F-marking interacts with Givenness and how this is regulated in different languages largely remains open. I think that a fruitful path of investigation would be to see the cross-linguistic differences not only in the domain of Imperatives but also in other environments such as in questions and see if we can make any generalizations regarding the prosodic differences in the two languages. Only then I think, we can get a full understanding of the role of intonation in Imperatives and in particular on the way it interacts with the different meanings derived. At this point, the only thing that we can show with certainty is that depending on which constituent is focused we get different alternatives deriving and therefore we get different inferences regarding what is allowed and what it isn’t.

### 3.4 Narrow-focus Imperatives

So far, I have only discussed broad focus and focus on the verb. However, we can also have narrow focus on a constituent. In this case under the present analysis, we will derive the interpretation that \( p \) is compatible with S’s desires and that an alternative derived by substituting the focused constituent is not. For example, the imperative in (14) with narrow focus on \textit{vanilla} provides permission to the kid to eat vanilla ice-cream but it also conveys a prohibition against eating other ice-cream flavors (e.g. chocolate ice-cream):

(14) **Context:** Child is asking for ice-cream at 10p.m. His mother desperate says:

O.k... Eat \textit{vanilla} ice-cream!... Although, you shouldn’t eat any ice-cream.

\[ \rightarrow \text{You are not allowed to eat chocolate, brownie, etc.} \]

Notice that narrow focus is also compatible in contexts in which the prejacent is not only taken to
be possible but also necessary. For example, in (15) it is already established that a window must be opened and the imperative clause conveys that *A can open the front window but not the back window.*

(15) **Context:** *It stinks in here... You should open a window...*

Open the **FRONT** window!

→ You are not allowed to open the back window, etc.

The necessity interpretation in (15) is not problematic for the present analysis because the request/command is already established in the context. If the context establishes that '∃x. p(x) is necessary' and the strengthened meaning of narrow focus imperative is that 'only p(a) is possible', it follows that 'p(a) is necessary'. In general, narrow-focus on a constituent a will emerge only when there is x such that p(x) is given. This means that the context will determine whether p(x) is a necessity or a possibility and therefore narrow focus Imperatives and Root Subjunctives, will always require contextual information to be classified as *commands/requests* as in (15) or as *permissions* in (14).

Overall, the present analysis predicts that there is a mapping between the prosodic pattern and the interpretation of the imperative (if not one-to-one correspondence, there is at least differentiation between *commands* and *permissions*) (cf. Portner (2015)). Further types of imperatives like *advice* or *wishes* should be examined, however, in order to gain a better understanding for the way in which prosody can provide cues for the interpretation of Imperatives and RSs (see for example Chatzikonstantinou (2013) for a study on the prosodic difference between *command-* and *advice- imperatives*).

The next question is to what extent subjects are sensitive to the prosodic cues for the interpretation of Imperatives. In Greek it appears that native speakers are quite sensitive to the intonation. At least, in a small pilot study in which I played them back the sound files from the recorded *permission* and *command* imperatives there was no difficulty recognizing *permission* or *requirement.* In English, on the other hand, things seem to be trickier with the native speakers finding the task of identifying whether an imperative is permission or a requirement more difficult. At any rate, experimental study (perception studies on different varieties of Imperatives) is necessary in order to identify how sensitive listeners are to the prosodic cues.
Another environment in which intonation seems to play a critical role for the interpretation of the utterance as conveying necessity or possibility is root subjunctive questions, which are discussed in the following section.

3.5 Root na-subjunctive questions

As I mentioned in the introduction, Greek has Root Subjunctive Interrogatives (RSIs). We will talk in detail about the importance of the availability of Root Subjunctive Questions, their properties and the lack of Imperative Interrogatives in Chapter 5. Here, let me focus on the ambiguity of RSIs which is parallel to the ‘ambiguity’ of Imperatives and RSs; RSIs are used to ask for permission or ask if something is necessary according to the Addressee. Once more we observe that the force of modality ranges from an existential to a universal modal. The example in (16) can be interpreted as ‘could I call?’ or ‘should I call’ depending on the intonation:

(16) Na paro ton Petro tilefono?
    SUBJ take.1SG the Peter telephone
    ‘Could/Should I call Peter?’

Root Subjunctive Questions are expected to have the meaning of their Root Subjunctives counterparts plus the contribution of the Question operator. If we follow an Alternative Semantics approach to Questions, treating them as the set of possible answers a lá Hamblin (1973), the meaning we will get is the set of propositions in (17):

(17) \( [(16)]^w = \{ \exists w' \in W. S's \text{ desires in } w \text{ are satisfied in } w' \land A \text{ calls Peter in } w'. \}
    \( \land \neg \exists w' \in W. S's \text{ desires in } w \text{ are satisfied in } w' \land A \text{ calls Peter in } w'. \}

The meaning in (17) seems to capture our intuition about the interpretation of the root subjunctive question in (16). By uttering (16) the Speaker wants to know whether it is compatible with the Addressee’s desires that he calls Nick or not.

Notice that in RSIs we ask about the Addressee’s desires not about the Speaker’s desires2. I will talk more about this property in Chapter 5, after I have introduced some necessary assumptions.

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2 Sometimes in order to avoid confusion I use the terms Questioner vs. Responder.
regarding the modal base and the ordering source of the operator involved in Imperatives and RSs. For now, think of it as the general perspective shift from the speaker in Declaratives to the Addressee in Questions.

Now let me focus on the quantificational force of the operator and the inferences we derive depending on the prosodic marking as I have done for the Imperatives and RSs in non-interrogative environments.

3.5.1 Prosody and na-Interrogatives in Greek

The main observation, first noted in Iatridou (2010), that we need to account for is that the interpretation of na-interrogatives varies between a permission reading and a requirement reading depending on the intonation. In particular, when the na-question has the default intonation pattern of a yes/no question in Greek the modal operator is interpreted as a possibility modal whereas when we have focus-marking on a constituent we get a stronger reading, as illustrated by the original example from Iatridou (2010) in (25):

(18) a. Na to VALO edo?
   SUBJ it put.ISG here
   ‘Can I put it here?’

b. Na to valo EDO?
   SUBJ it put.L SG here
   ‘Should I put it here?’

In order to understand the contrast in (18), we need first some background on the intonation of polar interrogatives in Greek.

Polar questions in Greek can be at surface identical to declaratives only distinguished by their intonation pattern. According to Baltazani and Jun (1999); Baltazani (2002, 2007); Arvaniti et al. (2006), the intonation for polar questions involves a low nuclear pitch accent (L*)3 followed by a rise-fall boundary (H- L%). In default yes/no-questions, the NPA falls on the verb or on the auxiliary when it is present, an example of this pattern is illustrated for the question in (19), uttered in an out of the blue context:

3Baltazani and Jun (1999) attribute the type of NPA in polar questions to the influence of the H-L% boundary. Specifically, they claim that the H-L% boundary marking polar questions reverses the tonal type of nuclear pitch accent, which is realized as a L* instead of the H*/H*+L NPA of the declarative.
(19) ΠΙΡΕ ο Νίκος τηλέφωνο?
Take.PAST.3SG the Nick telephone
‘Did Nick call?’

This question can be uttered out of the blue, without any preceding context. The nucleus is on the verb *pire* and the object carries no pitch accent. The H-L% boundary tone represents the rise-fall boundary that we find with polar questions:

![Sample Contour for default polar questions in Greek](image)

When there is F-marking on a constituent then the low NPA (L*) falls on the F-marked constituent. If there is material preceding the focused constituent then it has a prenuclear pitch accent (L*+H) similarly to what happens in declaratives. The boundary tone is always the same rise-fall (H-L%) in questions independently of the position of the NPA. For the same question as in (19), the NPA is on *Nikos*, as shown in the spectrogram in Figure 9.

The prosody of matrix subjunctive Interrogatives follows exactly the same rules as the other interrogatives in Greek. What is different is that there is a covert modal operator which interacts with focus alternatives rendering their prosodic pattern relevant for their interpretation. Now that we have introduced the general prosodic pattern for Interrogatives in Greek, we can describe the
role of prosody in *na*-subjunctive questions on their interpretation as in (20):

(20)  

a. If the NPA falls on the verb, a permission-asking question is derived  
b. If the NPA falls on any other word, a requirement-asking question is derived.

Let us consider again our initial example in (16), repeated in (21). If the NPA falls on the verb as shown in Figure 10, the interpretation is ‘Can I call Niko?’, the Questioner is asking the responder’s permission/opinion.

(21) Na paro ton Niko tilefono?  
SUBJ take.1SG the Peter telephone  
‘Could/Should I call Niko?’

The interpretation of the question in (21) differs if the NPA falls on the object *tilefono* (Figure 11). In this case, the intuition is that the speaker asks the Addressee whether he considers it necessary to call Niko. An appropriate context for this prosodic pattern is one in which *Nikos is the plumber of the company. The speaker who is the secretary sees a leak and he goes to her chief and explains*
In this case, we get pitch track in Figure 11 (the L* NPA falls on the last word).

In the following section, we proceed to account for the prosody-meaning mapping based on Focus Alternatives and their interaction with the modal operator.

### 3.5.2 Focus Alternatives and the interpretation of polar na-questions

The account we have presented for the derivation of the stronger meaning of Imperatives is based on the presence of certain focus alternatives, following Rooth’s analysis on Focus interpretation. Under Rooth’s approach the role of focus is to evoke a contrasting set of propositions (Rooth (1996), p. 203). Rooth (1996) introduces a focus operator, represented as a squiggle (~~), which introduces the focus presupposition that the focus alternatives are a subset of the focus semantic value of the phrase it attaches to. In the case of declaratives, it is assumed that this operator attaches at the propositional level and focus is interpreted at this level:

(22) a. LF: \(~[[\text{Nick}]_F \text{ came}]\)
Figure 3-11: Sample Contour for polar na-question with narrow focus in Greek

b. $\langle(22a)\rangle^f = \{\text{Nick came, Peter came, Mary came, etc.}\}$

In the case of questions, I take the focus operator to project only up to the propositional level (TP).
If this operator attached to the entire question (QP) then we would get a set of questions as the
focus semantic value and this doesn’t capture our intuitions about focused questions\(^4\). The focus
operator takes as its argument the embedded proposition, as shown in the LF in (23b) for a question
like (23a):

(23)   a. Did $\text{Nick}$ come?

b. LF: $\langle QP \ Q \sim [\langle \text{Nick} \rangle^f \ came]\rangle$

The alternatives that will be derived are the same as in the case of declarative:

(24)    $\langle(23)\rangle^f = \{\text{Nick came, Peter came, Mary came, etc.}\}$

\(^4\)Notice that it is not impossible to have a focus operator scoping above a question. For example, Iatridou and
Tatevosov (2015) show that even can scope above the question operator and generate a set of questions as alternatives.
However, in this case, it is clear that the alternatives are not set of questions but set of propositions.
This captures our intuition that in focused polar questions, there is an existential inference just like in focused declaratives (Jackendoff (1972); Rooth (1992); Abusch (2008); Abrusán (2013)). In particular for the question in (23) we get an inference that somebody came. The status of this inference has been debatable in the literature, with some arguing that it is an existential presupposition (Geurts and Van der Sandt (2004); Abusch (2008); Abrusán (2016)) and others arguing that the existential presupposition boils down to a *givenness* constraint (Rooth (1992, 1996); Schwarzschild (1999)). There is also a distinction between clefted and focused constituents; clefting is argued to give rise to a strong presupposition whereas plain focusing results in a weak existential presupposition which is easily cancelled (see the discussion in Abrusán (2016)). For a language like Greek, which has overt focus movement, the distinction is often drawn between moved focused constituents vs. in-situ focused constituents. Compare the following two questions in both of which the focused constituent is the object ton Niko. In (25b) where the focused constituent is fronted the presupposition that Peter saw somebody intuitively feels stronger.

(25) a. O Petros ide ton NIKO?  
   The Peter.NOM saw the Nick.ACC  
   ‘Did Peter saw NICK?’  

   b. ton NIKO ide o Petros?  
   the Nick.ACC saw the Peter.NOM  
   ‘Is it NICK that Peter saw?’

What is important is that, irrespectively from the status of the inference, in both cases we get an existential inference, which becomes stronger if there is focus-movement (see Abrusán (2016) for an account).

Having set the ground for the computation of the focus value in questions, we can turn to *na*-subjunctive questions and see in which way focusing interacts with the interpretation of the modal force. First of all, the ordinary semantic value of a question will always be the same irrespectively of the placement of focus marking. So a question like (26) will always have the meaning in (27) which we introduced in the previous section.

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5 The discussion regarding differences between moved and in-situ focus in Greek is much more complicated than presented here. For an overview and an analysis of the contrast between the two constructions see Gryllia (2009).
(26) Na paro ton Niko tilefono?
SUBJ take.1SG the Peter telephone
‘Could/Should I call Nick?’

(27) \[\[(26)\]]^w = \{ \exists w' \in W. S’s desires in w are satisfied in w' \land A calls Nick in w'. \land \neg \exists w' \in W. S’s desires in w are satisfied in w' \land A calls Nick in w'. \}

Aside from the ordinary semantic value we have the focus value, which is responsible for certain inferences. In the following I show how focus marking can affect the interpretation of na-questions which involve a covert possibility modal. The core idea is that the presence of certain focus alternatives restricts the available possibilities, in such a way that a stronger meaning than just a possibility arises. Below I will illustrate three different options for F-marking and the effect they have for the interpretation of na-questions:

**Option A: default yes/no-question**

The first option is that we have NPA on the verb which is the default intonation for yes/no-questions in Greek. I take this to be verum focus\(^6\) which would then derive exactly the same alternatives as the ones that we have in (27) above. Therefore, the default intonation for polar questions doesn’t

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\(^6\)This is actually a big question why we should treat this prosodic pattern as verum focus. The evidence from plain Interrogatives shows that if there is an auxiliary it will be the auxiliary bearing the NPA suggesting that indeed we are dealing with verum focus. However, the fact that in English the default prosodic pattern of yes/no-questions is not NPA on the auxiliary but rather broad focus similar to declaratives raises a question regarding the role of the prosodic pattern in Greek. Baltazani (2007) building on a proposal by Ladd (1996) suggests that it is the lack of any other way of marking the plain polar question in the grammar of Greek forces the nucleus to appear on the verb. Namely, Ladd observes that there are two patterns of accentuation in polar questions cross-linguistically: final nuclear accent as in declaratives (e.g. English), or nuclear accent on the verb (e.g. Greek). He proposes that the choice of the prosodic pattern in a language correlates with the cross-linguistic distribution of question particles; if a language has a question particle or if it morphologically marks question (as English with overt T-to-C movement) then it has broad focus whereas if a language has overt morphological marking in questions, then it exhibits the NPA-on-the-verb pattern. Baltazani (2007) provides evidence for this proposal by showing that when in Greek we have a question with the overt question particle mipos then the question has broad focus intonation with NPA aligning with the right edge of the utterance. The meaning and the exact semantic contribution of mipos is not clear to me but Baltazani translates it as ‘is it by any chance’. What is particularly interesting for the account presented here is that when a RSI appears with mipos as in (i) below it is interpreted as ‘should I/he… etc.’

(i) mipos na paro ton Petro tilefono?
Q.PART SUBJ take the Peter telephone
‘Should I call Peter?’

This cannot be due to the interpretation of mipos because in general it can appear in permission-asking questions as shown in (ii). However, the corresponding mipos-RSI in (iii) is out in this context whereas the one without mipos is perfectly fine (iv). Imagine a context in which you are a guest in a house and you are asking whether it would be possible to make a phone-call from their land-line:
affect the interpretation of na-questions. As expected by the existential meaning we have provided for the modal operator, the Questioner asks whether it is compatible with Addressee’s desires or not that he calls Nick. If the answer is positive, it will be understood as permission whereas if the answer is negative it is understood as prohibition.

Option B: narrow focus on a constituent

The second option is to have narrow focus on a constituent. For example, in the case of (28) we can F-mark the indirect object ‘Niko’:

(28) Na paro ton NIKO tilefono?
    SUBJ take.1SG the Peter telephone
    ‘Could/Should I call NICK?’

Now, the LF of the question involves in addition a focus operator which takes as its argument the proposition below the Question Operator. In this case, in addition to the ordinary semantic value, we will derive the focus value in (29b) assuming that there are two contextually salient individuals aside from Nick (N), Peter (P) and Mary (M):

(29) a. LF(28): \([QP \ Q [\sim \ [\text{ModOp Op} [TP S \text{call} \text{Nick}]]]]\)

(ii) Mipos boro na paro ena tilefono?
    Q.PART can.1SG SUBJ take.1SG a phone
    ‘Could I make a call?’

(iii) #Mipos na paro ena tilefono?
    Q.PART SUBJ take.1SG a phone
    ‘Could I make a call?’

(iv) na paro ena tilefono?
    SUBJ take.1SG a phone
    ‘Could I make a call?’

Based on our analysis we can explain why mipos-RSI cannot be used to ask permission since they have broad focus which gives rise to an interpretation when we ask whether something is necessary. However, given my ignorance regarding the meaning of mipos I hesitate to draw any conclusions. To return to the original question, I will keep treating NPA-accent on the verb in Greek polar questions as verum focus but further understanding is required to understand what is the exact contribution of focus and how English type languages are different from Greek-type languages. I would like to thank Edward Flemming for bringing up all these points and directing me to look at mipos-questions in Greek.
\[ \exists w' \in W. S's \text{ desires in } w \text{ are satisfied in } w' \land A \text{ calls } N \text{ in } w'. \]

b. \[ \mathbb{P}^{(28)}\] = \{ \exists w' \in W. S's \text{ desires in } w \text{ are satisfied in } w' \land A \text{ calls } P \text{ in } w'. \} \] \[ \exists w' \in W. S's \text{ desires in } w \text{ are satisfied in } w' \land A \text{ calls } M \text{ in } w'. \]

The focus has two effects; first, it introduces an inference that there is a person such that there is a world \( w' \) compatible with the Addressee's desires and the Speaker calls this person in \( w' \). In other words, it is common ground that \( A \) is o.k. with \( S \) calling somebody. The second effect is that if the answer to this question is \( \text{yes} \), we derive the inference that for none of the alternatives (emphNick, Mary) it is compatible with the A's desires for the S to call them. This comes out as an implicature by exhaustifying the focus alternatives of the answer in the same way that we presented for Imperatives in chapter 2. The \( \text{EXH} \)-operator takes as its input the focus alternatives and negates them as shown in (30) for the alternatives in (29b):

\[
[\text{EXHALT}(S)]^w = 1 \text{ iff } [S]^w = 1 \text{ and } \forall \phi \in \text{ALT}(\phi(w)) = 1 \rightarrow ([S] \subseteq \phi)
\]

The prediction is that if we have a contextually salient set of alternatives, then the alternatives will be negated by exhaustifying over them. In fact a narrow focused \( \text{yes/no} \)-question still has the semantics of a \( \text{yes/no} \)-question as it is evident by admitting a \( \text{yes/no} \) answer but it also points to a hanging \( \text{wh} \)-question which corresponds to the focus value of this question. Let us illustrate this with an example. Imagine a context before the Democratic Party elections, in which the Speaker asks his friend who to vote for. If ‘Sanders’ is F-marked, a continuation as in (31B) is not as natural as in the case of (31b) in which the question has the default intonation of \( \text{yes/no} \)-questions, with the NPA on the verb. The translation here does not quite capture the meaning of the question. In this context, the question means more “What is your opinion? Is it a good idea to vote for Sanders?”

(31) a. A. Sanders na psifiso?
Sanders SUBJ vote.1SG
‘Is it Sanders that I should vote for?’

b. B. #Ne. ala boris na psifisis ke Clinton (den me pirazi).
Yes but can.2SG SUBJ also Clinton I don’t mind
‘#Yes, but you can also vote for Clinton (I don’t mind).’

(32) a. A. na psifiso Sanders?
SUBJ vote.1SG Sanders
‘Do you think it’s o.k. to vote for Sanders?’

b. B. Ne. ala boris na psifisis ke Clinton (den me pirazi).
   Yes but can.2SG SUBJ also Clinton I don’t mind
   ‘Yes, but you can also vote for Clinton (I don’t mind).’

Notice that in the previous example the verb *vote* excludes the possibility that the Speaker votes both for Sanders and Clinton, therefore the additive particle ‘ke’ must obligatorily take scope above the modal operator. But what about cases in which the additive particle can scope below or above the modal operator? The following example shows that again there is a difference depending on the intonation. If the object is focused, then under a positive answer we derive the Implicature that the others should not be invited and therefore the continuation in (33B) is odd. On the contrary, a default *na*-question doesn’t yield this Implicature, making the continuation in (34B) perfectly natural.

(33) a. A. TON NIKO na kaleso?
   The Nick.ACC SUBJ invite.1SG
   ‘Is it Nick that I should invite?’

b. B. #Ne. ala tha thela na kalesis ke tus alus.
   Yes, but FUT like.PAST.1SG SUBJ invite.2SG also the others
   ‘#Yes, but I would like you to invite the others too.’

(34) a. A. na kaleso ton Niko?
   The Nick.ACC SUBJ invite.1SG
   ‘Is it Nick that I should invite?’

b. B. Ne. ala tha thela na kalesis ke tus alus.
   Yes, but FUT like.PAST.1SG SUBJ invite.2SG also the others
   ‘Yes, but I would like you to invite the others too.’

Therefore we see that narrow focus in *na*-questions restricts the possibilities in such a way that the meaning we derive is not a pure possibility but a possibility which comes with certain exhaustified possibilities (requirements) and creates the ‘illusion’ of a stronger meaning. Independently of which constituent is narrow focused, we will get the same effect. Below, I show what happens when the entire prejacent is taken to be F-marked.
Option C: broad-focus on the prejacent

As I showed in the previous section the NPA can also align with the right-edge of the question. In our example, this is the word *telephone*:

(35) na paro ton Niko TILEFONO?
    SUBJ take.1SG the Nick telephone
    ‘Should I call Nick?’

In this case, there are different possibilities as to what is actually F-marked and we need to resort to the context to find this out. It could be that only the object telephone is F-marked, however in this particular example it seems that the verb and the object forms a complex meaning ‘call’ and therefore we cannot substitute telephone alone. Having excluded narrow focus on telephone for this particular example, we are left with two possibilities; i) focusing the VP or ii) focusing the entire proposition embedded under the modal operator.

In the first case, we will get the LF in (36a), deriving all sorts of focus alternatives by substituting the VP with another constituent of the same type (36b):


b. \([(35)]^{f,w} = \{
\exists w' \in W. S's desires in w are satisfied in w' \land A calls Nick in w'.
\exists w' \in W. S's desires in w are satisfied in w' \land A e-mails Nick in w'.
\exists w' \in W. S's desires in w are satisfied in w' \land A does his homework in w'.
\exists w' \in W. S's desires in w are satisfied in w' \land A plays chess in w'.
\}\]

If the answer is positive, then we will derive an implicature that all the other alternatives are not desirable for the Addressee at the moment of the utterance time. If the answer is no, then there is a hanging question as to which of the alternatives is desirable, so it is appropriate for the speaker to respond by pointing to another alternative as in (37):

(37) ohi, na tu stilis e-mail.
No, SUBJ CL.DAT.3SG send.2SG e-mail
‘No, send him an e-mail.'
Aside from VP focus, stressing the right edge could also mark focus on the entire proposition embedded under the modal operator as shown in (38a). In this case, we can derive similar alternatives to (36b) but in addition it is possible that set of alternatives consists from the prejacent and the negation of the prejacent, therefore deriving the focus value in (38b):

(38)  a. LF(35): \[Q_\mathcal{P} \, Q \, [\sim_{ModOp} \, Op \, [TP \, S \, call \, Nick]]]\n
b. \[[[35]]^{f,w} = \{ \begin{array}{l} \exists w' \in W. \, S's \, desires \, in \, w \, are \, satisfied \, in \, w' \, \land \, A \, calls \, N \, in \, w'. \\ \exists w' \in W. \, S's \, desires \, in \, w \, are \, satisfied \, in \, w' \, \land \, \neg \, A \, calls \, N \, in \, w'. \end{array} \} \]

In this case, if we get a positive answer we get an inference that there is no world compatible with the Speaker’s desires in which the Speaker doesn’t call Nick. In other words, it is not just permitted but it is necessary that p. For example, if the NPA is on the verb and we have a positive answer, as in (39B), the questioner is not committed to fulfill the prejacent.

(39)  A. Na PARO ton Petro telefono?
        SUBJ take.1SG the Peter phone?
    B. Yes. → a ‘yes’ answer does not commit the Questioner to call Peter.

On the contrary, a positive answer to the same question but with broad focus gives rise to the inference that it is obligatory for the Questioner to call Peter.

(40)  A. Na paro TON PETRO telefono?
        SUBJ take.1SG the Peter phone?
    B. Yes. → a ‘yes’ answer commits the Questioner to call Peter.

Notice that if the question is no, we get the same interpretation in both cases that there is no world compatible with the Speaker’s desires in which the Speaker calls Nick. However, the there is still a difference that in the case of broad focus the Speaker has a preference for something and we need to figure out what is the alternative.

To summarize, the modal force in na-subjunctive questions is always existential; the difference in the interpretation arises due to F-marking which induces further alternatives. The presence of alternatives creates an existential inference that at least one of the alternatives is true. In addition,

7Another puzzle which deserves our attention is the interpretation of negated na-subjunctive questions. We cannot use them to request permission for not doing something. For example, the following question is infelicitous in a context in which an employee asks for a day-off because it is his child’s first ballet show:
under a positive answer we get to exhaustify over certain alternatives which captures our intuition that the responder not only provides permission but he also prohibits the questioner from certain actions, therefore the interpretation gets stronger than pure permission.

In the following section I argue that wh-na-questions behave similarly to narrow-focused polar na-questions with the difference that the alternatives are now part of the ordinary semantic value of the wh-question.

### 3.5.3 Wh-na-questions

Aside from polar root subjunctive questions, we can also have wh-questions with root subjunctives. Contrary to English root wh-infinitival questions which are very restricted (Bhatt 1999), wh-na-questions in Greek are very productive and they are used like polar na-questions to elicit the Addressee’s opinion on the matter. As shown for the examples below it is hard to choose between a paraphrase with a possibility or a necessity modal.

(41) a. Pjon na kaleso?
   Who.Acc SUBJ invite.1SG
   ‘Who to invite?’

b. Ti na diavasi i Ana?
   What SUBJ read.3SG the Ana
   ‘What should/could Ana read?’

c. apo pu na agoraso stafilia?
   from where SUBJ buy.1SG grapes
   ‘From where should I buy grapes?’

Following the alternative semantics approach to Questions, introduced in the previous sections, we can now derive compositionally the meaning of wh-na-questions by treating the wh-phrase as a variable which ranges over the set denoted by its restrictor. For example, the meaning of the

(i) #Na min ertho avrio sti dulja?
   SUBJ not come/1SG tomorrow at-the work
   Intended: ‘Can I not come to the work tomorrow?’

On the contrary, in a context in which the boss has already said that she expects some friends in her office and she would like to have some private space with them, the question in (i) is perfectly felicitous for her secretary to ask.

This intuition seems to be relevant to Ladd’s observation that preposed negation seems to be used to double-check \( p \) or not \( p \) (Romero and Han (2003)). I leave the issue of negated na-questions as they require in depth discussion of the role of negation in Questions in general (see also Sudo (2013)).
question in (41a) is the set of propositions in (42):

\[(42) \quad [[(41)]]_w = \{ \exists w' \in W. A's \text{ desires in } w \text{ are satisfied in } w' \land S \text{ invites } x \text{ in } w': x \text{ is an individual} \}\]

The meaning in (42) seems to capture our intuition that the Speaker asks the Addressee to name the individuals he agrees to be invited (exhaustive answer). Moreover, \textit{wh}-questions introduce an existential presupposition, so in this case the Questioner presupposes/expects that there is a person which the Addressee desires to be invited. In Chapter 5, where we will compare Imperatives and Root Subjunctives, we will talk more about the licensing of Root Subjunctives questions and we will also come back to \textit{wh}-questions in embedded contexts.

### 3.6 Summary

The conclusion that we draw from the interpretation root subjunctive questions is critical for the claim we have made in Chapter 2 regarding the existential character of the modal operator in Imperatives and Root Subjunctives. As it was discussed in the previous section, the only chance that we can derive a non-strengthened possibility interpretation is if what is F-marked is the modal operator. In the case of polar questions, the possibility interpretation comes out naturally when we have the default intonation of polar questions because the alternatives derived are those predicted by the Hamblin semantics of questions. If we were to treat Root Subjunctives as involving a universal modal it would be very difficult to account for the interpretation of root subjunctives which in their default pattern express possibility.

The discussion about the interaction between prosody and interpretation is definitely not exhaustive. There are many issues that require our attention aside from the focus marking and its relevance. First, as I mentioned in the previous section von Fintel & Iatridou (2015), as well as Portner (2015a), recognize that intonation is important but in a different way than discussed here. They point to the idea that in English, weak readings of Imperatives arise when there is a rising melody in the end. In general, a rising melody is found in questions and therefore it is also employed in declaratives to encode uncertainty or that the speaker is not entirely committed to believe the proposition or that the speaker doesn’t fully endorse the content of the prejacent (see
Gunlogson (2004); Farkas and Bruce (2009)). Based on this, von Fintel & Iatridou (2015) suggest that it’s possible that weak readings of Imperatives are parallel to declaratives which are asserted with some degree of uncertainty and therefore have a rising melody. Portner (2015a) employs a similar idea arguing that rising imperatives presuppose that the Addressee endorses the prejacent, therefore deriving a permission interpretation, as in the case of invitations. Whatever the effect of the rising melody is, it is real. This pattern emerged in some of the Imperatives that I recorded by some English speakers. However, the rising melody neither is obligatory to have a permission reading nor does it appear exclusively on permissions or invitations. For example, it can also appear in a request, suggesting that the Speaker doesn’t want to commit the Addressee to fulfill the prejacent (e.g. politeness reasons). The effect of the rising melody in Imperatives, as von Fintel & Iatridou (2015) note, is related to its effect in declaratives (reduced commitment/endorsement) but it is neither a prerequisite for the weak readings nor unique to the weak readings.

Finally, I would like to point to the importance of investigating the role of prosodic cues in disambiguating among the weak and strong readings of imperatives. This path seems necessary to check the validity of the present hypothesis that the stronger reading is derived due to alternatives emerging from focusing the prejacent.
Chapter 4

On the nature of the modal operator

Chapter 2 was concerned with the force of the modal operator in Imperatives and Root Subjunctives, analyzing them as existential modals. In Chapter 3, we saw how based on this idea we can account for the mapping between the prosody and the interpretation of these constructions. This chapter focuses on the character of this operator, namely defining its modal base and ordering source. First, we will discuss the meaning of the modal and then, in the second part of this Chapter we will try to derive its properties as the result of its syntax and its interaction with the Imperative and the Subjunctive mood.

4.1 Characterizing the modal base and the ordering source of
the Covert Modal Operator

Already I have taken a stance regarding the imperative operator assuming that it comes with a bouletic accessibility relation. The proto-denotation I gave for this modal, repeated here in (1), has a bouletic accessibility relation restricted by the Speaker’s desires, hardwired in its meaning.

\[
[[\text{Imp}]]^{w,c} = \lambda q \in D_{(st)}. \exists w' \in W \text{ such that } S_c \text{'s desires in } w \text{ with respect to the } A_c \text{'s actions are satisfied in } w' \& q(w') = 1
\]

This covert operator takes as its argument a proposition \( q \) of type \( \langle st \rangle \) and it expresses that \( q \) is consistent with the Speaker’s desires. There are two issues with this meaning. First, there is an
empirical problem that the meaning is very coarse and, in some environments, fails to derive the intended interpretation. Secondly, there is a theoretical issue regarding the nature of this operator. Namely, the fact that there is a covert modal operator which has the same meaning in Imperatives and Root Subjunctives, raises a question as to why this operator should have the meaning it has in both of these constructions (the question becomes even more pressing once we consider the cross-linguistic picture, where we find more instances of root constructions in which there seems to be covert modal operator with bouletic character, e.g. infinitives in German, subjunctives in many other languages, etc.). First, I provide a more elaborate meaning for this operator and, in the second section, I proceed to address the second question, namely why this operator appears to have the properties it has.

The meaning in (1) follows the original suggestion in Kratzer (1977), under which modals are evaluated with respect to one parameter, an accessibility relation. Moreover, this relation is part of the meaning of the modal operator, unlike other modal operators whose flavor is context-dependent Kratzer (1977). In the following, I modify the meaning of the modal oprator based on Kratzer’s (1981, 1992) proposal that modal operators are relative to two parameters; the modal base and the ordering source. The modal base defines which worlds are accessible and the ordering source imposes a ranking among these worlds.

Imperatives also depend on these two parameters for their evaluation (Schwager (2006); Kaufmann (2012) etc.). Let me illustrate this with an example why the meaning in (1) which involves only accessibility to the speaker’s desires is not enough. Imagine a context in which the Speaker is visited by a person he doesn’t really like. This person stays there for hours and it gets dark outside. Under these circumstances and believing that it’s quite dangerous for somebody to be outside that late, the speaker utters the Imperative in (2):

(2) Stay here tonight.

The desires of the speaker restrict the set of accessible worlds to worlds in which this person never visited him at first place, therefore having him stay there the entire night cannot be compatible his desires. It is commonly suggested in the literature that bouletic modality is associated with a circumstantial modal base (Portner (2009); von Fintel (2006); Kaufmann (2012)) or with a doxastic modal base as it has been argued for the predicate want (Heim (1992); von Fintel (1999);
Villalta (2000)). The case of Imperatives and Root Subjunctives seems to pattern better with desire predicates like *want* (see Wilson and Sperber (1988); Condoravdi and Lauer (2012); Crnić (2013)) which are restricted by a doxastic modal base. In our example, we could imagine that the speaker considers it possible that his visitor is being attacked and robbed if he leaves his house and therefore he makes it explicit that it is at least as good for him to stay as it is to leave. Of course, if he believed that getting robbed is not a possibility, the Speaker most probably wouldn’t have suggested that the visitor could spend the night at his place.

The difference between Imperatives and the predicate *want* is that *want* is treated as a universal modal whereas the Imperative operator in this case is treated as an existential modal, therefore making much weaker claims about the speaker’s desires. Furthermore, it is part of the lexical meaning of *want* that it has a doxastic modal base and a bouletic ordering source, whereas for the covert operator in Imperatives and Root Subjunctives we don’t want to hardwire desirability into the meaning of this operator. We treat the covert modal operator involved in these constructions as a garden variety modal operator whose flavor is not part of its lexical meaning. However, as I show in the next section, the modal base ends up expressing a doxastic relation and the ordering source a bouletic one, therefore generating a bouletic interpretation.

Given what we have said, the covert modal operator involved in Imperatives and Root Subjunctives combines with a modal base $f$ which determines a set of worlds which are compatible with what $S$ believes in the actual world and an ordering source $g$ which provides an ordering given what the ideal according to the S’s desires is.

1Kaufmann in Schwager (2006)/Kaufmann (2012) takes the same stance that the modal operator in Imperatives gets its meaning by being anaphoric to different conversational backgrounds. She takes advantage of the flexibility that such an approach provides in order to account for the different meanings we get with imperatives. The present analysis, although it shares with Kaufmann that the flavor of modality is not hardwired into the meaning of this operator, differs in that this operator in all the instances that we discuss (except for Chapter 6) has in fact a bouletic flavor. I will try to derive this in the next section. The reason that I don’t want to hardwire this bouletic relation into the meaning of this operator (as Condoravdi & Lauer (2012) do) is partly theoretical and partly empirical. The theoretical objection is that since we already observe that modal operators can have variable flavor and since a covert modal does not have lexical restrictions (as attitude verbs have), it would be strange to assume that this operator in particular is specified for its meaning. Of course, an answer to this could be that it is in fact the special form of Imperative that is associated with this meaning. However, as I have said the fact that Root Subjunctives and other covert modals appear to have the same bouletic interpretation challenges any attempt to associate the particular meaning with the Imperative form. The empirical problem, which is the other side of what I just said, is that we find Imperatives in some environments which do not have a bouletic interpretation (or in general a so-called ‘directive’ force). I will talk about these deviating patterns in Chapter 6, but the fact that they exist casts doubt on any attempt to have one-to-one mapping between the form and the meaning of an Imperative clause.
If we take the modal base to be doxastic and the ordering source bouleptic, the meaning we will derive is that there is a world among the ‘best’ (according to S’s desires) doxastic alternatives of S in which \( q \) is true. The idea that Imperatives involve a complex attitude on the part of the Speaker has been elaborated in many discussions of Imperatives. For example, Wilson and Sperber (1988) mention that “The intrinsic semantic properties of imperative form are characterisable in terms of a complex propositional attitude, itself analysable into two more elementary attitudes: the belief that a certain state of affairs is potential, and the belief that it is desirable”. Condoravdi and Lauer (2012) formalize this idea in terms of effective preferences, Starr (2011) also tries to capture a similar intuition about the Imperatives but in a different framework.

The meaning I provide here also captures the boulethic character of the modal, but it is weaker than the operator that Condoravdi & Lauer suggest. As I discussed in chapter 2, the effective preference operator ranks preferences among each other and states that the prejacent is ranked higher than other preferences which might be inconsistent with the prejacent. In the present analysis, the operator expresses consistency with S’s desires and the strengthened reading is the result of an implicature.

In the next section, it will be argued that:

i. the doxastic character of the modal base is derived due to the syntactic position of the modal operator being above TP (following Hacquard 2006, 2009) and

ii. the boulethic character of the ordering source is due to presence of subjunctive/imperative mood which, as I will show, posits certain restrictions to the operators combining with it

Before this however, we proceed to see how the boulethic meaning we have been assuming captures our intuitions about the meaning of Imperatives and Root Subjunctives. Below, I discuss in what sense Imperatives and Root Subjunctives express speaker’s endorsement and I address the issue of the performative character of these utterances, an issue that we haven’t touched so far.
4.1.1 Speaker endorsement & Performativity

The meaning we have provided for the modal operator suggests that the prejacent must at least be consistent with the Speaker’s desires. But what exactly do we mean by Speaker’s desires? When somebody makes a request or when she gives a command or when she wishes something, clearly, in some sense she endorses the prejacent. The incompatibility of the continuation in (4a) compared with the felicity of (4b) suggests that it is a property of Imperatives that the Speaker must endorse the content of the prejacent.

\[(4)\]
\[
\begin{align*}
    \text{a. } & \text{#Leave but I don’t want you to.} \\
    \text{b. } & \text{You should leave but I don’t want you to.}
\end{align*}
\]

The term speaker endorsement comes from Schwager (2006)/Kaufmann (2012) who argues that some weak endorsement is always present in Imperatives. Kaufmann and Schwager (2009) provide the following definition of weak speaker endorsement:

\[(5)\] Speaker endorsement: The negation of the prejacent does not follow from what is optimal with respect to the speaker’s wishes. (Kaufmann & Schwager 2009; p.243)

In Kaufmann & Schwager (2009), Kaufmann (2012, 2016) speaker endorsement is considered to be a general contextual restriction imposed on performative modals. (4b) is felicitous because should can be interpreted as a descriptive modal whereas the Imperative cannot. In Condoravdi & Lauer (2012) this restriction is captured by the bouletic character of the modal. However, as discussed in Condoravdi and Lauer (2012), even the weak version of Speaker endorsement seems to be too strong in some cases. First, in cases of disinterested advice, it is not obvious that the Speaker endorses the prejacent in any sense. For example, if you ask a stranger how to get to Stata Center and he replies with an Imperative ‘Take the Red line.’, it doesn’t mean you have any desire for him to take the Red line. However, we still observe that in these cases, it is not possible to have the I don’t want-phrase, with the Imperative. The example in (6) is from C&L who observe that although the Speaker has no interest in what the addressee will do, the disinterested advice is incompatible with an expression that conveys opposition to the speaker’s desires whereas it is perfectly compatible with an expression that conveys opposition to the rules (6B’) (see also
Kaufmann 2012). This contrasts with (6B”) which is compatible with both.

(6) A: How do I get into the building?
   B: Officially, you are not allowed to but just go through this door.
   B’: #I don’t want you to but just go through this door.
   B”’: The only way is through this door. But I don’t want you to go / you are not allowed to
   go through this door.

[C&L (2012); p.42]

Condoravdi & Lauer account for the presence of preference in these examples of disinterested advice by introducing a cooperation principle formulated below:

(7) Cooperation by Default:
   An agent A is cooperative-by-default iff he adds any topical goal g of another agent to his
   effective preference structure, such that for any preference structure PA: for no p ∈ PA: p ∉ g.

[C&L (2012); p.49]

The principle in (7) captures the intuition, as C&L put it, that ‘If you truly do not care whether g^2, and you know that someone else prefers g, then act as though you prefer g, as well.’

Of course, the speaker can adopt the goal of the addressee but still evaluate it with respect to his own preferences. For example, in (8) the Speaker adopts the A’s goal which is to cut the expenses of his company but he evaluates it with respect to his own preferences, not with respect to the addressee’s preferences.

(8) A. How do I cut the expenses of my company?
    B. Fire all the employees who take high salaries.
    A. But you know I’d rather go bankrupt instead of doing this.
    B. I know but this is my opinion. In any case, you can do whatever you want. It’s your

\footnote{For cases in which there is a conflict of desires between the speaker and the addressee regarding future actions, see the discussion in Lauer (2013), section 6.1.3.}
company and I don’t care at all.

Of course, it’s not necessary that the speaker sticks to his own preferences, the Speaker can accommodate the Addresse’s preferences depending on the situation. This is exemplified in (9) where the speaker is willing to conform to the speaker’s priorities.

(9)  
A. How can I go to New York?  
B. Take the train. It’s more expensive but it’s quicker.  
A’. o.. But I don’t want to pay a lot.  
B’. Then take the bus. It’s cheaper.

Another case in which it is not at all clear that the prejacent is consistent with the speaker’s desires is when we use an Imperative to provide permission. Consider the following example discussed in Condoravdi & Lauer (2012):

(10)  
OK, go to Paris then since you want it so much!  
a. #But, don’t forget, I don’t want you to.  
b. But, don’t forget, I didn’t want you to.

Condoravdi & Lauer express the intuition that the continuation in (10B) in some way, despite the past marking, still indicates that the speaker prefers the negation of the prejacent (i.e. that A doesn’t go to Paris). In the following examples, I show that we don’t even need to have a past marking on want, as long as we make it clear that the continuation is not intended as a prohibition against fulfilling the prejacent. Consider the following example in which the phrase I don’t want you to is embedded under the verb know. The continuation sounds perfectly fine both with an Imperative and with a RS.

(11)  
OK, go to Paris then since you want it so much!  
✓ But, you should know that I don’t want you to / I disagree with this.

(12)  
a. OK, pigene/ na pas sto Parisi afu to thes toso !  
OK, go.IMP/ SUBJ go.2.SG to Paris since it want.2SG so much!
Similarly, in a context in which the kids can’t wait to open their gifts under the Christmas tree, and then their mother says (thanks to Sabine Iatridou for bringing up such contexts):

(13) OK, open them now but my advice is that you wait until your cousins come as well.

Clearly, in (13) the mother provides permission but at the same time she suggests an alternative that the kids do not open their gifts which she considers being more optimal. Finally the following example (pointed out to me by Kai von Fintel) is also fine and clearly the meaning is that the speaker prefers the opposite but he provides permission to A to go to the party.

(14) I prefer that you stay at home but sure go to the party.

The example in (14) contrasts with (15) in which the phrase ‘I prefer you to stay at home’ follows the Imperative:

(15) #Sure, go to the party but I prefer you to stay at home.

So what are we to make of these examples? It seems that there is no restriction for speaker endorsement when the Imperative/RS expresses permission. If this is true, then our characterization of the modal is not correct. However, despite the felicity of the examples in (10) through (14), it still remains a fact that we cannot simply have the phrase ‘I don’t want you to.’ by itself following the imperative.\(^3\) In all of the examples above we had an additional mechanism. In (10) it was past marking, in (11)-(12) it was embedding under the verb know, in (13) we used the phrase my

\(^3\)Moreover, Condoravdi and Lauer (2016b) present an additional example which shows that speaker endorsement goes part and parcel with Imperatives. Namely, they show that an Imperative cannot be used in the consequent of a conditional which is meant to advise the Addressee against the fulfilling its content. The relevant contrast with an overt modal is illustrated in (ia) vs. (ib). (ib) cannot be understood as an attempt on the side of the Speaker to dissuade the Addressee to have the dinner at his place. On the contrary, (ia) can be understood as an attempt to change the addressee’s mind:

(i) Context: We are planning a dinner after a workshop. Sven has suggested that we have it at his small apartment.

a. Cleo: (But) if you want to have the dinner at your place, you have to / should / need to move to a bigger place before the workshop happens.

b. Cleo: (But) if you want to have the dinner at your place, move to a bigger place before the workshop happens.
advice is... and finally in (14) the speaker had to introduce first his objection and then provide permission. It seems that the restriction posited for Imperatives, and in general for performatives, is not that the negation of the prejacent does not follow from the speaker’s desires but actually the obvious: that the speaker does not, at the same time and without indicating that he has changed his mind, withhold permission for the prejacent to be realized. But as I said, this is obvious and it can be read as a general restriction “Don’t be contradictory”. In the above environments, in which the phrase ‘I don’t want you to.’ is infelicitous, it is interpreted as a prohibition. The idea is that by employing all the strategies listed above for (10)-(14) we can block the prohibitive reading of which otherwise emerges in these contexts. Returning to the original question as to what exactly we mean by Speaker’s desires, the answer is that we are dealing with a special type of desires, which is due to the performative character of these constructions. That is, the sense of Speaker endorsement that we get with Imperatives and Root Subjunctives does not stem solely from the bouletic character but from the fact that we have a performative bouletic modal. After all, in plain bouletics, despite the fact that they are analysed as universal, it is possible to express contradictory desires:

(16) a. I want you to leave but I also don’t want you to.
   b. Thelo na figis ala den thelo kiolas.
      want.1SG SUBJ leave.2SG but not want.1SG also.

Clearly, in this example the speaker is indecisive (maybe he has different reasons for wanting the *A to leave vs. not wanting it*, maybe he’s totally confused). So, it seems that our original idea that speaker endorsement is due to the bouletic character of the modal is not entirely correct. It seems that performativity is the critical factor. The tight connection between Speaker endorsement and performativity is an empirical fact well-discussed in the literature (see Kaufmann (2012); Condrovadi and Lauer (2012)). As shown below, an overt modal, that can otherwise be performative, when it combines with the phrase “I don’t want you to” it can only be interpreted as reporting a deontic possibility/necessity as shown below:

(17) a. You may smoke here but I don’t want you to.

This contrast is shown to be relevant for the way speaker endorsement is to be understood. As C&L note it shows that Speaker endorsement is present in Imperatives independently from the context and therefore, assuming a bouletic interpretation for this modal is in accordance with such data.
b. You may/should leave from my office but I don’t want you to.

So now our task is to define *performativity* and this is where the bouletic flavor becomes again relevant. According to Condoravdi and Lauer (2011); Lauer (2013, 2015) performativity is derived when a predicate expresses an *effective preference*, roughly an action related preference. Therefore, according to this view, all modals (*must, should, may*, etc.) when they have a performative character they convey an *action-related* desire. Therefore, *speaker endorsement* and *performativity* have in fact the same source and that’s why they always go together. In the following, I briefly present C&L’s approach to performativity⁴ and then I compare it with the one developed in a series of works by Kaufmann (Schwager (2006); Kaufmann (2012, 2016)). As we will see, despite their differences, they seem to reflect each other in certain ways. Before introducing any analysis, let me briefly illustrate in what sense Imperatives and Root Subjunctives are performative.

**What do we mean by saying that an utterance is performative?**

As has been longed observed in the literature, Imperatives (and in addition Root Subjunctives and other root constructions with a modal interpretation) have a performative effect in providing permission or issuing a command/request or expressing a wish but they cannot be used as reportative modals, reporting a possibility or a necessity of any sort (Sadock (1974); Sadock and Zwicky (1985); Wilson and Sperber (1988); Han (2000); Schwager (2006); Kaufmann (2012, 2016); Portner (2004a, 2007, 2010); Starr (2011); von Fintel and Iatridou (2015)). This becomes immediately obvious when we try to challenge an Imperative. We are not able to challenge the truth-conditions of the proposition, neither the sincerity of the speaker. Imagine a context where you know very well the rules of a city and somebody tells you the following, you cannot answer with either (18b,c,d):

(18)  
   a. Park in the center of the city.
   b. #That’s not true.
   c. #You are wrong. Parking is not allowed in the center of the city.
   d. #You’re lying. You want to get me into trouble because you hate me. You know that parking is not allowed in the center of the city.

⁴The discussion here is very basic for a full exposition of these ideas as well as their development over time see the original works cited above.
Similarly, when the Imperative in English or the Root Subjunctive in Greek expresses a wish, it also has a ‘performative’ character, as can be shown by the infelicity of the answers in (19):

(19)  
   a. Be at home!  
   b. Ah na ine spiti!  
      Ah SUBJ be.3SG home ‘I wish he is at home!’  
      B. #That’s not true. You only say this to make me like you.  
      B’. #You are lying. You only say this to make me like you.

We can describe a performative utterance as an utterance which cannot be characterized as true/false or challenged as a lie. The term *performative* was originally introduced in Austin’s (1962) work ‘How to Make Things with Words’ to describe an utterance which:

A. does not ‘describe’ or ‘report’ or constate anything at all, are not ‘true or false’; and  
B. is, or is part of, the doing of an action, which again would not normally be described as, or as ‘just’, saying something.

[ Austin (1962); p.5 ]

Notice, however, that the kind of performativity observed for Imperatives is different from the performative character of verbs which in certain environments by uttering them realize their content (e.g. *I name you husband and wife.* by a mayor). Although we cannot challenge Imperatives/RSs by saying ‘It’s a lie’ or judge it as true or false, we can challenge the sincerity of the speaker’s actual desires in the following way (whereas this is not possible for performatives like *marry*, etc.):

(20)  
   A. Leave!  
   B. You don’t really want me to leave! You only tell me in order to make me sad.

Moreover, in Greek we have a sort of idiomatic expression which roughly means ‘You don’t mean it’ but it basically says that ‘you’re lying’ and it is perfectly compatible with Imperatives and Root

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This description is very broad and it includes not only Imperatives but also Questions. This is not problematic, as Questions are in fact treated as some sort of performative utterances (see Lauer (2013) and the references therein), but here we need to focus on the performativity observed for Imperatives and Root Subjunctives.
subjunctives. Consider a context in which Konstantinos is eating a gyro-sandwich and there is a little piece left, so he offers it to me by saying the following imperative sentence in (21a). Then I can respond by (21b) meaning that he doesn’t mean it, in fact he pretends to be willing to offer it but he is not. Notice that the literal expression ‘you’re lying’ is infelicitous:

(21)  
   a. Fae afto to komataki.  
       eat.2SG this the piece.DIMIN  
       ‘Eat this little piece.’
   
   b. Psemata to les.  
       lies it say.2SG  
       ‘You don’t mean it.’
   
   c. #Psemata les.  
       lies say.2SG  
       ‘#You are lying.’

It is hard to tell what the difference between the expression in (21b) and the simple expression in (21c). Somehow, the expression in (21c) targets the content, which as we see cannot be challenged whereas the expression in (21b) targets the sincerity of the action itself. Therefore, the data in (21) should not be interpreted as evidence against the observation that we cannot challenge the sincerity of the speaker but as evidence that some sort of sincerity-challenging is possible but at a different level, not at the truth-conditional level.

The fact that we cannot judge an Imperative as true/false or challenge the sincerity of the speaker has led many researchers to treat performative utterances of this sort as self-verifying, that is, by virtue of their utterance their truthfulness, is guaranteed and therefore, they cannot be judged as false or lies (Ginet (1979); Bach and Harnish (1992), cf. Searle (1989)). This idea has been more recently employed to account for the performative character of Imperatives in analyses in which Imperatives are taken to be assertions of some sort.

In particular, Schwager (2006)/ Kaufmann (2012, 2016) derives performativity as the result of certain presuppositions that the imperative operator carries, whereas Condoravdi and Lauer suggest that Imperatives have a special pragmatic function different from Declaratives, which is, however, due to the special meaning that the Imperative operator has. Since the present analysis treats Imperatives and Root Subjunctives as having a truth-conditional meaning, it is critical that we can at least present some possibilities regarding the derivation of the performative character of
these utterances. In the following, I will present the two possibilities provided by C&L (2012) and Kaufmann (2012, 2016).

**Condoravdi & Lauer: effective preferences & performativity**

Condoravdi & Lauer attempt to capture the performative character of Imperatives by general pragmatic principles which rely on the notion of Speaker commitment. In Condoravdi & Lauer’s system, agents are committed to act in a certain ways which depend i) on the beliefs of the agent and ii) on the preferences of the agent. According to the definition they provide, by asserting a proposition \( p \), the speaker is publicly committed to believe \( p \) (doxastic commitment):

\[(22) \text{Doxastic Commitment:} \]
\[\text{An assertion of a declarative } \phi \text{ in context } C \text{ adds } \llbracket \phi \rrbracket_C \text{ to the public beliefs of the speaker, thereby publicly committing the speaker to act as though he believes } \llbracket \phi \rrbracket_C.\]

Condoravdi & Lauer propose a parallel formulation for Imperatives (as well as performative verbs in the earlier (2011) paper). The difference is that Imperatives publicly commit the speaker not to act as if he believes \( p \) but as if he prefers \( p \). In other words ‘imperatives commit the speaker to a particular kind of preference’.

\[(23) \text{Preference Commitment:} \]
\[\text{When a speaker utters an imperative that has the content } \phi, \text{ he thereby publicly commits himself to act as though he has a preference for } \phi \text{ to be actualized.}\]

As they say, this is not a peculiarity of Imperatives but it is a general pragmatic principle that *when a speaker is committed to believe that he has an effective preference for } p, \text{ then he is committed to prefer } p. \text{ This is called the principle of doxastic reduction for preference commitment and is formulated as in (24):*}

\[(24) \text{Doxastic reduction for preference commitment:} \]
\[\text{If an agent is publicly committed to act as though he believes that he is committed to an effective preference for } p, \text{ he is also publicly committed to act as though he effectively}\]
prefers $p$.

The performativity lies in the fact that whether the speaker desires the prejacent or not, by uttering an Imperative, he is publicly committed to act as if he prefers its prejacent. This fact cannot be challenged because it is the effect of the utterance. The “directive” force of Imperatives then, is only indirectly related to performativity. If the addressee accepts an utterance expressing commitment to a preference $p$, he will also accept commitment to prefer $p$. Therefore a cooperative and rational agent will try to fulfill the prejacent. From this it follows that an Imperative creates an expectation that the Addressee will take some action to fulfill the prejacent.

The question is what is special about the notion of effective preferences such that an utterance that expresses effective preference pragmatically commits the Speaker to this preference. The way I understand the notion of effective preference from Condoravdi & Lauer (2012, 2016) is that it expresses an action-related preference. That is, an effective preference is always a preference about some future course of action and therefore, if an Agent has inconsistent preferences, he needs to make a decision and rank his preferences so that he can be publicly committed to act in a certain way. Condoravdi and Lauer (2016a) elaborate on the notion of effective preference and, building on Hare (1968), make a distinction between:

i. preferences which simply report our mere psychological desires

ii. preferences which are action-relevant, that is, they express certain preferences over future courses of actions.

The latter type of desires corresponds to effective preferences. For example, a predicate like want can express either a psychological desire or an effective preference depending on the context. When want expresses an effective preference it will be performative and therefore it will also express speaker endorsement. Condoravdi & Lauer model the difference between the two interpretations of want in terms of underspecification in the meaning of want in the same way that modals are underspecified, arguing that depending on the context, want can express mere psychological desire or an action-related preference (effective preference). The different interpretations arise due to the different conversational backgrounds in the spirit of Kratzer.
Kaufmann: Decision problem & performativity

To my understanding, this view bears many similarities with Kaufmann’s account of performativity. Similarly to C&L, Kaufmann (2012, 2016) tries to identify the common thread across all environments which induce a performative interpretation. However, instead of attributing this property to the meaning of the operator by treating all performatives as expressing effective preferences, she characterizes the special properties of the environment in which performatives occur. In particular, when a priority modal appears as an answer to a Question under Discussion (QUD) that expresses a decision problem (and as long as other requirements are satisfied as I show I below) then this modal will get a performative interpretation. Kaufmann calls this context a practical context, defined in (25). Kauffmann takes the context to be an octuple of the form \( \langle S, A, w, t, CS, \Pi, f, g \rangle \), where \( S \) = speaker, \( A \) = Addressee, \( w \) = world, \( t \) = utterance time, \( CS \) = Context Set and \( f \) is the modal base and \( g \) the ordering source. \( \Pi \) represents the QUD. Having defined these parameters, we can now see Kaufmann’s definition of practical context:

\begin{align*}
(25) \quad & \text{A context } c \text{ is practical for an agent } \alpha \text{ (written } \alpha - \text{PRACTICAL}(c)), \text{ iff } \\
& \text{a. } \Pi c \text{ is a decision problem for } \alpha, \text{ written } \Pi^A_{\alpha}, \text{ and } \\
& \text{b. } g_c \text{ represents a set of rules, preferences, or goals. } \\
& \text{c. The salient modality in } c \text{ is decisive, that is, } CS \text{ entails that } f_c, g_c \text{ characterize the} \\
& \text{modality relevant to resolve } \Pi^A_{\alpha}. \\
(26) \quad & \text{A decision problem for an agent } \alpha \text{ is a set of non-overlapping propositions where each} \\
& \text{cell represents a future course of events that is choosable for } \alpha. \\
\end{align*}

An utterance with a modal that appears in such a practical context is taken to be the answer to the decision problem \( \Pi^A_{\alpha} \) (the QUD). Under this assumption, Kaufmann introduces a principle which guarantees that the Addressee will try to follow the advice provided for the decision problem, if he accepts that it can solve the problem. In addition to this, it is required that the speaker has epistemic authority over the issue (i.e. he has perfect knowledge of the modal base and the ordering source). By this reasoning, a modal that occurs in such a context that raises a decision problem will turn out to be performative because it is expected that the addressee will take some action following the advice/solution provided by the speaker.
Comparison and open issues

What seems relevant to me is that in both proposals, performativity arises in a context in which a decision must be made about a future course of action. The difference between Imperatives and the rest of modal operators which can be interpreted as performative (but don’t have to) is that Imperatives are always performative (cf. Ninan (2005) who argues that must is also necessarily performative when used in present tense). For Condoravdi & Lauer this is because the Imperative operator always expresses an effective preference by virtue of its meaning. Kaufmann, in order to account for the obligatory performativity of Imperatives, hardwires two presuppositions to Imperative Modal operator which guarantee i) that the Speaker has epistemic authority and ii) the modal occurs in a practical context.

As I understand it, in both C&L’s and Kaufmann’s analysis, performativity of Imperatives is captured by treating the Imperative utterance as an answer to decision problem regarding a future course of action. Of course, there is still a difference between the two views because, in Condoravdi & Lauer’s view, Imperatives always express an effective preference on part of the speaker whereas, for Kaufmann the operator can be any sort of priority modal with certain presuppositions which will guarantee that it will be an answer to a QUD that raises a decision problem (cf. footnote 3).

An apparently problematic case for both views is the wish readings of Imperatives. As I showed above, wishes also cannot be judged as true/false or challenged as lies. In each analysis, this problem is addressed in a different way. As C&L (2012) point out, ‘an effective preference is one that the agent will act on’ and for this reason it doesn’t seem a proper way to express mere desire. To address this issue, they argue that it is possible to derive a wish-reading when two conditions are satisfied, namely i) when the prejacent is not under Addressee’s control and ii) when there is no other maximal effective preference in conflict with the wish expressed (see C&L (2011); p.49). However, I think that this doesn’t answer our question as to why Imperative-wishes also have a performative character. Namely, if wish-Imperatives just expresses a wish, similarly to the verb wish, why does it behave differently? Kaufmann captures the performative character of wishes by positing an alternative requirement that the utterance appears in an expressive context which arises in the absence of an agent \( \alpha \):

\[\text{EXPRESSIVE}(c): \text{A context } c \text{ is expressive iff there is no agent } \alpha \text{ such that } c \text{ is } \alpha\text{-practical}\]
and $g_c = g_{bul}s$, which records the speaker's wishes.

It's true that the performative character of wishes could be viewed independently from the performative character of commands, requests, permissions, etc. For example, Grosz (2011, 2012), building on Potts and Roeper (2006) and Potts (2007), treats optative constructions as involving an expressive operator which takes a proposition as its argument and ‘shifts its descriptive content into the domain of expressive content’ (see also Kyriakaki (2008)). But even if we were assuming such a distinct analysis for wish-Imperatives and Root Subjunctives, there are other constructions, which are related, I think, to Imperatives and create a problem for the idea that performativity is action-related. Namely, in Greek we can use a root subjunctive construction with past-marking on the verb to convey that something was allowed by the Speaker, although the Addressee didn’t do it in the end. Consider the following example:

(28) **Context:** John sees Mary eating the last piece of pizza and he tells her: "Good, I didn’t eat the pizza, I thought you would want it." Then Mary can respond with the following sentence:

a. As tin etroges. Kati tha vriska na SUBJ,as cl.acc eat.IMPRF.PAST.2SG something FUT find.IMPRF.PAST.1SG NA fao.
eat.EAT.1SG
‘You could/should have eaten it. I would find something to eat.’

b. #Les psemata.
say.2SG lies
‘#You lie!’

This sort of constructions are not unique to Greek. Mastop (2011) discusses a construction in Dutch (the Past Imperative) which seems very similar to the one we find in Greek. In the following example the Speaker is telling the addressee what he should have done:

(29) Was toch lekker thuisgebleven.
Was PRT PRT at.home.stay.PP
‘You should just have stayed at home.’

Similarly to Imperatives and the root na-subjunctives, these forms also express some sort of
bouletic modality. Clearly, when they talk about a possibility in the past they cannot commit the Speaker to act in a certain way\textsuperscript{6}. Of course, it is still possible that we treat these constructions differently from Imperatives. But one of the points that I want to make in this dissertation, is that we shouldn’t treat them differently and that despite partial differences that I discuss in the next chapter, all root constructions which seem to involve a covert bouletic operator call for a unified analysis.

Therefore, the question is why Imperatives, Root subjunctives (but also root infinitives in languages like German) are performative? My view is that it cannot be a coincidence that in all these environments there is a covert operator which gets a bouletic flavor and which in addition is anchored to the Speaker and the time of the utterance. That is, the ideal would be if we could draw a relation between these parameters, which as I will show in the next section can be derived independently, and the fact that covert root modal constructions always appear in a context which guarantees their performative character. In other words, we need a link between the properties of the covert operators in these constructions and their special character as this is analyzed in the works by Kaufmann and Condoravdi and Lauer. For now, I remain agnostic as to what this link\textsuperscript{7} could be but I hope to have made clear that whatever the explanation for performativity is, it must make reference to the fact that performativity is not restricted to Imperatives but to other root constructions which also seem to contain a covert modal operator with a bouletic interpretation.

Finally, notice that Portner (2007) criticizes the modal approach as introducing a modal operator which is entirely redundant, since the mechanism that is necessary to derive the performative effect of Imperatives as creating obligations already accounts for their function and their interpret-

\textsuperscript{6}Similarly, Portner’s update-function doesn’t help us here to derive performativity. Portner (2013) himself acknowledges the difficulty of accounting for wishes as for example a wish like Be blond! cannot be taken as attempting to update sb’s To-Do List. Although he does not provide an account for these cases, he points to Mastop’s idea under which ‘there is a “practical commitment function” which indexes action plans (and hence To-Do lists, which make up action plans) to possible worlds.’ The way I understand this, from Portner’s discussion and Mastop’s (2011) paper is that in the case of wishes we map action plans to worlds in which the addressee has control over the prejacent in a wish (cf. counterfactuality). As Portner says, it is not exactly clear how this works and therefore to me accounting for wishes remains an open issue.

\textsuperscript{7}My very sketchy idea at this point is that a critical factor responsible for this sort of performativity in these constructions is the fact that the modal is relative to the speaker (more precisely to the perspective center, as I show in the next section) and that we should definitely draw a connection between the properties of ‘epistemic performatives and ‘bouletic performatives’. For example, another domain where there seems to be some sort of a covert operator is evidentials and there we have a similar sort of performativity, as far as I understand (see Murray (2014) for a different way to derive the performative character of evidentials). However, this is an idea that needs to be worked out to see if it works and whether it can provide any answer to the puzzle of performativity.
tation (Imperatives update the To-Do-List). In general, any version of the minimal approach can account for performativity by introducing a special pragmatic function for Imperatives parallel to the pragmatic function of Declaratives and Questions. The first response to such criticism is that the presence of a modal operator has been already shown independently in the second chapter. Still, keeping the idea that there is a covert operator in the semantics, we could have an analysis in which Imperatives have a special directive force (see Han 2000). However, my point is that any attempt to connect the Imperative form with a particular pragmatic function is problematic given two facts:

i. other root constructions which have a covert modal have the same performative character

ii. on the flipside, we will see imperative forms and root subjunctives (chapter 6) which do not have a bouletic interpretation and immediately are also stripped of their performative character.

Therefore, the insight in C&L (2012) and Kaufmann (2012, 2016) that performativity has to do with the nature of the operator rather than with clause type-function meaning seems to be more promising. In addition to this however, we need to decide what is exactly the nature of this performativity and what is its exact source.

4.2 Why doxastic modal base? Why bouletic ordering source?

Now that we have established the modal operator in Imperatives we can ask ourselves why the modal operator gets this meaning. Why does this operator have a doxastic modal base and a bouletic ordering source, why for example can it not be an epistemic modal expressing epistemic possibility? Why isn’t it ambiguous like many modals are? One might think that there is nothing to explain here, some modals are lexically restricted to be only epistemic (e.g. *might*) or non-epistemic (e.g. *can*). Similarly, we could say that the modal in the imperative clause is a bouletic one.

However, what is striking is that this property extends to other instances of covert modality in root contexts; for example Subjunctives which appear in an unembedded environment in Modern Greek have a similar interpretation as shown in (30). Similarly, we find bare infinitives in some
languages which have again the same effect (31) or even the so-called infinitival questions in English (32) (Bhatt 1999):

(30) Teacher to student:
   a. Na aniksis ta parathira sto dialima.
      SUBJ open.2SG the windows at-the break
   b. Anikse ta parathira sto dialima.
      open.IMP.2SG the windows at-the break
      ‘Open the windows during the break.’

(31) Hinsetzen (,bitte)!
      There.sit.INF (please)
      ‘Sit down please!’

(32) Who to call?

Focusing for now on Imperatives and matrix subjunctives in Greek we will try to derive i) the doxastic character of the modal base and ii) the bouletic character of the ordering source, starting with the modal base.

4.2.1 Speaker orientation and Doxastic modal base

Kratzer (1981, 2012) defines two possible modal bases; the circumstantial modal base which is found in root modals and the epistemic modal base which characterizes epistemic modals. This distinction together with the different ordering sources derives then the different flavors of modality we find across languages. Kratzer assumes that which modal base can combine with which ordering source is restricted; In her 1991 article about modality she writes “Not every kind of modal base can combine with every kind of ordering source. Epistemic modal bases take ordering sources related to information: What the normal course of events is like, reports, beliefs. Circumstantial modal bases take ordering sources related to laws, aims, plans, wishes. Within these constraints, there are many possibilities.” (Kratzer 1991; p. 659)

For example, the modal in (33a) is taken to have an epistemical modal base and a stereotypical or an empty ordering source, the one in (33b) a circumstantial modal base and a deontic ordering source and the one in (33c) a circumstantial modal base and a bouletic ordering source:
(33)  

a. *In view of what I know, John may come.*

b. *In view of what the circumstances (John committed a crime) and given the laws, John must go to jail.*

c. *In view of what the circumstances are and given Mary's preferences, she should try this chocolate. (Mary likes caramel chocolate and this chocolate is very good caramel chocolate.)*

Despite the restriction that Kratzer introduces, conceptually nothing should prevent an epistemic/doxastic modal base to combine with a bouletic ordering source or in general a prioritizing\(^8\) ordering source. In fact, as I discuss below attitude verbs like *hope* or *want* are analyzed as involving a doxastic modal base and a bouletic ordering source (Heim (1992); von Fintel (1999); Villalta (2000)). Therefore, I take it that an epistemic modal base can take a null ordering source (in cases of pure epistemic interpretations), a stereotypical ordering source (ranking the epistemic alternatives with respect to a degree of normality), or a prioritizing ordering source (a bouletic, a teleological or a deontic ordering source). For this section, I will only try to derive the epistemic/doxastic character of the modal base without caring about what the possibilities are for the ordering source, building on Hacquard's insight. We will deal with the ordering source in the next section.

The first idea that comes to mind when we talk about the character of the modal base is that it depends on the syntactic height of the modal operator. The idea that epistemic modals are at the proposition level whereas root modals are at the VP-level is expressed with different ways in the literature (thematic relations: Jackendoff (1972); Perlmutter (1971); Ross (1969), sentential modal vs. VP-modal: Brennan (1993) and see also the discussions in Bhatt (1999, 2006); Hackl (1998)and Wurmbrand (1999)).

Hackard (2006) undertakes the task of deriving a theory in which the characterization of the modal base is defined by the syntactic position of the modal operator. Taking as a starting point the aforementioned studies as well as Cinque’s hierarchy of functional heads (34), in which epistemic modals are higher than root modals, she develops a theory in which the modal base is anchored to an event, which can be either the speech act event (giving rise to an epistemic modal) or the main event (root modal).

\(^8\)The term prioritizing ordering source comes from Portner (2009) who classifies together bouletic, teleological and deontic modals under the term priority modals.
Cinque’s hierarchy (from Hacquard (2009), p. 19):

\[
\text{Mod}_{\text{epis}} > \text{Tense} > \text{Aspect} > \text{Mod}_{\text{volitional}} > \text{Mod}_{\text{deontic necessity}} > \text{Mod}_{\text{ability/deont. possibility}}
\]

Hacquard (2006) modifies Kratzer’s analysis and relativizes the modal base not to a world variable but to the event variable, as shown in (35a) and (35b) for a root and a circumstantial modal respectively.

(35)  
\(a. \quad f_{\text{epis}}(e) = \lambda w'. w' \text{ is compatible with the ‘content’ of } e\)  
\(b. \quad f_{\text{circ}}(e) = \lambda w'. w' \text{ is compatible with the circumstances of } e\)

[Hacquard (2009), (44)]

In this way, Hacquard captures the intuition that a root modal is interpreted relative to some participant of the main event whereas an epistemic modal is always relative to the Speaker’s beliefs. Moreover, she points out that evaluation time is also different; in epistemics, it is always the utterance time whereas in circumstantial modals, it is the time of the event described by the main event. This is captured if epistemic modals are above TP as opposed to root modals which are below TP.

In her dissertation, Hacquard introduces a third modal base (36) to account for what she calls true deontics. True deontics are deontic modals which are performative (e.g. must). Hacquard recognizes the need to posit a distinction between performative and root modals and she does so by suggesting that the modal base in true deontics is anchored to the speech act event. The exact formulation in (36) is not quite clear to me but the general idea is an adaption of Ninan’s (2005) proposal for performative must into Hacquard’s system. Hacquard mentions that Imperatives can be also explained in a similar fashion.

(36)  
\(f_{\text{DEONTIC}}(e) = \lambda e. \lambda w. w \text{ is compatible with the Addressee of } e\text{’s TO-DO List}\)

As I argue here and as it has been established in the literature about performatives, it is not necessary to introduce a special modal base. Instead, I’ll try to show here how building on Hacquard’s analysis, we can derive the Speaker orientation of Imperatives as a result of the height of the modal operator. Namely, I will keep Hacqard’s insight that the height of the modal operator is critical.
for the interpretation of the modal base and I will assume that the modal base of an operator that merges above TP has the denotation in (37) being relativized to three evaluation parameters, individual $i$, time $t$, and world $w$. In root constructions, I assume that the world of evaluation is the actual world, time of evaluation is the utterance time and individual of evaluation is same as the perspective center.

(37) a. $[\lbrack \text{epis/dox} \rbrack]^{w, i, t} = \lambda w'. w'$ is compatible with the beliefs of $i$ at time $t$ in world $w$.

Based on this meaning, a doxastic modal base will return the set of worlds which are compatible with the beliefs of the perspective center (by default the speaker) at $t (=the$ utterance time).

Now let me show that the modal operator both in Imperatives and Root Subjunctives always merges above TP. There are different analyses regarding the syntax of Imperatives (Rivero and Terzi (1995); Han (2000)) but there is agreement that the Imperative operator is located quite high either at a mood head (Rivero and Terzi (1995)) either at a C-head with special illocutionary properties (Han (1998, 2000)). What is crucial for the argument I present here is that the Imperative Operator is located above the tense/aspect head of the VP. There is also empirical evidence because in a language like Greek in which there is Perfective/Imperfective distinction we see that this distinction pertains to Imperatives, indicating that the Imperative operator appears at least higher than Aspect. I will also assume that there is a TP, something I will discuss in the next chapter. This operator now is relative to a modal base and an ordering source which are represented in syntax (following von Fintel and Heim (2011); Hacquard (2006)) and moreover they are evaluated with respect to an individual, a world and a time variable.

(38) a. Open the window.

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9 As Kratzer (2012) points out in the Notional Category of Modality, an idea along the lines of Hacquard could be developed relativizing the modal base to individuals, to time or situation.

10 In particular, I assume that the individual variable will be valued by the perspective center which can be either the Speaker in Declaratives or the Addressee in Questions or an entity salient in the discourse (for the exact mechanism under which perspective shifts see Bylinina et al. (2014); Swenson and Marty (2015)). For example, in embedded environments the perspective shifts to the matrix subject. Although embedded Imperatives are very rare in English, Crnič & Trinh (2009) observe that they are possible under the verb 'say' (see Crnič and Trinh (2009); Kaufmann (2012); Stegovec and Kaufmann (2015) for Slovenian). More about embedding will be discussed in the next chapter.

11 Notice that I also introduced the same parameters of evaluation for the ordering source for which I haven’t talked here but it should be necessary that it is also relativized to an individual just like the modal base. More on the ordering source in the following section.
Accordingly, the meaning of the modal operator, should be modified to be evaluated with respect to an individual and a time variable in addition to the world variable as shown in (39) (for brevity the semantic type \( s \) below stands for the triple of \( \langle w, i, t \rangle \) in the following denotation):

\[
[Op]^{i,w,f} = \lambda f \in D_{\langle s, st \rangle}. \lambda g \in D_{\langle s, st \rangle}. \lambda q \in D_{\langle s, st \rangle}. \exists w' \in \text{Best}_{g(w,i,t)}(f(w,i,t)) : q(w',i,t) = 1
\]

Given that the modal is above TP and it is not embedded under another operator, its modal base will return the set of the worlds compatible with the speaker’s desires at time \( t \). The ordering source is a bouletic one and so it will pick out the best of these worlds according to the S’s desires. However, nothing we have said so far derives the bouletic character of the ordering source.

Having an epistemic/doxastic modal base we are left in principle with two options based on what we said regarding the possible combinations of modal bases and ordering sources; i) an epistemic modal with an empty or a stereotypical ordering source or ii) a priority modal (bouletic,

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12 In the following chapters, whenever the details are not crucial, I will keep using the proto-denotation I introduced in chapter 2 but the reader should always keep in mind that I take the Imperative operator to take both a modal base and an ordering source.

13 Notice that the modal base is also taken to be doxastic/epistemic in Condoravdi & Lauer (2012). Kaufmann (2012) slightly differs in that she assumes the modal base to be constituted of what speaker and hearer jointly take the possible future courses of events, i.e. the common ground (CG)(c).
teleological, deontic) with a prioritizing ordering source. Clearly, based on the meaning we have provided, we want to explain why the latter (priority modal, and in particular bouletic) is what we get in Imperatives, as well as in other instances of covert modals in root environments (Root Subjunctives, Root infinitives). In the next section, I’ll try to explain why this is so, based on an analysis of the role of subjunctive mood.

4.2.2 On the bouletic ordering source

Why can we not find a matrix subjunctive or an imperative with an epistemic interpretation? From this point of view, the theories which associate the Imperative mood with a pragmatic function appear to do a better job because they distinguish between two moods which associate with two different pragmatic functions; declaratives update the Common Ground whereas Imperatives in a portnerian way update the To-Do-List. But as I have shown there is a modal operator in the semantics and so we need to see if we can capture the idea that the two moods are designated to different functions.

The distinction between Sentence and Verbal mood

At this point it is necessary to clarify the notion of mood (see Portner (2011) for an extensive discussion). The term mood is used at two different levels in the literature; the sentence mood and the verbal mood. Sentence mood is associated with the three different clause types, namely, the Declarative, the Interrogative and the Imperative. Portner (2016) defines sentence mood as in (40):

(40) \textbf{Sentence Mood} is an aspect of linguistic form conventionally linked to the fundamental conversational functions within semantic/pragmatic theory. These fundamental functions are the \textbf{Sentential Forces}. \hspace{2cm} \textmd{[Portner (2016); (4-5)]}

Under this definition, we find three basic sentence moods across languages which correlate to the three basic sentence types together with their proto-typical functions. These distinctions have received a great amount of attention within theories of speech acts and sentential force. For example, Sadock and Zwicky (1985) describe the declarative as being subject to judgments of truth and falsehood, the interrogative as elicitation of a response and the Imperative as expressing the
Speaker’s desire to influence future events. Wilson and Sperber (1988) make explicit the distinction between sentence mood and verbal mood; they notice that “mood must be taken not in its traditional syntactic sense, in which it refers to verbal inflection (e.g. indicative, imperative, optative), but in a semantic sense, in which it refers to the semantic or logical properties that distinguish, say, declarative sentences from imperative, interrogative and exclamative sentences” (Wilson & Sperber 1988, p. 2). In their discussion, they are concerned with defining the relation between sentence mood and illocutionary force.

From this point of view, Portner’s analysis of Imperatives which treats them as different clause types from Declaratives and associates them with different functions (updating the To-Do-list as opposed to the common Ground) provides at least a hint as to why cross-linguistically we observe this two-way distinction between sentence type and function. Notice though that, given that subjunctives which appear in root contexts have the same function as imperatives, this two-way distinction should be expanded to cover subjunctives and then it’s not clear anymore that we talk about two different forms with two different functions. On the other hand, an analysis of Imperatives as involving a modal operator leaves all the possibilities open regarding the semantics of this operator as well as the pragmatic context in which it can appear. In the following, I will show that in fact we can, under a modal approach, draw a two way distinction between Imperatives/RS on the one hand and Indicative Declaratives on the other, by considering the cross-linguistic distinction within verbal mood.

Verbal mood is the second type of mood that is discussed in the literature. This term concerns the distinction among different verbal forms which vary depending on the environment they appear in (see Portner 2011/2016). At least two verbal moods are distinguished cross-linguistically; the indicative and the subjunctive mood. The function, at least at a first level, has nothing to do with sentence mood. For example, both English matrix Questions and Declaratives have indicative mood but according to the clause-type analysis they perform different functions. The Imperative form should be also treated as a distinct verbal mood since it is different from Indicative. Another common example of verbal mood across languages is the optative which is usually associated with wishes (though definitely not restricted to wishes). What is important for the discussion that follows is that in many environments Subjunctive mood can be used instead of an Imperative. Also, in many cases, optative mood across languages is lost as a grammatical form and Subjunctive
mood is used instead (e.g. loss of optative form in Modern Greek resulted in Subjunctive being used for wishes). Therefore, I suggest that we can keep a coarse dichotomy between Subjunctive and Indicative verbal mood and treat Imperative and Optative mood as subvarieties of a universal Subjunctive mood. The question that I will address below is what governs the distinction between Subjunctive and Indicative mood and therefore whether we can understand something about the meaning of Imperatives by the fact that Imperative mood can be treated on a par with Subjunctive and distinct from Indicative which is used in declaratives.

**Imperative form as a subvariety of subjunctive verbal mood**

The idea that Imperatives correlate with Subjunctives is not new. Many researchers entertain the idea that Imperatives are like ‘unembedded subjunctives’. For example, Huntley in a series of works (Huntley (1980, 1982, 1984)) draws a distinction between indicative and non-indicative mood and treats Imperatives as the equivalent mood of embedded non-finite clauses. Portner (1997) suggests that the English Imperative is the unembedded counterpart of the “mandative subjunctive”. Portner (2011) draws our attention to the well-known fact that in many cases a subjunctive or an infinitival form can be used instead of an Imperative form to convey the exact same meaning. This is illustrated in (41) with examples from Italian (Zanuttini (1997)) and Spanish (Rivero (1994)) respectively (see also Han (1998); Rivero and Terzi (1995)):

(41) a. Telefoná!
call.IMP.2SG
‘Call [her]!’

b. Lo dica pure!
it say.SUBJ.3SG indeed
‘Go ahead and say it!’

c. Non telefonarele! / Non le telefonare!
neg call.INF-HER / NEG her call.INF
‘Don’t call her!’

d. Que me den el libro!
that me give.SUBJ.2PL the book
‘Give me the book!’

In a recent handout from a talk presented at MIT, Portner (2015) points out the commonalities
between Imperatives and embedded infinitives and subjunctives. For example, Imperatives and Subjunctives/Infinitives overlap in morphological forms, they often have a futurate meaning, we get a directive/optative meaning in root contexts. It is important to understand Portner’s perspective here. Portner (2011), when he discusses verbal mood in root contexts (section 3.1), writes:

“The widespread use of subjunctives and infinitives for imperative (or at least imperative-like) meaning has led many researchers to assume that subjunctives have a special affinity for directive interpretations. For this reason, they have sought to connect the directive semantics of imperatives to the analysis of the semantics of subjunctives in the theory of verbal mood; see, for example, Portner (1997), Han (1998), and Schlenker (2005). The general idea is that the directive meaning of imperatives is a subcase of the range of meaning compatible with subjunctives generally, so that it is natural for subjunctive form to be recruited for imperatives. However, while this way of looking at the situation leads us to expect that a root subjunctive can be used with an imperative-like communicative meaning, it does not capture the intuition that suppletive imperatives really are imperatives.”

[Portner (2011); p.1284]

After this passage Portner concludes that an adequate account for the interpretation of subjunctives and imperatives in root contexts requires in addition a theory of sentence-types that accounts for their discourse function. In other words, he says that the performative character of Imperatives and Root subjunctives cannot be accounted for by looking at any theory of verbal mood selection. However, my goal here is not to account for the directive force or the performative character of Imperatives, since we already addressed this issue in the previous section. Our job here is to explain why the modal operator in Imperatives and Subjunctives has a bouletic character. I will show that we can account for the bouletic flavor of the ordering source by taking seriously subjunctive mood selection and its role in the interpretation of the utterance.

**Mood Selection; a comparative approach**

Mood selection still presents linguists with open puzzles due to the variety of the data that need to be explained and to the differences that we find cross-linguistically. It is beyond the scope of this dissertation to provide an adequate analysis for the distribution of the *Subjunctive vs. Indicative*
mood. I will show instead that under the comparative approach we can explain the properties of
the modal operator in Imperatives and matrix Subjunctives.

Despite the cross-linguistic differences, there is general agreement that we can distinguish be-
tween semantic classes of predicates that select for the indicative and semantic classes of predicates
which select for Subjunctive\(^\text{14}\) (see Farkas (1992b, 2003) for Romanian and French, Giannakidou
(1994, 2015) for Greek, Giorgi and Pianesi (1997); Portner (1997) for Italian, Quer (2001) for
(2012)). To provide an example from Modern Greek, an epistemic predicate like \textit{think} selects
the indicative whereas a desire predicate like \textit{want} selects the Subjunctive\(^\text{15}\):

\begin{align*}
1. & \text{a. i Ana nomizi oti tragudai orea.} \\
& \quad \text{the Ana thinks that sing.PRES.3SG nicely.} \\
& \quad \text{‘Ana thinks that she sings nicely.’} \\
2. & \text{b. i Ana theli na figi o Petros.} \\
& \quad \text{the Ana wants SUBJ leave.PRES.3SG the Peter.NOM} \\
& \quad \text{‘Ana wants Peter to leave.’}
\end{align*}

The table below presents these general classes to give the reader a general idea of the puzzle
(modified from Villalta (2008)):

\begin{itemize}
\item \textit{Notice that all the accounts for mood distinction rely on embedded contexts and they do not consider the root environments in which subjunctives occur. Quer (2009) describes the Indicative as the mood of main assertions and non-modalized (or less modalized) embedded clauses whereas he treats Subjunctive as subordinated mood. However, as we will see Matrix Subjunctives are very productive in Greek as well as in other Balkan languages (e.g. Bulgarian) and in addition to this if we treat Imperatives as a subvariety of Subjunctive mood, then we can see that Indicative and Subjunctive mood are equally productive in embedded and matrix environments but in both cases they are associated with different properties.}
\item \textit{As I have already shown, the Subjunctive in Greek is marked by the particle \textit{na} (see next section for its status). However, it is important to notice that Greek being a Balkan language, has no infinitive and therefore in many environments in which in Romance languages an infinitive is used, in Greek we have a \textit{na}-construction. (e.g. with predicates like \textit{start} or in constructions like \textit{I have three years to eat} ... discussed in Iatridou (2014) or even cases with perception verbs "I saw him crying": in all of these environments the \textit{na}-construction appears and it is not in any way a subjunctive in the way described in the literature. Therefore, I will, from now on, assume that there is \textit{na}-infinitive-construction which is not relevant in this work and a \textit{na}-subjunctive-construction which is our locus of attention. In deciding about the environments in which \textit{na}-constructions are truly subjunctive I follow the literature in Romance. Of course, the root \textit{na}-construction, I have been treating throughout as a subjunctive. When a \textit{na}-construction is not in any obvious way a subjunctive I will gloss the particle \textit{na} as \textit{NA} as to avoid any confusion. See Philippaki-Warburton and Veloudis (1984) for a discussion of \textit{na}-clauses in Greek in general.}
\end{itemize}
Looking at the general picture, we can see that there are two possible ways to account for the data and both of these ways have been advocated in the literature. Under one approach (INDICATIVE_DEFAULT) the subjunctive is marked and the elsewhere mood is the indicative (Farkas (1992b, 2003); Giannakidou (1994, 2015); Quer (2001); Villalta (2008); Gielau (2015)) whereas under the other approach (SUBJUNCTIVE_DEFAULT) the indicative is the marked and the subjunctive is the elsewhere mood (Portner (1997); Schlenker (2005); Siegel (2009); Portner and Rubinstein (2012)). It should be noticed however that there are many differences among the individual approaches. The SUBJUNCTIVE_DEFAULT analyses share in common that they analyse Indicative mood as inducing contextual commitment on the part of the Speaker or the attitude holder. For example, Schlenker (2005) develops a referential approach to mood under which the Indicative mood carries a presupposition which triggers contextual commitment of a salient individual \(i\) in the context set and which doesn’t have to be the Speaker. In the absence of contextual commitment the Subjunctive is selected as the default/elsewhere mood (see Portner and Rubinstein (2012) for a criticism of Schlenker’s analysis due to the fact that it doesn’t predict which participant in the context (the speaker or a participant in the main event is contextually committed).

Portner and Rubinstein (2012) also develop their analysis around the notion of contextual commitment but in a different way. They define contextual commitment as a requirement that the modal backgrounds of the predicate, the facts and the preferences it is based on, be conversationally defensible (Portner & Rubinstein (2012); p.470). The intuition behind this is that the attitude

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<td>Modal predicates: it’s possible, it’s necessary, it’s likely, need</td>
<td>Verbs of saying: say, announce, confess, explain</td>
</tr>
<tr>
<td>Causative predicates: make, cause, help, avoid</td>
<td>Predicates of mental judgement: guess, understand, realize, discover</td>
</tr>
</tbody>
</table>

Looking at the general picture, we can see that there are two possible ways to account for the data and both of these ways have been advocated in the literature. Under one approach (INDICATIVE_DEFAULT) the subjunctive is marked and the elsewhere mood is the indicative (Farkas (1992b, 2003); Giannakidou (1994, 2015); Quer (2001); Villalta (2008); Gielau (2015)) whereas under the other approach (SUBJUNCTIVE_DEFAULT) the indicative is the marked and the subjunctive is the elsewhere mood (Portner (1997); Schlenker (2005); Siegel (2009); Portner and Rubinstein (2012)). It should be noticed however that there are many differences among the individual approaches. The SUBJUNCTIVE_DEFAULT analyses share in common that they analyse Indicative mood as inducing contextual commitment on the part of the Speaker or the attitude holder. For example, Schlenker (2005) develops a referential approach to mood under which the Indicative mood carries a presupposition which triggers contextual commitment of a salient individual \(i\) in the context set and which doesn’t have to be the Speaker. In the absence of contextual commitment the Subjunctive is selected as the default/elsewhere mood (see Portner and Rubinstein (2012) for a criticism of Schlenker’s analysis due to the fact that it doesn’t predict which participant in the context (the speaker or a participant in the main event is contextually committed).

Portner and Rubinstein (2012) also develop their analysis around the notion of contextual commitment but in a different way. They define contextual commitment as a requirement that the modal backgrounds of the predicate, the facts and the preferences it is based on, be conversationally defensible (Portner & Rubinstein (2012); p.470). The intuition behind this is that the attitude
holder should be able to defend his belief or preference. For example, they argue that $\text{want}_{\text{subj}}$ and $\text{hope}_{\text{indic}}$ differ in that $\text{hope}$ presupposes that there is some reasonable basis creating the hope whereas $\text{want}$ doesn’t need any sort of explanation. To illustrate this, they provide the following example which shows that $\text{want}$ is felicitous in a context where the desire of the speaker is considered unreasonable (and therefore unjustifiable) whereas $\text{hope}$ which combines with indicative is not.

(43) **You are at your doctor’s office for an annual checkup. He has just told you what bad shape your lungs are in. If you continue to smoke, you will soon die.**

a. *O mon Dieu! Avec tout ce stress je veux vraiment fumer une cigarette dès que sortirai.*

      ‘Oh gosh, Doctor, with all this stress I really want to have a cigarette as soon as I leave.’

b. *O mon Dieu! Avec tout ce stress j’espère vraiment fumer une cigarette dès que sortirai.*

      ‘Oh gosh, Doctor, with all this stress I really want to have a cigarette as soon as I leave.’

[Portner & Rubinstein (2012); (24), p.470]

I will come back to the distinction between $\text{hope}$ and $\text{want}$ below showing that it is, actually, better explained under the $\text{INDICATIVE}_{\text{DEFAULT}}$ analyses and in particular, under the comparative approach.

The $\text{INDICATIVE}_{\text{DEFAULT}}$ analyses share that the $\text{subjunctive}$-selecting predicates have a common property but this is quite different among the individual approaches. The common thread in Farkas (1992), Giorgi & Pianesi (1997), Quer (2001), Villalta (2008) and partially in Farkas (2003) is that the predicates selecting the subjunctive require two parameters of evaluation, in Kratzer’s terminology, both a modal base and an ordering source. This allows these analyses to account immediately for the strong distinction between $\text{epistemic}$-predicates which are evaluated with respect to an epistemic modal and $\text{desire}$-predicates which are evaluated with respect to a modal base
and in addition to this a bouletic ordering source. Portner & Rubinstein (2012) refer to this as the proto-standard analysis. The presentation here is based mostly on Villalta’s (2008) account and the discussion in Portner & Rubinstein (2012) who formalize this analysis in a slightly different way.

Villalta (2008) proposes that the key property for subjunctive-selecting predicates is that they have comparative semantics. This means that the subjunctive complement will always be associated with alternatives which will be ordered by the ordering source which is restricted either by the lexical semantics of the predicate or by the context in the case of modal adjectives such as possible (e.g. a bouletic, deontic ordering source). Her starting point for a comparative ordering source is Heim’s (1992) formulation of the semantics of want. However, according to Villalta the alternative is not always the negation of the prejacent but it is derived based on Focus Alternatives in a Roothian mechanism. More precisely, Villalta treats the subjunctive mood operator as having the same function as the focus operator (~) in Rooth’s theory which is to evaluate the alternatives. The ordering source then ranks the alternatives relative to the prejacent. What is important under the present view is that Villalta associates Subjunctive mood with a semantic function, namely the evaluation of the alternatives, which in turn provides a restriction for a non-null ordering source.

Portner and Rubinstein (2012) characterize the comparative approach (proto-standard analysis as they call it) in the following way:

(44)  
a. A predicate P selects the subjunctive iff its ordering source is not empty, leading to a comparative semantics.

b. For any propositional attitude predicate P with complement argument S, P selects the indicative form of S iff the conditions for P selecting the subjunctive form of S are not met.

Portner and Rubinstein (2012) criticize the ‘proto-standard approach’ on the basis of three different cases; the predicates hope, promise and probable in French. As they show, the predicate hope takes Indicative in French whereas it is predicted by the comparative analysis to take subjunctive since it is a desire predicate with a non-null ordering source. Once more, however, the cross-linguistic data vary. First, Villalta (2008) already discusses the behavior of the predicate hope ‘esperar’ in Spanish showing that Indicative shows up only when the predicate has the interpretation ‘expect/anticipate’. Evidence for this comes from the fact that modification by the degree adverb
*enormemente* ‘enormously’ is possible only when the predicate selects the subjunctive mood:

(45) a. Espero enormemente que venga mi hermano.
    hope.1SG enormously that come.PRES.SUBJ.3SG my brother
    ‘I enormously hope that my brother will come’

b. *Espero enormemente que vendra mi hermano.
    hope.1SG enormously that come.FUT.IND.3SG my brother
    ‘I enormously anticipate that my brother will come.’

We observe a similar contrast with the predicate *elpizo* ‘hope’ in Greek which is also compatible with either a subjunctive or an indicative complement. Although, in both cases we get the meaning that the Speaker desires the prejacent, it becomes clear that the status of this inference differs depending on mood choice and this becomes obvious if we interpret *hope* under the scope of negation. Consider the following pair; (46a) is inconsistent whereas (46b) is perfectly fine:

(46) a. #Thelo na erthi o Petros ala den elpizo na erthi.
    want.1SG SUBJ come.3SG the Peter but not hope.1SG SUBJ come.3SG
    ‘I want Peter to come but I don’t hope that he comes.’

b. Thelo na erthi o Petros ala den elpizo oti tha erthi.
    want.1SG SUBJ come.3SG the Peter but not hope.1SG thatIND come.3SG
    ‘I want Peter to come but I don’t hope that he will come.’

Giannakidou (2015) makes a similar observation for *hope* in Greek suggesting that the subjunctive in this case introduces a preference and she dubs this the *Subjunctive of preference*. What I would like to suggest is that the inference that the prejacent is desirable comes from different sources in the two cases; when *hope* selects Indicative it is interpreted as an epistemic predicate conveying a possibility and the desire-component is a presupposition of the verb. This means that the meaning of *hope* in this case would be similar to a predicate like *expect* and that the inference that the Speaker desires the prejacent to be realized comes as a presupposition as shown in (47):

(47) \[ [\text{hope}_{\text{IND}}]_w = \lambda x. p(x) \quad \forall w' \text{ compatible with } x’s \text{ expectations in } w, \]
    \[ p(w') = 1 \]

On the other hand, when *hope* selects a subjunctive the desire-component is introduced by a bouletic ordering source which satisfies the need of subjunctive for a non-null ordering source
and therefore it is part of the meaning, as shown in (48). The modal base is again restricted by the expectations of the subject.

\[ [\text{hope}_{\text{SUBJ}}]^w = \lambda p_{(x')}. \lambda x. \forall w' \in \max_{(x,w')} (f(x,w)): p(w')=1 \]

Assuming such an ambiguity for hope accounts for the contrast between (46a) and (46b) In (46b) the presupposition can project above negation and therefore the sentence is not inconsistent. On the contrary, in (46a) it is part of the meaning and the sentence sounds inconsistent. Similarly, (49b) is better than (49a) said by a student in his last year:

(49) a. #Distihos, den elpizo na paro pthio.
    Unfortunately, not hope.1SG SUBJ take.1SG degree
    ‘Unfortunately, I don’t hope to graduate.’

    b. Distihos, den elpizo oti tha paro pthio.
    Unfortunately, not hope.1SG that fut take.1SG degree
    ‘Unfortunately, I don’t hope that I will graduate.’

Similarly, as pointed out to me by Sabine Iatridou, the contrast between the two varieties of hope is revealed when we try to embed the hope_{IND} and the hope_{SUBJ} under the root modal can. The hope_{IND} is perfectly fine (50a) whereas the hope_{SUBJ} is ungrammatical (50b), like want. It seems a general restriction that a priority attitude cannot embed under the root modal can whereas an epistemic/doxastic predicate is perfectly fine.

(50) a. Tora boro na elpizo oti tha paro pthio.
    now can.1SG NA hope.1SG that_{IND} take.1SG degree
    ‘Now I can hope that I will graduate.’

    b. #Tora boro na elpizo/ thelo na paro pthio.
    now can.1SG NA hope.1SG/ thelo.1SG SUBJ take.1SG degree
    ‘#Now I can hope/want to graduate.’

On the flipside, we observe that the hope_{IND} can embed an epistemic modal whereas hope_{SUBJ} cannot. As Anand and Hacquard (2013) notice, a possibility epistemic can embed under an emotive doxastic (which I think is a suitable term for hope_{IND}^{16}) but it is not licensed under a desiderative.

\^{Anand} and Hacquard (2013) provide a different meaning for emotive doxastics assuming that they contribute two distinct assertions. Given the data in Greek, I think that treating the desire-component as a presupposition captures better the contrasts.
The contrast that we observe in (51) fits exactly this picture.

(51)  

a. Akomi elpizo oti mpori na peraso to mathima.  
still hope.1SG that may.3SG NA pass.1SG the class  
‘I still hope that it is possible to pass the class.’

b. #Akomi elpizo na mpori na peraso to mathima.  
still hope.1SG SUBJ may.3SG NA pass.1SG the class  
Intended: ‘I still want it to be possible to pass the class.’

The contrast between hope\textsubscript{ND} and hope\textsubscript{SUBJ} speaks in favor of the Comparative approach. However, the criticism in P&R is that in French hope selects Indicative, so it would be interesting to see what happens in French. It would be interesting to see if we can find evidence that the hope\textsubscript{ND} is more similar to the hope\textsubscript{ND} in Greek than to hope\textsubscript{SUBJ}, but I haven’t managed to solicit any conclusive data so the issue remains open (as Portner and Rubinstein (2012); Anand and Hacquard (2013) for some French speakers hope can combine both with subjunctive and indicative whereas for others only the indicative is possible).

The subjunctive – indicative contrast pertains to more predicates in Greek. Giannakidou (2015) observes that when the verb pistevo ‘believe’ combines with subjunctive it gets a preference meaning which she attributes to the special character of the subjunctive of preference. I suggest that this happens because the subjunctive always requires a non-empty ordering source and so believe when it combines with subjunctive is coerced into a bouletic predicate in addition to its epistemic character. To illustrate, the subjunctive complement in (52a) is entirely odd, assuming that the longer a surgery lasts, the more undesirable it is, whereas (52b) is perfectly fine:

(52)  

a. #O Nikos pistevo na kratisi poli ora i enhirisi.  
The Nick believes SUBJ last much time the surgery  
‘Nick believes that the surgery will last a lot of time.’ (and he considers this good)

b. O Nikos pistevo oti tha kratisi poli ora i enhirisi.  
The Nick believes that FUT last.3SG much time the surgery  
‘Nick believes that the surgery will last a lot of time.’

Now compare (52a) with (53) which is perfectly fine, since it is considered good for a surgery to be short.
The Nick believes that the surgery will last little.' (and he considers this good)

The second predicate that Portner & Rubinstein (2012) consider as a problem for the comparative approach is *promise*. In French, *promise* takes indicative whereas under the comparative approach, it would be expected to take subjunctive since *promise* introduces an obligation for the promiser. However, once more in Greek, we find that *promise* also comes with both Subjunctive and Indicative:

(54) a. O Nikos iposhethike na erthi.
     The Nick promised to come.
     ‘Nick promised to come.’

b. O Nikos iposhethike oti tha erthi.
     The Nick promised that he will come.
     ‘Nick promised that he will come.’

It is true that it is very difficult to pin down to the difference between (54a) and (54b). However, I would like to point to another predicate *swear* which also expresses commitment and also appears to select both subjunctive and indicative in Greek. Here, the difference becomes cleaner. The indicative is used when the commitment concerns just the truthfulness of the prejacent whereas the subjunctive is used when the commitment also creates an obligation on the part of the attitude holder to act so that the prejacent becomes true. The sentence in (55a) suggests that Peter has probably some prophetic powers and so he can vouch for the truth value of the complement. In (55b) however, where the subjunctive is used we get the intuition that Peter has to do something either as a doctor or as a magician perhaps, so that the prejacent comes true.

(55) a. O Petros orkistike stin Maria oti o Nikos tha gini kala.
     The Peter swore to Mary that the Nick will become well.
     ‘Peter swore to Mary that Nick will become well.’

b. O Petros orkistike stin Maria na gini kala o Nikos.
     The Peter swore to Mary for Nick to become well.
     ‘Peter swore to Mary for Nick to become well.’

---

17Anand and Hacquard (2013) who also adopt a comparative approach, assuming that subjunctive mood indicates preferences, mention in a footnote that *promise* is not a good case to test because it is a nonrepresentational attitude.
Having defined this difference, I think that we can construct similar examples for promise. Notice that promise is future oriented whereas swear is not, and incorporating this difference might explain why it is less easy to understand the distinction for promise as opposed to swear. This intuition suggests that the proto-standard analysis accounts for these contrasts better than P&R’s hypothesis that contextual commitment is the key factor for the presence of Indicatives. However, if I understand correctly Portner & Rubinstein’s (2012) definition of contextual commitment, we could possibly account under their analysis if we take commitment to the truth value of a sentence as more objective and therefore easier to defend as a claim than commitment to act in order to fulfill the prejacent. At any rate, the most we can conclude from these examples is that these predicates, at least when we consider their behavior in Greek, do not present counter-examples for the proto-standard approach.

The last predicate that Portner & Rubinstein present as problematic for the proto-standard approach is probable which - assuming that it expresses weak necessity and therefore it has a non-empty ordering source - should always combine with Subjunctive but it combines with both Indicative and Subjunctive. In Greek as well pithano ‘probable’ combines with both Subjunctive and Indicative. This is really problematic. An attractive idea would be that the critical factor in mood-selection is not to have a non-null ordering source but in particular a prioritizing or more specifically a bouletic ordering source with subjunctive. However, the fact that this predicate combines with both subjunctive and indicative is problematic for this idea as well. Villalta (2008) argues that probable takes subjunctive because there is an scale of likelihood according to which alternatives are ranked but as P&R (2012) point out this open all sort of possibilities for other epistemics as well. Acknowledging the concern raised in P&R (2012), I think that it is not enough to make us abandon the comparative approach which can account for a large scale of data. It remains however to be answered under which conditions the complement of probable is marked with subjunctive or indicative.

One last example that goes in favor of the proto-standard approach and against both P&R’s and Giannakidou’s (2015) approach is the mood-selection with the predicate convince in Greek. As I mentioned above, Giannakidou’s approach is compatible with both analyses. In her analysis the key to mood selection is (non)veridicality. According to her analysis, subjunctive appears in non-veridical environments. Non-veridical environments is the complement set of veridical
environments. In a series of works, Giannakidou has defined an operator as veridical if it entails the truth of its complement. She distinguishes between objective and subjective veridicality. The formal definition for objective veridicality is given in (56):

\[(56)\] **Objective veridicality (from Giannakidou (2015); (22))**

Let \( F \) be a monadic sentential operator. The following statements hold:

a. \( F \) is veridical just in case \( Fp \rightarrow p \) is logically valid; otherwise \( F \) is nonveridical.

b. A nonveridical \( F \) is antiveridical iff \( Fp \rightarrow \neg p \).

The different characteristic of subjective veridicality is that the complement has to be true according to individual \( i \) (the attitude holder in our case) (therefore accounting for predicates like \textit{believe}) and relativized to a certain epistemic state introduced by the predicate (therefore accounting for predicates like \textit{dream}). This is formalized in Giannakidou (2015) as in (57):

\[(57)\] **Subjective veridicality**

A function \( F \) that takes a proposition \( p \) as its argument is subjectively veridical with respect to an epistemic state \( M(i) \) of an individual anchor \( i \) iff:

a. \( Fp \) entails or presupposes that \( i \) knows/believes that \( F \) is true.

b. If \( i \) knows/believes that \( p \), then \( i \)'s epistemic state \( M(i) \) is such that: \( M(i) \subseteq p \).

Using this definition of (non)-veridicality, Giannakidou (2015) analyses subjunctive as the mood selected by non-veridical predicates. However, in order to account for emotive predicates like \textit{be glad, regret, be amazed} which in many languages select for the Subjunctive, she introduces an additional property of these predicates. Namely, she argues that emotive predicates introduce a negative presupposition that the negation of the prejacent was believed or expected to be true at some point before the utterance time. Giannakidou argues that when this presupposition is triggered by the predicate, it selects subjunctive mood.

However, we observe that this is not the case for the epistemic \textit{convince} which also seems to carry a similar inference that the negation of the prejacent was a viable alternative in the relative past. \textit{pitho} 'convince' in Greek is compatible with both subjunctive and indicative. As in the previous cases, we observe a semantic difference depending on mood selection. In (58a) the subject
is convinced that the prejacent is true. In (58b) the subject is convinced to provide permission or to act so that the prejacent becomes true.

(58)  a. Ο Νικός πιστικεί ότι θα ερθεί ο Πέτρος.  
The Nick convince.PASS.3SG that FUT come.3SG the Peter.NOM  
‘Nick got convinced that Peter will come.’

   b. Ο Νικός πιστικεί ότι θα ερθεί ο Πέτρος.  
The Nick convince.PASS.3SG that FUT come.3SG the Peter.NOM  
‘Nick got convinced for Peter to come.

Under the comparative approach the contrast between (58a) and (58b) can be explained since the subjunctive brings in a deontic ordering source capturing the intuition that the subject is obliged to act in a certain way for the prejacent to become true. On the other hand, when we have indicative there is no ordering source. Under Giannakidou’s approach it is not clear how to explain the licensing of Indicative in (58a) since in both cases the negation of the prejacent becomes salient due to the lexical meaning of convince. Under P&R’s account, one would expect that convince should always appear with Indicative since the subject is contextually committed to the prejacent. However, once more the reply from P&R’s view could be that what matters is how objective the point of view is and in the case of the pure epistemic convince could be treated as more objective than the deontic convince, although I’m not sure how this could be done.

I have shown that most of the issues that P&R present against the ‘proto-standard’ comparative approach turn to be arguments in favor of this approach if we look at the same data in Modern Greek. Of course, every analysis of subjunctives makes reference to a particular subset of languages and as has been long observed there are many cross-linguistic differences in the domain of mood-selection. The point of this discussion was to see whether the data in Greek support the comparative approach which was already outlined in the literature different varieties for French, Spanish, Romanian, etc. Indeed, by examining predicates in Greek which can combine with both moods, we saw that the comparative approach provides an explanation for the observed contrasts. Now the point is to show how based on the comparative approach we can also account for the nature of the operator that we find in Imperatives and Root Subjunctives. Based on the comparative approach and on Villalta’s idea that Subjunctive has a semantic contribution to the overall interpretation of the utterance, I outline the conditions under which the operator appearing in Imperatives
and Root Subjunctives appears to be bouletic in nature.

**Mood agreement in matrix contexts**

As I already discussed, treating the Imperative as a subvariety of Subjunctive mood is not a crazy idea. Under this view, the Imperative morphology represents nothing else but verbal mood (in the following section I will elaborate on the morphological and syntactic differences between Imperatives and Matrix Subjunctives in Greek). Critically, then the Modal Operator will be introduced on top of a subjunctive proposition of type \(\langle st\rangle\), which in syntactic terms represents a mood phrase. Syntactically, a mood head is a head that consists of the features \([+/-\text{SUBJ}]\) and it is in an agree-relation with the c-commanding verb (similarly to the the way \(T\) is in an agree relation with the verb). Moreover, the interpretation of the \([+\text{SUBJ}]\)-feature requires that there is an operator with a non-null ordering source such that the choice of \([\text{subj}]\)-mood will be licensed in such an environment:

(59) **Mood Selection**

a. \([+\text{SUBJ}] / P^{+g} [ ]\), such that \(P^{+g}\) represents a predicate that selects a non-empty ordering source.

b. \([-\text{SUBJ}] \text{ELSEWHERE.}\)

In the domain of syntax, following the discussion in semantics and pragmatics, the mood head is sometimes represented as a head representing illocutionary force/speech act type (see hierarchy in Cinque (1999) and sometimes as a head that is part the finite domain of the verb. In this case, we care about verbal mood. In most works MoodP (different labels have been given in various works) is taken to be above TP and below the C-domain (see Rivero (1994) for Balkan languages takes, Philippaki-Warburton (1992, 1998); Tsimpli (1990); Roussou (2000), Terzi (1992) for Greek). This is also illustrated in Haegeman’s proposal for clause structure introduces the Fin-head (Finiteness Phrase) in between TP and CP. Haegeman (2005, 2010) does not associate this head directly with Mood, but it becomes clear that if there were to be a Mood head it should be part of the Finite head. That said, I take both Imperatives and Root Subjunctives to have the basic syntax in (60). Critically, under this view the Imperative and the Root subjunctive represent varieties of subjunc-
tive mood-Phrases. The modal operator is not an integral part of the Imperative form or the Root Subjunctive; it is inserted to satisfy the requirement that Subjunctive\textsubscript{IMP} has for a modal operator with an ordering source. The CP-domain starts above the Modal Operator Phrase.

(60) a. Open the window.
    b. \[
    \begin{array}{c}
    \text{OpP} \\
    \text{Op} \quad f \quad \text{g} \\
    \text{MoodP} \\
    \text{Mood} \quad \text{TP} \\
    +\text{SUBJ} \quad \text{T} \\
    \text{AspP} \\
    \text{Asp} \quad \text{vP} \\
    \text{pro}_{Ad} \quad \text{v'} \\
    \text{v} \quad \text{VP} \\
    \text{V} \quad \text{DP} \\
    \text{open the window}
    \end{array}
    \]

This analysis is in fact very similar to the minimal approach in that it doesn’t assign the Imperative form with a special meaning. The imperative is only a proposition of type \langle st \rangle with no modal operator integrated into its semantics. The Operator is inserted in the course of syntactic/semantic derivation due to the requirement that Subjunctive\textsubscript{IMP} Mood has to be embedded under a modal operator with a non-null ordering source, therefore in the end it is represented in the syntax but not as part of the Imperative form itself, which is only a MoodP.

In addition, this modal operator by virtue of being above the TP-domain it is anchored to the Speaker, therefore its modal base is doxastic as we showed in the previous section and by virtue of the requirement posited by Subjunctive mood it will have a non-empty ordering source. Now the question is why the ordering source has to be bouletic in the case of Imperatives and Subjunctives.
If we take the definition of the proto-standard comparative approach seriously, we should allow for epistemics with subjunctives, since epistemics can also have a non-null stereotypical ordering source. Indeed, some epistemic modals are compatible both with Indicative and Subjunctive (as the case of *probable* that we discussed).

One possible answer to this problem is that the subjunctive is related to a priority operator and then there is an additional factor explaining the compatibility of subjunctive mood with predicates like *probable*. As it has been suggested in the literature (Farkas (2003), Portner & Rubinstein (2012)) we might need two parameters to account for the distribution of mood and not just one. Then, we can refine the comparative approach so that it doesn’t overgeneralize and define that it needs a non-null ordering source which is a prioritizing one:

(61)  

\begin{itemize}
  \item[a.] A predicate $P$ selects the subjunctive iff it has a prioritizing ordering source, leading to a comparative semantics.
  \item[b.] For any propositional attitude predicate $P$ with complement argument $S$, $P$ selects the indicative form of $S$ iff the conditions for $P$ selecting the subjunctive form of $S$ are not met.
\end{itemize}

Of course this means that we would need an additional parameter to account for predicates like *probable*, *likely* which select the Subjunctive. I’m not sure what this second parameter could be (e.g. *contextual commitment* in P&R (2012), *+Decided* in Farkas (2003)), but it should be kept apart from the first condition in (61). However, we would still need to explain why the ordering source of the modal operator in root contexts is not just any prioritizing ordering source (e.g. *deontic* but rather a bouletic one. I think that this can be explained given that we have taken not only the modal base but also the ordering source to be relative to the Speaker. Maybe this can also account for the absence of epistemic readings with a stereotypical ordering source. If the ordering source is anchored to the Speaker then it means that we will get a *subjective* evaluation. The stereotypical ordering source is about what the normal course of events is. The way I understand this notion it shouldn’t be relativized to the speaker but rather to what is commonly assumed to be the normal course of events. Portner (2009) addresses the issue of *subjective* epistemic modality. As he says, both Lyons (1977) and Kratzer (1981) distinguish between subjective and objective epistemic modality in slightly different terms. Kratzer (1981) discusses the following contrast
between (62a) and (62b). As she discusses the adverbial epistemic in (62a) can be used in contexts in which the speaker is based on totally subjective evidence (e.g. his superstitions). On the contrary, the expression in (62b) can only be used if the speaker uses objective scientific evidence, e.g. the status of the ship, the weather conditions, etc.

(62) a. Wahrscheinlich sinkt das Schiff.
    Probably sinks the boat.
    ‘Probably, the boat will sink.’

b. Es ist wahrscheinlich, daß das Schiff sinkt.
    It is probable that the boat sinks.
    ‘It is probable that the boat will sink.’

Portner’s criticism to this distinction is that the notions of subjectivity vs. objectivity depend on our cultural knowledge and therefore, what is subjective and what is objective is in the end to what is considered in a culture to be objective evidence for something and what is not. At any rate, this discussion is not about whether the ordering source is relative to the Speaker but whether the modal base is about the Speaker’s knowledge or the speaker’s beliefs. What is relevant for our discussion is whether the stereotypical ordering source can be relativized to the speaker. At some passage, in the same section, Portner (2009) Portner links subjectivity to performativity but from a different point of view, considering subjective utterances as having a different update function to the common ground. This is an interesting idea especially if we think the way Condoravdi and Lauer (2012) and Lauer (2013, 2015) analyse performativity as expressing Speaker’s effective preferences. The question of subjectivity is too broad to address it in one paragraph here. My point is that if we can exclude the possibility of having a stereotypical ordering source based on independent grounds (e.g. the anchoring of the ordering source to the Speaker) then maybe we can account for the bouletic character of the modal in root constructions without further modifications to the modal approach.

What did we achieve then? I showed that by treating the Imperative as an instantiation of Subjunctive Mood we can provide an explanation for why Imperatives have the meaning they have at least to some extent. We excluded the possibility of having a root modal or a pure epistemic with a null ordering source. The question why it is specifically bouletic remains open. Moreover, I accounted for the long-lasting intuition in the literature that Imperatives can be treated as the
counterparts of non-embedded Subjunctives and that there must be a connection between the two. In fact, I argue the two are one and the same thing – the only difference being a morphosyntactic difference. The embedded subjunctive and the Imperative both represent special instances of the general category of Subjunctive Mood.

Portner (2015b), in a handout from a talk presented at MIT, also tries to capture the connection between Imperatives and embedded subjunctives but in a different way, which is compatible with his dynamic analysis of Imperatives. He notices that they are parallel in that both in embedded subjunctives and in Imperatives, we have an ordering relation. The ultimate parallelism that Portner (2015b) attempts to draw is between the verbal and sentence mood. If I understand correctly, Portner (2015b) suggests that the sentential force (assertive/directive) in (64) is assigned based on the semantic type of the clause (informational/preferential) as in (63).

(63)  a. **Indicative principle**: If a clause $\phi$ is operated on by the informational modal, its form is indicative.

     b. **Subjunctive principle**: If a clause $\phi$ is operated on by the preferential modal, its form is subjunctive.

(64)  a. **Declaratives**: the sentential force of a declarative sentence is assertion.

     b. **Imperatives**: the sentential force of an imperative sentence is directing.

In the present approach, I don’t treat Imperative as a special sentence mood, instead I take it to be just a variety of Subjunctive verbal mood. The preferential character of the modal involved is in fact directly associated with the choice of the mood. In the next chapter, we will look into detail to the syntactic and semantic differences between Imperatives and Root Subjunctives in Greek and how they can be explained under the present framework.
Chapter 5

Root na-subjunctives vs. Imperatives in Modern Greek

5.1 Root Subjunctives in Greek

In the previous chapter, I talked about Imperatives as a subvariety of the general Subjunctive form. In this chapter, I discuss three types of Subjunctives in matrix environments:

i. imperatives
ii. na-subjunctives
iii. as-subjunctives

The distinction is a pure morphological one but I will compare them and show that whereas they share many properties, they also differ in important respects. What we expect, based on the analysis we presented in the previous chapter, is that in all of these constructions there is a bouletic modal involved and indeed as we will see this is true. I focus mainly on the differences between Imperatives and na-subjunctives, but whenever as-subjunctives are relevant I discuss them as well.

The reader should be familiar by now with the na-subjunctives in Greek. As I showed in the previous chapter, na-subjunctives can be embedded under certain predicates just like the subjunctives in Romance languages. For example, in (1a) the subjunctive is embedded under a directive verb and in (1b) under a desire predicate:

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However, as I showed na-subjunctives can also appear unembedded in root contexts. The literature on Root Subjunctives in Greek as well as in other Balkan languages is quite restricted (Rouchota’s (1994) dissertation is an exception as it discusses a variety of environments in which matrix subjunctives are used as opposed to Imperatives). By what we have said so far, we expect Imperatives and matrix na-subjunctives to occur in the same environments and yield the same interpretation. In both cases, the modal operator will merge above moodP which is above the tense/aspect head, therefore we will have a doxastic modal base. Furthermore, the fact that the mood-head is defined as [+SUBJ] will yield a requirement for a non-null ordering source which, which as we saw is bouletic in nature. In addition, I assume that in both cases the force of the operator is existential, since all the arguments presented in chapter 2 also go through for matrix subjunctives. Under this view, we expect Imperatives and matrix na-subjunctives to stand in free variation. Indeed, the following examples represent typical contexts in which a Subjunctive and an Imperative are interchangeable. As we observe, na-subjunctives like Imperatives can convey both strong readings like commands and requests (2) but also permissions (3) or invitations (4):

(2) Teacher to student:

a. Na aniksis ta parathira sto dialima.
   SUBJ open.2SG the windows at-the break

b. Anikse ta parathira sto dialima.
   open.IMP.2SG the windows at-the break
   ‘Open the windows during the break.’

(3) A chief says to an employee who has asked to leave earlier from the work:

a. OK, na figis noritera simera.
   OK SUBJ leave.2SG earlier today.

b. OK, fige noritera simera.
   OK leave.IMP.2SG earlier today.
‘OK, leave earlier today.’

(4) a. Na me pernis tilefono (opote thes).
   SUBJ CL.ACC.1 SG take.2SG phone whenever want.2SG
b. Perne me tilefono (opote thes).
   take.IMP CL.ACC.1 SG phone whenever want.2SG
   ‘You can call me (whenever you want).’

So far so good, but as it usually happens, the two linguistic forms are not in entirely free distribution. In the following, I will discuss the differences between Imperatives and Root na-subjunctives trying to account for them, but before this it’s necessary to make clear the syntactic differences between the two, so that we can evaluate which restrictions stem from syntactic constraints and which are due to semantic/pragmatic differences.

5.2 The syntax of Imperatives vs. na-subjunctives in Greek

As I said in the previous chapter, both na-subjunctives and Imperatives syntactically represent a moodP. However, there are clearly syntactic differences between the two. Let me just repeat the ingredients of the analysis:

i. Mood caries a [+SUBJ]feature.
ii. The [+SUBJ]feature is interpretable and it agrees with the verb.
iii. By its interpretation the mood [+SUBJ]P needs to combine with a modal operator with a non-null ordering source, deriving the bouletic interpretation of Imperatives and na-subjunctives.

In Imperatives, in Greek the verb undergoes subsequent movement from V-to-mood-to-ModOp and the [+SUBJ]feature is checked. The Aspectual head can be perfective or imperfective. The example in (5a) is perfective but in (5b) we have an imperfective imperative which can be habitual or progressive. Crucially, there is no tense marking, however I assume that there is a T-head which is defined as [non-past]

---

1I take the Tense in Imperatives to be defective. This is related to a long-standing question with respect to the status of the subject in Imperatives, especially in languages like English which generally do not allow null subjects (cf. Potsdam (2007) and the references therein). For now, I represent the imperative subject as a special null pro which I take to be restricted to the addressee. I will return to this issue as soon as I present the syntax for matrix na-subjunctives, since I think by comparing the two we can understand more about the imperative subjects in general.
(5) a. Anikse to parathiro
Open.PERF.IMP.2SG the window.

b. Anige to parathiro.
Open.IMPRF.IMP.2SG the window
‘Open the window.’

The V-to-ModOp movement also accounts for the fact that clitics follow the Imperatives in Greek (Rivero (1994)) as opposed to what happens in indicatives\(^2\). Assuming that clitics occupy a functional ClP right above TP, then we can explain why movement of the verb to ModOP results in the clitics following the verb as in (6b) as opposed to the indicative in (6a):

(6) a. To anikses. / *anikses to.
It.CL open.PAST.2SG

b. Anikse to. / *to anikse.
Open.IMP.2SG It.CL

*na*-Subjunctives differ syntactically from Imperatives in two important respects; i) they can have overt Tense marking and ii) there is no 2\(^{nd}\) person restriction on the subject. Of course, there is a third difference which is the presence of the *na*-particle, so let me start the discussion by considering the syntactic status of this particle.

There are broadly two views in the literature regarding the status of *na*\(^3\). Under the first approach *na* is located at mood-head representing subjunctive mood (on a par with the other subjunctive particle as which appears in matrix subjunctives) (Philippaki-Warburton and Veloudis (1984); Philippaki-Warburton (1992, 1998); Tsimpli (1990); Giannakidou (1998)). The second approach analyses *na* as a complementizer which is under C (Agouraki (1991); Tsoulas (1993, 1996); Roussou (2000)). In particular, Roussou (2000) argues that *na* first merges at mood and then it moves to C. Here I follow the first approach under which *na* merges and stays at mood head. A strong

\(^2\)There is another puzzle with respect to clitics and imperatives; Imperatives lack the Person Case Constraint (PCC) effect. There is no restriction in the ordering of Accusative and Dative clitics depending on their case and person features. I will not be concerned with this issue here as it requires a solid background on the PCC effect in general but see Terzi (1999); Anagnostopoulou (2005); Mavrogiorgos (2010) and the references therein for a discussion and possible solutions to the problem.

\(^3\)There is a third view under which *na* is neither mood-marker neither a complementizer. Based on its homonymy with a deictic particle *na* it is argued that *na* is a deictic element located at the left periphery which can take as its complement either a proposition or a nominal (see Christidis 1985, 1990, Veloudis 2001 and Roussou 2009 for an overview and a different implementation of this idea).
argument for analyzing *na* as a mood-element comes from the fact that the particle *na* and the verb must be strictly adjacent: Only clitics and the negation particle can intervene between the two. On the contrary, a complementizer can be separated by the verb by any constituent. A second argument is that the particle *na* can appear with complementizers which introduce dependent clauses, e.g. *prin* ‘before’. As argued in many works (see Philippaki-Warburton (1994) as one of the first papers arguing in favor of the mood-analysis and against the C-analysis) analyzing *na* as a complementizer makes it very difficult to account for these properties.

All that matters in the present work is that there is independent evidence for *na* to be an element located in mood-head. Based on this, I treat *na* as a particle which appears under a mood[+ subj] head. As we said in the previous chapter, the subjunctive mood by virtue of its comparative presupposition, requires a modal operator with a non-null ordering source. A modal operator is introduced and it gets its bouletic meaning in the way described in the previous chapter. The important point is that the verb now stays in T and therefore it will follow the clitics. The difference between *na*-subjunctives and Imperatives is that in Imperatives the verb moves to mood whereas in *na*-subjunctives this position is already filled by the particle and so the verb remains in T. Under this view, we can suggest the following syntactic configuration for *na*-subjunctives:

(7) a. Na aniksis to parathiro  
    SUBJ open.PRF.2SG the window.

    b. Na anigis to parathiro.  
    SUBJ Open.IMPRF.2SG the window  
    ‘Open the window.’
We see two big differences between Imperatives and na-subjunctives; i) na-subjunctives have a non-defective T and ii) Imperatives have V-to-Mood movement whereas in Subjunctives the presence of na under mood blocks movement of the verb to the mood-head.

Based on the theory I have outlined a natural question arises; why are Imperatives not embeddable just like na-subjunctives? Nothing from what I have said so far excludes the possibility that Imperatives can embed for example under a desire predicate like na-subjunctives. The question of the embeddability of Imperatives is not unique to the present analysis. It arises in fact for any analysis which treats imperatives as modalized propositions like Kaufmann’s analysis. Below I develop an account which associates the restricted embeddability of Imperatives to their obligatory restriction to 2nd person agreement.
5.2.1 Accounting for the Addressee restriction and the (non)-embeddability of Imperatives

The status of the Imperative subject as well as its restriction to 2nd person (or more broadly to an Addressee inclusive subject) has been the topic of investigation in many works (see Schmerling (1982); Platzack and Rosengren (1998); Potsdam (1998, 2007); Zanuttini (2008); Zanuttini et al. (2012); Medeiros (2015); Stegovec (2016)). In all of these works, it is clear that there must be some syntactic reason which constrains the interpretation of the Imperative subject to the Addressee and that Addressee-restriction is independent from the “directive force” of Imperatives. This also becomes clear from the availability of matrix utterances with “directive force” in which the subject is not Addressee-oriented. For example, *na*-subjunctives can have any person feature (1st person is attested only under certain conditions, which I will discuss in the next section) as shown in (8).

(8) a. Avrio, na fig-o. (1st Person)
   b. Avrio, na fig-is. (2nd Person)
   c. Avrio, na fig-i o Petros. (3rd Person)

The availability of 3rd person *na*-subjunctives is important because it shows that the explanation for the addressee-restriction in Imperatives should not be a pragmatic one as it is stressed in Zanuttini et al. (2012). It is perfectly comprehensible to order somebody to take care so that the content of a proposition \( p \) is fulfilled even if he is not the agent. Under the view we have pursued here, *na*-subjunctives have exactly this effect. The propositional content for (8c) is that there is a world compatible with the Speaker’s desires in which Peter leaves tomorrow. If the Addressee accepts the utterance he will adopt the S’s preference and therefore he will be expected to try fulfil the pre-jacent. Therefore, it becomes clear that in order to explain the Addressee-restriction in Imperatives we have to resort to their syntactic properties.

In the spirit of Zanuttini (2008) and Zanuttini et al. (2012), I would like to suggest that the 2nd person restriction is due to a head present in Imperatives which hosts 2nd person features and, by feature transmission, the subject gets to be interpreted as 2nd person. Zanuttini et al. (2012) argue that this is a special head called *jussive* head which, aside from Imperatives, is also present
in *exhortatives* and *promissives* in languages like Korean which have such constructions\(^4\). Instead of positing a separate head, I take the 2\(^{nd}\) person feature to be a restriction on the imperative mood head.

Under this view, mood\([+\text{SUBj}\Imp]\) has an \([+\text{ADDR}]\) unvalued person feature which in order to be checked needs to enter in local agreement with a head which has a \([+\text{ADDR}]\) feature. This, I argue, is the speech act (sa)-head which has the features \([+\text{SP/ADDR}]\). The presence of a speech-act beyond the left periphery in syntax has been independently posited (Speas and Tenny (2003); Haegeman and Hill (2013); Haegeman (2014); Hill (2007); Zu (2015)) and moreover it has been widely assumed in these works that sa-head can participate in agreement and value features (e.g. vocatives) (see also Miyagawa (2012, ress)) for agreement patterns beyond T and in particular allocutive agreement). Here, I have a very minimal sa-head simply assuming that it carries \([+\text{SP/ADDR}]\) features. The technical details need to be worked out, but in principle I assume a framework in which feature valuation takes place between a probe and a goal bearing the same feature. I take the sa-head to be present in syntax as shown in the configuration in (11). It should be made clear that the sa-head has no special properties; it is the speech act that appears in all sort of declaratives. What is special is the mood-head which has \([+\text{SUBj}\Imp]\) feature and is marked with a \([+\text{ADDR}]\) feature. Crucially, the verb moves to mood and there it gets its special morphology due to Addressee-agreement.

\(^4\)In Imperatives the person feature is set to 2\(^{nd}\) person, in promissives it is 1\(^{st}\) person and in exhortatives it is 1st person inclusive of the Addressee.
An analysis along these lines explains why the subject in Imperatives is restricted to Addressee. However, I would like to embark on the idea that with the same ingredients we can also explain the restricted embeddability of Imperatives. Namely, the agreement between sa-head and the mood-head for the addressee feature will fail if there is any intervening head with person features. This means that any embedding predicate would act as an intervener as it carries person features. As we will see in the last section we can embed an imperative under an adverbial like better (e.g. Better leave!) but this will cause no intervention effect due to its lack of person features.

In Greek as well as in English the only predicate which doesn’t act as an intervener is the predicate say (Crnič and Trinh (2009)). The Imperatives in (10) have been shown to be true Imperatives based on a variety of tests (see Crnič and Trinh (2009); Kaufmann (2012)).

(10) a. Nick₁ said call his₁ mom.
   b. O Nikos₁ ipe tiftonise sti mama tu₁.
      The Nick said call.IMP his mom.

It is important to notice that embedded imperatives both in English and in Greek are only licensed
if say takes no indirect argument. Even if the indirect argument is in second person the sentence is not good.

(11)  

a. *Nick told me/you/her call his mother.  

b. *O Nikos mu/su/tu ipe tilefonise sti mama tu.  
The Nick me.CL.DATE./you.CL.DATE said call.IMP his mother.

A tentative idea for why say is the only predicate to embed imperatives in Greek and English and why it cannot have an indirect object is that in the absence of the goal-argument, say is taken to be addressee-oriented and therefore it carries a [+ADDR] feature which can value the [+ADDR] feature in the mood [+subjimp]-head.

Under this view, since the unembeddability of Imperatives is directly related with the 2nd person restriction, we predict that “imperatives” which can appear in 3rd person can be embedded. This actually seems to be the tendency. Medeiros (2015) discusses under which conditions imperatives can embed and he suggests that the critical factor is the properties of the T-head. In particular, he claims that in English the Imperative T(ense) is defective, that is it lacks person/case features and therefore it doesn’t satisfy the requirements of its selecting complementizer C (working in a system in which C0 has certain uninterpretable-features). On the contrary, he claims that in languages in which Imperative T has person/case features then it is appropriate to be selected by an embedding C0. To provide evidence for this hypothesis he discusses mostly Ancient Greek, which can be embedded, relating this fact to the rich agreement of this language. His discussion reveals that in most languages which license embedded imperatives, the imperative form is not restricted to 2nd person. This is definitely true for Ancient Greek in which there is also 3rd person imperative as shown in (12), which is furthermore embedded. Under the present analysis, this can be taken to indicate that it is the lack of addressee-restriction in Ancient Greek, which licenses it in embedded contexts.

(12) Edethe hekein auton epi komon, legon hoti meth’ hautou kai ton oikeion pieto.  
‘He begged him to go to a party, saying that he [must] drink with him and his family.’
Turkish is a language which seems to fully support the idea pursued here. In Turkish there is a specific 2nd singular and 2nd plural form which is called the Imperative and indeed has all the interpretive properties of the Imperative and it is also performative:

\[(13)\]
\[\begin{align*}
  &a. \quad \text{Gel!} \\
  &\quad \text{Come.IMP.2SG}
  \\
  &b. \quad \text{Gelin!} \\
  &\quad \text{Come.IMP.2PL}
\end{align*}\]

However, it also has a 1st person and 3rd person form which is usually referred to as optative. Critically, the 3rd person form can be used just like the Greek na-subjunctive form to request that the prejacent is fulfilled or to provide permission for the prejacent to be fulfilled (I gloss it as IMP but keep in mind it is 3sg):

\[(14)\]
\[\begin{align*}
  &\text{Omer calls-sin!} \\
  &\quad \text{Omer work.IMP.3SG} \\
  &\quad \text{‘Omer should work.’}
\end{align*}\]

Now what is critical is that it’s not only the 3rd person form which can embed under the verb want (15), but also the 2nd person Imperative (16). In (16a) the 2nd person singular imperative is embedded under the verb want. Whereas in (16b) it is the 2nd person plural imperative which is embedded. (16c) represents another example just to show that this is a productive pattern in Turkish.

\[(15)\]
\[\begin{align*}
  &\text{Omer calls-sin istiyor-um.} \\
  &\quad \text{Omer work.IMP.3SG want.1SG} \\
  &\quad \text{‘I want Omer to work.’}
\end{align*}\]

\[(16)\]
\[\begin{align*}
  &a. \quad \text{Ali sen de gel istiyor.} \\
  &\quad \text{Ali you too come.IMP.2SG want.IMPRF.3SG} \\
  &\quad \text{‘Ali wants you, too, to come.’}
  \\
  &b. \quad \text{Ben siz de gelin istiyor-um} \\
  &\quad \text{I you.PL too come.IMP.2PL want.1SG} \\
  &\quad \text{‘I want you(pl) to come, too.’}
\end{align*}\]

\[^5\text{Many thanks to Isa Kerem Bayırli for providing all the judgements in this section and for helpful discussion.}\]
c. Ali sen bir hediye al istiyor.  
Ali you a gift buy.IMP.2SG want.3SG  
'Ali wants that you buy (him) a gift.'

The Turkish Imperative can also embed under the verb say but what is striking is the compatibility of the imperative form with the verb want. Together with the assumption we are making here that restricted embeddability is related to the Addressee-restriction and given that Turkish seems to have no such restriction, we predict that if the Imperative is truly a moodP it should be embeddable under want, which is verified in Turkish. Of course, we still need to see why in other languages which seem to have no Addressee restriction still do not allow embedding with want. We cannot be sure about Ancient Greek but in all examples reported by Medeiros we cannot find any reference to desire predicates. However, there might also be other factors playing a role, such as competition between two subvarieties of subjunctive mood. At any rate, I take the data in Turkish to constitute evidence in favor of the idea that Imperatives are just a subvariety of subjunctive mood and they are worth exploring more in the future.

Another example comes from Bhojpuri which also has no Addr-restriction and, as Medeiros (2015) shows, can appear in embedded contexts. Slovenian is another type of language which licenses embedded Imperatives. As Stegovec and Kaufmann (2015) show, Slovenian imperatives can be embedded under say (but they can also be embedded in other environments) with the verb say taking an actual indirect argument:

(17) Zare1 → Jure2: Marko3 je rekel Petru4, da mu3,4,k pomagaj2.  
Marko.NOM is said Peter.DAT that him.DAT help.IMP.2SG  
'Marko said to Peter that you should help him.'

Slovenian Imperatives appear both in 1st and 2nd person so strictly speaking they don’t present a counterexample to the idea pursued here as they are not Addressee-restricted. However, the fact that they do not have 3rd person raises a question as to whether mood has, after all, some person restrictions. Another fact about Slovenian is that it has a 3rd person subjunctive which is found in the same environments that Imperatives are found in and is formed with a particle naj and the verb (Stegovec 2016):
(18) (Marko) naj naredi to sam!
    (Marko.NOM) let do.3.sg this alone.SG.M
roughly: ‘Marko/he must do it himself.’

Given the complexity of the data in Slovenian I will avoid drawing any conclusions from them, but see Stegovec (2016) for a detailed analysis of Imperatives and naj-subjunctives. Here, I have tried to associate the addressee-restriction of Imperatives with their restricted embeddability. Based on this idea, below I present how we can account for two more environments in which Imperative forms are banned in Greek (and many other languages) whereas Root Subjunctives are licensed: Negated environments and Questions.

5.2.2 Negated Imperatives vs. Negated na-subjunctives

As it has long been observed many languages lack True Negated Imperatives (the term from Zanuttini (1994), meaning that the verbal form which appears in positive imperatives is not compatible with negation. In these languages, a different form appears either a ‘subjunctive’ form (in fact, the presence of subjunctive here is indicated by the special negative marker (see a.o Tsimpli and Roussou (1996) for negation in Greek) as it is shown for Greek below or an infinitive, as in Italian (Joseph and Philippaki-Warburton (1987); Zanuttini (1994, 1997); Rivero (1994); Rivero and Terzi (1995)):

(19)  a. Fige.
      Leave.IMP.2SG

b. *min fige.
   not leave.IMP.2SG

c. min figis.
   not leave.2SG

The proposed accounts for the incompatibility of Imperative forms with negation differ depending on two factors; i) the analysis assumed for Imperatives and ii) the status assumed for the negative markers (see Iatridou (2008) for an overview). What all accounts share (with the exception of Han’s account) is that in languages which lack True Negative Imperatives there is some blocking effect due to the presence of the negation.
Here I will follow the same path and I will argue that the lack of True Negated Imperatives in Greek is due to an agreement blocking effect between the mood-head and the verb. Critically, however, I argue that this is only a lack of the imperative form, not lack of the mood with the Imperative feature. As I show in the next section, negated imperatives differ semantically from negated na-subjunctives in the same way that Imperatives differ from na-subjunctives in non-negative contexts. Therefore, the account here is only meant to capture the lack of form, not the lack of the imperative mood under negation.

Verbal mood is widely considered to be part of the verbal inflectional system along with Tense, Aspect, Voice (see Portner (1997) a.o.). Therefore, the mood-head enters an agree-relation with the verb, the verb moves to mood and it gets its special agreement pattern (20a). However, when there is a Neg-head between mood and T, then it acts as an intervener, the verb cannot raise to mood and therefore it cannot get its special inflectional pattern (20b). Instead what agrees with the mood head is the Neg-head. This also explains why in Greek we have a distinct negative particle min specific to subjunctive mood, as opposed to den which is used in indicatives.

(20) Blocking of Imperative form due to Negation

\[
\begin{align*}
\text{a. } & \left[ [\text{moodP mood+SUBJ } [\text{TP } T \left[ \text{AspP Asp } [\text{VP}] \right] ] ] \right] \\
\text{b. } & \left[ [\text{moodP mood+SUBJ } \left[ \text{NegP Negmin } [\text{TP } T \left[ \text{AspP Asp } [\text{VP}] \right] ] \right] \right] \\
\end{align*}
\]

This analysis is intended to capture the lack of True Negated Imperatives in Greek and it correlates nicely with the fact that the choice of the negative particle depends on the mood choice. However, the issue of the lack of TNI gets more complicated once we look at the cross-linguistic picture. Zeijlstra et al. (2006) observes that there are languages which have a Negative marker specific to Imperatives and yet they form TNI. This is illustrated below for the Hungarian Imperative in (21). According to Zeijlstra, ‘ne’ is the negative particle used with Imperatives and Subjunctives.
‘nem’ is the negative particle used in indicatives (see also Kiss 2011)

(21) a. *Nem olvass!
    Neg  read.IMP
    ‘Don’t read!’

b. Ne olvass!
    Neg  read.IMP
    ‘Don’t read!’

Zeijlstra (2006) on a par with Han (1998, 2001) argues that there is always an Imp-feature on \( C^0 \) (which yields a directive illocutionary force). Both of them posit a difference between head-negation and adverbial negation. According to Han (2000, 2001) the problem with head-negation is that it adjoins on the verb and therefore when it moves to \( C^0 \), the Imperative operator is in the scope of negation and this is not allowed because the Imperative operator is also a speech act operator and therefore it cannot be in the scope of negation. On the contrary, adverbial negation does not adjoin to the verb and therefore there is no scope over the Imperative Operator. Crucially, as noticed in Iatridou (2008), under a modal-approach to Imperatives, there is no restriction on whether Negation can scope above or below the imperative operator. So for our analysis, Han’s assumption that negation cannot scope over the Imperative Operator doesn’t go through.

Zeijlstra’s account differs from Han’s in that he takes the negation which constitutes a head to be a possible intervener for the verb movement to \( C^0 \). Adverbial negation, on the other hand, does not posit such a problem. Indeed, cross-linguistic data that he provides show that languages with adverbial negation (Dutch, German, Norwegian, Swedish, Bavarian, Yiddish, Quebecois) have True Negated Imperatives (TNI). However, the puzzle comes with Slavic languages which, as Rivero & Terzi notice, have TNI and still their negation by all tests is analysed as head-negation. In order to account for these data, Zeijlstra employs an independently suggested distinction between negative markers which are semantically contentful (iNEG) and markers which are semantically null (uNEG). He argues that if a negative marker carries no interpretable feature then it doesn’t count as an intervener for V-to-C movement because the interpretive negation is a covert operator.

\[\text{A question arises, however, as to what happens to the performative character of the utterance if negation scopes above the bouletic modal. Lauer (2013) takes it that when believe for example is negated it doesn’t any more commit the speaker to believe that the prejacent is true. In the syntactic configuration I have suggested for both Imperatives and na-subjunctives the negative operator appears below the modal operator, therefore following the beaten track, I take it that the negation scopes below the modal.}\]
at specNegP as illustrated in (22b) whereas when the negative marker is a head and represents semantic negation then it counts as an intervener (22a):

(22) Zeijlstra et al. (2006)

\[
\begin{align*}
\text{a. } & \left[ [CP \text{ C} \rightarrow \text{IMP } [\text{NegP } \text{NEG } [\text{IP } V]]] \\
\text{b. } & \left[ [CP \text{ C} \rightarrow \text{IMP } [\text{NegP } [\text{Spec } \neg \text{Op } [\text{NEG}]] [\text{IP } V]]] \\
\end{align*}
\]

Zeijlstra’s analysis is also compatible with the analysis of Imperatives I pursue here. The only difference I have to posit is to replace C with the mood-head. We could account for the lack of TNI in Greek by saying that the negative particle min is interpretive negation and therefore it blocks movement, which is exactly what Zeijlstra says for min. However, the diagnostics that Zeijlstra suggests for detecting whether a negative marker has an interpretive negation feature do not seem to apply for min. Therefore, we stick to our original hypothesis that the problem occurs because the negative particle min is sensitive to the mood-feature and therefore blocks agreement and movement between the verb and the mood-head.

Finally, Rivero & Terzi (1994) focus on the syntactic position of the Imperative Operator and they posit a distinction between two types of languages: In Type A languages (most of Romance languages and Greek), C^0 has some special Imp-feature and therefore the verb needs to move to C^0. On the contrary, in Type B languages (most of Slavic languages), C^0 in Imperatives is not special and therefore no movement is necessary. From this difference, it follows that when there is an intervening negation between the verb and C^0 in Type A languages the verb cannot check the Imp-feature and therefore a different form will be used. In Type B languages, the presence of negation doesn’t cause such a problem because there is no need for movement at first place.

Under the present approach the verb moves to mood-head instead of C^0. For the sake of the argument, we could assume that we can keep Rivero & Terzi’s analysis with the difference that in some languages there is v-to-mood movement and in others there isn’t. However, the question is what drives this movement and why in some languages it’s obligatory whereas in other languages
it is banned. For the present analysis the relevant feature is [+SUBJ] but this feature should always be present, it shouldn’t just differ depending on the language because for us it’s the feature that guarantees the semantic interpretation of the modal.

5.2.3 On the availability of RS interrogatives as opposed to the lack of Imperative Interrogatives

As I have shown in chapter 3, *na*-subjunctives are well-formed in matrix interrogatives. Interrogative *na*-subjunctives are used to ask for permission or ask if something is necessary according to the Addressee. As we discussed in detail, the example in (23) can be interpreted as ‘could I call?’ or ‘should I call’ depending on the intonation:

(23) Na paro ton Petro telefono?
    SUBJ take the Peter telephone
    ‘Could/Should I call Peter?’

Moreover, as we saw, *na*-subjunctives can also appear in *wh*-questions:

(24) Pjon na paro telefono?
    Who.ACC subj take phone
    ‘Who should I call?’

The availability of Interrogative *na*-subjunctives is an important aspect of the modal analysis of *na*-subjunctives and Imperatives presented here. Crucially, RS interrogatives are not only attested in Greek, it seems that in most of Balkan languages in which RS are used they are also available in Questions. For example, in Bulgarian, the question in (25) is perfectly fine (p.c. Snejana Iovtcheva):

(25) Da se obadj li?
    SUBJ REFL call.1SG Q
    ‘Can I make a phone-call?’

Similarly in Turkish we can have the forms introduced above used in a question (interestingly the 2nd person Imperative doesn’t seem to be licensed in Questions):
(26)  a. Ara-yayim mi?
call.ISG Q
‘Shall I call?’

b. Ara-sin mi?
call.3SG Q
‘Shall he call?’

Portner’s analysis is based on the idea that different clause types (Declaratives, Imperatives and Interrogatives) are associated with different update functions; Declaratives update the Common Ground, Imperatives update the To-Do List and Interrogatives update the Question Stack. Portner doesn’t discuss root *na*-subjunctives but they fulfill all the criteria to be classified together with Imperatives based on their properties; i) they are performative, they cannot be used to report any preferences ii) their ordering source is prioritizing iii) they create an obligation for the addressee or they provide permission for $p$.

If we were following Portner for analyzing Imperatives in Greek, the most reasonable path would be to extend the same analysis to *na*-subjunctives. Indeed, Portner (2004b) mentions that similar constructions in other languages should be treated on a par imperatives with the difference that the subject may not be the addressee, but rather an individual that the addressee has control over. The example in (27a) from Bhojpuri that Portner provides seems to have the same interpretation as its *na*-counterpart in Greek (27b):

(27)  a. Layke tini baje aaveN. (Bhojpuri)
children.NOM three o’clock come.IMP.3SG

b. Ta pedia su na erthun stis tris i ora.
The kids yours SUBJ come at three o’clock
‘Your children come at 3 o’clock!’

However, the presence of interrogated *na*-subjunctives presents a problem for such an analysis. Their treatment as updates of the Question stack in the context doesn’t capture their association to their non-interrogative counterparts which are supposed to update the addressee’s To-Do List. Whereas the lack of interrogative Imperatives (although see Kaufmann (2012) for exceptions) is provided as an argument for the special clause type of Imperatives (Han (2000); Portner (2007), the availability of interrogative *na*-subjunctives suggests otherwise.
Under the present approach it is expected that covert modals in root contexts should also be licensed in root questions as well, and the only question is why Imperatives do not form questions as it is clear from the ungrammaticality of (28a-b) below:

(28)  
\begin{align*}
a. \text{*Fige esi?} \\
&\text{Leave.IMP.2SG you}
\end{align*}
\begin{align*}
b. \text{*Ti fas?} \\
&\text{What eat.IMP.2SG}
\end{align*}

Stegovec (2016) makes an interesting proposal that the absence of Imperative Questions might be attributed to a subject obviation effect that occurs between the Addressee-subject and the Perspective Center (he provides a syntactic analysis roughly as a Principle B violation). In the following, I will show that his analysis does not accommodate the data in Greek as 2\textsuperscript{nd} person subjunctives can occur in matrix questions and 1\textsuperscript{st} person singular subjunctives are licensed in declaratives. What I will show however, is that Stegovec’s (2016) idea can explain the restrictions in the availability of 2\textsuperscript{nd} person matrix subjunctives.

For the lack of Imperative Questions I propose that the problem lies in the agreement of the mood-head with the sa-head. The question is what blocks agreement between the two heads. One possible hypothesis is that the Q-operator acts somehow as an intervener between the mood-head and the sa-head. The fact that the restricted embeddability of Imperatives correlates with the absence of Imperative questions suggests that there should be a unified solution for the two. However, given the discussion about Turkish and their embeddability, we would expect 2\textsuperscript{nd} person Imperatives in Turkish to form questions and yet they don’t. This is problematic for reducing the lack of Imperative Questions to their non-embadibility. Further cross-linguistic investigation would certainly be necessary to decide on this point. As I show below, RS questions, as opposed to Imperatives, are licensed in 2\textsuperscript{nd} person under certain conditions. Therefore the lack of Imperative Questions should be attributed to a different sort of syntactic restriction.

**Root Subjunctive Questions and the Addressee-restriction**

Let me briefly remind you what the meaning of an interrogative *na*-subjunctive is, reviewing the discussion from Chapter 3. First, the Root subjunctive in (29) should have the meaning in (30)
based on what we have said for the modal operator merging above $mood_{\text{+SUBJ}}$.

(29)  

a. $O \text{ Nikos na diavasi tus athlius.}$  
The Nick SUBJ read.3SG the miserables  
‘Nick should/could read Les Misérables.’

b. LF: $[\text{OPP Op} [moodP mood_{\text{+SUBJ}}] [\text{TP Nick read Les Misérables}]]$

(30) $[[(29)]]^w = \exists w' \in W. S$’s desires in $w$ are satisfied in $w'$ $\land$ Nick reads Les Miserables in $w'$.

Now a question as in (31a) should differ from the declarative in (29) only with respect to the presence of the Question operator (Q), as shown in (31b):

(31)  

a. $\text{na diavasi o Nikos tus athlius?}$  
SUBJ read.3SG the Nick.NOM the miserables  
‘Should/could Nick read Les Miserables?’

b. LF: $[QOP Q [\text{OPP Op} [moodP mood_{\text{+SUBJ}}] [\text{TP Nick read Les Misérables}]]]$

As we already said in chapter 3, following an Alternative Semantics approach to Questions and treating them as the set of possible answers à la Hamblin (1973), the meaning we will get is the set of propositions in (32):

(32) $[[(31)]]^w = \{
\exists w' \in W. S$’s desires in $w$ are satisfied in $w'$ $\land$ N reads LM in $w'$.
$\land$
$\exists w' \in W. S$’s desires in $w$ are satisfied in $w'$ $\land$ N reads LM in $w'$.
\}

By uttering the question in (31) the Speaker wants to know whether it is compatible with the Addressee’s desires that Nick (N) reads Les Misérables (LM) or not.

The question which arises is about the status of 2$^{nd}$ person na-questions. Given the restriction of Imperatives to 2$^{nd}$ person, it would be interesting to see what happens with 2$^{nd}$ person na-questions. As I show, 2$^{nd}$ person na-questions are restricted but they are not ungrammatical and therefore their restriction should get a different explanation from the ungrammaticality of interrogated imperatives. In particular, following the insight in Stegovec (2016), I argue that the reason
why 2\textsuperscript{nd} person na-questions are restricted is a subject obviation effect, which means that the subject must be distinct from the perspective center (PC). When the PC shifts to an individual distinct from the addressee 2\textsuperscript{nd} person na-questions are felicitous and similarly 1\textsuperscript{st} root subjunctives (non-interrogatives) are restricted to environments in which the PC is distinct from the speaker. The phenomenon has been mostly discussed for embedded subjunctives in Romance, but here we focus in matrix environments.

As we have said, in Declaratives the PC is by default the speaker unless the context suggests otherwise. In Questions, the perspective shifts to the Addressee (Speas and Tenny (2003); Pearson (2013); Bylinina et al. (2014)). The idea is that the restricted availability of 2\textsuperscript{nd} person na-questions is due to the fact that the PC in questions is by default the addressee. The question in (33) cannot be understood as asking about the addressee’s desires:

(33) a. #Niko, ti na fas avrio?
   Nick what SUBJ eat tomorrow?
   \textit{Intended: ‘Nick, what would you like to eat tomorrow?’}

b. #Na pas avrio sto parti?
   SUBJ go tomorrow to the party?
   \textit{Intended: ‘Would you like to go to the party tomorrow?’}

However, in contrast with interrogated imperatives, the questions in (33) are not ungrammatical. We can imagine a context in which they are licensed and this is when there is a salient entity in the context that can be interpreted as the Perspective Center. For example, in the following question, by introducing explicitly a different perspective the na-question becomes felicitous. In (34a), imagine a context in which Mary has a health problem and her diet is very restricted. Then, John who is about to prepare the menu for next day is asking her but at the same time he is also wondering himself and tries to think a good idea. In this context, the PC seems to be understood jointly the Speaker and the Addressee, as if they need to make a decision together. In (34b) the PC is introduced directly in the previous sentence by asking \textit{what’s mom’s opinion}.

(34) a. Ti na fas avrio?
   what SUBJ eat tomorrow?
   ‘What could you eat tomorrow?’
b. Ti gnomi ehi i mama? Na pas sto parti?
   What opinion has the mom SUBJ go.2SG at-the party
   ‘What’s your mom’s opinion? Can/Should you go to the party?’

The requirement for Perspective Shift in Questions when the subject is 2nd person is reminiscent of
the phenomenon of Subject Obviation (or else disjoint reference effect) which has been observed
for embedded subjunctives in Romance languages (Farkas (1992a); Terzi (1992); Kempchinsky
(2009); Costantini (2014); Stegovec (2016)). The observation is that the attitude holder of the
matrix predicate cannot be co-referent with the embedded subject, an example from Constantini
(2014) illustrates the phenomenon in (35). The embedded subject needs to be disjoint from the
subject of want:

(35) Pietro vuole che pro parta domani.                 # if \([pro]\) = Pietro
    Pietro wants that pro leaves.SUBJ tomorrow
    ‘Pietro wants him/her to leave tomorrow.’

Various proposals have been made to account for Subject Obviation both syntactic (as a restric-
tion on the binding domain; Kempchinsky (2009); Tsoulas (1996); Stegovec (2016) or in terms
of competition theory of the subjunctive vs. the infinitive (Farkas (1992b); Schlenker (2005)))
and pragmatic (Costantini (2014)). However, it seems that none of these approaches alone can
account for the range of data discussed (see Stegovec (2016) for an overview of the literature and
weakpoints in the theories). Critically, Stegovec’s explanation for subject obviation is based on the
notion of the Perspective Center and so it is very relevant here.

In a nutshell, Stegovec argues that Subject obviation is the result of a binding restriction be-
tween the Subject of the embedded clause and a perspectival PRO which occurs in the specifier
of MoodP. Stegovec restricts the presence of this perspectival PRO only in directive clauses (ma-
trix and embedded) for which he assumes that they have a directive operator in Mood. Directive
clauses are defined as the clauses whose function is a directive speech act which is further defined
if the Speaker attempts to make an individual in context c ensure that the prejacent p takes place.
The present definition doesn’t fit our proposal for Imperatives and Subjunctives, since as we dis-
cussed, imperatives as well as matrix subjunctives do not always have this directive force (e.g. in
permission environments, or in cases in which imperatives have a different function as we will
see in Chapter 6). However, we can adapt Stegovec’s proposal into our system by suggesting that this perspectival PRO is associated with the Modal Operator (ModOP), since as we have already discussed the modal base and the ordering source of this operator are anchored to the perspective center. Keeping the rest of Stegovec’s proposal intact, we can now account for the requirement for perspective shift in 2\textsuperscript{nd} person subjunctives. As shown in the tree below the perspectival PRO and the subject end up in the same binding domain and if they are coindexed, we have a principle B violation because the subject is not free within its binding domain:

\begin{equation}
(36) \quad \text{ModOpP} \\quad \text{PRO}_{PC} \quad \text{ModOp}' \\quad \text{ModOP} \quad \text{MoodP} \\quad \text{mood} \quad \text{TP} \\quad \text{T} \quad \text{vP} \\quad \text{pro}_{k/si} \quad \text{v'} \\quad \text{v} \quad \text{VP}
\end{equation}

Under this view, we can explain why 2\textsuperscript{nd} person subjunctive questions are licensed when the PC is shifted from the default Addressee to a distinct individual.

The present analysis also predicts that in non-interrogatives root subjunctives, 1\textsuperscript{st} person subject will also be restricted. Indeed, 1\textsuperscript{st} person subjunctives present similar restrictions with 2\textsuperscript{nd} person subjunctives in questions. They can occur in two different contexts; the first one is when

\footnotesize{\textsuperscript{7}It should be made clear that by adopting this analysis we should also change our semantics accordingly so that the individual variable becomes an argument of the modal operator and not just an evaluation parameter}

\footnotesize{\textsuperscript{8}Notice that we observe the same effect in embedded subjunctive questions, the indirect argument of ask cannot coincide with the subject of the embedded question. In English embedded infinitival questions, this effect is not visible because the embedded subject necessarily agrees with the matrix subject:

(i) O Nikos me, rotise pjon na kales-*\text{is}*-i sto parti.
\quad The Nick CL.DAT.1SG asked who.ACC subj invite-*1/2/3SG to-the party
\quad ‘Nick asked me who I/you/he should invite to the party.’
}

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we really talk to ourselves and we make a list of things we want or we have to do. Imagine me writing/thinking a list of things planned for tomorrow:

(37) Tomorrow...

a. na stilo ena e-mail stin Ana,
   Tomorrow SUBJ send an e-mail to Ana

b. na telefoniso ston Niko
   SUBJ call to Nick

c. ke na do tin kaliteri mu fili
   and SUBJ see my best friend

By uttering (37) is as if we address another person i, I would sound weird as if I was holding him responsible for fulfilling the content of the propositions whereas it’s clearly under my control. In this case, we could also imagine using 2nd person as if we are distancing ourselves from the Perspective Center. The second case of environments which license 1st person subjunctives arise when the prejacent is not under the Speaker’s control and therefore the speaker asks somebody else to ensure that the prejacent will be fulfilled. Imagine a context in which I have to wake up at 6.00a.m. tomorrow morning and I have no alarm clock. In this case my mother who wakes up anyway before 6.00a.m. is responsible so that I wake up at 6.00a.m, so I tell to her:

(38) Avrio na ksipniso stis 6.00a.m.
   Tomorrow SUBJ wake.1SG at 6.00a.m.
   ‘Tomorrow I should wake up at 6.00a.m.’

I think that the two instances of 1st person subjunctives arise under different conditions. In the list-context, the speaker really distances himself from the subject of the embedded proposition, such that in the same context we can also have a 2nd person subjunctive. On the other hand, in the second case in (38) it seems that the perspective center shifts from the Speaker to the Speaker and the Addressee jointly as we saw for 2nd person subjunctive questions. It seems that by detecting carefully the Perspective Center in each particular example, we can account for the acceptability of 1st person subjunctive declaratives as well as 2nd person subjunctive questions by the same reasoning.

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9 Thanks to Kai von Fintel for suggesting examples like this.
Clearly, as we saw in the previous section Imperatives don’t work in the same way, since even when we have perspectival shift, an Imperative question sounds totally ungrammatical:

(39) Ti gnomi ehi o Nikos? *Ti fae avrio?
what opinion has the Nick? what eat.IMP tomorrow
*Intended: ‘What is Nick’s opinion? What could/should you eat tomorrow?’

Our original proposal Imperative questions are not licensed due to a syntactic restriction which cannot be ameliorated by shifting the perspective is necessary in order to account for the contrast between the restricted availability of 2nd person subjunctive questions and the ungrammaticality of Imperative Questions.

5.2.4 Summarizing the syntactic differences

In this section, I presented the ways in which Imperatives and na-subjunctives differ with each other;

i. The restriction of the 2nd person subject in Imperatives as opposed to Root Subjunctives in which the subject can be any person

ii. The restricted availability of embedded Imperatives

iii. The lack of negated imperative forms in Greek and many other languages

iv. The lack of Imperative Questions as opposed to the availability of Root Subjunctive Interrogatives.

Considering the restrictions of Imperatives in tandem with the allowance of na-subjunctive forms, we argued following previous analyses that the restrictions stem from syntactic reasons which we associated with the Addressee-restriction in Imperatives. Before ending this section, I would like to point out that the third subjunctive form which we introduced, as-subjunctives (40a), behaves similarly to Imperatives with respect to i) its restricted embeddability and ii) its inability to participate in Interrogatives, as shown in (40b) and (40c) respectively:

(40) a. As figi o Nikos.
Let leave.3SG the Nick

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'It’s o.k for Nick to leave.'

b. *i Ana ipe ston Petro as figi.
The Ana said to-the peter let leave.3SG
*Intended: ‘Ana said to Peter he could/should leave.’

c. *Pjos as figi?
who let leave.3SG?
*Intended: ‘who can leave?’

Given that the subject is not addressee-restricted, a question arises as to why the same restrictions apply. However, at this point the diachronic evolution of this particle ‘as’ might be relevant because it comes from the imperative form of the verb let. Based on this, I speculate that the mood phrase still has a [+ADDR]-feature, since the particle comes from an imperative form. The following section discusses further differences between Imperatives and na-subjunctives which seem to be grounded in the semantic component.

5.3 The semantic/pragmatic differences between Imperatives and na-subjunctives

Setting aside person restrictions, Imperatives and na-subjunctives are in free variation in many contexts such as commands, requests, warnings, permissions, invitations as I presented in the beginning of this chapter. However, we also find environments where only one of the two forms is felicitous. We start the discussion by looking at wishes which, in Greek, can be expressed only by na-subjunctives and as-subjunctives.

5.3.1 Lack of Wishes in Imperatives

The first clear-cut distinction between Imperatives and na-subjunctives concerns wishes. Contrary to what happens in English, Greek Imperatives cannot be used to express a wish (Condoravdi & Lauer (2012)). na-subjunctives, on the other hand, can be used to convey a wish. This restriction of Imperatives concerns both the wishes in which the addressee is present like in (41)-(42) as well as absent wishes (Kaufmann’s term) in which the addressee is not necessarily present as in (43). As shown in (41)-(42) only the na-subjunctives can be used to wish to somebody to have a good time.
or to get well. The Imperative always yields an interpretation in which we expect the addressee to
do something in order for the prejacent to be fulfilled:

(41) a. Na perasis omorfa! (wish)
    SUBJ pass.2SG nicely
    \[ b. #Perna omorfa!
    Pass.IMP nicely
    'Have a good time!'

(42) a. Na ginis grigora kala! (o.k. as a wish)
    SUBJ become quickly well
    \[ b. #Gine grigora kala!
    Become.IMP quickly well
    'Get well soon!'

Similarly, in (43b) the only way to interpret the imperative is as a request or encouragement of
some sort.

(43) a. Ah na kerdisis to lahio! (wish)
    Ah SUBJ win.2SG the lottery!
    \[ b. #Ah kerdise to lahio.
    Ah win.IMP the lottery
    'Win the lottery!'

Before accounting for the lack of wishes with Imperatives, let me notice that wishes can be also
expressed with the *as*-subjunctive as shown in (44), therefore suggesting that it’s not a special
property of *na*-subjunctives\(^{10}\):

(44) Ah as kerdisis to lahio! (wish)
    Ah let win.2SG the lottery!
    'Win the lottery.'

I suggest that the difference between Imperatives and *na*-subjunctives in Greek stems from a spe-

\(^{10}\) Notice though that there is a difference between *as*-wishes and *na*-wishes, pointed out to me by Sabine Iatridou.
*as*-wishes cannot be used for wishes like 'have fun!' etc. They always give the feeling of an *absent wish* as if the
speaker makes a plea to God for the fulfillment of the prejacent. I’m not sure how to formally describe this intuition
but it is possibly related to the special character of ‘as’ being derived from the imperative form of the verb ‘let’ in
Greek. *as*-subjunctives deserve a study on their own but I will leave this task for the future.
cial presupposition that imperatives carry in Greek that the prejacent is under the control of the Addressee. This can be formulated in the following way:

(45) For a sentence $\phi$, such that $\phi$ is of the form $[Op \text{ mood}_{[-\text{SUBJ}]}^{imp} \psi]$, $\phi$ is defined iff $\psi$ is under the control of the Addressee.

For the prejacent to be under the control of the Addressee, it means that Addressee is in principle able to ensure $\psi$ (see Condoravdi & Lauer 2011, p.8).

Notice that this difference between Imperatives and na-subjunctive pertains to negated Imperatives vs. negated na-subjunctives. A negated form with na, as in (46a), can be used to perform a wish or a curse in this case but the form without the particle na can only be interpreted as acquiescence or advice or request, etc.

(46) a. Na min paris pote pthio.  
    SUBJ not take.2SG never certificate  
    ‘I wish you will never take your degree’

b. Min paris pote pthio.  
    not take.2SG never degree  

For that matter I will assume that the mood is marked as $[+\text{SUBJ}]_{imp}$ both in positive and negated imperatives, the only difference is that the positive form cannot surface when negation intervenes as it was shown in the previous section. Irrespectively from the presence or absence of negation, the mood$_{[-\text{SUBJ}]_{imp}}$ will have the same requirement for Addresssee-control over $p$ thus blocking any wish-readings. Furthermore, the Addressee control requirement will guarantee that Tense (t) can only be after the utterance time (UT > t).

A different question arises as to why na-subjunctives, just like Imperatives in English, can only express a wish if it is common ground that the prejacent is not under the control of the Addressee. For example, Condoravdi & Lauer (2012) notice that the second imperative in (47) cannot be interpreted as a wish because usually getting work done depends on the agent:

(47) Have a good trip and get a lot of work done on the train!

In (47) we can accommodate a wish-interpretation only if we assume that there are factors be-
yond the Addressee-control (e.g. noise in the train) such that would prevent him from working. Similarly, the second conjunct, in (48) below, is understood more as an advice rather than a wish, whereas the first conjunct can be easily interpreted as a wish:

(48) Na perasis kala ke na horepsis poli!
    SUBJ pass.2SG well and SUBJ dance.2SG much
    ‘Have a good time and dance a lot!’

This restriction for the emergence of wish-readings follows naturally from Condoravdi & Lauer’s (2012) approach. When a Speaker utters an Imperative or a na-subjunctive, he is committed to act as if he has a preference for \( p \), and therefore he is committed to act to ensure \( p \). The Addressee by accepting the utterance he will also be committed to act for ensuring \( p \). That’s why pure wishes will only arise if the addressee has no control over \( p \).

We can see that this is a general pragmatic principle by the fact that even when we have an overt wish-particle, like *makari* in Greek, then we are forced to infer that the prejacent is not under the Addressee’s control. Somehow Addressee’s studying must be dependent from external factors and not from his will.

(49) Makari na diavasis avrio.
    Wish-prtc SUBJ read.2SG tomorrow
    ‘If only you read tomorrow!’

Lastly, I would like to point out that na-subjunctives can express a wish about a past event for which the speaker is not aware whether it has taken place or not. In (50) the Speaker is in situation where he doesn’t know whether Nick has come or not and he expresses a wish that Nick has come.

(50) Na irthe o Nikos!
    SUBJ come.PAST.2SG the Nick.NOM
    ‘I wish Nick came!’

Notice that the interpretation we get for (50) is captured by the semantics we have assigned to the modal operator merging above the moodP, the worlds in which Nick has come and the worlds in which Nick hasn’t come are among the doxastic alternatives of the Speaker. The meaning is then that there is a world among the doxastic alternatives of the Speaker which is compatible with the
Speaker’s desires and in this world Nick has come:

\[(51) \quad \text{if}(50)]^w = \exists w' \in W. S's \text{ desires in } w \text{ are satisfied in } w' \land \text{Nick came in } w'.\]

Similarly to what we saw in Chapter 2 by exhaustifying over the alternatives we also get the interpretation that there is no world compatible with the Speaker’s desires in which Nick hasn’t come.

Crucially, however, *na*-subjunctives cannot only express a wish regarding possible doxastic alternatives of the speaker but they can also express counterfactual wishes. In this case counterfactual marking (pluperfect on the verb) is obligatory. The critical example is in (52); it expresses that the Speaker wishes that Nick had come although he knows that didn’t come.

\[(52) \quad \text{Na ihe erthi o Nikos!} \quad \rightarrow \text{pluperfect} \]

This seems to be incompatible with the assumptions we have made regarding the modal base; the modal base is taken to involve only the worlds which are possible according to the speaker’s beliefs. I will leave this issue open as it requires a full understanding of the semantic contribution of the counterfactual marking (see Iatridou (2000); Ippolito (2013) a.o). The hope is that we can account for the data in (52) once we have an analysis about counterfactuals in general. A final remark on Optative constructions is necessary at this point. The wish-examples that we are discussing here clearly fall into the general category of Optative Constructions since they express a wish without an overt wish-operator or an attitude predicate expressing wish. Grosz (2012) analyses optative constructions as involving an expressive operator (*EX-OP*) encoding preferences. We could very well assume that *na*-subjunctives involve such an operator that license the wish interpretation. However, since in the case of *na*-subjunctives the wish-reading arises only when the prejacent cannot be taken to be under the control of the Addressee, it is more conservative to treat the modal operator as having uniform semantics across all of the instances of matrix *na*-subjunctives and derive the different interpretations *commands, permissions, wishes* via pragmatic principles as we showed in chapter 2 for Imperatives in English.
5.3.2 Restrictions on na-subjunctives

In the previous section we saw a specific restriction on Imperatives for Addressee-control which prevents them from expressing wishes. Aside from wish-environments (and setting aside person restrictions) I haven’t found a context in which a na-subjunctive is felicitous but an Imperative is not. On the contrary, I have found some environments in which Imperatives are felicitous but the na-subjunctives are not. Below, I present these environments and try to account for these restrictions.

Spontaneous requests / commands / invitations

We observe a contrast between Imperatives and na-subjunctives which is quite difficult to define; the intuition is that when the Speaker spontaneously comes up with a command, request or invitation, na-subjunctives are infelicitous. In the following, I’ll walk you through different examples so that you can evaluate this intuition. The first case is with environments in which there is an emergency requirement\(^{11}\) and as we see in (53a) only an Imperative can be used, the subjunctive is entirely odd (53b):

\begin{enumerate}
\item \textbf{Context: The Speaker and his friend John are hiding under a tree because the police is looking for John. Suddenly the speaker sees a policeman and so he tells the Addressee:}
\begin{enumerate}
\item Trekse!
   \textsc{run.IMP}
\item \#Na treksis!
   \textsc{subj run.2SG}
   ‘Run!’
\end{enumerate}
\end{enumerate}

Once more we observe the same difference with negated forms, when \textit{na} is present the utterance is infelicitous. The context below is again a context in which immediate (non)-action is required, the \textit{na}-form sounds very strange in this context:

\begin{enumerate}
\item \textbf{Context: The speaker spots a bee on the Addressee’s ear. Then he says:}
\end{enumerate}

\(^{11}\)A similar context is discussed in Rouchota (1994). She argues that Imperatives are less polite and that is why they are better in such environments. However, there is clearly no politeness contrast between Imperatives and \textit{na}-subjunctives. If that was an issue we would expect invitations to appear always with \textit{na}-subjunctives but this is not the case, as I show below.
(55)  a. fila me!
     kiss.IMP me

   b. #na me filisis!
     SUBJ me kiss.2SG
     ‘Kiss me!’

Invitations to guests are also pretty bad with na-forms; consider a guest-situation in which there is a basket with apples on the table and the Speaker says:

(56)  a. Pare ena milo!
     Take.IMP an apple

   b. #Na paris ena milo!
     SUBJ take.2SG an apple.
     ‘Take an apple!’

Whereas (56b) is perfectly fine it is not understood as pure invitation; it indicates that there is a reason why the Speaker wants the Addressee wants to try an apple (they are very tasty, etc.). The question is whether we can find a common thread that can explain this restriction on na-subjunctives.

All the environments I have presented seem to share an immediacy restriction: in all cases immediate action was expected upon uttering the imperative. Based on what I have said regarding the Tense in Imperatives vs. na-subjunctives, we can see why imperatives are more felicitous in environments where an immediate action is suggested. If Tense is defective in Imperatives we expect that when there is no temporal adverbial (e.g. tomorrow, in two hours, etc.) the value of the t variable depends on the Utterance Time (UT), therefore yielding a now-interpretation. On the
contrary, as I showed, the Tense in na-subjunctives is non-defective and so it is not necessary to be depended on UT, it can range from UT to any point after UT. Therefore, in contexts where immediacy is crucial, the Imperative and the na-subjunctive are in competition; since the Imperative by default, in the absence of any overt temporal adverbial, is restricted to the UT, it will be more suitable to express immediacy than na-subjunctive which can refer to any point beyond the UT.

It seems to me that this idea makes the right predictions in environments in which both the Imperative and the na-subjunctive are licensed but the Imperative seems in addition to have a now-requirement. Imagine a context where a kid returns home from the playground quite dirty, then the mother says:

(57)  a. Girorgaki, kane banio.  
      George, do.IMP bath

   b. Giorgaki, na kanis banio.  
      George, SUBJ do.2SG bath  
      ‘George, take a shower’

In both (57a) and (57b) the mother commands her son to take a shower, but in (57a) we additionally get the intuition that George should go immediately and take a shower rather after waiting two hours. The intuition is quite subtle but it correlates with the following example in which we have an invitation but there is a temporal adverbial in both cases. In this case there is no contrast between (58a) and (58b):

(58)  a. Perna apo to spiti kamia mera.  
      Pass.IMP from the house some day

   b. na perasis apo to spiti kamia mera.  
      SUBJ pass.2SG from the house some day  
      ‘Come by the house some day.’

Similarly, if we have a temporal adverbial that encodes immediacy we expect both the na subjunctive and the Imperative to be licensed, since immediacy is expressed by an overt temporal marker. This indeed seems true. Considering again the same context as in (53) we see that in the presence of the expression right now, the contrast disappears:

(59)  **Context:** The Speaker and his friend John are hiding under a tree because the police is
looking for John. Suddenly the speaker sees a policeman and so he tells the Addressee:

a. Trekse tora amesos!
    Run.IMP now immediately

b. Na treksis tora amesos!
    SUBJ run now immediately
    ‘Run right now!’

Based on these facts, I will take the immediacy contrast between imperatives and *na*-forms to be due to the different status of Tense in the two constructions.

**Indifference readings and IaDs**

In Chapter 2, we saw that Imperatives can convey indifference readings (60a). Subjunctives, on the other hand, cannot (60b):

(60)  

(60)  

    Go.IMP right go left not me concerns

b. #Na pas deksia, na pas aristera. Den me niazi.
    SUBJ go.2SG right SUBJ go.2SG left not me concerns
    ‘Go right, go left. I don’t care.’

evon Fintel & Iatridou (2015) notice another difference between Imperatives and *na*-subjunctives, namely that Imperatives can participate in the so-called IaD (Imperative and Declarative) constructions which express a conditional meaning (if you eat this chocolate, you’ll die in two hours) whereas *na*-subjunctives cannot.

(61)  

(61)  

a. Fae afto to sokolataki ke tha pethanis se dio ores.
    Eat.IMP this the chocolate and FUT die.2SG in two hours
    ‘Eat this chocolate and you will die in two hours.’

b. *na fas afto to sokolataki ke tha pethanis se dio ores.
    SUBJ eat.2SG this the chocolate and FUT die in two hours

evon Fintel & Iatridou notice the following generalization regarding IaDs:

(62)  

(62)  

If an imperative-like form can participate in IaDs, then it has variable force. It can express both command/request and permission readings.
Crucially, as they point out, the reverse doesn’t hold. That is, we can find imperative-like forms which have variable force and yet they cannot participate in IaDs. For example, this is exactly the case with *na*-subjunctives which as we saw convey permission but they cannot form IaDs. The question which arises now is if there is any particular connection between the lack of indifference readings and the lack of IaDs. It could be that the lack of both constructions with *na*-subjunctives is an accidental fact. However, the same fact seems to hold in Palestinian Arabic. von Fintel & Iatridou report that the form used under negation in Palestinian Arabic can have a permission reading, however as they show this negated form cannot participate in IaDs:

(63) *esma’-sh en-naseeha w b-torsob
    listen2SG.M-NEG the-advice and b-fail.2SGM
    ‘Don’t listen to advice and you will fail’

Interestingly, indifference readings seem to be impossible as well with this form (thanks to Sam Alxatib for providing the relevant data):

(64) *rooH... troH-esh... maa b-tifri’ ma’-i
go.2SGM go.2SGM-NEG NEG IMPRF-differ with-me
    ‘Go. Don’t go. I don’t care.’

On the contrary, Imperatives in Palestinian Arabic which are reported by von Fintel & Iatridou as forming IaDs, also have indifference readings as shown by the following example (p.c. Sam Alxatib):

(65) ruuH yamiin. ruuH shmaal. ma btifri’ ma’-i
    go right. go left. NEG differ.IMPRF with-me
    ‘Go left. Go right. I don’t care.’

Another language in which the association of indifference readings with the allowance of IaDs seems to be Bulgarian in which Imperatives can be used to express indifference and appear in IaDs whereas the root subjunctive form (formed with the particle *da*) which can express permission but no indifference is not good at IaDs.

The same contrast we observe in Albanian. Albanian is reported by von Fintel & Iatridou to have IaDs. Crucially, imperatives can also indifference as shown in (66):

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Albanian, like Greek also has a RS which can express permission as shown in (67a) but it cannot express indifference as shown in (67b). Importantly, the IaD is also not licensed (67c):

(67) a. Te shkosh ne parti, s’kam problem.
   SUBJ go.2SG to party, no problem.
   ‘Go to the party, I don’t mind.’

b. #Te shkosh majtas, te shkosh djathtas, nuk me intereson.
   SUBJ go.2SG left SUBJ go.2SG right not me interests.

c. #Ta hash kete dhe do te vdesesh per dy ore.
   SUBJ eat.2SG this and you will die in two hours

Finally, notice that indifference readings can be expressed with *as*-subjunctives, suggesting that the availability of indifference is not a special property of imperatives. Imagine the context in which the Addressee has asked the Speaker what Nick should do with the letter. Then the speaker can say:

(68) as mini, as figi. Den me niazi katholu.
   Let stay.3SG let leave.3SG. I don’t care at all.
   ‘He can stay, he can leave. I don’t care.’

Critically, *as*-subjunctives also participate in IaDs:

(69) as fai afto to sokolataki ke tha pethani se dio ores.
   Let eat.3SG this the chocolate and FUT die in two hours
   ‘If he eats this chocolate, he’ll die in two hours.’

The data indicate that there is a connection between indifference readings and IaDs. Based on this observation, I would like to propose that *indifference-* imperatives are actually conditionalized propositions as they are in IaDs. First, we saw that the two constructions seem to pattern together with respect to their availability. Second, we see similar constructions which are clearly conditional. What is interesting is that in Greek the same meaning can be expressed with a *na*-subjunctive which gets a conditional interpretation when it combines with the scalar particle *ke* ‘even’:
(70) Ke na minis. Ke na figis.. den me niazi.
even SUBJ stay.2SG even SUBJ leave.2SG not me concerns.
‘Even if you stay, even if you leave. I don’t care.’

Notice also that an expression encoding indifference is obligatory both in IaDs and in even-na-subjunctives (and even if it is not overt, it is always inferred that the speaker doesn’t care). Finally notice that we can convey the same meaning with a conditional:

(71) Ki an figis.. ki an minis.. den me niazi.
even if stay.2SG even if leave.2SG not me concerns.
‘Even if you stay, even if you leave. I don’t care.’

We can also use ite - ite ‘either – either’ and we get the same interpretation:

(72) Ite figis, ite minis.. den me niazi.
Either leave.2SG either stay.2SG notme concerns.
‘Whether you leave or stay.. I don’t care’

In all of these cases, the indifference-expression can be omitted like in indifference-imperatives. However, the intonation will always suggest that there is a continuation hiding in the context.

At this point I’m not sure what the exact analysis of indifference-imperatives is but analyzing them as conditionals of some sort doesn’t sound as a crazy idea, given i) the conditional means we employ to express indifference in (71)-(72) and ii) the correlation between the ability to participate in IaDs\(^\text{12}\) and express indifference. The meaning that indifference-imperatives express puts them together with the unconditional constructions discussed in Rawlins (2013) a.o. However, further investigation of these constructions is necessary in order to shape this idea and provide concrete evidence for it.

What I hope to have shown in this chapter is that Imperatives and Root Subjunctives differ in many respects but crucially not with respect to the flavor of the modal operator involved and not with respect to their existential character. In the following chapter we discuss deviating patterns for both of these constructions.

\(^{12}\)A full discussion of IaDs will only occur in the last chapter, where I will discuss deviating imperative patterns, but for now, much in the spirit of von Fintel & Iatridou, consider an analysis of IaDs as conditionals in which the imperative is the antecedent of the conditional.
Chapter 6

“Root” modals in “embedded” contexts

6.1 Introduction

In the previous chapters we presented an analysis of Imperatives and Root Subjunctives as inducing a covert existential bouletic modal. In this chapter, we will look at Imperatives and Root Subjunctives which seem to deviate from this pattern. The chapter is divided into two basic parts. In the first part, we will see environments where Imperatives and Root Subjunctives do not pattern with an existential analysis. Crucially, however, these environments involve an overt element that contributes the quantificational force of the modal operator and I will argue that in these cases the imperatives and root subjunctives are embedded under these quantificational elements. The second part is devoted to cases in which the flavor of the modality involved in Imperatives and Root Subjunctives seems to be different from the priority modal we have introduced in the previous chapters. In these cases, as well, I will show that Imperatives and Root Subjunctives are, in fact, embedded and I will introduce some additional assumptions regarding the environments in which subjunctive mood can appear, accounting for the appearance of Imperatives and Root Subjunctives in these contexts.

6.2 Quantificational adverbs with Imperatives and RSs

In what I have presented so far, Imperatives and Root subjunctives represent two special varieties of Subjunctive mood which by virtue of their properties require a modal operator which as we
showed has existential force. Therefore an Imperative (1a) or a na-subjunctive (1b) will have the interpretation in (2).

(1)  
  a. Leave!
  b. na figis!  

(2) \[ [(1)]'' = \exists w' \in W. S's desires in w are satisfied in w' \wedge A leaves in w'. \]

Subsequently, the stronger interpretation is derived by exhaustifying over Focus Alternatives, which in the case of broad focus alternatives we took to be the negation of the prejacent, therefore deriving the implicature in (3) which amounts to a necessity modal:

(3)  
  Imperative-Implicature: \( -\exists w' \in W. S's desires in w are satisfied in w' \wedge \neg A leaves in w' \).

Under this view, an Imperative or a Root subjunctive encountered out of context and without prosodic cues cannot be classified as permission or command/request. However, this ‘ambiguity’ is resolved if there is an overt quantificational element (an adverbial) which informs us about the force of the modalized proposition. In the following, I concentrate on Greek which seems to have two quantificational adverbials which can combine with Imperatives and Root Subjunctives. Similar elements can also be found in English, German and other languages.

We find two adverbials which combine with Imperatives and Root subjunctives in Greek and characterize their quantificational force: oposdipote ‘definitely’ and kalitera ‘better’. As I show below, oposdipote clearly forces a universal interpretation whereas kalitera ‘better’ can be characterized as comparative possibility in terms of Kratzer (2012).

6.2.1 Oposdipote-Universal

First, I present oposdipote-Imperatives, showing their universal force. The same facts hold for oposdipote with root subjunctives, so I will only discuss the data with Imperatives. The relevant examples are below.\(^1\)

\(^1\)The exact meaning of oposdipote is hard to define in these environments. The interpretation is something like under all circumstances, here I translate it as definitely – what is important is that it really conveys a universal interpretation like ‘in all possible worlds. . .’
The utterances in (4) express necessity and they cannot be used to express permission or invitation. The adverbial *oposdipote* is generally used to express necessity and it is compatible both with epistemic and deontic/bouletic necessity. In (5a,b) it expresses epistemic certainty, in (5c) where there is an overt modal which expresses deontic necessity, *oposdipote* has the effect of emphasizing the necessity:

(5)  

a. Tha ertho oposdipote.  
FUT come.1SG definitely  
'I will come definitely.' (There is no case I will not come.)

b. O Nikos irthe oposdipote.  
The Nick came definitely.  
'Nick has definitely come.'

c. Prepi oposdipote na erthis.  
must definitely SUBJ come.2SG  
'You must come definitey.'

When *oposdipote* is used with a possibility modal or even a weak necessity modal\(^2\), we can only analyze the sentences as involving two modal operators the possibility/weak necessity modal and then on top of this, a necessity modal, which as it is shown in the following examples, expresses epistemic necessity. In this case, however, *oposdipote* must appear either in the beginning or in the end of the clause and there must be an intonational break between *oposdipote* and the prejacent.

(6)  

a. Oposdipote, boris na figis.  
Definitely can.2SG SUBJ leave.2SG  
'Definitely, you can leave.'

b. Oposdipote, tha prepe na figis.  
Definitely, FUT must.PAST SUBJ leave.2SG  
'Definitely, you should leave.'

\(^2\) *tha prepe* corresponds to *should* and *ought to* in English and is analysed as a weak necessity modal in von Fintel and Iatridou (2008).
It becomes clear from the distribution of *oposdipote* that it expresses necessity and clearly when it combines with Imperatives/RSs and there is no intonational break in between, we get a necessity reading. If there is an intonational break in between, then as in the examples in (6) we get an epistemic necessity modal on top of the existential, as predicted by our analysis. In these cases, *oposdipote* has to either precede or follow the imperative proposition.

(7) Oposdipote, pigene sto parti.
    Definitely go.IMP to-the party.
    ‘Definitely, you can go to the party.’

Setting these cases aside, which can be accounted under the existential character of the operator, in all other cases, we get a necessity interpretation. This can be also shown by applying all the tests that were used in Chapter 2 to argue in favor of the existential character of Imperatives. The tests discussed below not only prove the universal character of *oposdipote*-Imperatives but also validate the reliability of these tests. First, when we have both *oposdipote* and only in a sentence, we observe that when the only-phrase fronts above the verb and *oposdipote* as in (8), we get an interpretation that *for the other books it’s not necessary that A reads them*. The compatibility of the continuation in (8a) as opposed to the continuation in (8b) shows that only here takes scope above a necessity modal:

(8) Mono afto to vivlio diavase oposdipote.
    Only this the book read.IMP definitely
    ‘Read only this book definitely.’

    a. Ta ala ine proeretika.
       ‘The others are optional’.

    b. #Ta ala tha se berdepsun ke den tha grapsis kala an ta diavasis.
       The others will you confuse and not FUT write well if them read.2SG.
       ‘The others will confuse you and you will not write well if you read them.’

When only appears below the verb and *oposdipote*, the b-continuation becomes immediately felicitous and the interpretation we get is that *it’s necessary to read only this book and not read the other ones*. In this case, however, when the only-phrase is in-situ the other interpretation, in which only is interpreted above the modal, is also possible (especially with certain intonation) thus rendering
the a-continuation felicitous as well.

(9) Diavase oposdipote mono afto to vivlio.  
Read definitely only this the book  
‘Definitely read only this book’

a. Ta ala ine proeretika.  
‘The others are optional.’

b. Ta ala tha se berdepsun ke den tha grapsis kala an ta diavasis.  
The others will you confuse and not FUT write well if them read.2SG.  
‘The others will confuse you and you will not write well if you read them.’

The necessity character of the modal is also clear by the fact that it doesn’t license Free Choice Items as opposed to plain Imperatives. To the extent, that (10a) is felicitous, it is only under the reading of the existential FCI, which can be paraphrased with the numeral one (as in 10b).

(10) a. %Tragudise oposdipote opjodipote tragudi.  
Sing.IMP definitely any song  
‘Definitely sing any song.’

b. Tragudise oposdipote ena opjodipote tragudi.  
sing.IMP definitely one any song  
‘Definitely sing any song.’

Similarly, a FCI combined with an exceptive is not felicitous with oposdipote:

(11) Tragudise oposdipote opjodipote tragudi, ektos apo aften.  
sing.IMP definitely any song except from this  
‘Definitely sing any song except this one.’

It should be clear by now that oposdipote-Imperatives pattern with universal modals which, of course, entails that an additive particle in the following vote-example should be totally inconsistent. Indeed, the sentence in (12) doesn’t make any sense (except if it is read as two sentences but then we need a long pause in between):

(12) Context: The elections are tomorrow and S&A are discussing about what they should vote,  
then, S says:
I hope that I have sufficiently shown that \textit{oposdipote}-Imperatives have unambiguously universal force as opposed to plain Imperatives and Root Subjunctives. Before, we proceed to an explanation of the universal character of \textit{oposdipote}-Imperatives, I shall present \textit{better}-Imperatives so that we can account for the two patterns together.

\section*{6.2.2 \textit{Better} - comparative possibility}

When \textit{better} combines with an Imperative or a Root Subjunctive as in (13), it gives rise to meaning which compares two alternatives and states that one is better than the other. The meaning we get is exactly the same for both forms.

\begin{enumerate}
\item \textbf{a.} \textit{Kalitera fige.}
\begin{varitemize}
\item \textit{Better leave.IMP}
\item \textit{'(You) better leave.'}
\end{varitemize}
\item \textbf{b.} \textit{Kalitera na figis.}
\begin{varitemize}
\item \textit{Better \textsc{subj} leave.2sg}
\item \textit{'(You) better leave.'}
\end{varitemize}
\end{enumerate}

In this particular example the interpretation we get is that the \textit{Speaker thinks that it's better for A to leave than stay}. However, in more complex sentences the alternatives encountered clearly correspond to Focus Alternatives. For example, in (14a) the indirect object is narrowly-focused and there the alternative should be of the form \textit{better give x the book} whereas in (14b) the direct object is focused and therefore the alternatives can be of the form \textit{better give John x}:

\begin{enumerate}
\item \textbf{a.} \textit{Kalitera dose sto \textsc{giani} to vivlio.}
\begin{varitemize}
\item \textit{Better \textsc{to} give to \textsc{john} the book}
\end{varitemize}
\item \textbf{b.} \textit{Kalitera dose sto \textsc{giani} to \textsc{vivlio}.}
\begin{varitemize}
\item \textit{Better \textsc{to} give to \textsc{john} the \textsc{book}}
\end{varitemize}
\end{enumerate}

The alternative can also be overt represented with a comparative \textit{than}-phrase.
better-Imperatives and Root Subjunctives clearly differ from plain Imperatives as they cannot be used in permission/invitation contexts but neither in the command/requests in which a plain imperative/na-subjunctive gets a strong interpretation. They always have a stronger reading than permission and a weaker reading than command. Moreover, clearly the tests that we presented for the existential character of Imperatives do not work for better-Imperatives. FCIs are not licensed and only scoping above better doesn’t even generate a possible interpretation. The scalar even is also not licensed.

Better is different than oposdipote in that is only licensed with Imperatives and RSs, it cannot combine with possibility (16a), necessity (16b) or weak necessity modals (16c). This is true both for Greek and for English. Some speakers marginally accept better with weak necessity modals but they still consider them degraded and they prefer a different construction instead:

    Better can.2SG SUBJ leave
    ‘*You can better leave.’

    b. *Kalitera prepi na figis.
    Better must SUBJ leave.2SG
    ‘*You must better leave.’

    c. *Kalitera tha prepe na figis.
    Better FUT must.PAST.2SG SUBJ leave.2SG
    ‘*You should better leave.’

It should be now clear to the reader that we are dealing with three different creatures:

a. Plain Imperatives/RSs → Existential Modal
b. Oposdipote-Imperatives/RSs → Universal Modal
c. Better-Imperatives/RSs → Comparative possibility Modal

Now we have to explain under which conditions the force of the modal operator is defined. The next section is dealing with this issue.
6.2.3 Deriving the patterns

Let me start by noticing that under the present analysis the Imperative form and the RS do not necessarily associate with an existential modal neither is the modal part of their forms. As I said in Chapter 3, Imperative and na-subjunctives represent subvarieties of the Subjunctive mood and their only requirement is to combine with a priority modal. There is no restriction on the force of this modal posited by the mood.

(17)

The conclusion for the existential character of the modal was derived by observing its interaction with focus alternatives and with other operators but its existential character wasn’t explained as a restriction of some sort as we did with the flavor of the modality. In principle, we could say that when we have a plain Imperative, an existential modal is introduced, whereas the presence of the universal *opos dipote* results in the introduction of a universal modal. Finally, the presence of *better* gives rise to a comparative possibility modal accordingly.

A possible hypothesis when we encounter such data is that we are dealing with a polysemous operator and then the quantificational adverbials are agreeing with the the corresponding operator (modal concord). However, it is not an option to assume that the modal operator in Imperatives and RSs is polysemous among a possibility, a necessity and comparative possibility modal, because we would expect this polysemy to show up without the contribution of the quantificational adverbs in plain Imperatives and RSs. As we have shown, the necessity reading comes out as an implicature depending on the focus alternatives. Moreover, the scope facts suggest that plain Imperatives and RSs involve an unambiguously covert existential operator. Excluding the polysemy option, I would like to suggest that, in the absence of an overt operator in plain Imperatives and na-subjunctives, an existential modal is introduced. However, instead of a covert modal operator we can introduce an overt universal modal like *opos dipote*, thus forcing a necessity interpretation. Similarly, when *better* is introduced it represents a modal operator with a comparative possibility
meaning. In the following I illustrate the technicalities of this account.

**Plain Imperatives/RSs**

When we have a plain Imperative/RS at the level of moodP we need a modal operator to merge to satisfy the requirement of the subjunctive mood for a prioritizing ordering source. As I have already discussed in chapter 2, an existential modal is introduced, yielding a possibility modal interpretation.

(18) a. Plain Imperatives, e.g. *Leave!*

\[ \text{ModOpP} \]
\[ \exists \text{ModOp} \quad g \quad \text{MoodP} \]
\[ \text{Mood}_{+[\text{SUBJ}]} \quad \text{TP} \]

b. \[ [\text{ModOpP}]^w = \exists w' \in W. \quad S's \quad \text{desires in } w \quad \text{are satisfied in } w' \land A \quad \text{leaves in } w'. \]

As I presented, in Chapter 2, the strong readings in *commands/requests* will be derived as an Implicature by exhaustifying over certain Focus Alternatives. However, when we have *oposdipote* the strong reading as I showed is not an implicature but rather part of the meaning of the proposition.

**Oposdipote/Better-Imperatives/RSs \rightarrow Universal /Comparative Possibility Modal**

Treating the adverbials *oposdipote* and *better* as the actual modal operators which contribute both the force and flavor, we can account for the necessity and the comparative possibility interpretation accordingly. It is important to notice that the modal flavor will need once more to be restricted by the requirements of the mood and the position of the modal, therefore yielding a bouletic modal anchored to the perspective center. The configuration below shows that *oposdipote* is the actual operator and that it directly derives a universal interpretation.

(19) a. *oposdipote*-Imperatives, e.g. *Oposdipote fige!* (as in (4a-b))
b. \([\text{oposdipote}] w = \forall w' \in W. S's \text{ desires in } w \text{ are satisfied in } w' \land A \text{ leaves in } w'\).

**Better-Imperatives/RSs \(\rightarrow\) Comparative Possibility Modal**

*Better* will appear in the same position but critically it will yield a different syntactic configuration, since it takes as its arguments two propositions and compares them, stating that the one is better than the other. *Better* can be analysed in different ways. One possibility would be to assume that it is derived compositionally from the degree adjective *good* (which would take a proposition of type \(<st>\) instead of an individual) combined with the comparative morpheme \(-er\) which would take as its restrictor the *than*-proposition \(p\), stating a relation between \(p\) and the main clause \(q\). However, since an ordinary good-adverbial is not licensed cross-linguistically, in such constructions, I will follow a different path, treating *better* as a chunk that takes two propositions as its arguments and establishes a comparative relation between the two. The relevant configuration for a sentence as in (13a-b) is given in (20). *Better* takes as its internal arguments the modal base and the ordering source and then it takes the *than*-proposition of type \(<st>\) and the prejacent of type \(<st>\).
(20) better-Imperatives, e.g. Better leave (than stay)! (as in (13a-b))

The meaning that this operator must deliver is that \( q \) is more desirable for the speaker than \( p \).

The following entry encodes this interpretation in a similar fashion to the meaning that Kratzer (2012) provides for comparative likelihood. Here, instead of likelihood we have desirability:

\[
\begin{align*}
\text{[better]} & = \lambda f, g, h \cdot \lambda p, q \cdot \max_{w} f(w) > 0 & \text{if } & (u) & \begin{array}{c}
\text{And }\exists v \text{ such that } v \text{ is compatible with } S \text{'s desires and } p \text{ is false in } v \text{ and } q \text{ is true in } v \\
\text{And } v \text{ is ranked higher with respect to } S \text{'s desires than } u
\end{array}
\end{align*}
\]

Given the bouletic character of the ordering source, the meaning in (21) states that:

\begin{itemize}
  \item There is no world \( u \) such that \( u \) is compatible with the \( S \)’s desires and \( p \) is true in \( u \) and \( q \) is false in \( u \)
  \item There is a world \( v \) such that \( v \) is compatible with \( S \)’s desires and \( p \) is false in \( v \) and \( q \) is true in \( v \)
  \item \( v \) is ranked higher with respect to \( S \)’s desires than \( u \)
\end{itemize}

In other words, for every word \( u \) compatible with \( S \)’s desires in which \( q \) is true and \( p \) is false and for every world \( v \) compatible with \( S \)’s desires in which \( p \) is true and \( q \) is false, then \( u \) is ranked higher than \( v \) with respect to the speaker’s desires.
This meaning correctly predicts that cases in which both alternatives are true might be equally
good or even better than or worse than the worlds in which only the prejacent is true. Consider the
following example, all of the continuations (a-c) are compatible with the initial utterance.

(22) Better dance with Peter than John.
    a. But if you want, you can dance with both of them.
    b. Of course, if you can dance with both even better!
    c. But make sure you don’t dance with both of them.

Furthermore, the meaning in (21) captures the intuition that by uttering (22) the speaker doesn’t say
that he necessarily wants the Addressee to dance with Peter. This shown clearly by the continuation
in (23):

(23) Better dance with Peter but it’s even better if you dance with Nick and not dance with
     Peter.

Before moving on to other phenomena, let me make a final remark about better which shows
that the modal flavor is really restricted both by the features in moodP but also by the position of
the modal operator. Better both in English and in Greek can also be in the form of an adjective
embedding a proposition \( p \). Consider the examples in (24). At first sight, they look as if they
have the exact same interpretation, however, upon closer examination it seems that they differ with
respect to the restrictions of their modal base. (24b) where there is no TP above the modal is
incompatible with a continuation ‘but I don’t want you to’. On the contrary, (24a) which involves
a TP on top of the modal operator, is fine with such a continuation as shown below:

(24) a. Ine kalitera na figis. Ala den to thelo.
    is better SUBJ leave But not it want
    ‘it’s better to leave. But I don’t want it.’

    b. Kalitera fige/ na figis. #Ala den to thelo.
    Better leave.IMP/ SUBJ leave.2SG But not it want
    ‘Better leave. But I don’t want it’

This validates our original hypothesis after Hacquard (2006), that the position of the modal forces
anchoring to the Speaker. Having explained the variability of the quantificational force of Imperatives and RSs in the presence of certain adverbials, next section discusses variations in the nature of the operator that embeds Imperatives and RSs which concern more its flavor and its function.

### 6.3 Embedded Imperatives - IaDs

So far, we have been dealing with Imperatives which encode a bouletic interpretation either providing permission or issuing a command/request or expressing a wish, etc. In this section, we will deal with Imperatives which clearly lack such an interpretation. As promised in the previous chapter, we will discuss the so-called IaD\(^3\) (Imperative and Declarative) constructions which seem to have a conditional interpretation as shown in the examples (25) after von Fintel & Iatridou (2015):

(25)  
\begin{enumerate}
  \item a. Study hard and you will pass the class.
  \item b. Ignore your homework and you will fail the class.
  \item c. Open the paper and you will find 5 mistakes on every page.
\end{enumerate}

Before introducing any analysis of (25a-c) let me spell-out a distinction commonly discussed between different types of IaDs. As noticed in von Fintel & Iatridou (2015), the IaD in (25a) can be read as an encouragement/urge from the Speaker to the Addressee, therefore correlating with the directive character of Imperatives. The IaDs in (25b)-(25c) clearly lack such endorsement; in (25b) it is quite possible that the Speaker wants quite the opposite (that Addressee doesn’t ignore his HW) and (25c) is neutral. Following von Fintel & Iatridou’s terminology, I will refer to the former as *endorsing IaDs* (e-IaDs) and to the latter as *non-endorsing IaDs* (n-IaDs). In line with von Fintel & Iatridou, I will treat e-IaDs and n-IaDs as involving the same syntax and semantics. However, as Keshet (2013) argues, I will show that e-IaDs can also, at least in some contexts, be analysed as real Imperatives conjoining with a Declarative\(^4\).

IaDs have been discussed in many works\(^5\) (Bolinger (1967); Davies (1986); Clark (1993);

---

\(^3\)The term was introduced by Schwager (2006)/Kauffman (2012) and since then it is commonly used to refer to these constructions.

\(^4\)This ambiguity view is supported by the fact that e-IaDs seem to behave in some respects on a par with n-IaDs whereas in other respects they have the properties of unembedded Imperatives.

\(^5\)Jespersen (1909/1925) had already noticed the deviating character of Imperatives in IaDs which he called pseudo-Imperatives (see Keshet (2013), von Fintel & Iatridou (2015))
Han (2000); Russell (2007); Schwager (2006); Kaufmann (2012); Russell (2007); Keshet (2013); Keshet and Medeiros (2014); von Fintel and Iatridou (2015) a.o.) giving rise to different analyses of these constructions mostly depending on the assumptions regarding the nature of Imperatives as properties/modalized propositions, etc. Here I will develop an analysis following von Fintel & Iatridou's (2015) insight which treats IaDs as truly conditional with no imperative modal represented in syntax/semantics. Below I present an account of both n-IaDs and e-IaDs as conditional sentences. Critically, however, I will base my analysis on the core idea of the present analysis that an Imperative represents a moodP which is a subvariety of Subjunctive mood. Under this view, I will argue that the Imperative forms in IaDs are conditionals in which the subjunctive\textsubscript{imp} mood is licensed by being embedded under the conditional operator. Eventually, this means that we will have to revise the conditions under which Subjunctive mood appears but this comes as no surprise, since, as I already mentioned in Chapter 3, the distribution of Subjunctive mood is a rather complicated issue that depends on different factors. To prevent any expectations, we won’t be able to explain the feature of the subjunctive mood that licenses its embedding under a conditional operator but by considering related structures, I hope I can show that taking subjunctive mood to be embedded under a conditional operator is a plausible hypothesis.

First, let me show that the behavior of IaDs is part of a larger puzzle which concerns the distribution of subjunctive mood in conditional sentences. At this point, it should be made clear that when I talk about subjunctive mood in Conditionals, I do not refer to the counterfactual marking which is related in some languages with Subjunctive plus past marking or just past marking in other languages (see Iatridou (2000); Ippolito (2013); von Fintel (2012)). I refer to present subjunctive marking which does not give rise to counterfactual interpretation. First, consider the other instances of conditional conjunction discussed in Culicover and Jackendoff (1997). The sentence in (26a) has a salient interpretation that if you drink another beer, I'll leave\textsuperscript{6}.

(26) a. One more can of beer and I'm leaving.

b. You drink another can of beer and I'm leaving.

\textsuperscript{6}As Culicover & Jackendoff (1997) notice depending on the context we can also get other interpretations such as if you throw another can of beer on my head, etc. but this is a question about how we fill the missing content which will not concern us here.
The English paraphrase in (26b) doesn’t tell us much about what mood-marking we have in the antecedent. In Greek, however, we find that if we want to keep the conditional interpretation only the subjunctive mood is licensed. The paraphrase in (27b) is good and it gives a conditional interpretation whereas the paraphrase in (27c) it can only mean that after you drink one more beer, I will go. The same interpretation we get in in (27d), where we have future perfective in the antecedent.

(27) a. Ali mia bira ke tha figo. 
other one beer and FUT leave.1SG
‘An other beer and I’ll leave.’

b. Ali mia bira na pjis (ke) tha figo. 
other one beer SUBJ drink.2SG and FUT leave.1SG
‘You dink another beer and I’ll leave.’

c. #Ali mia bira pinis ke tha figo. 
other one beer drink.2SG and FUT leave.1SG
‘You dink another beer and I’ll leave.’

d. #Ali mia bira tha pjis ke tha figo. 
other one beer FUT drink.2SG and FUT leave.1SG
‘You will drink another beer and (then) I’ll leave.’

The sentence in (27b) is equivalent with an IaD, as in (28) below:

(28) Pies ali mia bira ke tha figo. 
Drink other one beer and I’ll leave
‘Drink another beer and I’ll leave.’

They differ in that (27b) is not a conditional conjunction like the IaD in (28). As we observe and is optional in (27b), and although not ungrammatical, the sentence is better without it. Furthermore, na-subjunctives which participate in this sort of conditionals have an additional requirement that there must be a focused phrase in the beginning, which can be either another as in (27b) or a plain numeral as in (29) below or an even-phrase as in (30):

(29) Mia leksi na pis (ke) tha figo. 
One word SUBJ say.2SG and FUT leave.1SG
‘One word and I’ll leave.’
When _even_ is present, it is not possible to have conditional conjunction as shown in (30b), suggesting that the syntax of IaDs and this sort of even-conditionals is different. Despite the fact, that there are clearly syntactic differences between the IaD and the _na_-subjunctive conditional, what remains important is that in both cases we have a proposition in the antecedent marked with subjunctive mood. Whereas the exact conditions under which a _na_-subjunctive can participate in a conditional of this sort is a very interesting puzzle on its own, here I would like to draw attention to the fact that a _na_-subjunctive or an imperative is necessary in order to get a conditional interpretation in these contexts. This is not to say that Indicatives are not allowed in general in conditional conjunctions. For example von Fintel & Iatridou (2015) report the following example from Greek:

(31) O skilos mu akui keravnus ke krivete kato apo to trapezi.
the dog my hears thunders and hides under the table
‘My dog hears thunder and hides under the table’

However, this sort of conditional conjunction can only express a generic statement due to the obligatory imperfective marking in both conjuncts. In the following example we can see this contrast. Imagine that a generally fearless person has just watched a thriller and seems quite scared. In this context (32a) is felicitous and it has the interpretation that if you hear now a thunder, you will hide under the table. On the contrary, (32b) only expresses a general fact about this person, a generic statement regarding this person and therefore it is infelicitous in this context. Finally, (32c) shows that it is not possible to get a conditional interpretation with a future indicative antecedent:

(32) a. Tora, enan keravno na akusis, (ke) tha kriftis kato apo to trapezi.
now, one thunder SUBJ hear.2SG and fut hide.2SG under the table
‘If you hear now a thunder, you will hide under the table.’

b. #Tora enan keravno akus ke krivese kato apo to trapezi.
now, one thunder hear.IMPRF.2SG and fut hide.IMPRF.2SG under the table
#‘Now, you hear a thunder and you hide under the table.’
The conclusion that we can draw from these examples is that in the absence of an overt *if*-complementizer, subjunctive-marking seems to be critical in indicating that there is a non-generic conditional interpretation.

A similar construction like the one with the subjunctive conditional, we can also find in Turkish (thanks to Isa Kerem Bayirli for providing the example):

(33) agzini bir-daha acsin, ben buradan gidiyorum.
    his.mouth one.more.time open.3SG I from.here leave
    ‘He open his mouth one more time, I am leaving.’

The availability of this construction in both Greek and Turkish requires more attention. Why is subjunctive licensed in these conditional forms and also why an overt *if* cannot appear when we have Subjunctive?

Aside from Greek, Iatridou and Embick (1994) show that in Icelandic if the verb in the antecedent has present subjunctive marking, then it undergoes conditional inversion (34b). The present subjunctive marking is a necessary condition for the generation of an inverted non counterfactual conditional in Icelandic (34c). Moreover, when the verb shows present subjunctive marking it is not compatible with an overt *if*-complementizer (34d).

(34) a. Ef hann hefur faridh, eg kom.
    if he has.PRES.IND gone, I come
    ‘If he has gone, I will come.’

b. Hafi hann faridh, eg kom
    has.PRES.SUBJ he gone, I come

c. *Hefur hann faridh,…
    has.PRES.IND he gone

d. *Ef hann hafi faridh,
    if he has.PRES.SUBJ gone
    [Iatridou and Embick (1994); ex. (7)]

Setting aside the conditional inversion in (34b), the present subjunctive marking and the incompatibility with an overt *if*-complementizer resembles a lot the availability of present subjunctive in the
antecedent of *if*-less conditionals in Greek (for an analysis of *if*-less conditionals with subjunctive marking in Greek, see Kyriakaki (2008). Also, Iatridou & Condoravdi (work in progress) treat *if*-less conditionals with subjunctive antecedents as instances of conditional inversion. The present analysis of IaDs as conditionalized propositions is largely inspired by this idea.)

Having shown that not only Imperative forms but other subjunctive forms as well can appear in the antecedent of *if*-less conditionals, we now have to explain under which conditions Subjunctive mood is licensed in the antecedent of a conditional. The question which arises is the following: we have posited that subjunctive mood has an interpretable feature which posits a requirement for a modal operator with a non-null ordering source. Now, we want to get rid of this requirement because there seems to be no special operator involved aside from the conditional operator, whose presence is not dependent on mood. However, we cannot just assume that subjunctive mood doesn’t have this feature because then we could say this for any instance of subjunctive. In a sense, we are facing the same problem that any analysis positioning a modal operator into the semantics of imperatives faces, only via a different route. We don’t have to explain why the modal operator is not present but we have to explain why the feature of the subjunctive mood is not interpreted.

Looking into other domains, it seems that an analogous case is presented by Bjorkman (2011a) to account for the counterfactual tense-marking in conditionals. Bjorkman (2011) argues that in counterfactuals, $T^0$ enters the derivation with an uninterpretable feature in which case it will be checked by c-commanding head which has an agreeing interpretable feature. In particular, Bjorkman assumes that $C^0$ and $T^0$ has a special Past feature which is not really past but a feature that she dubs [Coincidence]-feature following Iatridou (2000) and later work by Ritter and Wiltschko (2010). This coincidence-feature refers to coincidence between times when it is interpreted at $T^0$ and coincidence between worlds when it is interpreted in $C^0$ (see Bjorkman (2011a,b); Wiltschko and Ritter (2009)). What really matters for our purposes is the mechanism under which an unvalued feature at $T^0$ is valued by Agree with $C^0$ in counterfactual conditionals, as shown in the

7The following definition is given in Bjorkman (2011a):

(i) a. \([-\text{Coincidence}] \text{ in } T^0\): The time (or location, or participants) of the vP situation do/don’t coincide with the time (or location, or participants) of the utterance/matrix situation.
   b. \([-\text{Coincidence}] \text{ in } C^0\): The world of the clause does/doesn’t coincide with the world of the utterance/matrix situation.
configuration below (the movement represents conditional inversion in the absence of *if*):

\[(35)\]

a. *If you had.../had you...*

b. \[
\begin{array}{c}
\text{CP} \\
\text{C}^0 & \text{TP} \\
\text{C}^0 & \text{T}^0 & \text{you} & \text{T}^0 & \ldots \\
i\text{-coin} & \text{had} & t_i \\
u\text{-coin}
\end{array}\]

It should be noticed that this analysis correlates more with Schlenker’s (2004) proposal in which *if* is contentful and it functions as definite determiner over worlds. This differs from Kratzer’s view of conditionals in which *if* carries no meaning at all and the conditional interpretation comes from a covert modal.

A parallel story for the subjunctive mood marking is that the mood head in these constructions is carrying an uninterpretable [+SUBJ] feature which is then checked by C^0. The nature of this feature would require in depth investigation of conditionals a task which we haven’t pursued in the present work. Instead, I will dub this feature with the descriptive label [cond] (conditional) avoiding any theoretical implications regarding the semantics of conditionals. Whatever the nature of this feature is, the idea is that should enter in an agree-relation with the [+SUBJ]-feature by mood. Under this view then the imperative in IaDs has the syntax in (36). *mood* comes with an uninterpretable [u-cond] feature, which is then valued by agreeing with C0 which has an interpretable [i-cond] feature.
In this spirit, we can explain why IaDs are interpreted as conditionals and why they don’t have the interpretation of ‘root’ imperatives. There is no modal operator involved in IaDs, they are simply the conditional antecedents. The mood$^0$ enters the derivation with an uninterpretable feature $[u\text{-}\text{cond}]$ which is checked by $C^0[i\text{-}\text{cond}]$ and therefore it is interpreted in $C^0$. This way the mood$^P$ is not interpreted in the usual way and therefore there is no motivation for introducing a modal with a non-null ordering source to satisfy the semantic requirements of mood$^P$. However, as I said above, it remains a big question what the nature of this feature is and why it can be in agree-relation with $C^0$ in conditionals. Moreover, certain assumptions regarding the role of if remain to be clarified (see Bjorkman (2011a,b)).

Furthermore under this view, a syntactic question arises regarding both IaDs but also the subjunctive conditionals that we saw; why they cannot appear with the complementizer if? A possible hypothesis is that if we treat if as an overt manifestation of the [+cond] feature realized at $C^0$, then when there is agreement between $C^0$ and mood$^0$ the feature [+cond] is realized at mood$^0$. Therefore, the presence of if as a marker of [+cond] is redundant and if doesn’t appear.

Acknowledging the importance of these questions, I’ll stick to the basic part of this hypothesis which is that the [+subj]-feature of the mood-head is not interpreted as usual because it enters in an agreement relation with the conditional $C^0$. Based on this, let me discuss some further issues regarding the syntax of IaDs.

In Greek, Imperative subjects can be overt and can precede or follow the verb. However, as von Fintel & Iatridou notice, non-endorsing IaDs (n-IaDs) only allow a post-verbal subject and not a preverbal subject:

In (36) a. Ignore your homework and you will fail.

b. 

\[
\begin{array}{c}
\text{CP} \\
\text{\hspace{1cm} C}^0 \\
\text{\hspace{1cm} mood}^\text{P} \\
\text{\hspace{1cm} \text{i-cond}} \\
\text{\hspace{1cm} mood}^0 \\
\text{\hspace{2cm} TP} \\
\text{\hspace{2cm} \text{u-cond}} \\
\text{\hspace{1cm} \text{pro}_\text{Ad} \, \text{ignore your HW}}
\end{array}
\]
Now this can be explained as an effect of verb movement to $C^0$ leaving the subject behind, as shown in the configuration below. The structure in (39) represents in fact an inverted conditional in which the verb has moved to $C^0$. Assuming that mood and $C^0$ are in an agree relation this movement is well-justified in Greek, in which the verb undergoes movement to all heads with which it agrees. In English, on the other hand we don’t expect this movement to take place because the lexical verb does not move to the higher inflectional heads.

Even assuming that the verb moves to $C^0$, one could wonder why the subject cannot precede
the verb as the result of some sort of Focus/Topic movement, since in a language like Greek overt Focus/Topic movement is a very common phenomenon. We observe that whereas this is in principle possible in if-conditionals it is not possible in IaDs (40a vs. 40b). In fact, nothing (except maybe aboutness topics, with a long intonational pause between the topic and the imperative) can precede the verb in IaDs (which contrasts, of course, with plain-imperatives).

(40) a. Ton Niko an dis tha timoso.
   the Nick.ACC if see.2SG FUT get-angry.
   ‘If you see [Nick]$_F$, I will get angry.’

b. *Ton Niko des and tha timoso.
   the Nick.ACC see.IMP and FUT get-angry.
   Intended: ‘see [Nick]$_F$ and I will get angry.’

c. Ton Niko des!
   Nick.ACC see.IMP

We might wonder whether the non-availability of overt Focus/Topic movement is a property of inverted conditionals in general. It seems that this is the case in Bulgarian, a language which has both inverted conditionals and overt Focus/Topic movement (also the same seems to hold in Icelandic according to Iatridou and Embick (1994)). Whereas when there is no inversion we can have a constituent moved, overt movement is banned in inverted conditionals, as illustrated by the contrast between (41b) and (42b)\(^8\):

(41) a. ako Ivan se beshe razvikal na Petar, (Az) shtjax da se jadosam.
   if Ivan REFL had shouted at Peter, I AUX to REFL angry
   ‘If Ivan had shouted at Peter, I would have gotten angry.’

b. Na PETAR ako beshe se razvikal Ivan,...
   At Peter if had REFL shouted Ivan,...

(42) a. razvikal LI se beshe Ivan na Petar, (az) shtjax da se jadosam
   shouted LI REFL had Ivan to Peter, I AUX to REFL angry

b. *Na PETAR razvikal LI se beshe Ivan,...
   at Peter shouted LI REFL AUX Ivan,...

Crucially, similarly to Greek, IaDs in Bulgarian, do not allow any overt focus/topic movement, as illustrated by the following example (p.c. Snejana Iovtcheva):

\(^8\)Many thanks to Snejana Iovtcheva for the judgements and the discussion of these examples.
There still remains the question of why we cannot have focus/topic movement in inverted conditionals and in IaDs, but the correlation between the two is suggestive for the properties that the two structures share.

Having argued that the Imperative is truly a conditional antecedent, the next question is the syntax of the entire IaD construction and in particular the role of the conjunctive and. Here I will assume specifically for the conjunction in Imperatives that syntactically, it is true conjunction but semantically it is vacuous. Another issue is what we take the syntax of conditionals to be in general. In a Kratzerian view, we should have a covert modal operator on top taking as its arguments first the antecedent and then the consequent. However, in order to accommodate the syntactic proposal about feature checking between the C⁰ and Mood⁰, I leaned towards the idea that C⁰ is contentful (see Schlenker’s analysis of conditionals in treating if as a definite determiner over worlds). Under this view, C⁰ takes first the antecedent and the consequent as its arguments, as shown in (44):

(44) a. Ignore your homework and you will fail.

b. Ignore your homework and you will fail.

The only approach so far that treats IaDs as purely conditionalized sentences, is von Fintel &
Iatridou (2015). The present analysis shares with von Fintel & Iatridou (2015) that there is no imperative modal operator in the syntax/semantics of IaDs but it is also different in taking the imperative form not to be just a VP encoding a property (in Portner’s terms) but a moodP marked with a special subjunctive feature.

This analysis, on the one hand, creates a problem that we need to explain how the [+SUBJ]-feature is not interpreted in the usual way. On the other hand, in von Fintel & Iatridou’s proposal this problem doesn’t arise but we have to explain why the verb in the antecedent of the conditional has to be marked with Subjunctive/Imperative morphology, whereas other minimal forms such as infinitivals cannot have the same function.

Under the present idea that Imperatives are subvarieties of subjunctives we can explain why Imperative forms and Subjunctive forms can appear in conditional antecedents and allows us to form a unified analysis of the two and then exploring their differences as well. One issue not quite answered yet is what the exact nature of the subjunctive feature is and under which conditions exactly it can be checked. I believe that this is a general issue regarding subjunctive mood selection. For different analyses of IaDs see the overview in Keshet (2013); Keshet and Medeiros (2014). Here, I would only like to discuss his proposal which makes entirely different predictions from the one I presented, since it always takes it that there is directive force even in n-IaDs, even in neutral IaDs.

Keshet (2013); Keshet and Medeiros (2014) assumes that in IaDs there is an Imperative C on top of the conjunction which means that IaDs will always have directive force, either prohibiting an action or enforcing it. He argues that the directive force is always present even in n-IaDs. For the n-IaDs as in (44a), he argues that it is some sort of warning therefore it is taken as a directive to not ignore the homework. For neutral cases, he claims that the directive is very mild such that it is not interpreted as directive but it still has this force. One of the arguments for the presence of the Imperative operator even in n-IaDs and neutral IaDs is that the Imperative has to be somehow under the control of the Addressee, as shown by his example in (45) (example (9) in Keshet and Medeiros (2014)):

(45) a. #Be too rainy and they’ll probably cancel the festival. (So, let’s check the weather before we go.)
b. #Anyone be even one inch too short and the whole group is barred from the roller coaster. (So fess up if you're too short!)

On the other side, what we find in Greek is quite the opposite from what Keshet argues. Whereas in the previous chapter I argued that the imperative presupposes that the prejacent is under the control of the Addressee, in IaDs we find that this is not the case. The following examples show that the Imperative form in IaDs does not have this restriction. (46) can be uttered in a context where a friend complains to another friend that nobody takes good care of him, when he has a problem whereas he is always there to help friends. Then the speaker can respond by saying (46) with an ironic touch but it has no directive force of any sort neither can we say that getting sick is under the control of the Addressee.

(46) Arostise esi ke ego tha su ftiahno supitses.
Get-sick.IMP you and I FUT you.CL.DAT make soups
‘Get sick and I will be making soups for you.’

Moreover, we can find IaDs in which the subject of the imperative is interpreted as a generic, as in the following example, in which there is clearly no directive force towards fulfilling or not the prejacent. Imagine two people who clearly consider bribing not an option for themselves, then one says:

(47) Kati tetjus tipus ladose tus ke tha su kanun amesos ti some such characters bribe.IMP them and FUT you.CL.DAT do.3PL immediately the dulja.
job.
‘Such people, bribe them and they will do your job immediately.’

Notice that you can respond to the utterance in (47) with something like ‘That’s true’ meaning that I agree that if you bribe people like him, they’ll do your job immediately. This clearly suggests that the moment that we don’t have a modal operator with the bouletic meaning analysed in Chapter 4, the Imperative form is stripped from its performative character, which verifies our analysis that the performativity is the direct result of the bouletic meaning of the operator, as argued by Condoravdi & Lauer (2011).

Finally, we have said that there is no Imperative operator in IaDs and no performativity and
yet, as von Fintel & Iatridou (2015) notice, just like regular imperatives their embedding is very restricted – identical with the distribution of regular imperatives. For example, if we embed the IaD in (48) under the verb believe as in (49) the sentence is ungrammatical:

(48) *Pistevo oti tetjus tipus ladose tus ke tha su kanun amesos ti dulja.
‘I believe that such people, bribe them and they will do your job immediately.’

Notice that we don’t have the same restrictions for the na-subjunctives in conditionals which can be embedded:

(49) Pistevo oti ali mia tetja vlakia na kanis, tha se apolisi.
I believe that other one such stupidity do.2SG FUT you.CL fire.3SG
‘I believe that if you do another stupidity like this one, he will fire you.’

By the same reasoning that we explained the restricted embeddability of Imperatives in Chapter 4, we can explain the non-embeddability of IaDs. Since we take the mood-head to be present it will still have a [+ADDR] feature to be checked and therefore embedding it under any predicate is prohibited. Crucially, embedding it under the conditional, doesn’t seem to be a problem, therefore we should assume that it doesn’t act as an intervener for addressee-agreement⁹. Critically, as von Fintel & Iatridou point out, it is the properties of the first conjunct that satisfy the subcategorization requirements of the higher verb.

Another issue, often discussed in the literature regarding IaDs, is that they cannot convey any sort of conditional. For example, von Fintel & Iatridou (2015) provide the following examples from Bolinger (1967) which show that although the corresponding are perfect, IaDs are not felicitous.

As Bolinger (1967) suggests in order for an IaD to be licensed there must be a causal relation between the first and the second conjunct:

(50) a. Like her and her friends will love you.
    b. *Like her and I’ll introduce her to you.

(51) a. Own a piece of property and you get taxed mercilessly.

⁹Relatedly, Alcázar and Saltarelli (2014) make a parallelism between the Imperative morphology and the allocutive agreement. They notice that allocutive agreement is also restricted in embedded environments but it is fine in the antecedent of a conditional.
b. *Own this property and I’ll buy it from you.

(52) a. Understand Chinese and you can get any of these jobs.

b. *Understand Chinese and I need you for a teacher.

I think we explain that the Bolinger intuition can be expressed solely by the presence of the connective ‘and’. Although ‘and’ is stripped of its logical meaning, it is not stripped of its pragmatic effects, therefore inducing a causal relation between the antecedent and the prejacent. Notice that not only IaDs but also the other Conditional Conjunctions, as Bolinger points out have this effect.

In the following section, I present a completely different Imperative construction in Greek which shares with IaDs that it deviates from the general interpretation of ‘root’ imperatives as involving a bouletic modal.

6.4 ande-Imperatives

Another imperative construction that looks like a true deviation from the ordinary Imperatives is found in Greek, when the Imperative combines with a special particle ande\(^{10}\). In this case the meaning we get is very different from that of a bouletic modal in plain imperatives. The meaning

\(^{10}\)This particle doesn’t have a specific meaning, it looks like a discourse particle. It can be used with ordinary imperatives to express urge/encouragement but in these cases, there is an intonational break between ande and the Imperative and the particle can also appear in the end, as shown in (i):

(i) Ande, pigene./ pigene, ande!
   Ande g0.IMP/ g0.IMP ande

It also can be used as a discourse particle in ordinary declaratives as in (ii), to express some sort of satisfaction/relief:

(ii) Ande efige o Petros
   Ande left the Peter
   ‘So, finally Peter left!’

Another use is to express surprise or mistrust:

(iii) Ande! Efige o Petros?
    Ande! Left the Peter?
    ‘Really!! Did Peter leave?’

Its use to convey that something is hard to be done is felicitous only if it combines with imperatives or na-subjunctives as I show below.
we get is that the Speaker considers the prejacent of the Imperative to be very difficult to happen. Let me illustrate with an example. Imagine a context in which two friends are sitting on the beach watching a kid, they don’t know, playing in the sea. Then the one can turn to the other saying the sentence in (53):

(53) Koita afto to pedaki! Ande vgalto tora apo ti thalasa...
Look this the kid ANDE take-out.IMP.IT.CL now from the sea
‘Look at this kid! It must be so hard to take it out of the water.’

Clearly, in this context the Speaker doesn’t instruct neither permits the Addressee to take the kid out of the sea. In fact, the speaker has no desire or whatsoever for the kid to be out of the water. He only expresses the thought that it will be hard (probably for his parents) to convince the kid to get out of the water.

Another example; Imagine a situation again in which the speaker is drinking his wine and suddenly he drops it on his shirt. Then he says:

(54) Ande katharise afton ton leke tora...
ANDE clean.IMP this the dirt now
‘it’s difficult to clean this dirt.’

The presence of an Addressee is not necessary, and even if the Speaker addresses somebody, we don’t get the meaning that the Speaker expresses a request or wish to clean this dirt. We only get the interpretation that this dirt is hard to clean.

Notice that the particle ande greatly facilitates this interpretation, but native speakers also accept the sentences without ande. In this case, the adverbial now, which doesn’t have its usual temporal meaning, seems to be necessary. Actually, now seems to be interpreted as ‘given the situation’.

The first thought that comes to mind is whether we can accommodate these data under the analysis of Imperatives that we already have. Namely, we can try to see if it is possible to interpret them as involving an existential bouletic modal and derive the additional meaning that $p$ is hard based on some pragmatic effect due to the presence of ande-particle. The most obvious problem with this idea is that the Speaker doesn’t express any desire that the prejacent of $p$ comes true. In fact, it can very well be the case that the Speaker clearly doesn’t want $p$, (in any possible
interpretation of \textit{want} and \textit{desire}). Imagine a context in which the Speaker is an anarchist and he watches the news, hearing that the police is looking for an anarchist group who stole a bank. Then the Speaker can say:

(55) \textit{Ne kala... Ande vres tus tora.}\hfill OK... \textit{ANDE find.IMP them.CL now}\hfill \\
\textit{Roughly: ‘it’s really difficult to find them now.’}

Clearly, in this example the Speaker doesn’t want the police to find the anarchists, what he expresses is that he considers it very difficult that the police will catch them eventually.

Another problem with trying to accommodate \textit{ande}-imperatives under the general analysis is that they don’t have the same performative effect that plain-Imperatives have. It seems that somebody can respond to (55) by saying “\textit{That’s not true, the police is already after them!}.” The responder challenges the truth value of the proposition expressed in (55). He disagrees that it will be difficult for the police to arrest them.

Finally, it is important that not only Imperative forms but also \textit{na}-subjunctives when they combine with \textit{ande} give rise to this interpretation. In all previous examples, we can substitute the Imperative with a \textit{na}-subjunctive and the meaning is exactly the same. Take for example (56) we can also use the subjunctive form in 2\textsuperscript{nd} person or a subjunctive embedding unaccusative construction and the interpretation is the same that this dirt is tough to clean.

(56) a. \textit{Ande na katharisis afton ton leke tora...} \\
\textit{ANDE SUBJ clean.2SG this the dirt now}\hfill ‘it’s difficult to clean this dirt.’

b. \textit{Ande na katharisi aftos o lekes tora...} \\
\textit{ANDE SUBJ clean.3SG this the dirt.NOM now}\hfill ‘this dirt is difficult to clean.’

In all of the previous examples, the subject of the prejacent is interpreted generically, however, this is not necessary. Imagine a context in which a 5-year old boy is trying to solve a math exercise you consider quite difficult for him to solve, you could say (57a) to him or (57b) to a third person:

(57) a. \textit{Kaimene Nikolaki, ande lise tora afit tin askisi.} \\
\textit{Poor little-Nicola, ANDE solve.IMP.2SG now this the exercise}
The above discussion suggests that an analysis of ande-Imperatives as combining with a prioritizing modal is not feasible and if it is, we would need to introduce so many modifications that, in the end, it would end up being a different analysis. Instead, I suggest that since we already saw that subjunctive moodP can combine with different operators and that this is another environment where this happens.

I argue that there is a modal operator involved in these cases as well but this is an epistemic modal expressing degree of difficulty according to the speaker (or whatever the perspective center is). We could assume that the particle itself brings in this sort of modality or that in its presence it forces a covert operator of this sort to appear and generate the meaning we observe. Since as I mentioned above this reading can arise even in the absence of ande, I will assume that there is a covert operator ($Op_{ande}$). I suggest that its meaning is similar to the meaning of a tough predicate that takes as its argument a proposition (see Lasersohn (2005); Stephenson (2007)). The crucial assumption is that the truth value of tough-predicates (like tasty and fun-predicates) is evaluated with respect to some individual, the judge. The perspective center that we introduced in the previous chapters should be considered as having the same role as the judge in this case. That said, we can take the particle ($Op_{ande}$) to contribute the following meaning in the relevant constructions:

\[(58) \quad \lbrack [Op_{ande}] \rbrack^w_j = \lambda f_{(st)}. \lambda p_{(st)}. \lambda d_d. \forall w' \in f(w)(j) \rightarrow p \text{ is } d - \text{tough in } w'\]

The entry in (58) says that ande takes as its argument a modal base $f$ and a proposition $p$ and a degree $d$ and states that for all the worlds $w'$ that are compatible with the doxastic alternatives of a judge $j$ $p$ is tough to a certain degree (above the medium) in $w'$. In other words, it states that the Speaker believes that $p$ is difficult to be realized. As I said, the subject in $p$ can be interpreted generically (as is usual for 2nd person subjects) but it can also be interpreted as the actual Addressee or of course we can have a 3rd person subjunctive with an overt subject. Based on these assumptions, the meaning of a sentence like (54) is given in (59):
As I said above, one can agree or disagree with such imperatives contrary to what happens with ordinary imperatives. In all of the examples from (53) through (57), we can get answers like ‘indeed’, ‘I agree’, ‘I disagree’, etc.

The meaning of this operator is compatible with the requirement of the subjunctive mood for an operator that induces a comparative relation, since it introduces degree of difficulty with respect to which the prejacent is evaluated. I take the presence of this construction to constitute strong evidence against approaches that treat imperatives like designated speech acts. Similarly, accounts which analyse Imperatives as involving a specific modal operator as part of the Imperative meaning also fail to account for the variety of the environments in which Imperatives appear.

Of course, the fact that this construction appears to be specific only to Greek raises concerns about how indicative it is for a general analysis of Imperatives cross-linguistically. Even restricted to Greek, however, it teaches us something about how Imperatives work in this language and our task is to check whether by looking at Imperatives as moodPs we can discover similar patterns in other languages. In fact, we find that a very similar construction which involves Imperatives occurs in Turkish. According to the dictionary, the particle ‘ande’ is a loan from the Turkish particle ‘haydi’. As it happens, when haydi combines with an Imperative in Turkish it derives a similar interpretation to the corresponding Greek construction. In the wine-context that I provided above we can say something similar in Turkish as shown in (60) below:

(60) ha(y)di temizle bakalim simdi isin yoksa
     HA(Y)DI clean.IMP lets.see now your.work exist.NEG.IF
     ‘haydi clean it now (if you don’t have what to do).’

The phrase *if you don’t have anything to do* doesn’t really have a literal meaning, it works as an idiom which facilitates the overall meaning which is that the Speaker believes that it’s difficult to *clean the dirt* (p.c. Ömer Demirok).

Similarly, in a context in which you are in a library as a tourist and there is a lot of noise, then you can turn to your companion pointing to the students who try to study and say (61) meaning

\[ \text{[Opande clean this dirt now]}^{w} = \forall w' j's \text{ beliefs are satisfied in } w' \rightarrow \text{ it is } d - \text{tough that one_gen clean this dirt in } w' \]
that it is really hard for them to study now. However, it seems that the generic reading is a bit harder to get with the 2nd person Imperative in Turkish.

(61)  haydi çalış şimdi bu gürültü-de  
      haydi work.IMP now this noise-LOC  
      ‘haydi work now with this noise.’

Ömer Demirok notices that there is an additional imperative construction in Turkish which can have this interpretation. Just like (61), (62) can express that the prejacent is difficult to be realized.

(62)  gel de çalış şimdi bu gürültü-de  
      come.IMP AND work.IMP now this noise-LOC  
      ‘Come and work now with this noise.’

It remains to be seen whether we can find more deviating imperatives cross-linguistically but even their presence in some languages is suggestive for the fact that Imperative form cannot be mapped to a single general meaning, function or speech act.

6.5 Conclusion

In this chapter we have looked to environments which alter the quantificational force of the operator in Imperatives and environments in which the flavor of the modal operator changes. In the case of IaDs, there is no modal operator at all, there is only the conditional operator and it remains to be answered what exactly licenses this. Moreover, we should really consider the general question under which conditions subjunctive mood is licensed in the antecedent of an if-less conditional. In the case of ande-Imperatives, the operator involved has a different meaning it expresses degree of difficulty like tough-predicates. Our theory can accommodate such deviations and therefore the availability of more such deviating patterns is something to look for.
Chapter 7

Conclusions & Open questions

This dissertation intended to expand our view of root modality by considering Imperatives on a par with Root Subjunctives in Greek. The comparison of these two constructions allowed us to view their similarities and argue that they constitute varieties of a single type of subjunctive mood. In other words, Imperatives, matrix na-subjunctives, as-subjunctives all constitute Root Subjunctives. This idea provided us with a tool to explain their common interpretation and function.

The first issue that we addressed concerned the quantificational force of Imperatives. Based on evidence from the interaction of the modal operator with only, it was argued that Imperatives have existential force directly accounting for permission-readings. The strong-interpretation of Imperatives in commands/requests was derived as an Implicature derived by exhaustifying over focus alternatives.

This approach allowed us to draw attention to the importance of intonation in the interpretation of Imperatives. Moreover, by extending the analysis to Root na-subjunctives we were able to account for the meaning of Root na-subjunctive interrogatives. As we saw, a na-question is interpreted by default as involving an existential modal but depending on the placement of focus we can account for stronger readings and ambiguities which otherwise would appear to be mysterious.

A question that remained opened concerned the differences between the intonational pattern of Imperatives in Greek as opposed to English. Namely, whereas Greek and English Imperatives have a similar intonation pattern in commands vs. permissions, we saw that in the case of invitations in which the prejacent is not given they differ. In Greek, the verb gets the NPA whereas in English it seems that the NPA aligns with the right edge as in commands/requests. As I said, further
investigation of the prosodic pattern of Imperatives in various contexts is necessary but also an overall understanding of the prosodic restrictions in each language can contribute to our better understanding of Imperatives and covert modality in general.

Another question arising from this analysis is whether there is a principled explanation for the existential character of Root Subjunctives. Relatedly, the covert modal in conditionals has also been analysed as existential in recent works (Herburger (2014), Bassi & Bar-Lev 2016). If this is true then maybe we can have a generalization regarding the existential character of covert modals. But we are far from that point. Even if we were to find that all covert modal operators are existential why would this be so? A possible idea that I didn’t pursue here but I think it’s worth exploring is that a covert modal operator does not have a quantificational force on its own, but it introduces a world variable which is then existentially closed (à la Heim (1982)). Still, it is debatable whether there is also Universal Closure in addition to Existential Closure (De Swart (2001)). This question goes far beyond the scope of this dissertation but aside from this theoretical question, there is also an empirical issue. It still remains to be seen whether apparent counterexamples to the hypothesis that covert modals are existential, are indeed counterexamples or whether we can find evidence that their necessity reading is derived from an existential one. One such case, aside from conditionals, is the infinitival constructions in German which for many speakers seem to have invariably universal force (although see Gärtner (2014) who argues that they are ambiguous).

The second question addressed in this thesis is the flavor of Imperatives and Root subjunctives. Namely, I tried to explain why all root non-indicative constructions share certain properties. Imperatives, varieties of subjunctives in Greek (na-subjunctives, as-subjunctives) but also in other languages (Turkish, Bulgarian, Romance and more), root infinitival constructions (e.g in German), Optatives (e.g. in Albanian, Ancient Greek) all share that:

i. They convey a bouletic meaning of some sort.

ii. They are performative.

We argued that this is not mere coincidence but all these constructions involve a subvariety of the general subjunctive mood which posits certain restrictions for their interpretation. In particular, they require a modal operator for their interpretation. The properties of this operator are determined, on the one hand, by the properties of Subjunctive mood and on the other hand, by the
fact that the operator occupies a high syntactic position in root contexts. We argued that the modal operator in Root Subjunctives (in the absence of any overt cue, e.g. *ande* in Greek) is bouletic, expressing the speaker’s desires. We came closer to understand why it happens that in these environments we get this sort of bouletic modal by exploring its syntax and the relevance of the subjunctive mood.

A critical question which we addressed but to some extent was left open is how we derive the performative character of these constructions. The core idea is that performativity is directly associated with the bouletic character of this operator and the fact that it is always relativized to the Perspective Center and the Utterance time. By relating the performativity not with a specific function tied to the Imperative clause type (cf. Portner’s analysis) but with the bouletic character of the modal we were able to predict non-performativity in cases in which Root Subjunctives don’t have a bouletic meaning (e.g. *ande*-subjunctives). To the extent that cross-linguistically, we can find more such constructions then we can say that the view which associates the meaning of an operator with its ability to yield a performative interpretation gains ground over the theory which takes performativity to be tied to a certain Imperative clause type.

Lastly, it should be made clear that by treating Imperatives on a par with other root subjunctive-variants shouldn’t obscure their differences. As we saw, there are many semantic and syntactic differences between Imperatives and *na*-subjunctives in Greek. The most obvious is that Imperatives cannot embed under overt operators the way *na*-subjunctives can. This restriction of Imperatives was attributed to the Addressee-restriction. It remains to be seen whether cross-linguistically we can make such a correlation by investigating the embeddability of Addressee-restricted Imperatives as opposed to constructions which are not restricted to the Addressee.

There are many more issues to comment on and many more questions to be answered. In conclusion, we can say that Root Subjunctives are not so unembedded in the end. Treating Imperatives and *na*-subjunctives as *mood*-phrases, we showed that they are always embedded under a covert operator or even under an overt one as in the case of *oposdipote* and *better*. Similarly, we showed that other operators can scope above these covert modals, providing another case of embedding. Under this view, IaDs or *na*-subjunctives which appear to function as the antecedent in a conditional, can be treated as a special case of embedding which we need to understand better.

Finally, this dissertation can also be viewed as an attempt to call on the need to investigate
Imperatives cross-linguistically with relation to other root constructions which convey modality and which in many cases are either analysed as identical to Imperatives or to a large extent they are ignored. I believe that not only will our understanding of Imperatives greatly benefited but we might also uncover new puzzles related to the semantics and pragmatics of these constructions.
Appendix A

Permission vs. Command/Request Contexts

(1) Marry Lilian
   a. **Command/Request:** George and his family are in a bad economic situation. He recently had a proposal from a rich girl, Lilian. So his father urges him:
      Marry Lilian.
   b. **Permission:** Peter has been in love with Lilian for three years now, but his father won’t let him marry her. Peter got sick and depressed because of this. Viewing his situation, his father finally said:
      Marry Lilian. [I don’t care.]

(2) Marinate the salmon.
   a. **Command/Request:** The chef comes into the kitchen holding a piece of salmon and he tells his assistant:
      Marinate the salmon. [You have to do this now.]
   b. **Permission:** George finds a piece of salmon in the fridge. He really likes to marinate things, so he asks his wife, ‘Can I marinate the salmon?’ His wife tells him:
      Marinate the salmon. [This is fine with me.]

(3) Open the window.
   a. **Command/Request:** The teacher enters the classroom and he says:
      Open the window.
b. **Permission:** Mary is sick and she is shivering although the weather is warm. John is clearly hot, but he tries to not complain because Mary is sick. Mary understands it and she tells him:

Open the window. [It doesn’t make any difference to me.]

(4) Play with the ball.

a. **Command:** Peter just invented a new anti-stress ball and he wants to check if it works. Then George his colleague comes in and Peter tells him, I made this ball and I need somebody to play with it. Please...:

Play with the ball. [I need to see if it works.]

b. **Permission:** George is sitting on Peter’s desk and he’s playing with Peter’s anti-stress ball. Peter is comes in and he sees George who tries to apologize... Then Peter says:

Play with the ball. [It’s o.k.]

(5) Drive this Lamborghini.

a. **Command:** John is an employee in a car company. A new type of car arrived so the chief tells him:

Drive this lamborghini. [We need to test if everything works fine.]

b. **Permission:** John has visited a car exhibition and he looks at a very expensive, luxurious Lamborghini wishing to try it... Then the staff tells him:

Drive this Lamborghini. [Nobody will object.]

(6) Take this book.

a. **Command:** The police is chasing George for his political beliefs. One of his books is already forbidden by the government. When his sister goes to his place to help him, he tells her:

Take the book. [You need to hide it somewhere.]

b. **Permission:** Mary is looking at her sister’s books and she seems to like one of them a lot. Her sister comes in and she tells her:

Take the book. [I will miss it but it’s o.k.]

(7) Jump into the water.
a. **Command:** Two kids are playing next to a pool. There is a bee turning around the one kid. Then the other kid says:

> Jump into the water. [Otherwise it will bite you.]

b. **Permission:** It's summer. People are working to remedy a hotel facility... One worker looks at the pool with the clean water enviously. His colleague who understands his thoughts tells him:

> Jump into the water. [After all, we cleaned it!]

(8) **Make John a sandwich.**

a. **Command:** John has just arrived from school and there is no food at home that he likes. So his mother tells her husband:

> Make John a sandwich. [I think he’s hungry.]

b. **Permission:** Ana is working at a fast food restaurant and John, a homeless man, is coming to ask for food. Ana asks her boss if it is o.k. to make him a sandwich. The boss tells her:

> Make John a sandwich. [I don’t mind.]

(9) **Feed the ducks.**

a. **Command:** A mother says to her child before leaving for work:

> Feed the ducks. [They will starve otherwise.]

b. **Permission:** Policeman to a boy approaching the ducks:

> Feed the ducks. [In this park it is not forbidden.]

(10) **Clean the kitchen.**

a. **Command:** A chef says to his assistant:

> Clean the kitchen.

b. **Permission:** Mary really wants to do something. Then she asks her host: ‘Can I clean the kitchen?’ She says:

> Clean the kitchen. [Since you want to.]
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