

Subjunctive imperative: novel insights from a hybrid category of mood and modality

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Abstract

The modal variation and morpho-syntactic mismatches of imperatives have challenged model-theoretic linguists, making it hard to unify them as a notional category. Depending on specific theories, imperatives inherently contain an illocutionary operator with directive force (e.g., Han 1998, 1999a/b/c, 2001), a performative necessity modal similar to MUST/SHOULD (e.g., Schwager 2005a, 2005b, 2006; as Kaufmann 2012), or may denote an addressee-restricted property that constitutes a full commitment (e.g., Portner 2005, 2003a/b; 2007; Ninan 2005; Condoravdi & Lauer 2010, 2011, 2012; among others). Despite the fact that imperatives cannot be simply identified with a single label of modality (i.e., *necessity*, *possibility*, *deontic*, *bouletic*, *teleological* etcetera), I propose that there is indeed an underlying property shared by all imperatives unifying and distinguishing them from declaratives: they contribute a nonveridical modal space. In this paper, I study imperatives in terms of nonveridicality and polar partition and argue that their semantic contribution is the presupposition of epistemic uncertainty as to the actualization of a proposition p and the creation of nonveridical modal spaces. Imperatives introduce a preference ordering between p and non- p worlds, and are analyzed as nonveridical operators conveying partial certainty and no inherent directive force. Under this perspective, it is not unexpected that *imperative* manifests not only as a verbal morphology, but also in the form of particles, i.e., the *subjunctive imperatives* with *na* particle in Greek, or that imperatives function modally since nonveridicality characterizes all modalities. Therefore, the dilemma whether imperatives are modals or not becomes redundant; it only matters that imperatives induce nonveridical modal spaces.

Keywords: imperative; subjunctive; nonveridicality; polar partition; choice; uncertainty; intention; evaluation; non-homogeneity; modal spaces; preference ordering; epistemic model; illocutionary force.

1 Imperatives: an introduction

The distinction between assertions (declarative sentences) and imperatives (imperative sentences) is quite common. This may be done with syntactic means, e.g., *Take an apple* vs. *You took an apple*; languages may also employ imperative morphology (e.g., Greek, Romance and Balkan languages, etc.). Declarative sentences and imperatives also differ in their discourse function: the former are argued to update the context and provide information, while imperative sentences are typically used as performative sentences typically associated with commands and

requests. Some formal semantic accounts assume a logical language reflecting those differences in having a clear syntactic distinction between declaratives and imperatives, often containing a designated directive illocutionary force operator (e.g., Han 1998, 1999a/b/c, 2001) for imperatives. The system is thus syntactically dichotomous; it is also semantically dichotomous in that declarative and imperative sentences denote different semantic objects. Declarative sentences denote propositions (sets of worlds) while imperative sentences — depending on specific theories — may denote a double-declarative (e.g., Davidson 2001a), properties (e.g., Portner 2007), actions (e.g., Barker 2012), or modalized declaratives (e.g., Kaufmann 2012).

It appears then that the modal variation and morphosyntactic mismatches of imperatives have challenged model-theoretic linguists, making it hard to unify them as a notional category. Approaches to imperatives are faced with the dilemma of either assuming that the imperative mood is an inherent performative necessity modal similar to MUST/SHOULD (e.g., Han 1998, 1999a/b/c, 2001; Schwager 2005a, 2005b, 2006; as Kaufmann 2012) by deriving possibility readings on the basis of a pragmatic machinery (Kaufmann 2012), or of presuming that the imperative mood involves a correlation between an underlying syntactic structure and the illocutionary functions (Han 1999c, 2000a; Ninan 2005; Charlow 2013; Mastop 2005, 2011; Starr 2010, 2012; among others) by contending that imperatives denote properties, and thus are not modals (Portner 2004, 2005, 2007).

In this paper, I show that explanations in terms of modal and non-modal status, propositional and non-propositional content, or true and false judgment — that characterizes the body of relevant literature — of imperatives are not clear enough to sufficiently explain the distinction between assertion and an imperative namely, the option between a veridical (non-partitioned) and a nonveridical (partitioned) epistemic domain respectively; a fundamental distinction lying at the core of the semantics in non-assertions such as imperatives. In any case, I try to avoid these terms (modal, propositional etc.) in view of the logical connotations of the imperative, and instead, I argue that the imperative should be reconsidered in the light of nonveridicality (see Giannakidou 1999 et seq. for nonveridicality) an account which directly links the option of the assertion to veridical and the option of non-assertion to nonveridical spaces (possible worlds), making reference to some agent's epistemic state — by default the speaker's — and evaluating every sentence with respect to an agent's epistemic state.

In achieving the objective set out, I examine the role of the subjunctive. The role of the subjunctive — and other forms like, for example, participial imperatives in Dutch and German, infinitival imperatives in Czech, Swedish, Italian — in surrogating for the missing imperative forms has been known for quite a while in the relevant literature (see Palmer 1986; and for Greek Mackridge 1985; Holton et al. 2004; among many others). However, subjunctive has unfortunately been analyzed separately — and not in context with imperatives — in formal theories which tend to focus on imperatives through the lenses of English, and thus neglecting the tight connections between mood and modal system (modality).

subjunctives in terms of syntax (structural position) and uses. This division of labor between *proper imperatives* that denote necessity and *subjunctive imperatives* that denote possibility is justified by three criteria-evidence supporting the existence of the semantic mapping as illustrated in (2). First, both proper and subjunctive imperative occupy a distinct syntactic position in the structure: the main clause. In Greek, for instance, we cannot find an embedded subjunctive imperative with illocutionary force. The subjunctive imperative just as proper imperative occurs only in the main clause. Secondly, both proper and subjunctive imperative neutralize tense distinctions on the verb, making reference only to future time. And thirdly, subjunctive imperative is a nonveridical mood, however, it is still able of having distinct from other subjunctive uses: the imperatival meaning vs. epistemic or emotive (see Giannakidou 2017 for a detailed discussion on *epistemic* and *emotive subjunctive*). To put it in a nutshell, subjunctive imperatives although they share some recognizable character with the rest of the nonveridical moods, they can be distinguished from other uses of the subjunctive. These observations are in line with Giannakidou (2015) who argues for the existence of epistemic subjunctive as a possibility modal and the division of veridical/nonveridical moods in Greek as suggested and analyzed in various papers by Giannakidou (1997, 1998, 1999, 2009, 2013a).

The following table summarizes in a straightforward manner the landscape of imperatives in Greek that fits the big picture on modality as offered by Kratzer (1977, 1981, 1991b) who argues for lexically encoded quantificational force, and the claims by Portner (1997, 2003a/b) who contends that moods restrict the conversational background of a modal:

(2) IMPERATIVES			
PROPER		SUBJUNCTIVE	
realized morphologically		realized syntactically	
NECESSITY		POSSIBILITY	
<u>Universal</u> operator		<u>Existential</u> operator	
variation		variation	
EPISTEMIC	DEONTIC	EPISTEMIC	DEONTIC

I propose an analysis of Greek imperatives as nonveridical propositional operators, adopting insights put forward by Giannakidou (1998, 2013, 2015), Giannakidou & Mari (2017) and Staraki (2017a). For Giannakidou, subjunctive has semantic contribution (e.g., conveying epistemic uncertainty) and produces semantic effects (e.g., indicating epistemic weakening/uncertainty), thus creating nonveridical modal spaces relative to an individual. I argue that the subjunctive imperative can be analyzed within exactly this framework, with the additional observation that in Greek, the choice between *proper imperative* and *subjunctive imperative* strengthens or weakens the force of the proposition expressed.

The discussion proceeds as follows. In section 2, I define a new species of imperative, the *subjunctive imperative* — counterpart to the *proper imperative* — and argue that it produces a

semantic effect by conveying a weaker imperatival meaning. In section 3, I argue that imperatives in Greek cannot be accounted for by a range of the current approaches — offering new insights on the semantic contribution of imperatives. Imperatives are nonveridical expressions: they convey uncertainty as to the defeasibility of the outcome and induce a nonveridical modal space: a polar partition between *p* and non-*p* worlds. In section 4, I offer an analysis of the *subjunctive* and *proper imperative* in the framework of nonveridicality paying particular emphasis to the properties of non-homogeneity (see polar choice/partition) of the modal bases and the induced preference ordering. In section 5, I offer a comparison with some related to mine approaches to imperatives, calling attention to the differences and similarities. Section 6 concludes the paper.

2 Subjunctive imperatives: a landscape

In this section, I define a new species of imperative, *subjunctive imperative*, which expresses possibility. The *subjunctive imperative* creates relatively weak statements, reflecting a speaker's epistemic states that allow *p* and non-*p*, they are therefore nonveridical. In this terms, the *subjunctive imperative* is counterpart to the *proper imperative*, and its function is to weaken the veridicality of the imperative sentence.

2.1 Uses of the subjunctive imperative in Greek

The kind of mood I am glossing as *subjunctive imperative* has a wide range of uses² and I consider it as the equivalent of the *proper imperative*. *Subjunctive imperative* (3b) is formed by means of *na* particle and the verb after it — just like the embedded subjunctive (3a), but is found exclusively in main clauses — similarly to proper imperatives (3c), conveying directive meaning — compare (3b) to (3c) — in contrast to the embedded subjunctive (3a). Like proper imperative it is non-assertive:

- | | | | | |
|--------|---|---------------------|---------------------|-------------------------------|
| (3) a. | Thelo
want.1SG | na
SBJV | fighis
leave.2SG | <i>dependent subjunctive</i> |
| | “I want you to leave.”
≠ “I want that I order you to leave.” | | | |
| b. | Na
SBJV | fighis
leave.2SG | | <i>subjunctive imperative</i> |
| | “You should leave!”
= “I order you to leave!” | | | |
| c. | Fighe!
Leave.2SG | | | <i>proper imperative</i> |
| | “Leave!” | | | |

² Both proper and subjunctive imperative have the same uses unless otherwise specified.

As Portner (1997) put it: “The semantic differences among moods contribute significantly to our understanding of their syntactic distribution.” In Greek, the choice between subjunctive and proper imperatives determines its syntactic distribution and the modal uses — compared to the dependent subjunctive — as the set of the contrastive examples (3) illustrates.

There is a tight connection between mood and modality in Greek as both subjunctive and proper imperative (4b-c) are themselves licensers of modal spaces, in other words, of sets of possible worlds, unlike strictly dependent subjunctive which depends on the existence of a licenser — e.g., volitional, permissive, directive, modal, and negative verbs — higher up in the structure (4a). For instance, subjunctive imperative may be used to express requirements and exhortations in 3rd person equivalents of the imperative, and it may be used as an alternative to the imperative in the 2nd person while expressing an offer to do something may be expressed in the 1st person:

- (4) a. Na perasi o Janis
 SBJV come.3SG the next
 “Let John come in!” = “John, come in!”
- b. Na fighis avrio
 SBJV leave.2SG tomorrow
 “‘You should leave tomorrow!’” = “‘Leave tomorrow!’”
- c. Na su po ena paramithi
 SBJV you tell.1SG one tale
 “Let me tell you a tale!” = “I’ll tell you a tale!”

Wishes and curses may also be expressed through a subjunctive imperative, for instance:

- (5) a. Na ise kala!
 SBJV be well
 “May you be well!”
- b. Na mi se ksanadho!
 SBJV NEG.SBJV you see again.1SG
 “Never let me see you again!”
- c. Na hathis ilithie!
 SBJV get lost.2SG idiot
 “Get lost, you idiot!”
- d. Na isuna edho!
 SBJV were.2SG here
 “If only you’d been here!”

The subjunctive imperative may be used to express permission (6a), suggestions (6b), advice (6c), and requirements (6d), for example:

- (6) a. Na pas spiti su tora an thes
 SBJV go.2SG home your now if want.2SG

“You can/may go home now, if you want.”

- b. Na sinandithume sto stathmo ton trenon
 SBJV meet.1PL at-the station of-the.GEN trains.GEN
 “We could meet at the train station.”
- c. Na pame.1PL me to treno
 SBJV go by the train
 “We shall/can travel by train.”
- d. Na stamatas sto kokkino fanari
 SBJV stop.2SG at-the red light
 “You must/have to stop at a red light.”

The subjunctive imperative — like the proper imperative — can be used as a conditional counterfactual (7a) or factual (7b), and as a concessive conjunction making it equivalent to the English concessive “even if” (8), as follows:

- (7) a. Na ton pakalages (ke) tha su ekane ti hari
 SBJV him could ask.3SG (and) FUT you would do.3SG the favor
 “If (only) you could ask him, he would do you the favor.”
- b. Na ton parakalesis ke tha su kani ti hari
 SBJV him ask.2SG and FUT you do.3SG the favor
 “If you ask him, he will do you the favor.” = “Ask him, and he will do you the favor.”

- (8) Ke na ton parakalas dhe tha su kani ti hari
 And SBJV him ask.2SG NEG.IND FUT you do the favor
 “Even if you ask him, he will not do you the favor.” = “Ask him, although I doubt he will do you the favor.”

Both proper and subjunctive imperative share similar uses as illustrated above. However, the instances of subjunctive imperative we saw reflect the choice of a speaker to produce a semantic effect: imperative-weakening. Optional subjunctive — reflecting a speaker's choice — (see Giannakidou 2017) is well-known and cross-linguistically attested, e.g., in polarity subjunctives (Quer 1998, 2001, 2009), in relative clauses conveying uncertainty (Farkas 1985; Quer 1998; Giannakidou 1998, 2013a), in free relatives (Quer 1998, 2001; Marques 2010; Giannakidou and Cheng 2006) and other linguistic phenomena (see Giannakidou 2017 for a detailed discussion). As shown, there is one more kind of subjunctive reflecting a speaker's choice: subjunctive imperative. More specifically, when a speaker selects between a proper or a subjunctive imperative, s/he is making a point to distinguish between the modal force of the utterance in context. That is, the mood variation does not index the truth of the proposition, but rather indicates the weakening of the imperatival meaning in the context. In particular, when choosing the proper imperative mood, the speaker produces an inference of strong desire/intention toward the realization of what was requested. However, when choosing the subjunctive imperative the speaker produces an inference of weak desire/intention. Then, in contrast to the dependent

subjunctive, the subjunctive imperative has semantic contribution. Thus, in rather too simple terms, we may say the proper imperative denotes a high degree and the subjunctive imperative a lower degree of desire/intention. I will say more about this in section 3 and 4.

2.2 Subjunctive imperative: the manifestation of possibility

The subjunctive imperative conveys possibility — existential — modality. An argument for the role of possibility modality in subjunctives is the existence of *epistemic subjunctive* (Giannakidou 2017). Epistemic subjunctive occurs when subjunctive expressions are used to express epistemic uncertainty of an individual or in terms of Giannakidou (2015) to indicate *veridicality weakening* (see Giannakidou 2013a; Giannakidou & Mari 2013a/b; Giannakidou 2017). Observe how mood choice — indicative vs. subjunctive — that is visible in Greek with the complementizer, contributes to the change of meaning in the verb (for a discussion on mood choice see also Portner 1997 and Quer 2001; Giannakidou 2017):

- (9) a. Pistevo oti o Janis ine edo.
 believe.1SG **that.IND** the John is.3SG here
 “I believe that John *is* here.”
- b. Pistevo na ine o Janis edo.
 believe.1SG **that.SBJV** is.3SG the John here
 “I believe (=hope) that John *might* be here.”

The choice of subjunctive imperative, I propose, has the same semantic effect: it indicates the speaker's subjective point of view — introducing a preference ordering, as we will discuss later (section 4.2). Proper imperatives (10a) convey a direct order and the immediate inception or cessation of an action while subjunctive imperatives (10b) an indirect and modal weakening of a requested or offered action, for example:

- (10) a. Figh-e!
 Leave-2SG.IMP
 “Leave!” implies “It is necessary that you leave.”
- b. Na figh-is
 SBJV Leave-2SG.PRF.NPST
 “You should leave!” implies “It is possible that you leave.”

The example in (10b) is epistemically weaker — signaling the speaker's uncertainty — than that with the proper imperative (10a). The proper imperative denotes the universal, whereas the subjunctive imperative denotes the existential quantification. Therefore, Greek employs a morpho-syntactic strategy to mark the weakening with mood suffixes and particles, i.e., a stronger one with the imperative (morphologically) and a weaker one with the subjunctive (morpho-syntactically).

The role of subjunctive in main clauses is not an exclusive characteristic of Greek of course. In many Western Romance languages like Catalan (Hualde 1992), a subjunctive preceded by the complementizer *que* “that” (11b) has a weaker meaning compared to an imperative (11a):

- (11) a. Dóna 'm el llibre ara.
 Give.2SG.IMP 1SG the book now
 “Give me the book now!”
 b. Que em donguis el llibre!
 SBJV 1SG give.2SG.SUBJV the book
 “Do/You should give me the book!”

The same weakening effect via subjunctive is observed in French (12) and Italian (13), and other typologically different languages from Greek such as Lillooet Salish (see Matthewson 2010 for a thorough analysis of the weakening effects of subjunctive) and Nigerian Pidgin (14) (Faraclas 1996), for example:

- (12) a. Sache la vérité!
 Tell.2SG.IMP the truth
 “Find out the truth!”
 b. Que tu saches la vérité! pour la première fois
 SBJV you tell.2SG.SUBJV the truth for the first time
 “May you find out the truth for the first time!”

- (13) a. Tenga le mani a posto.
 hold.3SG.SUBJV the hands in place
 “Keep your hands in place!”

- (14) Mek yù no bay nyam!
 SBJV you NEG buy yam
 “Don't buy yams!”

There appears to be a generalization, then, that a speaker — excluding syntactic dependency phenomena like subordination — has a choice between a proper and a subjunctive imperative (see also section 2.1). In other words, a speaker selects the subjunctive in order to produce a semantic effect: *veridicality weakening*. As Giannakidou (2015) succinctly puts it: “The speaker, in the subjunctive version, has some uncertainty in her epistemic state and her commitment ... there are cases where a speaker chooses the subjunctive, outside these selection contexts, to produce a semantic effect. In this case, the subjunctive does have semantic contribution.” Well known cases where the subjunctive is selected in order to convey uncertainty are polarity subjunctive (Quer 1998, 2001, 2009), relative clauses (Farkas 1985, Quer 1998, Giannakidou 1998, 2013a), free relatives (Quer 1998, 2001; Marques 2010; Giannakidou & Cheng 2006),

modal adverbs of possibility (Giannakidou 2009), and I would add to this list *subjunctive imperative* that express possibility modality, selected by a speaker to produce a semantic effect: convey a weaker imperatival meaning.

3 The semantics of imperatives in Greek: the nonveridical frame

In sections 3.1 and 3.2, I briefly consider some representative accounts of the formal analyses of imperatives. My goal is to present the relevant background and show that imperatives in Greek cannot be accounted for by the current approaches. In section 3.3, I present data that show that both the *subjunctive* and *proper* imperative contribute a presupposition of epistemic uncertainty as to the defeasibility of the outcome by inducing a nonveridical modal space: a polar partition between p and non- p worlds. Imperatives (proper and subjunctive), I argue, function modally at the propositional level. We have already seen in section 2 that the subjunctive imperative has the semantic contribution of uncertainty in the epistemic state and commitment of an individual, and I present more data to this effect in subsection 3.3.1. Nonveridicality — by creating modal spaces — produces a semantic effect: it conveys the strength of intentions an individual holds as I show in section 3.3.2 and provides the fundamental distinction between declaratives and imperatives: a partitioned or not epistemic space

3.1 A brief survey of the existing frameworks in syntax and semantics

Imperatives in English are formed using the bare infinitive form of the verb:

- (15) a. Get up!
b. Go ahead. Take the car keys!
c. Talk politely and you will soften her anger.
d. Raise your voice and I am out of here.

In general, imperatives are used to express *what should be* (15a), *what may be* (15b) and *what would be if* (15c-d). In the first case (15a), the imperative indicates how the world has to be and has a strong directive meaning based on certain personal or social norms, laws, expectations, etcetera. In the second case (15b), the imperative can be interpreted as a wish, concession, acquiescence or indifference. Finally, in the third case (15c-d), the examples of imperatives are found in certain conjunctions, i.e., with *and*, *or* — the construction called IaDs (imperative and declarative) by Kaufmann (2012) — and convey (non-) endorsement on behalf of the speaker (see Russell 2007; Kaufmann 2012; von Stechow & Iatridou 2017 for relevant discussion). In this sense, the third kind of imperatives express a proposition whose validity is dependent on certain conditions and/or hypothetical state of affairs.

In an effort to explain the characteristic property of imperatives as “unmarked or minimally marked” (Palmer 1986: 29), Katz & Postal (1964: 74–79) within a transformational model argue that imperatives feature an underlying IMP morpheme expressing the imperatival meaning (for

similar transformational approaches see also Klima (1964) and Thorne (1966); among others). A purely syntactic approach, however, is refuted (e.g., Kiparsky 1963; Lees 1964; Bolinger 1967; Levenston 1969; Stockwell et al. 1973; Schmerling 1977, 1982; Akmajian et al. 1979; among many others) as the elusive syntactic behavior of imperatives — restrictions on sentence adverbials, co-ordination and negation, and the ban on embedded imperatives — could not be sufficiently explained through transformations.

In the literature of generative semantics, imperatives seems to be dominated by a performative clause conveying the generic meaning “I command/request you” — the roots originating in Austin (1962:32) and directive speech acts — thus, taking a place alongside the declaratives and interrogatives (e.g., Katz and Postal 1964: 149; McCawley 1968: 155–161; Sadock 1969, 1970, 1974; Ross 1970; Ascoli 1978; among others). In this approach, a correlation between the underlying syntactic structure and the illocutionary functions of imperatives is drawn, providing insight into the rich variation of sentence types having imperative and imperative-like uses (e.g., tagged commands, explicit performatives, peremptory declaratives, question imperatives, etcetera). Recent advocates of the performativeness of imperatives include Beukema & Coopmans (1989), Platzack & Rosengren (1998), Potsdam (1998), Han (1999, 2000a/b), Jensen (2003b). For example, Portner (2004, 2005, 2007, 2009, 2012) further argues that imperatives are not propositions — thus, they have no truth values and cannot be modeled in truth conditional semantics — but properties incumbent on the addressee to acquire them via a To-Do-List (TDL) — similar to the “sphere of permissibility” by Lewis' (1979) and *plan set* by Han (1998). Subsequent advocates of the performativity in imperatives also include Ninan (2005), Charlow (2013), Mastop (2005, 2011), and Starr (2010, 2013). Nevertheless, the variation of imperative facts crosslinguistically, i.e., the overt subjects in German imperatives, the obligatory enclisis of an object pronoun in French and Greek imperatives, and the ban on negated imperatives in Greek, Spanish, Italian and Classical Arabic, among other languages, rebuts the main argument of the performative approach (see Stockwell, Schachter & Partee 1973; Downes 1977; Holmberg 1979; among others).

Besides the performative analyses adopted are those semantic accounts suggesting a wider meaning in imperatives: the modal (e.g., Huntley 1980, 1982, 1984; Akmajian 1984, Davies 1986; de Haan 1986, Boogaart 2004). For instance, Kaufmann (2012) and as Schwager (2005a, 2005b, 2006), for example, distinguishes between the contribution of clause type (imperative) and performativity (order, advice, permission, etcetera) and assimilates the modalized propositions with imperatives in a declarative-like semantics. According to Kaufmann (2012), then, imperatives express propositions, and hence, have truth values. However, they also come with a set of additional presuppositions that function like felicity conditions. In the spirit of underspecification, Jary & Kissine (2014, 2015) in a DRT (Discourse Representation Theory) framework argue that imperatives require an assignment function and cannot be judged true or false, thus making a break with classical formal semantics. Finally, Staraki (2017a) argues that imperatives are underspecified nonveridical operators.

Cross-linguistically imperatives — for example, participial imperatives in Dutch and German, infinitival imperatives in Czech, Swedish, Italian, Danish, Faroese, Icelandic, Norwegian, and Swedish and conditional/hypothetical imperatives in English, Hungarian, Greek and Russian — have been shown to convey modality (e.g., Bolinger 1967; van der Meer 1975; Lawler, J.M. 1975; Downes 1977; Davies 1979; Wachtel 1979; Tiersma 1985; Clark 1993a; Wrátil 2000; Boogaart & Trnavac 2004; Staraki 2013, 2017). Assuming, therefore, that imperatives involve a modal component seems fully justified, and understandably, kindle questions about the semantic object that should be assigned to imperatives. Due, though, to their attested modal and performative variation, it has been a difficult task to nail down the underlying logical properties of imperatives. In any case, the following options emerge: Should imperatives be analyzed as a semantic object distinct from declaratives or as a modal in a declarative-like semantics, adding pragmatic machinery blocking truth-evaluation? In the next subsection, I show that the study of this hybrid category — the *subjunctive imperative* in Greek — sheds new light on the analysis of imperatives, by setting the question of imperatives' contribution on the right footing: it is the option between a partitioned or a non-partitioned epistemic domain that differentiates imperatives from declaratives.

3.2 How Greek imperatives diverge

Unlike English (16a), imperatives in Greek are an overt nonveridical operator denoting universal (16b) and existential quantificational force (16c). In contrast, the English imperative is considered as inherently universal (Han 1998, 1999c, 2001; Kaufmann 2012; among others). Existential readings can be accounted for pragmatically (Schwager 2005a, 2005b, 2006, and as Kaufmann 2012) or ambiguous between an existential and a universal reading (Platzack and Rosengren 1998; Grosz 2008a/b, 2014; among others):

- (16) a. Get up!
 b. Siko!
 Get up.2SG
 “Get up!” = “It is necessary that you get up.”
 c. Na sikothis!
 SBJV get-up.2SG
 “‘You should get up!’” = “‘It is possible that you get up.’”

Treating imperatives, thus, as default universal quantifiers cannot be generalized, as shown in (16b-c) with Greek imperatives. The quantifier split in (16b-c) shows that imperatives in Greek overtly denote the range (number of worlds) of the quantificational domain in which something is prescribed. Specifically, (16b) is prescribed in ALL worlds and may be formally represented by a universal quantifier, while (16c) is prescribed in SOME worlds and may be represented by an existential quantifier.

The *subjunctive imperative*, furthermore, may convey deontic modality, relating to obligation, wishes and permission that emanates from some kind of authority, i.e., rules, preferences, desires, the law, and most typically the actual speaker who lays down an obligation or gives permission:

- (19) a. Na erthi mesa
 SBJV come.3SG.IMFV.NPST inside
 “Let him in!”
 b. Na pas sto dhiaolo
 SBJV go.2PL.PFV.NSPT to-the hell
 “Go to hell!”

A few lines above, I said that imperatives in Greek do not have inherent illocutionary (directive) force, contrary to what is assumed in the literature (e.g., Portner 2007; Han 2001; Kaufmann 2012; Harris 2016; among others). There are syntactic and semantic facts that *proper imperatives* and *subjunctive imperatives* have no inherent illocutionary force. First, *subjunctive imperatives* occur only in main clauses on a par with *proper imperatives*. This implies that a subjunctive in order to acquire illocutionary force like an imperative, it has to raise to C node (see Rivero 1994a,b; Rivero & Terzi 1995; Giannakidou 1998; 2009). As Giannakidou (2009) argues the subjunctive particle *na* has a double function as a mood and subordinator. And this is exactly what we observe in (20) where the subjunctive in (20b) acquires illocutionary force while the embedded clause (20c) lacks it.

- (20) a. Fighē!
 Leave-2SG.IMP
 “Leave!”
 b. Na fighis
 SBJV leave-2SG.PRF.NPST
 “You should leave!”
 c. Su ipa na figis
 you told.1SG.PST SBJV leave-2SG.PRF.NPST
 “I told you to leave!”

In order to underline this point, there are occurrences of *na* with other illocutionary forces, e.g., cases with past tense (21a), and interrogative (21b) where no imperative but epistemic meaning arises. The examples in (21), then, indicate two important things: (a) as said earlier, *na* does not inherently contribute directive force, and (b) the subjunctive, as shown in Giannakidou (2009, 2015), receives epistemic possibility readings. Therefore, subjunctive mood has no inherent directive force.

- (21) a. Isos na efighe.
 Perhaps SBJV left-3SG.PRF.PST
 “Perhaps, s/he left.”

- b. Pjos na efighe?
 Who **SBJV** left-3SG.PRF.PST
 “Who (do you think) left?”

In addition, a solid argument that — similarly to *subjunctive imperatives* as mentioned above — *proper imperatives* do not have inherent illocutionary force comes from two syntactic facts in Greek: (a) the incompatibility of negation with proper imperatives, and (b) the proper imperatives and declarative sentence conjoint. First, with regard to (a), Rivero (1994a,b) and Rivero & Terzi (1995) propose that imperative clauses feature a covert operator [IMP] to which a verb has to move, and that the default position of [IMP] is in C⁰. Now, in positive imperatives through head movement the verb goes from T⁰ and Agr⁰ to C⁰ with no problems, acquiring illocutionary force. By contrast, in negative imperatives the head NegP precedes VP, thus functioning as a barrier to the movement of V to C, for example (22):

- (22) *Min fighe!
 NEG.SBJV go.2SG.IMP
 Intended: “Don't go!”

Greek *proper imperatives* — in line with crosslinguistic observations (see Palmer 1986; Aikhenvald 2010; Giorgi & Pianesi 1997; Portner 2004; among others) employ a special bound morpheme generated under Mood⁰ that has to move to C to acquire illocutionary force (see Giannakidou 2009). Moreover, with regard to (b), Greek like other languages — unlike English imperatives that can be questioned whether they are true conditional-imperatives — has morphologically marked imperatives, i.e., Czech (Meyer 2010), German (Thieroff 2010), Irish (Ó Baoill 2010), Spanish (Grande Alija 1997) with conditional meaning, for instance:

- (23) Kalopjase ton ke tha dhis
 Flatter.2SG.IMP him and FUT see.2SG.PVF.NPST
 “Flatter him and you will see! (≈ Flatter him and you will be benefited!)”
 = “If you flatter him, you will be benefited!”

The example (23) from Greek is important because it shows that the imperative receives a non-directive interpretation, thus, making the theories for analyzing the imperatives as inherently encoding illocutionary force considerably weak (see Davies 1986). Therefore, *proper imperatives* — similarly to *subjunctive imperatives* — do not inherently encode illocutionary force. This observation is true for other languages as well (see Jary & Kissine 2014 for a detailed presentation on the matter), refuting the arguments of theories that imperatives are inherently performative (e.g., Searle 1969; Searle & Vanderveken 1985; Han 2001; Vanderveken 2002, 2005; Portner 2007, 2009; Han 2001; Kaufmann 2012; among many others) or that imperatives and directive force cannot be teased apart (e.g., Barker 2004; Mastop 2005).

In consideration of the above, the following generalizations for imperatives in Greek emerge: (a) a particle like subjunctive *na* may take up functions of imperatives and be interpreted

If there is at least one world in W that is a $\neg p$ world, W is nonveridical (non-homogenous modal space).

Considering nonveridicality, a preliminary approximation of the epistemic weakening³ in imperatives can be the following (based on Giannakidou & Mari 2013a/b):

(29) *Epistemic weakening in subjunctive and proper imperatives:*

Epistemic weakening is the creation, by an individual i , of a nonveridical modal space.

After all, the choice of mood has a semantic contribution: a presupposition of epistemic uncertainty.

Epistemic uncertainty and epistemic authority of an individual in imperatives are not novel observations (e.g., Kaufmann 2012: 155; Staraki 2017: 6; among others). Kaufmann (2012), for example, argues that epistemic uncertainty is a presupposition and a felicity condition (see Kaufmann 2012: 4.2.4) associated with imperatives. If an *imperative*(p) is felicitous, it triggers the presupposition that the individual believes that p is true in all the worlds of the common ground (CG) singled out by some ordering source over which the individual has epistemic authority. As a result, imperatives are true in every possible world. This is a very strong prediction (see also Jary & Kissine 2014 for a similar observation), and one that does not correspond to the data from Greek. By contrast, I propose that imperatives are nonveridical operators that do not allow the veridical inference to the truth of p much like any other modal operator (see Giannakidou 1998; Staraki 2013, 2017a/b) conveying epistemic states that allow p and *non- p* . This theoretical stance allows us to view imperatives — and especially subjunctive imperatives — as part of the big picture of modality: there is one underlying property and that is nonveridicality (Giannakidou 2017 for an extensive discussion on the matter). Moreover, it allows us to see imperatives in their real perspective: they function modally, but this time not as a modal in the assertion and presupposition (*pace* Kaufmann 2012), but at the level of propositional functions (see relevant discussion in Bernardi 2002; Giannakidou 2017) — imperatives thus are not disguised declaratives. As an additional side benefit, it is possible to argue that imperatives are not properties (*pace* Portner 2007), regardless of whether they are governed by some modal verb or expression, or not. This is because the property of nonveridicality — common feature in imperatives in Greek, at least — does not strictly require the presence of a lexical item (governing modal/verb) as we saw; it merely requires that a linguistic item create nonveridical — modal — spaces. Imperatives in Greek most certainly can do that, functioning as modals themselves.

3.3.2 Nonveridical frame: intention and evaluation

³ It may seem surprising that the concept of *epistemic weakening* can be applied in the analysis of proper imperatives as they are a universal modal. However, it is not unusual for a universal to indicate reduced speaker's commitment (see Lassiter 2013, Giannakidou & Mari 2013, offering the relevant data).

In section 3.2, I have argued that imperatives do not inherently encode directive force, unless they are found in a main clause. I have also presented the idea, in section 3.3.1, of epistemic weakening as the creation of a nonveridical modal space (following Giannakidou 1998, 1999, 2015; Giannakidou and Mari 2012a/b) in imperatives (Staraki 2017b). Here I want to show that the selection between subjunctive and proper imperative is directly involved in conveying the strength of intentions an individual holds. Specifically, the “strength”, I argue, that underlies the interpretation of imperatives, differs in terms of *weak* and *strong* and is directly associated to the speaker's communicative intentions.

Observe the examples (30a) and (30b). The volitional verb *thelo* “to want” implies the speaker's desire of a certain outcome. It may also have a weaker counterpart in *elpizo* “to hope” (see Givón 1990; Rudanko 1998; Sag & Pollard 1991). (30a) conveys a stronger urge — more like a stronger direct manipulation — than (30b) that expresses a weaker one bordering on a mere hope:

- (30) a. Thelo na vris ena oreo dhiamerizma
 Want.1SG SBJV find.2SG a nice apartment
 “I want you to find a nice apartment.”
 ≈ “I want that you *find* a nice apartment.”
- b. Elpizo na vris ena oreo dhiamerizma
 hope.1SG SBJV find.2SG a nice apartment
 “I hope that you find a nice apartment.”
 ≈ “I hope that you *may find* a nice apartment.”
- c. Na vris ena oreo dhiamerizma
 SBJV find.2SG a nice apartment
 “You should find a nice apartment!”
 ≈ “I *weakly* urge you to find a nice apartment.”
Epistemic possibility: “Given the situation, *it is possible that you find a nice apartment.*”
Deontic possibility: “Within the rules, *it is possible that you find a nice apartment.*”
- d. Vres ena oreo dhiamerizma
 find.IMP.2SG a nice apartment
 “Find a nice apartment!”
 ≈ “I *strongly* urge you to find a nice apartment.”
Epistemic necessity: “Given the circumstances, *it is necessary that you find a nice apartment.*”
Deontic necessity: “Based on the rules, *it is necessary that you find a nice apartment.*”

In English declarative speech acts there is a gradual semantic and syntactic transition from weak to weaker counterparts, manifesting through a choice between (a) the infinitival complement, conveying a deontic meaning, and (b) the subjunctive complement, expressing an epistemic (uncertainty) meaning (see relevant discussion in Givón 1990):

- (31) a. He suggested that you *paint* the wall immediately. *infinitive complement*
weak manipulation
- b. He suggested that you *should have painted* the wall earlier. *subjunctive complement*
lower certainty

In Greek, however, at the level of complementation where the subordinator-subjunctive *na* followed by a verb is the equivalent of the lost infinitive (see Mackridge 1985), the subtle nuances of strong vs. weak manipulation — packaged in declarative speech acts — are not readily apparent. The choice between *weak* and *strong* force survived in main clauses. Consider the next minimal pair of the examples (30c) and (30d). With a subjunctive imperative — an existential operator — there is uncertainty about the realization of *p*; thus, at least for (30c) we do not debate about the weak intention of the *na*-imperative. In uttering (30c), the speaker conveys a weak urge so that the addressee finds a nice apartment, and nothing more than that. There is a level of low certainty on the speaker's part that the addressee will in fact find a nice apartment. The speaker merely utters that s/he does not consider impossible that the addressee find one. By contrast, with a proper imperative — a universal/necessity operator — we still have uncertainty about the realization of *p*, however, the speaker conveys a higher degree of urge than mere subjunctive imperative. In uttering (30d), the speaker conveys a strong urge so that the addressee finds a nice apartment, and that there is some partial commitment (in non-formal way) on the speaker's part. The speaker merely utters a stronger urge than possibility imperative (30b). Then, at the level of the main clause, subjunctive and proper imperative in Greek represent a semantic and syntactic distinction of weak vs. strong directive force, thereby confirming the claims (e.g., Rivero 1994a,b; Rivero & Terzi 1995; Giannakidou 1998; 2009) that imperatives are an operator having to move to C^0 in order to acquire directive force. Given the above observations, we may argue that the nonveridicality inference and the degree of strength of the illocutionary point are now evaluated to what the individual/speaker's communicative intention is: weak or strong. Proper imperatives are stronger than subjunctive imperatives. Moreover, they are still stronger than modalized propositions (e.g., *must*, *should*, etc.), as they do convey the speaker's intention to pursue a certain goal/outcome.

Overall, then, we see that nonveridicality — by creating modal spaces — regulates mood choice in imperatives. In the complement clauses, the mood itself does not seem to contribute anything semantically (see Giannakidou 2009, 2015), however, in the main clauses the selection of mood produces a semantic effect.

4 The framework

A first characterization of imperatives as nonveridical operators can be found in Giannakidou (1998). There, Giannakidou mentions that: “... imperatives as nonveridical operators do not preserve the truth of *p*, nor do they require that *p* be true in *c*” with no further analysis. As we saw in section 3.3, Giannakidou's (1998, 1999 et seq.) leading idea is that nonveridicality is a

property of linguistic expressions related to the entailment of the truth of their complement sentence (see also Zwarts 1995, Beaver and Frazee 2011). As Giannakidou (1997, 1998, 1999, 2011, 2017), building on an argument about perception verbs offered by Montague (1969), argues, nonveridicality is a property of expressions — like modality, moods and modal verbs — that do not entail the truth or the falsity of their complement sentence. As she puts it: “A nonveridical state, on the other hand, is defined as one that contains at least one $\neg p$ world, it therefore conveys weaker commitment to the proposition than a veridical state, i.e. only partial commitment at best.” As follows:

(32) (Non) veridicality of propositional operators

- i. A propositional operator F is veridical iff Fp entails or presupposes that p is true in some individual’s model $M(x)$; p is true in $M(x)$, if $M(x) \subset p$.
- ii. If (i) is not the case, F is nonveridical.
- iii. A nonveridical operator F is *antiveridical* iff Fp entails *not* p in some individual’s model: iff $M(x) \cap p = \emptyset$

It is worth pointing out, that Giannakidou’s (1997, 1998, 2017) distinction is identified with respect to an individual anchor’s epistemic state — a set of worlds, in order to capture the idea that truth is assessed relative to an individual. These models are sets of worlds, epistemic or doxastic alternatives representing what the epistemic agent i believes, and as Giannakidou & Mari (2013) propose, we can think of them as “modal bases” associated with individuals. For instance, in main assertions, the model represents the epistemic space of the speaker, and it includes worlds compatible with s/he believes, what s/he knows, or believes that s/he knows. Giannakidou & Mari (2013) and Giannakidou (2015) also note that from the epistemic domain, we can generalize veridicality and nonveridicality to all kinds of modal spaces (sets of possible worlds), including various kinds of modal bases (see Staraki 2017a), thus, turning veridicality and nonveridicality as properties of the modal spaces:

(33) *Veridical, nonveridical modal spaces*

- i. A set of worlds M is *veridical* with respect to a proposition p iff all worlds in M are p worlds (the property of homogeneity).
- ii. A set of worlds M is *non veridical* with respect to a proposition p iff there is at least one world in M that is a $\neg p$ world. (the property of non-homogeneity).
- iii. A set of worlds M is *antiveridical* with respect to a proposition p iff M and p are disjoint.

In SOME worlds you call today.

- b. Telefonise simera
call.IMP.2SG today
“Call today!”
≈ “I *strongly* urge you to call today.”
[[Call today]]^{c,f,g} = [[You have to call today]]
In ALL worlds you call today.

The subjunctive and proper imperative indeed express intention about the truth of p , and at the same time, they impose a polar partition on the modal space, allowing the possibility of *not p* (see also Staraki 2017: 24), as follows:

(35) **Polar partition of a Modal Base $\cap f(w)$:**

A polar partition \amalg of a modal base $\cap f(w)$ is a division of worlds in $\cap f(w)$ as a union of non-overlapping, non-empty, mutually and collectively exhaustive subsets. The subsets of worlds in $\cap f(w)$ is the quantificational domain of imperatives.

The creation of a nonveridical space differs between imperatives, i.e., conveying relative truth, imposing polar partition on the knowledge space of the speaker (see relevant discussion in Giannakidou & Mari 2013a/b). Specifically, with a proper imperative p is prescribed in ALL worlds (36b), while with a subjunctive imperative p is prescribed in SOME worlds (36a). Now, the nonveridicality of the modal base for imperatives should be revised to the following in order to properly reflect the difference in polar partition and non-homogeneity among possible worlds:

(36) a. **Nonveridical space in subjunctive imperatives:**

If there is at least one world in W that is a *non-p*-world.

b. **Nonveridical space in proper imperatives:**

If, in the set of worlds in W , the set of p -worlds is greater than the set of *non-p*-worlds.

Thus, we observe, first, that imperatives encode nonveridicality in the presupposition — a concept not strange in the analysis of mood and modality (e.g., Giannakidou 2013a-b, 2015; Giannakidou & Mari 2013a/b, 2015; Staraki 2013, 2016a/b, 2017a/b/c) — since both proper and subjunctive require non-homogenous modal bases (Giannakidou & Mari 2015; for a similar concept Condoravdi 2002 and diversity condition; Staraki 2013, 2014, 2016a/b, 2017a/b for proportional non-homogenous modal bases). Second, each kind of imperative encodes a distinct relation between worlds where p and *not p* are live options.

This observed heterogeneity of modal bases in imperatives has not been argued before with the exception of Staraki (2017a) who identifies various kinds of modal bases, and argues that the possible worlds need not be on a par, further showing that modal base in imperatives allow worlds that may be mutually exhaustive and gradable. For instance, some possible worlds may outrank other possible worlds (ibid: 12), and some worlds may vary in degree of necessity to

sentence conveying the speaker's preferences: it is necessary/possible that you take a left turn. Provided the similarity to preference/volitional verbs, it seems reasonable to assume that imperatives — the ordering source — introduce a preference ordering relative to an individual anchor's model of evaluation M_x . Anchors are the individuals uttering the imperative. The nonveridicality of an imperative is now relativized to the individual anchor (for individual anchors Farkas 1992; for anchor's model of evaluation Giannakidou 1998, 2009, 2011, 2015; Lasersohn 2005) The individual anchor's model is a set of worlds, representing what the individual anchor intends, and we may conceptualize of these models as “modal bases” associated with individuals:

(38) Individual anchor's model of evaluation M_x

An imperative proposition IMP_p is true in M_x iff:
 $\forall_w [w \in M_x \rightarrow w \in \lambda w'. p(w')]$

The ordering source $g(w)$, first, creates a nonveridical partitioning in the speaker's modal state by introducing worlds in which $\neg p$, i.e., *you don't take a left*, and secondly, states that the worlds where *you take a left* are preferred over the worlds where *you don't take a left*:

(39) a. **Definition of $g_{weak}(w)$:**

There is at least one world in W that is more desirable to the speaker than a *non-p*-world.

A world A where p holds is **weakly preferred** to a world B where p does not hold iff:

$$\exists w [\{w \mid w \in (M(x) \cap p)\} \geq_{preferred} \{w' \mid w' \in (M(x) \cap \neg p)\}]$$

b. **Definition of $g_{strict}(w)$:**

In the set of worlds in W , the set of p -worlds is more desirable to the speaker than the set of *non-p*-worlds.

A set of worlds A where p holds is **strictly preferred** to a set of worlds B where p does not hold iff:

$$\forall w [\{w \mid w \in (M(x) \cap p)\} >_{preferred} \{w' \mid w' \in (M(x) \cap \neg p)\}]$$

Consider, again, imperatives in (40), but this time with the continuation *I don't care* where the speaker expresses no care, interest or concern about one's taking a left. In this case, it is implied an equivalence relation on preferences (see Staraki 2017a). The individual that utters (40) with the continuation *but I don't care* shows no care for taking a left or right turn:

(40) a. Stripse aristera Strips-e deksia. De me endiaferi!

Turn.2SG.IMP left Turn.2SG.IMP right. I don't care

“Take a left. Take a right. I don't care!”

Paraphrase: *I'm indifferent* as to where you turn.

Preferences_(individual) = {*take-a-left* \equiv *take-a-right* iff *take-a-left* \geq *take-a-right* \wedge *take-a-right* \geq *take-a-left* for x }

Implication: The action “take a left” and the action “take a right” are indifferent to the individual's preferences.

b. Pes ena traghudhi. De me endiaferi!

Say.2SG.IMP left a song I don't care

“Sing a song. I don't care!”

Paraphrase: *I'm indifferent* as to whether you are going to sing or not.

Preferences_(individual) = {*sing* \equiv *not-sing* iff *sing* \geq *not-sing* \wedge *not-sing* \geq *sing* for x }

Implication: The action “sing” and the action “not-sing” are indifferent to the individual's preferences.

Aloni's (2004, 2007a-c) distinction between *choice-offering* (40a) and *no-choice-offering* (40b) imperatives won't be efficient for various reasons, but most importantly because it does not predict that even plain imperatives (40b) may trigger a preference ordering (see Staraki 2015 for an overview). None of the imperatives in (40) is interpreted exclusively as permission or order. Imperatives in (40) seem to express something more than mere necessity or possibility: *I'm indifferent as to...* The essential component we should capture, then, is indifference. Aloni (2004) and Kaufmann (2012)⁴ rightly point to some sort of universality but they do not provide an interpretation for the indifference component which, although the individual requires the addressee to act somehow, at the same time, s/he states that s/he is indifferent as to whether the addressee in fact complies with the requirement issued, i.e., (40a-b). We should enrich, thus, the analysis with a component that will predict this equivalence inducing imperatives.

Indifference should be considered as a subtype of the ordering source denoting preference equivalence on possible worlds. In other words, I propose that *indifference* represents an ordering relation in which *p* and *non-p* are equally good or indifferent to an individual. The individual indicates the absence of an effect on him/her or the lack of will to influence the

⁴ Current theories (Aloni 2004; Kaufmann 2012, among others) fail to capture the semantics of indifference because they rely on uniform possibility or necessity semantics for imperatives, relegating the various readings to pragmatics. The account I propose treats imperatives as modals with an underquantified (underspecified) domain. This way, we can paraphrase any imperative of the form *an individual orders Y* as *there is a set of things X that an individual considers, a certain number of which Y the individual prefers/requires*. From this partitive construction, we can derive all the various readings of imperatives, including the most puzzling ones, such as the indifference readings (see Staraki 2015).

addressee, as shown by examples (41a-b). The *p*-worlds and the *non-p* worlds do not have a hierarchical/dominance relation to one another, because the individual chooses not to posit any strict or weak ordering in contrast to (41a-b). The individual is indifferent about certain actions because to him/her they are identical or similar situations. The following defines *indifference*:

(41) **Definition of $g_{invariant}(\mathbf{w})$:**

In the set of worlds in \mathbf{W} , the set of *p*-worlds is equally good or indifferent to the set of *non-p*-worlds.

A set of worlds A where *p* holds is **equivalent** to a set of worlds B where *p* does not hold iff:

$$!\forall \mathbf{w} [\{ \mathbf{w} \mid \mathbf{w} \in (\mathbf{M}(\mathbf{x}) \cap p) \} \equiv_{preferred} \{ \mathbf{w}' \mid \mathbf{w}' \in (\mathbf{M}(\mathbf{x}) \cap \neg p) \}]$$

The observation made here with regard to the existence of preferences in imperatives is in line with previous literature. For instance, there are accounts that directly link imperatives to a preference structure (Condoravdi & Lauer 2011, 2012), to an ordering source consisting of speaker's beliefs and preferences (Han 1998; Kaufmann 2012), and to a set of alternative preferences (Starr 2013; Staraki 2015, 2017), thus corroborating the claim that imperatives convey an individual's preference ordering by providing a bias toward to a set of worlds in the modal base (Staraki 2013, 2017). The observation is also reminiscent of desire reports by Heim (1992), and faithful in spirit to Giannakidou's (2015) analysis of the evaluative subjunctive. Yet, there is a new contribution in the current analysis: a separation of ordering sources precisely reflecting the preference ordering of an individual, and properly formalizing indifference in imperatives. In other words, I argue, that the type of ordering of the worlds (namely, the preference ordering) in the modal base is significant, affecting the interpretation of imperatives and playing, as we saw in the above examples, an essential role in determining the “strength” (strong vs. weak vs. indifference). The preference ordering in imperatives, therefore, in Greek, becomes explicit through the choice of mood.

Notice, now, that the separation of ordering sources is not just a “peculiarity” of Greek. Japanese⁵ features a morphological distinction that conveys the preference ordering of an individual. For instance, the Japanese example (42) is appropriate only when the individual wants to express weak preference:

- | | | |
|------|--|-------------------------------|
| (42) | Hidari-ni
Left-to
“Turn left!”
$g_{weak}(\mathbf{w})$: | maga- tte!
turn-IMP |
|------|--|-------------------------------|

⁵ I would like to thank Osamu Sawada for providing so generously the Japanese examples which confirm my analysis on preference ordering and imperatives.

Take a left is **weakly preferred** to *Do not take a left* iff:

$$! \exists w [\{w \mid w \in (M(x) \cap \textit{take-a-left})\} \succeq_{\textit{preferred}} \{w' \mid w' \in (M(x) \cap \textit{not-take-a-left})\}]$$

By contrast, imperatives with the suffix *-e* (e.g., *magar-e*, ‘turn-IMP’) express a stronger degree of requirement than those with the suffix *-te*; imperatives with the suffix *-e* feature a strict ordering:

- | | | |
|------|--|------------------------------|
| (43) | Hidari-ni
Left-to
“Turn left!”
$g_{\textit{strict}}(w)$: | maga- re!
turn-IMP |
|------|--|------------------------------|

Take a left is **strictly preferred** to *Do not take a left* iff:

$$! \forall w [\{w \mid w \in (M(x) \cap \textit{take-a-left})\} >_{\textit{preferred}} \{w' \mid w' \in (M(x) \cap \textit{not-take-a-left})\}]$$

The imperative in (43) conveys a strong authoritative direction, i.e., when ordering soldiers, but it would never be used by a driving instructor; while the example in (42) features a much more moderate ordering of preferences by the individual. Thus, we may assume that in Japanese too, one may express the nuances of ordered preferences with the morphological distinction between *-te* and *-e*; which morpheme will be used is a matter of preference determined by the individual. Thus, the use of an ordering source that reflects an individual’s ordered preferences is not just an abstractly motivated part of the analysis presented here. Rather, it appears to be an essential component of imperatives’ logical structure explicitly featured in Greek and Japanese at least. I believe that languages in general have more or less similar ways — explicit or implicit — to denote an individual’s strong or weak predispositions, but that classification will be the subject of future work.

Linking the mood choice to the change of meaning in the verb is not an *ad hoc* argument. Actually, Quer (2001) for Spanish, Portner & Rubinstein (2016) for English and French, and Giannakidou (2015) for Greek argue that the phenomenon is quite common. Then, we may conclude that the dual mood pattern is part of this phenomenon: the choice between proper and subjunctive imperative correlate with change in the verb meaning. The subjunctive imperative produces a weak modal and the proper imperative a strong modal reading. In other words, we have an alternation between subjunctive and proper imperative producing distinct semantic effects via the kind of ordering source.

Imperatives in Greek, an overt nonveridical operator, introduces a selection function (see Staraki 2017) that maps an individual’s preference ordering $\leq g_i$ to the propositions of a modal base $f(w)$. While a proper imperative says that the set of *p*-worlds is strictly preferred than the set of *non-p*-worlds based on the preference ordering of the individual, the subjunctive

imperative says at least one p -world is weakly preferred than a $non-p$ -world based on the individual's preferences.

(44) a. Proper imperative:

$$Selection_{f(w)}^{g(strict)}$$

b. Subjunctive imperative:

$$Selection_{f(w)}^{g(weak)}$$

5. Comparison with some related approaches

5.1 Han (1998, 1999a,b,c, 2001)

Han (1998) argues in detail that imperatives are an operator which is a set of morphosyntactic features, including a feature that encodes directive force, and another feature that encodes irrealis modality (unrealized interpretation). Imperatives, according to Han (1999a,b,c), are instructions updating the plan set of a hearer and have the direction force of the speech act they perform (order, wish, permission, etcetera). Han's approach and mine agree in treating imperatives as operators and as having a conversational background (modal base, ordering source) as parameters of their interpretation.

An essential conceptual difference between Han's approach and mine, though, is that in her account imperatives are treated on a par with deontic modals. Han (1999c) argues that imperatives are similar to the deontic modality expressed by modal verbs like *must* and *may*, and offers a formal analysis of imperatives based on Kratzer's (1986, 1991) semantics of modality and conditionals. Like Han (1999c), Kaufmann⁶ (2012) argues that imperatives denote modalized propositions similar to modalized declaratives, and the only difference is that, while modalized declaratives have both descriptive and performative use, imperatives have only performative use.

Kaufmann (2012) further argues that a presuppositional component restricts the operators use to contexts and performative effects. In Han's (1999c) and Kaufmann's (2012) approaches a parallel between imperatives and deontic modal verbs is supported, for example:

(45) Sit! \approx You must/should sit!

⁶ Since Han (1998 et seq.) and Kaufmann (2012) are in agreement on considering imperatives as modalized propositions, I decided to refer to both of them in this section and avoid repeating the argument in the following part about Kaufmann (2012).

(45) is based on the assumption that imperatives can be paraphrased as a performative *should* \varnothing (Kaufmann 2012: 60, Hypothesis 2.2). Intuitive right as it may seem, this assumption sets the incorrect premises in the analysis of imperatives for two reasons. First, imperatives and modal verbs do not denote the same semantic object (Staraki 2015a). Imperatives unlike performative modal verbs have the assertoric force to present a proposition as true (for the assertoric force Frege 1892: 150, 1897: 140; Kissine 2008; for the assertoric force of imperatives Kaufmann 2012; Staraki 2013, 2015a, 2017a), For example, in Greek, while imperatives assert something as true, modal propositions evaluate the truth:

- (46) a. Sevasou.2sg.IMP ta dikaiomata ton alon
 Respect the rights of the others!
- b. # Sevasou ta dikaiomata ton allon! Ala min to kanis.
 # Respect the rights of the others! But don't do it.

In example, with the imperative (46a) the speaker asserts the truth of a necessity, disallowing inconsistencies on the part of a speaker, thus becoming infelicitous, if negated (46b). For putting an imperative forward as true, for example (46), is not the predication of 'true' (Staraki 2015a). On the contrary, with a modal verb a speaker assesses the degree of the truth of a necessity or permission. In Greek, a deontic modal expression can be negated, without resulting into a contradiction (see Staraki 2013, 2015a, 2017a), while in English it is acceptable by some speakers, for example:

- (47) Context: You accidentally killed your friend's cat.
- Prepi na zitisis sighnomi apo to filo su, ala min to kanis!
 Must SUBJ ask sorry from the friend yours but not it do
 ? # You must apologize to your friend, but don't do it.

Second, the fact that imperatives express similar meaning to that of *must* does not mean that imperatives are equivalent to modalized declaratives. As we have already seen in section 2 and 3 imperatives represent a larger array of modalities. For instance, an imperative does not mean that there is in fact a norm that licensed it, for example:

- (48) a. Pighene sto dhiaolo ≠ Prepi na pas sto dhiaolo
 go.2sg.IMP to-the hell *curse*
 Go to hell ≠ You must/might go to hell
- b. Dhiaskedhase sto parti ≠ Prepi/bori na dhiaskedhasis sto parti

Have fun.2sg.IMP to-the parti		<i>wish</i>
Have fun at the party		≠ You must/might have fun at the party
c. Endaksi! Fighē,	tote!	≠ Prepi/bori na fighis tote
OK go.2sg.IMP then		<i>concessive</i>
OK, go, then!		≠ You must/might have at the party

As for the semantics of imperatives, Han (1998, 1999c) assumes that imperatives are by default universal. We have seen, however, that treating imperatives as default universal quantifiers cannot be generalized, as shown in Greek imperatives where there is an explicit separation between the proper and subjunctive imperatives. Moreover, we showed that indifference-imperatives indicate that a default universal quantifier cannot efficiently capture their semantic contribution implying an equivalence relation on preferences (section 4.2).

Turning now more specifically to what constitutes a modal base in imperatives, Han (1999c) proposes that their modal interpretation is based on a totally realistic modal base $f(w)$ which contains all the facts known to the speaker in w . However, a totally realistic modal base is tantamount to assign to every possible world a set of propositions which are true in that world. It is a universal quantification in reverse. It is not clear, then, how a totally realistic modal base could deal with cases (see section 3 and 4.1) where the non-homogeneity of modal bases in imperatives is presupposed, encoding a distinct relation between worlds where p and *not* p are live options.

The ordering source $g(w)$ is the set of obligations or permissions issued by the speaker (Han 1999c). This assumption is problematic in the face of the examples in section 4.2. In cases like (37), an ordering source, as argued by Han (1999c), is incompatible with the role of imperatives in understanding how individuals decide what to do and how individuals guide actions. Thus, the assumption that imperatives feature an ordering source that contains obligation or permissions is not warranted, and this undermines Han's account of imperatives. This problem does not arise when the ordering source is analyzed as a preference ordering relative to an individual anchor's model of evaluation M_x . In fact, an individual-relative ordering source can effectively represent and predict the case of indifference-imperatives (section 4.2) as an equivalence on preferences.

5.2 Portner (2005, 2007a/b)

Portner's (2005, 2007a/b) analysis focuses on the pragmatics of imperatives, promoting the idea that they are not propositions but properties incumbent on and restricted to the addressee(s) To-Do List — a set of propositions the individual is committed to make true. In parallel, Portner assumes a logical language that reflects those differences in having a clear morpho-syntactic distinction between declarative-propositions and imperative-properties by assigning different semantic values to imperative and declarative sentences. Despite I agree that there are indeed

reasons to keep imperatives and declaratives as distinct semantic objects, Portner's and my analysis differ on the following points.

First, I take imperatives to be nonveridical propositional operators: they do not require commitment of the speaker to the truth of the *p*. Instead, Portner argues that imperatives are properties that at the syntactic level they all have second-person features, thus, presupposing the property is applicable only to the addressee (see also Zanuttini et al. 2012). This assumption explains the conflict between the 3rd person subject and the imperative in (49a):

- (49) a. *Emma kiss (you)!
 b. (You) be kissed by Emma.
 c. Everyone switch your phone off!
 d. Everyone switch his/their phone off!

If imperatives were propositions then (49a) would be grammatical. (49a) and (49b) that express the same content, and have to be able to put a requirement on the addressee that he be kissed by Emma. However, (49a) cannot place a requirement on the addressee, thus, imperatives are all 2nd person properties. In my view, Portner's argument can be challenged on two counts. There are cases of 3rd person imperatives where the 2nd person pronouns can be used to refer to the 3rd person subject (49c) — though these seem to be restricted to indefinite pronominal subjects, i.e., *everyone*, *no one*, *someone*, etc. And second, there are imperatives that stand in morphological agreement with the 3rd person subject (49d). Thus, in English the 2nd person syntactic assumption does not seem to generally apply — not even in English.

But even if we may dispute the validity of the given examples in (49c-d) on the ground that *everyone* might be vocative, Greek evidence tell us otherwise. As mentioned in 2.1, subjunctive imperatives in Greek may be used to express directive meaning (commands, requests, exhortations etc) in 3rd person equivalents of the imperative, and they may be found in the 2nd person and 1st person as well. Subjunctive imperatives should also stand in morphological agreement with the subject (50a-b):

- (50) a. Oli na klisete/klisun to kinito sas
 Everybody SBJV switch the phone your
 off.2PL/3PL
 “Everyone switch your/their phone off!”
 b. Na erthi ke o Janis/*esi/*esis
 SBJV come.3SG and the John/you.2SG/*you.2PL
 “Even John should come!”
 c. I Emma na se filisi
 Emma SBJV you kiss
 “Emma should kiss you”
 d. Na filithis apo tin Emma
 SBJV be by the Emma
 kissed.3SG

“You be kissed by Emma!”

Moreover, the respective examples (50c) and (50d) to (50a) and (50b) do not express the same content: in (50a) the requirement is placed on Emma, and in (50d) on the addressee. Thus, the assumption that imperatives are syntactically 2nd person and always signal the addressee's commitment to the TDL is not justified.

Second, under Portner's perspective, declaratives and imperatives also differ in their discourse function: the former provide information and update the common ground (CG), while imperatives are typically used as requirements for action (commands, orders etc.) and cannot update the CG. Yet, imperatives, as we have seen, may update the CG through an individual's epistemic model, and — Greek imperatives at least — do not inherently encode directive force (section 3.2).

Therefore, I conclude that Portner's account of imperative as properties and my own come from different starting points. For now, I assume that imperatives may be interpreted as nonveridical operators, reflecting the speaker's choice and epistemic uncertainty, and as conveying weak and strong preference orderings. Ultimately, I would like to investigate the contribution and the function of imperatives as directive speech acts but this must be left for future occasion.

5.3 Kaufmann (2012)

Kaufmann's work on interpreting imperatives has served as an inspiration to the approach I have developed here. A fundamental insight I take over from her work is the distinction between the contribution of clause type (imperative) and performativity (order, advice, permission, etcetera). A major conceptual difference, however, is that Kaufmann's account relies crucially on a presuppositional component — as felicity conditions, while my account is semantically and not pragmatically driven.

Kaufmann assimilates the modalized propositions with imperatives (see sections 2 and 3 for counterarguments), arguing that imperatives are a particular type of sentence-level form type associated with the prototypical function ORDER. Kaufmann (2012) argues that imperatives express propositions and hence, have truth values, however, they come with an additional presuppositional meaning. Kaufmann (2012: 4.2.4), then, argues that the semantic contribution of the imperative amounts to the following three presuppositional ingredients: (a) the epistemic authority condition, (b) the epistemic uncertainty, and (c) the ordering source restriction. The first presupposition is justified in the epistemically privileged position of an authority. The second presupposition pertains to the intuition that with imperatives we cannot allow the veridical inference (commitment) to the truth of a proposition. The third presupposition concerns the issue of whether there is a salient decision problem in the context or not. Although not explicitly, these presuppositions constitute a set of constraints on the parameters of interpretation — the conversational background and context. This means that the set of presuppositions — a pragmatic machinery — for imperatives, according to Kaufmann (2012), should be met, if an

imperative is to be felicitous, and, when these constraints are met, then an imperative is necessarily true. I think these presuppositions are generally correct but misleading in that they make general features of communication into particular semantic features of imperatives, and falsely correlate the felicity of an expression with challenging its truth content. Let's consider a characteristic example:

- (51) Ann: Do fifty push-ups!
Belle: Hey wait a minute, you are in no position to give me orders.
- (52) a. Epistemic authority: The speaker is the epistemic authority iff s/he is aware of what kind of directive speech acts s/he is entitled to perform in the context.
b. Epistemic uncertainty: The epistemic authority or the speaker believes that $IMP\ p$ and $\neg IMP\ p$ hold in the context.
c. Ordering source: If the addressee believes that the speaker is sincere and cooperative, then the addressee believes that $IMP\ p$ is necessarily true in all worlds that best conform to what the speaker commands in the context.

With regard to the first presupposition — the epistemic authority — it does not seem to bring out a characteristic specific to directing one's future actions, i.e., the imperative, as opposed to promising, threatening or asserting. Any communicative action requires the speaker's awareness of what s/he is entitled to perform in any context of utterance.

With regard to the second presupposition — the epistemic uncertainty — it cannot properly capture that when a speaker utters an imperative s/he is not committing him/herself to some future action. The reason is that epistemic uncertainty presents the speaker as simultaneously having two conflicting belief states $IMP\ p$ and $IMP\ \neg p$. The opposite, however, is more intuitive: a set of nonveridical-uncertain states (see section 3 and 4) are relevant to an individual's epistemic model and not the individual him/herself. This theoretical stance allows us to effectively capture an individual's uncertainty state without committing ourselves to contradicting beliefs.

As for the third presupposition — sincerity and cooperation — this again seems to be a very general condition relating with the notion that communicative acts conventionally express information about a certain attitude or motive that is conveyed by the communicative act in the context of utterance. The sincerity and cooperativeness presuppositions relating to the ordering source in imperatives, then, is a general *ethical* requirement on communication to the effect that the $IMP\ p$ is not misleading. It just takes the addressee's rejection to judge an imperative as false. For instance, Belle's answer (rejecting Ann's authority) throws off the felicity of *Do fifty push ups* and marks the imperative as necessarily false. Not having the attitude one by convention is supposed to have in uttering an imperative would be to deceive, and in Kaufmann's account it is not clear why this ethical condition should be part of the meaning of an imperative in blocking truth-judgment.

Whereas, therefore, these distinctions have influenced my account of analyzing imperatives, the approach I propose departs from them. Nonveridicality provides an intuitive and effective

way of capturing epistemic uncertainty in imperatives truth-conditionally, and a straightforward semantics that the truth of the imperative is not absolute but relative to an individual. This approach to imperatives offers the advantage of avoiding unnecessary pragmatic machinery — directive force and presuppositions — to block truth-evaluation and not committing to the question whether the imperative mood is a modalized declarative akin to a necessity modal. Imperatives, in a nutshell, express a disposition, though a mere disposition: without entailing or presupposing the truth of the proposition they take as input.

5.4 Condoravdi & Lauer (2010, 2011, 2012)

Condoravdi & Lauer (2010, 2011, 2012) argue in detail that the various uses of imperatives arise from the interaction of imperative meaning with contextual conditions. Condoravdi & Lauer's approach and mine agree that it is not the directive force that is semantically encoded (section 2) — there is no systematic link between the illocutionary and the directive force in imperatives — the speaker's effective preferences in imperatives (section 3).

An essential conceptual difference between Condoravdi & Lauer's approach and mine, however, is that they assume that imperatives, as with assertions bringing about a doxastic commitment, commit the speaker to a particular kind of preferences. Condoravdi & Lauer — just like Han (1998, 1999a,b,c, 2001), Portner (2005, 2007), and Kaufmann (2012) — consider that the commitment on the part of the speaker is built-in on the semantic component. In particular, they propose that in uttering an imperative, a speaker commits to his/her beliefs and preferences. According to Condoravdi & Lauer “ ... being committed to having a certain preference means being committed to choose one's action as if one really has this preference, and similarly for belief.” As proof for this assumption, they argue that it is always infelicitous to produce an utterance of the form “*IMP p*, but I don't want *IMP p*”, for example:

(53) # Work on this problem! I don't want you to work on this problem but you can do it.

As we have seen, however, this assumption is problematic in analyzing imperatives as the speaker's preferences can be overruled and reversed:

- (54) a. Work on this problem! I don't want you to work on this problem but if you want to ace the test you have to.
 b. Work on this problem! I don't want you to work on this problem but my opinion does not really matter.

Rational individuals keep or commit to preferences, but not forever; they discharge those preferences believed to have been satisfied (55a); alter preferences when relevant facts change (55b); and convey indifference (55c):

(55) a. Fere ena potiri nero. A, eferes kiolas.

- | | | | | | | | |
|----|--|------|----------------|------------|-------|-----------------|---------|
| | Bring.2SG.IMP | one | glass | water | oh | brought.2SG.PST | already |
| | “Bring me a glass of water. Oh, you have already brought one.” | | | | | | |
| b. | Fere | tin | efimeridha. | kalitera | fere | to | vivlio |
| | Bring.2SG.IMP | the | newspaper | no, better | bring | the | book |
| | “Bring me the newspaper. Or better yet, bring me the book.” | | | | | | |
| c. | Feris | dhen | feris | to vivlio | dhe | me niazi | |
| | Bring.2SG.SBJV | NEG | Bring.2SG.SBJV | the book | not | me care | |
| | I don't care, either bring the book or not. | | | | | | |

As Condoravdi & Lauer's formalism of commitment now stands, then, once an individual adopts a preference, s/he will not be deterred. For example, if an individual *i* utters *Buy an umbrella. It will rain*, and later revises his/her beliefs, the individual cannot turn *Buy an umbrella* off; the individual is committed to the preference *Buy an umbrella*. This is obviously a non efficient analysis of imperatives. The account I propose is couched in the semantic framework of nonveridicality and individual's anchors states that allows us to relativize preferences to the individual's epistemic state — beliefs, intentions and goals. In this respect, when an individual *i* utters *Buy an umbrella*, this becomes relative to his/her epistemic state. If later, the individual revises his/her beliefs and utters \neg *Buy an umbrella*, this is relative to his/her revised epistemic state. This means we can formalize individuals weakening their preferences — commitments, that is to say — and at the same time, capture the property of nonveridical operators that do not entail or presuppose the truth or the falsity of their proposition. And, Greek, as I have shown, has two strategies for commitment weakening, i.e. a stronger one with the universal-proper imperatives and a weaker one with the existential-subjunctive imperatives.

6. Conclusions

The purpose of the paper was twofold. First, I re-introduced the landscape of imperatives in Greek by identifying *subjunctive imperatives* a case where the subjunctive particle *na* takes up functions of imperatives, and is the counterpart of *proper imperative*. Then, I showed that the modal and morphosyntactic variation in imperatives becomes quite manageable, if we accept two positions: firstly, the sensitivity of imperatives to nonveridicality, and secondly, the connection of imperatives with a polar opposition between *p* and *not p*. Subjunctive imperatives, in fact, manifest themselves with *na* particle, and in all cases contribute a nonveridical space, i.e., a modal space with a polar partition into *p* and *not p* worlds. Subjunctive imperatives and proper imperatives alike are themselves nonveridical. That a particle like subjunctive *na* takes up functions of imperatives and is interpreted modally is not an odd finding especially for Greek a language where particles also function as modals (e.g., Giannakidou 2012, Giannakidou and Mari 2015, Staraki 2013, 2017 for future particle). The current approach suggests that imperatives are not merely a modalized declarative akin to a necessity modal with inherent directive force, as widely disseminated, but rather that imperatives create a nonveridical partitioning in the speaker's epistemic state by introducing a polar partition on possible worlds.

If imperatives, then, are not disguised modal declaratives but nonveridical operators — as I extensively argued here — then, whether imperatives constitute a modal or not is a pseudo-dilemma; the much-discussed and, in my opinion, false dichotomy on the basis of morpho-syntactic features between declaratives and imperatives can no longer be maintained, at least not as one related to semantics. The issue of the morpho-syntactic category of imperatives is and should be kept distinct from the issue of its semantic contribution, and this is a novel conclusion for imperatives. Imperatives should be reexamined as a notional category based on their semantic contribution and nonveridicality seems to be an essential component in their meaning.

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