

On some properties of the complementizer *ke*

George Kotzoglou & Costas Canakis

University of the Aegean

gkotz@rhodes.aegean.gr, c.canakis@sa.aegean.gr

Περίληψη

Στο άρθρο αυτό εξετάζουμε ορισμένα μορφοσυντακτικά και σημασιακά χαρακτηριστικά των συμπληρωματικών προτάσεων που εισάγονται με τον σύνδεσμο και. Επισημαίνουμε τη μορφολογική εξάρτηση των εν λόγω προτάσεων από το ρήμα της υπεράνω πρότασης, η οποία εκδηλώνεται μέσω της υποκαθορισμένης/ ελλειμματικής ρηματικής μορφολογίας. Στη συνέχεια, εξετάζουμε την αιτία για την οποία τα ρήματα τα οποία επιλέγουν ως συμπλήρωμα και-προτάσεις αποτελούν υποσύνολο εκείνων που επιλέγουν να-συμπληρωματικές προτάσεις. Δείχνουμε ότι το και εισάγει προτάσεις των οποίων το περιεχόμενο προϋποτίθεται, θεωρείται δεδομένο, γεγονός που ερμηνεύει τη μη δυνατότητα επιλογής των και-συμπληρωματικών από ρήματα εξάρτησης με συγκεκριμένες σημασίες. Τέλος, προτείνουμε ότι μέρος της κατανομής και της συντακτικής συμπεριφοράς των συνδέσμων ότι/πως, να, που, και, προκύπτει από δύο χαρακτηριστικά τους: την ελλειμματική ή μη μορφολογία και τη σημασία της προϋπόθεσης που επιβάλλουν ή μη στις προτάσεις τις οποίες εισάγουν.

Λέξεις-κλειδιά: και-συμπληρώματα, ελλειμματική μορφολογία, σύνδεσμοι, προϋπόθεση

1 Introduction

The Greek complementation system has been thoroughly described and analyzed in a number of works (Ingria 1981, Kakouriotis 1982, Varlokosta 1994, Roussou 1994, 2006, among others). Quite prominent in these works is the description of embedded (traditionally termed *volitional*) *na*-clauses. Those clauses seem to be both morphologically and syntactically dependent on the matrix verb at certain instances (though by no means always). Taking this into account, a large number of papers discusses the morphosyntactic restrictions on the predicate of *na*-clauses (cf. Philippaki-Warburton and Veloudis 1984, Iatridou 1993, Moser 1997, 2007, Roussou 2006, 2009) and/or the issue of non-finiteness/control (Terzi 1992, Iatridou 1993, Eftimiou 1997, Philippaki-Warburton and Catsimali 1998, Varlokosta 1994, Spyropoulos 2007, Roussou 2009, Spyropoulos and Philippaki-Warburton 2010, among many others) that often arises in the relevant contexts.

This article discusses some morphosyntactic properties of complement clauses introduced by the complementizer *ke* (και) ('and') in Greek, such as the bracketed ones in (1-2), which make them quite similar to *na*-clauses in certain respects.

- (1) Αρχισε και έτρεχε.
started.3sg and ran.3sg
'He started running.'
- (2) Θα μάθω και θα μαγειρεύω.
FUT learn.1sg and FUT cook.1sg
'I will learn to cook.'

The existence of subordinate *ke*-clauses has been noted in the literature (Tzartanos 1946, Householder et al. 1964, Mackridge 1987, Roussou 2006, Spyropoulos 2007, among others), but these structures have not been discussed systematically, with the exceptions of Kazazis (1965), Canakis (1995), Delveroudi (1995), and Kotzoglou (2018).

In this paper we present the main morphosyntactic properties of complement *ke*-clauses and we discuss their special semantic import, noting that they give rise to a strong presuppositional reading. Then, we attempt a preliminary categorization of the complementizers introducing Greek complement clauses by including *ke* into the group of *oti*, *na*, and *pu*.

The paper is structured as follows. Section 2 discusses the properties of *ke* as a subordinator that distinguish it from its function as a coordinator. Section 3 lays out the morphological limitations imposed on the predicate of *ke*-complements. In section 4 we explore the issue of obligatory coreference (control) between the subject of the *ke*-clause and a matrix argument. Section 5 explores the similarities between *ke*-clauses and factive *pu*-clauses and argues that the former give rise to a presuppositional reading quite similar to the latter (cf. Nikiforidou to appear). Finally, section 6 offers a brief comparison of some complementizers introducing complement clauses in Greek.

2 Differences subordinating *ke* from paratactic *ke*

The main differences between the subordinator *ke* and other instances of *ke* (most importantly, though not exclusively, its paratactic use) have been discussed in Canakis (1995), Delveroudi (1995) and Kotzoglou (2018). Let us review some of them.

First of all, to the extent that the clauses conjoined by paratactic *ke* are not temporally (or causally) sequential, their order may be reversed (Delveroudi 1995):

- (3a) Η Μαρία αγόρασε ένα σπίτι και η Σοφία
 the Maria bought a house and the Sophia
 πήρε προαγωγή.
 got promotion
 ‘Maria bought a house Sophia got a promotion.’
- (3b) Η Σοφία πήρε προαγωγή και η Μαρία αγόρασε
 the Sophia got promotion and the Maria bought
 ένα σπίτι.
 a house
 ‘Sophia got a promotion and Maria bought a house.’

This is not the case in *ke*-complements, where inversion leads to ungrammaticality (cf. (4b) and (5b)):

- (4a) Ο Νίκος άρχισε και έτρεχε.
 the Nick started and ran
 ‘Nick started running.’
- (4b) *Ο Νίκος έτρεχε και άρχισε.
 the Nick ran and started
 ‘Nick started running.’
- (5a) Η Ελένη ξέρει και κολυμπάει.
 the Eleni knows and swims

- ‘Eleni knows how to swim.’
 (5a) *Η Ελένη κολυμπάει και ξέρει.
 the Eleni swims and knows
 ‘Eleni knows how to swim.’

What is more, true conjoined structures disallow *wh*-subextraction from just one of the conjuncts (6a) (due to some version of Ross’s 1967 Coordinate Structure Constraint) and permit it only across the board (6b).

- (6a) *Τι [αγόρασες εφημερίδα] και [μαγείρεψες ι];
 what bought.2sg newspaper and cooked.2sg
 ‘What did you buy a newspaper and cook?’
 (6b) Τι [αγόρασες ι] και [μαγείρεψες ι];
 what bought.2sg and cooked.2sg
 ‘What did you buy and cook?’

On the contrary, *ke*-complements allow *wh*-extraction from the *ke*-clause (at least, argument extraction, see section 5):

- (7a) Τι ήξερες [και τραγουδούσες ι];
 what knew.2sg and were.singing.2sg
 ‘What did you know how to sing?’
 (7b) Τι θα αρχίσει [και Θα μας λέει ι];
 what FUT start.3sg and FUT us.gen tell.3sg
 ‘What will he start telling us?’

Which are parallel to the (also grammatical):

- (8a) Τι ήξερες [να τραγουδάς ι];
 what knew.2sg NA sing.2sg
 ‘What did you know how to sing?’
 (8b) Τι θα αρχίσει [να Μας λέει ι];
 what FUT start.3sg NA us.gen tell.3sg
 ‘What will he start telling us?’

The status of the *ke*-clause as an argument of the superordinate verb can be evidenced by the fact that, once the *ke*-clause is present, the matrix verb may not accommodate yet another complement (both the sentences that follow are ungrammatical with the intended meaning, whereby the second verb is the clausal complement to the first):

- (9a) *Ήξερες τη Μαρία και χόρευες.
 knew.2sg the Maria and danced.2sg
 ‘You knew Maria and (you knew) how to dance’
 (9b) *Αρχίζουμε το παιχνίδι και κλαίμε.
 are.starting.1pl the game and cry.1pl
 ‘We are starting the game and (we are starting) crying.’

Finally, as we will see later on, complement *ke*-clauses are usually (necessarily, with most matrix verbs) controlled by some matrix argument (usually, subject). This is

not the case in normal coordination, where each of the conjuncts is syntactically independent (in other words, the first conjunct may not impose control requirements on the second –such relations are to be found only in subordination).

- (10) Ξέραμε και γράφαμε. / *έγραφες. / *γράφανε.
 knew.1pl and were.writing.1pl *2sg *3pl
 ‘We knew how to write.’

Having established that in *ke*-complement clauses *ke* functions as a subordinator rather than a coordinator, let us turn to the morphosyntactic properties of the verb in *ke*-complements.

3 Core morphological properties of *ke*-complements

Similarly to some instances of volitional *na*-clauses (and unlike *oti*- and *pu*-complement clauses), *ke*-complement clauses may not manifest the full matrix of Tense-Aspect-Mood morphological exponents in any given situation. Their morphological marking rather depends to a great extent on (a) the category of the matrix verb and (b) on the morphological specification of the matrix verb.

ke-complement clauses may appear as complements to a subgroup of *na*-licensing verbs. What is more, the verbs licensing *ke*-complements cannot be grouped in a single category, as pointed out by Kazazis (1965:104). However, in most instances *ke*-clauses are complements of: aspectual verbs (*αρχίζω*, *ξεκινώ*), verbs of knowing/learning (*ξέρω* (*know*), *μαθαίνω* (*learn*)), verbs of perception (*βλέπω* (*see*), *ακούω* (*hear*)), and a small residue of other verbs (such as *μπορώ* (*can*), *καταφέρνω* (*manage to*), *θέλω* (*want*)).

In any case, what seems to be quite interesting is the fact that the verb of *ke*-complements seems to be underspecified or partially specified for a number of grammatical categories, in some of which it copies the relevant values of the matrix verb.

3.1 Mood

ke-clauses stand out in that they invariably copy the mood specification of the matrix verb. So, in (11a) the embedded clause must surface in subjunctive, in tandem with the matrix subjunctive. In a similar fashion, the matrix indicative in (11b) forces the presence of an indicative in the embedded clause, and the same applies with the imperative in (11c).

- (11a) Να ξέρετε [και [*πλέκετε / να πλέκετε / πλέχτε]].
 SUBJ know.2pl and knit.ind.2pl SUBJ knit.2pl knit.imp.2pl
 ‘You should know how to knit.’
- (11b) Σας άκουσα [και [ερχόσασταν / *να έρχεστε / *ελάτε]].
 you.Acc heard.ind.1sg and arrived.ind.2pl SUBJ arrive.2pl
 arrive.imp.2pl
 ‘I heard you arriving.’
- (11c) Μπορέστε [και [*κερδίζ/σετε / *να κερδίσετε / κερδίστε]].
 be.able.imp.2pl and win.ind.2pl SUBJ win.2pl

win.imp.2pl .
 ‘Be able to win!’

In other words, *ke*-clauses seem to be the only embedded clauses underspecified for mood in Greek.

3.2 Tense

Moreover, *ke*-clauses copy the exact tense specification of the superordinate clause, either in the indicative (12a-c) or in the subjunctive (13):

- (12a) Αρχίζεις [και [τρέχεις / *έτρεχες / *θα τρέχεις]].
 start.pres.2sg and run.pres.2sg run.past.2sg FUT run.pres.2sg
 ‘You start running.’
- (12b) Αρχισες [και [*τρέχεις / έτρεχες / *θα τρέχεις]].
 start.past.2sg and run.pres.2sg run.past.2sg FUT run.pres.2sg
 ‘You started running.’
- (12b) Θα αρχίσεις [και [*τρέχεις / *έτρεχες / θα τρέχεις]].
 FUT start.2sg and run.pres.2sg run.past.2sg FUT run.pres.2sg
 ‘You will start running.’
- (13) Να αρχίσεις [και [να τρέχεις / *να έτρεχες]].
 SUBJ start.Pres.2sg and SUBJ run.Pres.2sg SUBJ run.Past.2sg
 ‘You should start running.’

However, it is not always the case that embedded T(ense) copies the morphology of matrix T. In rare but manifested occasions, the predicate of the *ke*-clause copies the semantic/pragmatic value of T from the matrix verb.

- (14a) Αρχισα και έτρωγα τα πάντα.
 start.past.1sg and eat.past.1sg the everything
 ‘I started eating everything.’
- (14b) Αρχισα και τρώω τα πάντα.
 start.past.1sg and eat.res.1sg the everything
 ‘I’ve started eating everything.’

Both (14a) and (14b) are possible, but in the latter ‘arxisa’ is meant to include the present tense and, given that aspectuals denote a single event together with the verbs in their embedded clause, the single event is situated in the present.

Finally, with certain ‘other verbs’ (non- aspectuals/verbs of cognition/perception verbs) no strict Tense dependency obtains:

- (15) Φρόντισα και θα έχουμε ευνοϊκή μεταχείριση.
 arranged.1sg and FUT have.1pl favourable treatment
 ‘I arranged for us to have a favourable treatment.’

3.3 Aspect

As far as the morphological manifestation of aspect is concerned, we observe a split:

A) *ke*-complements of aspectual verbs and verbs of cognition are necessarily marked [-Perf]:

- (16a) Αρχίζεις [και [τρέχεις / *τρέξεις]].
 start.imperf.pres.2sg and run.imperf.pres.2sg run.perf.pres.2sg
 ‘You start running.’
- (16b) Αρχισες/άρχιζες [και [έτρεχες/ *έτρεξες]].
 start.perf./imperf.past.2sg and run.imperf.past.2sg run.perf.past.2sg
 ‘You started running.’
- (16c) Θα αρχίζεις/θα αρχίσεις [και [θα τρέχεις/ *θα τρέξεις]].
 FUT start.perf./imperf.2sg and FUT run.imperf.2sg FUT run.perf.2sg
 ‘You will start running.’

B) *ke*-complements of other Vs allow for either aspectual specification:

- (17) Μπόρεσα [και [έτρεχα/ έτρεξα]].
 were.able.to.perf.2sg and run.imperf.past.1sg run.perf.past.1sg
 ‘I was able/managed to run.’

3.4 Agreement

When it comes to subject-verb agreement in *ke*-clauses, we observe yet another split:

A) *ke*-complements of aspectuals and cognition verbs exhibit obligatory control by the subject of the matrix. So, in that case, embedded Agr copies the corresponding information of matrix Agr:

- (18) Ο Ηλίας ξεκίνησε [και [έτρεχε / *έτρεχα / *τρέχαμε]].
 the Ilias started.3sg and ran.3sg ran.1sg ran.1pl
 ‘Ilias started running.’

B) *ke*-complements of perception Vs have either uncontrolled subjects (in case the embedded clause is the sole argument of the matrix) (19) or object-controlled subjects (20).

- (19) Είδα και φύγανε.
 saw.1sg and left.3pl
 ‘I saw that they left.’

- (20) Άκουσα τον Παύλο [και [παραπονιόταν /
 heard.1sg the Pavlos and was.complaining.3sg
 *παραπονιόμουν / *παραπονιόμασταν]].
 was.complaining.1sg was.complaining.1 pl
 ‘I heard Pavlos complain.’

C) *ke*-complements of other object control verbs (*διατάζω* (*order*), *πιέζω* (*press*), *αναγκάζω* (*force*), *διδάσκω* (*teach*), etc.) carry on their subcategorization frame (familiar from *na*-complements) to *ke*-complementation. So, they appear with controlled subjects in their object control guise or, with uncontrolled subjects, in case they are the sole arguments of the matrix verb.

- (21) Ο λοχαγός διέταξε τους στρατιώτες
 the captain ordered.1sg the soldiers
 [και [συγκεντρώθηκαν / *συγκεντρωθήκατε]].
 and were.gathered.3pl were.gathered.2pl

D) *ke*-complements of other verbs are not obligatorily controlled and, hence, there is no restriction on the morphological makeup of their Agr head.

- (22) Ο Λεωνίδας κατάφερε [και έπεσε
 the Leonidas managed.3sg and fell.3sg
 η πίεσή του
 the blood.pressure his
 ‘Leonidas managed so that his blood tension dropped.’

4 Core syntactic properties of *ke*-complements

Most of the syntactic properties of *ke*-complements stem from their morphological makeup, discussed above. We will focus here on the correlation between obligatory control and impoverished/underspecified verbal morphology.

As we saw in the previous section: (a) Some kinds of matrix verbs require subject- (aspectuals, cognition Vs) or object- (perception Vs in their ditransitive guise) control, while others (such as *μπορώ*, *καταφέρνω*) do not; (b) Some kinds of matrix verbs impose more severe restrictions to the morphological makeup of the predicate of the *ke*-clause, while others do not. This differing behavior to a large extent coincides with the control relation, as can be evidenced in the table below:

	Controlled subject <-----> No control					
	Aspectual	Cognitive	Dir. Perception	Indir. Perception	Object control	Other
Mood	SAME AS MATRIX	SAME AS MATRIX	SAME AS MATRIX	SAME AS MATRIX	SAME AS MATRIX	SAME AS MATRIX
Tense	SAME AS MATRIX	SAME AS MATRIX	SAME AS MATRIX	FREE	FREE	FREE
Aspect	IMPERF	IMPERF	IMPERF	FREE	FREE	FREE
Agreement	SAME AS MATRIX (CONTR BY S)	SAME AS MATRIX (CONTR BY S)	CONTROLLED BY OBJ	FREE	CONTROLLED BY OBJ	FREE

Table 1 | The verbal continuum from (subject) control to no control

This is reminiscent of a pattern observed in *na*-clauses. As observed by Spyropoulos (2007:163) ‘[the] control pattern coincides to a great extent with the temporal properties of subjunctive complements as described above. Thus, Independent Subjunctives exhibit no control, Dependent Subjunctives partial control, and Anaphoric Subjunctives exhaustive control.’ Verbs that exhibit exhaustive control according to Spyropoulos (2007) are aspectuals (*αρχίζω*, *ξεκινώ*) and verbs such as *ξέρω*, *μαθαίνω*,

which are also morphologically dependent and subcategorize for control complements even in *ke*-clauses, as we saw. Verbs which give rise to partial or to no control in Spyropoulos' (2007) account also impose more laxed morphological requirements in *ke*-complementation as well (*καταφέρνω, πετυχαίνω*).

So, the morphosyntactic pattern in *na*- and *ke*-complement clauses seem to work in a parallel fashion. Impoverishment in verbal morphology of the embedded clause brings about the requirement for syntactic dependency. This impoverishment seems to be caused by the same groups of verbs in both *ke*- and *na*-complements. The difference between *ke*- and *na*-clauses seems to be the exact manifestation of impoverishment: specific tense and aspect selection in the case of *na*-clauses, totally anaphoric mood and tense and probable aspectual and agreement restrictions in the case of *ke*-complements.

This neat account, however, leaves a crucial aspect of the distribution of *ke*-complements unaccounted for. As we have already noted, *ke*-clauses are selected by a subset of the verbs that select *na*-complement clauses. We explore reason for this behavior, and the main semantic difference between the two types of clause, in the section that follows.

5 On an important semantic nuance

As regards the interpretation of *ke*-complement clauses, native speakers will agree that by using them the speaker presupposes the truth of the complement clause, in a sense somewhat similar to the one proposed for factive complements by Kiparsky and Kiparsky (1971). In this sense, (24) is contradictory, since a presupposition cannot be refuted, whereas (23) is not:

- (23) Ήξερα να γράφω ποιήματα, αλλά δεν έγραφα.
 knew.1sg NA write.1sg poems but NEG wrote.1sg
 'I knew how to write poems, but I didn't write any.'
- (24) #Ήξερα και έγραφα ποιήματα, αλλά δεν έγραφα.
 knew.1sg and was.writing.1sg poems but NEG wrote.1sg
 'I knew how to write poems, but I didn't write any.'

The fact that *ke*-clauses presuppose the validity/truth of the event denoted in the embedded clause might be the reason why they are incompatible (in the indicative mood) with verbs that denote the discontinuation of an action, as this creates a contradiction (the matrix denotes that the action is not carried out, while the embedded asserts its validity):

- (25a) *Σταμάτησα [και του έστελνα χαρτζιλίκι].
 stopped.1sg and his sent.1sg pocket money
 'I stopped sending him pocket money.'
- (25b) *Θα πάψω [και θα μιλάω].
 FUT cease.1sg and FUT speak.1sg
 'I will cease speaking'

Note that the same verbs freely accommodate the corresponding *na*-complements, as these are not presuppositional:

- (26a) Σταμάτησα [να του στέλνω χαρτζιλίκι].

- stopped.1sg NA his send.1sg pocket money
 ‘I stopped sending him pocket money.’
 (26b) Θα πάψω [να μιλάω].
 FUT cease.1sg NA speak.1sg
 ‘I will cease speaking’

This incompatibility might explain why a number of predicates selecting for *na*-clauses do not subcategorize for *ke*-complements. Consider the following contrasts, in which the (b) *ke*-examples might be ruled out due to the incompatibility of the lexical meaning of the matrix verb (which denotes a non-fulfilled action, such as forgetting (27b), failing (28b), or even one that was just possible but not necessarily realized (29b)) with the presupposition that the embedded clause holds true:

- (27a) Θυμήθηκα [να σβήσω το φως].
 remembered.1sg. NA turn.off.1sg the light
 [και έσβησα το φως].
 and turned.off.1sg the light
 ‘I remembered to turn off the light.’
 (27b) Ξέχασα [να σβήσω το φως].
 forgot.1sg. NA turn.off.1sg the light
 *[και έσβησα το φως].
 and turned.off.1sg the light
 ‘I forgot to turn off the light.’
- (28a) Κατάφερα [να περάσω στο πανεπιστήμιο].
 succeeded.1sg NA pass.1sg at.the university
 *[και πέρασα στο πανεπιστήμιο].
 and passed.1sg at.the university
 ‘I succeeded in getting into the university.’
 (28b) Απέτυχα [να περάσω στο πανεπιστήμιο].
 failed.1sg NA pass.1sg at.the university
 [και πέρασα στο πανεπιστήμιο].
 and passed.1sg at.the university
 ‘I failed to get into the university.’
- (29a) Έτυχε [να γνωρίσω ένα καλό παιδί].
 happened NA meet.1sg a good fellow
 [και γνώρισα ένα καλό παιδί].
 and met.1sg a good fellow
 ‘It so happened that I met a good fellow.’
 (29b) Ήταν πιθανό [να γνωρίσω ένα καλό παιδί].
 was.possible NA meet.1sg a good fellow
 *[και γνώρισα ένα καλό παιδί].
 and met.1sg a good fellow
 ‘It was possible that I would meet a good fellow.’

So, it might be possible to exclude a large number of *na*-selecting verbs (*ξεχνάω* (*forget*), *αποτυγχάνω* (*fail*), *ελπίζω* (*hope*), *σκοπεύω* (*intend to*), *απειλώ* (*threaten*), etc.) on the basis of their semantics, as being incompatible with the presuppositional reading of the *ke*-complement clause.

Kiparsky and Kiparsky's (1971) main test for factivity employs matrix negation. It is suggested that matrix negation may not affect the truth conditions of an embedded factive clause, while it does affect the truth conditions of non-factive complements. In other words, factive clauses remain valid even in the scope of matrix negation, while non-factive ones do not.

- (30a) Δεν είπα [ότι ο Νίκος έφυγε].
 NEG said.1sg that the Nick left.3sg
 'I did not say that Nick left.'
 (does NOT presuppose that Nick left)
- (30b) Δεν λυπήθηκα [που ο Νίκος έφυγε].
 NEG felt.sorry.1sg that the Nick left.3sg
 'I did feel sorry that Nick left.'
 (DOES presuppose that Nick left)

This test, once used with aspectuals and cognitive verbs such as *ksero-/maθeno*, gives a surprising result. Unlike matrix negation in corresponding *na*-complements (which applies also to the embedded (31a)), and matrix negation in *pu*-factives (which leaves the embedded V unaffected (31b)), matrix negation in sentences with *ke*-complements yields a deviant expression (31c):

- (31a) Δεν άρχισα [να τρέχω].
 NEG started.1sg NA run.1sg
 'I did not start running.'
- (31b) Δε μετανιώνω [που τρέχω].
 NEG regret1.sg that run.1sg
 'I don't regret running.'
- (31c) *Δεν άρχισα [κι έτρεχα].
 NEG started.1sg and ran.1sg
 'I did not start running.'

(31c) may only be interpreted with focus on 'άρχισα' as: 'I was running, I just didn't START (at that point) doing it.', which is a different meaning altogether than the intended one.

The same awkwardness surfaces with other matrix verbs as well. So, (32) may only have the idiosyncratic interpretation 'I ran despite my will', in which, crucially, the embedded clause remains true/a fact.

- (32) *Δεν ήθελα [κι έτρεχα].
 NEG wanted.1sg and ran.1sg
 'I did not want to run.'
 (only to be understood as 'I ran despite my will.
 > presupposes 'I ran')

The same applies to other predicates selecting *ke*-complements. They may not be negated, possibly due to the fact that, by negating the matrix verb, once in the indicative, this verb becomes incompatible with the presuppositional import of the embedded clause, in a similar way with the lexically incompatible verbs in the examples (25)-(29):

- (33) (*Δεν) άρχισα/ξεκίνησα/ήθελα/κατάφερνα/μπορούσα/επεδίωκα/έμαθα

NEG started/began/wanted/succeeded in/could/intended in/learned
 [και αγοράζα πολλά βιβλία].
 and bought many books.
 ‘I did not start/begin/want/manage/was able/intended to/learned to buy/
 buying many books.’

Yet another well-known property of factive complements is the fact that they constitute islands to adjunct extraction, while permitting argument extraction (i.e. they are weak islands, in the terminology of Rizzi 1991). This is a well-known property of factive *pu*-complements (cf. Roussou 1994, Varlokosta 1994).

- (34a) ?Τι μετάνιωσες [που αγοράσαμε ι];
 what regretted.2sg that bought.1pl
 ‘What did you regret that we bought?’
- (34b) *Πότε μετάνιωσες [που αγοράσαμε τηλεόραση ι];
 when regretted.2sg that bought.1pl television
 ‘When did you regret that we bought a television?’
 (with an embedded reading of *pote*)

Unsurprisingly, *ke*-complements, just like factive *pu*-clauses, are transparent to argument extraction (cf. (7a), repeated here as (35a)), but block adjunct extraction (35b):

- (35a) Τι ήξερες [και τραγουδούσες ι];
 what knew.2sg and were.singing.2sg
 ‘What did you know how to sing?’
- (35b) *Πότε ήξερες [και τραγουδούσες τη Διεθνή ι];
 when knew.2sg that were.singing.2sg the Internationale
 ‘When did you know how to sing the Internationale?’
 (with an embedded reading of *pote*)

The exact same effect can be seen with other kinds of matrix verbs as well (all judgements assuming an embedded reading of the fronted *wh*-phrases):

- (36a) Με τι είδες τους εργάτες [να γκρεμίζουν
 with what saw.2sg the workers NA demolish.3pl
 το σπίτι ι];
 the house
 ‘What did you see the painters demolishing the house with?’
- (36b) *Με τι είδες τους εργάτες [και γκρέμιζαν
 with what saw.2sg the workers and demolished.3pl
 το σπίτι ι];
 the house
 ‘What did you see the painters demolishing the house with?’
- (37a) Πώς ήξερες [να μιλάς ιταλικά ι];
 how knew.2sg NA speak.2sg Italian
 ‘How did you know to speak Italian?’
- (37b) *Πώς ήξερες [και μιλούσες ιταλικά ι];
 how knew.2sg and were.speaking.2sg Italian

‘How did you know to speak Italian?’

To summarize, in this section we argued that both *na* and *ke* may introduce complements whose verb is morphologically impoverished, but their crucial semantic difference is that the latter marks the truth of clause as given. We have mainly used the tests in Kiparsky and Kiparsky’s (1971) so as to elucidate the fact that the *na-* vs *ke-* distinction has a morphosyntactic basis, but it is not crucial for our purposes at this stage to commit ourselves to the exact nature of the semantic nuance (i.e. whether it is factivity, presuppositionality, subjective construal or none of the above). It might be the case that Nikiforidou’s (to appear) proposal of the feature “discourse-active” in her discussion of (*o*)*pu* also applies here.

6 Conclusions: On the common properties of subordinate Cs (in complement clauses)

If the above discussion is on the right track, a neat pattern arises concerning the four complementizers introducing complement clauses (setting aside for the moment the complementizers introducing interrogatives and clauses of fear) in Greek, namely *oti/pos*, *na*, *pu*, and *ke*. These Cs form the following pairs:

- *oti/pos* and *pu* introduce complement clauses that are morphologically independent in any case (they may exhibit the full array of morphosyntactic markings independently of the matrix verb, no matter what the matrix verb is).
- *oti/pos* and *na* introduce complement clauses without imposing the requirement that the content of these clauses is presupposed to be true.
- *pu* and *ke* introduce complements whose truth is presupposed rather than asserted (n.b. to the extent that the semantics of presupposition is contributed by the C – Roussou (2006) convincingly argues that factivity may also be contributed by the lexical semantics of the matrix predicate).
- *na* and *ke* introduce complement clauses whose verbal morphology may be impoverished/underspecified and, as a consequence, their subject may be controlled by a matrix argument.

So, if we divide Greek complementizers introducing object complement clauses into categories (setting aside the complementizers introducing indirect questions and clauses of fear) with respect to the morphosyntactic feature (+/- morphologically dependent) and the semantic feature (+/- ‘presuppositional’, in the sense discussed above), we obtain the following pattern:

	Non-presupposed	(Potentially) presupposed
Morphosyntactically independent	oti- pos-	pu-
(Potentially) Morphosyntactically dependent	na-	ke-

Table 2 | Morphological dependence, presupposition and Greek complementizers

This four-way divide opens up the possibility that these complementizers are manifestations of a single C head with parametric choices leading to its different instantiations. Of course, this is just a first approximation to a complex matter.

Finally, setting aside for the moment the bold attempt at a generalization made above, let us summarize some of the secondary implications of our study of *ke*-clauses for the morphosyntactic architecture of Greek:

- a) *ke*-complement clauses are the only Greek embedded clauses underspecified for mood and, as a consequence, they are the only ones that may be marked even as [+Imperative].
- b) *ke*-complement clauses may be obligatorily (and exhaustively) controlled by an argument of the matrix clause (with some predicates) no matter in what mood they surface and, as a consequence, constitute a strong argument against defining control as stemming from subjunctives (or untensed subjunctives).
- c) *ke*-complement clauses, when compared with corresponding *na*-clauses that exhibit similar control properties, offer an argument for the lexical primacy of control.
- d) *ke*-complement clauses constitute an argument for the fact that featural deficiency (which is a necessary but not sufficient condition for control) might be manifested in different ways even within the same language.

References

- Canakis, Costas. 1995. "KAI: The story of a conjunction." PhD diss., The University of Chicago.
- Delveroudi, Rea. 1995. "Ο Συμπληρωματικός Δείκτης *Kai* [The Complementizer *ke*]." *Studies in Greek Linguistics* 15: 281-291.
- Efthimiou, A. 1997. "Control Theory: The Case of *na*-Complements of Modern Greek." In *Greek Linguistics '95: Proceedings of the 2nd International Conference on Greek Linguistics*, edited by Gaberell Drachman, Angeliki Malikouti-Drachman, Jannis Fykias, and Chryssoula Klidi, 429–437. Graz: W. Neugebauer Verlag.
- Householder, Fred W., Kostas Kazazis, and Andreas Koutsoudas. 1964. *Reference Grammar of Literary Dhimotiki*. Bloomington: Indiana University.
- Iatridou, Sabine. 1993. "On Nominative Case Assignment and a Few Related Things." *MIT Working Papers in Linguistics* 19:175–196.
- Ingria, Joseph. 1981. "Sentential Complements in Modern Greek." PhD diss., MIT.
- Kakouriotis, Athanassios. 1982. "Complementation in Modern Greek and English." *Papers and Studies in Contrastive Linguistics* 14:99–127.
- Kazazis, Kostas. 1965. "Some Balkan Constructions Corresponding to Western European Infinitives." PhD diss., Indiana University.
- Kiparsky, Paul, and Carol Kiparsky. 1971. "Fact." In *Semantics: An Interdisciplinary Reader in Philosophy, Linguistics and Psychology*, edited by Danny D. Steinberg, and Leon A. Jakobovits, 345–369. Cambridge: Cambridge University Press.
- Kotzoglou, George. 2018. "Για τον Υποτακτικό Σύνδεσμο *Kai* [On the Subordinating Complementizer *ke*]." In *Figura in Praesentia: Essays in Honor of Professor Thanasis Nakas*, edited by Konstantinos Dinas, 197–212. Athens: Patakis.
- Mackridge, Peter. 1987. *Η Νεοελληνική Γλώσσα [The Modern Greek language]*. Athens: Patakis.
- Moser, Amalia. 1997. "The Choice of Aspect in *na*-Complements." In *Greek Linguistics '95: Proceedings of the 2nd International Conference on Greek*

- Linguistics*, edited by Gaberell Drachman, Angeliki Malikouti-Drachman, Jannis Fykias, and Chryssoula Klidi, 567–576. Graz: W. Neugebauer Verlag.
- Moser, Amalia. 2007. “Υποτακτική, Χρόνος και Παρεμφατικότητα [Subjunctive, Tense and Finiteness].” In *Γλωσσικός Περίπλους: Studies in Honor of Dimitra Theophanopoulou-Kontou*, edited by University of Athens Department of Linguistics, 212–223. Athens: Kardamitsa.
- Nikiforidou, Kiki. To appear. “From Relativizer to Adverbial Connective: Transitional Constructions and Reanalysis in Medieval Greek (*ο*)*ρη* [όπου].” In *Linguistic Theory and Language Change in the 21st Century*, edited by Nikolaos Lavidas and Kiki Nikiforidou. Leiden: Brill.
- Philippaki-Warbuton, Irene, and Georgia Catsimali. 1999. “On Control in Greek.” In *Studies in Greek Syntax*, edited by Artemis Alexiadou, Melita Stavrou, and Geoffrey Horrocks, 153–168. Dordrecht: Kluwer Academic Publishers.
- Philippaki-Warbuton, Irene and Yannis Veloudis. 1984. “Η Υποτακτική στις Συμπληρωματικές Προτάσεις [Subjunctive in Complement Clauses].” *Studies in Greek Linguistics* 5:149–167.
- Rizzi, Luigi. 1991. *Relativized Minimality*. Cambridge, Mass.: MIT Press.
- Ross, John Robert. 1967. “Constraints on Variables in Syntax.” PhD diss., Massachusetts Institute of Technology.
- Roussou, Anna. 1994. “The Syntax of Complementisers.” PhD diss., University College London.
- Roussou, Anna. 2006. *Συμπληρωματικοί Δείκτες [Complementizers]*. Athens: Patakis.
- Roussou, Anna. 2009. “In the Mood for Control.” *Lingua* 199:1811–1836.
- Spyropoulos, Vassilios. 2007. “Finiteness and control in Greek.” In *New Horizons in the Analysis of Control and Raising*, edited by William D. Davies, and Stanley Dubinsky, 159–183. Dordrecht: Springer.
- Spyropoulos, Vassilios, and Irene Philippaki-Warbuton. 2010. “Φαινόμενα Ανύψωσης στην Ελληνική [Raising Phenomena in Greek].” *Studies in Greek Linguistics* 30:574–588.
- Terzi, Arhonto. 1992. “PRO in Finite Clauses: A Study of the Inflectional Heads of the Balkan Languages.” PhD diss., City University of New York.
- Tzartanos, Achilleas. 1996 [1946]. *Νεοελληνική Σύνταξις (της Κοινής Δημοτικής) [Modern Greek syntax (of the common demotic)]*. Thessaloniki: Kyriakidis.
- Varlokosta, Spyridoula. 1994. “Issues on Modern Greek Sentential Complementation.” PhD diss., University of Maryland at College Park.