The morphosyntax of the periphrastic future under negation in Cypriot Greek

*Jason Merchant**
University of Chicago
merchant@uchicago.edu

Natalia Pavlou
University of Chicago
npavlou@uchicago.edu

Abstract

In Cypriot Greek, the negated future is marked by the element *tha*, which appears instead of the expected present tense copula and a selected subordinating element. This paper documents the distribution of this item for the first time, and presents an analysis in Distributed Morphology that analyzes *tha* as a portmanteau morpheme realizing two heads in the context of negation. This analysis requires that spans (or targets of Fusion) can include a verb and the head of its c complement.

Keywords

Cypriot – future tense – negation – periphrasis – Distributed Morphology – span

1   The future and negation in Cypriot Greek

1.1   *The periphrastic future: copula + na*

Cypriot Greek, like its Standard Modern Greek sister spoken primarily to its northwest across the Mediterranean, has a copula verb that inflects for person, number, and tense, but shows no number distinction in the third person:

(1)   Cypriot Greek copula *ime* 'be'

	present		*past*	
	sg	pl	sg	pl
1	ime	imasten	imun	imastan/imaston/imastun
2	ise	isaste	isun	isastan/isaston
3	en	en	itan/ito/itun[1]	itan/ito/itun

This verb is used with adjectival, nominal, and prepositional predicates:

(2)   a. *Ta   mora   en   arosta.*
         the child.NEUT.pl be.NONPAST.3 sick.NEUT.pl
         'The children are sick.'

      b. *Ta   mora   en   kali   mathites.*
         the child.NEUT.pl be.NONPAST.3 good.MASC.pl pupils.MASC.pl
         'The children are good students.'

      c. *Ta   mora   en   sto   dhomatio.*
         the child.NEUT.pl be.NONPAST.3 in.the room
         'The children are in the room.'

Cypriot Greek has a two-way tense distinction morphologically represented: past and non-past (see Holton et al. 1997 for more detail on the identical standard Greek system), and two aspects: imperfective and perfective. It marks the future[2] periphrastically, using a construction that the (here invariant) 3rd

---

1   The alternative past plural forms in each person are in free variation; the difference does not index number for the third person.

2   It is traditional to call this form the future, though close examination of its uses shows that it has non-temporal, modal uses as well; see Giannakidou and Mari 2017 for references and extensive discussion of standard Greek. Pending a similar semantic investigation of the Cypriot Greek, we will continue to call this form the future for convenience. The semantic issues raised by a complex, multi-head construction being interpreted as a single modal

person copula with a clause headed by the subordinating particle *na*[3] (traditionally called 'subjunctive', and which we will assume is a complementizer for the time being) and a verb in the non-past:

(3) *En   na pao.*
     be.NONPAST.3 na go.PERF.NONPAST.1sg
     'I will go.'

The particle *na* is found in a range of contexts, including as the head of selected control and raising CPs; Cypriot Greek, like standard Greek, lacks infinitives, and uses *na*-clauses in their stead:
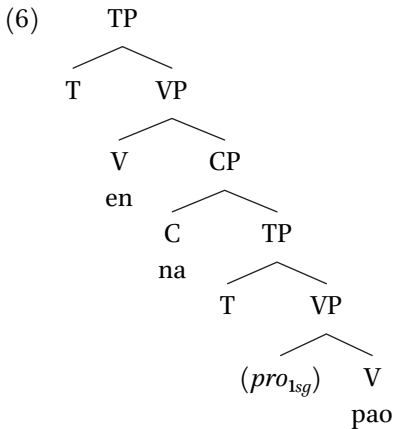
(4) *Thelo   na pao.*
     want.IMPERF.NONPAST.1sg na go.PERF.NONPAST.1sg
     'I want to go.'

(5) *Thelo   na ton dho.*
     want.IMPERF.NONPAST.1sg na him see.PERF.NONPAST.1sg
     'I want to see him.' (Terzi 1999b:230)

Roussou and Tsangalidis (2010) debates whether *en na* is a single lexical item or not. We claim that each of the elements in *en na* has an independent use: *en* as a verb and *na* as a (clausal) subordinator.[4] The null hypothesis for

---

operator are the usual ones regarding the challenge of compositionality for idioms, idiom chunks, collocations, and 'constructions' generally; compare e.g. *must* with *have to*, and *will* with *be going to*, among many other such examples.

3 Analyses vary somewhat in whether they take *na* to be a complementizer, as Philippaki-Warburton 1982 and Agouraki 1991 do, or to head a MoodP or other IP-internal functional projection, possibly selected by a null C or otherwise embedded under a C, as Roussou 2000, 2001 and Giannakidou 2009 do. All that is important for us is that *na* signals the presence of a CP layer, for reasons that will become clear below. To sidestep these labeling issues, we will therefore gloss *na* simply as 'na'.

4 We know of no compelling reason to suspect that *en* in *en na* was ever anything but a form of the copula verb historically. We thus agree with Symeonides 2006:240, who writes that "I have the impression that this category of the future is based on *éni* (*éne*) and *en=einai*, *prokeitai*" (translation ours), where *einai* is the 3rd person nonpast unreduced copula verb and *prokeitai* is another paraphrastic future (roughly, 'be going to'). While it is not our aim here to try to trace the history of this construction, nor is it in any way relevant to our synchronic analytical goals, we may also point out that historical accounts that do not tie *en na* to the copula encounter numerous difficulties. In particular, we find the speculation of

the syntactic structure of the periphrastic future which combines these two elements, therefore, is to put them together in the usual way, with the verb *en* selecting a phrase headed by *na*, as illustrated in the following simplified structure (where we suppress the representation of verb movement to T, as well as of other elements possibly present in the clause):

(6)

```
            TP
          /    \
         T      VP
              /    \
             V      CP
             en   /    \
                 C      TP
                 na   /    \
                     T      VP
                          /    \
                    (pro₁ₛ𝓰)    V
                              pao
```

The *na* that occurs in this location has the usual properties found with *na*-clauses elsewhere in the language. First, it can select for what we follow Holton et al. 1997 in calling the dependent form of the verb; the dependent verb form is the perfective nonpast, and it is always selected for—it occurs only under certain particles, like *na*, and in certain embedded constructions (see Giannakidou 2009 for the claim that the dependent verbal form in the perfective nonpast cannot be identified with the utterance time of the context). This was illustrated for the usual *na* in (4) and (5) above, where *pao* and *dho* are respectively the dependent forms (the perfective nonpast), and in (3) for *en na*.

Second, as with all *na*-clauses in Cypriot Greek, when the embedded predicate in the *na*-clause is negated, the negator that appears under *na* is the 'sub-

_____

Chatziioanou 1999:92 that this *en* somehow derives from an earlier *thelo* ("*thelo na > thel na > then na > enna*") to be highly unlikely: such a derivation (which lacks any basis in the historical record we are aware of) would require an idiosyncratic sound change to account for the loss of the initial interdental voiceless fricative *θ*. (It is in precisely this last, implausible, step that Chatziioannou's proposal diverges from the well established history of standard modern Greek *tha*, as argued in Joseph and Pappas 2002 and Roberts and Roussou 1999. We do not rule out the possibility of a parallel diachronic development for Cypriot Greek *tha*, but we have not conducted the relevant historical research needed to establish the point.) See section 3.4 below for additional reasons to reject a derivation of *en* from *the*.

junctive' negator *men*, as in (7), glossed NEG.SUBJ (see Chatzopoulou 2012 for the history of the Standard Modern Greek cognate *min*), not the indicative *en* (see section 1.2 for more on *en*).

(7) *Thelo   na men   pais.*
     want.1sg na NEG.SUBJ go.PERF.NONPAST.2sg
     'I want for you not to go.'

(8) *Akusa   oti   en   na men*
     hear.PERF.PAST.1sg that be.NONPAST.3 na NEG.SUBJ
     pais.
     go.PERF.NONPAST.2sg
     'I heard that you will not go.'

The appearance of *men* in this context is expected if the *na* that we see in (8) is the usual *na* found elsewhere the language, such as that in (7).

There are two pieces of evidence that make it clear that the sequence *en na* is not a fixed or lexicalized expression of a single head, tense or otherwise.[5] First, the copula part can appear independently in the past tense as illustrated in (9):

(9) *Itan   na pao   ekso.*
     be.PAST.3 na go.PERF.NONPAST.1sg outside
     'I was going to go out.'

---

5 Precisely the same reasoning applies to the English modal expression *be to*, which has undergone a different path of development and has slightly different properties, but which bears obvious similarities to the Cypriot Greek locution. See Huddleston et al. 2002:113 and Kayne 2013 for brief discussion. The fact that Greek also has such an expression shows that Kayne's proposed generalization about the distribution of this construction cannot be correct: he analyzes *Abby is to appear tonight* as *Abby is MEANT FOR to appear tonight* and claims that only a language like English that has a case-assigning complementizer like *for* will be able to have this construction. Greek lacks any such case-assigning complementizer. Kayne's reasoning is based on the idea that there is no way to assign the attested modal semantics to *be to* in its individual parts (and therefore the modality must come from unpronounced elements). But this reasoning strikes us as unfounded: the same question arises with any multi-morphemic idiom or partially compositional phrase, including *call up* 'muster', *call out* 'challenge', *spill the beans* 'reveal the secret', etc. Any solution to the issues raised for compositionality in such phrases (see e.g. Kobele 2012 and Harley 2014) will apply to *be to* and *en na* as well.

This is entirely expected if *en* is merely the nonpast 3rd person copula: *itan*, also found as *ito* (Vassiliou 2002) or *itun*, is the regular 3rd person past tense of the copula.

Second, we find coordinated *na*-clauses under *en* (and under *itan*, shown in (25) below):

(10) a. *En   na pao   che na*
        be.NONPAST.3 na go.PERF.NONPAST.1sg and *na*
        kathariso.
        clean.PERF.NONPAST.1sg
        'I will go and clean.'

     b. *En   na mairepsis   i   na*
        be.NONPAST.3 na cook.PERF.NONPAST.2sg or *na*
        katharisis?
        clean.PERF.NONPAST.2sg
        'Are you cooking or cleaning?'

     c. *En   na mairepsis   oksa na*
        be.NONPAST.3 na cook.PERF.NONPAST.2sg or   *na*
        katharisis?
        clean.PERF.NONPAST.2sg
        'Which of the two are you doing: cooking, or cleaning?'
        (Or: 'Are you cooking, or are you cleaning?')

If *en na* were a single head or fixed lexical expression, then coordination of such *na*-clauses alone should not be possible.[6]

The verbal form selected by *na* in the periphrastic future also behaves as expected for such forms in Cypriot Greek with respect to the placement of clitics. Though object clitics in Cypriot Greek are enclitic in a number of matrix and embedded clauses (see Terzi 1999b, Mavrogiorgos 2013, to appear among others), as illustrated in (11), clitic arguments of dependent verbs under *na* are proclitic, as seen in (12).

---

6 As in standard Greek, we do not find coordinated VPs or Vs under *na*: *na* is a proclitic that cannot cliticize onto the first element of a coordinate structure.

(11) *Idha   ton   extes.*
      see.PERF.PAST.1sg him.CL yesterday
      'I saw him yesterday.'

(12) a. *Thelo   na ton   dho   avrio.*
        want.1sg na him.CL see.PERF.NONPAST.1sg tomorrow
        'I want to see him tomorrow.'

    b. **Thelo   na dho   ton   avrio.*
        want.1sg na see.PERF.NONPAST.1sg him.CL tomorrow

The periphrastic future construction also triggers proclisis, as expected if the construction contains a regular *na*-clause:

(13) a. *En   na ton   dho   avrio.*
        be.NONPAST.3 *na* him.CL see.PERF.NONPAST.1sg tomorrow
        'I will see him tomorrow.'

    b. **En   na dho   ton   avrio.*
        be.NONPAST.3 *na* see.PERF.NONPAST.1sg him.CL tomorrow

1.2   *Sentential negator* en *and the periphrastic future*

Sentential negation in Cypriot Greek is expressed in indicative clauses with the preverbal element *en* (compare standard modern Greek *dhen*), which happens to be homophonous with the 3rd person nonpast form of the copula seen above:

(14) *En   pieno.*
      NEG go.IMPERF.NONPAST.1sg
      'I am not going.'

As expected, this negator can co-occur with the copula, both in the present and past:

(15) a. *Ta mora   en   en   arosta.*
        the children NEG be.NONPAST.3 sick
        'The children are not sick.'

b. *Ta mora   en   itan   arosta.*
   the children NEG be.PAST.3 sick
   'The children were not sick.'

The expectation, then, is that the negator *en* and the copula with *na* in the periphrastic future should be able to combine. And this is true, when the copula is in the past:

(16) *En   itan   na pao.*
     NEG be.PAST.3 *na* go.PERF.NONPAST.1sg
     'I wasn't going to go.'

It therefore comes as a surprise that sentential negation and the nonpast copula *en* in the periphrastic future cannot co-occur:

(17) **En   en   na pao.*
     NEG be.NONPAST.3 *na* go.PERF.NONPAST.1sg
     (Intended: 'I will not go.')

The fact that *en en* is not found in (17) is not due to mere haplology (even syntactically conditioned haplology, as in Salzmann 2013 and Merchant 2014), given that (15a) is well-formed.

What we find instead for the negated future is surprising and shows an interesting fact of syntactic micro-variation between two closely related varieties. It has been observed before that "Cypriot Greek lacks the future particle [*tha*] of Standard Greek" (Terzi 1999a:110, fn 24), as shown in (18).[7]

(18) **Tha pao.*
      tha go.PERF.NONPAST.1sg
      ('I will go.')

---

7 The example in (18) is acceptable in Standard Modern Greek: it is in fact the usual way to express the future (see Tsangalidis 1998, Giannakidou and Mari to appear). The particle is only acceptable among Greek Cypriot speakers when the high variety of Standard Modern Greek is used in code-switching or code-mixing (Tsiplakou 2009, 2014). Apart from the second author's own judgments, the data presented here concerning both the use of *en na* and the appearance of *tha* in negated sentences were confirmed by the results of a questionnaire, administered in the summer of 2016 to ten speakers of Cypriot Greek.

But precisely this *tha*[8] that is otherwise absent from the language is the form that appears in the negated periphrastic future:[9]

(19) *En   tha pao.*
    NEG *tha* go.PERF.NONPAST.1sg
    'I will not go.'

The appearance and identity of this *tha* is the puzzle to be solved.

2   Spanning: vocabulary items that realize more than one node

The element *tha* is in complementary distribution with the usual future marking strategy *en na*. The most parsimonious analysis therefore is to take the two sets of elements to be differing, competing realizations of the same nodes, one realized under negation, and the other otherwise: allomorphs, in other words, expanding the use of that term slightly.[10]

Such an analysis can be implemented in a theory such as Distributed Morphology (see Arregi and Nevins 2012 and Bobaljik 2015 and Embick and Noyer 2007) in which a single generative system is responsible both for word structure and phrase structure and derivation of complex objects is syntactic. Distributed Morphology (Halle and Marantz 1993) incorporates hierarchical structure into morphology by positing that the input to morphology is syntactic structure. Traditional features (or feature bundles) are distributed over nodes, which in turn are subject to Vocabulary Insertion, the process that replaces or realizes morphosyntactic featurally specified nodes as particular morphemes.

---

8   Similarly to *na*, we gloss this element simply as *tha*, in order not to prejudge its category or function. (Analyses differ on where the Standard Modern Greek *tha* is introduced: in a lower C modality projection (Roussou 2000), in a FutP above TP (Spyropoulos and Philippaki-Warburton 2001), or as the realization of T *tout simple*.)

9   Newton (1972):67 notes in a parenthesis that *eθ θa* is a possible form for a negated future, but he does not actually provide any examples, so it remains unclear in what contexts he would claim it to appear.
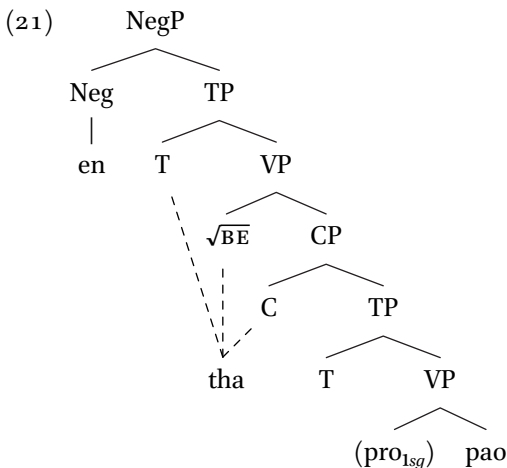
10   This distribution has obvious parallels to negative polarity items (NPIs); on one reading, we can claim that *tha* is an NPI in Cypriot Greek. Such a claim does not immediately help with understanding its morphosyntactic distribution, of course. *Tha*, unlike the nonemphatic items in Greek, is not licensed by higher negation, questions, disjunctions, imperatives, or any of the other environments that non-emphatic NPIs appear in in Greek (see Giannakidou 1998), with the exception of conditionals; for these latter, see section 3.4 below.

In our analysis, we posit the following Vocabulary Items (abstracting away from person features here for simplicity):

(20) a. $\sqrt{\text{BE}}$ ↔ en / T[pres] __
      b. C ↔ na
      c. T[pres] $\sqrt{\text{BE}}$ C ↔ tha / NEG __

By the Elsewhere Principle, insertion of the Vocabulary Items in (20a,b) will be preempted by the more narrow context of insertion in (20c).

The unusual property of the entry in (20c) is that it realizes three nodes, not just one. It is for this reason that we adopt a theory that allows Vocabulary Insertion to target multiple nodes with a single rule: these nodes must form what is known as a *span* (Svenonius 2012, Merchant 2015, Bennett et al. 2015), and our innovation here is to claim that *tha* is a portmanteau morpheme that is inserted for T, the copula root, and C simultaneously.[11] The resulting structure is as follows:

(21)

We note here that it is not crucial that the root of the copula be categorized as v, as we have done here, nor is it crucial that the copula has not moved to T. Either of the routine assumptions that the root is categorized by a separate v node or that v moves to T are compatible with our analysis; they simply require

---

11   An equivalent result could be achieved in a theory that posits an operation of Fusion, subject to the same locality conditions that spanning is subject to. See Embick 2010, Arregi and Nevins 2012, and Bobaljik 2015.

slight reformulations of the Vocabulary Items in (20). Indeed, we could leave the copula entirely in situ and make the presence of *en* vs. *itan* contingent on whether the neighboring Tense node is specified as present or past, as in (22). This kind of analysis merely extends the logic of spanning from the insertion of Vocabulary Items to their conditioning environments (as argued for in Merchant 2015): such an alternative would need to take the sequence of nodes that constitute the conditioning environment together, forming themselves a span of nodes.[12]

(22) $\sqrt{be}$ C $\leftrightarrow$ tha / NEG T[pres] __

Whichever implementation is ultimately to be preferred, this kind of local allomorphic analysis makes a prediction: if the adjacency between *en* and *na* is disrupted, *tha* should fail to appear. There are in fact two such cases, both of which bear out this prediction of our analysis.

First, the copula allows for a missing complement: dropping the CP sister to the copula will bleed the rule in (20c). Under our analysis, the environment for the insertion of *tha* is not met (due to the lack of C) (compare 23b and 23c), and we expect to find instead an emergence of the unmarked effect (McCarthy and Prince 1994). The following data show that this expectation is met:

(23) a. *O   Yannis   itan   na pai   ekso*
        the Giannis.NOM be.PAST.3 na go.PERF.NONPAST.3S out
        extes,   ala i   Maria   en   itan.
        yesterday but the Maria.NOM NEG be.PAST.3
        'Giannis was going to go out yesterday, but Maria wasn't.' (= going to go out yesterday)

    b. *O   Yannis   en   na pai   ekso*
        the Giannis.NOM be.NONPAST.3 na go.PERF.NONPAST.3S out
        avrio,   ala i   Maria   en   tha pai.
        tomorrow but the Maria.NOM NEG FUT go.PERF.NONPAST.3
        'Giannis will go out tomorrow, but Maria will not.'

---

12   Another possibility would be to analyze *tha* as only realizing the copular, with a null variant of C preempting *na* there: while such an analysis may capture the facts by positing mutual allomorphy, it essentially makes the codependency of the realizations of the copula and of the subordinating C in this context an accident and thus fails to capture the complementary distribution in the usual way.

c. *_o   Yannis   en   na pai   ekso_
  the Giannis.NOM be.NONPAST.3 na go.PERF.NONPAST.3s out
  avrio,   ala i   Maria   en   tha.
  tomorrow but the Maria.NOM NEG FUT
  (Intended: 'Giannis will go out tomorrow, but Maria will not.')

We can see that the missing *na*-clause is due to ellipsis, not Null Complement
Anaphora, because it is possible to extract from the missing complement.
In (23a), the preverbal subject *i Maria* in the matrix clause has moved there
by an A-movement from the embedded clause (see section 3.1 below). A'-
dependencies can also reach into the missing CP (unlike what is possible in
cases of Null Complement Anaphora; see Merchant 2013).[13]

(24) _To   aftokinito itan   na plini   o   Kostas,   che tin_
     the car   be.PAST.3 na wash.3s the Kostas.NOM and the
     motora   itan i   Maria   (na plini).
     motorbike.ACC was the Maria.NOM   na wash.PERF.NONPAST.3sg
     'The car, Kostas was going to wash, and the motorbike, Maria was (going
     to wash).'

The fact that ellipsis blocks allomorphy that depends on a triggering element
internal to the ellipsis site is a simple ordering effect: ellipsis bleeds the allo-
morphic rule in (20c) by removing part of the structural description of the rule.
This interaction is thus fully parallel to those studied in Bennett et al. 2015 for
Irish, for example.
     The second piece of evidence that the appearance of *tha* involves locally
conditioned allomorphy over a span comes from the behavior of *en na* and
tha in coordinations. As seen in (10) above and in (25) here, *na*-clauses can be
coordinated under the copula, with the futurate meaning maintained for both
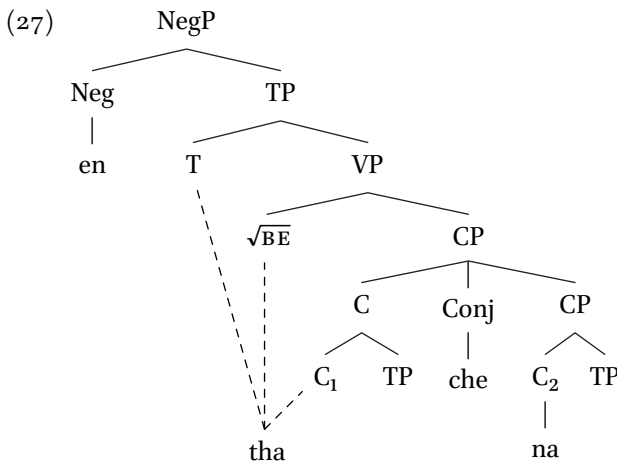conjuncts.

(25) _Itan   (che) na mairepso   supʰa che na_
     be.PAST.3 both na cook.PERF.NONPAST.1sg soup and na
     kathariso   to   domatio avrio.
     clean.PERF.NONPAST.1sg the room   tomorrow
     'I was (going) (both) to cook soup and to clean the room tomorrow.'

---

13   It is immaterial here whether the ellipsis in question is of the CP or of the VP, with verb-
      raising having moved the copula out of the target of ellipsis (as in V-stranding VP-ellipsis of
      the kind studied by McCloskey 1991 and many since); see Merchant 2016 for an argument
      that standard modern Greek has the latter.

But in the negated present, we find an asymmetry: the conjunct closest to negation shows the expected replacement of *en na* by *tha*, but any non-local conjunct does not. In other words, when the span targeted by (20c) is interrupted, the *tha* allomorph is impossible in the conjunct that isn't adjacent to Neg—instead, we find the regular *na* again:

(26) a. *En   tha mairepso   che na kathariso*
NEG tha cook.PERF.NONPAST.1sg and na clean.PERF.NONPAST.1sg
avrio.
tomorrow
'I will not cook and clean tomorrow.'

b. **En   tha mairepso   che tha*
  NEG tha cook.PERF.NONPAST.1sg and tha
kathariso   avrio.
clean.PERF.NONPAST.1sg tomorrow
('I will not cook and clean tomorrow.')

We assume that the coordination of the CP complements to *en* is a balanced (symmetrical) coordination with the expected morphology on both conjuncts (see Johannessen 1993), represented here for convenience as a ternary branching structure.[14] Vocabulary Insertion targets a span of nodes that includes the C head of the closest conjunct, in an apparent violation of the Coordinate Structure Constraint:

(27)

---

14   The copula *en* itself cannot head a conjunct under negation: there is no VP coordination

Note that an analysis based on head movement followed by Fusion would have difficulty accounting for these data: head movement is subject to the Coordinate Subject Constraint, so the requisite complex head consisting of T, $\sqrt{\text{BE}}$, and C1 (which would form the input to the Fusion operation) cannot be formed in the syntax.

If this analysis is correct, we must countenance an expanded domain for spans, allowing T-V-C in (21) and (27) to count as a span (or merely V-C, if the rule in (22) is correct). This conclusion is at odds with the definitions of spans that restrict spans to extended projections, such as the following, from Merchant 2015:

(28) Let T be an ordered n-tuple of terminal nodes $\langle t_1, \ldots, t_n \rangle$ such that for all $t \in T$, $t = t_1$ or t is an element of the extended projection of t_1.
  a. For all $k = 1 \ldots n$, t_k is a span. (Every node is a trivial span.)
  b. For any $n > 0$, if t_k is a span, then $\langle t_k, \ldots, t_{k+n} \rangle$ is a span.

(29) **Spanning Insertion Hypothesis**: A *span* and only a span can be targeted for Vocabulary Insertion.

Instead, it would appear at first glance that we must define a span to include a contiguous string of elements after Linearization. By locating the point of the derivation that spanning is sensitive to after Linearization, this proposal also explains why no Coordinate Structure Constraint violation is registered in (27): the CSC is a constraint on syntactic (or semantic) representations, not on strings. The definition in (30) is much weaker than that in (28), since it eliminates the requirement in that the elements be in an extended projection.[15]

---

under negation in any variety of Greek, presumably for the same reason that coordination under *tha* and *na* is impossible. The negator is a proclitic and cannot cliticize into a conjunct, though whether this is a cause or an effect, we cannot determine on the basis of these data.

15   This move is presaged in part by a similarly weaker definition offered in Abels and Muriungi (2008:719), who propose a version of a span (which they call a 'stretch') that includes the selectional requirement but jettisons the requirement that the heads be in an extended projection: "We suggest that a morpheme can realize a stretch of functional heads; by a stretch we mean one or more heads that select each other's maximal projections."

(30) Let T_D be the unique totally ordered n-tuple of terminal nodes $\langle t_1, \ldots, t_n \rangle$ over the elements in a derivation D that satisfy the Linearization statements generated by D.[16]
    a. For all $k = 1 \ldots n$, t_k is a span. (Every node is a trivial span.)
    b. For any $n > 0$, if t_k is a span, then $\langle t_k, \ldots, t_{k+n} \rangle$ is a span.

That the conditions on insertion of Vocabulary Items must in some cases be made sensitive to linear adjacency is a conclusion argued for on independent grounds by Arregi and Nevins 2012 and Ostrove 2015 (though see Moskal and Smith 2016 for an opposing view).

   At this point in our investigation, we have little evidence that mere adjacency is not the best model for these data, though allowing such string adjacency to be the sole conditioning factor for allomorphy is widely thought to overgenerate (see Svenonius 2012 for discussion). Another possibility for analyzing the coordinate structures would be to assimilate the spanning insertion condition to that found for closest conjunct agreement (as in McCloskey 1986, Munn 1999, Villavicencio et al. 2005, and Haegeman and van Koppen 2012, among many others). These in turn could privilege the first conjunct for structural reasons: it could be that the first conjunct CP is the true and only complement to the copula, and noninitial conjuncts are mere adjunct CPs to the first conjunct. These latter would show *na*, therefore, because they are not in the extended projection. This move raises a number of obvious difficulties (for extraction, subcategorization, and agreement), but these are the usual difficulties in handling conjunction to begin with.

   Nevertheless, given the wide range of predicted but absent phenomena that mere linear adjacency would allow, it seems most prudent to find a middle ground. What we need is to define spans as consisting of all tuples of nodes that are in the set of adjacent terminal nodes and that stand in a (possibly transitive) selection relation. This is easily done:

(31) Let $T_{<<}$ be the unique set of ordered pairs of terminal nodes $\langle t_i, t_j \rangle$ over the elements in a derivation D such that t_i immediately precedes t_j. Let T_S be the set of all pairs of nodes in D $\langle t_i, t_j \rangle$ such that t_i selects t_j.
    a. For all $k = 1 \ldots n$, t_k is a span. (Every node is a trivial span.)
    b. For any $n > 0$, $\langle t_1, \ldots, t_n \rangle$ is a span iff for all $1 \leq i \leq n$, $\langle t_i, t_{i+1} \rangle \in T_{<<} \cap T_S$

---

16   On some theories, such an ordered tuple is the output of Linearization; on others, it can

This definition picks out a subset of those nodes that select other nodes: the subset of such nodes that also stand in the immediate precedence relation. This means that when a verb selects a CP and immediately precedes it, $\langle V, C \rangle$ will be a span. Likewise when a v selects and immediately precedes a V. But when a v selects a specifier to its left (say, a DP), $\langle v, D \rangle$ will not form a span: although v selects D, it does not precede it. Likewise for potential selection relations that hold between a selecting head and a head remote from the selecting head, as was the case in the coordinations in (27) above: $\sqrt{\text{BE}}$ selects C2, but does not immediately precede it. Since $\langle \sqrt{\text{BE}}, C_2 \rangle \notin T_{<<}$, these two elements do not form a span.[17]

An additional prediction is made by the present analysis: because T-V-C must form an uninterrupted span to surface as *tha* under negation, the presence of a marker on the left conjunct should make *tha* impossible. This is the case in balanced coordinations, such as those involving *ute ... ute* 'neither ... nor' under negation (see Giannakidou 2007 for further discussion of the properties of *ute*). In such a situation, the unmarked *na* should appear. These predictions are also borne out:

(32) a. **En   tha ute   mairepso   supha ute na*
         NEG tha neither cook.PERF.NONPAST.1sg soup   nor na
         kathariso   to   dhomatio avrio.
         clean.PERF.NONPAST.1sg the room   tomorrow

    b. **En   ute   tha mairepso   supha ute na*
         NEG neither tha cook.PERF.NONPAST.1sg soup   nor na
         kathariso   to   dhomatio avrio.
         clean.PERF.NONPAST.1sg the room   tomorrow

(33) *En   en   ute   na mairepso   supha ute na*
     NEG be.NONPAST.3 neither na cook.PERF.NONPAST.1sg soup   nor na
     kathariso   to   dhomatio avrio.
     clean.PERF.NONPAST.1sg the room   tomorrow
     'I will neither cook soup nor clean the room tomorrow.'

---

    be generated by the transitive closure over the Linearized pairs. Arregi and Nevins 2012 argue that the output of Linearization maintains hierarchical information as well.

17   Svenonius 2012:2 fn 3 considers the possibility that spans may include heads from across multiple extended projections, writing that "c-selection essentially turns a selected complement into part of the extended projection, at least for the purposes of lexical insertion". This presages part of our definition in (31), but does not include the crucial adjacency requirement.

The example in (33) is particularly significant: it shows that the appearance of *tha* for *en na* under negation is not due to some incompatibility of negation with *en na*, either syntactic or semantic: in (33), the regular sentential marker *en* does occur with *en na*, yielding the expected meaning. This remarkable reappearance of *en na* under negation is predicted by our analysis: because the copular *en* is not adjacent to *na* in (33), the allomorphic rule in (20c) will not apply, and instead we find the usual exponents of these morphemes.

3   Additional issues and questions

3.1   *On the properties of the copula*

The nature of the interactions between the higher verb, realized as *en* or *itan*, and the surface subject, are tangential to our concerns in this paper, so we will confine ourselves to only a few remarks.

It appears that apparent preverbal subjects in the matrix clause are moved there from the embedded clause via one of the strategies that underlie the robust word order permutations that Greek enjoys: the movement that derives much of the attested variation appears to have A-movement-like properties despite not targeting a position associated with agreement in their own clause (see Alexiadou and Anagnostopoulou 2002 for raising out of *na*-clauses, and Spyropoulos and Revithiadou 2007 for a discussion of preverbal subjects).

For example, subject idiom chunks from clausal idioms like the one in (34) do not appear in control clauses (35a) or as cross-clausal topicalized phrases (35b):

(34) *Efkalen   malja   i   γlossa   mu.*
       grow.PERF.PAST.3sg hair.ACC the.NOM tongue.NOM my
       'I talked a lot about the same thing; I wore myself out talking.' (*lit.* 'My tongue grew hair.')

(35) a. * *I   γlossa   mu eprospathise   na*
            the.NOM tongue.NOM my try.PERF.PAST.3sg na
            fkali   malja.
            grow.NONPAST.PERF.3s hair.ACC
            (*Intended:* 'I tried to talk a lot', *lit.* 'My tongue tried to grow hair.')

b. * [I   ɣlossa   tu]₁, se   proidhopiisa   oti
    the.NOM tongue.NOM his   you.ACC warn.PERF.PAST.1sg that
    t₂ fkalli   malja.
      grow.PERF.NONPAST.3sg hair
    (*Intended*: 'I warned you that he talks a lot', *lit*. 'I warned you that his
    tongue grows hair')

But these idiom chunks can appear before the copula, as seen in (36a,b) for the
present and past copulas, respectively.

(36) a. *I   ɣlossa   mu en   na fkali*
    the tongue.NOM my be.NONPAST.3s na grow.PERF.NONPAST.3sg
    malja.
    hair.ACC
    'I will talk a lot about the same thing.' (*lit*. 'My tongue will grow hair')

    b. *I   ɣlossa   mu itan   na fkali*
    the tongue.NOM my be.PAST.3 na grow.PERF.NONPAST.3sg
    malja.
    hair.ACC
    'I was going to talk a lot about the same thing.' (*lit*. 'My tongue would
    grow hair')

Similarly, active/passive synonymy is maintained under *en na*: (37a) and (37b)
are synonymous.

(37) a. *O   jatros   en   na eksetasi   ton*
    the doctor.NOM be.NONPAST.3 na examine.PERF.NONPAST.3sg the
    Kosta.
    Kostas.ACC
    'The doctor will examine Kostas.'

    b. *O   Kostas   en   na eksetasti   pu ton*
    the Kostas.NOM be.NONPAST.3 na examine.PASSIVE.3s by the
    jatro.
    doctor.ACC
    'Kostas will be examined by the doctor.'

If this reasoning is correct, we have a case of A-movement out of an embedded finite clause, a conclusion in line with that of Alexiadou and Anagnostopoulou 2002 for certain aspectual predicates. Two additional tests from Alexiadou and Anagnostopoulou 2002 yield the same result. First, as they discuss, pseudocleft-like structures as in (38b) do not allow the *na*-clause complement of raising verbs to be the pivot. This shows a similar distribution with other raising predicates that also do not allow pseudocleft formation, as in (38b). This observation of a parallel distribution then shows A-movement-like properties from the embedded *na*-clause to the matrix clause, as also shown with idioms and active/passive synonymy above.

(38) a. *Tuto pu   itan   i Maria itan   na*
      that which be.PAST.3 the Maria be.PAST.3 na
      pai   ekso.
      go.PERF.NONPAST.3sg outside
      (Intended: 'What Maria was going to do was go outside', *lit.* 'What Maria was was that she-go outside.')

    b. *Tuto pu   arkepsen   o Yannis itan na*
      that which start.PERF.PAST.3sg the Yannis was na
      vura.
      run.PERF.NONPAST.3sg
      (Intended: 'What Yannis started doing was to run', *lit.* 'What Yannis started was that he-run.')

Second, nominative anaphors as in (39) allow backward binding into subjects of raising, but not control, predicates (see Landau 2013 for extensive additional discussion and diagnostics). This shows that the anaphor can be reconstructed to and bound in its base position. In (39), *o eaftos tu* is in the subject position of the main clause and it is bound by the pronoun in the *na*-clause; this is consistent with the supposition that *o eaftos tu* A-moves out of the embedded clause to the matrix clause.

(39) *O eaftos   tu en   na tu   aresi.*
    the self.NOM his be.PRES.3 na him.GEN appeal.PERF.NONPAST.3sg
    'He will like himself.'

Two other typical tests that distinguish A- from A′-movement, the presence of weak crossover effects and the licensing of parasitic gaps, yield less than reliable results in Cypriot Greek, and so we do not report the data here. Briefly,

quantificational subjects of *en na* clauses appear to be able to bind pronouns that are inside matrix adjunct. In other words, such subjects do not trigger weak crossover effects. We would normally conclude that they reach their surface positions by A-movement (over matrix adjuncts), expanding their A-binding domains. But it is difficult to interpret the results of this diagnostic because it is not clear whether even clearly topicalized phrases from embedded clauses trigger weak crossover effects in all cases in the first place. It is also unclear whether Greek has a set of gaps with the profile of parasitic gaps in languages like English.

Given the parallels to raising predicates, then, it comes as something of a surprise that in these constructions, the copular verb always appears in the 3rd person (recall from (1) that the 3rd person shows no number distinction in this verb).

(40) a. *Eɣo en   na pao.*
          I   be.NONPAST.3 na go.PERF.NONPAST.1sg
          'I will go.'

      b. **Eɣo ime   na pao.*
          I   be.NONPAST.1sg na go.PERF.NONPAST.1sg
          ('I will go.')

While unusual, this would not be the only verb in Greek to show this behavior: impersonal verbs like *prepi* 'must' and *bori* 'is possible' have a similar pattern. There are two obvious analytical paths for accounting for the lack of agreement on *en* in (40).

First, the locality domains for Agreement and for movement could be different (Potsdam and Polinsky 2008, Keine 2016): in Greek, apparently, the embedded CP *na*-clause, which does not assign nominative case, allows for EPP-driven (·D·-driven) A-movement from its subject to the higher subject position. The ability of agreement to probe into the CP could be limited, perhaps because CP itself has ϕ-features. The necessity for default inflection would follow on this analysis from the fact that the higher T node, where the probing ϕ-features are located, is separated from the potential controller of agreement by a clause boundary, CP. Movement of the DP into the higher domain does not alter this fact, since the probe only agrees downward.

The second possibility again would take it that Agree to value the ϕ-features on the higher T can only probe T's c-command domain, but would derive the lack of agreement from an interaction of movement and Agree. If movement occurs before Agree, then movement of the subject above T would bleed Agree.
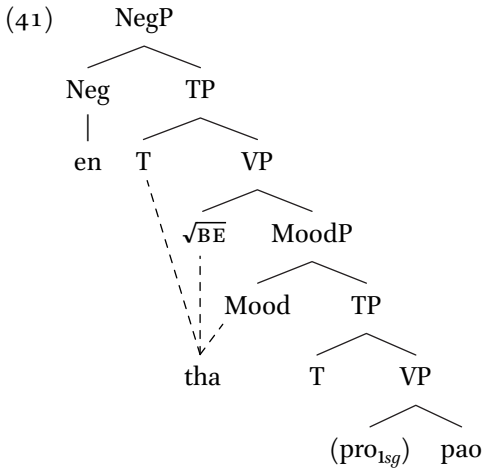
Such an analysis can be implemented in a system like that of Georgi 2014 and Martinović 2015, who study such opaque interactions in detail: the movement feature on the head that agrees would precede the agreement feature: $\langle \cdot D \cdot, *\phi* \rangle$. The advantage of this approach is that it could code on individual lexical items a differing order of Move and Agree triggers, allowing us to understand the difference between *en/itan* and the aspectual verbs studied by Alexiadou and Anagnostopoulou 2002, which do agree with their derived subjects, as a lexical difference, specified in the lexical entries for the different verbs.

In either case, any theory of default values should capture the fact that what surfaces is 3rd person (for example, the interaction of default values with Agreement failures in Preminger 2014). It it not important for our purposes to choose between these alternatives, and we leave adjudication between them to future work.

3.2   *Is clause union an alternative?*

There is in principle another possibility for analyzing the allomorphic competition between *en na* and *tha*, one that would preserve the definition of span built on the notion of extended projection, and not weaken it to mere transitive selection (modulo the immediate precedence condition). This alternative would require two changes to our analysis: first, we could adopt the position of many researchers (such as Giannakidou 2009, Philippaki-Warbuton 1994, and others) that *na* is in a lower clause-internal projection, such as Mood, and not in C, and does not require embedding under a C. Second, we could claim that the copula *en/itan* in these structures selects for MoodP directly, bypassing the CP layer, and that this truncated complement phrase is the realization of a restructuring context. As in Germanic and Romance restructuring phenomena (Wurmbrand 2004), the selecting v and the lower v would be in the same domain for certain purposes, including allomorphy (a phenomenon familiar from German for example, where one subset of restructuring contexts licenses the Infinitivus Pro Participio, a locally conditioned variant realization of a verb under the perfect auxiliary). On this analysis, *na* and *en* would not be in different domains, and our definition of span requires no revision along those lines: instead, we could analyze the entire v-na-v complex as involving only one extended projection (see also Grano 2012 for an in-depth discussion of some Greek restructuring verbs).

On this analysis, we would have structures such as the following.

(41)   NegP
          ╱   ╲
      Neg   TP
       | ╱   ╲
      en   T   VP
                   ╱   ╲
               √BE   MoodP
                      ╱   ╲
                  Mood   TP
                             ╱   ╲
                  tha   T   VP
                                 ╱   ╲
                           (pro₁ₛ₉)   pao

In this case, we would therefore not find a CP layer, even though *na*-clauses in other contexts project CPs, as can be seen by the appearance of a clitic-left-dislocated DP between a selecting verb and *na* in the following examples.

(42) *Thelo*   *ton*   *Yanni*   *na ton*
     want.IMPERF.NONPAST.1sg the.ACC Yannis.ACC *na* him
     apolisun   *avrio.*
     fire.PERF.NONPAST.3pl tomorrow
     'I want them to fire Yannis tomorrow.'

The *en na* construction, however, appears to have an embedded CP layer: there is a landing site of at least marginal acceptability for clitic-left dislocated phrases between the matrix verb and *na*:[18]

---

18   For reasons that are unclear to us at present, cases in the present tense are much worse:

      (1)   *En*   *ton*   *Yanni*   *na ton apolisun*
            be.NONPAST.3 the.ACC Yanni.ACC *na* him fire.IMPERF.NONPAST.3pl
            avrio.
            tomorrow
            'They are firing Yanni tomorrow.'

(43) *?Itan   ton   Yanni   na ton*
       be.IMPERF.PAST.3 the.ACC Yanni.ACC *na* him
       apolisun   avrio.
       fire.PERF.NONPAST.3pl tomorrow
       'They were going to fire Yiannis tomorrow.'

But a significant remaining question on such an analysis is why the higher T cannot agree with the lower subject. If a clause boundary intervenes (a CP, as in (21) above), standard theories of locality of agreement will correctly predict that the embedded subject only triggers agreement on the embedded verb. If we collapse the clauses, it would seem, *ceteris paribus*, that the matrix T would now be in the same phase as the lower subject, and hence able to value its ϕ-features via Agree with the embedded subject.

3.3   *On the* the na *construction*
Greek Cypriot speakers also find examples like (44) acceptable. At first sight, this seems to involve a contracted form of the volitional verb *thelo* (to *the*; see Joseph and Pappas 2002 and Pappas 2001 for relevant discussion); but this *the* is not found anywhere else in the language.

(44) *E(n) the na pao   popse.*
       NEG the na go.PERF.NONPAST.1sg tonight
       'I am not going tonight.'

This use of *the* + *na* is also reported in Roussou and Tsangalidis 2010 as a reduced form that maintains the *na*-complement. Markopoulos 2008 notes the emergence of *the na* in the 14th century AD as a construction used for expressing volition-related meaning, and he treats *the* as the product of the loss of the unstressed word-final /i/ of the volitional verb *theli* 'want' following the loss of intervocalic /l/. Similarly, the 2nd person singular in Standard Modern Greek also exhibited a similar reduction, from *thelis* to *thes*, in the same period, a fact suggesting that it belonged to the same pattern as the *the na* construction.

(45) *An the na mbun   apu tin tripan, t' aloga apothe   na*
       if 'the' na enter.3pl from the hole   the horses from.where na
       ta   mbasomen?
       them pass.through.1pl
       'If they will go through the hole, where will we pass the horses through?'
       (Cypriot Greek, Mahairas, 509)

Synchronically, *the* is hardly used in any other context and speakers do not necessarily associate it in the aforementioned construction with a volitional reading. As the example in (46a) shows, it is no contradiction to not want to do something but to nevertheless predict or plan for it to happen; the fact that *the* in precisely the same context gives rise to a contradiction, as indicated in (46b), shows that *the* is not merely a reduced form of *thelo* and is compatible with *the* indicating futurity in the same way as *en na* (though we will have to leave a close investigation of their semantic differences to future work).

(46) a. *En   thelo   na pao*
       NEG want.IMPERF.NONPAST.1sg na go.IMPERF.NONPAST.1sg
       avrio,   alla en   na pao.
       tomorrow, but be.3s na go.IMPERF.NONPAST.1sg
       'I don't want to go tomorrow, but I will go.'

    b. *#En   the na pao   avrio,   alla en   na*
        NEG 'the' na go.IMPERF.NONPAST.1sg tomorrow, but be.3 na
       pao.
       go.IMPERF.NONPAST.1sg
       #'I will not go tomorrow, but I will go.'

Note finally that the fact that *the na* can be felicitously embedded under negation makes it unlikely that the failure of *en na* to similarly appear under negation is due to its meaning or to something idiosyncratic about *na* in these contexts: it is due to the fact that there is a more specific morpheme, *tha*, which is competing for precisely the copular + *na* span under negation, and which, by the Elsewhere Principle, pre-empts the appearance of *en na*.

3.4   *An additional point of comparison with Standard Modern Greek* tha

The assumption that the Cypriot Greek future periphrastic construction is built on a biclausal structure, involving a *na*-clause, comes as no surprise when considering the development of the future particle *tha* in Standard Modern Greek. Historical work on the development of the future particle *tha* also suggests that more complex structures were involved, similar to the one we argue for here. Joseph and Pappas 2002 and Roberts and Roussou 1999 argue that Standard Modern Greek *tha* involves a redeployment of the volitional verb *thelo* 'want' and the infinitive, the latter replaced by the head *ina*. A use of the volitional verb and the *na*-clause to give a future reading has also been documented for medieval Cypriot Greek in Aerts 1983 in (47) and a

similar development to today's use of *en na* has also been previously assumed (Chatziioanou 1999:92, Menardos 1969).

(47) *I*   *tis*   *theli*   *na mini*   *as*
       PRT someone want.3sg na stay.PERF.NONPAST.3sg let
       mini.
       stay.PERF.NONPAST.3sg
       'If someone will stay, let him stay.'

The Cypriot Greek periphrastic *en na* can profitably be compared to the Standard Modern Greek future particle *tha* (see Tsangalidis 1998 and Giannakidou and Mari to appear for extensive discussion of Standard Modern Greek *tha*). In all contexts in which we saw *en na* appear above, Standard Modern Greek would use the particle *tha*: like *en na*, *tha* takes both perfective and imperfective nonpast verbal complements in its futurate use (while also taking the past in its epistemic use). Both *en na* and *tha* can appear, for example, in protases of conditionals:

(48) a. *An en*   *na vreksi,*   *en*   *na*
          if   be.NONPAST.3 na rain.PERF.NONPAST.3s be.NONPAST.3 na
          minume   *esso.*
          stay.PERF.NONPAST.1pl home
          'If it rains, we will stay home.'   [Cypriot Greek]

      b. *An tha vreksi,*   *en*   *na*
          if   FUT rain.PERF.NONPAST.3s be.NONPAST.3 na
          minume   *esso.*
          stay.PERF.NONPAST.1pl home
          'If it rains, we will stay home.'   [Cypriot Greek]

(49) *An tha vreksi,*   *tha minume*   *spiti.*
       if   FUT rain.PERF.NONPAST.3s FUT stay.PERF.NONPAST.1pl home
       'If it rains, we will stay home.'   [Standard Modern Greek]

The fact that *tha* can appear in the Cypriot Greek conditional protasis in (47b) is unexpected, unless the conditional head *an* in Cypriot Greek bears the relevant conditioning feature NEG that the Vocabulary Insertion rule in (20c) above requires. We are not in a position to pursue this further here, other than to note the cross-linguistically variable appearance of so-called 'expletive' negation in conditionals (see Yoon 2010 for discussion).

The microvariation observed in the distribution of the Standard Modern Greek *tha* and the Cypriot Greek *tha* still assumes the modification for spanning as an analytical option for learners in all languages and reduces the differences to the lexical items only. These lexical items have individual contextual insertion environments, and these conditioning environments may also differ, as a point of lexical variation within and among languages. All variation is in the lexicon. The kinds of variation, or microvariation (Barbiers 2009 and many others), that are found must be those that are represented in the lexicon. It is a trivial observation that the vocabularies of languages differ; it is nontrivial, but looking more true than ever, that this is the *only* way in which languages differ. All word order and other differences, obvious or subtle, in fact derive from the Vocabulary Entries of the words and morphemes that are present in the language, and whose varying properties are learned. What is common to all languages, and thus to Standard Modern Greek and to Cypriot Greek, are operations such as Merge and Vocabulary Insertion, with its possibility to make use of spans in the statement of insertion and conditioning (see Merchant 2015 for an argument that certain stems and portmanteaux desinences in Standard Modern Greek require the use of spans). All variation is 'microvariation': larger, apparently macrovariation, is simply the sum result of large repetitions of many similar choices in the points of microvariation. Lexical variation, in this sense, causes the morphosyntactic variation observed between the two varieties. The comparison of the uses of Standard Modern Greek *tha* and Cypriot Greek *en na*, however, strengthens the supposition that these two elements play parallel roles and have similar distributions in the two language varieties.

4   Conclusion

The variation of the Cypriot Greek periphrastic future *en na~tha* presents a puzzle for standard spanning theory, where spans are restricted to extended projections. We analyzed *en na* as being just what it seems to be: the copula followed by the 'subjunctive' subordinating particle *na*; *tha* replaces both of these under clausemate negation. In other words, *tha* is a portmanteau form realizing the copula and the embedded head that normally surfaces as *na*: concretely, *tha* realizes a (т-)v-c span. In one sense, *tha* is an allomorph of *en na*.

Cypriot Greek *tha* therefore represents a morpheme whose environment for Vocabulary Insertion cannot be stated within a single extended projection. For this reason, we revised the definition of span to make it sensitive to mere selection (including across a clause boundary). The facts from coordination, in particular the ability of the closest conjunct to license *tha* across its edge, and the

fact that CP ellipsis bleeds *tha*, required a further, more radical revision: spans are sequences of selecting heads that also immediately precede one another.

Constraints on possible morphemes can come from the kinds of linearizations that are possible, from cyclic constraints on the generation of those statements, or elsewhere, but one conclusion is inescapable: eppur si spane![19]

References

Abels, Klaus, and Peter Muriungi. 2008. The focus particle in Kîîtharaka: Syntax and semantics. *Lingua* 118:687–731.

Aerts, Willem Johan. 1983. Periphrastic constructions of the Future tense, especially with mellein in Medieval Cypriotic. *Epetiris tu Kentru Epistimonikon Erevnon* [*Journal of the Scientific Research Center*] XII:149–169.

Agouraki, Georgia. 1991. Spec/Head licensing: The cases of Foci, Clitic Constructions and Polarity Items. Doctoral Dissertation, University College London.

Alexiadou, Artemis, and Elena Anagnostopoulou. 2002. Raising without infinitives and the role of agreement. *Dimensions of Movement. Amsterdam: John Benjamins* 17–30.

Arregi, Karlos, and Andrew Nevins. 2012. *Morphotactics: Basque auxiliaries and the structure of Spellout*. Berlin: Springer.

Barbiers, Sjef. 2009. Locus and limits of syntactic microvariation. *Lingua* 119:1607–1623.

Bennett, Ryan, Emily Elfner, and James McCloskey. 2015. Prosody, focus, and ellipsis in Irish. Ms., Yale, University of British Columbia, and University of California, Santa Cruz.

Bobaljik, Jonathan David. 2015. Distributed Morphology. Ms., University of Connecticut.

Chatziioanou, Kyriakos. 1999. *Grammatiki tis omiloumenis Kypriakis dialektou* [*grammar of the Cypriot dialect*]. Lefkosia: Ekdosis Tamasos.

Chatzopoulou, Aikaterini. 2012. Negation and nonveridicality in the history of Greek. Doctoral Dissertation, University of Chicago.

Embick, David. 2010. *Localism versus globalism in morphology and phonology*, volume 60. MIT Press.

Embick, David, and Rolf Noyer. 2007. Distributed morphology and the syntax/morphology interface. *The Oxford handbook of linguistic interfaces* 289–324.

Georgi, Doreen. 2014. Opaque interactions of Merge and Agree: On the nature and order of elementary operations. Doctoral Dissertation, Universität Leipzig, Leipzig.

Giannakidou, Anastasia. 1998. *Polarity sensitivity as (non)veridicality*. Amsterdam: John Benjamins Publishing Company.

---

19   With apologies to Galileo.

Giannakidou, Anastasia. 2007. The landscape of EVEN. *Natural Language and Linguistic Theory* 25:39–81.

Giannakidou, Anastasia. 2009. The dependency of the subjunctive revisited: Temporal semantics and polarity. *Lingua* 119:1883–1908.

Giannakidou, Anastasia, and Alda Mari. 2017. A unified analysis of the future as epistemic modality: The view from Greek and Italian. *Natural Language and Linguistic Theory*. Published Online April 26, 2017. DOI 10.1007/s11049-017-9366-z.

Grano, Thomas A. 2012. Control and Restructuring at the Syntax-Semantics interface. Doctoral Dissertation, University of Chicago.

Haegeman, Liliane, and Marjo van Koppen. 2012. Complementizer agreement and the relation between c^0 and T^0. *Linguistic Inquiry* 43:441–454.

Halle, Morris, and Alec Marantz. 1993. Distributed morphology and the pieces of inflection.

Harley, Heidi. 2014. On the identity of roots. *Theoretical linguistics* 40:225–276.

Holton, David, Peter Mackridge, and Irene Philippaki-Warburton. 1997. *Greek: A comprehensive grammar of the modern language*. Psychology Press.

Huddleston, Rodney, Geoffrey K. Pullum, et al. 2002. The Cambridge Grammar of English. *Language. Cambridge: Cambridge University Press* 1–23.

Johannessen, Janne Bondi. 1993. Coordination: A minimalist approach. Doctoral Dissertation, University of Oslo, Faculty of Arts, Linguistics Department.

Joseph, Brian D., and Panayiotis A. Pappas. 2002. On some recent views concerning the development of the Greek future system. *Byzantine and Modern Greek studies* 26:247–273.

Kayne, Richard S. 2013. Comparative syntax. *Lingua* 130:132–151.

Keine, Stefan. 2016. Probes and their horizons. Doctoral Dissertation, University of Massachusetts at Amherst, Amherst, Mass.

Kobele, Gregory M. 2012. Eliding the derivation: a minimalist formalization of ellipsis. In *Proceedings of the HPSG 2012 conference*.

Landau, Idan. 2013. *Control in generative grammar: A research companion*. Cambridge: Cambridge University Press.

Markopoulos, Theodore. 2008. *The future in Greek: From Ancient to Medieval*. Oxford University Press.

Martinović, Martina. 2015. Feature geometry and head-splitting: Evidence from the morphosyntax of the Wolof clausal periphery. Doctoral Dissertation, University of Chicago, Chicago, Illinois.

Mavrogiorgos, Marios. 2013. Enclisis at the syntax-PF interface. *Challenging Clitics (Linguistik Aktuell/Linguistics Today 206). Benjamins, Amsterdam* 27–54.

Mavrogiorgos, Marios. to appear. Decomposing EPP effects in greek enclisis. *Journal of Greek Linguistics*.

McCarthy, John, and Alan Prince. 1994. The emergence of the unmarked: Optimality in

prosodic morphology. *Papers from the Annual Meeting of the North East Linguistic Society* 24.

McCloskey, James. 1986. Inflection and conjunction in Modern Irish. *Natural Language and Linguistic Theory* 4:245–282.

McCloskey, James. 1991. Clause structure, ellipsis and proper government in Irish. *Lingua* 85:259–302.

Menardos, Simos. 1969. *Glossike melete* [*Linguistic Studies*]. Nicosia: Cyprus Research Center.

Merchant, Jason. 2013. Diagnosing ellipsis. In *Diagnosing syntax*, ed. Lisa Lai-Shen Cheng and Norbert Corver, 537–542. Oxford: Oxford University Press.

Merchant, Jason. 2014. The Afrikaans final negative particle is a clitic on vp. Ms., University of Chicago.

Merchant, Jason. 2015. How much context is enough? Two cases of span-conditioned stem allomorphy. *Linguistic Inquiry* 46:273–303.

Merchant, Jason. 2016. Does Greek have vvpe? Yes, but it's easy to overlook. Paper presented at the 5th annual Midwest Greek Linguistics Workshop, University of Chicago.

Moskal, Beata, and Peter W. Smith. 2016. Towards a theory without adjacency: hyper-contextual vi-rules. *Morphology* 26:295–312.

Munn, Alan. 1999. First conjunct agreement: Against a clausal analysis. *Linguistic Inquiry* 30:643–668.

Newton, Brian. 1972. *Cypriot Greek: Its phonology and inflections*. Walter de Gruyter.

Ostrove, Jason. 2015. On morphological locality, linear adjacency, and the nature of Vocabulary Insertion. Ms., University of California, Santa Cruz, November 2015.

Pappas, Panayiotis. 2001. The microcosm of morphological change. Variation in thelo + infinitive futures and ethela infinitive counterfactuals in Early Modern Greek. *Diachronica* 18:59–92.

Philippaki-Warburton, Irene. 1982. On mood and complementizers in Modern Greek. Ms., University of Reading.

Philippaki-Warbuton, Irene. 1994. The subjunctive mood and the syntactic status of the particle na in Modern Greek. *Folia linguistica* 28:297–328.

Potsdam, Eric, and Maria Polinsky. 2008. Real and apparent Long-distance Agreement in Subject-to-Subject Raising constructions. Paper presented at the DGfS Workshop on Local Modeling of Non-local Dependencies in Syntax, Bamberg, Germany.

Preminger, Omer. 2014. *Agreement and its failures*. Cambridge, Mass.: mit Press.

Roberts, Ian, and Anna Roussou. 1999. A formal approach to 'grammaticalization'. *Linguistics* 37:1011–1041.

Roussou, Anna. 2000. On the left periphery: Modal particles and complementisers. *Journal of Greek linguistics* 1:65–94.

Roussou, Anna. 2001. Control and raising in and out of subjunctive complements. *Comparative syntax of Balkan languages* 74–104.

Roussou, Anna, and Anastasios Tsangalidis. 2010. Reconsidering the 'Modal Particles' in Modern Greek. *Journal of Greek Linguistics* 10:45–73.

Salzmann, Martin. 2013. Rule ordering in Verb Cluster Formation: On the extraposition paradox and the placement of the infinitival particle *te/zu*. *Rule interaction in grammar* 65–121.

Spyropoulos, Vassilios, and Irene Philippaki-Warburton. 2001. 'Subject' and EPP in Greek: The discontinuous subject hypothesis. *Journal of Greek Linguistics* 2:149–186.

Spyropoulos, Vassilios, and Anthi Revithiadou. 2007. Subject chains in Greek and PF processing. In *Workshop on Greek Syntax and Semantics, MIT*, 20–22.

Svenonius, Peter. 2012. Spanning. Ms., CASTL, University of Tromsö.

Symeonides, Charalampos P. 2006. *Istoria tis Kypriakis dialektou.* [*The history of the Cypriot dialect*]. Lefkosia: Kentro Meleton Ieras Monis Kikkou.

Terzi, Arhonto. 1999a. Clitic combinations, their hosts and their ordering. *Natural Language and Linguistic Theory* 17:85–121.

Terzi, Arhonto. 1999b. Cypriot Greek clitics and their positioning restrictions. In *Studies in Greek syntax*, ed. Artemis Alexiadou, Geoffrey Horrocks, and Melita Stavrou, 227–240. Dordrecht: Kluwer.

Tsangalidis, Anastasios. 1998. *Will and tha: a comparative study of the category future.* Thessaloniki: University Studio Press.

Tsiplakou, Stavroula. 2009. Code switching and Code-mixing between related varieties: Establishing the Blueprint. *International Journal of the Humanities* 6:49–65.

Tsiplakou, Stavroula. 2014. How mixed is a 'mixed' system? The case of Cypriot Greek koine. *Linguistic Variation* 14:161–178.

Vassiliou, Erma. 2002. The word order of Medieval Cypriot. Doctoral Dissertation, La Trobe University.

Villavicencio, Aline, Louisa Sadler, and Doug Arnold. 2005. An HPSG account of closest conjunct agreement in NP coordination in Portuguese. In *Proceedings of the HPSG05 conference*, ed. Stefan Müller. Stanford, Calif.: CSLI Publications.

Wurmbrand, Susi. 2004. Two types of restructuring–lexical vs. functional. *Lingua* 114: 991–1014.

Yoon, Suwon. 2010. 'Not' in the mood: The syntax and semantics of evaluative negation. Doctoral Dissertation, University of Chicago, Chicago, Illinois.