

Phrasal and clausal comparatives in Greek and the abstractness of syntax

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Abstract

Greek phrasal and reduced clausal comparatives differ in that the former, but not the latter, show island sensitivities. In neither case, however, is the material that constitutes the island pronounced. This paper argues that such facts can only be captured by positing abstract unpronounced syntactic structures over which the island constraints are stated; the comparison between the two kinds of comparatives further shows that reducing the island effects to semantic or other ill-formedness is not possible: the island effects are irreducibly syntactic. Such facts provide support for syntactic architectures that countenance this kind of abstractness.

One of the recurrent leitmotifs of theorizing in many domains, including syntax, is that simple surface appearances can be misleading, and that underneath apparently simple elements or phenomena we find complex and intricate structures. This paper explores one such domain, that of phrasal comparatives, and shows that in at least one language, namely Greek, these constructions, which appear on the surface quite simple, actually contain fully clausal syntax, subject to a process which masks their complexity and

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gives rise to their surface simplicity. It is argued that such an analysis is necessary to account for the facts of this construction, and that no theory or analysis which attempts to keep the syntax simple can have a successful account of the facts. The argument itself is simple: effects which are universally believed to be due to complex syntactic dependencies, namely island sensitivities, are attested in the Greek phrasal comparatives; these island sensitivities cannot plausibly be attributed to semantic or processing difficulties, as a slightly different syntactic means can express the intended meaning without deviance (using the clausal or reduced clausal comparative). These facts indicate that apparently simple phrasal comparatives have a clausal source, subject to movement constraints, and ellipsis, as proposed on other grounds by Lechner 2001, 2004; this analysis crucially relies on the availability of abstract, unpronounced syntactic structures and provides a direct argument for grammatical architectures that countenance such abstractness.

1 Clausal and phrasal comparatives

Clausal comparatives are comparatives in which the complement of the marker of the standard of comparison (e.g., *than* in English) shows clausal syntax, consisting of all the usual elements found in a clause minus only the gap corresponding to the comparative operator. In English, these have the following form.

- (1) Mary plays the guitar better than John plays the guitar.
- (2) More people live in Russia than live in the US.
- (3) In the 2000 presidential election in Florida, more people₁ thought they₁ voted for Gore than thought they voted for Bush.

In Greek, clausal comparatives have the same properties; note that the standard marker corresponding to English *than* is *apoti*.

- (4) I Maria pezi kithara kalitera apoti pezi kithara
the Maria.NOM plays guitar better than.CLAUSAL plays guitar
 o Giannis.
the Giannis.NOM
 ‘Maria plays the guitar better than Giannis plays the guitar.’

- (5) Perissoteri anthropi pistevun oti i Maria pezi kithara
more people think.3pl that the Maria plays guitar
 apoti pistevun oti pezi violi.
than.CLAUSAL think.3pl that play.3sg violin
 ‘More people think that Maria plays guitar than think that she plays violin.’

Phrasal comparatives, on the other hand, contain only a single phrase following the standard marker, as in (6).

- (6) a. Mary plays the guitar better than John.
 b. Mary reads more books than John.
 c. More people like Mary than John.

In English, this *than* has been argued by Hankamer 1973 to be a preposition, based on its ability to be stranded under *wh*-movement, as in (7), and the ability of reflexives bound by the subject of the adjective to appear after it, as in (8).

- (7) Who is Mary taller than?
 (8) No-one₁ is taller than himself₁.

In Greek, such phrasal comparatives appear as in (9).

- (9) I Maria pezi kithara kalitera apo ton
the Maria.NOM plays guitar better than.PHRASAL the
 Gianni.
Giannis.ACC
 ‘Maria plays the guitar better than Giannis.’

While Greek does not allow for preposition stranding under *wh*-movement, other tests for prepositionhood indicate that the Greek phrasal comparatives are as prepositional as their English counterparts, if anything more clearly so. First, the standard marker is *apo*, which in other uses is a preposition meaning ‘from, of’ (such as in (10)).

- (10) a. I Maria erxetai apo ton Gianni.
the Maria.NOM is.coming from the Giannis.ACC
 ‘Maria is coming from Giannis’s (place).’

- b. To ðoro apo ton Gianni irθe.
the gift from the Giannis.ACC arrived
 ‘The gift from Giannis arrived.’

In all uses, what follows *apo* must be a single DP in the accusative case, as we expect from a preposition. This is true even in cases like (9), where the standard of comparison corresponds to a notional subject. Data from the distribution of reflexives and pied-piping under wh-movement (Greek lacks preposition-stranding) show similarly that *apo* in phrasal comparatives is a preposition. First, pied-piping is possible in phrasal comparatives, as shown in (11). Second, to the extent that locality conditions on the licensing of reflexives indicates a monoclausal domain, the possibility of the Greek bound reflexive anaphor *o eaftos tu* after *apo*, seen in (12), provides further evidence for the prepositional nature of *apo* in these structures.

- (11) Apo pjon (ipes oti) epekse kalitera kithara i
than.PHRASAL whom (said.2sg that) played better guitar the
Maria xtes?
Maria.NOM yesterday
 ‘Than whom did (you say that) Maria play(ed) guitar better yesterday?’
- (12) Kanenas₁ dhen ine psiloteros apo [ton eafto tu]₁.
n-person not is taller than.PHRASAL the self his
 ‘No-one is taller than himself.’

What we can call ‘reduced clausal comparatives’ can look at first sight quite similar to phrasal comparatives: they contain generally a single phrase following the standard marker:

- (13) More people live in Russia than in the US.
 (14) More people thought they voted for Gore than for Bush.

What distinguishes reduced clausal comparatives from true phrasal ones is the fact that a non-DP may follow *than*. In addition, multiple phrases may occur after *than* as well:

- (15) a. Amy likes to play the guitar loudly more than quietly.
 b. More people like to watch movies than climb mountains.

(16) Amy plays the guitar better than Sam the violin.

There is of course an analytical ambiguity in examples like (6): these may be true phrasal (prepositional) comparatives, or a reduced clausal ones: for such examples it is generally impossible to determine which, in English.

In Greek, however, reduced clausal comparatives are much simpler to identify. While they also may have one or more phrases following the standard marker, this marker is invariably *apoti*, not *apo*, and what follows the standard marker can be any category consistent with its understood role in the clause. This includes the possibility that the standard is a DP in the nominative, as in (17a).

- (17) a. I Maria pezi kithara kalitera apoti o
the Maria.NOM plays guitar better than.CLAUSAL the
 Giannis.
Giannis.NOM
 ‘Maria plays the guitar better than Giannis plays the guitar.’
- b. Perissoteri anthropi nomizan oti psifisan ton Gore
more people thought that they.voted.for the Gore.ACC
 apoti ton Bush.
than.CLAUSAL the Bush.ACC
 ‘More people thought that they voted for Gore than thought they voted for Bush.’

In a reduced clausal comparative, the case of a DP following *apoti* must in fact be the case that its correspondent in a nonreduced clausal comparative would have: for a contrasting subject, for example, the case must be nominative (compare (18a) with the phrasal (9) above). When such a nominative appears, the phrasal marker *apo* is impossible, as seen in (18b).

- (18) a. * I Maria pezi kithara kalitera apoti ton
the Maria.NOM plays guitar better than.CLAUSAL the
 Gianni.
Giannis.ACC.
 ‘Maria plays the guitar better than Giannis plays the guitar.’
- b. * I Maria pezi kithara kalitera apo o
the Maria.NOM plays guitar better than.PHRASAL the
 Giannis.
Giannis.NOM

‘Maria plays the guitar better than Giannis plays the guitar.’

As in English, non-DP and multiple remnants are possible only with reduced clausal comparatives:

- (19) a. Perissoteri anthropi menun stin IPA apoti sti
more people live in.the USA than.CLAUSAL in.the
 Rosia.
Russia
 ‘More people live in the US than in Russia.’
- b. Perisstoeri anthropi milisan me ton Gianni tin Kyriaki
More people spoke with the Giannis the Sunday
 apoti me ton Anesti to Savato.
than.CLAUSAL with the Anestis the Saturday
 ‘More people spoke with Giannis on Sunday than with Anestis
 on Saturday.’

2 Standard analyses

The standard analyses of these various comparatives, as exemplified among others by Hankamer 1973 and Kennedy 1999 (see Lechner 2001, 2004 for extensive discussion), posit that phrasal comparatives have the syntax of simple PPs, as in (20), while reduced clausal comparatives involve movement of a remnant to a clause-external (or clause-peripheral) position concomitant with clausal ellipsis, as in (21). Elided material here and below is enclosed in angled brackets (< >); in these structures, representation of the comparative operator itself is suppressed.

- (20) a. Abby plays guitar better [_{PP} than [_{DP} Ben]].
 b. I Maria pezi kithara kalitera [_{PP} apo [_{DP} ton
the Maria plays guitar better than.PHRASAL the
 Gianni]].
Giannis.ACC
 ‘Maria plays the guitar better than Giannis.’

- (21) a. More people live in Russia than [_{CP} [_{PP} in the US]₂ <live *t*₂>].

- b. I Maria pezi kithara kalitera apoti [CP [o
the Maria plays guitar better than.CLAUSAL *the*
 Giannis]₃ <[TP pezi kithara t₃]>].
Giannis.NOM *plays guitar*
 ‘Maria plays guitar better than Giannis does.’

3 Unexpected island sensitivities

The conceptually appealing and straightforward standard analyses lead us to the following expectation: since phrasal comparatives are just PPs without movement, and since reduced clausal comparatives involve movement of the remnant, we should find island effects in reduced clausal comparatives but not in phrasal ones. In Greek, in fact, we find just the opposite set of facts:

- (22) *Phrasal* comparatives in Greek show island effects. Reduced *clausal* comparatives do not.

This can be seen on the basis of the following data. In each doublet, the element following the standard marker contrasts with a phrase internal to an island in the main clause (a relative clause, a temporal adjunct, and a sentential subject, respectively). When this phrase occurs in a reduced clausal comparative with *apoti* (the (a) examples), the structure is grammatical; when it is in a phrasal comparative with the preposition *apo* (the (b) examples), it is not.

- (23) Perissoteri anthropi menun sto kratos pu kivernai o Putin
more people live in.the state that governs the Putin
 a. apoti o Bush.
than.CLAUSAL *the Bush*.NOM
 b. * apo ton Bush.
than.PHRASAL *the Bush*.ACC

‘More people live in the country that Putin governs than live in the country that Bush governs.’

- (24) O Nikos evelepe perissoteres tenies otan tu tis sistine
the Nikos saw more movies when him them recommended
 i Nana
the Nana

- a. apoti i Elena.
than.CLAUSAL the Elena.NOM
- b. * apo tin Elena.
than.PHRASAL the Elena.ACC

‘Nikos saw more movies when Nana recommended them to him than he saw when Elena recommended them to him.’

- (25) To oti o pritanis prokitai na kalesi ti katharistria ine
the that the dean is.going to invite the cleaner is
 perissotero aksioperiergo
more noteworthy

- a. apoti tin Maria.
than.CLAUSAL the Maria.ACC
- b. * apo tin Maria.
than.PHRASAL the Maria.ACC

‘That the dean is going to invite the cleaning lady is more noteworthy than that he is going to invite Maria.’

These facts are just the opposite of what the standard analysis predicts. Reduced clausal comparatives, since they involve movement of a remnant, should be sensitive, not insensitive, to islands. Phrasal comparatives, on the other hand, since they involve by hypothesis no movement at all, should not show syntactic island effects. The fact that these latter *do* show island sensitivities cannot be due to semantic effects or to processing concerns: this is shown most simply by the fact that the intended meaning is indeed expressible, both in the reduced clausal version (the (a) examples of (23)-(25)) as well as in fully clausal comparatives involving no ellipsis at all.

- (26) Perissoteri anthropi menun sto kratos pu kivernai o Putin
more people live in.the state that governs the Putin
 apoti menun sto kratos pu kivernai o Bush.
than.CLAUSAL live in.the state that governs the Bush.NOM
 ‘More people live in the country that Putin governs than live in the country that Bush governs.’

- (27) O Nikos evlepe perissoteres tenies otan tu tis sistine
the Nikos saw more movies when him them recommended
 i Nana apoti evlepe otan tu tis sistine i
the Nana than.CLAUSAL saw when him them recommended the
 Elena.
Elena.NOM
 ‘Nikos saw more movies when Nana recommended them to him than
 he saw when Elena recommended them to him.’
- (28) To oti o pritanis prokitai na kalesi ti katharistria ine
the that the dean is.going to invite the cleaner is
 perissotero aksioperiergo apoti ine to oti prokitai
more noteworthy than.CLAUSAL the that is.going to
 na kalesi tin Maria.
invite the Maria.ACC
 ‘That the dean is going to invite the cleaning lady is more noteworthy
 than that he is going to invite Maria is.’

The same point is made by the English translations of (23)-(25), which involve no reductions and which express the intended, but unavailable, readings of the (b) examples in (23)-(25).

4 Variable island sensitivities

One *prima facie* conclusion one could draw from these facts would be to claim that ‘reduced clausal’ comparatives in Greek do not involve clausal syntax internal to the *than*-clause at all. Such an approach is taken by a number of analysts for a similar range of data involving sluicing and fragment answers. I begin by reviewing the extant approaches to the variable island behavior in other apparently elliptical constructions, and then return to the case of the Greek comparatives.

4.1 Elliptical repair in sluicing, VP-ellipsis, and fragment answers

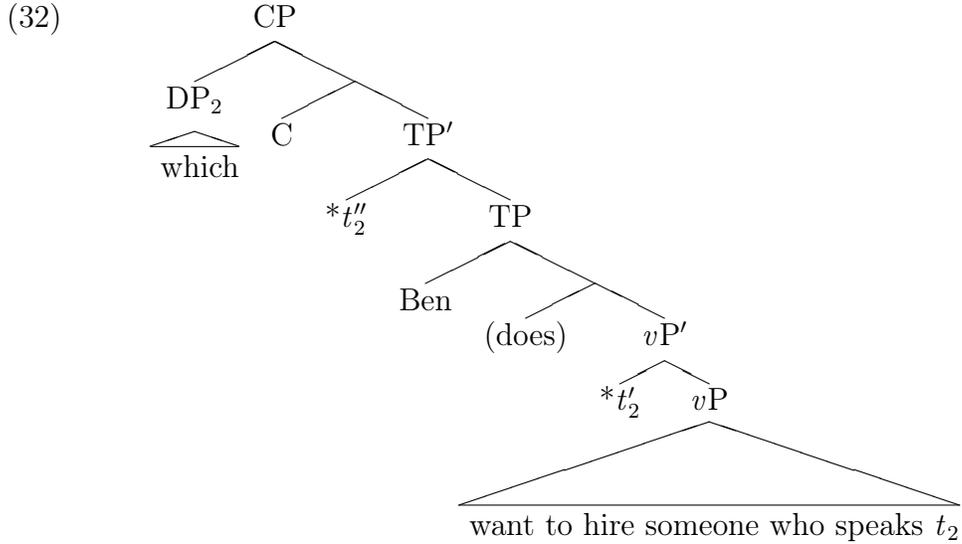
As famously noted by Ross 1969, sluicing seems to ameliorate island violations; while (29) exhibits a standard (here, relative clause) island effect, its counterpart in (30) with sluicing shows no comparable deviance.

- (29) *Ben wants to hire someone who speaks a Balkan language, but I don't remember which he wants to hire someone who speaks.
- (30) Ben wants to hire someone who speaks a Balkan language, but I don't remember which.

Broadly speaking, there are two classes of solution to this problem. The first class, dating back to Ross 1969 and Chomsky 1972, seeks to assign the amelioration to a result of the ellipsis, generally by a fine-tuned analysis of the syntactic nature of the island effects themselves (or by fine-tuning the requirements for parallelism in such structures, where the ellipsis allows for a wider range of possible parallelisms than the nonelliptical structure does; Chung et al. 1995, Fox and Lasnik 2003, and Park 2004 represent this sub-strand). A recent approach along these lines is Merchant 2004 and to appear, which claims that intermediate traces of island-violating wh-movement are illicit (technically, PF-uninterpretable, assuming a Late Insertion model and assuming that the resulting feature bundle is unrealizable by the morphology, following Kennedy and Merchant 2000's approach to Left Branch effects). All such approaches also seek to capture the fact that wh-extraction out of VP-ellipsis sites is much more restricted, and does not amnesty islands:

- (31) *Abby wants to hire someone who speaks a Balkan language, but I don't remember which Ben does. (= <want to hire someone who speaks>)

Merchant's proposal for these cases is that an illicit intermediate trace survives *v*P deletion (in VP-ellipsis), but that TP-deletion (in sluicing) eliminates all such traces. Technically, 'ellipsis' is the interpretation of a dedicated feature (E) that can appear on certain functional heads (e.g., C in sluicing and T in VP-ellipsis) and whose interpretation at PF is that of syncope (the effect of eliminating its complement from the PF structure: in other words, no node internal to 'ellipsis site' is required to, or allowed to, undergo Vocabulary Insertion). The crucial intermediate trace is labelled $*t''_2$ in (32).



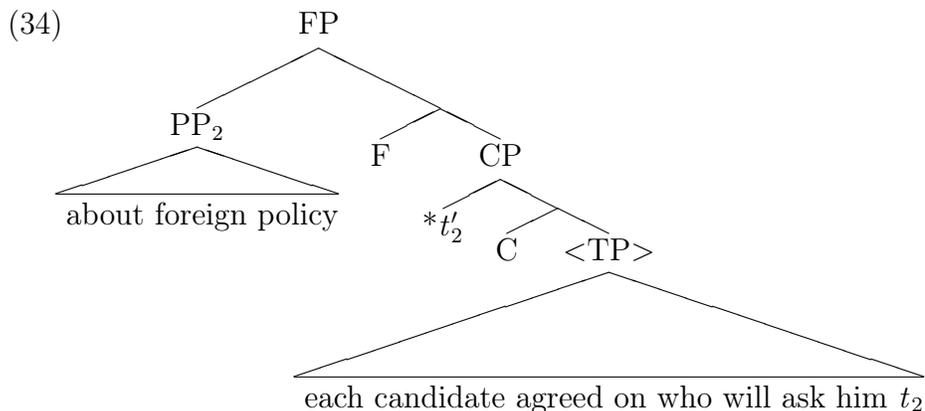
In (32), ellipsis of the complement of C (i.e., sluicing) eliminates all *-traces from the PF-interpreted object (in particular, neither $*t''_2$ nor $*t'_2$ reach the PF interface, since they are both contained in the node ‘deleted’, namely TP'). In VP-ellipsis, on the other hand, deletion of the complement of T, namely vP' , leaves $*t''_2$ in the syntactic object submitted to Vocabulary Insertion at PF; this trace, however, is illicit: the lexicon lacks any item that corresponds to its feature bundle, by hypothesis. It is the persistence of this trace that accounts for the deviance of (31).

For the purposes of this paper, I will state the analysis in terms of these illicit intermediate traces, though nothing hinges on this: the analysis is identical if a different approach to the contrast between (30) and (31) is adopted.

While the differing amount of remaining structure in sluicing vs. VP-ellipsis is obvious, similar effects can be found where the remaining structure has no phonological exponents, in particular in the analysis of certain fragment answers such as (33).

- (33) a. A: Did each candidate₁ agree on who will ask him₁ *about abortion* (at the debate)?
 b. B: *No, [about foreign policy].
 c. cf. B: No, each candidate₁ agreed on who will ask him₁ *about foreign policy*.

Merchant 2004 proposes to assimilate the island effects found in such fragment answers to those found in VP-ellipsis as in (31) by taking advantage of additional functional structure on the left periphery. In that proposal, the fragment answer is moved to the specifier of a functional head on the left periphery, above what is taken to be a CP through whose specifier the fragment also moves. The ellipsis in fragment answers targets the clausal node which is complement to the (lower) C, not F. In island-violating movement, the ellipsis of TP leaves a *-trace, namely $*t'_2$ in (34), in the object interpreted at PF, leading to the ill-formedness of (33b); the resulting tree, with angled brackets indicating the elided TP, is as follows.



Despite the fact that neither F nor C contains pronounced material, their presence is necessary to provide the requisite structure for the successive cyclic A' -movement of the PP *about foreign policy* and to host the ill-formed intermediate trace $*t'_2$. It is such additional structure that will prove instrumental in understanding the Greek phrasal comparative facts.

While attributing island effects and in particular their amelioration in certain circumstances (such as under sluicing) to a refined syntax may be the most common approach to Ross's discoveries, there is a second line of analysis that eschews such abstractness entirely. The absence of island effects in most cases of sluicing is attributed to the simple fact that there is no wh-movement posited at all, and indeed no syntactic structure at all beyond that of the pronounced material. Since there is no syntax internal to the 'ellipsis', there is a fortiori no violation of syntactic islands. This second strand of analysis is represented by Levin 1982, Ginzburg and Sag 2000, Culicover and Jackendoff 2005, and Jäger 2006. Note that on such approaches, it is

the sometime reemergence of island sensitivities, as in (31) (such cases first noted in Sag 1976) or in (33), that is a puzzle. Culicover and Jackendoff 2005 do not discuss cases in which sluicing or VP-ellipsis retains island effects (see Chung et al. 1995, Merchant 2001, Fox and Lasnik 2003, Kennedy 2003, Lasnik and Park 2003, and Park 2005 for such cases), but they do adduce numerous examples of fragment answers with island-internal correlates parallel in general structure to (33) which lack detectable island effects. At this point, our understanding of the relevant phenomena is too rudimentary to give a satisfying account of why some fragment answers require structures like (34) while others, such as those in Culicover and Jackendoff 2005, do not. It seems most likely that nonelliptical base-generation of certain fragments is possible (see also Schlangen 2003 and Stainton to appear), and that factors of varying strengths preclude such structures when linguistic antecedents are available (as mooted in Merchant 2006). A crucial point to bear in mind in this connection is that the contrasts cannot easily be attributed to obvious processing or semantic effects, as the intended meanings are indeed expressible with slight variations in syntactic means (such as (33c) for (33b)).

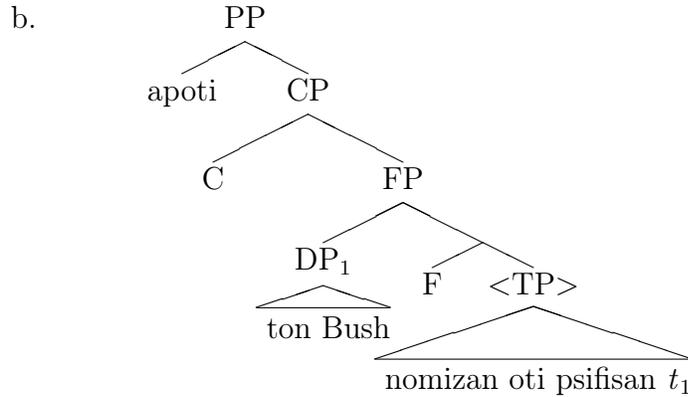
4.2 Variable island effects in Greek comparatives

The proposed analysis of the differences in island sensitivities in sluicing (generally insensitive) vs. VP-ellipsis and fragment answers (generally sensitive) leads directly to a way of capturing the attested differences along the same dimension in the Greek reduced clausal (insensitive to islands) vs. phrasal (sensitive) comparatives. Extending the analysis to these latter structures is straightforward, but requires that we accept the fact that, although they appear to have a simple surface structure consisting only of a PP, Greek phrasal comparatives embed an abstract, unpronounced clausal syntax. Exactly this claim in fact is defended at great length in Lechner 2001, 2004, who discusses the numerous advantages such an analysis has for a range of cases in English and German.

Recall first that the standard analysis of reduced clausal comparatives, adopted with minor modifications here, posits movement of the remnant to a clause-external position with ellipsis of the clausal node, as in (35b) for an example like (35a), repeated from above.

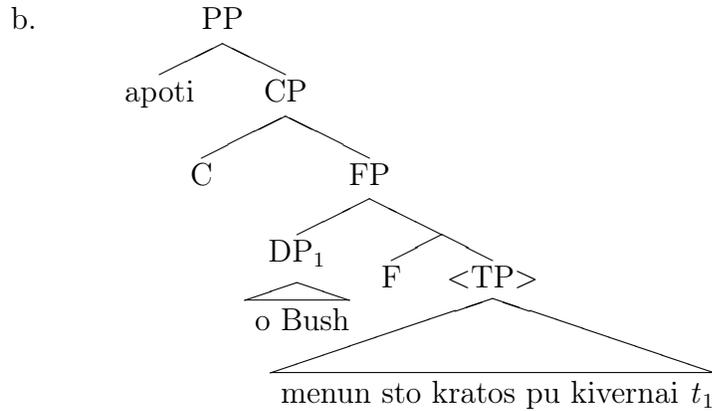
- (35) a. Perissoteri anthropi nomizan oti psifisan ton Gore
more people thought that they.voted.for the Gore.ACC

apoti ton Bush.
than.CLAUSAL the Bush.ACC
 ‘More people thought that they voted for Gore than (thought that they voted for) Bush.’



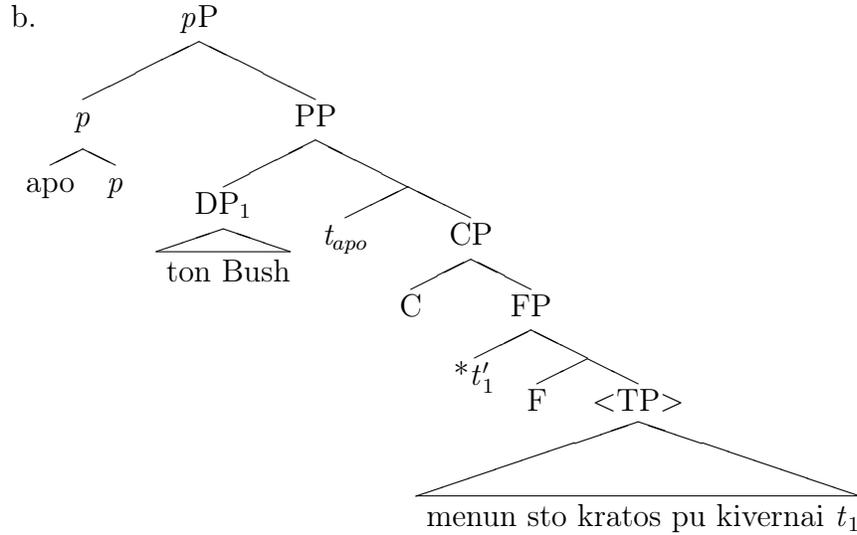
Since reduced clausal comparatives fail to show island effects, the ellipsis must be comparable to that found in sluicing, targeting a node which contains any potential illicit intermediate traces. As in sluicing, the simplest way to achieve this result is to analyze the elided node as the complement to the head whose specifier is the landing site for the remnant. For an example containing an island, then, such as (23a), repeated here, the relevant structure will be that in (36b).

- (36) a. Perissoteri anthropi menun sto kratos pu kivernai o
more people live in.the state that governs the
 Putin apoti o Bush.
Putin than.CLAUSAL the Bush.NOM
 (lit.)‘More people live in the country that Putin governs than
 (live in the country that) Bush (governs).’



The lack of island effect in clausal comparatives then follows. For apparent phrasal comparatives such as (37a), repeated from (23b) above, the unexpected presence of island effects indicates that there is at least one remaining illicit intermediate trace of A'-movement outside the ellipsis site. The easiest way to implement this intuition is if the remnant DP moves out of the CP complement of *apo* 'than'. Such a movement is most straightforwardly accounted for if the preposition is embedded in a *pP* shell (as in Matsubara 2000); the remnant can then move to specPP, while the P itself moves to *p* (see the discussion nested PP structures for Greek in Theophanopoulou-Kontou 1992 and Terzi 2005). The resulting structure is that in (37b).

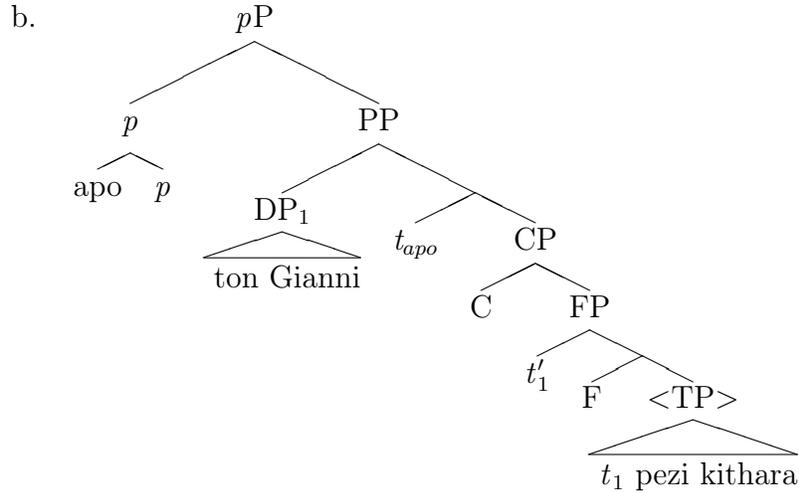
- (37) a. * Perissoteri anthropi menun sto kratos pu kivernai o
more people live in.the state that governs the
 Putin apo ton Bush.
Putin than.PHRASAL the Bush.ACC
 'More people live in the country that Putin governs than (live in
 the country that) Bush (governs).'



The illicit trace, $*t'_1$, is outside the elided TP (marked by angled brackets), and hence triggers a PF crash for the same reasons such structures are ruled out in the fragment answer and VP-ellipsis cases discussed above. It is the presence of this intermediate trace that results in the observed island sensitivity.

For simple phrasal comparatives which do not involve extraction out of an island, the licit structure is that in (38b), for examples like (38a).

- (38) a. I Maria pezi kithara kalitera apo ton
the Maria.NOM plays guitar better than.PHRASAL the
 Gianni.
Giannis.ACC
 ‘Maria plays guitar better than Giannis.’



This structure merits more detailed comment. Note first that it is essentially simply one way of instantiating basic claim of Lechner 2001, 2004 that ‘phrasal’ comparatives embed a clausal domain. Though the details differ slightly, the present facts dovetail with Lechner’s arguments for this conclusion.¹ They are also compatible with Lechner’s counterarguments to Hankamer’s proposal for a simple prepositional *than* (i.e., one that selects simply a DP, not a CP). Recall that the DP following *apo* behaves like the object of a preposition with respect to wh-pied-piping, reflexive licensing, category, and case. The former two facts were illustrated in (11) and (12) above, repeated here:

- (39) Apo pjon (ipes oti) epekse kalitera kithara i
than.PHRASAL whom (said.2sg that) played better guitar the

¹The primary differences between the present structures and Lechner’s are two. First, the account given here of island sensitivity requires more structure internal to the standard clause; in particular, it requires an FP and an ellipsis operation beyond that of the across-the-board extraction Lechner uses. Second, the top of the tree is more articulated here: the DP remnant’s case is determined by *apo*. Lechner, discussing only English and Greek, does not consider languages in which phrasal and clausal comparatives are marked with different standards of comparison and also assumes that default case assignment will correctly handle the in his account otherwise caseless remnant in some situations: while his analysis is well suited to uniform languages like English and German, more must be said to account for Greek.

Maria xtes?

Maria.NOM yesterday

‘Than whom did (you say that) Maria play(ed) guitar better yesterday?’

- (40) Kanenas₁ dhen ine psiloter₁ apo [ton eafto tu]₁.
n-person not is taller than.PHRASAL the self his
‘No-one is taller than himself.’

These facts indicate that the post-*apo* DP is local in the relevant senses to elements in the matrix clause. These locality effects are accounted for in the present account by the raising of the remnant into the higher domain of P/*p*: wh-pied-piping becomes possible (since the wh-feature on the remnant can be passed to the P/*p* under whatever implementation of feature percolation or Agree is adopted for prepositional pied-piping), and reflexive binding in this raised position is licit (since no clausal node intervenes between the matrix subject and the anaphor in its higher position).

Next, it is a fact that the remnant in phrasal comparatives is necessarily a single DP (despite the fact that other, and multiple, categories can in principle serve as remnants under stripping-like operations, and in particular are found in reduced clausal comparatives with *apoti* as seen above). This fact is attributable to several factors. First, if specPP can host only one phrase, as a general property of prepositions in Greek (they take only one complement), the absence of multiple remnants in phrasal comparatives follows. Second, no category other than DP can raise to specPP, either because the raising itself is triggered by a category-specific strong feature (say, a specifier selectional feature D, or a strong inflectional feature D*), or because no other category would be able to participate in an Agree relation with the Case feature on *p* (leading to an ‘inverse Case filter’ violation on *p*, if Case must be checked (or ‘deleted’) on the Case-assigning head—for example, if Case is uninterpretable on the assigning head).

The local relation between *p* and the remnant is also expressed in the case on the remnant, which is accusative, assigned under Agree from *p*. It raises an interesting question regarding the assignment and realization of case features; DPs raised in this manner out of finite clauses surface with the Case determined by the higher Case-assigning head, here accusative. This is so despite the fact that the DP may have received a different value for its Case feature internal to the CP; in (38), for example, the DP first receives nominative inside TP, then raises into specPP where it receives accusative,

the latter determining the morphological realization. This is precisely the conclusion reached in Bejar and Massam 1999 on the basis of independent evidence, primarily from Nieuuan. They show convincingly that there exist a range of cases in which DPs receive first one (structural) case before raising into the domain of a second (structural) case assigner, and that it is the latter that determines the morphological form of the DP in Nieuuan-type languages. Greek patterns with Nieuuan in this respect, spelling out the Case features on the head of the movement chain, in Bejar and Massam’s terms. They propose two parameters relating to the nature of the Case feature and the Spell-Out of Case features in chains; for present purposes, it need only be the case that Case values in Greek can be overwritten. (Alternatively, Greek may allow for more than one Case shell—KP in Bittner and Hale’s 1996 system—, similar to those found in case-stacking languages like Korean or Kayardild as described in Yoon 2004 and Evans 1995 respectively.) The fact that such multiple case assignment can occur in languages like Greek and Nieuuan but not in English is most likely related to the fact that the former languages have also been claimed to allow raising out of finite clauses (see Alexiadou and Anagnostopoulou 1999 for recent discussion of Greek and Bejar and Massam 1999 for Nieuuan).

The proposal that a DP may raise into a prepositional domain from a clausal one differs mainly in details from those made for Irish in McCloskey 1984, for French in Kayne 2004, and for Greek in Joseph 1979, 1990. Joseph 1990, for example, shows that Greek allows raising out of finite (subjunctive) clauses into the case-marking domain of the preposition *me* ‘with’, as in the following example, which preserves the idiomatic reading (Joseph 1990:(14)):

- (41) Me ton kombo na ftani sto xteni etsi, i lisi
with the knot.ACC SUBJ reach.3s to.the comb thus the solution.NOM
 faneronotan.
manifested.3s
 ‘With things coming to a head in this way, the solution was becoming evident.’ (lit. ‘With the knot thus reaching the comb, ...’)

In this example, the DP *ton kombo* (lit. ‘the knot’) raises out of the finite subjunctive clause where it receives nominative case into the domain of the preposition *me* where it receives accusative.

Finally, note that movement of the remnant into P’s domain is necessarily concomitant with ellipsis of the lower TP: in other words, the phrasal comparative standard marker *apo* requires the ellipsis of the embedded clause.

This co-dependency is parallel in most respects to that found in fragment answers, and is easily captured by positing that that feature that allows movement of the remnant into specFP is part of the same feature bundle as the E feature that triggers ellipsis. It is this FP which is selected by the C head under *apo*, and we can suppose that *apo* itself selects, indirectly, for this feature (through a variant of the C that occurs in comparatives); this is similar in essence to the kind of selection into an extended projection familiar from Romance, in which verbs can select for subjunctive through what appears to be an inert, or at least invariant, complementizer.

In sum, Greek phrasal comparatives embed a fully clausal domain; the DP remnant in such structures raises out of the elided clause and becomes a prepositional object. If this movement violates locality constraints such as islands, the resulting phrasal comparative will be ill-formed, specifically, because of the presence of an illicit intermediate trace, on the theory of island repair adopted here. It is crucial in this analysis that the element in specFP in a phrasal comparative (as in (38b)) be a trace of movement; a prolepsis analysis, in which the accusative-marked DP merely ‘controls’ or binds a null operator in specFP, is insufficient if Merchant 2004, to appear is right in claiming that only intermediate traces (i.e., non-head elements in a movement chain) host the *-feature; in his analysis, heads of chains (such as the *wh*-phrase in sluicing) themselves do not trigger island effects (see Merchant 2001, to appear for discussion of the details of implementation of this system)—if they did, sluicing for example would not alleviate islands, since the pronounced *wh*-phrase would also be *-marked. Under this system, then, we conclude that it is the DP from the lower clause itself that moves into the higher prepositional domain.

In reduced clausal comparatives, on the other hand, the movement is simply to a clause-external position, similar to that found in sluicing and some fragment answers; any island effects are ameliorated by the ellipsis of the node containing the illicit intermediate traces.

4.3 English comparatives

While it is not my aim to investigate English here, it is worthwhile making a few brief remarks. English comparatives show a different distribution in the data: the remnant in a reduced clausal or phrasal comparative uniformly shows island sensitivity, as noted by Reinhart 1991 and Lechner 2001, 2004; of course, there is no unambiguous surface way to determine whether these

involve phrasal or reduced clausal structures, unlike in Greek.

- (42) *More people live in the country that Putin governs than Bush.
(\neq than live in the country that Bush governs)
- (43) *Nikos saw more movies when Nana recommended them to him than Elena. (\neq than Nikos saw when Elena recommended them to him)
- (44) *That the dean is going to invite the cleaning lady is more noteworthy than Maria. (\neq than that the dean is going to invite Maria)

The uniformity of locality effects indicates that a strategy parallel to that underlying the Greek reduced clausal comparatives must be unavailable in English. In particular, the kind of movement that extracts the remnant in Greek clausal comparatives—namely the same kind of movement found in sluicing—cannot be the kind employed in English reduced clausal comparatives. This conclusion, in fact, has been reached on independent grounds in several works. Lechner 2001, 2004 shows that English remnants are subject to even stronger locality conditions, parallel to those found in stripping, gapping, and multiple sluicing (allowing extraction only over bridge and restructuring verbs). While refining the account of restrictions on remnant movement is not a goal here, such restrictions provide further support for the main claim of this paper, namely that it is impossible to capture the full range of data in this domain without making use of unpronounced syntactic structure.²

5 Conclusion

Theories of syntax strive for parsimony in the devices they posit and degree of abstractness they countenance, but this parsimony cannot come at the

²While Lechner, in my view correctly, attributes the locality (or ‘boundedness’, in his term) constraints on English remnants to independent restrictions on the overt movement of the remnant, Reinhart 1991 proposes that the restrictions derive from covert movement of the correlate. Although it is difficult to decide between the two approaches based solely on data from a uniform language like English, Greek forces our hand: if the correlate must move to a position near the remnant (to resolve some version of parallelism, or to form some kind of complex quantifier, as Reinhart suggests), then even reduced clausal comparatives in Greek should show island effects, contrary to fact.

expense of empirical coverage. The facts from Greek comparatives demonstrate that a certain amount of ‘abstract’ syntactic representation—abstract in the sense that there are syntactic structures that have no phonological exponents—must be permitted. To date, no-one has proposed a theory of the locality of movement, resulting in island effects, that is anything but syntactic in the broad sense (that is, computed over syntactic representations or morphosyntactic ones at PF); in particular, it continues to be *opinio communis* that island effects are not plausibly to be captured by semantic, pragmatic, or processing mechanisms. The standard, and persuasive, argument for this position is that dependencies into islands are regularly tolerated as long as a movement dependency is not involved (for example, binding of pronominal variables and some *in situ* wh-question construals are not sensitive to islands). Given this, the appearance of island effects in Greek phrasal comparatives is a puzzle if there is no syntactic structure to trigger it. As Culicover and Jackendoff 2005:246fn11 put it, “If [such] cases ... were ungrammatical, that would be far better evidence of the reality of invisible structure”. And indeed it is.

References

- [1] Alexiadou, Artemis and Elena Anagnostopoulou. 1999. Raising without infinitives and the nature of agreement. In Sonya Bird, Andrew Carnie, Jason D. Haugen, and Peter Norquest (eds.), *Proceedings of the 18th West Coast Conference on Formal Linguistics*, 14–26. Cascadia Press: Somerville, Mass.
- [2] Bejar, Susana and Diane Massam. 1999. Multiple case checking. *Syntax* 2.2:65–79.
- [3] Bittner, Maria and Ken Hale. 1996. The structural determination of case and agreement. *Linguistic Inquiry* 27:1–68.
- [4] Chomsky, Noam. 1972. Some empirical issues in the theory of transformational grammar. In Stanley Peters (ed.), *The goals of linguistic theory*, 63–130. Prentice-Hall: Englewood Cliffs, NJ.
- [5] Chung, Sandra, William Ladusaw, and James McCloskey. 1995. Sluicing and logical form. *Natural Language Semantics* 3:239–282.

- [6] Culicover, Peter and Ray Jackendoff. 2005. *Simpler Syntax*. Oxford University Press: Oxford.
- [7] Evans, Nicholas. 1995. *A grammar of Kayardild*. Mouton de Gruyter: Berlin.
- [8] Fox, Danny and Howard Lasnik. 2003. Successive-cyclic movement and island repair: The difference between sluicing and VP-ellipsis. *Linguistic Inquiry* 34: 143–154.
- [9] Hankamer, Jorge. 1973. Why there are two *than*'s in English. In Claudia Corum, T. Cedric Smith-Stark, and Ann Weiser (eds.), *Proceedings of the 8th annual meeting of the Chicago Linguistics Society*. Chicago, Ill.
- [10] Jäger, Gerhard. 2006. Indefinites and sluicing: A type-logical approach. Ms., University of Bielefeld. (To appear in revised form in *Language and Computation*.)
- [11] Joseph, Brian D. 1979. Raising to Oblique in Modern Greek. In *Proceedings of the Fifth Meeting of the Berkeley Linguistics Society*, 114–128.
- [12] Joseph, Brian D. 1990. Is Raising to prepositional object a natural language grammatical construction? In Brian D. Joseph and Paul M. Postal (eds.), *Studies in Relational Grammar 3*, 261–276. University of Chicago Press: Chicago.
- [13] Kayne, Richard S. 2004. Prepositions as probes. In Adriana Belletti (ed.), *Structures and beyond: The cartography of syntactic structures, Vol. 3*, 192–212. Oxford University Press: Oxford.
- [14] Kennedy, Christopher. 1999. *Projecting the adjective*. Garland Press: New York.
- [15] Kennedy, Christopher. 2003. Ellipsis and syntactic representation. In Susanne Winkler and Kerstin Schwabe (eds.), *The interfaces: Deriving and interpreting omitted structures*, 29–53. John Benjamins: Amsterdam.
- [16] Kennedy, Christopher and Jason Merchant. 2000. Attributive comparative deletion. *Natural Language and Linguistic Theory* 18:89–146.

- [17] Lasnik, Howard and Myung-Kwan Park. 2003. The EPP and the subject condition under sluicing. *Linguistic Inquiry* 34:649–660.
- [18] Lechner, Winfried. 2001. Reduced and phrasal comparatives. *Natural Language and Linguistic Theory* 19.4:683–735.
- [19] Lechner, Winfried. 2004. *Ellipsis in comparatives*. Mouton de Gruyter: Berlin.
- [20] Levin, Lori. 1982. Sluicing: A lexical interpretation procedure. In Joan Bresnan (ed.), *The mental representation of grammatical relations*, 590–654. MIT Press: Cambridge.
- [21] Matsubara, Fuminori. 2000. p*P phases. *Linguistic Analysis*: 30:127–161.
- [22] Merchant, Jason. 2004. Fragments and ellipsis. *Linguistics and Philosophy* 27: 661–738.
- [23] Merchant, Jason. 2006. ‘Small structures’: A sententialist perspective. In Ljiljana Progovac, Kate Paesani, Elena Casielles, and Ellen Barton (eds.), *The syntax of nonsententials: Multidisciplinary perspectives*. Amsterdam: John Benjamins.
- [24] Merchant, Jason. To appear. Variable island repair under ellipsis. In Kyle Johnson (ed.), *Topics in ellipsis*. Cambridge University Press: Cambridge.
- [25] McCloskey, James. 1984. Raising, subcategorization and selection in Modern Irish. *Natural Language and Linguistic Theory* 1:441–487.
- [26] Park, Myung-Kwan. 2004. Phases, cyclicity, and extraction out of ellipsis in English. Ms., Dongguk University.
- [27] Reinhart, Tanya. 1991. Elliptic conjunctions—Non-quantificational QR. In Asa Kasher (ed.), *The Chomskyan turn*, 360–384. Blackwell: Cambridge, Mass.
- [28] Ross, John R. 1969. Guess who? In Robert Binnick, Alice Davison, Georgia Green, and Jerry Morgan (eds.), *Papers from the 5th regional meeting of the Chicago Linguistic Society*, 252–286. Chicago Linguistic Society: Chicago, Ill.

- [29] Schlangen, David. 2003. *A coherence-based approach to the interpretation of non-sentential utterances in dialogue*. PhD Thesis, School of Informatics, University of Edinburgh.
- [30] Stainton, Robert. To appear. *Words and thoughts*. Oxford University Press: Oxford.
- [31] Terzi, Arhonto. 2005. Locative prepositions as possessums. In Marina Mattheoudakis and Angeliki Psaltou-Joycey (eds.), *Selected papers on theoretical and applied linguistics*, 130–144. Department of theoretical and applied linguistics, Aristotle University: Thessaloniki.
- [32] Theophanopoulou-Kontou, Dimitra. 1992. I synthetes prothetikes phrasis tis N.E. ke i dhomi tus [Complex prepositional phrases in Modern Greek and their domain]. In *Proceedings of the 13th annual meeting of the department of linguistics*, 311–330. Aristotle University: Thessaloniki.
- [33] Yoon, James. 2004. Non-nominative (major) subjects and case stacking in Korean. In P. Bhaskararao and K. V. Subbarao (eds.), *Non-nominative subjects*, Vol. 2, 265–314. Amsterdam: John Benjamins.