A puzzled look at properties of *wh*-in situ in Cypriot Greek[*]

Kleanthes K. Grohmann
University of Cyprus

Elena Papadopoulou
University of Cyprus & University of Essex

1 Introduction

In the right contexts, even *wh*-movement languages permit *wh*-expressions to not undergo fronting (see e.g. Bolinger 1978 and Ginzburg and Sag 2000). This paper investigates structures of such *wh*-in situ in, and corresponding interpretations available to speakers of, Cypriot Greek (CG), a typical *wh*-ex situ language like English; that is, in order to form a *wh*-question, a single *wh*-phrase is fronted into the left sentence periphery, but under particular pragmatic, discourse-specific conditions, in-situ *wh*-expressions are felicitous to form an information question. What makes CG potentially interesting is that certain structures which should not be possible or at least be expected less preferred than others seem to be used and interpreted, especially when compared to the closely related Standard Modern Greek (SMG), based on recent work starting with Sinopoulou (2008). Results obtained from a quantitative study on grammaticality judgements in CG (reported in Grohmann and Papadopoulou 2010) confirm our initial doubts about the findings for SMG reported in Vlachos (2008), though we note that some of these have already been retracted and updated in a revised version (Vlachos 2010).

Our contribution explores how the Modern Greek variety spoken on the island of Cyprus differs in interesting ways from (mainland) Greece. *Wh*-in situ in Greek (used as a cover term for SMG and CG where finer distinctions are not necessary), a *wh*-movement language, is briefly discussed in section 2 (taking our cue from Sinopoulou 2009 for SMG) and continued in section 3 with a focus on interpretations available, alongside *wh*-in situ structures in English, another typical *wh*-movement language (cf. Bolinger 1978). The discourse contexts in which *wh*-in situ is felicitous are presumably identical for SMG and CG (though not discussed here, but see Ginzburg and Sag 2000 for a general account), but the syntactic operations involved and semantic interpretations available might not be. After an initial description of the phenomenon in section 3 (based largely on Vlachos 2008, 2010), section 4 is the theoretical core of this contribution that concludes the present investigation with an extended discussion and outlook.

---

2 *Wh*-question formation in CG

This study examines the relationship between in-situ and ex-situ occurrences for four types of *wh*-questions in Greek: those involving *wh*-arguments, such as (i) *pjos/pcos* (SMG/CG) 'who-MASC.NOM' for subjects and (ii) *pjon/pcon* (SMG/CG) 'who-MASC.ACC' for objects, as well as the *wh*-adjuncts (iii) *pos* and (iv) *indalos*, both meaning 'how'. CG *wh*-question formation resembles to a large extent SMG but differs with respect to the properties carried by some CG *wh*-words and the addition of the dialectal element *embu* (Grohmann *et al.* 2006)*,* literally '(it-)is-that' (note that CG, like SMG, is a null subject language); since it is used here in interrogative contexts, we gloss *embu* as 'is(-it)-that' (for *embu* with non-interrogative focus, see e.g. Grohmann 2007 and Fotiou 2009).

To set the stage for the structures under investigation, (1) and (2) illustrate regular *wh*-ex situ and specially conditioned *wh*-in situ information questions with *wh*-arguments in SMG and CG.

(1)   a.   *Pja/Pjo   koritsi sinantise o Nikos xθes   vraði?*   [SMG]
         who/which girl   met   the Nick yesterday evening
         'Who/Which girl did Nick meet last night?'

      b.   *Pcan/Pcan koruna ivren o Nikos extes   ti nixta?*   [CG]
         who/which girl   found the Nick yesterday the night
         'Who/which girl did Nick meet last night?'

(2)   a.   *O Nikos sinantise pja/pjo   koritsi xθes   vraði?*   [SMG]
         the Nick   met   who/which girl   yesterday evening
         'Nick met who/which girl last night?'

      b.   *O Nikos ivren pcan/pcan   koruan extes   ti nixta?*   [CG]
         the Nick found who/which   girl   yesterday the night
         'Nick met who/which girl last night?'

Assuming the fronted *wh*-expression to sit in SpecCP in (1), it seems to occupy a lower position in (2), with a pre-verbal subject, possibly identical with the canonical object position.

CG *wh*-words bear a noticeable morphological resemblance to their SMG counterparts, other than the obvious (and minor) morpho-phonological differences. The range of *wh*-expressions includes the quantifiers *pcos/-ia/-o* 'who/which.MASC/FEM/NEUT', *posos* 'how much/how many', *ti* 'what', and *inda* 'what' as well as the adverbs *pote* 'when', *pu* 'where', *jati* 'why', *pos* 'how', *inda* 'why', and *indalo(i)s* 'how' (Simeonidis 2006: 217; cf. Holton *et al.* 1997: 414 for SMG). The three *inda* *wh*-words (the quantifier *inda* 'what' as well as the adverbs *inda* 'why' and *indalos* 'how') are dialect-specific to CG.

166

The three *inda wh*-words have different properties from their SMG counterparts. SMG *pos* 'how', as in (3), can undergo movement into the left periphery (to the assumed landing site SpecCP) or it can be left in situ (possibly adjoined to *v*/VP; see also section 3). When in situ, *pos* carries a more "restrictive" reading in SMG, as Vlachos (2008) calls it; the dialectal counterpart *indalos* 'how' does not share that property, since it can only appear sentence-initially (discussed at length by Papadopoulou, in progress), shown in (4).

(3) a. ***Pos*** *anikse tin porta o Nikos?* [SMG]
      how opened the door the Nick
      'How did Nick open the door?'

    b. *O Nikos anikse tin porta **pos**?*
      the Nick opened the door how
      'Nick opened the door how?'

(4) a. ***Indalos*** *aniksen tin portan o Nikos?* [CG]
      how opened the door the Nick
      'How did Nick open the door?'

    b. * *O Nikos aniksen tin portan **indalos**?*
      the Nick opened the door how
      'Nick opened the door how?'

Similar properties are exhibited by dialectal *inda* and SMG *jati* 'why' (as well as CG *inda* and SMG *ti* 'what'). Used in CG, SMG *jati* can either undergo movement to SpecCP or remain in situ, whereas CG *inda* can only appear high, presumably merged into SpecCP just like CG *indalos* 'how'. See Grohmann and Papadopoulou (2010), Pavlou (2010), and Papadopoulou (in progress) for more.

A characteristic property of CG *wh*-question formation is the addition of the element *embu* 'is(-it)-that' that may optionally appear after the preposed *wh*-expression, deriving questions such as (5a) and (6a) below. Depending on how *embu* is analyzed, different syntactic operations would be involved in the derivation of CG *wh*-questions. Initially, it was suggested that *embu*-structures are essentially *bona fide* cleft-structures (Grohmann *et al.* 2006), but considering that SMG does not allow any form of clefting, such a syntactic innovation may seem a little far-fetched. Papadopoulou (in progress) analyzes *embu* as a "fossilized" complementizer, filling interrogative C.

Regardless of the final analysis of *(e)mbu*, the following data illustrate the (im)possibilities of *pos/indalos* 'how' in CG:

(5) a. ***Pos (embu)*** *aniksen tin kashian o Nikos?* [CG]
     how EMBU opened the box the Nick
     'How did Nick open the box?'

   b. *O Nikos **(*embu)** aniksen tin kashian **pos (*embu)**?*
     the Nick EMBU opened the box how EMBU
     'Nick opened the box how?'

(6) a. ***Indalos (embu)*** *aniksen tin kashian o Nikos?* [CG]
     how EMBU opened the box the Nick
     'How did Nick open the box?'

   b. * *O Nikos **(embu)** aniksen tin kashian **indalos (embu)**?*
     the Nick EMBU opened the box how EMBU
     'Nick opened the box how?'

Note that *embu* 'is(-it)-that' cannot be used with *wh*-in situ, even though a *wh*-word on its own may appear in situ, as in (3b). (5b), in particular, shows two things: (i) CG-used *pos* may stay in situ, unlike CG *indalos* (6b), and (ii) *embu* can neither occur in a low position near an in-situ *wh*-expression nor appear in the left periphery on its own. Restrictions on *embu* in the clause can be schematized as in (7): That is, regardless of whether *embu* (or *mbu* when combined with *nda* 'what, why') occupies a fixed position in the left periphery, such as C, it is only grammatical immediately following a fronted *wh*-expression — not lower down associated with one nor dissociated from the *wh*-phrase, whether in the left periphery or not.

(7) a. [$_{CP}$ WH *(embu)* … t_{WH} …]
   b. * [$_{CP}$ *(embu)* XP *(embu)* … WH *(embu)* … *(embu)*]

Since the remainder of this paper will not deal with *embu* as such (see e.g. Grohmann *et al.* 2006, Grohmann 2007, Fotiou 2009, and Papadopoulou, in progress), this rough characterization must suffice, namely that CG *embu* is restricted to a left-peripheral position right-adjacent to a fronted *wh*-expression. In other words, *embu* (or, as mentioned in Grohmann *et al.* 2006 and discussed at length by Pavlou 2010, *mbu* when following variants of *inda* 'what' and 'why') is restricted to an optional occurrence in an interrogative C.[1]

---

[1] Note that the clefting-approach to *embu* of Grohmann *et al.* (2006) can capture the distributional facts as well, since there *embu* is decomposed into copular *en* plus complementizer *pu* that "fuse" (post-)syntactically.

3 Ex-situ and in-situ interpretive quirks

This section lays the theoretical and empirical foundations for the quantitative study (in Grohmann and Papadopoulou 2010) and subsequent analysis. Some relevant background will be introduced first on *wh*-in-situ structures in ex-situ languages and corresponding interpretations. The relevant data from Greek will be presented next, with particular emphasis given to CG from more than one perspective.

So-called *wh*-in situ non-reprising, information questions (Bolinger 1978, Ginzburg and Sag 2000) require a particular discourse context, which Vlachos (2008, 2010) discusses in detail in his general account of such structures in SMG. One of the facilitating factors involved seems to be something very close to the notion of D(iscourse)-linking (Pesetsky 1987); that is, in order to felicitously ask a *wh*-in situ question, a discourse context must have been established that allows identification of the *wh*-expression.

Other than difficulties examples such as (9) below might bring about, this cannot be the whole story, however, as Vlachos (2010) also demonstrates, but it helps assigning an initial analysis of *wh*-in situ in terms of unselective binding (among many others, Kamp 1981), as also suggested by Pesetsky (1987) for D-linking, under which the *wh*-expression would be bound by an interrogative operator; Vlachos (2010) proposes an alternative that licenses the in-situ syntax more locally, within the *v*P, and all we care about here, regardless of the specifics, is that in-situ *wh*-items can indeed be licensed there — in situ.

Some examples of well-formed information questions with *wh*-in situ in English follow (from Ginzburg and Sag 2000: 280), some are construed, others taken from the "real world" (English in-situ *wh*-expressions require special stress, indicated by small capitals):

(8) a. A: Well, anyway, I'm leaving.
         B: OK, so you'll be leaving when exactly?
     b. A: I'm annoyed.
         B: Aha. You're annoyed with whom?

(9) a. A: My friends, they saw everything.
         B: Yeah, they saw what?
                              [CBS Saturday Night Movie, 25 January 1992]
     b. Michael Krasny [addressing a guest — who has not said anything yet — about the interim chief of the US Attorney's office]:
         This is a position that is how important in your judgment, Rory?
                              [Forum KQED, 29 July 1998]

Pending further discussion, an in-situ *wh*-item WH can be bound unselectively by a question operator OP (CP) or licensed locally (*v*P):

(10) $[_{CP}$ (OP$_i$) C$_Q$ … $[_{vP}$ (OP$_i$) … WH$_i$ …]]

Aside from the variation in SMG and CG question formation so far discussed, stronger divergences arise regarding restrictions in interpretation, that is, the kinds of readings speakers associate with in-situ structures. *Wh*-words left in situ do so at the cost of interpretation.

Generally, a *wh*-item is interpreted in its scope position or rather, it scopes over material c-commanded from its interpretation site. In ex-situ constructions, the *wh*-item thus scopes over the entire clause from its SpecCP position. A question that then arises for in-situ *wh*-constructions is what scope they take. Typical *wh*-in-situ languages such as Chinese are not restricted as such by clause boundaries, that is, an embedded in-situ *wh*-expression can take matrix scope (Huang 1982 and much subsequent work). Vlachos (2008, 2010) has shown for SMG that *wh*-in situ expressions are clause-bound.

Next we will address some pertinent issues for CG *wh*-in situ — and some possibly quite puzzling, astounding differences from SMG. Before we go there, however, three remarks are in order concerning the mental-grammar status of CG at large. First, one may ask to what extent SMG *pos* 'how' (as well as *jati* 'why' and *ti* 'what') used in CG would indeed reflect CG grammar. Put differently: Can Greek words be used at all in the Cypriot dialect? Asked this way, the answer must surely be a resounding "Yes": After all, not every lexical item in the CG variety is uniquely native. But the trickier part of this question is whether in this case two synonymous words can be said to be "in competition" (where an SMG lexical item would compete with CG grammar to either follow the CG combinatorics in the expression it is used in or impose SMG grammar upon insertion) — or whether they are either not synonymous after all or do not really compete. If they were not synonymous, we would not face an issue here, but in accordance with Grohmann and Papadopoulou (2010), we cannot discern whether this is indeed the case. Lack of competition could mean two things: The SMG form comes with SMG syntax, even when used in a CG context, or something else is going on.

Pending further discussion and digression,[2] we assume that the use of SMG items in CG speech is not only acceptable, but also does not take away anything from the CG-specific grammatical properties under investigation. We also leave aside the issue whether idiolects, diglossia, and other sociolinguistic factors of a "high" variety (SMG) influence the grammar of a "low" variety (CG). Following standard generative assumptions that a speaker's language is the result of an internalized grammar of that speaker, "dialects" have their own grammar, on a par with "languages" (among many others, see Kayne 2000: 7). Correspondingly, if a large group of CG speakers employs *pos*, it reflects the clear availability of *pos* in that group's mental grammar rather than, say, code-switching, competition, confusion,

---

[2] The larger issue behind CG grammar is currently being investigated by the Cyprus Acquisition Team (http://www.research.biolinguistics.eu/CAT), focusing on (a)typical language development. See Grohmann (2011b) for a first presentation and Grohmann and Leivada (in press) for discussion on competing factors between CG and (the influence of) SMG.

and so on. Variations of our answer to this first remark may also become clearer when we look at the third point raised below.

Second, it might be debatable at first sight whether the "in-situ" *wh*-items (in either variety) are indeed *in situ*. We will not engage in a discussion as to what the factors are that allow in-situ information questions (see e.g. Bolinger 1978, Ginzburg and Sag 2000, and Vlachos 2010). Rather, the question is intended to tie in "apparently in-situ expressions" with a popular line of analysis that assumes projections lower in the clausal spine as landing sites for short (*wh*-)movement, as suggested recently by Belletti (2004), for example. The idea here is that discourse-related positions, such as topic and focus (and, by extension, *wh*-items), are not uniquely licensed in the clausal left periphery ("split Comp" in the sense of Rizzi 1997), but that they can also appear in the "lower Infl" area, such as at the periphery of *v*P or, to use current terminology, at the outer edge of the "*v*P-phase" (in Phase Theory of Chomsky 2000 and subsequent work). Sinopoulou (2008) applies this idea to Greek multiple *wh*-questions, but explicitly not to single *wh*-in situ.

Again, we side with Vlachos (2010), who provides an account in the context of non-reprising (*wh*-in situ) information questions which might be compatible with either view, but it does make a strong case for "in-situ *in situ*" as we assume here for simplicity. In addition, we hold the perhaps conservative view that different parts of the clause structure are responsible for different interface tasks — but uniquely so. Referring to the tripartite, domain-driven framework of Grohmann (2003), the lowest part of the structure is responsible for thematic information (an articulate *v*P, which he calls "Θ-Domain"), while discourse-related material and operators must be licensed in the highest part ("split Comp" or an articulated CP, the "Ω-Domain"), couching the agreement-layer in between ("split Infl" or an articulated TP, the "Φ-Domain"). In other words, we assume a three-way split of clausal structure into CP – TP – *v*P, each expanded into different functional projections, but also each uniquely identifying interpretive tasks. This view does not easily allow low discourse-related licensing, unlike Belletti's (2004) approach which, in turn, might be easily made compatible not only with the cartographic framework assumed there, but also, as briefly mentioned above, with Phase Theory in a perhaps natural manner.[3] The long and short of this second remark is that we assume the in-situ *wh*-phrase to not have *wh*- or focus-moved at all.

Third, and related to the previous point, the fact alone that two lexical items show different syntactic behavior is not that surprising —after all, they are different lexical items. Even in English, it has been argued that not all *wh*-items pattern alike. The "true adjuncts" *why* and *how*, for example, have been suggested to be generated high, inserted directly into C, unlike "(semi-)argumental" *who*, *what*, *when*, etc. (Rizzi 1990, and among many others, Tsai 2008 for more recent discussion).

More relevant is the observation that the two *wh*-expressions for reason (but see

---

[3] For a preliminary discussion on how to frame some of Grohmann's (2003) core insights within Phase Theory, see Grohmann (2011a).

Tsai 2008 for a more fine-grained distinction between *wh*-adjuncts which goes beyond the scope of the present investigation of CG)*, why* and *how come*, show quite different properties within the same language —for example, *how come* does not trigger inversion and it may not stay in situ. In this respect, *pos* and *indalos* in CG might reflect *why* and *how come* in English, respectively.

With all this in mind, we suggest here that *indalos* is obligatorily merged into SpecCP (presumably specified as such in the CG lexicon), while *pos* at least may come from a lower position (leaving open the option of "high insertion" if it turns out to be needed). When doing so, scope ambiguities might arise —and should be resolved with in-situ *wh*-expressions. Consider the schematic structures in (11):

(11) a. [$_{CP}$ indalos (embu) […]]
      b. [$_{CP}$ pos (embu) [… t_{pos} …]]

The high-inserted *indalos* obligatorily takes scope over the entire clause, while *pos* may take the same "high scope" —but in addition, it also allows "low scope" (namely, if interpreted in its base position). The following data illustrate.

Take a simple English sentence like (12):

(12) John opened the door.

At least two relevant modifications can be expressed, an *instrumental modification* (expressing the instrument with which the door was opened) or a *manner interpretation* (referring to the manner, or in this case better: disposition of the agent, of the door-opening event):

(13) a. John opened the door with the key.   *instrumental*
      b. John opened the door with anger/angrily.   *manner*

A *how*-question gives rise to ambiguity: *How did John open the door?* could be answered with either (13a) or (13b). The same holds for Greek. In particular, as Vlachos (2008) first discussed, when the *wh*-expression is in SpecCP, both readings are available, as in (14). In contrast, in-situ *pos* only allows an instrumental *(nevriasmenos* 'with anger'*)* interpretation.

(14)   ***Pos***   *anikse*   *tin*   *porta*   *o*   *Nikos?*   [SMG]
        how   opened   the   door   the Nick
        'How did Nick open the door?'

   a. *Me*   *to*   *kliði.*
       With   the   key
       'With the key.'

172

b. *Nevriasmenos.*
angry-NOM
'With anger.'

We will return in the next section, where we address additional factors and complications, to the at first glance puzzling fact that CG seems to differ in this respect along the lines of (18) below, having to do with the revised discussion from Vlachos (2010) and the relevance of the b-answer item's category, casting doubt on the infelicitous status of a manner reading for SMG —or at least suggesting that this might not be the whole story. CG *pos*, namely, seems to allow both interpretations in both situations, irrespective, thus, of whether the *wh*-word is in situ or not. That is, a manner interpretation of in-situ *pos* is perfectly acceptable in CG, as (15) shows where the b-answer is indeed felicitous.

(15) *O   Nikos   aniksen   tin   porta   **pos**?*   [CG]
the   Nick   opened   the   door   how
'Nick opened the door how?'

a. *Me   to   kliði.*
with   the   key
'With the key.'

b. *Nevriasmenos.*
angry-NOM
'With anger.'

Similarly to CG *pos*, argumental 'who'-questions allow different readings in more complex contexts (data again taken from Vlachos 2008). In SMG questions such as (16), both readings are available, where the *wh*-phrase can either be construed with the matrix (object of *anakinose*) or the embedded clause (as the argument of *apokalipse*).

(16) ***Se pjon*** *anakinose o   Janis oti   i   Maria   apokalipse to mistiko?* [SMG]
to   whom announced the John that the Mary   revealed   the secret
'To whom did John announce that Mary revealed the secret?'

a. *To anakinose   ston   diefθindi   tu.*
it   announced   to-the   senior-manager   his
'He announced it to his senior manager.'

b. *Anakinose   oti   i   Maria   to   apokalipse*
announced   that   the   Maria   it   revealed

173

ston   adaγonisti   tis   eterias.
to-the   competitor   of-the   company
'He announced that Mary revealed it to the company's competitor.'

The two interpretations are arguably derived from a simplified structure, such as the one depicted in (17).[4] That is, movement of the *wh*-word to SpecCP either from the matrix (position _^{A}_) or from the embedded clause (position _^{B}_) allows it to be construed as the internal argument of the matrix or the embedded verb, respectively.

(17)   Se pjon anakinose o Janis [$_{VP}$ $t_{anakinose}$ _^{A}_
       [oti i Maria apokalipse [$_{VP}$ to mistiko $t_{apokalipse}$ _^{B}_]]]?
       'To whom did John announce that Mary revealed the secret?'

And the same should apply in CG embedded *wh*-questions:

(18)   ***Se pcon (embu)*** *esinaferen   o   Yiannis oti   i   Maria ipen tin*   [CG]
      to   whom EMBU talked-about the John   that the Mary said the

      alithkian?
      truth
      'To whom did John say that Mary said the truth?'

    a.   *Esinaferen   to   ston   Giorgo.*
       talked-about   it   to-the   George
       'He said it to George.'

    b. # *Esinaferen   oti   i   Maria ipen stin   Anna tin aliθkian.*
       talked-about   that the Maria   said to-the Anna the truth
       'He said that Mary said the truth to Anna.'

But as signaled in (18), the embedded reading is marginal, if possible at all (see the next section for further discussion, including fn. 5, where we address the reason why we translate *esinaferen* as 'said').

Restrictions similar to the manner interpretation for in-situ *pos* in SMG above account for embedded in-situ *wh*-phrases in SMG. Assuming these to be clause-

---

[4] We only mark VP very broadly, not committing to the internal structure of ditransitive predicates and following standard assumptions that the verb moves at least to T in Greek. We also assume that the post-verbal subject preceding the predicate's internal arguments stays in situ (Spec*v*P), whereas the pre-verbal subject position may either be SpecTP or some higher position, such as a C-related left-peripheral topic phrase. For extensive discussion of the intricacies of Greek syntax bearing on these issues, see, among many others, Philippaki-Warburton (1985), Alexiadou and Anagnostopoulou (1998), and Roussou and Tsimpli (2006).

bound in SMG (Vlachos 2008), they should not be able to be interpreted as an argument of the matrix verb. And indeed, the *wh*-phrase is interpreted as the argument of the embedded clause only, and not the matrix, allowing for the b- but not the a-interpretation (Vlachos 2010).

Not so in CG. With a sentence-final *wh*-phrase, an interpretation of the *wh*-phrase as the argument of either the matrix or the embedded clause is allowed, as in (19).

(19)   *O Yiannis ipen oti i Maria esinaferen tin aliθkian **se pcon?*** [CG]
      the John   said that the Mary talked-about the truth   to whom
      'John said that Mary said the truth to whom?'

     a.   Ipen to ston   Giorgo.
         said it to-the George
         'He said that to George.'

     b.   Ipen oti i   Maria ipen stin   Anna tin aliθkian.
         said that the Mary said to-the Anna the truth
         'He said that Mary said the truth to Anna.'

It is apparent that CG and SMG do not differ only with respect to some dialect-specific lexical items used in *wh*-question formation (e.g. *inda, indalos, embu*) or a large number of undisputed phonological differences (not discussed here) —but also, so it seems, with respect to semantico-syntactic restrictions that apply, presenting an interesting arena of comparison. CG in-situ *wh*-phrases, whether dialect-specific or not, quite clearly appear to have different properties from those in SMG, allowing different interpretations in the same environments.

4. Revisiting *wh*-in situ in CG formally

One result that has crystallized so far is that not every *wh*-item can stay in situ in CG, in line with English, where *how come*, for example, can never appear in situ and where certain *wh*-expressions have been argued to be obligatorily merged "high" (i.e. straight into SpecCP). The same also applies to the CG *wh*-item *indambu*, regardless of whether it is being used argumentally ('what') or adverbially ('why'), and in this respect might differ from English. Certainly, the discussion in the literature concerning *why* (and also *how*) across languages, starting with Bromberger (1987), bears relevance on the issue.

We will not pursue this any further than just mentioning the fact that certain CG *wh*-expressions can either not stay in situ or, more likely, never "come" from a lower position to begin with; *(e)mbu* is certainly one of those elements in CG that seem to be obligatorily licensed in the left periphery, whether inserted directly into C

(Papadopoulou, in progress) or as the result of a much more complex clefting structure (Grohmann *et al.* 2006); see also Pavlou (2010) for an overview of several approaches to the shortened variant *mbu* in connection with *inda* (namely, the forms *indambu, innambu, tambu, namu,* and *ambu,* which can all mean 'what' or 'why'). In this sense, we can conclude that the ability of a *wh*-expression to appear in situ depends not exclusively on syntactico-semantic licensing mechanisms in the grammar, but to a large extent on the lexical properties of a given item.

As a comparative result, a second solid, and possibly the most surprising, difference between CG and SMG *wh*-in situ questions is the availability of a matrix interpretation of an in-situ *wh*-expression in CG that, at least at first glance, appears to occupy a position within an embedded clause —an option which does not exist in SMG.

Recall from the discussion above (regarding example (19)) that SMG does not allow the response in, hence the interpretation construed with, (19a). SMG *(se) pjon* '(to) whom' is thus not able to scope all the way into the matrix, be it by LF-movement or some other licensing operation, whereas CG *(se) pcon* seems to be. (20) is a rough sketch of a possible structural representation (but see fn. 4 for some qualifying remarks):

(20)   [$_{CP}$ **OP** C [o Yiannis ipen … [$_{vP}$ **OP** (o Yiannis) *v* [$_{VP}$ _^{A}_ t$_V$
      [$_{CP}$ **OP** oti-C [i Maria esinaferen … [$_{vP}$ **OP** (i Maria) *v*
        [$_{VP}$ tin aliθkian t$_V$ **se pcon**]]]]]]]]

The null hypothesis is arguably that *se pcon* originates as the indirect argument of the embedded verb *esinaferen* and then, staying in situ throughout the derivation, somehow takes scope for the (information) interrogative interpretation. Ignoring the matrix clause for the time being, we suggested in (10) above that this "somehow" can be done through unselective binding by an operator OP in SpecCP or locally within its immediate domain of interpretation, suggested to be *v*P; the latter we signal through an OP in the "edge" of *v*P.

If its scope is indeed clause-bound, as argued to hold for SMG (Vlachos 2008, 2010), it should not matter which option we choose: Either the immediate *v*P or the OP in the embedded SpecCP might be used to license *(se) pcon* in situ —but the result would invariably be an embedded interpretation. This could work for SMG, but not for CG, where a matrix interpretation is acceptable as well.

In a longer version of this article (Grohmann and Papadopoulou 2010), we entertained several solutions. However, the discussion boils down to a single scenario (thanks to Marcel den Dikken, p.c., for valuable input): CG does not require complement clauses of ditransitive verbs to obligatorily extrapose — unlike SMG, and unlike English, as a matter of fact. Under neutral intonation, (21c) is worse than (21b):

(21)   a.   John said that the earth is flat.

b.　John said to Mary that the earth is flat.

c. [??] John said that the earth is flat to Mary.

We capitalize on the additional position in (20) marked, as in (17) above, _^A_. However, this indirect-object position should not be the specifier of VP but rather the complement of the verb, with the direct object sitting in SpecVP (see the rich body of literature starting with Larson 1988). The two interpretations arise from an ambiguous lexical choice: *ipe* 'said' used monotransitively vs. ditransitively.[5]

In other words, the availability of a matrix interpretation of an apparently embedded in-situ *wh*-item in CG, as opposed to SMG, is due to the fact that the complement clause introduced by *oti* 'that' has not extraposed, as in English or SMG. The two interpretations for (19) have thus two structurally different derivations: (22a) for matrix and (22b) for embedded interpretation of the *wh*-in situ expression. (Either one would still be compatible with any of the *wh*-in situ licensing mechanisms, whether a CP- or a *v*P-related OP, or some other way.)

(22)　a.　$[_{CP}$ **OP** C [o Yiannis ipen … $[_{vP}$ **OP** (o Yiannis) *v*
　　　　　　$[_{VP}$ $[_{CP}$ **OP** oti-C [i Maria esinaferen … $[_{vP}$ **OP** (i Maria)
　　　　　　　　v $[_{VP}$ tin aliθkian t$_V$]]]]] t$_V$ **se pcon**]]]
　　　　　　　　　　　　(ditransitive matrix verb *ipen* 'said', CP in SpecVP)

　　　　b.　$[_{CP}$ **OP** C [o Yiannis ipen … $[_{vP}$ **OP** (o Yiannis) *v* $[_{VP}$ t$_V$
　　　　　　$[_{CP}$ **OP** oti-C [i Maria esinaferen … $[_{vP}$ **OP** (i Maria) *v*
　　　　　　　　$[_{VP}$ tin aliθkian t$_V$ **se pcon**]]]]]]]]]
　　　　　　　　　　　　(monotransitive matrix verb *ipen* 'said', CP in Compl-V)

For SMG, this option is either not available or simply strongly dispreferred. Which one it is rests on further testing, possibly also through a grammaticality judgment task similar to the one reported in Grohmann and Papadopoulou (2010).

A final intended result of our study was to show a discrepancy between CG and SMG as regards the availability of instrumental and manner readings with *pos*-in situ. This would have been the most puzzling difference, primarily for theoretical reasons, as the following discussion will bring to light.

---

[5] This is, of course, why Vlachos (2008) chose the SMG verbs *anakinose* 'announced' and *apokalipse* 'revealed'. However, CG purportedly does not make this subtle distinction, so we opted for using the most natural CG verb of saying, *ipe*, the past tense of *leo* 'say'. If we had used Vlachos' verbs, the respondents would invariably have perceived an SMG-influenced tone in the test sentences, unnatural for CG, and might perhaps have responded differently. Note that we used several different verbs, however, each one alternating in matrix and embedded contexts, without significant effects. This issue clearly reflects the difficulties not only for investigating varieties without a writing system through a written questionnaire (see Grohmann and Papadopoulou 2010), but also the sensitive task of exploring a "low-prestige" variety (CG), trying not to find or create interference from the "high-prestige" variety (SMG).

As mentioned in the introduction, Vlachos (2008), on which we based our original investigation, was subsequently revised and appeared as Vlachos (2010). The revisions include some of the data reported earlier, and the published version differs in crucial respects as regards both the analysis and the treatment of a number of data. One of these concerns cases like in-situ *pos* in SMG. Vlachos (2008) reports that the predicate adjective *nevriasmenos* 'angry-NOM' would in this case be infelicitous, unlike CG, as shown in (15b).

Three notes are in order, however. First, somewhat surprisingly perhaps, Vlachos employed the adjective *nevriasmenos* as opposed to the adverb *nevriasmena*. And indeed, as he reports in his published work, the adverb is acceptable for SMG speakers. It is thus possible that *pos*-in situ may have a manner interpretation in SMG after all, just as it does in CG.

Second, Vlachos notes in this context: "Although for some Greek native speakers the subject-related [manner — KKG & EP] reading of the *wh*-in-situ adverb does not immediately derive" (Vlachos 2010: 89, fn.3), where we assume that "derive" means *arise*. There is thus some additional variability which should be taken into account in further studies of this phenomenon.

Third, unlike the original presentation of the data by Vlachos (2008), the questionnaire study carried out for this research (Grohmann and Papadopoulou 2010) contained the adverb *nevriasmena* 'angrily' instead of the adjective *nevriasmenos* 'angry'. Perhaps CG use of adjectives vs. adverbs is at stake or some other grammatical difference between the two varieties, but considering speakers' intuitions seriously that in this context, they prefer the adjective, and this adjective seems to be less preferred in the same context by SMG speakers, as reported in Vlachos (2008) and several other speakers of SMG consulted. Thus, while, in light of Vlachos (2010), our results concerning *pos*-in situ may not appear as strong as they did compared to Vlachos (2008), the situation for CG, at least, seems clear: The in-situ and the ex-situ use of *pos* 'how' allows a manner reading as well as an instrumental interpretation.

In closing, this study has shown that there are grammatical differences between CG and SMG which can be investigated formally —even in the presence of obstacles such as understudied varieties, as is the case with Cypriot.

References

Alexiadou, A., and E. Anagnostopoulou. 1998. Parametrizing Agr: Word order, V-movement and EPP-checking. *Natural Language and Linguistic Theory* 16.491–539.

Belletti, A. 2004. Aspects of the low IP area. In L. Rizzi (ed.), *The Structure of CP and IP: The Cartography of Syntactic Structures*, vol. 2, 16–51. New York: Oxford University Press.

Bolinger, D. L. 1978. Asking more than one thing at a time. In *Questions*, ed. by H.

Hiz, 107–150. Dordrecht: D. Reidel.

Chomsky, N. 2000. Minimalist inquiries: The framework. In *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, ed. by R. Martin, D. Michaels, and J. Uriagereka, 89–155. Cambridge, MA: MIT Press.

Fotiou, C. 2009. Focusing Strategies in Cypriot Greek. In *Selected Papers from the 2006 Cyprus Syntaxfest*, ed. by K. K. Grohmann and P. Panagiotidis, 63–91. Newcastle-upon-Tyne: Cambridge Scholars Publishing.

Ginzburg, J., and I. A. Sag. 2000. *Interrogative Investigations: The Form, Meaning, and Use of English Interrogatives*. Stanford, CA: CSLI.

Grohmann, K. K. 2003. *Prolific Domains: On the Anti-Locality of Movement Dependencies*. Amsterdam: John Benjamins.

Grohmann, K. K. 2007. Clefts and the joys of sideward movement. Invited presentation at the *Student Conference on Formal Linguistics 2 (SCoFL 2)*, Adam Mickiewicz University, Poznan (April 21–22).

Grohmann, K. K. 2011a. Anti-locality: Too-close relations in grammar. In *The Oxford Handbook of Linguistic Minimalism*, ed. by C. Boeckx, 260–290. Oxford: Oxford University Press.

Grohmann, K. K. 2011b. Some directions for the systematic investigation of the acquisition of Cypriot Greek: A new perspective on production abilities from object clitic placement. In *The Development of Grammar: Language Acquisition and Diachronic Change — In Honor of Jürgen M. Meisel*, ed. by E. Rinke and T. Kupisch, 179–203. Amsterdam: John Benjamins.

Grohmann, K. K., and E. Leivada. In press. Interface ingredients of dialect design: Bi-X, socio-syntax of development, and the grammar of Cypriot Greek. In *Towards a Biolinguistic Understanding of Grammar: Essays on Interfaces*, ed. by A. M. Di Sciullo, Amsterdam: John Benjamins.

Grohmann, K. K., and E. Leivada. 2010. Competing factors for Language acquisition in diglossic environments: Languages, meta-languages and the socio-syntax of development hypothesis. Poster presented at *Competing Motivations*, Max Planck Institute for Evolutionary Anthropology, Leipzig (November 23–25).

Grohmann, K. K., P. Panagiotidis, and S. Tsiplakou. 2006. Properties of *wh*-question formation in Cypriot Greek. In *Proceedings of the 2ⁿᵈ International Conference on Modern Greek Dialects and Linguistic Theory (Mytilene, Greece: 30 September–3 October 2004)*, ed. by M. Janse, B. D. Joseph, and A. Ralli, 83–98. Patras: University of Patras.

Grohmann, K. K., and E. Papadopoulou. 2010. Cypriot anomalies in *wh*-in situ structures. In *e-Proceedings of the 4th International Conference on Modern Greek Dialects and Linguistic Theory (Chios, Greece: 11–14 June 2009)*, ed. by A. Ralli, B. D. Joseph, M. Janse, and A. Karasimos, 74–105. [lmgd.philology.upatras.gr/en/research/downloads/MGDLT4_Proceedings.pdf]

Grohmann, K. K., and E. Papadopoulou. 2011. Question(able) issues in Cypriot Greek. *Linguistic Analysis* 37(1–2).8–38.

Holton, D., P. Mackridge, and I. Philippaki-Warburton 1997. *Greek: A Comprehensive Grammar of the Modern Language*. London: Routledge.

Huang, C.-T. J. 1982. *Logical Relations in Chinese and the Theory of Grammar*. MIT doctoral dissertation, Cambridge.

Kamp, H. 1981. A theory of truth and semantic representation. In *Formal Methods in the Study of Language*, ed. by J. Groenendijk, T. Janssen, and M. Stokhof, 277–320. Amsterdam: Universiteit van Amsterdam.

Kayne, R. 2000. *Parameters and Universals*. New York: Oxford University Press.

Papadopoulou, E. In progress. *Acquisition of Wh-Questions: Evidence from Cypriot Greek*. University of Essex doctoral dissertation, Colchester.

Pavlou, N. 2010. *Mbu*! On *wh*-objects and true adjuncts in Cypriot Greek. In *e-Proceedings of the 4th International Conference on Modern Greek Dialects and Linguistic Theory (Chios, Greece: 11–14 June 2009*, ed. by A. Ralli, B. D. Joseph, M. Janse, and A. Karasimos, 154–176. [lmgd.philology.upatras.gr/en/research/downloads/MGDLT4_Proceedings.pdf]

Pesetsky, D. 1987. *Wh*-in-situ: Movement and unselective binding. In *The Representation of (In)definiteness*, ed. by E. Reuland and A. ter Meulen, 98–129. Cambridge, MA: MIT Press.

Philippaki-Warburton, I. 1985. Word order in Modern Greek. *Transactions of the Philological Society* 83: 113–143.

Rizzi, L. 1990. *Relativized Minimality*. Cambridge, MA: MIT Press.

Rizzi, L. 1997. The fine structure of the left periphery. In *Elements of Grammar: Handbook in Generative Syntax*, ed. by L. Haegeman, 281–337. Dordrecht: Kluwer.

Roussou, A., and I.-M. Tsimpli. 2006. On Greek VSO again! *Journal of Linguistics* 42.317–354.

Simeonidis, C. P. 2006. *Ιστορία της Κυπριακής Διαλέκτου* (History of the Cypriot Greek Dialect). Nicosia: Holy Monastery of Kykkos Centre of Research.

Sinopoulou, O. 2008. Multiple questions and apparent *wh*-in situ: Evidence from Greek. *Proceedings of ConSOLE XV*: 223–246.

Sinopoulou, O. 2009. Απλές ερωτήσεις με ερωτηματική λέξη *in situ*: Η περίπτωση των Ελληνικών (Simple questions with *wh*-in situ: The case of Greek). *Proceedings of the 8th International Conference of Greek Linguistics*: 1118–1132 (CD-ROM). [Also online at www.linguist-uoi.gr/cd_web/arxiki_en.html.]

Tsai, W.-T. D. 2008. Left Periphery and *How–Why* Alternations. *Journal of East Asian Linguistics* 17.83–115.

Vlachos, C. 2008. *Wh*-in-situ inquiries in a *wh*-movement language: The case of Greek. Unpublished ms., University of Patras.

Vlachos, C. 2010. *Wh*-in-situ: The case of Greek. In *Movement and Clitics*, ed. by V. Torrens, L. Escobar, A. Gavarró, and J. Gutiérrez, 85–113. Newcastle-upon-Tyne: Cambridge Scholars Publishing.