

# Cypriot anomalies in *wh*-in situ structures\*

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## 1. Introduction

This paper investigates structures of *wh*-in situ in (and corresponding interpretations available to speakers of) Cypriot Greek, a typical *wh*-ex situ language. That is, in order to form *wh*-questions, a single *wh*-phrase is fronted into the left sentence periphery, as in English, but under certain (pragmatic, discourse-specific) conditions, as in English, in-situ *wh*-expressions are felicitous to form an information question (i.e. without echo or rhetorical interpretation).<sup>1</sup> What makes Cypriot Greek potentially interesting in this respect is that, from all we know about its grammar — admittedly, not as much as we would like to —, structures that should not be possible or should be less preferred than others seem to be used and interpreted (and vice versa), in particular when compared to the closely related standard variety of Modern Greek. We set out to investigate some such structures quantitatively by conducting a questionnaire-based study on both syntactic structures and available interpretations of *wh*-in situ in Cypriot Greek.

To provide a very basic background to the language(s) discussed here, Cypriot Greek (henceforth, CG) is a linguistically understudied variety of Standard Modern Greek (henceforth, SMG) spoken on the island of Cyprus, in the far east of the Mediterranean Sea (more than twice as far from Athens as Rhodes, one of the southeastern-most islands of Greece). Several politico-economic reasons as well as an “apparent inability” of native speakers to draw linguistic boundaries between CG and SMG have led to a confusion as to what is “purely dialectal” and what “grammatically correct” means.<sup>2</sup> Opposing views regarding how similar or different the syntax of the two varieties is (Papagelou 2001) have guided a growing body of research carried out in Cyprus and elsewhere (e.g., Grohmann *et al.* 2006 and Gryllia & Lekakou 2006 on *wh*-related issues). More fundamental issues are currently being investigated for child language development by the Cyprus Acquisition Team (Grohmann, to appear, and much ongoing work).

We tested CG-speaking adults for interpretive effects in matrix and embedded information-question environments for *wh*-in situ vs. *wh*-ex situ and found a number of remarkable properties. One obvious factor in the licensing of such questions is the

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\* This paper started out as a reaction to Christos Vlachos’ presentation at the UCY Linguistics Discussion Group on *wh*-in situ in Greek (subsequently written up as Vlachos 2008, but revised as Vlachos 2010, with differences we will address here in some detail). We would like to thank Christos for discussion as well as Marcel den Dikken, Terje Lohndal, Panos Pappas, and the other reading group members, also for initial (dis)confirmation of judgements, in particular: Anna Epistithiou, Skevi Hadjiefthymiou, Evelina Leivada, Skevi Mavroudi, Chrystalla Michael, Natalia Pavlou, and Elena Theodorou. We extend our gratitude to the audiences at the *ISTAL 19* workshop ‘The Optionality of Wh-Movement’ (Thessaloniki, April 2009) and the *MGDLT 4* conference (Chios, June 2009). A revised version of this paper is going to appear as Grohmann & Papadopoulou (forthcoming).

<sup>1</sup> For reasons of simplicity, the discussion is restricted to single information questions throughout this investigation. The major points to be highlighted hold irrespective of the number of *wh*-expressions. On the theoretical relevance of echo questions for minimalist analysis, see the very recent work by Sobin (2010), whose relevance for the present topic we discuss in Grohmann & Papadopoulou (forthcoming).

<sup>2</sup> The use of double quotes here is intended to signal the difficulty researchers are faced when investigating a mostly “dialectal sub-standard” variety such as CG which is often flat out rejected by its own speakers as a “proper language” (see also Papapavlou 1998 and much subsequent work on socio-linguistic aspects of CG, and a current survey by Ioannidou *et al.* 2009, but see fn. 18 below).

contextual information in a way yet to be described appropriately (see also the references in the following paragraph), but in the long run we aim to incorporate a better developed effect of the role and use of (CG) discourse-linked questions as opposed to single *wh*-expressions as done in this study.

Our contribution explores how the variety of Greek spoken on the island of Cyprus differs in interesting ways from mainland Greece. *Wh-in situ* in Greek, a *wh*-movement language, is discussed in section 2 (see Sinopoulou 2009 for SMG) alongside *wh-in situ* in English, another typical *wh*-movement language (cf. Ginzburg & Sag 2000). A very basic description of the phenomenon is presented in section 3, returned to in section 5 (based largely on Vlachos 2008, 2010). The discourse contexts in which *wh-in situ* is felicitous are presumably identical for SMG and CG, even possibly English and beyond (though they are not discussed here) — but the syntactic operations involved and semantic interpretations available are (or at least, may be) not. This is discussed at length empirically in section 4. Section 5 is the theoretical core of the paper that concludes the study with an extended analysis, discussion, and outlook.

## 2. *Wh*-Question Formation in CG

This study investigates the relationship between four types of *wh*-questions in Greek, those involving *wh*-arguments, such as *pjos/pcos* (SMG/CG) ‘who-MASC.NOM’ for subject and *pjon/pcon* (SMG/CG) ‘who-MASC.ACC’ for object as well as the manner-adjuncts *pos* and *indalos*, both meaning ‘how’ (in this section and the next). CG *wh*-question formation resembles to a large extent *wh*-question formation in SMG but differs with respect to some properties carried by CG *wh*-words and the addition of the dialectal element *embu* (Grohmann *et al.* 2006), literally ‘(it-)is-that’ (CG, as SMG, is a null-subject language); since it is used here in interrogatives (for non-interrogative focus use, see Fotiou 2009), we consider *embu* as ‘is(-it)-that’. However, as can be inferred from the results of the questionnaire complementing the study (section 4), more substantial differences arise (sections 3 and 5).

To set the stage for the structures to be discussed presently, (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<br>‘Who/Which girl did Nick meet last night?’     |       |
|     | b. | Pcan/Pcan koruan ivren o Nikos extes ti nixta?  | [CG]  |
|     |    | who/which girl found the Nick yesterday the night<br>‘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<br>‘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<br>‘Nick met who/which girl last night?’      |       |

CG *wh*-words bear an obvious morphological resemblance to their SMG counterparts, other than the obvious (and minor) morpho-phonological differences. The *wh*-expressions include the quantifiers *pcos/-ia/-o* ‘who/which’, *posos* ‘how much/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 quantifier *inda* ‘what’, and the adverbs *inda* ‘why’ and *indalos* ‘how’, are dialect-specific to CG as depicted in Table 1, which lists simplex *wh*-expressions in the left and (corresponding) complex ones in the right column.

Table 1: *Wh-words in Cypriot Greek*

<b>Wh-quantifiers</b>	
<i>pc-os/-ia/-o</i> 'who-MASC/-FEM/-NEUT'	
<i>pc-os/-ia/-o</i> NP 'which-MASC/-FEM/-NEUT NP'	<i>se pcon</i> 'to whom' <i>apo pcon</i> 'from whom' <i>*pu pcon</i> 'from whom' <i>pros pcon</i> 'to whom'
<i>pos-os/-in/-o</i> 'how much-MASC/-FEM/-NEUT'	<i>ja poso</i> 'for how long' <i>se poso</i> 'in how long' <i>*pu poso</i> 'from how much'
<i>ti</i> 'what'	<i>se ti</i> 'to what' <i>apo ti</i> 'from what' <i>pros ti</i> 'why'
<b>Wh-adverbs</b>	
<i>pote</i> 'when'	<i>apo pote</i> 'since when' <i>mexri pote</i> 'until when' <i>ja pote</i> 'for when'
<i>pu</i> 'where'	<i>apo pu</i> 'from where' <i>pros ta pu</i> 'towards where' <i>ja pu</i> 'to where'
<i>jati</i> 'why'	
<i>pos</i> 'how'	
<b>CG-specific</b>	
<i>indalo(i)s</i> 'how'	
<i>inda</i> 'what'	<i>se inda</i> 'in which' <i>pu inda</i> 'from which' <i>gia inda</i> 'for what'
<i>inda</i> 'why'	

\*These are also specific to the CG dialect.

According to Simeonidis (2006:217), the CG *wh*-quantifier *inda* derives from the interrogative pronoun *tinda* 'what' used in Asizes (a text of laws from the island dating to the 10<sup>th</sup> and 11<sup>th</sup> centuries), literally *ti ine afta* 'what are these'.<sup>3</sup> CG *inda* is a pronoun invariant in gender, number, and case which can be used either pronominally ('what/which NP') or pronominally (what we also call "bare *inda*" meaning simply 'what'). In addition, *inda* has the two phonologically reduced forms *a* and *nda*, which are used rarely and mainly in the village variety of the dialect known as "*xorkatika*" (Newton 1972:19). However, *inda* can also mean 'why' in CG, suggesting that this *inda* must have originated from *gia inda logo* 'for what reason' (Papadopoulou, in progress). When adjoined to (*e*)*mbu* 'is(-it)-that', both instances of *inda* come in several variants, namely, *nambu*, *tambu*, *ambu*, and *innambu* (Pavlou 2009, this volume). The third *inda*-derived *wh*-word is *indalo(i)s* 'how', literally *inda* 'what' + *logis* (in Ancient Greek *tropos*) 'way/manner', meaning 'in what manner, how', which also originated from the interrogative pronoun *tinda* 'what' (see e.g. Papagelou 2001, Simeonidis 2006, and Giagoulis 2009 for more discussion).

These 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 a landing site

<sup>3</sup> As Angeliki Ralli mentions in her state-of-the-art review article on Greek dialects, Contossopoulos (1983-1984), "who tries to establish an isogloss on the basis of the form of the *wh*-word *what*" (Ralli 2006:138), could also be cited here for work on dialectal question formation in Greek and the issue of *inda* (vs. *ti*).

one may assume to be Spec-C) 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 (Papadopoulou, in progress), shown in (4). (We will return to these readings in section 3, and then again, more analytically, in section 5.)

- (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’. On the ‘why’ side, SMG *jati* can either undergo movement to Spec-C or remain in situ, as in (5) below, whereas *inda* can only undergo movement, as in (6). Only if preceded by *ja* ‘for’ can *inda* be left in situ, as (6c) shows; in this environment, *inda* is freely translated as ‘why’ but literally should be, as glossed, ‘for what (reason)’.<sup>4</sup>

- (5)a. **Jati** piye ston ayona o Nikos? [SMG]  
 why went to-the match the Nick  
 ‘Why did Nick go to the match?’  
 b. O Nikos piye ston ayona **jati**?  
 the Nick went to-the match why  
 ‘Nick went to the match why?’
- (6)a. **Inda** epien is tin mappan o Nikos? [CG]  
 why went to the match the Nick  
 ‘Why did Nick go to the match?’  
 b. \* O Nikos epien is tin mappan **inda**?  
 the Nick went to the match why  
 ‘Nick went to the match why?’  
 c. O Nikos epien is tin mappan **ja inda**?  
 the Nick went to the match for what  
 ‘Nick went to the match why?’

Prenominal *inda* ‘what’ can remain in situ or undergo movement in both SMG and CG, shown in (7) and (8), respectively.

- (7)a. **Ti vivlio** ðiavazi o Nikos? [SMG]  
 what book reads the Nick  
 ‘What book is Nick reading?’

<sup>4</sup> A more detailed analysis of these structures is provided by Pavlou (this volume) and Papadopoulou (in progress). Our main concern here regards (non-)availability of *wh*-in situ in CG and the corresponding interpretations as well as purported “mismatches” or unexpected structures, discussed from section 3 on.

- b. O Nikos *ðiavazi ti vivlio?*  
the Nick reads what book  
'Nick is reading what book?'

(8)a. **Inda vivlion** *θkiavazi o Nikos?* [CG]  
what book reads the Nick

'What book is Nick reading?'

- b. O Nikos *θkiavazi inda vivlion?*  
the Nick reads what book  
'Nick is reading what book?'

Pronominal or bare *inda* 'what', on the other hand, obligatorily undergoes movement to Spec-C and can never be left in situ, as (10) demonstrates (more on *(e)mbu* below), in contrast to *ti* (predominantly used in SMG, but also employed by CG speakers), shown in (9).

(9)a. **Ti** *ðiavazi o Nikos?* [SMG & CG]  
what reads the Nick  
'What is Nick reading?'

- b. O Nikos *ðiavazi ti?*  
the Nick reads what  
'Nick is reading what?'

(10)a. **Indambu** *θkiavazi o Nikos?* [CG]  
what-EMBU reads the Nick  
'What is Nick reading?'

- b. \* O Nikos *θkiavazi indambu?*  
the Nick reads what-EMBU  
'Nick is reading what?'

Notice that bare *inda*, i.e. when used pronominally, is always followed by *mbu*, which arguably is a phonological variant of *embu* 'is(-it)-that' (Grohmann *et al.* 2006). Promising accounts would take bare *inda* to have grammaticalized as *indambu* 'what-is(-it)-that' (Papadopoulou, in progress) or perhaps combine with it syntactically (see Pavlou, this volume, for discussion of several possibilities); we assume the former.<sup>5</sup> For readability, we often gloss *(e)mbu* 'EMBU'.

A characteristic property of CG *wh*-question formation is the addition of this element *embu* which may optionally appear after the preposed *wh*-word, deriving questions such as (11a) and (12a) below. Depending on how *embu* is analyzed, different syntactic operations would be involved in the derivation of CG *wh*-questions. Initially (cf. fn. 5), 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 be a little far-fetched, so that *embu*-structures might rather involve a "fossilized" complementizer, where interrogative C be filled by *embu* (Papadopoulou, in progress).

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

<sup>5</sup> We leave aside the original suggestion by Grohmann *et al.* (2006), briefly alluded to in the text presently, that *embu* actually contains or introduces a full-fledged clefting structure, akin to English "It is X that..." (see Fotiou 2009 for non-interrogative focus but also Gryllia & Lekakou 2006 for some criticism), or the possibility they suggest but then reject that, when reduced to *mbu*, the *wh*-word *inda* undergoes *wh*-cliticization parallel to what may be found in Romance varieties (cf. Munaro & Pollock 2005).

- (11)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?’
- (12)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 found along with the *wh*-word in situ, even though the *wh*-word on its own can, as in (3b) and the b-examples of (5)–(9). (11b), in particular, shows two things: (i) CG-used *pos* may stay in situ, unlike CG *indalos* (cf. (12b)), 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. The ban on occurrences of *embu* in the clause can in fact be schematized as in (13).

- (13) a. [<sub>CP</sub> WH ((*e*)*mbu*) ... t<sub>WH</sub> ... ]  
 b. \* [<sub>CP</sub> ((*e*)*mbu*) XP ((*e*)*mbu*) ... WH ((*e*)*mbu*) ... ((*e*)*mbu*) ]

More can and possibly should be said, but since the remainder of this paper will not deal with *embu* as such (see e.g. Grohmann *et al.* 2006, Fotiou 2009, and Papadopoulou, in progress), this characterization that *embu* is restricted to a left-peripheral position right-adjacent to a fronted *wh*-expression, bare and rough as it is, hopefully suffices. In other words, *embu* (or, as discussed in Grohmann *et al.* 2006 and, at length, Pavlou this volume, *mbu* when following variants of *inda* ‘what’ and ‘why’) is restricted to optional occurrence in an interrogative C.<sup>6</sup>

Other than the *embu*-strategy, the first major difference between SMG and CG *wh*-question formation, then, is that the native item for ‘how’, *indalos*, cannot stay in situ (as in (4b) and (12b)), unlike SMG, where *pos* may stay in situ (as in (3a)). The Greek form *pos*, when used by speakers in CG, is also allowed in situ (as in (11b)). The same holds for CG *inda* ‘why’ (cf. (6b)) and *inda(mbu)* ‘what(-EMBU)’ (cf. (10b)) as opposed to the corresponding SMG *jati* and *ti*, respectively, even when used in CG (cf. (5b) and (9b)).

To address *wh*-in situ non-reprising, information questions very briefly (beyond Bolinger 1978 and Ginzburg & Sag 2000), it is clear that they require a particular discourse context. Vlachos (2008, 2010) goes into significant detail in his general account of such structures in SMG and we do not think that much more needs to be said for the purposes of the present paper. We thus restrict ourselves to pointing out that intuitively, one of the facilitating factors involved seems to be something very much akin to D(iscourse)-linking (Pesetsky 1987), that is, in order to ask a *wh*-in situ question felicitously, a discourse context must have been established that allows identification of the *wh*-expression. Other than difficulties examples such as (15b) 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” (Kamp 1981, Heim 1982; see also e.g. Cresti 1998), as also suggested by Pesetsky for D-linking, under

<sup>6</sup> Note that Grohmann *et al.*’s (2006) clefting-approach to *embu* can capture the distributional facts as well, since there *embu* is decomposed into copular *en* plus complementizer *pu* that “fuse” (post-)syntactically.

which the *wh*-expression would be bound by an interrogative operator; Vlachos proposes an alternative that licenses the in-situ syntax more locally, within the *vP*, and all we care about here, regardless of the specifics, is that in-situ *wh*-items can indeed be licensed in situ (see also the beginning of the next section).

Some examples of *bona fide* information questions with *wh*-in situ in English follow (Ginzburg & Sag 2000:280), some construed, others taken from the “real world” (English in-situ *wh*-expressions require special stress, indicated by small capitals):

- (14) 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?
- (15) 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 (*vP*):

- (16) [<sub>CP</sub> (OP<sub>i</sub>) C<sub>Q</sub> ... [<sub>vP</sub> (OP<sub>i</sub>) ... WH<sub>i</sub> ... ]]

### 3. Ex-Situ and In-Situ Interpretive Quirks

Aside from the variation in SMG and CG question formation so far discussed, stronger divergences arise regarding different 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 Spec-C 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.<sup>7</sup> This section 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. First, one may ask to what extent SMG *pos* (as well as *jati* and *ti*) used in CG would indeed reflect CG — or in other words: Can Greek words be used at all in the Cypriot dialect? Put this way, the answer must be a resounding “Yes”: After all, not every word of 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” — 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

<sup>7</sup> The relevant comparison would, of course, not be with a strict *wh*-in-situ languages, but with one that allows optional *wh*-in situ, such as French (argued to be clause-bound and restricted to root clauses starting with Chang 1997 and Bošković 1997). Much has been debated over the correct properties of French *wh*-in situ, and the upshot seems to be that there are at least two varieties (Mathieu 2004), one that allows and one that disallows embedded *wh*-in situ (see e.g. Starke 2001, Cheng & Rooryck 2002 and Adli 2006).

from the limited data we have gathered, 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, 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 dialects, diglossia, and other sociolinguistic influences a “high” variety may have on a “low” one and follow standard generative assumptions that the language of a speaker is the result of an internalized grammar of that speaker — yes, “dialects” have their own grammar, on a par with “languages” (cf. Kayne 2000) — and if a large group of CG speakers employs *pos*, it reflects the clear availability of *pos* in that group’s lexicon rather than code-switching or any other “explanation” one might want to bring up. Variations of our answer to the 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 (arguably, predominantly discourse-driven) factors are that allow in-situ information questions, that is, the “non-reprising” use of in-situ questions, first observed by Bolinger (1978), more recently discussed by Ginzburg & Sag (2000: chap. 7). Vlachos (2008, 2010) does this at length in a modern, minimalist framework taking into account formal semantic and pragmatic notions. Rather, the question is meant to tie in “apparently in-situ expressions” with an analysis that assumes lower projections 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 *vP* or, to use current terminology, at the outer edge of the “*vP*-phase” (in Phase Theory, starting with Chomsky 2000). Sinopoulou (2008) applies this idea to Greek multiple *wh*-questions, but explicitly not to single *wh*-in situ (see also Sinopoulou 2009 and Vlachos 2008, 2010).

Again, we side with Vlachos (2010), who provides an interesting account in the context of the larger issues of *wh*-in situ, non-reprising information questions (see also the brief discussion around (16)) which might, in the end, be compatible with either view, depending on one’s take on displacement in natural language, 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 *vP*, which he calls “ $\Theta$ -Domain”), while discourse-related material and operators must be licensed in the highest part (“split Comp” or an articulated CP, the “ $\Omega$ -Domain”), couching the agreement-layer in between (“split Infl” or an articulated TP, the “ $\Phi$ -Domain”). In other words, we assume a three-way split of clausal structure into CP – TP – *vP*, 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.<sup>8</sup> The long and short of the second remark, then, is that we assume the in-situ *wh*-phrase not to have moved at all, even if it may be only for convenience at this point.<sup>9</sup>

<sup>8</sup> For a preliminary discussion on how to frame some of Grohmann’s (2003) core insights within Phase Theory, see Grohmann (in press).

<sup>9</sup> A potential consequence might be that an unselectively binding operator from a CP-related position should be clearly preferred over a local *vP*-operator (cf. the very basic (16) above); we will not pursue this issue any further.



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; see also Bromberger 1987 on English *why*, Collins 1991 on English *how come*, Ko 2005 and Ochi 2004 for valuable cross-linguistic discussion, and Tsai 2008 for more recent discussion). More relevant is the observation that the two *wh*-expressions for reason (but see 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 Spec-C (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 (17):

- (17) a. [<sub>CP</sub> *indalos* (*embu*) [ ... ]]  
 b. [<sub>CP</sub> *pos* (*embu*) [ ... *t<sub>pos</sub>* ... ]]

The high-inserted *indalos* obligatorily takes scope over the entire clause, while *pos* may at least in theory take the same “high scope” — but in addition also “low scope” if interpreted in its base position. The following data illustrate what we have in mind.

Take a simple English sentence like (18):

- (18) 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):

- (19) 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 (19a) or (19b). The same holds for Greek. In particular, as Vlachos (2008) first discussed, when the *wh*-expression is in Spec-C, both readings are available, as in (20).

- (20) **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.’  
 b. Nevriasmenos.  
 angry-NOM  
 ‘With anger.’

In contrast, in-situ *pos* only allows the instrumental interpretation:

- (21) O Nikos anikse tin porta **pos**? [SMG]  
 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.’

We will return in section 5, 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 (24) below. 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, (21) is perfectly acceptable with a manner interpretation in CG, as (22) shows.

- (22) 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 (23), 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*).

- (23) **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 ston adayonisti tis eterias.  
 announced that the Maria it revealed to-the competitor of-the company  
 ‘He announced that Mary revealed it to the competitor of the company.’

The two interpretations are arguably derived from a simplified structure, such as the one depicted in (24).<sup>10</sup> That is, movement of the *wh*-word to Spec-C either from the

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<sup>10</sup> 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. We also assume that the post-verbal subject preceding the predicate’s internal arguments stays in situ (Spec-v), whereas the pre-verbal subject position may either be Spec-T or some higher position, such as a topic phrase. The exact details, an issue of perennial debate in Greek syntax, do not play a role here; for discussion, see, among many others, Philippaki-Warbuton (1985), Alexiadou & Anagnostopoulou (1998), and Roussou & Tsimpli (2006).

This said, as pointed out to us by Spyros Armostis (p.c.), there is a mismatch which we unfortunately failed to control for in the quantitative data discussed in section 4: Note that the subject in the matrix clause is post-verbal, while in the embedded clause it shows up in pre-verbal position. To the extent that this might be relevant, we have not been able to integrate it into 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.

- (24) Se pjon anakinose o Janis [<sub>VP</sub>  $t_{\text{anakinose}} \_A$   
[oti i Maria apokalipse [<sub>VP</sub> to mistiko  $t_{\text{apokalipse}} \_B$  ]]]?  
'To whom did John announce that Mary revealed the secret?'

The same should apply in CG embedded *wh*-questions — but as signaled in (25), the embedded reading is marginal, if possible at all (see section 4 for quantitative results and section 5 for discussion, including the reason why we translate *esinaferen* as 'said').

- (25) **Se pcon (embu)** esinaferen o Yiannis oti i Maria ipen tin alithkian? [CG]  
to whom EMBU talked-about the John that the Mary said the truth  
'To whom did John say that Mary said the truth?'
- a. Ipen to ston Giogo.  
said it to-the George  
'He said it to George.'
  - b. # Ipen oti i Maria ipen stin Anna tin aliθkian.  
said that the Maria said to-the Anna the truth  
'He said that Mary said the truth to Anna.'

Restrictions similar to (21) above account for embedded in-situ *wh*-phrases in SMG. Assuming in-situ *wh*-phrases to be clause-bound in SMG (Vlachos 2008), they should not be able to be interpreted as an argument of the matrix verb. And indeed, in (26), 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).

- (26) O Janis anakinose oti i Maria apokalipse to mistiko **se pjon**? [SMG]  
the John announced that the Mary revealed the secret to whom  
'John announced that Mary revealed the secret to whom?'
- 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 ston adayonisti tis eterias.  
announced that the Mary it revealed to-the competitor of-the company  
'He announced that Mary revealed it to the competitor of the company.'

Not so in CG, however. With a final *wh*-phrase, which we may take to be in situ within the embedded clause for now (but see section 5 for discussion), interpretation of the *wh*-phrase as the argument of either the matrix or the embedded clause is allowed, as in (27); again, see section 4 for speakers' judgments results from the questionnaire.

- (27) 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 Giogo.  
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.'

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discussion of this paper and leave it as an intriguing research question for the future.

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.

We return to this in section 5, where we offer, if not solutions, at least suggestions how to understand the facts as discussed here, and a little bit beyond). Before going there, however, we would like to first support the data reported in this section and the previous with the results obtained from a grammaticality-judgment questionnaire.

#### 4. The Questionnaire

Validity of the initial observations and intuitions of native speakers as described in sections 2 and 3 was attained through the distribution of a grammaticality-judgment questionnaire.<sup>11</sup> This questionnaire was used to explore the possible differences in interpretation which could arise from the different syntactic structures in CG; the results were later compared to SMG (see sections 3 and 5).<sup>12</sup> The questionnaire was set up in order to investigate uses and interpretations of ‘how’ in CG, in particular whether CG *pos* has different semantic and/or syntactic properties from SMG *pos*; it also aimed to identify the properties of CG-specific *indalos*. Differences arising from *wh*-phrases in situ and ex situ in embedded questions were tested as well. It is hypothesized that in-situ *wh*-phrases in embedded questions will be interpreted as the argument of both the matrix and the embedded clause in CG (see e.g. example (27) above), whereas ex-situ *wh*-phrases will be (at least preferably) interpreted as matrix arguments only (see e.g. example (25) above). Any effects of *embu* ‘is(-it)-that’ and referentiality were also tested. Specific items and aspects of design are provided in the appendices.

##### 4.1. Participants

The questionnaire was conducted with thirteen Greek Cypriot native speakers of CG who are permanent residents of Cyprus; only one participant had lived in the UK for 3 years. Since we wanted to test the validity of the initial set of native judgements, we decided to keep the age range constant and thus chose participants aged 20–32 years (M = 25.5, SD = 2.9), balanced for gender (6 female and 7 male). All participants come from an urban background (Nicosia and Larnaca) and none had any linguistic background or other relevant training; the initial informants (see fn. 11) did not participate in the questionnaire.

##### 4.2. Material and Design

The structures and available interpretations of four types of *wh*-questions were tested in the questionnaire, namely those involving the *wh*-arguments *pcos* ‘who-NOM’ and *pcon* ‘who-ACC’ — referred to subsequently and in Appendix B as ‘Who-S(ubject)’ and ‘Who-O(bject)’ — as well as the two *wh*-adjuncts for ‘how’, *pos* (taken over from SMG) and *indalos* (unique to CG). Depending on the syntactic restrictions applying in CG (see section 2), each type of question was distributed evenly across referentiality (R) and non-referentiality (NR), and in-situ, ex-situ, and sentence-medial position of the *wh*-expression were employed. All questions were also distributed along the use or absence of *embu* ‘is(-it)-that’ (which, as mentioned above, will not be reported here any further).

<sup>11</sup> Native speaker judgements originally came from the second-named author as well as the reading group participants acknowledged in the title footnote.

<sup>12</sup> Please note that *inda*-questions were not included in the questionnaire, since their status in CG has not been fully established yet (for some discussion, see Grohmann *et al.* 2006, Pavlou, this volume, and Papadopoulou, in progress).

The questionnaire involved two sets of verbs, all checked for frequency. The first set included verbs which could allow for an instrumental reading in *wh*-questions, namely *annio* ‘open’, *katharizo* ‘clean/wipe out’, *kofko* ‘cut’ (as in (20)–(21) above), and the second consisted of three verbs of saying *leo* ‘say’, *sinaferno* ‘talk about’, *murmuro* ‘ramble’ (as in (25)–(27) above). All agents used, male (marked for masculine gender) and female (marked for feminine gender), as well as subjects and objects, are frequently used nouns in CG which were furthermore distributed evenly, along with the verbs, across all conditions (see Appendix A for a full list). This design resulted in 57 sentences which were arranged randomly, so as to avoid any strategies developed by participants (see Appendix B for details).

Specific items in the questionnaire involved question patterns and structures such as those in (28)–(32), that is, *ex-situ* and *in-situ wh*-questions with lexical items that are used in CG without sounding “too Greek” (see also fn. 15 below), including *pos*.

- (28) **Indalos (embu)** aniksen tin kashian o Nikos?  
 how EMBU opened the box the Nick  
 ‘How did Nick open the box?’
- (29) **Pos (embu)** aniksen tin kashian o Nikos?  
 how EMBU opened the box the Nick  
 ‘How did Nick open the box?’
- (30) O Nikos aniksen tin kashian **pos**?  
 the Nick opened the box how  
 ‘Nick opened the box how?’
- (31) **Pcos mitsis (embu)** esinaferen i Maria oti esisen to pulukuin?  
 which young-boy EMBU talked-about the Mary that tore the teddy  
 ‘Which young boy did Mary say who tore the teddy?’
- (32) I Maria esinaferen oti esisen to pulukui **pcos mitsis**?  
 the Mary talked-about that tore the teddy which young-boy  
 ‘Mary said which young boy who tore the teddy?’

Items like (33) were also included in the questionnaire, provided in order to clarify the ambiguity observed in (23)–(27) above.

- (33) I Maria esinaferen **pcos mitsis** oti esisen to pulukui?  
 the Mary talked-about which young-boy that tore the teddy  
 ‘Mary said which young boy who tore the teddy?’

### 4.3. Procedure

Participants were initially familiarized with obligatory phonological adaptations; among others, double *pp* was used to represent CG /p<sup>h</sup>/, a phone that is not part of the SMG inventory. This was considered to be essential, since it helped facilitate for an entirely CG-linguistic environment, avoiding any interaction between SMG and CG.

We leave aside the issue of “artificiality” this choice may be interpreted to cause (see also fn. 13 right below). Note that CG is not orthographically codified, despite recent attempts and a growing body of literature expressed in CG (beyond newspaper articles, there is modern poetry and drama, for example). The SMG writing system is used to write CG, therefore a gap in the representation of double clusters and double consonants is present, as just mentioned.

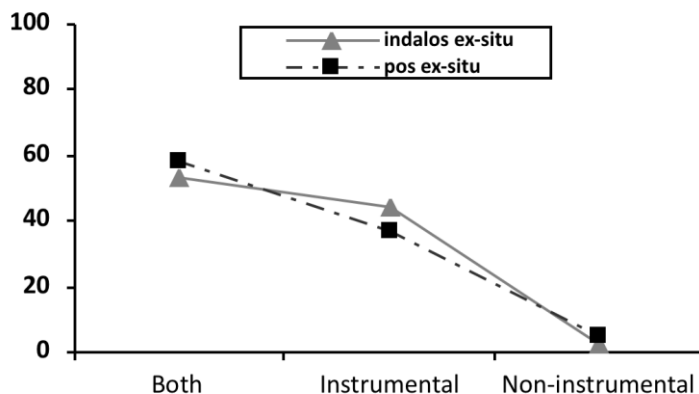
In the absence of a “proper” writing system for CG, the choices we had were using

either Greek or English — arguably neither ideal.<sup>13</sup> In this sense, the test sentences were written in more or less standard Greek orthography, there were no phonetic clues, and context was not provided (yet a hypothetical interpretation was being elicited from the participants). A three-fold choice was given to the participants with one representing an instrumental reading only, one a manner reading only, and the third indicating both potential interpretations.

#### 4.4. Results

All answers given were coded and analyzed in Microsoft Excel due to a small number of participants, which disallowed for any statistical tests to be run. Initial analysis of the results has shown that *embu* ‘is(-it)-that’, (non-)referentiality (R/NR), and the verbs/nouns used did not have any effect on the results. The *wh*-items *pos* and *indalos* ‘how’ have dissimilar properties, deriving from the fact that they basically are two different lexical items that nevertheless allow for similar readings in the patterns tested. In-situ and ex-situ *pos* seem to employ different strategies in CG, as compared to SMG *pos*. In addition, in-situ and ex-situ Who-O and Who-S questions allow for different readings. Each case is analyzed in detail in the remainder of this section; a more analytical discussion will be presented in section 5.

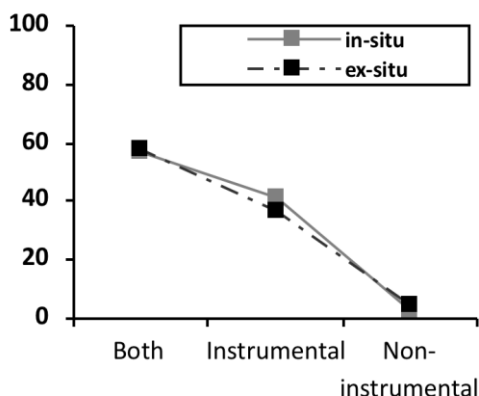
To start with, CG *indalos* does not have the same properties as SMG *pos*, since it can never be left in situ (see section 2 above). As shown in Graph 1, the same pattern is followed with respect to the interpretations allowed with the two *wh*-words; above 50% of the participants allow for instrumental and manner interpretations, and between 37% and 44% allow only for the instrumental reading.



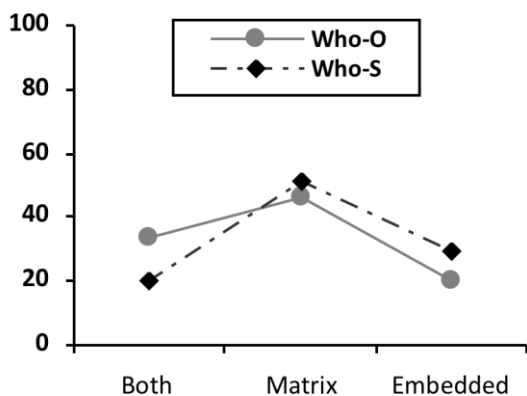
Graph 1: CG *indalos* vs *pos* ‘how’

To the extent that *pos* can be used by CG speakers, it can not only be left in situ (as in SMG), but it can also modify the subject as a manner adverb, as opposed to the instrumental-only interpretation in SMG (see section 3). As shown in Graph 2, CG *pos* allows for both interpretations: 56.6% when in-situ and 58% when ex-situ. Accordingly, it is evident that CG *pos* is not affected by its position in the sentence, in contrast to SMG *pos* (again, see sections 2 and 3, but see section 5 for a serious complication of the facts in both languages due to additional evidence reported in Vlachos 2010).

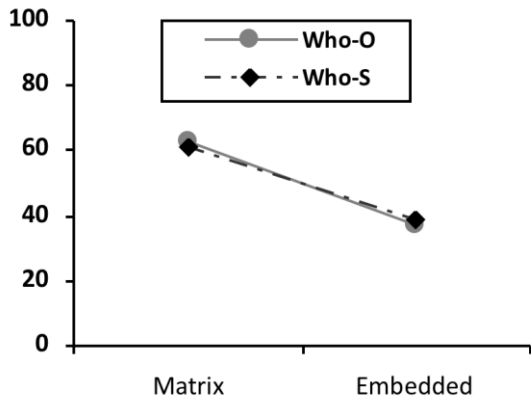
<sup>13</sup> One might suggest that such research (that is, on linguistic varieties without their own writing systems) better involve auditory presentation of the test sentences, through pre-recorded testing sentences, for example. However, this will not work for the elicitation of quite complex structures and subtle interpretive differences — and especially *wh*-questions — either for either of (at least) two reasons: (i) if recorded with neutral intonation, as would have to be done in order to eschew interpretive effects, the sentences would sound very unnatural, and (ii) if spoken naturally, they would of course give away the intended interpretation(s) immediately.

Graph 2: *CG pos 'how'*

In the presence of a potential ambiguity between a matrix and an embedded reading, interpretation of an ex-situ *wh*-element with the embedded clause is strongly dispreferred, if possible at all, for both Who-O (20%) and Who-S (29%). It becomes clear from Graph 3 that Who-S questions employ a clear dispreference towards the embedded reading, with the choice for both interpretations being lower (20%) than the embedded only (29%). The conclusion we can draw from these results is then: *In complex structures, Who-S correlates most strongly with a matrix-only interpretation, whether ex-situ or in-situ*. In contrast to this, Who-O questions show stronger preference for both interpretations (34%) rather than the embedded only (20%). Still, this allows us to conclude (perhaps a bit weaker): *Who-O correlates most strongly with a matrix-only interpretation*.

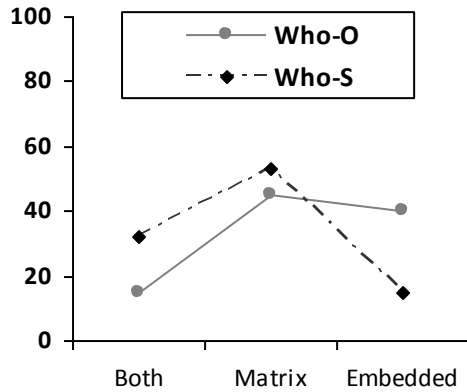
Graph 3: *Who-O & Who-S ex-situ*

If we accumulate the percentage of the third choice, that is, both to the embedded and the matrix option, as depicted in Graph 4, the same pattern emerges for both types of questions. We can capture this as a firm result as follows: *In the absence of a disambiguating context, wh-ex situ questions in CG complex structures preferably attach a matrix interpretation of the wh-item; an embedded reading is strongly dispreferred*.



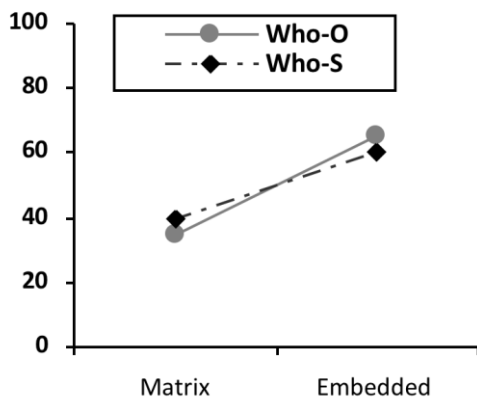
Graph 4: *Who-O/Who-S ex-situ*

In contrast to the above, when the *wh*-word is in situ, the matrix reading is (marginally) possible in CG, unlike SMG where it is clearly ruled out. As represented in Graph 5, there is a clear indifference for matrix readings with *Who-O* questions (15%), whereas for *Who-S*, the embedded interpretation seems to be almost rejected (20%).



Graph 5: *Who-O & Who-S in-situ*

If we break down the “both” options, the same pattern is revealed with a *Who-O* preference for the matrix reading at 35% and a *Who-S* preference at 39.5%, while embedded, the preferences rise to 65% & 60.5%, respectively. This is shown in Graph 6.



Graph 6: *Who-O/Who-S in-situ*

In sum, the quantitative data gathered from the grammaticality-judgment questionnaires administered to 13 CG-native participants confirm the native-speaker intuitions reported in the presentation of the data in sections 2 and 3, by and large. In CG,



the *wh*-items *pos* and *indalos* ‘how’ have dissimilar properties but allow for similar readings, with CG *pos* modifying the subject as a manner adverb either when ex-situ or when left in-situ. In-situ *wh*-expressions in CG (marginally) allow for matrix readings, (i) unlike SMG, and (ii) also in contrast to situations of potential ambiguity between a matrix and an embedded reading, where interpretation of an ex-situ *wh*-element with the embedded clause is strongly dispreferred, if possible at all.

## 5. Discussion

One result that, we hope, has crystallized throughout the paper so far is that, as discussed in section 2, not every *wh*-item can stay in situ in CG, possibly in contrast to SMG but certainly 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 Spec-C). 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 and inspired by Bromberger (1987), might bear some relevance.

As interesting as it might be, we will not pursue this issue any further other than simply mentioning the fact that certain CG *wh*-expressions can either not stay in situ or 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 (this volume) 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 might hold that the ability of a *wh*-expression to appear in situ depends not exclusively on syntactico-semantic licensing options or 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 arguably 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. Let us get back to these cases in some more detail by repeating the CG example (27) and providing an additional specimen in (34).

- (27) 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.’
- (34) O Yiannis ipen oti i Maria emourmouran **se pcon?** [CG]  
 the John said that the Mary rambled to whom  
 ‘John said that Mary rambled on to whom?’
- a. Ipen to ston Giorgo.  
 said it to-the George  
 ‘He said that to George.’
- b. Ipen oti i Maria emourmouran stin Anna.  
 said that the Mary rambled to-the Anna  
 ‘He said that Mary rambled on to Anna.’

Recall from the discussion above that SMG does not allow the response in, hence the interpretation construed with, (27a) as well as, by extension, (34a). That is, SMG (*se*) *pjon* ‘(to) whom’ is 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. (35) is a first rough sketch of a possible structural representation (see fn. 10 around the discussion of (24) above for some simplified issues; for us right here, the exact surface positions of subject and verb do not matter):

- (35) [CP **OP** C [ o Yiannis ipen ... [vP **OP** (o Yiannis) v [vP <sub>A</sub> tv [CP **OP** oti-C [ i Maria esinaferen ... [vP **OP** (i Maria) v [vP tin aliθkian tv **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 (16) above that this “somehow” can be done through unselective binding by an operator **OP** in Spec-C (see Cresti 1998 for discussion, for example) or locally within its immediate domain of interpretation, suggested to be *vP* (see Vlachos 2010 for SMG); the latter we signal through an **OP** in the “edge” of *vP*.<sup>14</sup>

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 *vP* or the **OP** in the embedded Spec-C 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. We thus first suggest that something like either (36a) or (36b) could be used for SMG, but not for CG (for simplicity, we use the CG words from (35); replace accordingly with SMG from (26) above, for example):

- (36) a. [ o Yiannis ipen ... [CP **OP** oti-C [ i Maria esinaferen ... [vP (i Maria) v [vP tin aliθkian tv **se pcon** ]]]]]  
 b. [ o Yiannis ipen ... [CP oti-C [ i Maria esinaferen ... [vP **OP** (i Maria) v [vP tin aliθkian tv **se pcon** ]]]]]]

We now return to the matrix clause issue, also relating to (35), and discuss two possible sets of scenarios how matrix interpretation in CG could be integrated into the general picture. The first would require an unselective-binding account for *wh*-in situ and adopt the non-trivial assumption that **OP** in matrix Spec-C may bind the in-situ *wh*-phrase in the embedded clause. Phase-theoretic considerations aside, this assumption is non-trivial in that one would have to claim — and ideally, support with additional data — that CG *wh*-in situ differs from SMG in not being restricted to a single clause boundary. We currently have no such additional data, and neither do we have any reason to believe that CG would indeed differ from SMG in this respect. In this case, the **OP** in matrix Spec-C in (35) would be the licensing operator. So instead of (36a) for SMG, we would be dealing with (37a) for CG; for the *vP*-licensing account, it would be (37b).

- (37) a. [CP **OP** C [ o Yiannis ipen ... [ i Maria esinaferen ... [vP (i Maria) v [vP tin aliθkian tv **se pcon** ]]]]]  
 b. [CP [ o Yiannis ipen ... [vP **OP** v [ i Maria esinaferen ...

<sup>14</sup> In case it has not transpired yet, our goal here is not to come up with the best possible analysis for, or even a novel account of, licensing *wh*-in situ — be it for Greek or more generally. Rather, we would like to try to make sense of the structures and interpretations our study has uncovered. We thereby might cut some corners and possibly avoid further discussions in a nonchalant manner by somewhat simplifying or glancing over details, but we hope that the tools and assumptions we employ here are transparent enough, yet interesting and relevant.

[<sub>vP</sub> (i Maria) v [<sub>vP</sub> tin aliθkian t<sub>v</sub> **se pcon** ]]]]

The unselective-binding account from matrix Spec-C in (37a) can only be made to work if CG *wh*-in situ is *not* clause-bound. The same can be said for the local-licensing account in (37b), except that in this case, it would not even be “local” anymore. Vlachos’ (2010) proposal that *wh*-in situ expressions are licensed locally, within their immediate vP, is exactly that: presupposing that their interpretation is clause-bound and evoking the local, i.e. immediately dominating, vP. Neither is given in (37), so we discard this first set of scenarios flat out. We thus need a more satisfactory account.

As an alternative, we capitalize on the additional position in (35) marked, as in (24) above, *\_A\_*. The rough story of the second scenario is that the two interpretations arise from an ambiguous lexical choice: *ipe* ‘said’ used monotonically vs. ditransitively.<sup>15</sup> That is, looks are deceiving and *se pcon* in (27) is not in situ in the embedded clause after all but rather in the matrix clause, roughly in the position of *\_A\_*.

Implementing this idea, we could revise our structure(s) for CG (27) and account for the availability of a matrix interpretation of the apparently embedded in-situ *wh*-item through structural ambiguity:

- (38) a. [ **OP** o Yiannis ipen ... [<sub>vP</sub> **OP** (o Yiannis) v [<sub>vP</sub> **se pcon** t<sub>v</sub>  
[<sub>CP</sub> oti i Maria esinaferen tin aliθkian ]]]]  
b. [ o Yiannis ipen ... [<sub>CP</sub> **OP** oti-C [ i Maria esinaferen ...  
[<sub>vP</sub> **OP** (i Maria) v [<sub>vP</sub> tin aliθkian t<sub>v</sub> **se pcon** ]]]]]]

Here *se pcon* is either generated as the indirect object of the matrix verb *ipen* ‘said’ (for example, in Spec-V, as in (38a)) or originates in the embedded clause, as the indirect object of *esinaferen* ‘talked’ (as in (38b)). The “good news” is that these structures again allow both the unselective-binding or the local-licensing accounts of *wh*-in situ, as signaled by the positions for OP, under which each instance of (*se*) *pcon* would be licensed (immediately) within its respective clause.

Note two things first, however: (i) the (external) merge position of *se pcon* would be different in the two cases, as illustrated in (38), even though they arguably play identical roles as indirect objects; (ii) if *se pcon* were merged as an argument of the matrix verb to yield the matrix reading, it would not come out as such in an in-situ linearized string — it is not in the “final” position in which it is pronounced. Perhaps neither objection is terribly worrying, in which case we leave the choice to the reader (see also fn. 14 above). After all, the finer structure of vP might need revising anyway, and the jury is still out on how linearization really works and when it applies in the derivation.

Whichever way to go, it becomes clear that under anyone’s take on scope and interpretation, a matrix reading of (*se*) *pcon* in cases like (27) and others requires that at some point in the derivation, (*se*) *pcon* passes through the matrix clause. If Vlachos’ (2008, 2010) discussion of clause-boundedness of SMG *wh*-in situ extends to CG, this can only mean that it must have started out there. That is to say, *se pcon* must originate in the matrix clause, roughly as in (38a), otherwise it cannot be construed with matrix

<sup>15</sup> 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’ (see also Appendix A for a list of verbs used). 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 section 4.3 and fn. 13 above), 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).

interpretation. Leaving aside for now the exact licensing mechanism(s) of *wh*-in situ more generally (i.e. whether it is through Spec-C, Spec-v, or some other manner), this means that *se pcon* either starts out as an argument, as in (38a), and something else needs to be said on linearizing it properly — or it is right-adjoined from the start (to matrix VP/vP), again leading to non-trivial consequences. We will explore this option for *pos* presently.

First, however, we briefly address those complex interrogative structures with *wh*-ex situ, for which we observed a clear difference between CG and SMG: The embedded interpretation of the *wh*-item is strongly dispreferred. This was the case for (25), repeated here:

- (25) **Se pcon (*embu*)** esinaferen o Yiannis oti i Maria ipen tin alithkian? [CG]  
 to whom EMBU talked-about the John that the Mary said the truth  
 ‘To whom did John say that Mary said the truth?’
- a. Ipen to ston Giorgo.  
 said it to-the George  
 ‘He said it to George.’
- b. # Ipen oti i Maria ipen stin Anna tin aliθkian.  
 said that the Maria said to-the Anna the truth  
 ‘He said that Mary said the truth to Anna.’

In the absence of additional evidence, we assume (25) to be the ex-situ version of (27), minus the optional *embu* (discussed in section 2) and with the verbs reversed (but see the brief comment in fn. 13 that the matrix vs. embedded appearance of the chosen verb had no significant effect on interpretation).

If so, a version of (38) should underlie the derivation of (25) as well, that is, in theory *se pcon* should be generated either in the matrix clause (39a) or in the embedded clause (39b):<sup>16</sup>

- (39) a. [ **se pcon** embu esinaferen ... [<sub>VP</sub> o Yiannis v [<sub>VP</sub> (**se pcon**) t<sub>v</sub>]  
 [<sub>CP</sub> oti i Maria ipen tin aliθkian ]]]]
- b. [ **se pcon** embu esinaferen o Yiannis [<sub>CP</sub> (**se pcon**) oti-C  
 [ i Maria ipen [<sub>VP</sub> tin aliθkian t<sub>v</sub> (**se pcon**) ]]]]]]

Again, these are possibly the underlying derivations for SMG (see (23) in section 3, discussed in Vlachos 2008, 2010) for which, again, the corresponding lexical items from SMG should be inserted. But for CG, (39b), at least, seems to be inappropriate, since it would predict that the moved *wh*-expression (*se*) *pcon* should be able to reconstruct and yield the embedded reading — which is not available.

To be honest, we do *not* have an interesting explanation for this state of affairs, if any at all. One factor we assumed would not seem to play a role is the choice of verb. As mentioned before (e.g., fn. 15), the three verbs of saying we used, namely *leo* ‘say’, *sinaferno* ‘talk about’, and *murmuro* ‘ramble’ (see section 4.2), did not exhibit any effects on the participants’ responses. Note, first of all, that the CG verb *sinaferno* does not exist in SMG (Babinotis 2008). It is a verb derived from the Ancient Greek *sinanafero*, used when talking about someone who is not present (Giagoulis 2009:455). We gather from our informants that it is nowadays used synonymously with *leo*, which is why we consistently translated it as ‘say’ in the data presented here. The test sentences contained one of these three verbs in the matrix and the embedded clause, but never the same verb twice in a given sentence. We thus deemed it unlikely that the verb form *esinaferen* ‘talked about’ in

<sup>16</sup> Here we signal the original, externally merged copy of *se pcon*, as well as the purported intermediate copy in (39b), with boldfaced parentheses and gloss over structural details irrelevant at this point (labels of projections, position of subjects, and other aspects of the derivational history; see also fn. 10 above).

examples like (25) had a particular effect, since in other sentences it appeared in the embedded clause, yet the embedded interpretation was not construed. However, since (40) is such an example, our initial assumption might not be so innocent and straightforward after all. We admit that in this instance, *esinaferen* is best translated as ‘talked about’. In fact, since its argument structure seems saturated by the clitic *ton*, it is impossible to construe an embedded interpretation of the *wh*-moved PP *se pcon*.

- (40) **Se pcon (*embu*)** ipen i Maria o Nikos esinaferen ton? [CG]  
 to whom EMBU said the Maria that the Nick talked-about him-CL  
 ‘To whom did Mary say that Nick talked about him?’

Unless we are overlooking some crucial aspect of CG grammar, the facts seem to turn out the way described here. Syntactically, (25) and similar data might suggest that CG does not allow long (*wh*-) movement, which would be wrong; hence, we will not pursue this option. Neither will we pursue an oft-heard assessment of speakers, something to the effect of: “Cypriots don’t like to use complicated sentences.” We thus cannot offer a decent explanation for this aspect.

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. Alas, things are never that simple, so let’s roll this up from the beginning. This final part of our discussion leads us then to the purported difference between SMG (21) and CG (22), the latter of which repeated here for convenience, where, in contrast to CG, the *b*-response was reported to be infelicitous for SMG in Vlachos (2008):

- (22) 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.’

As mentioned in the title footnote, 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 (21) in SMG. Vlachos (2008) reports that the predicate adjective *nevriasmenos* ‘angry-NOM’ would in this case be infelicitous, unlike CG, as shown in (22b). Three notes are in order, however, leading to another possibly extended discussion.

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. The “updated” (41) is taken from Vlachos (2010).

- (40) O Nikos anikse tin porta **pos**? [SMG]  
 the Nick opened the door how  
 ‘Nick opened the door how?’  
 a. Me to kliði.  
 with the key  
 ‘With the key.’  
 b. Nevriasmena.  
 angrily

‘Angrily.’

It is thus possible, even in SMG, that *pos*-in situ may have a subject-oriented manner interpretation, as in CG.

Second, Vlachos notes in this context: “Although for some Greek native speakers the subject-related reading of the *wh*-in-situ adverb does not immediately derive” (Vlachos 2001:fn.3). There is thus some additional variability which should be taken into account in further studies of this phenomenon.

Third, unlike the “original” discussion by Vlachos (2008), the pilot of our questionnaire contained the adverb *nevriasmēna* instead of the adjective *nevriasmēnos*. However, the reaction of native speakers was that the adverb sounded “too Greek” (SMG-like), and that they preferred *nevriasmēnos*.<sup>17</sup> Having opened one can of worms too many already, we will not venture into a monologue on the CG use of adjectives vs. adverbs, or some deeper grammatical variation in this large area between the two varieties, but we at least take the 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 we consulted afterwards. We also elicited five additional CG judgements on *pos*-ex and -in situ post-hoc, with the adjective, and all five speakers went for both interpretations in both contexts, thereby confirming that (20) and (22) do indeed hold for CG. Moreover, when asked how they interpreted *nevriasmēnos*, all five responded (again, in both contexts): “Nick opened the door with anger.”

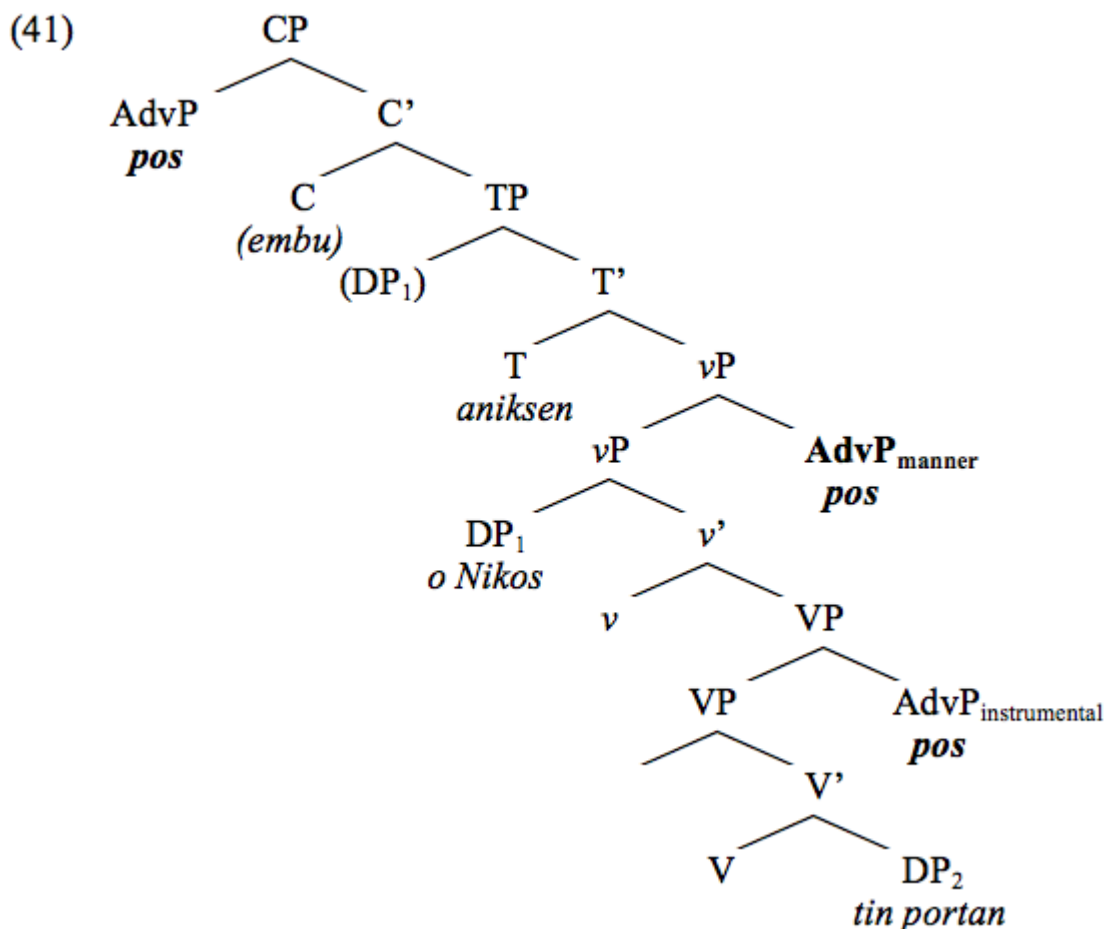
Thus, while, in light of Vlachos (2010), our results concerning *pos*-in situ may not appear as strong as they did compared to Vlachos (2008), the situation for CG, at least, seems clear: The in-situ and the ex-situ use of *pos* ‘how’ allows a subject-oriented manner reading as well as an instrumental interpretation. How significant this result is with respect to SMG is another matter.

On the analytical side, however, comparing the discrepancy between SMG (21) and CG (22), with the adjective *nevriasmēnos* ‘angry’ as intended “manner reading” and the PP *me to kliði* ‘with the key’ as “instrumental reading” for the *wh*-adverbial *pos* ‘how’, we would like to suggest the difference between CG and SMG to lie in one (or both) of two factors: (i) CG has the manner-adverbial right-adjoined to *vP*, scoping immediately over the thematic subject, while SMG only allows right-adjunction of *pos* to *VP* and (ii) only in CG can the manner adverbial stay in situ, while in SMG *pos* has to *wh*-move obligatorily. The structural option is depicted in (41):

(41)

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<sup>17</sup> This assessment came from all five speakers pre-tested. Of course, we refer to our fn. 15 above once more.



Perhaps the structure in (41) can be improved in the near future, but without further testing, neither option seems particularly appealing at the moment. Once again, we have to defer a final analysis to a better understanding of Greek (dialectal) syntax of which we are, admittedly, not specialists. But we would like to submit the conjecture that unless a working solution can be found, matters would be rather strange if the clause structure and derivational histories for these constructions were by and large the same for CG and SMG, as we tentatively assume here. This is not to say that the clause structure or syntactic derivation may not differ at all, quite the opposite. Since at least Terzi (1999a, 1999b), the idea has been pursued that the differences in clitic placement (SMG proclisis vs. CG enclisis in many identical syntactic environments) might lie in a different landing site of the verb, which in CG would move to a higher position than in SMG. For extensive, and more recent, discussion on clitic placement, see especially Mavrogiorgos (2009). So some structural differences might be present (CG might employ a different functional head), going hand in hand with derivational differences (that this head attracts the verb only in CG), but with respect to *wh*-in situ structures or finer and more subtle interpretation differences, we just lack the relevant data at this point to warrant such a hypothesis.

This leads us to a final postscript on earlier analytical forays we ventured into. We simply do not have enough facts to say with some certainty that the structural or derivational properties of the two varieties differ in significant ways for the cases at hand — be it *pos*-in situ and differing interpretation construals, be it *pcon*-ex situ and the absence of an embedded reading in CG, or be it *pcon*-in situ and the availability of either construal in CG. As such, we tried to restrict ourselves in this paper to discuss some initial observations, then also corroborated quantitatively, about the “facts” as we presented them here, added by several digressions on various analytical paths one could tread on towards an understanding of why CG and SMG seem to diverge the ways they

seem to. What we will not do is pursue yet another route of “explanation” — one that might build on the above-mentioned oft-heard assessment of Greek Cypriots that their language would not allow “complicated” sentences (see also fn. 2 in above). A cynic might take this to the creole route of CG phylogeny, but we will resist such temptation. A more constructive reading of this assessment (or whatever there is to it) might be a processing account, which we will likewise ignore for now. Absence of an embedded interpretation of *pcon*-in and *ex situ* in complex structures could be construed as a “preference” to process top-down and stop interpreting once a first possible reading has been found — in either case the matrix position, whether “real” or not. Needless to say, while this might help account for why shorter movement should generally be preferred, it would make for a very weak case for a(ny) derivational approach.

Note finally that stating anything valid about the grammar of CG is notoriously difficult: CG is considered by many speakers not to be a *bona fide* variety in the first place, carrying “low prestige”; in addition, and related to this point, Greek Cypriots tend to perceive CG as “inferior” in some way and consequently look down upon their own language; Papapavlou (1998), for example, investigated speakers’ attitudes by marking 12 traits such as kindness, intelligence, sincerity, dependability, and sense of humor carried by CG versus SMG.<sup>18</sup> As a result, it is tremendously difficult to extract stable judgments shared by a majority of speakers.

At the same time, as we have already mentioned (and again, related to both previous points), there is no codified, official grammar of CG — although, and this makes us hopeful for future research, several such enterprises are currently on their way, such as the Kykkos Monastery’s *Thesaurus Linguae Cypriae Graecae* project (<http://www.thisavros.com>). In addition, the body of formal research on CG morphosyntax is constantly growing (starting with work on clitics by Agouraki 1997 and Terzi 1999a, 1999b, but expanding more and more, such as Grohmann *et al.* 2006, among several others). Also, it can only be hoped that research on CG acquisition (for the longest time restricted, more or less to, Petinou & Terzi 2002, but currently expanded by Neokleous, in progress, also on the acquisition of clitics and Papadopoulou, in progress, on *wh*-related issues), in particular the systematic investigations into child language development in typically developing and language-impaired children carried out by the Cyprus Acquisition Team (<http://www.research.biolinguistics.eu/CAT>) will eventually bear fruit as well. The latter is going to be done within the newly funded *Gen-CHILD* research project (see Grohmann 2010, upcoming for overviews).

Note also that the influence of SMG, and the role it plays in daily life and society in (Greek-speaking) Cyprus, surely needs to be taken into account, which we have not. This is, of course, one of the perpetual problems with “diglossia” (see Papapavlou & Pavlou 1998, but also Karyolemou 2006) — and, for most people, gives rise to the question: Where, when, and how does a variety become a grammar? (As already mentioned in section 3, this is not so for most, if not all, generative linguists; see, among many others, Kayne (2000) for extensive discussion and argumentation from a “micro-parametric” perspective applied to the myriad varieties of the Romance language family.) In this context, one should also be more careful with one’s research of “the” CG variety/idiolect/dialect/language — factors such as “bleaching” from SMG and others, as well as (possibly, but not necessarily, geographical) variation within CG itself, may further

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<sup>18</sup> As a way of “revising” the perhaps bleak tone of fn. 2 above, we would like to point out that, while there certainly are Greek Cypriots that reject CG as a proper language or at least look down upon it, there is also an increasing number that feels the exact opposite. See, among others, Moschonas (2002), who also cites the above-mentioned Papapavlou (1998) for positive attitudes as well (see also Papapavlou 2001), Gardner-Chloros *et al.* (2006), and Karyolemou (2006). For a recent study, see especially Leivada *et al.* (2009), and references cited there, regarding attitudes towards CG and linguistic change in Cyprus; the authors report on their survey in which 51 out of 80 participants expressed a desire for the recognition of CG as the official language of the Republic of Cyprus.



blur the issue. Solid sociolinguistic research, such as Pappas (in press) on variability in CG clitic placement, is noteworthy in this respect.

And lastly, even if these points can be dealt with, the design of our data gathering may be argued to leave room for improvement: the number of speakers tested (13 respondents is not very representative), the time it takes to fully fill out the questionnaire (57 sentences take a long time to process), or the presentation of the test sentences (Greek orthography for oral CG, absence of phonetic clues, lack of context with a request for interpretation, and so on), possibly among other factors as well.

Such concerns notwithstanding, we would like to close our report on a more positive note. This study has shown that there are serious grammatical differences between “low” CG and “high” SMG which can be investigated formally, even in the presence of obstacles.

In addition, a growing body of work is currently being devoted to language development, specifically to the first language acquisition of CG by typically developing children (as well as language-impaired children). Activities of the above-mentioned Cyprus Acquisition Team, a research group recently initiated by the first-named author and now officially funded (cf. Grohmann 2010, upcoming, to appear), have already started looking into the acquisition of *wh*-questions, and the research about to be completed by the second-named author deals with very similar issues (Papadopoulou, in progress). In the future, we will develop a modified testing tool to determine the onset of interpretations such as those discussed here, or even the availability of in-situ information questions, with young children.

**Appendix A: List of Verbs, Nouns, and Agents**

<b>Verbs (matrix)</b>	<i>annio</i> 'open' <i>katharizo</i> 'clean' <i>kofko</i> 'cut' <i>leo</i> 'say' <i>sinaferno</i> 'talk about' <i>murmuro</i> 'ramble'
<b>Verbs (embedded)</b>	<i>pao</i> 'go' <i>derno</i> 'hit' <i>shizo</i> 'tear'
<b>Nouns</b>	<i>vazanin</i> 'aubergine' <i>kashia</i> 'box' <i>aftokinito</i> 'car' <i>vurna</i> 'sink' <i>alithkia</i> 'truth' <i>peripatos</i> 'walk' <i>pulukuin</i> 'teddy'
<b>Agents</b>	<i>Yiannis</i> 'John' <i>Nikos</i> 'Nick' <i>Anna</i> 'Anna' <i>Maria</i> 'Mary'
<b>Agents (controls)</b>	<i>mitsis</i> 'young boy' <i>mastros</i> 'boss'

**Appendix B: Distribution of Experimental Conditions**

item no.	<i>wh</i> -word	R/NR	in-situ	first V (matrix)	second V (embedded)	<i>embu</i>	first N (matrix)	second N (embedded)
1	<i>who</i> -O	R	-	V4	V6	+	M1	F2
2	<i>who</i> -S	N R	-	V6	X3	-		
3	<i>inda</i> <i>los</i>	N/ A	-	V3	N/A	-	M2	
4	<i>who</i> -O	R	+	V6	V5	-	F2	M1
5	<i>who</i> -S	N R	-	V4	X1	+		
6	<i>who</i> -S	R	+	V5	X2	-	F1	
7	<i>who</i> -O	N R	-	V5	V6	-	M2	F1
8	<i>pos</i>	N/ A	-	V1	N/A	+	F2	
9	<i>who</i> -S	R	±	V4	X1	-		
0	<i>who</i> -O	N R	+	V4	V6	-	F1	M2
1	<i>who</i> -S	R	-	V6	X3	+	M2	
1	<i>pos</i>	N/ A	+	V3	N/A	-	F2	
1	<i>who</i> -S	R	-	V5	X2	-		
1	<i>who</i> -O	N R	-	V6	V5	+	F1	M2

1 5	<i>who</i> -S	R	+	V4	X1	-	M2	
1 6	<i>who</i> -O	R	-	V4	V6	-	F2	M1
1 7	<i>inda</i> <i>los</i>	N/ A	-	V1	N/A	+	M1	
1 8	<i>who</i> -S	N R	±	V4	X1	-	F1	
1 9	<i>who</i> -S	N R	-	V5	X2	-	M2	
2 0	<i>who</i> -o	R	-	V6	V4	+	F2	M1
2 1	<i>pos</i>	N/ A	-	V1	N/A	-	M1	
2 2	<i>who</i> -O	R	+	V5	V6	-	F1	M2
2 3	<i>who</i> -S	N R	-	V6	X3	+		
2 4	<i>inda</i> <i>los</i>	N/ A	-	V2	N/A	-	F2	
2 5	<i>who</i> -S	N R	+	V6	X3	-		
2 6	<i>pos</i>	N/ A	-	V3	N/A	-	F1	
2 7	<i>who</i> -O	N R	-	V6	V5	-	M2	F1
2 8	<i>who</i> -S	N R	±	V5	X2	-		
2 9	<i>who</i> -S	R	-	V4	X1	+	M1	
3 0	<i>pos</i>	N/ A	+	V2	N/A	-	F1	
3 1	<i>who</i> -S	R	-	V4	X1	-	M2	
3 2	<i>who</i> -O	N R	-	V5	V6	+	F2	M1
3 3	<i>pos</i>	N/ A	-	V2	N/A	-	M1	
3 4	<i>who</i> -O	N R	+	V5	V4	-	F1	M2
3 5	<i>inda</i> <i>los</i>	N/ A	-	V3	N/A	+	M2	
3 6	<i>who</i> -O	R	-	V5	V4	-	F2	M1
3 7	<i>who</i> -S	R	+	V6	X3	-	M1	
3 8	<i>who</i> -O	R	-	V5	V4	+	F1	M2
3 9	<i>pos</i>	N/ A	+	V1	N/A	-	M2	
4 0	<i>who</i> -S	R	±	V5	X2	-	F2	
4 1	<i>who</i> -S	N R	-	V5	X2	+	M1	
4 2	<i>who</i> -O	R	+	V4	V5	-	F1	M2
4 3	<i>who</i> -S	N R	-	V4	X1	-		
4 4	<i>pos</i>	N/ A	-	V2	N/A	+	F2	
4 5	<i>who</i> -S	R	+	V5	X2	-		
4 6	<i>who</i> -O	N R	-	V4	V5	-	F1	M2

4 7	<i>who</i> -S	R	-	V5	X2	+		
4 8	<i>inda</i> <i>los</i>	N/ A	-	V1	N/A	-	F2	
4 9	<i>who</i> -S	R	±	V6	X3	-		
5 0	<i>who</i> -O	N R	-	V4	V5	+	F1	M2
5 1	<i>pos</i>	N/ A	-	V3	N/A	-	M2	
5 2	<i>who</i> -S	R	-	V6	X3	-	F2	
5 3	<i>who</i> -O	N R	+	V6	V4	-	M1	F2
5 4	<i>inda</i> <i>los</i>	N/ A	-	V2	N/A	+	F1	
5 5	<i>who</i> -S	N R	+	V4	X1	-		
5 6	<i>who</i> -O	R	-	V6	V4	-	F2	M1
5 7	<i>who</i> -S	N R	±	V6	X3	-	M1	

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