



$$(2) \quad \text{XP} \dots [_{\nu\text{P}} \text{XP} [_{\nu\text{P}} \nu [_{\text{VP}} \text{V} [_{\text{CP}} \text{C} \dots \text{XP} \dots ]]]]$$

Note that if  $\nu$  does not establish an Agree relationship with the complement–CP, XP cannot be extracted out of CP as depicted in (2). So the strategy in (2) is available only in situations in which the matrix  $\nu$  establishes an Agree relationship with the complement–CP.<sup>1</sup>

Independently of the long-movement approaches represented by (1) and (2), the generative line has long recognised the existence of two alternative strategies for forming long-distance A'–dependencies. One of these involves what I will call (following Salzmann 2006) ‘resumptive prolepsis’. On such an approach, represented prominently by Cinque’s (1990) proposal, the proleptic XP originates in the matrix clause, either inside or outside the VP, and binds a null resumptive pronoun in the lower clause, as illustrated in (3). I will show in section 3.4 of this paper that Hungarian has both (3a) and (3b), and that the two prolepsis structures behave differently with respect to the featural agreement relationship between the proleptic XP and the resumptive pronoun in the lower clause.

$$(3) \quad \begin{array}{l} \text{a. } \text{XP} \dots [_{\nu\text{P}} \nu [_{\text{VP}} \text{V} [_{\text{CP}} \text{C} \dots \textit{pro} \dots ]]] \\ \text{b. } \text{XP} \dots [_{\nu\text{P}} \text{XP} [_{\nu\text{P}} \nu [_{\text{VP}} \text{V} \text{XP} [_{\text{CP}} \text{C} \dots \textit{pro} \dots ]]]] \end{array}$$

Finally, natural language makes extensive use of mechanisms that spell the *wh*–XP out in the left periphery of the embedded clause, while interpreting it upstairs.<sup>2</sup> Two such mechanisms are well-documented in the literature: *wh*-scope marking (which does not move the *wh*-constituent up to its scopal position in the matrix clause at all), and *wh*-copying (which features the *wh*-constituent in both clauses). I will argue that these mechanisms share the presence of a scope marker — which may be either null or overt, and if overt, either invariant or (when coindexed with the *wh*–XP, as in (4c)) showing concord with the *wh*-constituent in the embedded clause. This is schematically represented in (4) (with coindexation in (4c) marking concord).

$$(4) \quad \begin{array}{l} \text{a. } \text{SM} \dots [_{\nu\text{P}} \nu [_{\text{VP}} \text{V} [_{\text{CP}} \text{XP} \text{C} \dots \text{XP} \dots ]]] \\ \text{b. } \text{SM} \dots [_{\nu\text{P}} \text{SM} [_{\nu\text{P}} \nu [_{\text{VP}} \text{V} \text{SM} [_{\text{CP}} \text{XP} \text{C} \dots \text{XP} \dots ]]]] \\ \text{c. } \text{SM}_i \dots [_{\nu\text{P}} \text{SM} [_{\nu\text{P}} \nu [_{\text{VP}} \text{V} \text{SM} [_{\text{CP}} \text{XP}_i \text{C} \dots \text{XP} \dots ]]]] \end{array}$$

The representations of ‘plain’ *wh*-scope marking in (4a,b) and *wh*-copying in (4c) make it explicit that I believe that these two phenomena have fundamentally similar derivations and representations, and that the primary difference (from which a number of secondary differences ensue) between the two phenomena is the absence of a concord relationship between the scope marker and the *wh*-constituent in the embedded CP in the former, and the presence of concord in the latter. One of my objectives in what follows is to defend this hypothesis, and to flesh it out in more detail.

1 The derivation in (2) converges in interesting ways with the analysis of long A'–dependencies emerging from work adopting the formalism of Tree Adjoining Grammar (TAG) — see esp. Frank (2002, 2006). It, too, eschews an intermediate trace or copy of the A'–moved constituent in the specifier position of the complement–CP. On a TAG–based approach, in long-distance A'–dependencies the matrix clause forms an ‘auxiliary tree’ recursive on C' that is ‘plugged into’ the elementary tree (a simple CP) that harbours the (local, CP–internal) A'–dependency. The TAG–based approach actually goes further than Rackowski & Richards’s (2005) analysis when it comes to long-distance extraction of material originating inside the  $\nu\text{P}$  of the embedded clause: for Rackowski & Richards, such extraction will proceed via a stop-over on the edge of both the embedded  $\nu\text{P}$  and the matrix  $\nu\text{P}$ ; in a TAG–based approach, movement to SpecCP within the elementary tree must proceed via the  $\nu\text{P}$ –edge but in the auxiliary tree representing the matrix C', there can be no  $\nu\text{P}$ –adjoined trace because this auxiliary tree does not represent an A'–dependency at all. Since I will not be directly concerned in this paper with the question of whether intermediate traces/copies in  $\nu\text{P}$ –adjoined positions are motivated or not (my focus here is on the question of whether there is an intermediate trace/copy in the embedded SpecCP; for some pertinent discussion of the distribution of intermediate stop-overs on the edge of  $\nu\text{P}$ , I refer to Den Dikken 2007), I will not dwell on this matter in any further detail here — though it should be clear that this is an empirical matter of significant potential importance.

2 I will have nothing to say in this paper about *wh-in-situ*. A covert scope marking approach to *wh-in-situ* may be plausible for some cases of *wh-in-situ* (Japanese perhaps being the most natural case in point), though whether such an approach can be made to carry over to, say, French is a question I cannot address here.

Overlooking the derivations in (1)–(4), one is immediately struck by the fact that there is a certain amount of redundancy in this picture. What is particularly striking is that, with the scope marker entertaining a concord relationship with the *wh*-constituent, as in (4c), the scope-marking strategy is very similar to the densely successive-cyclic movement strategy in (1), which uses SpecCP as an escape hatch for long A'–movement. Since it has already been demonstrated in the literature (Rackowski & Richards 2005, in particular) that long A'–movement can be performed strictly via the edges of *v*P and does not need to utilise SpecCP as an escape hatch, and since the densely successive-cyclic movement scenario in (1) looks so similar to the *wh*-copying scenario in (4c), the question naturally arises whether the former could be reduced to the latter — that is, whether we could perhaps treat *all* long A'–dependencies that arguably feature a *wh*-constituent in the left periphery of the embedded clause as scope marking dependencies. Such would be possible if we allowed the scope marker in (4c) to show *full* concord with the *wh*-XP in the embedded SpecCP, causing the latter to delete under complete identity with the c-commanding concordial scope marker in the matrix clause.

Reducing (1) to (4c) with full concord, and thereby eliminating the possibility of successive-cyclic movement via SpecCP, would simplify the typology of long A'–dependencies to just three basic strategies:

- (5)
- a. successive-cyclic movement via *v*P–edges
  - b. resumptive prolepsis
  - c. scope marking (with no concord, partial concord, or full concord)

This is precisely the picture that I would like to derive in this paper. I will develop it in much further detail in what follows.

## 2 On Spec-to-Spec movement

Besides the fact that it would seem redundant to exploit a stop-over on the edge of CP if it is theoretically possible to hop from the lower *v*P–edge to the matrix *v*P–edge, and the fact that (4c) with full concord between the scope marker and the *wh*-XP should be able to deliver the same gross output as (1), there are other reasons to doubt that successive-cyclic movement via SpecCP should be a theoretical possibility. First of all, such movement has proved to be stubbornly resistant to accommodation within the minimalist guidelines laid down in Chomsky (1995) and subsequent work — simply put, many valiant attempts in the literature notwithstanding, it has basically proved untriggerable (which has led some, including Bošković 2002, to give up on the whole idea of intermediate touch-downs needing triggers).

Secondly, were successive-cyclic movement via SpecCP to exist, it would be the only known case of movement to an A'–specifier position in the left periphery that is not terminal. I am not aware of any instances of long topicalisation (i.e., the movement of a constituent of a subordinate clause into a topic position in the matrix clause) proceeding via a topic position (call it SpecTopP, for concreteness<sup>3</sup>) in the embedded clause: SpecTopP–to–SpecTopP movement, with the emergence of a topic marker in the Top–head in both clauses, is non-existent, to my knowledge. And likewise, it is impossible for a constituent of a subordinate clause to be focalised in the embedded clause (by raising to SpecFocP) and then to proceed further into the SpecFocP position in the matrix clause. That such is indeed impossible is evident, for instance, from the fact that, in Hungarian (whose Verb Second rule allows one to diagnose the application of focus fronting in a particular clause by simply inspecting the placement of the finite verb *vis-à-vis* dependent material, such as particles/preverbs), sentences such as (6a) are ungrammatical (see Lipták 2001) (in contradistinction to (6b), where focalisation and concomitant Verb Second happen only in the matrix clause, or (6c), where they obtain only in the subordinate clause):

3 No particular significance should be attached to this labelling: it is provided for concreteness only. The text statement shall not be read as an endorsement of the existence of TopP, therefore. The same, *mutatis mutandis*, applies to the ensuing discussion of focalisation and FocP.



The derivations in (2) (Rackowski & Richards-style successive-cyclic movement via  $\nu$ P-edge only) and (4c) (concordial scope marking) for long A'-dependencies will be shown to give us a better purchase on the empirical facts than does the 'classic' derivation in (1). The conjunction of successive-cyclic movement via  $\nu$ P-edges and concordial scope marking will allow us to preserve unscathed all of the arguments that are commonly thought to support the derivation in (1). To the extent that any of these arguments implicate SpecCP at all, they never actually make reference to SpecCP as an *intermediate* stop-over point: the apparently valid arguments for escape-hatching movement through SpecCP turn out to be arguments for *terminal* movement to SpecCP instead. We will see this in section 5. But first, I will fill in the details of the three derivations for long A'-dependencies in (5a-c), using Hungarian as my guide.

### 3 The three derivations for long A'-dependencies through the lens of Hungarian

In this section, I will present a detailed case study of the morphosyntax of long A'-dependencies in Hungarian in order to illustrate and make the case for each of the ingredients of the typology in (5): successive-cyclic A'-movement uniquely via  $\nu$ P-edges, resumptive prolepsis, and scope marking.

#### 3.1 Hungarian agreement

Before being able to get to the properties of A'-dependencies in Hungarian, however, I should first lay the necessary foundations upon which we can build the rest of the edifice. In this section, I will present the bare essentials of subject agreement and accusative Case and definiteness agreement in the language. In the next, I provide a summary of the empirical lie of the land in the morphosyntax of long-distance A'-dependencies.

In Hungarian, as in many other languages, nominative subjects of finite clauses agree with their finite verb in  $\phi$ -features. All person/number combinations have discrete inflectional forms. (8) illustrates this for the verb *énekelni* 'to sing', used intransitively.<sup>5</sup>

(8)	a.	(én)	énekel-ek	d.	(mi)	énekel-ünk	(Hungarian)
		I	sing-1SG.INDEF		we	sing-1PL.INDEF	
	b.	(te)	énekel-sz	e.	(ti)	énekel-tek	
		you <sub>SG</sub>	sing-2SG.INDEF		you <sub>PL</sub>	sing-2PL.INDEF	
	c.	(ő)	énekel-∅	f.	(ők)	énekel-nek	
		(s)he	sing(3SG.INDEF)		they	sing-3PL.INDEF	

Agreement between the nominative subject and the finite verb is regulated by the *morphological* number features of the subject. To see this, we should look at sentences that have quantified subjects that are notionally plural (because they denote a plurality of referents). Such quantified noun phrases are consistently formally *singular* in Hungarian, despite their plural reference. Thus, in (9), not just *minden lány* 'every girl' but also *két lány* '(lit.) two girl', *sok lány* '(lit.) many girl' and *hány lány* '(lit.) how many girl' are all singular noun phrases. Insertion of the plural marker *-k* on *lány* would be ungrammatical in all these cases. And importantly for our purposes in what follows, it would be equally ungrammatical for the formally singular QP-subject to combine (via notional number marking) with the plural agreement form of the finite verb.

(9)	a.	minden	lány(*-ok)	énekel(*-nek)	(Hungarian)
		every	girl-*PL	sing-3SG.INDEF/*3PL.INDEF	
	b.	két	lány(*-ok)	énekel(*-nek)	
		two	girl-*PL	sing-3SG.INDEF/*3PL.INDEF	

<sup>5</sup> Since Hungarian is a pro-drop language, the subject pronouns in the examples in (8) can freely be dropped. Note that the paradigm in (8) illustrates the so-called 'indefinite conjugation', applicable when the verb is (used) intransitive(ly) or, if transitive, takes an indefinite object. The choice between the definite and indefinite conjugations is determined by the properties of the object, as discussed below. For simplicity, in the initial discussion of subject agreement I will ignore the definite conjugation.

- c. sok lány(\*-ok) énekel(\*-nek)  
 many girl-\*PL sing-3SG.INDEF/\*3PL.INDEF
- d. hány lány(\*-ok) énekel(\*-nek)  
 how.many girl-\*PL sing-3SG.INDEF/\*3PL.INDEF

Perhaps the most famous property of the Hungarian verbal inflectional system is its distinction between a ‘definite’ and an ‘indefinite’ conjugation. The traditional terms for these two inflectional paradigms in Hungarian descriptive grammar are *tárgyas ragozás* ‘objective conjugation’ and *alanyi ragozás* ‘subjective conjugation’, respectively.<sup>6</sup> This terminology signals that when the former is used, a property of the object is reflected in the finite verb’s inflection: the fact that (a) there is an (accusative-marked) object, and (b) it is of a particular morphosyntactic type (it is definite). (10) illustrates the difference in form and distribution between the two finite verb conjugations. Note that, as the examples in (10a’) and (10b’) show, clausal complements also participate in this definiteness agreement pattern: infinitival complement clauses trigger indefinite agreement on the matrix verb, whereas finite complement clauses (which are optionally accompanied by the proleptic pronoun *azt* ‘it’) trigger definite agreement. Neither infinitival complement clauses nor finite complement clauses are themselves marked for morphological case. I will assume, however, that they do engage in a structural Case-checking relationship with their selecting verb. The overall generalisation, then, is that finite verbs are marked for the definiteness of their structurally (ACC) Case-marked complements.<sup>7</sup>

- (10) a. (én) szeret-ek {valaki-t / egy / két lány-t / sok lány-t / minden lány-t}  
 I love-1SG.INDEF someone-ACC a/one / two girl-ACC many girl-ACC every girl-ACC  
 ‘I love {someone/a girl/one girl/two girls/many girls/every girl}’ (Hungarian)
- a’. (én) szeret-ek [PRO szerelmes lenni]  
 I love-1SG.INDEF in.love be-INF  
 ‘I love to be/being in love’
- b. (én) szeret-em {*pro* / ő-t / azt a szép lány-t / az összes lány-t / Mari-t}  
 I love-1SG.DEF (s)he-ACC that pretty girl-ACC the all girl-ACC Mari-ACC  
 ‘I love {him/her/that pretty girl/all the girls/Mari}’
- b’. (én) szeret-em (azt), [hogy szerelmes vagyok]  
 I love-1SG.DEF it-ACC that in.love am-1SG  
 ‘I love it that I am in love’

6 This terminology may suggest a treatment of Hungarian (finite) clause syntax as belonging to the *ergative* type (cf. e.g. Lindhout-Lengyel 1993). The fact, however, that the marking of the subject is the same regardless of whether there is an object and, if so, whether it is definite or indefinite suggests that the ergative hypothesis is unlikely to be sustained. I will not pursue it further.

7 An interesting quirk in this otherwise quite transparent inflectional pattern manifests itself when we consider sentences with a first or second person object pronoun. Whereas third person object pronouns are obligatorily adorned with the accusative case suffix *-t* and must trigger definite agreement on the finite verb (cf. (10b) with *ő* ‘him/her’), first and second person singular object pronouns are often not morphologically cased (the *-et* on *téged(et)* and *engem(et)* in (i) and (ii) is preferably dropped; the *-et* on their plural counterparts, *titeket/benneteket* and *minket/bennünket*, on the other hand, is preferably pronounced), and none of the first and second person object pronouns (whether they be singular or plural) trigger definite agreement on the finite verb, despite their semantic definiteness. Thus, in (ib) and (iia,b), we see the verb appear in its indefinite conjugation form. An additional wrinkle in this domain is presented by finite clauses whose subject is first person singular and whose object is second person. Such sentences pick a form of the finite verb not featured anywhere else in the grammar of the language: the special *-lak/-lek* form illustrated in (ia).

- (i) a. (én) szeret-lek {téged(et) / titek-et / bennetek-et} \**szeretem*, \**szeretek* (Hungarian)  
 I love-LAK/LEK you<sub>SG</sub>-ACC you<sub>PL</sub>-ACC you<sub>PL</sub>-ACC
- b. (ő) szeret {téged(et) / titek-et / bennetek-et} \**szereti* (3SG.DEF)  
 (s)he love-3SG.INDEF you<sub>SG</sub>-ACC you<sub>PL</sub>-ACC you<sub>PL</sub>-ACC
- (ii) a. (te) szeret-sz {engem(et) / mink-et / bennünk-et} \**szereted*  
 you<sub>SG</sub> love-2SG.INDEF me.ACC us-ACC us-ACC
- b. (ő) szeret {engem(et) / mink-et / bennünk-et} \**szereti* (3SG.DEF)  
 (s)he love-3SG.INDEF me.ACC us-ACC us-ACC

### 3.2 Agreement and Case in Hungarian long A'–dependencies

Long-distance A'–dependencies present us with some interesting deviations from the patterns described in the foregoing.<sup>8</sup>

#### 3.2.1 Long A'–fronting of the subject of a finite clause (I): Retention of nominative Case

Let us focus particularly on cases of long A'–fronting of the subject of an embedded finite clause. Here, Hungarian disposes of two different strategies. One strategy, which is generally considered rather marginal by Hungarian speakers across the board, is characterised by the properties listed in (11).

- (11) *long A'–fronting of the subject of a finite clause with retention of nominative Case*
- downstairs *formal* number agreement only (regardless of the notional number of the focus)
  - upstairs *definite* agreement only (regardless of the (in)definiteness of the focus)
  - output generally marginal<sup>9</sup>

Throughout the discussion to follow, I will confine my attention to *indefinite wh*-constituents, to keep the (already quite complicated) picture maximally simple. The paradigm in (12) shows that, for this strategy, the only (marginally) acceptable output is (12a). What we see here is that the A'–fronted subject surfaces with the morphological reflex of the nominative Case feature it is expected to check in the embedded finite clause, does not control definiteness agreement on the upstairs verb (which bears definite inflection in (12a), despite the fact that *hány lány* is indefinite), and must trigger formal (i.e., singular) agreement on the downstairs verb (even though *hány lány* 'how many girls' is notionally plural). ('PV' stands for 'preverb', representing *el*.)

- (12)
- |    |                     |           |                |      |                      |             |
|----|---------------------|-----------|----------------|------|----------------------|-------------|
| a. | <sup>(?)</sup> hány | lány      | akar-od,       | hogy | eljöjjön?            | (Hungarian) |
|    | how.many            | girl(NOM) | want-2SG.DEF   | that | PV-come.SUBJUNC(3SG) |             |
| b. | *hány               | lány      | akar-od,       | hogy | eljöjje-nek?         |             |
|    | how.many            | girl(NOM) | said-2SG.DEF   | that | PV-come.SUBJUNC-3PL  |             |
| c. | *hány               | lány      | akar-sz,       | hogy | eljöjjön?            |             |
|    | how.many            | girl(NOM) | want-2SG.INDEF | that | PV-come.SUBJUNC(3SG) |             |
| d. | *hány               | lány      | akar-sz,       | hogy | eljöjje-nek          |             |
|    | how.many            | girl(NOM) | want-2SG.INDEF | that | PV-come.SUBJUNC-3PL  |             |
- '(lit.) how many girls would you want that come, i.e., how many girls would you like to come?'

#### 3.2.2 Long A'–fronting of the subject of a finite clause (II): 'Case switch'

Long A'–fronting of the subject of a finite clause can also give rise to a rather different kind of output, with *accusative* marking on the fronted constituent as its most salient feature — a case of 'Case switch', to give the phenomenon a name.<sup>10</sup> The empirical picture here is summarised in (13), and illustrated in (14).

8 In my discussion of the empirical side of the morphosyntax of Hungarian long A'–fronting (a term which applies equally to *wh*-fronting and focus fronting), I rely heavily on important work done by Gervain (2003, 2005). The emphasis of both her work and mine is on (i) the distribution of 'upstairs' (in)definiteness agreement under long A'–fronting of the subject of an embedded finite clause, (ii) the distribution of 'Case switch' under subject focus fronting, and (iii) the possibility of 'downstairs' notional (rather than formal) agreement on the finite verb. Though Gervain tested both definite and indefinite A'–fronted constituents, she did not separate the results for the two types of foci in her statistics. I will be presenting the facts for *indefinite* fronted constituents only.

9 Gervain has found that speaker judgements range from just '?' to virtually unacceptable; but none of her informants rejects (12a) outright. Since for the strategy in (11) (unlike in the case of the strategies discussed later in this section), there is no clear dialectal variation, I have pooled the judgements for all speakers.

10 I will use 'Case switch' as a descriptive label. From the discussion further below, it will become apparent that there is no literal Case switch involved.

- (13) *long A'–fronting of the subject of a finite clause with 'Case switch'*
- downstairs *formal* (singular) agreement acceptable for all speakers; downstairs *notional* (plural) agreement the preferred option for some speakers but marginal for others
  - upstairs (in)definiteness agreement and Case-checking controlled by the fronted subject
- (14)
- \*hány lány-t akar-od, hogy eljöjjön? (Hungarian)  
how.many girl-ACC want-2SG.DEF that PV-come.SUBJUNC(3SG)
  - \*hány lány-t akar-od, hogy eljöjje-nek?  
how.many girl-ACC want-2SG.DEF that PV-come.SUBJUNC-3PL
  - ?hány lány-t akar-sz, hogy eljöjjön?  
how.many girl-ACC want-2SG.INDEF that PV-come.SUBJUNC(3SG)
  - %hány lány-t akar-sz, hogy eljöjje-nek? GROUP I ✓  
how.many girl-ACC want-2SG.INDEF that PV-come.SUBJUNC-3PL GROUP II ??(?)  
'(lit.) how many girls would you want that come, i.e., how many girls would you like to come?'

The fronted constituent in this pattern behaves very much like a constituent of the matrix clause: it controls definiteness agreement there, and also checks the upstairs verb's accusative Case feature. For some speakers (those belonging to GROUP I), the fronted constituent does not even assert its morphological singularity within the clause to which it interpretively belongs: the d-example features notional *plural* agreement on the downstairs verb. For other speakers, however, downstairs plural agreement sounds quite outlandish.

### 3.2.3 Scope marking

So far, we have found that simply taking the nominative subject of an embedded finite clause and A'–fronting it into the matrix clause is typically considered rather marginal (to somewhat varying degrees) by speakers of Hungarian, and that in the 'Case switch' pattern, which is generally preferred to the nominative-retention pattern, there is variation among speakers with respect to the number-agreement inflection on the downstairs verb. What all Hungarians agree on, however, is that the strategy of choice for the formation of a multiclausal question with matrix scope for the *wh*-constituent is to employ so-called *scope marking*,<sup>11</sup> with an invariant scope marker (here *mit* 'what-ACC') in the matrix clause and the 'real' *wh*-constituent occupying the focus position in the subordinate clause (as witness the placement of the finite verb *vis-à-vis* the preverb *el*). This is illustrated in (16). The scope-marking strategy is characterised by the set of properties summarised in (15).

- (15) *scope marking in a long subject question*
- upstairs *accusative*-marked *wh*-scope marker (*mit*), triggering *indefinite* agreement
  - downstairs *nominative wh*-constituent in focus position
  - downstairs *formal* number agreement only (regardless of the notional number of the focus)
- (16)
- \*mit akar-od, hogy hány lány jöjjön el?  
what-ACC want-2SG.DEF that how.many girl(NOM) come.SUBJUNC(3SG) PV
  - \*mit akar-od, hogy hány lány jöjje-nek el?  
what-ACC want-2SG.DEF that how.many girl(NOM) come.SUBJUNC-3PL PV
  - mit akar-sz, hogy hány lány jöjjön el?  
what-ACC want-2SG.INDEF that how.many girl(nom) come.SUBJUNC(3SG) PV
  - \*mit akar-sz, hogy hány lány jöjje-nek el?  
what-ACC want-2SG.INDEF that how.many girl(NOM) come.SUBJUNC-3PL PV  
'(lit.) how many girls would you want that come, i.e., how many girls would you like to come?'

11 For discussion of scope marking (alternatively called 'partial *wh*-movement'), see Dayal (1994), Horvath (1997), Lipták (2001), Lutz *et al.* (eds, 2000), Fanselow (2006), and references cited there.

Here, the *wh*-scope marker in the matrix clause checks the matrix verb’s accusative Case feature, concomitantly agreeing with it in definiteness, and preventing the embedded *wh*-subject from engaging in any feature-checking relationship with the matrix verb. The *wh*-subject occupies the focus position in the lower clause, checks nominative Case against finite T, and must control *formal* agreement with the downstairs verb.

These are the three patterns that I will be primarily concerned with in the remainder of this section. I will analyse them from the perspective of the typology of A’-dependencies given in (5), without any recourse to successive-cyclic movement through SpecCP. We will find that Hungarian gives us solid evidence for the existence of all three strategies in (5), and also gives us the opportunity to finesse the details of these strategies in more detail.

### 3.3 Successive-cyclic movement via *vP*-edges

With SpecCP a terminal landing-site (as per (7), above), truly successive-cyclic A’-movement may only proceed via *vP*-edge adjunction positions, as in Rackowski & Richards’ (2005) analysis, wherein it is the Agree relationship between the matrix *v* and the complement-CP that ‘opens up’ the CP, allowing movement out of CP without a stop-over on its edge. Alongside Tagalog (Rackowski & Richards’ source) and Chamorro (which I will discuss in section 5.4.4, below), Hungarian provides evidence for the existence of successive-cyclic movement uniquely via *vP*-edges.

In Hungarian, this type of derivation is responsible for outputs of the type in (12a): cases of long A’-fronting in which the matrix verb systematically shows definite (DEF) agreement inflection and the extractee bears a morphological case corresponding to the Case it checks in the embedded clause (that is, nominative for extraction of the subject of an embedded finite clause). The derivation of (12a) (repeated below as (17a)) can thus be summarised as in (17b).

- (17) a. <sup>(?)</sup>hány lány akar-od hogy eljöjjön? (= (12a); Hungarian)  
 how.many girl(NOM) want-2SG.DEF that PV-come-3SG  
 b. DP=hány lány ... [<sub>vP</sub>  $\bar{\text{D}}\text{P}$  [<sub>vP</sub> *v* [<sub>vP</sub> akar-od [<sub>CP</sub> hogy  $\bar{\text{D}}\text{P}$  eljöjjön]]]]]

The *wh*-constituent *hány lány* ‘how many girls’ starts out in the embedded clause, where it checks nominative Case as well as formal (i.e., singular) agreement against the lower finite T. It proceeds straight to a position on the edge of the matrix *vP*, with such fell-swoop movement being facilitated by the fact that the upstairs *v* establishes an Agree relationship with the complement-CP. This Agree relation between *v* and CP is formally reflected by the definite agreement inflection on the upstairs verb. The matrix verb *must* agree in definiteness with the complement-CP in order to allow A’-extraction from that CP to take place.

The result of successive-cyclic A’-fronting via the *vP*-edge is generally deemed rather marginal by Hungarian speakers for cases involving *argument* extraction. We surmise that this is because, in the case of argument extraction, there are simpler alternatives available to form long A’-dependencies — the ‘resumptive prolepsis’ and concordial scope marking strategies to be discussed in more detail in the following sections.

It would certainly be wrong to conclude that the Rackowski & Richards-style successive-cyclic movement derivation is generally marginal (in Hungarian or even universally). As a matter of fact, it is the *only* long A’-fronting strategy available in cases in which the fronted constituent is a *non-argument* — e.g., a predicate nominal or measure phrase.<sup>12</sup> These have different case forms: predicate nominals (in the Hungarian counterparts of finite copular sentences in languages like English) are nominative (showing ‘case

12 It is conceivable that the latter could be folded into the former category, if a successful case can be made for the idea that measure phrases are predicate nominals. See Frampton (1991:39, fn. 23) for an early suggestion to this effect. Adger’s (1993, 1996) discussion of measure phrases is compatible with this suggestion as well. I will not pursue it in detail here, but consider it a plausible option. The fact that measure phrases in Hungarian bear accusative Case could be related to the fact that bare-NP time-frame adverbials like *tíz percet* ‘ten minute-ACC’ likewise bear accusative Case, despite their not being arguments of the verb. See Csirmaz (2006) for discussion of this latter point.

concord’ with their nominative subjects), whereas measure phrases are accusative. But what they share is that they cannot establish an agreement relationship with the matrix verb: upstairs agreement is consistently definite, which indicates that the matrix *v* must engage in an Agree relationship with the complement–CP; and, in the case of predicate nominals, ‘Case switch’ (of the type seen in (14c,d)) is out of the question. The facts in (18), for predicate nominals, and (19), for measure phrases, illustrate this.<sup>13</sup>

- (18) a. *milyen ember szeretné-d hogy legyen Béla?* (Hu.)  
 what.kind.of man(NOM) would.like-2SG.DEF that be(come).SUBJUNC-3SG Béla  
 b. *\*milyen ember szeretné-l hogy legyen Béla?*  
 what.kind.of man(NOM) would.like-2SG.INDEF that be(come).SUBJUNC-3SG Béla  
 c. *\*milyen ember-t szeretné-l hogy legyen Béla?*  
 what.kind.of man-ACC would.like-2SG.INDEF that be(come).SUBJUNC-3SG Béla  
 d. *\*milyen ember-t szeretné-d hogy legyen Béla?*  
 what.kind.of man-ACC would.like-2SG.DEF that be(come).SUBJUNC-3SG Béla  
 ‘what kind of man would you like Béla to be(come)?’
- (19) a. *hány kiló-t gondol-od, hogy nyom János?* (Hungarian)  
 how.many kilo-ACC think-2SG.DEF that weigh(3SG.INDEF) János  
 b. *?\*hány kiló-t gondol-sz, hogy nyom János?*  
 how.many kilo-ACC think-2SG.INDEF that weigh(3SG.INDEF) János  
 ‘how many kilos do you think János weighs?’

This means that non-argumental noun phrases undergo focus fronting via strategy (2) and *only* (2). Apparently, matrix *v* cannot Agree with the extractee in such cases, only with CP. This is true for both predicate nominals (which never engage in an Agree relationship with any *v*) and measure phrases — and it is particularly striking for the latter: after all, measure phrases *do* seem to entertain an Agree relationship, for definiteness and perhaps also for Case (depending on the syntactic nature of their morphological accusative case), with their *local v*. To see this, a quick look at the simple, monoclausal examples in (20) is instructive: in (20), the verb *nyom* ‘weigh’ clearly entertains a definiteness agreement relationship with the measure phrase, which is indefinite in (20a) but definite in (20b).

- (20) a. *hetven kiló-t nyom János* (Hungarian)  
 seventy kilo-ACC weigh(3SG.INDEF) János  
 ‘János weighs seventy kilos’  
 b. *pontosan azt a hetven kiló-t, amit az orvos írt elő neki*  
 precisely that the seventy kilo-ACC which the doctor prescribed for-him  
*nyom-ja János*  
 weigh-3SG.DEF János  
 ‘János weighs precisely those seventy kilos that the doctor had prescribed for him’

We cannot say, therefore, that the reason why (19b) fails is that the measure phrase is categorically incapable of establishing any Agree relationship with any *v*.

There is reason to believe, however, that the accusative case of measure phrases is not a structural Case: measure-phrase constructions do not passivise (see (21)). The same is true for sentences like (22a), with verbs such as *contain*, whose accusative ‘objects’ behave like measure phrases when it comes to upstairs definiteness agreement in Hungarian, as shown in (23), which is to be compared to (19a,b), above.

13 I should note that Gervain (2003, 2005) did not include predicate nominals and measure phrases in her data set, and that I have not, at this time, executed an extensive survey of native speaker judgements regarding the data in (18)–(19). The judgements reported for (18)–(19) are based on a preliminary investigation of just a few speakers.

- (21) a. John weighs 200 pounds  
 b. \*200 pounds are weighed by John
- (22) a. this box contains 20 books  
 b. \*20 books are contained by this box
- (23) hány könyvet {gondol-od/?gondol-sz}, hogy tartalmaz ez a doboz? (Hu.)  
 how.many book-ACC think-2SG.DEF/2SG.INDEF that contain-3SG.INDEF this box  
 ‘how many books do you think this box contains?’

This failure to passivise does not seem to be a lexical property of the verbs used in these examples: the verb *contain* does passivise (*the cost/crisis/crowd could not be contained*), but not when it is used in sentences of the type in (22a). I put this down to the absence of a structural ACC Case-checking relationship in (21/22a).

If indeed the measure phrase in (21a) and the ‘object’ in (22a) fail to check structural Case (leaving open the question of the provenance of their morphological accusative case in languages such as Hungarian, which at present I have nothing to say about), we can hold this responsible for the fact that these noun phrases cannot engage in a feature-checking Agree relationship with the matrix *v*. And for predicate nominals, it is entirely standard to assume that they do not possess a structural Case feature at all. To be sure, they can be morphologically case-marked, but their morphological case is not the reflex of a structural Case-checking relationship between the predicate nominal and some functional category: rather, the morphological case of a predicate nominal is the reflex of a *case concord* relationship between it and its subject (which does have a structural Case feature). So what unites predicate nominals and measure phrases is their inability to check the structural Case feature of *v*. Because the other two scenarios for establishing long A’-dependencies (resumptive prolepsis and concordial scope marking) both crucially implicate a feature-checking Agree relationship between the matrix *v* and the fronted *wh*-constituent (as I will show in detail below), these strategies will be inapplicable in the case of non-argumental noun phrases. (In addition, resumptive prolepsis is generally impossible with non-arguments.) The matrix *v*, in long A’-fronting constructions involving such noun phrases, must hence check all of its formal features against CP, leaving only the Rackowski & Richards-style derivation for the formation of long A’-dependencies with non-argumental noun phrases.

Far from being a ‘marginal option’, therefore, successive-cyclic long A’-movement via *vP*-edges, *à la* (2), is alive and well in the syntax of Hungarian. But with long *argument* extraction, it is distinctly dispreferred — because there are other, syntactically rather simpler ways of forming long A’-dependencies in such cases. I will turn to these ways now.

### 3.4 Resumptive prolepsis

One such simpler strategy for the formation of sentences in which a *wh*-constituent belonging to a subordinate clause surfaces in the matrix clause exploits resumptive prolepsis: it base-generates accusative *hány lány-t* ‘how many girls-ACC’ in the *matrix* VP and has it bind a null resumptive pronoun in the subordinate clause.<sup>14</sup> This null resumptive shows semantic agreement with its grammatically singular but notionally plural antecedent, and itself controls plural inflection on the lower verb. The result is (14d), repeated here as (24a), analysed as in (24b). A’-movement here takes place only in the matrix clause, while in (17b) it is long-distance.

- (24) a. \*hány lány-t akar-sz hogy eljöjjenek? (= (14d); Hungarian)  
 how.many girl-ACC want-2SG.INDEF that PV-come-3PL  
 b. DP=hány lányt<sub>i</sub> ... [<sub>vP</sub> DP [<sub>vP</sub> *v* [<sub>VP</sub> akar-sz DP [<sub>CP</sub> hogy pro<sub>i</sub> eljöjjenek]]]]

14 Den Dikken (1999:166) already points out that there are speakers for whom an *overt* resumptive pronoun is in fact grammatical in long-distance focus fronting cases. Gervain (2003) also included examples of this type in her questionnaire.

- (i) \*PÉTER-T hiszem, hogy ő jött (Hungarian)  
 Péter-ACC believe-1SG.DEF that he came  
 ‘it is Péter that I believe came’

My hypothesis is that the resumptive prolepsis strategy in (24b) leads to *obligatory* ‘notional agreement’ on the downstairs verb (technically, semantic agreement between the matrix accusative and the null resumptive, with the latter controlling garden-variety grammatical agreement with the downstairs verb). This hypothesis is based on my findings, in Den Dikken (1999), for null resumption in Hungarian possessed noun phrase constructions. Consider (25a–d).

- (25) a. a nő-k könyv-e-i(\*-k) (Hungarian)  
 the woman-PL book-POSS-PL.POSS’UM-PL.POSS’OR  
 ‘the women’s hats’  
 a’. az ő/pro könyv-e-i\*(-k)  
 the (s)he book-POSS-PL.POSS’UM-PL.POSS’OR  
 ‘their books’  
 b. [a nő-k-nek a könyv-e-i-%(-k)]  
 the woman-PL-DAT the book-POSS-PL.POSS’UM-PL.POSS’OR  
 ‘the women’s books’  
 c. a nő-k-nek, csak a KÖNYV-e-i-%(-k) veszett el  
 the woman-PL-DAT only the book-POSS-PL.POSS’UM-PL.POSS’OR got lost  
 ‘only the women’s BOOKS got lost’  
 d. csak a NŐ-K-nek veszett el a könyv-e-i-%(-k)  
 only the woman-PL-DAT got lost the book-POSS-PL.POSS’UM-PL.POSS’OR  
 ‘only the WOMEN’s books got lost’

What is interesting is that in (25b–d), where the possessor is dative, speakers vary when it comes to possessive agreement on the possessed noun. Den Dikken (1999) reduces the speaker variation in (25b–d) to the distribution of resumption. *Plural* possessive agreement on the possessed noun is the reflex of a resumption strategy: the dative possessor binds a null resumptive pronoun occupying the nominative possessor position in (25a,a’).<sup>15</sup> So in Den Dikken’s (1999) analysis of the facts in (25), resumption correlates one-to-one with plural possessive agreement — in other words, the resumptive, in contexts such as (25b–d), *MUST* be plural (see also fn. 15 on overt resumption). In concert with this, Gervain (2005:12) notes that the overt pronoun in (26) *MUST* be plural as well (cf. also Farkas 2006). If we assume (as is arguably the null hypothesis) that what holds of overt pronouns holds of null pronouns as well, the null resumption strategy in (24b) will yield *only* ‘notional agreement’ on the downstairs verb (as in (24a)).

- (26) két fiú jött be a szobába; leültettem őket / \*őt (Hungarian)  
 two boy came PV the room-into seated-1SG.DEF them him  
 ‘two boys entered the room; I offered them a seat’

Note, though, that in (27) (also from Gervain 2005), there is optional plural agreement for all speakers.

- (27) hat meghívott-ról tudom, hogy pro {jön/jönnék} (Hungarian)  
 six invitee-about I-know that come-3SG/3PL  
 ‘about/for six invitees, I know that they are coming’

15 As with long focus fronting (recall fn. 14), overt resumptive pronouns are allowed by some speakers in these possessed noun phrases (Den Dikken 1999:165). Whenever the overt resumptive pronoun shows up, plural possessive agreement is obligatory, as expected in light of the text discussion (cf. (i)).

(i) %a nők-nek az ő könyv-e-i\*(-k) (Hungarian)  
 the women-DAT the she book-POSS-PL.POSS’UM-PL.POSS’OR

In this example, the binder of the null resumptive pronoun, *hat meghívott* ‘(lit.) six invitee’, originates in a translative PP inside the matrix clause, and does not engage in a feature-checking relationship with any functional category. Structurally, *hat meghívott-ról* is an adjunct, originating in a non-argument position outside the c-command domain of *v*. This recalls the difference between (3a) and (3b), repeated below.

- (3) a. XP ... [<sub>VP</sub> v [<sub>VP</sub> V [<sub>CP</sub> C ... *pro* ... ]]]  
 b. XP ... [<sub>VP</sub> ~~XP~~ [<sub>VP</sub> v [<sub>VP</sub> V ~~XP~~ [<sub>CP</sub> C ... *pro* ... ]]]]

The translative resumptive prolepsis construction in (27) represents (3a), while (14d)/(24a) instantiates (3b).

The two resumptive prolepsis strategies have different agreement properties — not just when it comes to formal or notional agreement on the downstairs verb. Thus, in the minimal pair in (28) (which projects the proleptic pronoun as a translative adjunct) only the a–option works, (28b) being entirely impossible; but in (29) (which exploits the (3b) strategy, with *téged* ‘you(SG).ACC’ originating within the VP and checking accusative Case against *v*), the b–sentence seems to be the preferred option.<sup>16</sup>

- (28) a. TE ról-ad        mondtam    hogy szeretné-m    hogy elnök    legyél        (Hungarian)  
           you about-2SG    said-1SG    that would.like-1SG    that president be.2SG  
 b. \*TE ról-ad        mondtam    hogy szeretné-lek    hogy elnök    legyél  
           you about-2SG    said-1SG    that would.like-LEK    that president be.2SG  
 (29) a. <sup>?</sup>TÉGED        mondtá-lak    hogy szeretné-m    hogy elnök    legyél  
           you.ACC        said-LEK    that would.like-1SG    that president be.2SG  
 b. TÉGED        mondtá-lak    hogy szeretné-lek    hogy elnök    legyél  
           you.ACC        said-LEK    that would.like-LEK    that president be.2SG

While with the translative prolepsis strategy it is impossible to have a second person singular resumptive pronoun in the medial clause (which would trigger the special *-lek* agreement inflection on the medial verb, *szerelek*; recall fn. 7 on this special agreement form), in the accusative prolepsis strategy this is better than increasing the distance between the resumptive pronoun in the lowest clause and the overt proleptic object in the root clause. It appears that the two resumptive prolepsis strategies in (3) differ with respect to the allowable distance between the proleptic element in the higher clause and the null resumptive pronoun in the lower clause: (3a) tolerates (in fact, seems to desire) distance whereas (3b) appears to want to minimise the distance. What exactly this difference is rooted in, and how it in turn is responsible for the fact that in (27) speakers report oscillation between notional and formal agreement, while in (24a) only notional agreement materialises, is not entirely clear to me at this time. But one thing is clear: resumptive prolepsis constructions with proleptic *adjuncts* should be carefully kept separate from similar constructions with proleptic *arguments*. It is the latter (and only the latter) that interest me in this paper. For these, it seems clear that when they are morphologically singular but notionally plural, they combine with a *plural* resumptive pronoun.

So to sum up, the resumptive prolepsis strategy in (3b)/(24b) consistently gives rise to (a) an accusative proleptic object in the matrix clause that (b) controls definiteness agreement with the matrix finite verb and (c) entertains a notional agreement relationship with the null resumptive pronoun in the lower clause.

That the downstairs notional agreement case in (14d)/(24a) involves (null) resumption in the lower clause rather than long-distance A’-movement from out of the embedded clause is confirmed by the fact that it is impossible for the focused subject to license a parasitic gap in the lower clause — (30a) and (31a) are ungrammatical, and contrast markedly with (30b) and (31b), with formal agreement on the lower verb.<sup>17</sup>

16 Thanks to Anikó Lipták for her help with these examples.

17 Many thanks to Katalin É. Kiss and Judit Gervain for their help with constructing the examples in (30) and (31), and for providing judgements. These parasitic gap cases are loosely modelled on Hungarian examples of parasitic gaps in right-peripheral adjunct clauses licensed by extraction of the subject of a finite clause presented in Horvath (1992). Thanks to Kelly Nedwick and Ronit Shaham for drawing my attention to Horvath’s paper.

- (30) a. \*hány lány-t        mondtál hogy jönnek a buliba anélkül hogy meghívtál volna?  
       hw.mny girl-ACC you-said that come-3PL the party-to without that PV-invited-2SG would  
 b. <sup>(?)</sup>hány lány-t        mondtál hogy jön a buliba anélkül hogy meghívtál volna?  
       hw.mny girl-ACC you-said that come-3SG the party-to without that PV-invited-2SG would  
       ‘how many girls did you say came to the party without you having invited (them)?’
- (31) a. \*KÉT LÁNY-T        szeretnék hogy eljönnének anélkül hogy meghívok (Hu.)  
       two girl-ACC would.like-1SG that would.come-3PL without that PV-invite-1SG  
 b. <sup>(?)</sup>KÉT LÁNY-T        szeretnék hogy eljönne anélkül hogy meghívok  
       two girl-ACC would.like-1SG that would.come-3SG without that PV-invite-1SG  
       ‘it’s two girls that I’d like to come without me inviting (them)’

Parasitic gaps can only be licensed by variables left by A'–movement. The fact, then, that no parasitic gap is licensable in the embedded clause in (30a) and (31a) tells us that no A'–movement obtains within the embedded clause there. In the b–examples, featuring downstairs grammatical (singular) agreement, on the other hand, parasitic gap licensing does succeed (to the same somewhat marginal degree that the original examples designed by Horvath 1992, on which these sentences are modelled, generally succeed; cf. fn. 18). These cases of long A'–dependencies involving upstairs (in)definiteness agreement and Case switch but downstairs formal rather than notional agreement are thus significantly different from the a–examples in their derivation. What we learn from (30) and (31), therefore, are two important things: (i) the construction represented by (14d)/(24a) does not involve A'–movement in the lower clause (but null resumption instead, as shown in (24b)), and (ii) the construction represented by (14c), repeated below, *does* feature A'–movement downstairs (and hence should not be analysed in terms of resumptive prolepsis).<sup>18</sup>

- (14c) <sup>?</sup>hány        lány-t    akar-sz,        hogy eljőjön?        (Hungarian)  
       how.many    girl-ACC    want-2SG.INDEF    that    PV-come.SUBJUNC(3SG)

### 3.5 Interim results

Let us take stock at this juncture. We have now put in place an account for (12a)/(17a) (analysed in terms of successive-cyclic A'–movement via vP–edges, as in (17b)) and (14d)/(24a) (involving resumptive prolepsis, as in (24b)), and have thereby provided empirical support for the existence of two of the three strategies for the formation of long A'–dependencies postulated in (5). What remains to be done is to give an account for the example in (14c), repeated at the end of the previous section, with its signature cocktail of upstairs (in)definiteness agreement and Case switch (just as in (14d)) but downstairs *formal* agreement (unlike in (14d)).

18 The parasitic gap test cannot be administered to the construction in (12a), with upstairs definiteness agreement and retention of nominative Case on the extracted subject. This is because, as Horvath (1992) points out, having parasitic gaps in right-peripheral adjunct clauses licensed by extraction of the subject of a finite clause is possible in Hungarian *provided* that the lower subject undergoes Case switch in the matrix clause: (ia), with accusative *kiket*, succeeds, while (iib), with nominative *kik*, crashes. I should point out that, though Horvath presents (ia) without any markings suggesting that it might be somewhat degraded, all of my Hungarian informants have indicated to me that, while passable, (ia) is certainly not perfect. I have therefore decided to adorn (ia) with some question marks, acknowledging its marked status. But what is clear is that (ia) is decidedly better than the entirely ungrammatical example in (ib). I take this to be caused by a case-matching requirement imposed on parasitic gap constructions.

- (i) a. <sup>(?)</sup>kiket        mondtál hogy sosem panaszkodnak azután hogy a tanító megbüntet?  
       who-PL-ACC you-said that never complain-3PL after that the teacher punishes  
       ‘whom did you say never complain after the teacher punishes?’  
 b. \*kik        mondtad hogy sosem panaszkodnak azután hogy a tanító megbüntet?  
       who-PL(NOM) you-said that never complain-3PL after that the teacher punishes

For (14c), we have discovered that its derivation should involve A'–movement in the lower clause, not resumption. I have presented two considerations conspiring to this conclusion: the A'–fronted constituent situated in the matrix clause is capable of licensing a parasitic gap in the lower clause (as seen in the b–examples in (30) and (31)), and resumptive prolepsis constructions with proleptic *arguments* always give rise to *notional* agreement with the resumptive pronoun. So (14c) cannot be analysed with an appeal to resumptive prolepsis. But neither can it be analysed along the lines of Rackowski & Richards-style successive-cyclic A'–movement via *vP*–edges, since such would fail to accommodate the upstairs agreement and Case facts. A third strategy is called for, therefore — a strategy that must share with the Rackowski & Richards-style derivation the fact that A'–movement obtains in the embedded clause, but must differ from it in delivering upstairs (in)definiteness agreement and Case switch. This strategy will turn out to be what I will call concordial scope marking. But before we can appreciate the nature of concordial scope marking (a novel notion that requires careful introduction), I first of all need to introduce 'plain' *wh*-scope marking, the preferred strategy for all Hungarians when it comes to the construction of long A'–dependencies. This is the topic of the next subsection. In section 3.7, I will subsequently return to (14c).

### 3.6 Scope marking

In a *wh*-scope marking (or 'partial *wh*-movement') construction in Hungarian, the *wh*-constituent moves no further than the embedded focus position, its scope being indicated by the *wh*-scope marker (*mit* 'what-ACC' in the cases under discussion) in the matrix clause. The *wh*-subject of the embedded clause checks  $\phi$ -features and nominative Case downstairs, and has no feature-checking relationship with the matrix *v*, from which it is separated by a phase boundary. Our earlier example in (16c), repeated below as (32a), is thus analysed as in (32b).

- (32) a. *mit akar-sz hogy hány lány jöjjön el?* (= (16c); Hu.)  
       what-ACC want-2SG.INDEF that how.many girl(NOM) come-3SG PV  
       b. SM=*mit* ... [<sub>VP</sub> SM [<sub>VP</sub> *v* [<sub>VP</sub> *akar-sz* SM [<sub>CP</sub> *hogy* [<sub>FocP</sub> DP=*hány lány* [*jöjjön el*]]]]]]]

At no point does the 'real' *wh*-constituent move out of the embedded clause to replace the *wh*-scope marker (i.e., there is only an *indirect dependency* between the *wh*-expletive and the 'real' *wh*; see Dayal 1994, Horvath 1997): the radical impossibility of accusative Case checking performed by the 'real' *wh*-constituent (*\*mit akarsz hogy hány lány-t jöjjön*) testifies to this.<sup>19</sup>

The literature is brimming with accounts of the scope marking construction. I will not be able to do it justice here (see Lutz *et al.*, eds, 2000 for a variety of excellent contributions on the topic; also Fanselow 2006). Instead, I will embrace one particular outlook on the gross structure of the scope marking construction, one that will serve me well in the remainder of this paper. The outlook in question is due to Felser (2001).

<sup>19</sup> For 'partial *wh*-movement' constructions such as those found in Indonesian or Malay (Saddy 1991, Cole & Hermon 1998), where the *wh*-constituent appears in the left periphery of the embedded clause but there is no overt scope marker in the matrix clause, it is plausible to assume that there is a null scope marker upstairs (i.e., a null counterpart to Hungarian *mit* in (32)).

- (i) Ali (mem)beritahu kamu tadi [apa (yang) Fatimah (\*mem) baca]? (Malay)  
       Ali MENG-told you just now what that Fatimah MENG-read  
       'what did Ali tell you just now that Fatimah was reading?'

Note that the *meng*-prefix, which is obligatorily absent from nominal *wh*-movement paths in Malay, cannot show up in the embedded clause (within which *wh*-movement is taking place) but *can* show up in the matrix clause in (i). This suggests that *apa* 'what' never raises beyond the embedded clause, not even at LF, confirming that there is no 'expletive replacement' of the (null) scope marker by the 'real' *wh*-constituent going on. The facts of Indonesian and Malay 'partial *wh*-movement' (including the island facts discussed at length by Cole & Hermon) follow straightforwardly if the entire *wh*-clause moves at LF, via 'clausal pied-piping'. Languages such as Basque (Otriz de Urbina 1990) and Imbabura Quechua (Cole 1982, Hermon 1984) show such clausal pied-piping in overt syntax. Clausal pied-piping is presumably an instantiation of the 'indirect dependency' *wh*-scope-marking strategy.

Felser (2001) proposes what she calls a complex predicate approach to the scope marking construction. The central insight of this approach is that the matrix verb and the embedded clause form a complex predicate that is predicated of the scope marker (*mit* in the Hungarian example above).<sup>20</sup> Concretely, Felser has the scope marker originating in the specifier position of a Larsonian VP whose head takes the CP that contains the ‘real’ *wh*-constituent as its complement, as depicted in (33) (with the lexical material provided by the Hungarian example in (32a)).

(33)  $v$  [<sub>VP</sub> SM=*mit* [<sub>V</sub> V [<sub>CP</sub> *hogy* [<sub>FocP</sub> DP=*hány lány* [*jöjjön el*]]]]]

This perspective on the basic structure of the scope marking construction provides a proper base position for the scope marker (‘SM’), gives it a role to play in the structure (by making it the subject of predication inside the matrix VP), and straightforwardly enables the scope marker to engage in a structural Case- and  $\phi$ -feature checking relationship with the matrix *v*. This is precisely what we need in order to get the account of *wh*-scope marking in Hungarian going.

The structure in (33) is one way of giving formal substance to the idea that the Hungarian scope marker *mit* originates in the same position as the ‘clausal expletive’ *azt* associated with a complement clause:

(34) *azt* akarom, [<sub>CP</sub> *hogy két lány jöjjön*] (Hungarian)  
 it/that-ACC want-1SG-DEF that two girl come-3SG

Once the ‘clausal expletive’ and the scope marker are assimilated in this way (with both serving as the subject of a predication featuring the complement–CP as (part of) the predicate), it follows without further ado that scope marking is unavailable in constructions featuring the ‘clausal expletive’. Thus, in Hungarian, *azt* (seen in (34)) and the scope marker *mit* (see in (32a)) never co-occur; and by the same token, in German, it is impossible to use scope marking in the presence of the ‘clausal expletive’ *es*, as seen in (35) and (36).<sup>21</sup>

(35) a. *womit scheint es (dir), daß man ihm helfen kann?* (German)  
 where-with seems it you that one him help can  
 ‘with what does it seem (to you) that one can help him?’

20 In a particularly interesting move, Felser suggests that the idea that the scope marker is the subject of the complement–CP may explain the fact that it cannot remain *in situ* in a multiple *wh*-question — a fact that several of the contributors to the Lutz *et al.* (2000) volume bring up but generally fail to account for insightfully.

(i) <sup>?</sup>*\*wer meint was, wen wir gewählt haben?* (German)  
 who thinks what whom we elected have

Felser manages to relate this straightforwardly to the observation (made by Fanselow & Mahajan 2000:207) that *in situ* placement of interrogative *was* is impossible in German whenever *was* is modified (or, put differently, is itself directly the subject of predication). Thus, while (iia) is grammatical, it fails to support a multiple *wh*-question interpretation, instead forcing an indefinite reading upon *was* *Schönes* ‘what beautiful’; on the other hand, the interrogative interpretation *is* available for *was* in (iib), where *was* is not *in situ*.

(ii) a. *wer hat dir denn was Schönes gesagt?* (German)  
 who has you DPRT what nice said  
 ‘who said something nice to you?’  
*\*wer hat dir denn was Schönes gesagt?*  
 \*‘who said which nice things to you?’  
 b. *was hat er dir denn Schönes gesagt?*  
 what has he you DPRT nice said  
 ‘which nice things did he say to you?’

21 These particular examples are from Reis (2000:381), but many authors (including several contributors to the Lutz *et al.* volume in which Reis’s paper appears) have pointed this out.

- (36) b. \**was* scheint *es* (dir), womit man ihm helfen kann?  
 what seems it you where-with one him help can  
 a. womit heißt *es*, daß man ihm helfen kann? (German)  
 where-with is.said it that one him help can  
 ‘with what is it said that one can help him?’  
 b. \**was* heißt *es*, womit man ihm helfen kann?  
 what is.said it where-with one him help can

What (33) also accounts for immediately is the fact that the *wh*-scope marker is in complementary distribution with real objects of the matrix verb, as shown for German in (37b), which contrasts with (37a).<sup>22</sup>

- (37) a. wen hat Peter *das Gefühl*, daß man fragen könnte? (German)  
 whom has Peter the feeling that one ask could  
 ‘who does Peter have the feeling that one could ask?’  
 b. \**was* hat Peter *das Gefühl*, wen man fragen könnte?  
 what has Peter the feeling whom one ask could

I take it, then, that (33) is amply supported by the empirical facts of the scope marking construction; and I also consider (33) to present a plausible perspective on the way the scope marker is structurally integrated into the structure as a whole.

Felser (2001) points out that, thanks to serving as a predicate of the scope-marker pronoun in the matrix clause, the embedded CP in *wh*-scope marking is similar to a relative clause (which likewise serves as a predicate). But importantly, the subject of the *wh*-CP in *wh*-scope marking must be an interrogative *wh*-pronoun: it cannot be a non-*wh* pronoun, nor can it be a *wh*-pronoun in a non-interrogative context. Felser takes this to be an automatic reflex of what she calls an *interrogative concord* relationship between the CP and the scope marker (its subject).<sup>23</sup> She explicitly likens this concord relationship to the Case concord relationship in effect (in many languages, including German) between the subject and a predicate nominal. And she goes on to assume, as is entirely plausible, that this concord relationship is subject to a locality restriction: closest c-command. These are all essential ingredients of the analysis of *wh*-scope marking, it seems to me, and I will adopt them wholesale.

### 3.7 Full-concordial scope marking: The syntax of Hungarian (14c)

As we have just seen, one important ingredient of Felser’s (2001) insightful analysis of the *wh*-scope marking construction is the idea that there is a concord relationship between the scope marker and the complement-CP. I would like to take this concord relationship further by allowing it to involve not just interrogativity (as in ‘plain’ scope marking) but also the features of the *wh*-constituent in the complement-CP.

Concretely, what I would like to propose is that it is possible for the scope marker in the matrix clause to share, in principle, any (as yet unchecked) features of the *wh*-constituent in the complement-CP. This will help me analyse the peculiar cocktail of properties characterising the A’-dependency found in the Hungarian example in (14c), repeated below as (38a). What I propose here is that this construction is a hidden scope marking construction: *wh*-movement actually proceeds no further than the embedded SpecCP position, with the *wh*-constituent engaging in a full concord relationship with the scope marker in the matrix, as in (38b).

22 Examples from Reis (2000:380).

23 Interestingly, Felser points out that this interrogative concord relationship could account for the fact that *wh*-scope marker is impossible with *infinitival* complement-CPs in German (cf. (i)): this can be viewed as a consequence of the fact that in German, infinitival clauses cannot (productively) serve as questions (unlike in English, where *I wonder what to do* and *I wonder whether to go (or not)* are grammatical).

- (38) a. <sup>?</sup>hány lány-t akar-sz, hogy eljőjön? (= (14c); Hungarian)  
 how.many girl-ACC want-2SG.INDEF that PV-come-3SG  
 b. SM+FF<sub>DP</sub>=hány lányt ... [<sub>VP</sub> SM+FF<sub>DP</sub> [<sub>VP</sub> v [<sub>VP</sub> akar-sz SM+FF<sub>DP</sub> [<sub>CP</sub> DP=∅ hogy DP eljőjön]]]]  
CONCORD

In the derivation of (38a), the *wh*-constituent checks nominative Case and agreement in the embedded clause, and then terminally A'–moves to the SpecCP position of the subordinate clause. It is not spelled out there, however, because all of its remaining features are subsequently shared, under concord, with the *wh*-scope marker generated in the matrix VP. Concord gives the scope marker all the formal and semantic features of the 'real' *wh*-constituent *except* for those uninterpretable features that had already been checked in the lower clause. So after concord, the scope marker is fully featurally identical with the *wh*-phrase in SpecCP, except for Case: an accusative Case feature is deployed on the scope marker to ensure proper Case-checking in the matrix clause. Thus, the concordial scope marker, which raises to the matrix focus position, is spelled out as *hány lány-t* 'which girl-ACC'. Its spell-out in the matrix clause, in a position that asymmetrically c-commands the position of the lower *wh*-phrase, forces the full deletion of its featurally near-identical twin in the lower SpecCP (as per Kayne 1994).

The concordial *wh*-scope-marking derivation in (38b) circumvents the Case problem apparently posed by (38a) by not positing successive-cyclic movement of the embedded subject. Movement of *hány lány* from the embedded nominative Case-checking position into the matrix accusative Case-checking position is impossible: chains do not have two structural Case-features. Instead of moving successive cyclically, the *wh*-DP in (38a) actually moves *locally*, within the embedded clause, and stays there — just as in (32), the 'plain' *wh*-scope marking construction, where the concord relationship is strictly confined to *wh*-interrogativity. In (38a), on the other hand, there is a *full* concord relationship between the *wh*-constituent in the embedded SpecCP and the scope marker, causing the latter to look exactly like its twin in the lower clause, except for the fact that the two have different Case features. Since nominative Case in Hungarian (as in so many other languages) is morphophonologically null, the concordial scope marker thus ends up being just slightly richer than the source of its concordial features: it, unlike the original *wh*-phrase, has an overtly realised structural accusative Case feature as well. With the upstairs concordial scope marker thus subsuming the original *wh*-constituent in the embedded clause *in toto*, and asymmetrically c-commanding it as well, the original *wh*-constituent is forced to remain silent at PF.<sup>24</sup> The net result of the derivation in (38b), then, is the *impression* of long-distance *wh*-fronting — an impression that arises because, even though *wh*-movement is in fact clause-bound, the donor of the features taken on by the scope marker under concord is not spelled out at PF, leaving only the concordial scope marker in the upstairs clause to receive a phonological matrix.

On the surface, then, constructions of the type in (38a) are quite opaque: they certainly do not wear their scope marking nature on their sleeve. But it can be discerned from the fact that (a) there is positive evidence (coming directly from the morphophonology) that the *wh*-constituent in the upstairs clause checks accusative Case in that clause, and (b) there is positive evidence (coming, rather less directly, from the grammaticality of parasitic gap licensing in the embedded clause: recall (30b) and (31b), above, of which the former is repeated below) that the *wh*-constituent undergoes A'–movement in the downstairs clause.

24 In multi-clausal constructions, the agreeing scope marker will, in its turn, engage in a concord relationship with the scope marker in the next clause up, and so forth. Like 'plain' *wh*-scope marking, (38b) is iterative, but while in 'plain' *wh*-scope-marking constructions, each clause typically has its own 'expletive' scope marker, as in (ia) (with speakers varying as to whether they accept (ib) or not; see the contributions to Lutz *et al.* 2000), in full concord *wh*-scope marking constructions, each concordial scope marker except for the highest one remains silent — for the same reason that the DP in the lower SpecCP in (38b) must remain silent. The fact that (ia) is grammatical can be made to follow from the plausible assumption that *was* is the spell-out of material embedded *within* DP (for concreteness, let us assume that *was* is the spell-out of just the NP portion of the *wh*-DP): the NP portion does not c-command out of DP, hence there is no violation of the PF condition barring the simultaneous identical spell-out of two or more copies in an asymmetrical c-command relationship (Kayne 1994).

- (i) a. was glaubst du was Hans gesagt hat was Peter meint wen Maria geküsst hat (German)  
 b. %was glaubst du daß Hans gesagt hat daß Peter meint wen Maria geküsst hat

- (30b) <sup>(?)</sup>hány lány-t        mondtál hogy jön        a buliba anélkül hogy meghívtál volna?  
 hw.mny girl-ACC you-said that come-3SG the party-to without that PV-invited-2SG would  
 ‘how many girls did you say came to the party without you having invited (them)?’

The conjunction of upstairs accusative and (in)definiteness agreement and downstairs parasitic gap licensing is reconcilable only with a concordial scope marking analysis.<sup>25</sup>

It may be good to make it explicit at this point that the derivation of (38a) demonstrably does not involve null operator movement in the downstairs clause — what moves inside the embedded clause is the *wh*-constituent itself, not a null operator associated with it. (30b) shows that null operators in Hungarian trigger indefinite agreement (*meghívtál*). If the operator in the lower clause in (38b) were an INDEF null operator, it should be possible to have a DEF *wh*-constituent in an apparent long-distance *wh*-movement construction that triggers DEF agreement *upstairs* but (via the null operator, which is always INDEF, by its very nature; cf. *pg* constructions) INDEF agreement *downstairs*. But such sentences are sharply impossible:

- (39) melyik lányt gondolod hogy János {megcsókolta/\*megcsókolt}? (Hungarian)  
 which girl-ACC think-2SG.DEF that János PV-kissed-DEF/\*INDEF

This is relevant to analyses (such as Schneider-Zioga’s 2009 for Kinande; see section 5.4.2, below) that have sought to represent some apparent long-distance *wh*-movement constructions in terms of partial null operator movement. But though the derivation in (38b), for full-concordial *wh*-scope marking, does not involve null operator movement, there are striking similarities between the embedded clause in (38b) and relative clauses (some of which do involve null operator movement) — at the theoretical level, both are arguably predicates (recall Felser 2001); and at the empirical level, both involve terminal *wh*-movement to the edge of CP without a true question interpretation arising (see again Felser 2001 for relevant discussion).

25 An interesting question that arises in connection with parasitic gap licensing is whether the full-concordial scope marking derivation of long *wh*-questions would allow a parasitic gap to be licensed by the *wh*-constituent in the *matrix* clause. Much depends here on the base-generation site of the concordial scope marker in the matrix clause. I have assumed so far, following the empirical lead of Hungarian and the theoretical lead of Felser (2001), that the scope marker originates in the matrix VP and raises up from there, leaving a variable behind. In a full-concordial scope marking construction, this variable will for all intents and purposes behave as if it were the variable of the *wh*-constituent in the lower SpecCP: after all, the matrix scope marker ‘inherits’ all of the features of the *wh*-constituent, in effect ‘becoming’ the *wh*-constituent itself. Hungarian full-concordial scope marking must involve base-generation of the scope marker inside the matrix VP. It is expected, therefore, that in Hungarian the equivalent of (i) should be acceptable with upstairs accusative Case and indefinite agreement. The verdict on Hungarian (iia) is not crystal clear, however: while one speaker I asked accepts it marginally, another finds it woeful. (Incidentally, both speakers reject (iib), with upstairs nominative and definite agreement, and (iic), the ‘plain’ scope marking construction. That (iic) fails is entirely as expected: there is nothing in the matrix clause that could license the parasitic gap; the scope marker is not engaged in a concord relationship with the ‘real’ *wh*. And the ungrammaticality of (iib) reduces to the same factor that also renders (ib) in fn. 18, above (from Horvath 1992), ungrammatical. In fn. 18, I suggested that this is due to a case-matching requirement imposed on Hungarian parasitic gap constructions.)

- (i) how many boys did the DA say had assisted the defendant after calling *pg* to the witness stand?  
 (ii) a. \*hány lány-t mondott az ügyész hogy segített a vádlottnak, azután hogy odahívott tanuskodni? (Hungarian)  
 how.many girl-ACC said-3SG.INDEF the DA that assisted the defendant after that called-3SG.INDEF to.witness  
 b. \*hány lány mondta az ügyész hogy segített a vádlottnak, azután hogy odahívott tanuskodni?  
 how.many girl(NOM) said-3SG.DEF the DA that assisted the defendant after that called-3SG.INDEF to.witness  
 c. \*mit mondott az ügyész hogy hány lány segített a vádlottnak, azután hogy odahívott tanuskodni?  
 what-ACC said-3SG.INDEF the DA that how.many girl(NOM) assisted the defendant after that called-3SG.INDEF to.witness

In a language that has full-concordial scope marking and that base-generates its scope marker within the VP (as in (38b)), treating it as the object of the verb, parasitic gap constructions of the type in (i) are expected to be grammatical. In languages that base-generate their scope marker outside the VP, in the scope position, with CP serving as the object of the verb, (i) should fail as a full-concordial scope marking construction with a matrix parasitic gap (though it might still succeed as an instance of Rackowski & Richards-style successive-cyclic movement via *vP*-edges). Checking the predictions is a complicated matter, though: in particular, controlling for all the relevant factors (base-generation site of scope marker; (2) or not) may be very difficult to do.

Note that the word order in the embedded clause of (38a) makes it clear that the *wh*-constituent is not being moved into the embedded focus position — unlike in the ‘plain’ scope marking construction in (32a), where the *wh*-phrase must in fact undergo focus fronting. This difference between ‘plain’ scope marking and full-concordial scope marking is arguably tied directly to the fact that in the latter, there is full concord between the *wh*-constituent in the lower clause and the scope marker in the higher clause. For such full concord to be possible, the closest c-command condition ought to be satisfied by the terms of the concordial pair — the scope marker upstairs and the *wh*-constituent downstairs. And for that condition to be satisfied, there ought to be no phase head or closer potential target for a concord relationship in between the scope marker and the *wh*-constituent. If the *wh*-constituent raised no further than to the focus position in the embedded clause, it would end up separated from the scope marker by the C-head of the embedded clause (a phase head), which would then be the closest available source for a concord relationship with the scope marker. With the *wh*-constituent raising no further than the focus position of the embedded clause, therefore, the only concord relationship that can ensue between the scope marker and something in its local c-command domain is one for *wh*-interrogativity — precisely as in Felser’s (2001) analysis of ‘plain’ *wh*-scope marking. To obtain full concord between the scope marker and the *wh*-constituent, what is needed is a configuration in which the two terms of the concordial pair are in a local c-command relationship with no other possible concordial feature or phase head intervening. And this can only be accomplished by having the *wh*-constituent in the embedded clause raise into the highest specifier position of the embedded clause — in other words, for full-concordial scope marking to be possible, *wh*-movement to SpecCP is essential.

Conversely, when nothing more than interrogative concord obtains (as in the ‘plain’ *wh*-scope marking construction), we expect that the downstairs *wh*-constituent raises no further than some specifier position below the highest head in the CP domain. For Hungarian, this is evidently the case: in (32a), *hány lány-t* ‘how many girl-ACC’ clearly raises to a position lower than the complementiser *hogy* ‘that’ that introduces the subordinate clause. For Hindi, another language famous for its ‘plain’ *wh*-scope marking constructions, word order in the embedded clause likewise makes it crystal clear that the *wh*-constituent in that clause has not raised to the highest specifier of that clause. (In Hindi, the *wh*-constituent may even be *in situ* within the embedded CP.) But for German, it is far from self-evident that the *wh*-constituent in a ‘plain’ scope marking construction is not in the highest specifier position of its clause.<sup>26</sup> Consider (39).

26 For the so-called ‘clausal pied-piping’ construction, briefly mentioned previously in fn. 19, it is attractive to propose a covert scope marking approach, working exactly like ‘plain’ *wh*-scope marking except for the fact that there is no overt scope marker, causing the entire embedded clause to raise into the matrix scope position. What seems to argue in favour of an assimilation of ‘plain’ *wh*-scope marking and clausal pied-piping is that both resist negation in the matrix clause (see Rizzi 1990 for scope marking, and Arregi 2003:135 for Basque clausal pied-piping). If this assimilation is correct, then the Malay facts mentioned in fn. 19 raise the same kind of potential concern as do the German scope marking facts: it seems that the *wh*-constituent *has* in fact raised into the highest specifier position of the embedded clause, preceding what appears to be the complementiser (*yang*). For Malay, as for German, one is therefore led to argue (if one believes in an analysis along the lines proposed in this paper) that the declarative complementiser introducing embedded clauses is not the lexicalisation of the highest functional head in its clause. Fortunately for me, Basque clausal pied-piping constructions do not pose any kind of threat for the text generalisation that ‘plain’ *wh*-scope marking (and by extension, clausal pied-piping constructions) feature the *wh*-constituent in the embedded clause in a position that is not the highest specifier position in its clause: in Basque clausal pied-piping constructions, it is entirely possible for topicalised material to appear to the left of the *ex-situ wh*-constituent, as in [<sub>CP</sub> *Jonek se idatzi rabela*] *pentzate su?* ‘Jon-ERG what written has you-think?’ (Karlos Arregi, p.c.), where *Jonek* precedes *se*. Basque clausal pied-piping is thus directly compatible with the proposed analysis.

Nonetheless, Arregi (2003) argues explicitly that clausal pied-piping does not involve an indirect-dependency scope marking structure (*contra* Lahiri 2002), based on two semantic facts. First of all, Arregi points out that it is not true that the embedded clause in a Basque clausal pied-piping construction must be presuppositional — in stark contrast to the embedded clause in an indirect-dependency *wh*-scope-marking construction (Herburger 1994). The presupposed status of the embedded proposition follows straightforwardly from the indirect dependency approach to *wh*-scope-marking constructions (hence is an argument for it): at LF the scope marker receives as its restriction the embedded question; the scope marker is a *wh*-determiner, hence presuppositional.

- (i) ‘If *D* is a presuppositional determiner, then a sentence of the form  $D\alpha[A\alpha][B\alpha]$  (where  $\alpha$  is a variable and *A* and *B* are (1-place) predicates) presupposes the conjunction of  $\exists\alpha[A\alpha]$  and any other presuppositions that may be associated with the predicate in the restriction, viz. *A*’ (Lahiri 2002)

- (39) a. was glaubst du, wer daß {kommt/ du bist}? (German)  
       what think you who that comes you are  
       b. wer glaubst du, wer daß {kommt/ du bist}?  
       who think you who that comes you are

Fanselow & Mahajan (2000:222) report explicitly that there are dialects of German that allow so-called *wh*-copying constructions of the type in (39b), with a ‘doubly-filled Comp’ configuration in the lower clause. I will analyse this construction in the following section as a concordial scope marking construction, so the grammaticality of (39b) is unsurprising. What is perhaps worrisome, however, is that (39a) occurs as well (see Fanselow 2006:449). But the fact that (39a) is grammatical does not necessarily undermine the claim that in ‘plain’ *wh*-scope marking constructions, the *wh*-constituent in the lower clause must not be on the edge of the highest CP layer: much will depend on a fine-grained cartography of the German CP. For Dutch, it is certainly unlikely that the complementiser *dat* (the cognate of German *daß*) occupies the highest head position in the CP field: it can be preceded by another complementiser, *of* ‘if’, in *of dat* sequences (e.g., *ik weet niet wie of dat er komt* ‘I know not who if that there comes, i.e., I don’t know who is coming’). I provisionally assume that what is true for Dutch *dat* carries over to German *daß*, and hence that (39a) does not prove unequivocally that the *wh*-constituent in the embedded clause of a ‘plain’ *wh*-scope marking construction is on the edge of the highest CP layer. In any event, the prediction ensuing from the analysis is clear: to ensure that nothing more than Felser-type interrogative concord takes place, it must be that the *wh*-constituent in the lower clause of a ‘plain’ *wh*-scope marking construction is not on the edge of the highest CP layer.

The ‘plain’ and full-concordial *wh*-scope marking constructions thus differ from one another in two respects, which are intimately related: (i) in the latter, there is full concord between the *wh*-constituent in the lower clause and the scope marker in the higher clause, whereas in the former there is concord between the scope marker and the features of the highest C–head of the lower clause; this is a consequence of the fact that (ii) in the concordial scope marking construction the *wh*-constituent raises to the edge of the highest CP layer, whereas in the ‘plain’ *wh*-scope marking construction the ‘real’ *wh*-constituent does not reach so high a point.

A different way of putting some of this is that a central difference between ‘plain’ scope marking as in (32) and concordial scope marking as in (38) is that while the former involves an *indirect* dependency between the scope marker and the ‘real’ *wh*-constituent, in (38) there is a *direct* dependency between the two. If this is correct, therefore, both direct and indirect dependency exist in the realm of scope marking constructions, but they deliver different outputs: ‘plain’ *wh*-scope marking *always* involves indirect dependency (as Bruening 2006 is right to stress); and direct dependency *always* delivers concordial scope marking.

But note that the fact that in clausal pied-piping constructions the embedded clause is not presuppositional, rather than defeating the assimilation of indirect-dependency *wh*-scope marking and clausal pied-piping altogether, could be made to follow from the fact that there is *no overt scope marker* in clausal pied-piping constructions: in particular, with the entire scope marker being null, there is no overt *wh*-determiner in the structure; assuming that the null D of a null scope marker is not presuppositional, then with the embedded CP in a dependency relationship with the *null* scope marker it does not follow that the embedded clause must be presuppositional in clausal pied-piping constructions. Arregi’s second argument against an assimilation of indirect-dependency *wh*-scope marking and clausal pied-piping is the interpretive discrepancy between the two when it comes to amount *vs* referential readings in *how-many* questions — ‘plain’ scope marking constructions allow only the amount reading, not the referential reading; but Basque clausal pied-piping constructions are ambiguous in the same way that LD *wh*-questions are. If this is a matter of *scope* (as is standard), it is conceivable that clausal pied-piping gives the *wh*-constituent the possibility of wide scope, while ‘plain’ scope marking does not. So if in ‘plain’ scope marking constructions the *wh*-clause does *not* undergo LF–movement towards the scope marking, and if the *wh*-constituent can be argued to have the ability to (‘almost’) c-command out of the clause it is contained in, then the scope facts about scope marking constructions and clausal pied-piping constructions fall into place without the idea that the two have the same *underlying* syntax being in jeopardy. Arregi is assuming the *Lahiri-style* analysis of indirect-dependency scope marking, and is investigating whether this analysis could be carried over to clausal pied-piping constructions — *quod non*. But Lahiri’s analysis of ‘plain’ scope marking in terms of LF–movement of the *wh*-clause seems ill-motivated and syntactically undesirable. So at LF, indirect-dependency scope marking constructions arguably *do* differ from clausal pied-piping constructions. But it seems to me that the *underlying* representation for indirect-dependency scope marking constructions and clausal pied-piping constructions may very well be the same, involving a structure of the type in (32b). Arregi’s two arguments against an assimilation of the analysis of clausal pied-piping to a Lahiri-style analysis of ‘plain’ scope marking do not undermine such an underlying assimilation.

To return to the main thread of the discussion in this section, what I have argued is that Hungarian builds sentences of the type in (14c) not via the application of successive-cyclic movement via SpecCP (which would at first blush appear to be a sensible approach to such examples) but instead via what I have called concordial *wh*-scope marking. Precisely because (14c) looks at first like a prime candidate for an analysis in terms of successive-cyclic movement via SpecCP (with the embedded subject checking Case- and  $\phi$ -features against the lower T, and subsequently checking Case and definiteness against the higher  $\nu$ ), the fact that it cannot be so analysed is very significant.

The full-concordial scope marking derivation in (38b) is presumably available universally — though in many languages it may be very difficult, if not downright impossible, to distinguish between it and (2)/(17b) (repeated below), the derivation involving successive-cyclic movement via  $\nu$ P-edges.

(17b) DP=*hány lány* ... [ <sub>$\nu$ P</sub>  $\bar{\text{DP}}$  [ <sub>$\nu$ P</sub>  $\nu$  [ <sub>$\nu$ P</sub> *akar-od* [<sub>CP</sub> *hogy*  $\bar{\text{DP}}$  *eljöjjön*]]]]]

Hungarian provides the morphological tools to recognise (38b) as distinct from (17b): in the latter, with matrix  $\nu$  Agreeing with CP, we get systematic upstairs DEF agreement, and the *wh*-constituent will be spelled out with the Case it checks in the embedded clause (so nominative in (17b)); in (38b), on the other hand, matrix  $\nu$  Agrees with the full-concordial scope marker in definiteness, and the full-concordial scope marker will be spelled out with the Case checked by the matrix  $\nu$  (i.e., accusative). In languages lacking the morphological wherewithal to tease (17b) and (38b) apart, long A'-dependencies may often be ambiguous between the successive-cyclic derivation and the full-concordial *wh*-scope marking derivation. (Note that the two derivations do not compete: they have different numerations.) This may, at least in part, lie beneath the fact that both L1 and L2 learners of English produce *wh*-scope marking constructions and *wh*-copying constructions (i.e., *wh*-scope-marking constructions with  $\phi$ -concord) alongside long *wh*-fronting (for L1 acquisition, see Thornton's 1990 seminal work; for L2 acquisition, see Slavkov 2008 and references there).

I should point out at this point that mine is not the first attempt to assimilate apparent successive-cyclic movement via SpecCP to *wh*-scope marking. In an interesting paper, Stepanov & Stateva (2006) have recently sought a *rapprochement* between the two phenomena as well. I will not have the space here to discuss their account in detail, but let me say clearly that I fully agree with them that (apparent) long-distance *wh*-movement constructions can be derived from a source structure that is very similar to that of *wh*-scope marking constructions. I also *partially* agree with their statements that 'long-distance questions involve an (abstract) *wh*-scope marker' (p. 2107) and that '[a]ll language form *wh*-questions of the [long *wh*-fronting or *wh*-scope marking] type with the help of a scope marking *wh*-element' (p. 2146) — I agree *partially* because, as I have argued in the foregoing, genuine long-distance A'-movement dependencies, *not* built on a *wh*-scope marking structure but instead derived *à la* (2) (successive-cyclic movement via  $\nu$ P-edges), do exist. Thus, it seems to me that Stepanov & Stateva's proposal is too categorical, in generalising over *all* long *wh*-fronting; but they are right that there are indeed long *wh*-fronting constructions involving a scope marking derivation. Stepanov & Stateva (2006) are arguably wrong, however, to believe that the abstract *wh*-scope-marker 'initially forms a constituent with an embedded clause' and that long-distance *wh*-movement 'becomes possible when the (abstract) *wh*-scope marker is able to undergo incorporation with the matrix verb' from out of the [SM+*wh*-CP] structure originating in the verb's complement. Apart from the fact that some of their technical assumptions are rather dubious,<sup>27</sup> it seems to me that the biggest problem with the idea that the *wh*-scope marker must incorporate into the verb to make long *wh*-fronting possible is that it basically

27 Here, I would like to highlight the 'tree pruning' exercise they engage in to accommodate the fact that CP allows the *wh*-constituent to raise up into the matrix clause after the scope marker has incorporated, and also the significant semantic compositionality problem that their analysis encounters: see p. 2143, where they suggest that, while the composite SM+V 'is derived syntactically, the lexical meaning is assigned later to the whole complex word, perhaps under the conceivable assumption that the meaning of the scope marker and the matrix verb are underspecified in' long *wh*-fronting constructions. This is playing word games, and it is not sufficient either because Hindi *wh*-scope marking constructions are assumed to have the same syntactic derivation featuring scope marker incorporation into the verb but they have a different semantics, forcing a presuppositional reading on the embedded clause while English scope marker incorporation constructions do not.



(41) the weather seems like {it/\*the weather} is going to change

If we believe that *the weather* and *it* are members of a single chain, then plainly we are not dealing here with the multiple spell-out of copies that are included in this chain: at a minimum, we would need a ‘copy reduction’ mechanism to ensure that the lower copy is never spelled out as a full noun phrase; it must be pronominal instead. Here one might have recourse to some version of Principle C of the Binding Theory (though how exactly that would work is far from clear). But what should give us pause before pursuing such an approach is that exactly the opposite problem dogs a literal copying approach to so-called *wh*-copying constructions. For in such constructions, it is possible to use a full-fledged, multi-word *wh*-constituent *provided* that it is spelled out in full *only* in the most deeply embedded clause: the ‘copy’ in the higher clause(s) must be a bare *wh*-word:

- (42) a. who do you think whose fault that is?  
 b. \*whose fault do you think whose fault that is?
- (43) a. who do you think which baby eats the ice cream? (L2 English)  
 b. \*which baby do you think which baby eats the ice cream?
- (44) a. wen denkst du wen von den Studenten man einladen sollte? (German)  
 who think you who of the students one invite should  
 ‘which of the students do you think one should invite?’  
 b. \*wessen Studenten denkst du wessen Studenten man einladen sollte?  
 whose students think you whose students one invite should
- (45) wieviel sagst du wieviel Schweine ihr habt? (German)  
 how.many say you how.many pigs you(PL) have  
 ‘how many pigs do you say that you have?’

(42a), with *who* upstairs, is a type of sentence attested multiple times in postings on the internet;<sup>29</sup> (42b) is radically unattested. And similarly, (43a), taken from Gutiérrez’s (2005) work on L2 acquisition of English, is found while (43b) is not.<sup>30</sup> The German facts in (44) and (45) (taken from Fanselow & Ćavar 2001, cited in Bruening 2006) further confirm the picture on a cross-linguistic basis. Throughout these cases, we plainly cannot make an appeal to something like Principle C to rule out the ungrammatical sentences.

Systematically, so-called *wh*-copying is characterised by the fact that, just as in ‘plain’ *wh*-scope marking constructions, the *wh*-constituent in the higher clause(s) is a *bare wh*-element.<sup>31</sup> This, I would like

29 Gavrusava & Thornton (2001) point out that the children they observed in their experiment investigating the acquisition of questions like *whose flower do you think fell off?* never produced things like (42a), although they did produce *who do you think’s flower fell off?*. But they point out that none of the children in their particular experiment happened to produce ‘medial *wh*-constructions’ to begin with (whereas other L1 learners of English do), so I take this to be an accidental gap, not a principled one.

30 Thornton (1990, 1995) has observed somewhat different effects in L1 acquisition of English. In particular, she reports (see also Thornton & Crain 1994, Van Kampen 1997) that sentences such as (i) occur as ‘medial *wh*-constructions’ in child English. I have nothing to say about these here.

(i) which mouse do you think who the cat chased? (child English)

31 German (i) arguably does not counterexemplify the text statement, it being highly likely that *wovon* is treated as a single word (obtained via some form of reanalysis or incorporation). As Fanselow & Mahajan (2000) point out, when a full PP appears to be involved, speakers are less willing to accept full-fledged *wh*-copying — (ii) is often rejected. One suspects that those speakers for whom (ii) does actually succeed can treat *an wen* in (ii) analogously to *wovon* in (i), as a single-word unit. The case of Afrikaans, where (iii) is apparently fully productive and acceptable, is potentially somewhat harder to deal with. But here, too, it remains significant that such examples work only if the preposition takes a pronominal *wh*-complement.

- (i) wovon glaubst du wovon sie träumt? (German)  
 where.of think you where.of she dreams
- (ii) \*an wen glaubst du an wen sie denkt?  
 of whom think you of whom she thinks

to argue, is a consequence of the fact that in so-called *wh*-copying constructions, what gets ‘copied over’ to the scope marker in the matrix clause is a small subset of the features of the *wh*-constituent in the embedded clause — in what I call *partial* concord. A typical case of *wh*-copying featuring a nominal *wh*-constituent in the matrix clause involves concord between the *wh*-constituent downstairs and the *wh*-scope marker upstairs for just the N-features of the former — not for any of the other features of the *wh*-constituent, in particular, those residing under D.

So, to take the case in (43a) as our initial illustration, the structure can be schematised as follows:

- (46) a. who do you think which baby eats the ice cream?  
 b. SM+FF<sub>NP</sub>=*who* ... [<sub>VP</sub> SM+FF<sub>NP</sub> [<sub>VP</sub> v [<sub>VP</sub> think SM+FF<sub>NP</sub> [<sub>CP</sub> [<sub>DP</sub> which [<sub>NP</sub> baby]]] ...  $\bar{D}P$  eats...]]]]  
CONCORD

Under concord, all the N-features of the *wh*-constituent *which baby* are shared with the *wh*-scope marker in the higher clause. The set of N-features includes all the  $\phi$ -features, but none of the quantificational properties of the *wh*-constituent. Concretely, then, the scope marker ‘inherits’ from the *wh*-constituent the fact that it is singular and human, which (in conjunction with the fact that it is a *wh*-element) leads the scope marker to be spelled out as *who* — and crucially not as *which baby* (which would have had to involve full concord, in which case, inevitably, the *wh*-phrase in the downstairs clause would have ended up being silent; recall the discussion in section 3.7, above).

In some of the examples of *wh*-copying presented above, something slightly different is going on: rather than the *wh*-constituent’s N-features being ‘copied over’ under concord, it is precisely its D-features (and the D-features *alone*) that seem to be the target of concord. A case in point seems to be (45), which ‘copies’ just the quantificational properties of the *wh*-constituent downstairs, leaving the rest untouched. This is also a logical possibility. So I take it to be interesting that it appears to be attested. Either way, since in so-called *wh*-copying constructions, the *wh*-scope marker is only in a *partial* concord relationship with the *wh*-constituent downstairs, it never actually ends up being fully *identical* with the *wh*-constituent in the lower clause. This has the desirable effect of ensuring that *both* the partial-concordial scope marker *and* the *wh*-constituent in the lower clause receive a phonological matrix. In this respect *wh*-copying constructions behave very much like ‘plain’ *wh*-scope marking constructions — and very differently from full-concordial scope marking constructions, which always involve full deletion downstairs, under identity with the asymmetrically c-commanding fully concordial scope marker upstairs. But on the other hand, it is precisely the fact that both partial-concordial scope marking constructions and full-concordial scope marking constructions involve *concord*, while ‘plain’ scope marking constructions do not, that makes *wh*-copying seem much closer to ‘successive-cyclic’ *wh*-fronting constructions than to ‘plain’ *wh*-scope marking constructions.

Distributionally, too, *wh*-copying constructions are quite different from ‘plain’ *wh*-scope marking constructions, and much closer to ‘successive-cyclic’ *wh*-fronting constructions. I agree here entirely with what Schippers (2009) writes on the subject (where ‘LD’ stands for ‘long-distance’):

*wh*-copying is more closely related to LD *wh*-movement than partial *wh*-movement. Specifically, *wh*-copying is a type of secondary strategy for LD *wh*-movement. This observation indeed seems to be corroborated by crosslinguistic patterns: partial *wh*-movement and LD *wh*-movement are often in complementary distribution (cf. Stepanov & Stateva, 2007), while *wh*-copying only appears to show up in languages that also have LD *wh*-movement. This is also corroborated by grammaticality judgment data from Dutch, an LD *wh*-movement language, which shows that *wh*-copying is much more acceptable than partial *wh*-movement in this language and even preferred over LD *wh*-movement by some speakers.

- (iii) met wie het jy nou weer gesê met wie het Sarie gedog (Afrikaans)  
 with whom have you now again said with whom has Sarie thought  
 met wie gaan Jan trou?  
 with whom goes Jan marry  
 ‘who did you say (again) did Sarie think Jan is going to marry?’

It seems to me that this is correct and significant. Schippers' proposal and mine are both successful in deriving it. But it seems to me that the present proposal does so in a way that is superior to the rather questionable 'sequential chains' approach put forward by Schippers, which I will briefly comment on now.

Schippers (2009) presents an outlook on the typology of *wh*-dependencies that is philosophically similar to the one pursued here in that it exploits *wh*-scope marking in the analysis of long-distance *wh*-movement and *wh*-copying as well. For Schippers (as for me, by and large<sup>32</sup>), the *wh*-constituent in the embedded clause is the *head* of a local *wh*-movement chain, in all three construction types. What makes *wh*-copying and long-distance *wh*-movement different from *wh*-scope marking on Schippers' approach is that in the former two cases, the *wh*-constituent is 'attracted again and move[s] up' — because 'there is a higher CP where a Q-feature must also be checked'. Concretely, then, in both *wh*-copying and long-distance *wh*-movement constructions the *wh*-constituent in the embedded clause is 'both the head and the tail of separate A'-movement chains'.

It seems to me that this proposal makes it extremely difficult to understand how *\*who did you ask who left?* and *\*who did you ask left?* can be ruled out — illegitimate cases of *wh*-copying and long-distance *wh*-movement (respectively) out of an embedded *question*. It seems that this is precisely the kind of thing the 'both head and tail of separate chains' proposal should straightforwardly allow, wrongly so. Exactly how the difference between *wh*-copying and long-distance *wh*-fronting is accounted for also remains unclear: Schippers writes that '[i]t is ... "safer" not to delete the medial *wh*-phrase at all, which results in *wh*-copying', but that '[i]f the choice is being made to delete the medial *wh*-phrase anyway (and hence the head of the first chain), LD *wh*-movement results'; but she does not make it clear what determines the choice between the 'safer' route and the other one. In fairness, I should point out, however, that for me, what determines the difference between *wh*-copying and long *wh*-fronting (or, in my terminology, the difference between partial concord and full concord) also is not perfectly clear.<sup>33</sup>

What the present proposal does address explicitly, with an appeal to the locus of *wh*-placement, is why 'plain' *wh*-scope marking and *wh*-copying tend to be in complementary distribution. The division of labour between 'plain' *wh*-scope marking and *wh*-copying is recast in this work as a function of the position of the *wh*-constituent in the lower clause: within CP or on its edge, respectively. This predicts that *wh*-copying should not exist in languages that spell (embedded) *wh*'s out in a position lower than SpecCP: concord is subject to locality conditions; no phase head C may intervene between the members of a concord relationship. Hungarian always spells out its interrogative *wh*'s in a CP-internal focus position,<sup>34</sup> and hence, while extraordinarily well-stocked in types of A'-dependencies, it lacks precisely the *wh*-copying construction. This is a very straightforward and entirely accurate prediction which I will chalk up as an argument in favour of the approach taken here.

32 I say 'by and large' because my proposal of course explicitly does *not* seek to reduce *all* apparent long-distance *wh*-fronting to *wh*-scope marking: I have argued on the basis of the facts of Hungarian that UG should allow, alongside full-concordial scope marking, for the possibility of successive-cyclic *wh*-fronting via *vP*-edges, *à la* Rackowski & Richards (2005). The derivation in (2) is profoundly different in nature from the concordial scope marking derivation, as I have stressed.

33 Stepanov & Stateva (2006:2112) criticise McDaniel's (1986) '*wh*-chains' approach to the typology of *wh*-dependencies precisely for not being able to predict 'why many languages possess one type of dependency, but not the other'. There are superficial parallels between the present approach to the typology of *wh*-dependencies and McDaniel's (1986) '*wh*-chains' approach — though in a way McDaniel's line runs in exactly the opposite direction: for her, it is the 'plain' *wh*-scope-marking construction for which a '*wh*-chain' is postulated; for me, on the other hand, there is a kind of chain formed (via concord) in full-concordial *wh*-scope marking constructions and in *wh*-copying (or partial-concordial) *wh*-scope marking constructions, but not in 'plain' *wh*-scope marking constructions.

34 Though, as we have seen, interrogative *wh*-phrases CAN raise terminally to SpecCP in Hungarian (just as in English). But because Hungarian exploits raising to SpecCP only in *wh*-scope marking questions that give rise to full concord between the *wh*-constituent raised to SpecCP and the scope marker, the *wh*-constituent cannot actually be *pronounced* in cases in which it raises to SpecCP in this language. Any *pronounced wh*-constituent in a Hungarian *wh*-question occupies the focus position, within (and not on the outermost edge of) CP.

‘Plain’ scope marking and *wh*-copying are not in complementary distribution throughout the world’s languages. Thus, Passamaquoddy utilises both strategies, in addition to also having long *wh*-fronting at its disposal. But while *wh*-copying and long *wh*-fronting behave exactly on a par with respect to the diagnostics Bruening (2006) puts forward, ‘plain’ *wh*-scope marking behaves differently. To see this, consider the fact that, as Bruening points out, in a Passamaquoddy ‘plain’ scope marking construction (featuring *keq(sey)* as the scope marker), the matrix verb must be in its inanimate form, whereas in *wh*-copying constructions (partial-concordial scope marking constructions, in my way of looking at them) and long *wh*-fronting constructions (likely to be analysed as cases of full-concordial scope marking in Passamaquoddy), the matrix verb shows animate agreement with the *wh*-constituent:<sup>35</sup>

- (47) a. *keqsey* Tihtiyas *wewitahato-k* [CP *wen-il* *mace-wici-yem-ku-n* *Sipayik*]? (Pas.)  
 what Tihtiyas remember.INAN-3CONJ who-OBV start-with-go-INV-N Sipayik  
 ‘who does Tihtiyas remember went with her to Sipayik?’
- b. *wen* Mali *wewitaham-a-c-il* [CP *wen* *kisi-niskam-uk*]?  
 who Mary remember.AN-DIR-3CONJ-PARTOBV who PF-dance.with.AN-1-CONJ  
 ‘who does Mary remember I danced with?’
- c. *wen* Mali *wewitaham-a-c-il* [CP *eli* *kisi-niskam-uk*]?  
 who Mary remember.AN-DIR-3CONJ-PARTOBV that PF-dance.with.AN-1-CONJ  
 ‘who does Mary remember I danced with?’

Though I have no explicit evidence to this effect for Passamaquoddy, what my analysis of the three different types of *wh*-scope marking constructions (‘plain’, partial-concordial, and full-concordial) leads me to conjecture is that in (47a) the ‘real’ *wh*-constituent in the embedded clause occupies a position that is structurally lower than the position *wen* occupies in (47b). Such a positional difference will certainly be compatible with the fact that the upstairs verb is unable to agree with the embedded *wh*-phrase in (47a), while it does agree with *wen* in (47b): with *wen-il* in (47a) occupying a position within (rather than on the edge of) the CP phase, it is invisible to the matrix verb, which agrees either with the scope marker or with the complement–CP.<sup>36</sup>

Full parallelism between ‘plain’ *wh*-scope-marking and *wh*-copying constructions could be found only in languages in which both constructions involve a *direct* dependency between the scope marker upstairs and the *wh*-constituent downstairs. But it is precisely the point of the present analysis that ‘plain’ scope marking constructions and concordial scope marking constructions crucially differ from one another on this point, the former involving an *indirect* dependency. Bruening’s (2006) discussion of Passamaquoddy strongly confirms that ‘plain’ *wh*-scope marking constructions *always* involve an *indirect* dependency of the type proposed in Dayal (1994) (contrary to what Bruening had concluded in his 2004 paper, where he had proposed that Passamaquoddy has two different types of ‘plain’ scope marking construction, one involving direct dependency and the other indirect dependency).<sup>37</sup> Bruening’s other main observation, that *wh*-copying behaves very much like long *wh*-fronting, also fits in with the discussion in this paper — especially if Passamaquoddy exploits full-concordial scope marking in the formation of its long *wh*-dependencies.

35 Bruening (2006:33–34) writes: ‘I believe that *wh*-copying is ungrammatical without the agreement, just like long-distance movement, but I do not yet have the relevant data.’

36 It is hard to say exactly what the verb is agreeing with. If indeed the matrix verb in (47a) agrees with the complement–CP rather than with the scope marker *keq(sey)*, then Passamaquoddy will be an example of a ‘plain’ scope marking language that generates its scope marker outside the VP.

37 Bruening (2006), rescinding his earlier argument in Bruening (2004), now argues that the *tan*-scope-marking construction in Passamaquoddy is actually a *wh*-copying construction. So while Bruening argues against a parallel approach to *wh*-scope-marking and *wh*-copying constructions, it is interesting that he ends up with a kind of empirical *rapprochement* between the two in Passamaquoddy, where something that on the surface looks much like a *wh*-scope marking construction is treated as *wh*-copying.

Bruening, in his discussion of scope marking and *wh*-copying, relies heavily on Felser's (2004) approach to these two phenomena, which I would like to make a few remarks on in closing this discussion of *wh*-copying. Though Felser's approach to *wh*-copying is very different in details from mine, there is a point of contact between the two accounts. While Felser concludes that the lower copy is an intermediate *wh* left behind under successive-cyclic movement, she does not treat it as *identical* with the upstairs copy: 'multiple *wh*-copies are actually non-identical', at least at LF (p. 561); the two 'copies' correspond to different portions of the *wh*-constituent (the operator part upstairs, the restriction downstairs).<sup>38</sup> Nothing else said, such a 'stranding' approach to *wh*-copying would lead one to expect 'copies' to surface in any of the positions along the *wh*-movement path — including, crucially, any and all *vP*-adjoined 'copies' as well as the base 'copy'. (Schippers 2009 correctly makes this point as well.) This is contrary to fact.

Felser (2004:565) says something potentially quite interesting about why no 'copies' ever materialise in these positions: she sees *wh*-copying as one of two ways for German speakers to satisfy the requirement that embedded CP have phonological content, either in the head or in the specifier position. So Felser's proposal ends up predicting that *daß* and the '*wh*-copy' should be in complementary distribution: each ultimately serves the same purpose: 'rendering the embedded CP in long-distance questions PF-visible' (p. 565) — and she actually says, towards the end of her paper, that indeed PF-visibility 'accounts for the fact that overt intermediate copies do not normally co-occur with overt complementisers' (p. 571). The use of 'normally' here is puzzling. Earlier in her paper she had rejected the complementiser agreement approach to *wh*-copying (the intermediate *wh* is an agreeing complementiser, not a *wh*-word) precisely on the basis of the fact that the '*wh*-copy' is NOT in complementary distribution with an embedded complementiser: to prove this, she brought up Fanselow & Mahajan's (2000) example of co-occurrence of a '*wh*-copy' and a complementiser, quoted above as (39b) (*wer glaubst du wer daß du bist?*), and it certainly was not deemed 'abnormal' at that stage in the argumentation.

In sum, attractive though it might seem, the 'PF-visibility' idea to regulate the distribution of '*wh*-copies' ultimately does not work. This then takes us back to the question of why the loci of '*wh*-copy' spell-out are precisely the intermediate SpecCP positions, and no other positions on the successive-cyclic *wh*-movement path. For the absence of lexicalisation of the copy in the *base* position, one might appeal to something similar to what Sportiche (1988) says in the context of his stranding approach to Q-float; but for Sportiche, it is quite important that Q-float does manage to strand a Q in *all* intermediate positions, regardless of their nature — and as we will see in our discussion of Q-float off of *wh*-constituents in West Ulster English in section 5.2.1, it is likely that such Q-float is also possible in *vP*-edge positions.

On a successive-cyclic movement approach to *wh*-copying, therefore, there does not appear to be a principled solution to the problem of why '*wh*-copies' never materialise in any positions other than SpecCP. The partial-concordial scope marking approach to *wh*-copying, on the other hand, does have a principled answer to this question: '*wh*-copies' can only show up in SpecCP positions because it is only in these positions that they can engage in a featural concord relationship with the *wh*-scope marker in the higher clause; lower copies in *wh*-movement chains (and all other chains, for that matter) *always* remain silent (that is, there is no such thing as 'copy spell-out'), hence no overgeneration problem ever arises.

### 3.9 On non-argumental noun phrases and concordial scope marking

At this point, I would like to address a question that came up in our discussion of the distribution of the various strategies for forming long *wh*-dependencies in Hungarian: why full-concordial scope marking is not available, in Hungarian, for non-argumental *wh*-constituents (nominal measure phrases, predicate nominals). Recall that of the various logically possible options for forming a long *wh*-question corresponding to English *what kind of a man would you like Béla to become?*, Hungarian can resort to exactly one — the one in (18a); (18b–d) are all ungrammatical.

38 Felser draws an explicit connection here between *wh*-copying and *was für*-split.

- |      |    |   |                      |      |                      |             |
|------|----|---|----------------------|------|----------------------|-------------|
| (18) | a. | milyen ember  | szeretné-d           | hogy | legyen               | Béla? (Hu.) |
|      |    | what.kind.of man(NOM)                               | would.like-2SG.DEF   | that | be(come).SUBJUNC-3SG | Béla        |
|      | b. | *milyen ember                                       | szeretné-l           | hogy | legyen               | Béla?       |
|      |    | what.kind.of man(NOM)                               | would.like-2SG.INDEF | that | be(come).SUBJUNC-3SG | Béla        |
|      | c. | *milyen ember-t                                     | szeretné-l           | hogy | legyen               | Béla?       |
|      |    | what.kind.of man-ACC                                | would.like-2SG.INDEF | that | be(come).SUBJUNC-3SG | Béla        |
|      | d. | *milyen ember-t                                     | szeretné-d           | hogy | legyen               | Béla?       |
|      |    | what.kind.of man-ACC                                | would.like-2SG.DEF   | that | be(come).SUBJUNC-3SG | Béla        |
|      |    | ‘what kind of man would you like Béla to be(come)?’ |                      |      |                      |             |

Of course (18b) and (18d) are never serious contenders: when the matrix verb has indefinite inflection, *v* will have to establish a full agreement relationship with the *wh*-constituent, which it clearly is not doing in (18b) (because *milyen ember* is nominative, not accusative); and (18d) is ungrammatical because accusative *milyen embert* is trying to check the upstairs *v*'s Case feature without at the same time checking its definiteness feature as well. But (18c) is a plausible option, *a priori*. The fact that it fails demands a principled explanation, especially in view of the fact that both ‘plain’ *wh*-scope marking and *wh*-copying *do* happen with non-argumental noun phrases:

- |      |    |                                   |         |     |     |     |       |          |
|------|----|-----------------------------------|---------|-----|-----|-----|-------|----------|
| (48) | a. | was                               | glaubst | du  | wer | du  | bist? | (German) |
|      |    | what                              | think   | you | who | you | are   |          |
|      | b. | wer                               | glaubst | du  | wer | du  | bist? |          |
|      |    | who                               | think   | you | who | you | are   |          |
|      |    | both: ‘who do you think you are?’ |         |     |     |     |       |          |

So whatever underlies the ungrammaticality of (18c), it cannot be a restriction on scope marking in general, or even on concordial scope marking.

Let us conjecture that what is at work in (18c) is specifically a restriction on *full*-concordial scope marking constructions. Full-concordial scope marking involves the concord for *all* features of the *wh*-constituent in the embedded SpecCP between this constituent and the scope marker in the matrix clause. Partial-concordial scope marking (‘*wh*-copying’), on the other hand, involves concord for a subset of features (typically, just the N-features) only. Assume now the existence of a ‘ $\theta$ -feature’ (or some other formal property associated specifically with argumenthood), and assume (as one surely must) that this feature is a property of DPs, not bare NPs (which are usually denied argumenthood in the literature). Then we may suggest that the combination of a structural accusative Case feature (assigned to the scope marker in the matrix VP) and the lack of a ‘ $\theta$ -feature’ (or whatever formal property is associated with argumenthood) results in a *clash* — presumably at LF (because it is of course not at all impossible for a non-argument to have a *morphological* accusative feature; in fact, measure phrases in Hungarian *are* explicitly so adorned).

This is a convenient way of dealing with the problem posed by Hungarian, though it is not terribly deep.<sup>39</sup> But supposing it can be made to work, it will rule out full-concordial scope marking (‘successive-cyclic movement via SpecCP’) for all non-arguments (at least in all languages whose scope markers originate in the VP), while leaving partial-concordial scope marking (‘*wh*-copying’) unaffected because the ‘ $\theta$ -feature’ is not shared under partial concord: only the N-features, not the D-features are affected by partial concord. This in turn forces non-arguments to perform long-distance A'-fronting via the Rackowski & Richards (2005) strategy, which is contingent on the matrix *v* establishing an Agree relationship with the CP from which extraction takes place. Such an Agree relationship cannot be established when the CP is in subject position or in adjunct position — this derives (at least for languages whose scope markers originate within the matrix VP) the robust ban on extraction of non-arguments (even when formally DPs) from subject and adjunct clauses. (See Rackowski & Richards 2005 for thoughts on how to derive the *wh*-island condition as well.)

39 Particularly discomfoting is the need to adopt a ‘ $\theta$ -feature’ or some other formal property singling out arguments.

One last note. Throughout the discussion of scope marking constructions I have assumed (taking the empirical lead of Hungarian and the analytical lead of Felser 2001) that the scope marker systematically originates as a subconstituent of the matrix VP, and raises to SpecCP from there. But it is entirely possible that languages exist that base-generate their scope markers *outside* the matrix VP, perhaps directly in the scopal A'–specifier position (cf. (4a)). If this is indeed the case, *and* if concord can obtain (under certain circumstances) between the distant scope marker and the *wh*-constituent in the lower SpecCP, then it is expected that there may be languages in which non-argument extraction from subject and adjunct clauses is not ruled out — precisely because such languages might have recourse to the full-concordial scope marking derivation for such constructions. To be able to properly assess the merits of this prediction, what remains to be discovered is a proper picture of the circumstances under which scope markers originate in VP–internal position or instead in an A'–position (if indeed they ever do), and what exactly the restrictions are, cross-linguistically, on extracting non-argument material from subject and adjunct clauses. I cannot address this here.

## 4 On the similarities and differences between the three scope marking strategies

In section 3, I developed in detail an analysis of *wh*-copying and certain instances of long *wh*-fronting involving what I have called *concordial scope marking*, thereby establishing a *rapprochement* between 'plain' *wh*-scope marking and the other two ways of building non-successive-cyclic long *wh*-dependencies.<sup>40</sup> But a *rapprochement* is not necessarily the same thing as a declaration of identity — though indeed there is an important sense in which 'plain' *wh*-scope marking constructions, *wh*-copying constructions, and certain long *wh*-fronting constructions are parallel (all involve a scope marker base-generated in the matrix clause, and consequently none involve cross-clausal A'–movement), there remain important differences among the three constructions as well. At the macro-level, 'plain' *wh*-scope marking constructions involve an *indirect* dependency between the scope marker and the 'real' *wh*-constituent in the embedded clause, whereas both types of concordial scope marking (*wh*-copying and long *wh*-fronting) by their very nature must involve a *direct* dependency between the scope marker and the *wh*-constituent in the lower clause. And at the micro-level, *wh*-copying (or *partial-concordial* scope marking) and long *wh*-fronting (or *full-concordial* scope marking) constructions differ in the amount of 'stuff' the scope marker 'inherits' from the *wh*-constituent in the downstairs clause: partial-concordial scope marking, as its name suggests, 'copies over' only a subset of the *wh*-constituent's features (typically just the N–features), while full-concordial scope marking has the scope marker 'inherit' *all* of the features of the downstairs *wh*-constituent (which must remain silent at PF).

It is against this background that I would like to investigate in this section what the empirical similarities and differences between the three scope marking strategies are. The analytical similarities and differences between the three types of scope marking construction laid out in the previous paragraph lead us to expect the possible existence of (a) phenomena for which all three *wh*-scope marking constructions behave on a par, (b) phenomena for which 'plain' *wh*-scope marking and partial-concordial *wh*-scope marking ('*wh*-copying') behave on a par, and (c) phenomena for which partial-concordial and full-concordial scope marking behave on a par. (Because of the signature of full-concordial scope marking, it is not expected that it will ever team up with 'plain' *wh*-scope marking but not with partial-concordial scope marking.) All three types of phenomenon appear to exist, as we will see in section 4.1.

### 4.1 Hallmarks of 'plain' *wh*-scope marking constructions compared to concordial scope marking

#### 4.1.1 Inner islands

Rizzi (1990) seems to have been the first to note that 'plain' *wh*-scope marking constructions resist the presence of a sentential negation in the upstairs clause (see also Höhle 1996, Reis 2000:378):

40 I reiterate once again, lest this be lost from view, that genuine successive-cyclic *wh*-fronting constructions do exist as well; but in the discussion in this section, I will not be concerned with derivations of the type in (2).

- (49) a. \*was glaubst du nicht, mit wem Hans sich dort treffen wird? (German)  
 what believe you not with whom Hans REFL there meet will  
 b. mit wem glaubst du nicht, daß Hans sich dort treffen wird?  
 with whom believe you not that Hans REFL there meet will  
 ‘who don’t you think that Hans will meet there?’

The accounts in the literature of this negation datum have capitalised on the non-referential nature of the scope marker (both on direct and indirect dependency approaches). Reference is arguably a property of noun phrases that is contributed by the DP-layer: ‘bare’ NPs are inherently non-referential; for reference, a DP-layer is required — more specifically, I propose that what is needed for reference is a DP whose specifier position is occupied by an operator of a specific sort. The ‘plain’ *wh*-scope marker (*was* in German, *mit* in Hungarian) is either not a DP to begin with or, if it is, it lacks the operator contributing reference. The fact that the ‘plain’ scope marker is non-referential can, in turn, be held responsible for the fact that it cannot establish an A’-movement dependency across a sentential negation.<sup>41</sup>

If this is the right way of looking at the inner island effect in (49a), then what do we expect to find in *wh*-copying (partial-concordial scope marking) and long *wh*-fronting (full-concordial scope marking) constructions? The answer should be straightforward in the case of *wh*-copying. Since *wh*-copying, in my analysis, typically involves concord between the downstairs *wh*-constituent and the upstairs scope marker for the N-features of the former, it is expected not to affect in any way the referential status of the scope marker upstairs. In light of this, it will not surprise the reader to see that *wh*-copying constructions parallel ‘plain’ *wh*-scope marking constructions with respect to inner island effects (Reis 2000:395):

- (50) \*wen glaubst du nicht, wen sie liebt? (German)  
 whom believe you not whom she loves

The partial-concordial scope marker in the upstairs clause is entirely like *was* in (49a) when it comes to the properties of the DP-layer. Since the referential properties of *was* are such that it cannot refer, the partial-concordial scope marker in (50) will be non-referential as well, whence its resistance to an intervening negation.

For Hungarian ‘plain’ *wh*-scope marking, the inner island effect manifests itself as well, as is clear from the ungrammaticality of (51a). Hungarian, as we know, does not have *wh*-copying. But it does have a variety of different ways of establishing long A’-dependencies — and one of these I have argued involves full-concordial *wh*-scope marking. Now compare (51b) and (51c), the latter (with its upstairs definite agreement) involving successive-cyclic A’-movement via vP-edges (*à la* Rackowski & Richards 2005) while the former (with its upstairs indefinite agreement) represents full-concordial scope marking.

- (51) a. \*mit nem gondolsz, hogy kit fog meghívni? (Hungarian)  
 what-ACC not think-2SG.INDEF that who-ACC will PV-invite  
 b. ?kit nem gondolsz, hogy meg fog hívni?  
 who-ACC not think-2SG.INDEF that PV will invite  
 c. kit nem gondolod, hogy meg fog hívni?  
 who-ACC not think-2SG.DEF that PV will invite

The empirical picture on (51a) and (51c) is clear: these are bad and good, respectively. But (51b) is interesting. I have not done an extensive questionnaire study so far, but of the two speakers that I have tested all of the Hungarian sentences in section 4.1 on, one indicates that, though she would normally prefer the b-pattern to the c-pattern, her preference switches to the exact opposite in the presence of upstairs negation — that is, (51b) is distinctly worse than (51c), even though *without* negation, (51c) would be worse than (51b).

41 I refer to the literature on inner island effects for fuller discussion of the details.

Results here are clearly preliminary and subject to further testing. But if indeed a significant number of speakers agree that, while normally (i.e., in the absence of negation) upstairs definite agreement would be dispreferred to upstairs indefinite agreement with the fronted *wh*-constituent, the preference is reversed in the presence of a matrix negation, this suggests that full-concordial scope marking does have at least one of the vestiges of ‘plain’ *wh*-scope marking (and *wh*-copying): sensitivity to inner islands.

This may at first seem surprising. After all, full-concordial scope marking by hypothesis ‘copies over’ all of the features of the *wh*-constituent in the lower clause onto the scope marker. But if reference is crucially a property of an operator in the *specifier* position of DP, as I have suggested, then it is expected that reference will not get ‘copied over’ under full concord. A quick inspection of a well-known case of concord may be appropriate at this point, to solidify the picture. Predicates and their subjects often show concord, including Case and gender. But plainly, there is no concord between a predicate and its subject for referentiality: predicates by their very nature are non-referential; the concord relationship between a predicate and its subject does not suddenly make the predicate referential, or force a non-referential reading onto the subject. It seems, then, that quite generally, reference is not a ‘concordial property’ — quite possibly because it is not representable as a featural property of any of the lexical ingredients of noun phrases (but instead is contributed by an abstract operator). And with this in mind, it then comes as no surprise to find that inner island effects are, to a certain extent, manifest in Hungarian full-concordial *wh*-scope marking constructions of the type in (51b).<sup>42</sup>

#### 4.1.2 Matrix predicate restrictions

Reis (2000:380–81) points out that in German, the ‘plain’ *wh*-scope marking construction imposes restrictions on the matrix predicate. Thus, the matrix verb cannot take an object, as in (37a) (repeated here), nor can it be a verb like ‘want’ (52a), and the scope marker also cannot correspond to the subject of the matrix clause (53a). In all three respects, long *wh*-fronting constructions behave differently, as the b–examples show.

- (37) a. \*was hat Peter das Gefühl, wen man fragen könnte? (German)  
       what has Peter the feeling whom one ask could  
       b. wen hat Peter das Gefühl, daß man fragen könnte?  
       whom has Peter the feeling that one ask could  
       ‘who does Peter have the feeling that one could ask?’
- (52) a. \*was möchte Fritz, wen seine Tochter heiratet? (German)  
       what wants Fritz whom his daughter marries  
       b. wen möchte Fritz, daß seine Tochter heiratet?  
       whom wants Fritz that his daughter marries  
       ‘who does Fritz wish that his daughter will get married to?’
- (53) a. \*was ist klar, wen seine Tochter heiraten will? (German)  
       what is clear whom his daughter marry wants  
       b. ?wen ist klar, daß seine Tochter heiraten will?  
       whom is clear that his daughter marry wants  
       ‘who is it clear that his daughter wants to get married to?’

To this, I add that Fanselow & Mahajan (2000:199) report the contrast in (54), featuring the ‘clausal expletive’ *es* in the matrix clause:<sup>43</sup>

42 The fact that (51b) is not fully ungrammatical is perhaps due to the fact that it looks so much like (51c) on the surface: a certain amount of analogy may be involved here to ‘dilute’ the empirical picture. Still, the reversal of the normal preference that was reported by one of my informants suggests that the inner island effect is real (albeit weaker than in ‘plain’ scope marking cases).

43 I should note that von Stechow (2000:471) calls the judgement on sentences like (54b) into question. It is also unfortunate that these examples involve a matrix negation, which is a serious distractor from the role played by the expletive *per se*.

- (54) a. \*was hast du es nicht für möglich halten wollen, wen sie liebt? (German)  
 what have you it not for possible hold want whom she loves  
 b. wen hast du es nicht für möglich halten wollen, wen sie liebt?  
 whom have you it not for possible hold want whom she loves  
 ‘who did you not considered it possible that she loves?’

Later in her paper, Reis (2000:395) notes that *wh*-copying constructions are by and large on a par with ‘plain’ *wh*-scope marking constructions when it comes to these diagnostics (though (55a) is rather better than (37a)). And Fanselow & Mahajan (2000:219) point out that *wh*-copying is also like ‘plain’ *wh*-scope marking in resisting the ‘clausal expletive’ *es*.<sup>44</sup>

- (55) a. ?wen hat Peter das Gefühl, wen man fragen könnte? (German)  
 whom has Peter the feeling whom one ask could  
 b. \*wen möchte Peter (lieber), wen Petra heiratet?  
 whom wants Peter rather whom Petra marries  
 c. \*womit ist klar, womit er handelt?  
 where-with is clear where-with he deals  
 d. \*wen glaubte Fritz es, wen sie liebt?  
 whom believed Fritz it whom she loves

This predicate restriction diagnostic involves a set of (arguably) purely syntactic restrictions. Thus, for Felser (2001), the ungrammaticality of (37a) is a straightforward case of syntactic competition for the object position (recall section 3.6, above); and (54a) can likewise be viewed as competition between *es* and the *wh*-scope marker. It is not immediately clear what the syntactic problem is with (52a) (I set this aside here). And (53a) is not universally ungrammatical: Hungarian *can* actually build *wh*-scope marking constructions with the scope marker serving as the nominative/subject (see Horvath 1997 for discussion):

- (56) mi volt világos, hogy kit vesz el Péter? (Hungarian)  
 what was clear that who-ACC marries PV Péter

But on aggregate, these predicate restrictions provide robust support for an assimilation of *wh*-copying constructions to ‘plain’ *wh*-scope marking constructions.

For Hungarian long *wh*-fronting constructions, these predicate restrictions do not provide a fertile testing ground, however, for the hypothesis that constructions in which the fronted *wh*-constituent agrees in definiteness with the matrix verb involve concordial scope marking. The agreement contrast between successive-cyclic movement derivations and concordial scope marking is not verifiable in any of these constructions. This is unfortunate; but at least the parallel between ‘plain’ *wh*-scope marking and *wh*-copying is quite firmly vindicated by the predicate restriction data.

#### 4.1.3 Presuppositionality

An important observation originally due to Herburger (1994) is that there is a semantic contrast between (57a) and (57b):

44 Felser (2004:552) appears to be denying that *wh*-copying resists the ‘clausal expletive’ *es*, quoting a contrast between her examples in (ia) and (ib).

- (i) a. \*was scheint es, wen Hans geschlagen hat? (German)  
 what seems it whom Hans hit has  
 b. ?wen scheint es, wen Hans geschlagen hat?  
 whom seems it whom Hans hit has

- (57) a. was glaubt der Georg, wen die Rosa geküßt hat? (German)  
       what believes the Georg whom the Rosa kissed has  
       b. wen glaubt der Georg, daß die Rosa geküßt hat?  
       whom believes the Georg that the Rosa kissed has

In (57a), the proposition implicated by the (embedded) *wh*-clause (that Rosa kissed someone) must be interpreted as being part of the speaker's beliefs (*de re*) — 'Rosa kissed somebody, who does Georg think it was?'. On the other hand, (57b) merely requires the speaker to presuppose that Georg believes that Rosa kissed someone.

Lahiri (2002:515) makes sense of the obligatorily presupposed status of the embedded proposition as follows: 'if one assumes (say, following Karttunen and Peters, 1976) that questions like *Who did Rosa kiss?* implicate that Rosa kissed someone, one may say that a scope marking structure like [(57a)] inherits that implicature'. Put differently, given an *indirect* dependency approach to 'plain' *wh*-scope marking constructions, (57a) is basically interpreted as a sequence of questions ('what does Georg believe? who did Rosa kiss?'), so naturally, the implicature that Rosa kissed someone, which is triggered by the question 'who did Rosa kiss?', will be present in the sequence of questions that is the 'plain' *wh*-scope marking construction as well.

Viewed this way, the interpretive properties of (57a) are an important piece of support for the *indirect* dependency approach to 'plain' *wh*-scope marking constructions. And if indeed this is the way to make sense of (57a) (as I believe it is), then it also raises a clear expectation for the interpretation of the corresponding *concordial* scope marking constructions — *wh*-copying and long *wh*-fronting. Recall that *concordial* scope marking constructions differ in one fundamental respect from 'plain' *wh*-scope marking constructions: while the latter involve no direct dependency between the 'real' *wh*-constituent and the upstairs scope marker, the former do, as a function of concord. So if the interpretive properties of (57a) are to be understood specifically as a reflex of the *indirect* dependency between the scope marker and the *wh*-constituent, then it is expected that in the *concordial* scope marking constructions corresponding to (57a), we should NOT find the same interpretive restriction, because *concordial* scope marking constructions involve a *direct*, *concordial* dependency between the scope marker and the embedded *wh*-constituent.

To my knowledge, nothing has been reported in the sizeable literature on types of *wh*-constructions on the question of whether *wh*-copying constructions presuppose the embedded proposition. But Claudia Felser (p.c.) tells me that, in line with the prediction reasoned out in the previous paragraph, German *wh*-copying is indeed like long *wh*-fronting constructions in that it does not presuppose the truth of the embedded proposition. For Hungarian as well, speakers seem perfectly able to interpret both successive-cyclic *wh*-fronting constructions and full-*concordial wh*-scope marking constructions (i.e., long *wh*-fronting constructions in which the fronted *wh*-constituent controls upstairs Case and agreement checking) in such a way that the truth of the embedded proposition is not presupposed. On the other hand, Hungarian 'plain' *wh*-scope marking constructions, like their German counterparts, do typically presuppose the embedded proposition.

So here we see that, among the trio of *wh*-scope marking constructions, the two *concordial* cases behave on a par, and as a pair distinguish themselves from the 'plain' *wh*-scope marking construction. And we can understand this quite straightforwardly as a reflex of the fact that while *concordial wh*-scope marking constructions involve a *direct* dependency (via concord) between the scope marker and the *wh*-constituent in the lower clause, 'plain' *wh*-scope marking constructions do not — and as a result, the latter are interpreted essentially on a par with sequences of questions, while the former are not.<sup>45</sup>

45 Stepanov & Stateva (2006) have some difficulty accounting for the fact that *wh*-scope marking constructions and long *wh*-fronting have different interpretations — though they make it seem as if this difference falls out from their analysis, it all hinges in the end on the plausibility of their suggestion that 'although *WHAT+think* is derived syntactically, the lexical meaning is assigned later to the whole complex word, perhaps under the conceivable assumption that the meaning of the scope marker and the matrix verb are underspecified in *wh*-LDDs' (p. 2143) — plainly a non-trivial assumption: it basically amounts to eliminating the scope marker from the semantics of long-distance *wh*-dependencies with a single *wh* altogether; since it is precisely the point of their *syntactic* analysis

## 4.1.4 (In)consistent beliefs

Reis (2000) makes the interesting observation that (58b) is ambiguous: the object of the propositional attitude in question can either be inconsistent or consistent. But in (58a) the object of attitude must be inconsistent.

- (58) a. was glaubt/sagt sie, wo Fox populärer ist als er ist? (German)  
       what believes/says she, where Fox popular-CPR is than he is  
       b. wo glaubt/sagt sie, daß Fox populärer ist als er ist?  
       where believes/says she that Fox popular-CPR is than he is

Reis also notes that the *wh*-copying construction behaves exactly like *wh*-scope-marking: according to Reis (2000:395), (59) has an inconsistent reading only.

- (59) wo glaubt sie, wo Fox populärer ist als er ist?  
       where believes she where Fox popular-CPR is than he is

This once again confirms, at the observational level, that *wh*-copying mimics ‘plain’ *wh*-scope marking quite closely.

This diagnostic has everything to do with the question of where the *wh*-expression in the embedded clause is interpreted. For ‘plain’ *wh*-scope marking, it is interpreted in the embedded clause (whence the inconsistent-belief reading). And with *wh*-copying (partial-concordial scope marking), the same is true: only a subset of the features of the *wh*-constituent are shared with the *wh*-scope marker in the matrix clause, making it impossible for the *wh*-constituent to be fully interpreted upstairs.

For *full*-concordial scope marking (i.e., long *wh*-fronting with upstairs definiteness agreement triggered by the fronted *wh*-constituent), one would probably expect a different outcome: after all, with *all* of the features of the *wh*-constituent ‘copied over’ onto the scope marker in the matrix clause, it ought to be possible for the *wh*-constituent to be fully interpreted in the higher clause, thus supporting a consistent beliefs reading. The judgements on the relevant Hungarian facts are not perfectly sharp. But it seems that, indeed, the example in (60b) is amenable to a consistent reading. (Whether, in fact, the ‘plain’ *wh*-scope marking construction in (60a) is unambiguously inconsistent is not clear either. The matter appears to be much subtler in Hungarian than it is in German.)

that there *is* a scope marker in such *wh*-dependencies, the fact that it is entirely dormant in the semantics seems to create a surprising syntax/semantics mismatch. It seems to me that the Stepanov & Stateva analysis is difficult to reconcile with the basic insight of the indirect dependency approach to *wh*-scope marking that the authors are co-opting: in the indirect dependency approach, the scope marker is a quantifier, with the embedded question serving as its restriction; for long-distance *wh*-dependencies with a single *wh*, the authors assume that there is still a scope marker in the syntactic structure, and that it still takes the embedded clause as its complement, just as in the representation of *wh*-scope marking constructions; but the scope marker is null and must *incorporate* into the matrix verb. How that is allowed, considering that it is a quantifier (and quantifiers typically do not incorporate), remains an open question; and moreover, assuming that it is allowed, the incorporation in itself does not suspend the status of the embedded clause as the restrictor of the scope marker (in fact, for Hindi scope marking constructions, the authors assume that the overt scope marker incorporates into the verb, but they also follow the Dayal line in treating the embedded clause as the restriction of the scope marker). So the scope marker is a quantifier, the embedded clause is its restrictor; somehow the scope marker is allowed to incorporate, and somehow, when the scope marker is null, the semantics imposed by the scope marker evaporates altogether. Note that, though Stepanov & Stateva assume that it is the formation of a complex verb that is responsible for the fact that the expected compositional semantics of *wh*-scope marking constructions does not materialise in long *wh*-fronting constructions, it cannot be, on their assumptions, that the process of scope marker incorporation, and the concomitant formation of a complex verb, *automatically* suspends the compositional semantics of *wh*-scope marking constructions: for Hindi, the authors explicitly assume that the scope marker incorporates into the matrix verb and forms a ‘structural unit’ with it (see p. 2127), which in that case apparently has no effect on semantics.

- (60) a. mit gondol Mari hogy ki magasabb mint amekkorá? (Hungarian)  
 what-ACC think-3SG.INDEF Mari that who taller than he is  
 b. kit gondol Mari hogy magasabb mint amekkorá?  
 who-ACC think-3SG.INDEF Mari hogy taller than he is  
 c. ki gondolja Mari hogy magasabb mint amekkorá?  
 who(NOM) think-3SG.DEF Mari that taller than he is  
 all: ‘who does Mari think is taller than he is?’

If indeed (60b) is ambiguous between a consistent and an inconsistent reading, this does not contradict a structural assimilation of this type of *wh*-fronting construction to *wh*-scope marking constructions: after all, there is a reason why the non-ambiguity of ‘plain’ *wh*-scope marking and *wh*-copying constructions does not carry over to *full*-concordial *wh*-scope marking constructions. This would show that, although the same underlying configuration underlies ‘plain’, partial-concordial and full-concordial *wh*-scope marking constructions, they do not necessarily always behave the same way when it comes to each and every diagnostic: much depends on what exactly is being ‘copied over’ onto the matrix scope marker under concord.

#### 4.1.5 Scope vis-à-vis a matrix clause quantifier

According to Pafel (2000:348), ‘the negative quantifier has obligatory scope over the *wh*-phrase in [(61a)], leading to a logical structure with a strange interpretation’, whereas (61b) is perfectly normal.

- (61) a. <sup>??</sup>was wird nicht einer vermuten, wo sie sich versteckt hält? (German)  
 what will nobody suspect where she REFL hidden holds  
 b. wo wird nicht einer vermuten, daß sie sich versteckt hält?  
 where will nobody suspect that she REFL hidden holds  
 ‘where will nobody suspect that she is hiding?’

Pafel also brings up the related scope facts in (62), reporting that (62a) is unambiguous in that it supports only a  $\forall >$  ‘where’ interpretation (surface scope), not a ‘where’  $> \forall$  reading, whereas (62b) is ambiguous.

- (62) a. was glaubt jeder, wo sie gerne leben würde? (German)  
 what believes everyone where she gladly live would  
 b. wo glaubt jeder, daß sie gerne leben würde?  
 where believes everyone that she gladly live would  
 ‘where does everyone think she would like to live?’

Pafel also discusses the corresponding *wh*-copying constructions in this connection. He points out that (63) ‘does not elicit unanimous intuitions and judgements, as far as my informants are concerned’ (p. 348). He adds: ‘I myself tend to regard it as unacceptable’, on a par with (61a). And for (64), Pafel marks the ‘where’  $> \forall$  reading as questionable (‘?’) rather than entirely impossible, as in (62a). Judging from von Stechow (2000:466, fn. 9), the judgements on scope in *wh*-copying constructions that Pafel reports in his 2000 paper are to some extent the reverse of what he reported in the talk he gave at the Tübingen workshop that was the trigger for the Lutz *et al.* (2000) volume in which Pafel’s paper appears. von Stechow makes a point of saying that he agrees with Pafel’s original observations, not with the judgements reported in Pafel (2000). Apparently, the scope facts of *wh*-copying constructions are subject to speaker variation, therefore.

- (63) <sup>%</sup>wo wird nicht einer vermuten, wo sie sich versteckt hält? (German)  
 where will nobody suspect where she REFL hidden holds  
 (64) wo glaubt jeder, wo sie gerne leben würde  
 where believes everyone where she gladly live would



In light of the discussion in the preceding paragraph, it would be expected that, when it comes to scope, *full-concordial* scope marking ought to behave like ‘D–feature concord’ *wh*-copying. That is to say, we would expect that full-concordial scope marking constructions are scopally ambiguous. This appears to be the case: my informants indicate that as far as scope is concerned, the b– and c–examples in (65) are on a par in being ambiguous, while the ‘plain’ scope marking construction in (65a) is not.

- (65) a. mit           mondott           mindenki,   hogy ki           a legjobb színész? (Hungarian)  
           what-ACC   said-3SG.INDEF everyone   that who(NOM) the best actor  
       b. kit           mondott           mindenki,   hogy           a legjobb színész?  
           who-ACC   said-3SG.INDEF everyone   that           the best actor  
       c. ki           mondta           mindenki,   hogy           a legjobb színész?  
           who(NOM) said-3SG.DEF everyone   that           the best actor  
           all: ‘who did everyone say is the best actor?’

The discussion of scope in the various types of *wh*-scope marking constructions in this subsection has brought home perhaps particularly clearly that a lot depends on exactly how much ‘stuff’ is affected by concord, and exactly which pieces of a complex noun phrase are critical in the computation of relationships with other material in the clause.

#### 4.1.6 Numerical *wh*-phrases and scope

Lahiri (2002) points out (basing himself on earlier work by Kroch and Cresti) that (66) is ambiguous between a wide-scope and a narrow-scope reading for the *wh*-phrase. The two readings are paraphrased in (66a,b).

- (66)           how many books does John think that Bill read?  
       a. what is the number of books (such that) John thinks that Bill read those books? (wide scope)  
       b. what is the number such that John thinks that Bill read that many books? (narrow scope)

As Lahiri puts it, ‘[(66a)] corresponds to a reading where the questioner is asking about the [number of] books such that John has thoughts about Bill reading those books. In [(66b)], the questioner is asking about the number of books such that John has thoughts about the number of the books that Bill read’.

Lahiri goes on to point out that in both German and Hungarian ‘plain’ scope marking constructions, only a narrow-scope reading is available for the *wh*-phrase, whereas long *wh*-fronting constructions are ambiguous.<sup>47</sup> But while it is indeed clear that a Hungarian ‘plain’ scope marking construction such as (67a) allows a narrow-scope, pure amount reading only, the interpretation of the long *wh*-fronting constructions in (67b) and (67c) is actually less straightforward than Lahiri suggests.

- (67) a. mit           akarsz,                   hogy hány           lányt   hívjunk   meg? (Hungarian)  
           what-ACC   want-2SG.INDEF   that   how.many   girl-ACC   invite-1PL   PV  
       b. hány           lányt   akarsz,                   hogy meghívjunk?  
           how.many   girl-ACC   want-2SG.INDEF   that   PV-invite-1PL  
       c. hány           lányt   akarod,                   hogy meghívjunk?  
           how.many   girl-ACC   want-2SG.DEF   that   PV-invite-1PL

The unavailability of a wide-scope interpretation of the type in (66a) for the ‘plain’ scope marking construction in (67a) certainly supports the indirect dependency approach taken in this paper, and seems to be a

47 Lahiri attributes his Hungarian examples to Julia Horvath and Anna Szabolcsi. He only gives an upstairs INDEF agreement example for long *wh*-fronting. Anna Szabolcsi (p.c.) has informed me that the empirical lie of the land is rather less straightforward, for the scope of numerical noun phrases in long *wh*-fronting constructions, than Lahiri makes it out to be.



(33)  $v$  [<sub>VP</sub> SM=*mit* [<sub>v</sub> V [<sub>CP</sub> *hogy* [<sub>FocP</sub> DP=*hány lány* [*jöjjön el*]]]]]]

The basic idea (due to Fanselow & Mahajan 2000:207) is that an *in-situ* simple *wh*-expression like *was* that serves as the subject of a noun-phrase modifier, such as the CP in (33), cannot be interpreted as an interrogative *wh*-expression, hence cannot participate in a multiple *wh*-question, in German. Thus, while (69a) is grammatical, it fails to support a multiple *wh*-question interpretation, instead forcing an indefinite reading upon *was* *Schönes* ‘what beautiful’. On the other hand, the interrogative interpretation is perfectly available for *was* in (69b), where *was* is not *in situ*.

- (69) a. wer hat dir denn *was* Schönes gesagt? (German)  
 who has you DPRT what nice said  
 ‘who said something nice to you?’  
 \*‘who said which nice things to you?’  
 b. *was* hat er dir denn Schönes gesagt?  
 what has he you DPRT nice said  
 ‘which nice things did he say to you?’

This account of the ungrammaticality of (68a) carries over straightforwardly to the *wh*-copying construction in (68b), which features a concordial scope marker *in situ* inside the matrix VP. The concordial scope marker is like the ‘plain’ scope marker *was* in what matters for the story at hand: it is a simple *wh*-word, hence ambiguous in principle between an interrogative reading and a simple indefinite reading; but because of the fact that it finds itself *in situ* and in a predication relationship with a CP, it resists an interrogative interpretation, thereby ruling out the desired multiple *wh*-question interpretation for (68b).

Unfortunately, as I already pointed out in the opening statement to this subsection, this particular test cannot be administered to full-concordial scope marking constructions: the full-concordial scope marker is (typically) not a simple *wh*-word, and besides, German does not have a morphological way to unambiguously recognise full-concordial scope marking, while Hungarian (which does) does not behave exactly like German when it comes to the interpretation of *in-situ wh*-expressions. But at least the multiplicity facts discussed in this section provided us with one last, very clear and straightforward parallel between ‘plain’ *wh*-scope marking and *wh*-copying constructions, lending further support to our reduction of the latter to the former.

#### 4.2 General conclusions

In this section, I have reviewed a number of diagnostics that characterise ‘plain’ *wh*-scope marking constructions, and have examined the extent to which these diagnostics carry over to concordial scope marking constructions, both partial and full, with an eye towards corroborating the scope marking approach to *wh*-copying and certain instances of long *wh*-fronting (in particular, the ones that feature upstairs (in)definiteness agreement and Case checking controlled by the fronted *wh*-phrase).

The results fall into four different categories. Inner islands form the first category: they seem to be manifest in all three types of scope marking construction, confirming that the same basic structure and derivation underlies ‘plain’, partial-concordial, and full-concordial *wh*-scope marking. The (in)consistent belief and scope facts form the second category, showing that the two types of concordial scope marking construction can behave differently as a function of exactly how much featural material is affected by concord. The third category is formed by the presuppositionality data, which have the two *concordial* cases behave on a par, as opposed to the ‘plain’ *wh*-scope marking construction. This particular constellation brings home the significance of the fact that concordial *wh*-scope marking constructions involve a *direct* dependency (via concord) between the scope marker and the *wh*-constituent in the lower clause, while ‘plain’ *wh*-scope marking constructions represent an *indirect* dependency. And finally there is a fourth category of cases for which either the facts are just not clear at this time, or no full trio of cases can be constructed.

Overall, these results are interesting and positive. That there are indeed contexts in which all three scope marking constructions behave on a par enhances their underlying and derivational assimilation. But because of the fact that concord affects the feature composition of the upstairs scope marker, it is naturally to be expected that there will be differences between concordial and ‘plain’ *wh*-scope marking cases, as well as between partial and full-concordial scope marking constructions. The fact that both types of differences are found and can be tied in an insightful way to their concordial properties supports one of the central ideas of this paper: that there are a variety of different types of scope marking constructions, each differing from one another as a function of concord (more specifically, the extent to which featural concord obtains: no concord at all, partial concord, or full concord).

## 5 Standard arguments for successive cyclicity: A critical review

The preceding sections have presented an extended argument against the idea that successive-cyclic movement via SpecCP exists in the grammar of natural language. Successive-cyclic extraction via SpecCP became theoretically inescapable once S was declared a bounding node, and fell-swoop movement crossing more than one bounding node was declared an impropriety. And empirical support for successive-cyclic A’-movement derivations seemed abundant, coming from a variety of domains of the grammar. *Wh*-copying has already been dismissed; but complementiser agreement, embedded inversion, binding ambiguities, and quantifier float have always been prominent among the empirical arguments for successive-cyclic movement via SpecCP, too. As I will argue in this section, none of these phenomena actually make a case for a stop-over in SpecCP.

### 5.1 Embedded inversion

In a number of languages, long *wh*-fronting can give rise to its signature syntax of *inversion* not just in the clause in which the *wh*-constituent is spelled out, but also in lower clause along the extraction path. We see this, for instance, in Belfast English (Henry 1995), Afrikaans (Du Plessis 1977), the Romance languages (Kayne & Pollock 1978, Torrego 1984), and also in Basque (Ortiz de Urbina 1989). Illustrations are given below (with inversions highlighted in italics).

- (70) what *did Mary* claim [*did they* steal]? (Belfast English)
- (71) waarvoor *dink julle* [*werk ons*]? (Afrikaans)  
 where-for think you.PL work we  
 ‘what do you think we work for?’
- (72) où *crois-tu* [*qu’ est allé Jean*]? (French)  
 where believe-you that is gone Jean  
 ‘where do you believe that Jean went?’
- (73) que *dijo Luis* [*que decia la gente* [*que habia publicado el diario*]]? (Spanish)  
 what said Luis that said the people that had published the newspaper  
 ‘what did Luis say that the people were saying that the newspaper had published?’
- (74) nork *uste duzu* [*esan du-ela Mikelek* [*idatzi du-ela eskutitza*]]? (Basque)  
 who-ERG think aux say aux-that Mikel-ERG write aux-that letter  
 ‘who do you think that Mikel said wrote the letter?’

It is commonly thought in the field that such embedded inversion cases support the idea that the fronted *wh*-constituent transits through a position in each lower clause that is of the same type as the position that it finally lands in: with this assumption in place, the emergence of an inversion pattern in each clause can be attributed to exactly the same structural factor throughout — the presence of a *wh*-constituent (either overt or a trace/silent copy) in the local SpecCP. Boeckx (2008:13) perhaps voices the common sentiment most poignantly when he says that he ‘find[s] it in fact very hard to even think of an alternative explanation for such facts’.

I will not specifically address the case of Basque in (74) here, and will save a fuller discussion of Afrikaans until section 5.2.2, below. In the present section, I will comment in some detail on exactly what it is that the Belfast English and Romance data tell us.

For the Romance stylistic inversion case, it is not at all obvious that it must implicate a *wh*-constituent in SpecCP. The phenomenon is triggered by operators of certain specific types (as well as by the subjunctive, which I will leave aside) — importantly, it is not the case that any and all operators can bring it about: thus, in French, stylistic inversion is not triggered by *si* ‘if’ or *pourquoi* ‘why’. In these cases, even though there arguably is an operator in SpecCP (a null question operator in the case of *si*), there is no trace inside the clause: the operator, in the case of *si* and *pourquoi* questions, is base-generated in SpecCP. The fact, then, that stylistic inversion is not triggered precisely in cases in which, though there is an operator in SpecCP, there is no trace within the clause suggests strongly that the key to licensing stylistic inversion is not the presence of an operator in SpecCP but rather the presence of a variable on the edge of *v*P (or, perhaps in some cases, the edge of TP; cf. temporal adverbials). If this is correct, successive-cyclic movement through SpecCP is *not* crucially implicated in the analysis of embedded stylistic inversion, hence embedded stylistic inversion cannot be chalked up as an argument for successive-cyclic movement through SpecCP. The embedded inversion facts in Romance, illustrated in (72) and (73), appear to be perfectly compatible with a successive-cyclic movement derivation that utilises *v*P–adjunction only, *à la* (2); it does not corroborate the derivation in (1).

The Belfast English embedded inversion case in (70) cannot be analysed analogously to Romance stylistic inversion. Henry (1995:116) argues cogently that the subject in embedded inversion constructions in Belfast English is not in a low position (as it arguably is in Romance): the distribution of embedded inversion is notably different from that of so-called singular concord, which does arguably feature the subject in a low position. But even for Belfast English embedded inversion, it is not evident that the facts supply a genuine argument for *successive-cyclic* movement *through* SpecCP. Important once again is the fact that it is not the case that any and all *wh*-phrases trigger embedded inversion — in particular, as Henry (1995:120) observes, embedded inversion is never triggered in (clauses embedded inside) *relative* clauses. This casts significant doubt on the idea that embedded inversion in Belfast English is triggered by an intermediate trace of *wh*-movement to begin with. Henry points out that *wh*-phrases in relatives and questions should somehow be distinguished for such an account — which she endorses — to be feasible. But certainly *morphologically* there is no difference in English between *wh*-phrases in relatives and questions. (The fact that *wh*-constituents in questions ‘mean’ something different from *wh*-phrases in relatives is likely a consequence of the feature content of the *head* of the CP, with the C–head of questions being endowed with a [Q] feature or operator; see Den Dikken & Giannakidou 2002 and Den Dikken 2003.) So embedded inversion in Belfast English is not a straightforward argument for successive-cyclic *wh*-movement through SpecCP. It does seem to be the case that the analysis of subject-auxiliary inversion in (Belfast) English should make reference to operator material in the left periphery; but it seems not to count *intermediate* traces of operators as triggers: what seems to matter crucially is that the operator involved is itself physically located in a *question*. (Note that Belfast English readily produces inversion in embedded questions as well.) If this is the right way of thinking about the Belfast English inversion facts, then the data in (70) are much more likely to furnish an argument for an analysis in terms of concordial scope marking (*à la* (4c) or (38b)) than for one along the lines of (1): the inversion clause is a terminal *wh*-question, and the operator in the embedded question is associated with a concordial scope marker in the matrix clause. As I have discussed in detail earlier in this paper, in such a case of full-concordial scope marking, the entire feature content of the *wh*-phrase in the embedded SpecCP is copied onto the scope marker, which is spelled out at PF in a way that is identical with the *wh*-phrase that moves terminally to the embedded SpecCP; the latter, in turn, is forced to remain silent because it is c-commanded, at PF, by an identical feature bundle higher up the tree.

A possible bonus of this kind of approach to the facts in (70) is that it presents a potentially interesting window on the difference between Belfast English and Standard English in this context: it could localise the key difference in the distribution of *wh*-scope marking, which Belfast English has (on a concordial scope marking approach to (70)) but Standard English probably lacks. If concordial scope marking

is the crux for embedded subject-auxiliary inversion in English, then Standard English cannot produce this at all, nor would it be expected to produce any other types of scope marking (incl. ‘plain’ scope marking and ‘*wh*-copying’), which is correct (at least for the adult language). Belfast English, on the other hand, could be expected to produce, alongside embedded inversion (which on this analysis is a give-away that the language employs scope marking in its grammar of *wh*-questions), also other instances of scope marking. Whether these are in fact attested is a question I do not have any information on at this time; but it is an eminently testable matter.

In short, what I have sought to demonstrate in this brief discussion of embedded inversion phenomena is that they do not appear to vindicate (1), successive-cyclic movement via SpecCP. For Romance stylistic inversion, it is more likely that the key factor is an intermediate trace adjoined to *vP* — made available by the successive-cyclic movement derivation in (2). And for Belfast English embedded inversion, the facts point in the direction of a concordial scope marking analysis along the lines of (4c)/(38b), with terminal rather than intermediate movement to SpecCP.

## 5.2 Stranding stuff

### 5.2.1 *Q*-float in West Ulster English

Staying in Northern Ireland for just a little while longer, let me move on now to investigate a different kind of argument that is often put forward as support for successive-cyclic *wh*-movement via SpecCP: the case of quantifier float in West Ulster English (McCloskey 2000). In West Ulster English (unlike in Standard English), *wh*-words such as *what* can combine with the quantifier *all*, and strand this quantifier under movement into the left periphery of the clause. Interestingly, one of the positions that *all* can be stranded in is a position right between the matrix verb and the complementiser of the embedded verb, in a case of long-distance *wh*-fronting such as (75):

- (75) a. what did he say *all* (that) he wanted? (West Ulster English)  
 b. what did you mean *all* for me to do?

If the position occupied by *all* in (75) is SpecCP, and if it must be locally linked to a member of the chain of *what*, then it would seem that (75) could be construed as a powerful argument for the derivation in (1).

Upon closer scrutiny, however, it is not too likely that the position occupied by *all* is indeed SpecCP. Consider first of all that, in a discussion of the word-order pattern in (76a), involving *all*-float off an external-argument *wh*, McCloskey (2000:75) argues for a derivation in which the verb overtly leaves the VP, raising around the landing-site of the nominal object as well as the base position of the subject, which is where the floating quantifier is assumed to be sitting in (76a). The structure in (76b) illustrates this derivation.

- (76) a. who was throwin’ stones *all* around Butchers’ Gate?  
 b.  $who_i$  was [<sub>FP</sub> *throwin’* [<sub>Agrop</sub> *stones* [<sub>Agro’</sub>  $t_j$  [<sub>VP</sub> [ $t_i$  *all*] [<sub>V’</sub>  $t_j$  [<sub>VP</sub> *around Butchers’ Gate* [<sub>V’</sub>  $t_k$ ]]]]]]]]

The important point here for the discussion of (75) is that West Ulster English is assumed to feature overt movement of lexical verbs to a head position well above VP, even above the landing-site of Object Shift (which McCloskey labelled SpecAgrOP but which in the *vP* era is commonly identified as a position on the edge of *vP*). That assumption makes it possible to analyse the facts in (75) in such a way that *all* is located in a position on the edge of the matrix *vP*.<sup>49</sup>

49 The fact that (ib) is ungrammatical, in contrast to (ia), should, on such an approach to (75), indicate that Object Shift targets a position higher up the tree than the intermediate landing-site on the *vP*-edge exploited by successive-cyclic *wh*-movement.

- (i) a. what did he tell him *all* (that) he wanted? (West Ulster English)  
 b. \*what did he tell *all* him (that) he wanted?



Stranding of material in an intermediate SpecCP is notoriously difficult, however. We have already seen that West Ulster English Q–float arguably does not instantiate it; and no dialect of English, to my knowledge, comes close to allowing things like *\*what do you think for we work?*, contrasting sharply to *what do you think we work for?*, which strands the preposition in its base position.<sup>50</sup> So if Afrikaans (77b) did indeed involve P–stranding in an intermediate SpecCP position along the way, it would raise the difficult question of why subextraction from an A'–moved constituent such that the head of that constituent is stranded is otherwise so rare (if not entirely impossible).<sup>51</sup>

50 Dutch may at first glance appear to mimic Afrikaans fairly closely: (ia) is acceptable (though somewhat marginal), and looks quite a bit like (77b) (except, importantly, for the fact that it does not feature embedded inversion). But it seems highly unlikely that it is derived in the way Du Plessis suggested for Afrikaans: rather, (ia) plausibly takes the prolepsis construction in (ib) (itself somewhat worse than the P–stranding case) as its input, with the *over*–PP base-generated in the matrix clause.

- (i) a. <sup>(?)</sup>waar denken jullie over dat iemand eens een goed artikel zou moeten schrijven? (Dutch)  
 where think you.PL about that someone once a good article ought to write  
 'what do you think someone ought to write a good article about sometime?'  
 b. <sup>??</sup>wij denken over dat onderwerp dat iemand eens een goed artikel zou moeten schrijven  
 we think about that topic that someone once a good article ought to write

Support for this conjecture comes from two sources. The first is that when we turn the matrix clause in (ia) into a non-root clause, so that it no longer fronts the finite main verb into second position but spells it out to the immediate left of the clause that it embeds, we find *over* to the left of the matrix verb, not in between the matrix verb and the complementiser *dat* (where it would be expected to occur if P were stranded in SpecCP):

- (ii) een onderwerp waar wij <over> denken <\*over> dat iemand eens (Dutch)  
 a topic where we about think about that someone once  
 een goed artikel zou moeten schrijven  
 a good article ought to write  
 'a topic that we think someone ought to write a good article about sometime'

And secondly, there is the fact that parenthetical material (here *als ik vragen mag* 'if I may ask') that belongs to the matrix proposition can linearly intervene between the stranded preposition and the complementiser *dat*, as in (iii). Such parenthetical intervention is entirely impossible in constructions such as (iv), in which it is uncontroversially the case that the *wh*-constituent occupies the specifier position of the embedded CP: in (iva) the parenthetical appears between the *wh*-constituent and the complementiser(s), in (ivb) it shows up between the *wh*-word and the embedded subject, and in (ivc) it splits *waar* from its selecting P in the left periphery, and in all cases the result is robustly unacceptable.

- (iii) <sup>?</sup>waar denken jullie over, *als ik vragen mag*, dat iemand eens een boek zou moeten schrijven? (Dutch)  
 where think you about if I ask may that someone once a book ought to write  
 (iv) a. \*kan jij me vertellen waar, *als ik vragen mag*, (of) dat je een boek over hebt geschreven? (Dutch)  
 can you me tell where if I ask may if that you a book about have written  
 b. \*kan jij me vertellen waar, *als ik vragen mag*, je een boek over hebt geschreven?  
 can you me tell where if I ask may you a book about have written  
 c. \*kan jij me vertellen waar, *als ik vragen mag*, over je een boek hebt geschreven?  
 can you me tell where if I ask may about you a book have written

The ungrammaticality of (iv) is perfectly unsurprising. But if (iii) were to involve a derivation of the type hypothesised by Du Plessis (1977), such that the stranded preposition occupies the embedded SpecCP position, then the grammaticality of this sentence would be a total mystery. Its grammaticality falls into place, however, once we give up the idea that *over* is stranded in SpecCP, and instead base-generate its projection in the matrix clause, as a proleptic object.

51 I am not suggesting that subextraction from an A'–moved constituent should be categorically impossible — if Lasnik & Saito's (1990) judgement on things like *who do you think that pictures of, John would never buy?* (a case of subextraction from a fronted topic, which for them is marginally acceptable and contrasts markedly with *\*who do you think that pictures of are on sale?*, involving subextraction from the subject of a finite clause) holds up to scrutiny, then at least some subextraction does seem to be possible from A'–moved phrases. Lasnik & Saito also mention the case of subextraction from a *wh*-phrase terminally moved to SpecCP in this connection, and find that sentences such as *who do you wonder which pictures of John would buy?* are more or less on a par with the subextraction-from-topic example quoted earlier. What these examples share is that they involve subextraction from the *highest* member of an A'–movement chain. And what makes the Afrikaans case in (77b) different is precisely the (alleged) fact that there is subextraction from an *intermediate* member of an A'–chain.

There is reason to believe, however, that (77b) and its ilk have been misanalysed as cases of P–stranding in SpecCP. Let us present a fuller picture of the facts clustering around this medial P–stranding case, to gauge the more microscopic properties of the phenomenon. First of all, it is important to be aware of the fact that Afrikaans allows so-called *wh*-copying. Thus, (71) and (77a,b) alternate with (77c), which features two full tokens of the *wh*-PP *waarvoor* ‘where-for’.

- (77) c. *waarvoor* dink julle *waarvoor* werk ons?  
 where-for think you.PL where-for work we

That there is a pattern to this is clear from the fact that the full set of cases can be reproduced in (78), this time featuring a subcategorised PP. But interestingly, as Du Plessis (1977:726) points out explicitly, it is impossible to combine the pattern in (78d) with pied-piping of *waarvoor* in the embedded clause: (78e) is ill-formed.<sup>52</sup>

- (78) a. *waaroor* dink jy *stry* ons die meeste? (Afrikaans)  
 where-about think you.SG argue we the most  
 b. *waaroor* dink jy *waaroor* *stry* ons die meeste?  
 where-about think you.SG where-about argue we the most  
 c. *waar/wat* dink jy *stry* ons die meeste *oor*?  
 where/what think you.SG argue we the most about  
 d. *waar/wat* dink jy *oor* *stry* ons die meeste?  
 where/what think you.SG about argue we the most  
 e. \**waar/wat* dink jy *oor* *waaroor* *stry* ons die meeste?  
 what think you.SG about where-about argue we the most

The ungrammaticality of (78e) would seem to follow straightforwardly from a ‘stranding in SpecCP’ approach: with stranded *oor* already in the embedded SpecCP, there would be no space for *waaroor*, on the standard assumption that SpecCP cannot be multiply filled. But the facts of medial P–stranding in *tricausal* constructions ultimately defeat a ‘stranding in SpecCP’ analysis, and suggest the contours of a different approach to the phenomenon. Consider the paradigm in (79):<sup>53</sup>

- (79) a. *waar/wat* dink julle dink die bure *stry* ons *oor*? (Afrikaans)  
 where/what think you.PL think the neighbours argue we about  
 ‘what do you think the neighbours think we argue about?’  
 b. *waar/wat* dink julle dink die bure *oor* *stry* ons?  
 where/what think you.PL think the neighbours about argue we  
 c. \**wat* dink julle *oor* dink die bure *stry* ons?  
 what think you.PL about think the neighbours argue we  
 d. *waaroor* dink julle *waaroor* dink die bure *waaroor* *stry* ons?  
 where-about think you.PL where-about think the neighbours where-about argue we  
 e. *waaroor* dink julle *waaroor* dink die bure *wat/waar* *stry* ons *oor*?  
 where-about think you.PL where-about think the neighbours what/where argue we about

52 Du Plessis only gives (78e) with *wat* in the upstairs SpecCP; but his text discussion suggests that it would be equally ungrammatical with *waar*.

53 All these examples are from Du Plessis (1977), except for (79c), which Rackowski & Richards (2005) added to the mix. (Rackowski & Richards only give *wat* here as the *wh*-operator. My suspicion is that *waar* would not improve things in any way, but I have not checked this explicitly.

Rackowski & Richards are right to point out that if Afrikaans freely allowed P–stranding in intermediate SpecCP positions, a classic successive-cyclic movement analysis, with stop-overs in all SpecCPs along the way, would lead one to expect (79c) to be just as good as (79b). The ungrammaticality of (79c) is thus sufficient to cast doubt on Du Plessis’ original account of the medial P–stranding data, and also on the implication that they corroborate a derivation of the type in (1). But it does not tell us just how such medial P–stranding *should* be analysed.<sup>54</sup> It is here that a close inspection of (79e) becomes important. This example, which is an interesting case of apparent *wh*-copying with P–stranding in the lowest clause but pied-piping in the higher two clauses, suggests an avenue towards an analysis of all the Afrikaans data reviewed so far.

The sentence in (79e) is a variant of the straightforward *wh*-copying construction in (79d). But a literal ‘*wh*-copying’ analysis would be very hard to apply to (79e): if (79e) were to involve *wh*-copying, there would be no source for the adposition *oor* in the higher clauses. A plausible analysis of (79e) involves PP–*prolepsis* rather than literal *wh*-copying. More specifically, there is an *oor*–PP generated in the medial clause, with a *wh*-scope marker as the complement of *oor*. The scope marker in the complement of *oor* inherits the N–features from the *wh*-constituent in the most deeply embedded SpecCP, via partial concord.

$$(80) \quad \dots \underbrace{[_{PP} P=oor \text{ SM}] \quad [_{CP} [_{DP} D \quad [_{NP} \textit{waar/wat}]]]_i \quad [_{C'} \textit{stry} \quad [_{TP} \textit{ons} \dots [_{PP} \textit{oor} \textit{t}_i]]]]]}_{\text{N-CONCORD}}$$

The concordial scope marker subsequently raises to the specifier position of the proleptic PP headed by *oor*, resulting in *waaroor*, and this constituent then raises to the SpecCP position of the medial clause, after which a second round of PP–*prolepsis cum* partial concord takes place: another *oor*-headed proleptic PP is generated in the highest clause, and the scope marker in *oor*’s complement undergoes concord with the *wh*-operator.

While (79e) is a case of partial-concordial scope marking (‘*wh*-copying’) in conjunction with PP–*prolepsis*, (79a) must be full-concordial scope marking without PP–*prolepsis*: the complement of *oor* in the most deeply embedded clause raises to the local SpecCP (bringing about embedded inversion there), and then establishes full concord with a scope marker in the middle clause, after which the original *wh*-operator deletes under full identity with the c-commanding full-concordial scope marker in the higher clause.

$$(81) \quad \dots \underbrace{\text{SM} \quad [_{CP} [_{DP} \textit{D} \quad [_{NP} \textit{wh}]]]_i \quad [_{C'} \textit{stry} \quad [_{TP} \textit{ons} \dots [_{PP} \textit{oor} \textit{t}_i]]]]]}_{\text{D-CONCORD}}$$

(79b) is a variant of our crucial case of ‘medial P–stranding’ in (77b), so I am going to save a discussion of it until I am done with my account of (79c) and (78e), the two ungrammatical cases in the set.

That (79c) is ungrammatical can be understood along the following lines. In this example, as in all the other ones under discussion, there is inversion in the most deeply embedded clause, so there must have been movement to SpecCP in that clause. Since all movement to SpecCP is *terminal*, as per (7), and since there is no physical left-over of the *wh*-constituent in the most deeply embedded clause, this *wh*-constituent must have been deleted under full identity with a c-commanding element in the higher clause. The fact that full deletion takes place in the most deeply embedded clause tells us that we cannot be dealing here with a derivation similar to (80), with a proleptic PP in the higher clause that contains a concordial scope marker. What we need is concord for *all* of the features of the constituent of P=*oor* and the *wh*-operator. Such concord requires the creation of a unified feature bundle for P and its complement, via *reanalysis* (cf. Van Riemsdijk 1978 and work in its wake, and also Fanselow & Mahajan 2000; recall fn. 31, above, for relevant discussion). The composite feature bundle resulting from reanalysis is copied over, via what we might call ‘P–concord’, onto the scope marker in the higher clause, as depicted in (82).

54 Rackowski & Richards do not present an account of the contrast between (79b) and (79c) themselves.

$$(82) \quad \dots \text{SM} \underbrace{\quad \quad \quad}_{\text{P-CONCORD}} \left[ \text{CP} \left[ \text{PP } \textit{oor} + \textit{wh} \right]_j \left[ \text{C}' \textit{stry} \left[ \text{TP } \textit{ons} \dots t_j \right] \right] \right]$$

The application of ‘P-concord’ results in a concordial scope marker upstairs that has all the features of P and P’s complement, causing full deletion downstairs. Upstairs, this feature bundle would be spelled out as *waaroor* once terminally raised to its local SpecCP in the medial clause. But what (79c) tries to do after movement of the ‘P-concordial’ scope marker to the SpecCP of the medial clause is to ‘distill’ the nominal portion of the reanalysed complex from that complex. Such is impossible: once P is reanalysed with its complement, all syntactic autonomy on the part of the P’s nominal complement is lost. Thus, (79c) fails.

Let us now return to (78e), which looks like an excellent piece of support for the ‘stranding in SpecCP’ analysis advocated by Du Plessis (1977). In (78e), there clearly has been pied-piping movement to the embedded SpecCP. If the *wh*-operator entertained full D-concord with the matrix scope marker, then *waar* in the embedded clause would inevitably be subject to deletion, which, however, is not what is going on in (78e): *waar* is actually spelled out in the embedded SpecCP position as well as in the matrix clause in (78e). If reanalysis of *waaroor* took place and ‘P-concord’ with the matrix scope marker obtained, we would lose all of *waaroor* in the subordinate clause; and moreover, stranding of *oor* in the matrix clause would be impossible. So a derivation along similar lines as the one in (80), with PP-prolepsis in the matrix clause, is our only option here, with *waar* (the *wh*-operator in the embedded SpecCP) trying to establish an N-concord relationship with the matrix scope marker.

$$(83) \quad \dots \left[ \text{PP } \textit{P=oor} \text{SM} \right] \underbrace{\quad \quad \quad}_{*\text{N-CONCORD}} \left[ \text{CP} \left[ \text{PP} \left[ \text{DP } \textit{D} \left[ \text{NP } \textit{waar} \right] \right]_i \left[ \text{P}' \textit{oor } t_i \right] \right]_j \left[ \text{C}' \textit{stry} \left[ \text{TP } \textit{ons} \dots t_j \right] \right] \right]$$

The N-concord relationship fails to be established, however, because the features of *waar* are arguably too deeply embedded inside the constituent in SpecCP (NP is the complement of the head of the opaque specifier of the specifier of the constituent in SpecCP) to be visible to the scope marker in the matrix clause. This explains that, when PP pied-piping takes place in the lowest clause and the *waar*+P complex is spelled out in that clause, all higher clauses must involve PP pied-piping as well — though, as we have seen, the opposite is not true: it is entirely possible for there to be PP pied-piping in higher clauses without there being such in the lowest clause (recall (79e), analysed as in (80)).

Finally, let us go back to (79b) as well as (78d) and (77b), the example that started it all off. In the discussion of the examples in (77)–(79) so far, I have appealed extensively to concordial scope marking, something that Afrikaans exploits heavily in its syntax of A’-dependencies. But German is well known for its concordial scope marking (‘*wh*-copying’) as well. Yet German has never been reported to produce sentences like (77b), (78d) and (79b) on any regular basis. So what is it that makes Afrikaans different from German, such that it makes ‘medial P-stranding’ possible?

What is important, it seems to me, in answering this question is the fact that Afrikaans allows the non-R-word *wat* to subextract from PP, whereas German (and Dutch as well) only allows extraction of so-called R-words from PP (Van Riemsdijk 1978). Let us take this to mean that it is legitimate in Afrikaans to delete the complement of P under identity with a *wh*-operator altogether *outside* PP — whereas in German (and Dutch) the complement of P may only be deleted under identity with a *wh*-operator *inside* PP, in SpecPP. If this is correct, then Afrikaans allows a derivation for (77b), (78d) and (79b) in terms of full concord, with full deletion of the *wh*-operator in the embedded clause, as depicted in (84): the *oor*-PP is base-generated in the embedded clause, and is pied-piped into the embedded SpecCP, after which full D-concord applies between the *wh*-operator and a bare (i.e., non-PP-embedded) scope marker in the matrix clause.

$$(84) \quad \dots \text{SM} \underbrace{\quad \quad \quad}_{\text{D-CONCORD}} \left[ \text{CP} \left[ \text{PP } \textit{oor} \left[ \text{DP } \textit{D} \left[ \text{NP } \textit{wat} \right] \right] \right]_j \left[ \text{C}' \textit{stry} \left[ \text{TP } \textit{ons} \dots t_j \right] \right] \right]$$



- (87)        waar dink julle        voor, *as ek mag vra*,        werk ons?        (Afrikaans)  
               where think you.PL    for    if I may ask    work we

In sum, it seems that there are two roads to ‘medial P–stranding’ in Afrikaans: the ones in (85) and (86). The latter does not have the stranded P sitting in SpecCP at all, so it does not even come close to being a case for successive-cyclic movement through SpecCP. The derivation in (85) does in fact involve ‘P–stranding’ in a medial SpecCP position — but still it does not result from successive-cyclic movement through SpecCP to a higher operator position in the matrix clause. If it were possible to freely strand prepositions in embedded SpecCP positions under successive-cyclic movement, it would be very difficult to rule out (79c) (as Rackowski & Richards 2005 are right to point out). The fact that medial P–stranding is impossible in the presence of PP pied-piping in the matrix clause (as in (78e)), while PP pied-piping *cum* P–stranding in *wh*-copying constructions is not generally ruled out (witness (79e), which is particularly difficult to reconcile with a multiple copy spell-out approach), pointed us in the direction of a concordial scope marking approach to the Afrikaans facts. As I have endeavoured to demonstrate, the concordial scope marking analysis predicts with precision precisely which combinations of PP pied-piping and P–stranding are legitimate and which are not — and it also delivers a reanalysis of the basic fact in (77b), which now no longer serves to support successive-cyclic movement via SpecCP.

### 5.3 Binding ambiguity

Having dealt with what is perhaps the most formidable *prima facie* evidence for successive-cyclic movement via SpecCP, and having dismissed it, let me now proceed to addressing some of the remaining arguments (most of them more prominent in the literature, in fact, than the cases previously reviewed) that have been advanced in favour of this scenario.

The first on my list is the fact that in a sentence such as (88), English allows the anaphor inside the fronted *wh*-phrase to be anteceded by any of the subject noun phrases in the complex sentence.

- (88)        [which pictures of *himself*] does *John* think that *Bill* said that *Bob* would like to buy?

The ambiguity of such sentences is routinely cited as evidence for the idea that the fronted *wh*-phrase makes a touch-down in the SpecCP position of each CP: the anaphor can then be bound by *Bill* if the *wh*-phrase is ‘reconstructed’ into the most deeply embedded SpecCP position, and by *John* if it is ‘reconstructed’ into the specifier of the CP selected by *think*; and of course the *Bob*-reading results from ‘reconstruction’ of the *wh*-phrase all the way down into its base position.

But as it stands, (88) really is not an argument for successive-cyclic movement through SpecCP. For it is easy to verify that the three readings for *himself* can just as easily be obtained via a Rackowski & Richards-style derivation *à la* (2), with stop-overs on *vP*-edges but not in SpecCP. ‘Reconstructing’ the *wh*-phrase to a position on the edge of the *vP* of *say* will then deliver the *Bill*-reading, and ‘reconstruction’ to the edge of the *vP* of *think* yields the *John*-reading. Rackowski & Richards (2005) are right to point this out.

We can go further than this, however. For not only do binding ambiguities of the type in (88) in themselves fail to explicitly confirm the need for successive-cyclic movement through SpecCP, it can easily be shown that such binding ambiguities certainly cannot *always* be the result of ‘reconstruction’ into SpecCP positions along the movement path. Thus, note that even when we ‘bake’ a *wh*-island into a sentence like (88), as in (89), we still obtain all three readings — the examples in (89a) and (89b) are midly degraded due to a violation of the *wh*-island condition, but they are just as ambiguous as is (88).

These parenthetical placement facts differ quite strikingly from the ones found in Dutch (recall fn. 50) or, for that matter, in English (\**could you tell me what, if I may ask, he works for?* is markedly worse than *could you tell me <, if I may ask,> what he works for <, if I may ask>?*). What they might suggest is that, somehow, the embedded clause in Afrikaans is ‘porous’ in the sense that matrix parenthetical material can relatively easily descend into it. But a different way of looking at these data would be to interpret them as showing that a *wh*-constituent belonging to the embedded clause can be placed in the matrix clause more readily in Afrikaans than in languages such as Dutch or English. I cannot pursue this further here.

- (89) a. ?[which pictures of *himself*] does *John* think that *Bill* wondered whether *Bob* would like to buy?  
 b. ?[which pictures of *himself*] does *John* wonder whether *Bill* said that *Bob* would like to buy?

If the *John*- and *Bill*-readings for the anaphor in sentences of the type in (88) were obtainable only via ‘reconstruction’ into SpecCP positions along the successive-cyclic movement path, then (89a) ought to lose us the *Bill*-reading, and (89b) should lack the *John*-reading. But the fact of the matter is that (89a,b) both support the same three interpretations for the anaphor *himself* that (88) also supports. What this tells us is that, contrary to what is often claimed in the literature, the binding ambiguity found in sentences of the type in (88) is not evidence for successive-cyclic movement through SpecCP — it probably *is* evidence for successive cyclicity, but rather than implicating SpecCP, it should make reference to  $\nu$ P–edge positions. Those, not SpecCP positions, turn out to be the key operatives when it comes to binding ambiguity induced by long-distance *wh*-fronting. Once we factor in the  $\nu$ P–edge positions, reference to SpecCP becomes entirely redundant in the context of these binding ambiguities.

The message to take away from (88) and (89), then, is that these binding facts may very well support the existence of successive-cyclic A’-movement, but if they do, they are evidence for (2), the Rackowski & Richards (2005) derivation, and not for (1).

#### 5.4 Agreement

Finally, I would like to address a body of facts clustering around agreement phenomena specific to (long-distance) A’-dependencies, and investigate to what extent these facts supply evidence for successive-cyclic movement via SpecCP.

##### 5.4.1 Irish complementiser agreement

In the literature on successive-cyclic A’-movement, an oft-cited datum is the fact that in Irish, the complementiser of each clause along the extraction path shows agreement with the *wh*-constituent. A representative example is (90) (taken from McCloskey 1990):

- (90) an rud [*a* shíl mé [*a* dúirt tú [*a* dhéanfá]]] (Irish)  
 the thing C<sub>[+WH]</sub> thought I C<sub>[+WH]</sub> said you C<sub>[+WH]</sub> do-COND-2SG  
 ‘the thing that I thought you said you would do’

The argument for successive-cyclic movement via SpecCP built on (90) was solid in the days when agreement relationships were establishable only via structural Spec–Head relations: to get the complementisers to agree with the *wh*-operator, one had to ensure that they engaged in a Spec–Head relation with the operator at some point in the derivation; and on the standard assumption that the complementisers in question are occupants of C, this inevitably meant that there had to be traces or copies of the *wh*-operator in the intermediate specifier positions of the CPs in the complement of *shíl* ‘thought’ and *dúirt* ‘said’.

But the theory has moved on. Rather than relying exclusively on Spec–Head relations in its account of agreement phenomena, the theory now makes primary reference to the Agree relationship, which involves c-command (reined in by a phasemate condition). To be sure, it is entirely possible that Spec–Head relations continue to play some role in the account of agreement phenomena (see esp. the interesting work by Franck *et al.* 2006, wherein it is argued that Agree alone is not sufficient to account for all agreement phenomena). But the baseline condition that needs to be met in order for an agreement relationship between two elements to be established is that there be an Agree relation between a probe and a goal. In the case at hand, the probe is the agreeing complementiser, and its goal is some member of the *wh*-movement chain — in particular, a member of the chain that is c-commanded by the probe and that is not separated from the probe by a phase head. The relevant chain members, for complementiser agreement cases of the type in (90), will be the traces or intermediate copies of the *wh*-operator on the edges of the  $\nu$ Ps — those traces/copies are on the edges of

the first phase below C, hence not separated from the C–probe by any phase head. An Agree relationship between C and the  $\nu$ P–adjoined traces/copies of the *wh*-operator is thus readily established; and via this Agree relationship, the complementiser agreement facts should in principle be accountable for.

To argue that Agree itself is not sufficient to account for the Irish complementiser agreement facts, and that accounting for (90) requires *in addition* to the Agree relationship between C and the  $\nu$ P–adjoined trace/copy that there also be a Spec–Head relation established between C and a *wh*-trace/copy in SpecCP, would have to involve a careful demonstration of the special ‘tightness’ of the connection between the complementiser and the *wh*-trace/copy. For instance, one would have to show that the agreement relation between *wh*-operators and complementisers of intermediate clauses is more impervious to ‘intruders’ (‘agreement attractors’) than a ‘mere’ Agree relation would lead one to expect — along the lines of Franck *et al.*’s (2006) work, which demonstrates that agreement based on ‘mere’ Agree relations is easier to ‘tamper with’ than agreement based on both Agree and Spec–Head relations.

The main claims of Franck *et al.*’s (2006) paper are that feature checking for subject-verb agreement involves two distinct operations/steps, (i) Agree (taking care of feature *valuation*), and (ii) Move + Spec–Head agreement (which takes care of feature *verification*), and that Agree associated a Spec–Head relation ‘gives rise to a more stable morphological manifestation of agreement’ than does Agree by itself. In particular, they present a detailed argument to the effect that ‘agreement is more error-prone when based on the sole AGREE operation ... than when it is further verified locally as the subject has moved to the position of specifier of the agreement node’. By way of an illustration of the kinds of things Franck *et al.* are concerned with in their work, let me present the case of agreement attraction in French cleft constructions, which is perhaps particularly germane to the case of Irish complementiser agreement under investigation.

Franck *et al.* (2006) start by pointing out the results of an experiment they conducted on cleft sentences of the type in (91), in which the clefted constituent, which is plural, is the controller of agreement on the finite verb of the relative clause, with agreement in the relative clause thus bypassing the singular subject.

- (91) a. <sup>1</sup>c’est les négociations que le ministre suspendent (French)  
           it’s the negotiations that the minister suspend-3PL  
       b. <sup>1</sup>c’est les négociations que suspendent le ministre  
           it’s the negotiations that suspend-3PL the minister

Their experiment showed that agreement ‘attraction’ to the clefted constituent is considerably more likely to happen in (91b) than it is in (91a).<sup>58</sup> More technically put, inverted (VS) sentences give rise to more interference from the clefted constituent than do canonical (SV) sentences. This difference in the likelihood of attraction between (91a) and (91b) is taken to support Franck *et al.*’s hypothesis (itself taking its cue from earlier work by Guasti & Rizzi 2002) that agreement relationships include two components, and that when just one of these components (Agree) is in place, as in VS sentences, subject–verb agreement is more fragile than when it involves both Agree and Spec–Head agreement.

Going back to Irish now, what one would need to show in order to demonstrate that Agree is not sufficient to account for complementiser agreement of the type in (90) is that such agreement cannot be interfered with by any other logically possible goal for the complementiser. For the particular examples in (90), there really does not seem to be any closer possible goal for the complementiser: the subject is in a low structural position, presumably lower than the  $\nu$ P–edge position occupied by the intermediate trace/copy of the *wh*-operator, so it is unlikely to interfere with the Agree relationship between the complementiser and the *wh*-operator. To set up potential ‘agreement attraction’ effects, one would want to look at cases in which either the subject appears preverbally or some other potential agreement goal for the complementiser appears in a

58 In neither sentence is this the norm — whence my ‘<sup>1</sup>’ diacritic on both sentences, indicating that the agreement ‘attraction’ found in them is a special effect. The important point, however, is that such ‘attraction’ is more likely in (91b) than in (91a).

Note that the effect seen in (91) is similar in nature to that reported by Kimball & Aissen (1971), and discussed at some length in Kayne (1989), for varieties of American English: *the people who Clark think are in the garden*.

structural position closer to the complementiser than the *vP*-adjoined trace/copy of the *wh*-operator, and to see whether such a constituent would effectively be able to serve as an ‘attractor’. This is not the place for me to pursue such an investigation — I am sketching its contours here only for the benefit of future research. But the upshot of this should be clear: to prove that Agree is not enough and a Spec–Head relationship is crucial in the analysis of Irish complementiser agreement, it must be shown that the complementiser agreement relation seen in (90) is impervious to any interference from logically possible ‘attractors’. The case would surely gain in strength if ‘agreement attraction’ effects could be brought to light elsewhere in the syntax of Irish: for if Irish never showed any ‘agreement attraction’ to begin with, absence of such effects in complementiser agreement contexts would not make a strong case for the need for Spec–Head agreement.

The bottom line of this discussion is that, absent a cogent demonstration of the need, over and above an Agree relationship between the complementiser and the *vP*-adjoined trace/copy of the *wh*-operator, for a Spec–Head relation between the complementiser and a trace/copy in SpecCP, facts of the type in (90) do not lend automatic support for successive-cyclic movement via SpecCP. As far as I am aware, no case has been made for the need for Spec–Head agreement over and above Agree in the case of Irish. Hence, at this time, Irish complementiser agreement as a case for successive-cyclic movement through SpecCP remains moot. It is fairly clear what needs to be done to make it a genuine case for a derivation of the type in (1); but as long as what needs to be done has not been done, the Irish facts remain at best a *potential* argument for (1).

#### 5.4.2 Kinande complementiser agreement

Another familiar argument for successive-cyclic movement via SpecCP, based once again on complementiser agreement, comes from the Bantu languages. Of course this argument is subject to the same kind of scrutiny that we argued the case of Irish should be subjected to. But as it happens, the status of Bantu complementiser agreement as evidence for a derivation along the lines in (1) has been called into question even independently of these kinds of considerations, in recent work by Schneider-Zioga (2009), with reference to Kinande.

In Kinande (as in several other Bantu languages), the complementiser in each clause along the extraction path agrees in noun class with a displaced *wh*-constituent or focus, producing surface patterns that are very similar to the ones just reviewed for Irish. (92) is a typical example.

- (92)            *ekihi kyo Kambale asi [nga kyo Yosefu akalengekanaya [nga kyo (Kinande)*  
                   what AGR Kambale know COMP AGR Yosefu thinks                           COMP AGR  
                   Mary’ akahuka]]  
                   Mary cooks  
                   ‘what did Kambale know that Yosefu thinks that Mary is cooking (for dinner)?’

Schneider-Zioga demonstrates that ‘[n]ot only can *wh*-agreement occur, it *must* occur in every clause between the site of extraction ... and the site of phonological location of the *wh*-word’ (p. 47) — thus, in (92) the agreement marker *kyo* cannot be omitted in any of its three locations. Thus (92) appears to be *prima facie* evidence for successive-cyclic movement — and if it could in addition be shown that Spec–Head agreement is an essential player in the distribution of *kyo* (recall the discussion in section 5.4.1), then Kinande (92) could even be evidence for the scenario in (1).

But interestingly, Schneider-Zioga argues explicitly that, contrary to appearances, (92) is not a case of long-distance, successive-cyclic movement at all. She bases her argument on three pieces of evidence — absence of reconstruction effects in long *A'*-dependencies in Kinande, absence of superiority effects, and the fact that successive-cyclic *A*-movement appears to be impossible in Kinande as well (so apparently, there is no successive-cyclic movement of any kind in the language).<sup>59</sup> Instead of a successive-cyclic movement account, Schneider-Zioga proposes an analysis of the type schematised in (93):

59 For lack of expertise, I will not critically review Schneider-Zioga’s evidence against successive-cyclic movement in Kinande here; instead, I will (perhaps at my peril) take it at face value.

(93) [ $wh_i$  AGR [<sub>TP</sub> ... [<sub>CP</sub> OP<sub>i</sub> AGR [<sub>TP</sub> ... RESUMPTIVE PRONOUN<sub>i</sub> ...]]]]

The *wh*-expression originates in the clause in which it surfaces, and binds a null operator in the next clause down; in multi-clausal constructions, that operator will, in its turn, bind another null operator in the next clause down, and so forth, all the way down to the lowest null operator, which binds a null resumptive pronoun. So each A'–dependency is a *local* dependency (and for Schneider-Zioga, the physical *wh*-constituent is not engaged in any movement dependency at all: all movement is performed by null operators).

The analysis in (93) is in a way a blend of two analyses proposed for long A'–dependencies in this paper: the resumptive prolepsis analysis (represented by (3)), and the concordial scope marking analysis (represented by (4c)). Little if anything in Schneider-Zioga's analysis depends on 'OP' being a null operator of the kind that is standardly assumed to be found in, say, *tough*-movement or parasitic gap constructions (that is, the label 'OP' is a convenience rather than a profound ingredient of the analysis); nor, in fact, does it seem crucial that there be a null operator in the lower SpecCP to begin with: recall that complementiser agreement effects could in principle be taken care of without recourse to a Spec–Head relationship in CP. The absence of certain island effects in long A'–dependencies in Kinande suggests that Schneider-Zioga is probably right in calling upon the services of a resumptive pronoun in (93); but the postulation of a null operator in the SpecCP of the lower clause may not be inevitable. For lack of expertise, I cannot undertake a more detailed discussion of Kinande long A'–dependencies here. But at a minimum, what we are led to conclude from Schneider-Zioga's careful examination of the Kinande facts (which on their face seem to lend striking support to (1)) is that, once again, there is no clinching evidence for successive-cyclic A'–movement via SpecCP here.

#### 5.4.3 Selayarese verb agreement

A rather less well known but at first sight particularly striking case for successive-cyclic A'–extraction via SpecCP is Selayarese (apparent<sup>60</sup>) long focus fronting (affecting both 'plain vanilla' and [+WH] foci, just as in Kinande or Hungarian). In Selayarese (an Austronesian language spoken in Indonesia; see *Finer 1997, 2003* for detailed discussion), 'verbs selecting clausal complements show *-i*, the third person absolutive marker' (*Finer 1997:686*), the same marker that verbs also bear when they select an absolutive-case definite object. We see this clearly in (94), where the *-i* suffix is underlined and printed in italics for easy spotting.

(94) mu-isse?-*i* muko la-jañjang-*i* i<sup>61</sup> Ali i Baso? (Selayarese)  
 2FAM-know-3 COMP 3-saw-3 CLF Ali CLF Baso?  
 'you know that Baso? saw Ali'

If we take *-i* to be an agreement (and Case) marker of sorts, then what (94) shows is that the matrix verb entertains an obligatory agreement (and Case) relationship with the complement–CP, and the embedded verb is agreeing with its definite object as well, resulting in an obligatory *-i* on the downstairs verb. But importantly, when we turn the object of the lower verb into *inai* 'who' and place it in initial position in the matrix clause, three things change: the lower verb loses its *-i*, the upstairs verb can no longer be marked with *-i* either, and the complementiser *muko* (which must be present in (94)) is absent:<sup>62</sup>

60 I say 'apparent' because, though the facts to be discussed do indeed appear to involve long focus fronting, in recent work *Finer (2003)* has reanalysed them in such a way that they actually do not. I will elaborate on this in what follows.

61 The *i* preceding *Ali* is a classifier for [+human] noun phrases, glossed here as 'CLF'.

62 I will return at the end of this section to the fact that the complementiser is not strictly speaking barred from appearing. The syntax of long A'–dependencies featuring overt complementisers is very different from that involved in (95), involving resumption. A discussion of the resumption strategy can only be sensibly undertaken once the movement-based strategy is in place.



The fact that coreference of the absolutive clitic hosted by the focus-fronted PP and the possessor of the subject is impossible in (96a) is fairly straightforwardly a reflex of weak crossover: the clitic *-i* undergoes A'–movement around *andoʔ-na* 'his mother'. But no weak crossover effect arises in (96b), the long focus fronting case. This would be entirely surprising if the focus-fronted PP had undergone successive-cyclic A'–movement from out of the embedded clause into the matrix clause. After all, in English, *who did his mother see in the field?* and *who did his mother say that you saw in the field?* resist coindexation of *who* and *his* equally. The absence of a crossover effect in the matrix clause of (96b) thus seems to indicate that the focus-fronted locative PP *ri parang-i* (which crucially hosts a third person Absolutive clitic coindexed with the possessor in *andoʔ-na* 'his mother') has not left the embedded clause in (96b).

Finer (2003) concludes from this (and other evidence as well) that, surface appearances notwithstanding, (96b) does not in fact involve long focus fronting at all: rather, what happens is that the focused PP focus-fronts *locally* within the embedded CP, subsequent to which the CP fronts into a position in the matrix clause ('clausal pied-piping'; cf. Basque (Ortiz de Urbina 1990) and Imbabura Quechua (Cole 1982, Hermon 1984), and also fn. 26, above), with the TP portion of the fronted CP (containing everything *except* for the focus) eventually being extraposed from the fronted CP (in a way similar to what Davies 2000 proposes for Madurese). The details of the analysis need not concern us here — and they could very well be subject to change. The only thing that matters is that the absence of a weak crossover effect in (96b), in striking contrast to the emergence of such an effect in (96a), argues quite forcefully against Finer's (1997) earlier analysis of Selayarese in terms of successive-cyclic extraction from the embedded clause.

If, as Finer (2003) ends up concluding, Selayarese actually has no long A'–movement at all, then plainly we cannot present (95) as evidence for successive-cyclic movement through SpecCP. Selayarese apparent long A'–movement turns out to be local movement once the facts are put under a microscope — much as in the case of Kinande reviewed previously, and arguably also in Madurese (Davies 2000) and Sundanese (Davies & Kurniawan 2009).

Before leaving Selayarese, I should mention that (95) does not paint the full picture of long A'–dependencies in the language: while (95) suppresses the embedded complementiser, it is not strictly speaking impossible for long A'–dependencies to feature an overt complementiser. The pair in (97a,b) appears to suggest that the complementiser may freely be included or left out in cases of long A'–fronting:

- (97) a. inai mu-isseʔ muko la-jañang-i i Basoʔ (Selayarese)  
       who 2FAM-know COMP 3-see-3 CLF Basoʔ  
       b. inai mu-isseʔ la-jañang-i i Basoʔ  
       who 2FAM-know 3-see-3 CLF Basoʔ

But the versions with and without the complementiser suddenly show diverging behaviour elsewhere in their syntax once we add one level of embedding: in tricausal (98a), the verb in the middle clause now shows absolutive agreement with the lowest clause, while in complementiserless (98b) no such agreement is found.

- (98) a. inai mu-isseʔ-(\*i) muko la-isseʔ-i i Ali lako la-jañang-i i Basoʔ (Sel.)  
       who 2FAM-know COMP 3-know-3 CLF Ali COMP 3-see-3 CLF Basoʔ  
       b. inai mu-isseʔ-(\*i) la-isseʔ-(\*i) i Ali la-jañang-i i Basoʔ  
       who 2FAM-know 3-know-3 CLF Ali 3-see-3 CLF Basoʔ

For Finer (1997), the presence of absolutive inflection (the suffix *-i*) on the middle verb in (98a) (versus the obligatory absence of such inflection on the same verb in complementiserless (98b)) is indicative of the absence of any movement dependency involving the most deeply embedded clause. (Recall that forced absence of the complementiser is taken to be a diagnostic for A'–movement to SpecCP.) Instead, the most deeply embedded clause contains a *resumptive pronoun*, associated with the *wh*-operator through binding rather than movement. But the verb of the highest clause in (98a) does have to remain unadorned with *-i*,

which to Finer suggests that there *is*, after all, some movement dependency involved in the higher regions of this sentence. Finer argues specifically that the operator originates in the SpecCP of the medial clause, and undergoes A'–movement into the highest clause, forcing the absence of *-i* on *mu-isse?* An update of this analysis in terms of Finer's (2003) more recent outlook on A'–movement dependencies in Selayarese is readily made, such that the operator no longer raises from the SpecCP of the medial clause but instead stays there (very much as in Schneider-Zioga's 2009 analysis of Kinande, given in (93)) and causes clausal pied-piping into the matrix clause.

Specific details of the analysis aside, it seems that Selayarese employs both operator movement and operator-bound resumption in the formation of its A'–dependencies — but if Finer's (2003) reanalysis of his earlier (1997) account is on the right track, all A'–dependencies in Selayarese are *local* dependencies, and none provide evidence for successive-cyclic movement through SpecCP.

#### 5.4.4 Chamorro verb and complementiser agreement

Finally in this section, I would like to review one more case of verb agreement in long A'–extraction constructions often brought up in support for successive-cyclic movement via SpecCP — the case of Chamorro, another Austronesian language (spoken on the Mariana Islands). In my discussion of Chamorro, I will be basing myself on the detailed description and analysis presented in Chung (1998:Chapter 6); but I will deviate from Chung's account in some essential respects.

Chamorro *wh*-constructions (questions as well as other *wh*-dependencies, including relative clauses) involve A'–fronting to a position which is plausibly identified as SpecCP.<sup>65</sup> In Chamorro sentences featuring a *wh*-dependency, one finds this dependency reflected in the form of special agreement morphology in two places: the language has *wh*-agreement on the verb and on the complementiser. Let me introduce these in turn.

When a single clause in Chamorro includes a *wh*-dependency, the verb of that clause will take on a special inflectional form reflecting an agreement relationship between the verb and the *wh*-constituent. This *wh*-agreement has a visible effect on output in three cases, summarised in (99):

- (99) a. nominative *wh*-constituents trigger the infix *-um-* on a transitive realis verb (100a)  
 b. objective *wh*-constituents trigger the infix *-in-* plus optional nominalisation of the verb (100b)  
 c. oblique *wh*-constituents trigger obligatory nominalisation of an unaccusative verb plus optional infixation of *-in-* (100c)
- (100) a. hayi chumätgi-n mämaisa gui'? (Chamorro)  
 who WHNOM.laugh.at-LINK self.PROG him  
 'who was laughing at himself?'  
 b. hafa kinannóno'-mu?  
 what WHOBJ.eat.PROG-AGR  
 'what are you eating?'  
 c. hayi mahalan-mu?  
 who WHOBL(=NML<sup>66</sup>).lonely-AGR  
 'who are you lonely for?'

65 Chung (1998:209) makes it crystal clear that in Chamorro, 'the interrogative phrase in constituent questions *must* be displaced' (original italics): *in-situ* questions are disallowed. She also shows that *wh*-fronting constructions in Chamorro are simple *wh*-CPs, not (pseudo)cleft constructions. This is one respect in which Chamorro provides for a more straightforward demonstration of the existence and necessity of (2) than does Tagalog (on which Rackowski & Richards 2005 base their argument for (2)), whose *wh*-dependencies arguably involve a cleft, biclausal syntax. It is also rather clearer for Chamorro than it is for Tagalog that the affixes on the verb that are crucially implicated in the formation of long A'–dependencies are indeed agreement affixes.

66 'NML' in the gloss of (100c) stands for 'nominalisation'. My glosses of the Chamorro examples are adaptations of Chung's (1998) original glosses.

The *wh*-dependency is also formally reflected on the complementiser of the clause in whose specifier the *wh*-phrase lands. Here again, there are three discrete ways in which the agreement relationship comes to the surface, summed up in (101):

- (101) a. [+N,–LOC] *wh*-constituents trigger a  $\emptyset$  complementiser (102a)  
 b. [+N,+LOC, $\emptyset$ ] *wh*-constituents trigger the complementiser *änai* (102b)  
 c. other *wh*-constituents trigger the complementiser *na* (Guam dialect) or *nai/ni* (Saipan dialect) (102c)
- (102) a. hafa  $\emptyset$  malago'-mu (Chamorro)  
 what C WHOBL.want-AGR  
 'what do you want?'  
 b. guihi [*Op* *änai* gaigi si tata-ña yan si nana-ña  
 there C AGR.be father-AGR and mother-AGR  
 'there where his father and mother were'  
 c. ginin hayi *na* un-risibi katta?  
 from who C AGR-receive letter  
 'from whom did you receive a letter?'

Three things should be added to this simple introductory picture for a full understanding of Chamorro *wh*-agreement. First of all, *wh*-agreement on the complementiser 'affects only the highest C<sup>0</sup> of the Wh-construction' (Chung 1998:229) (cf. *ni* in (103)). Secondly, *wh*-agreement on the verb '*must* be manifested only in the lowest clause of the Wh-construction' (Chung 1998:247; original italics) (cf. WHOBL in (103)).

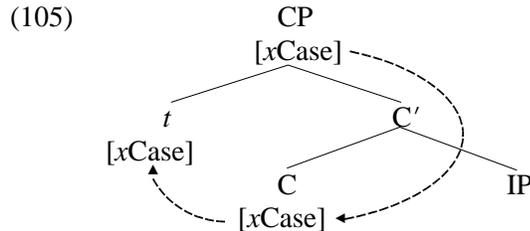
- (103) i taotao [*Op* *ni* si Juan ilek-ña [malägu' gui' [asuddä'-ña]]] (Chamorro)  
 the person C Juan say-AGR AGR.want he WHOBL  
 'the person who Juan said he wanted to meet'

And thirdly, and most importantly for the purposes of the discussion here, *wh*-agreement on the verb takes 'an unexpected form in the higher clauses of long-distance Wh-constructions' (Chung 1998:249) — in particular, *wh*-agreeing verbs in higher clauses 'are not inflected for the Case of the initial Wh-trace [but] for the Case of the intermediate CP out of which Wh-movement has most immediately occurred' (p. 250):

- (104) a. hayi si Manuel hinassóso-nña chumuli' i salappi'? (Chamorro)  
 who Manuel WHOBJ.think.PROG-AGR WHNOM.take the money  
 'who does Manuel think has taken the money?'  
 b. guiya esti na boi i mu-na'mäguf gui' na un-li'i  
 he this LINK boy the WHNOM-make.happy her C WHOBJ.AGR-see  
 'this boy is the one who it made her happy that you had seen'  
 (lit.) '... that [that you had seen] made her happy'

In (104a), the *wh*-constituent *hayi* itself is nominative, and this is duly reflected on the verb of the clause in which it originates. But while the verb of the matrix clause also *wh*-agrees with the *wh*-phrase, it does not (and cannot) Case-agree with the *wh*-operator: instead, it Case-agrees with the clause from which *wh*-extraction has taken place (in other words, with the container of the trace of the *wh*-phrase). Since that clause is the matrix verb's complement, *wh*-agreement on the matrix verb shows objective Case agreement. The example in (104b) makes the same point, in precisely the opposite direction, so to speak: this time the *wh*-constituent (a null operator) itself has objective Case, as reflected in the form of *wh*-agreement on the verb that selects it (*un-li'i*); but since the clause from which long-distance *wh*-movement takes place is the nominative subject of the matrix verb, this verb shows *wh*-agreement for *nominative* Case rather than objective Case.

Chung (1998:251), in a brief and sketchy account of the facts in (104), tries to accommodate them on the basis of an analysis of long-distance *wh*-dependencies via successive-cyclic movement through SpecCP. She suggests that ‘Chamorro has mechanisms of feature distribution which allow the Case specification of CP to propagate to its head and which further allow the Case specification of C<sup>0</sup> to propagate to its specifier’:



Via these successive instances of ‘propagation’, the Case feature of CP eventually makes its way to the *wh*-constituent in the embedded SpecCP, allowing the matrix verb to Agree with it for both ‘*wh*-ness’ and Case. It remains unclear on this proposal, however, why the *wh*-constituent in the embedded SpecCP (which either already has a Case feature or does not want one) would be happy to receive (another) Case feature via ‘propagation’, from CP. And even if the *wh*-constituent in SpecCP is indeed capable of acquiring a second Case feature via ‘propagation’ from CP, it remains to be explained why it is precisely the ‘propagated’ Case feature (rather than the one that the *wh*-constituent has ‘of its own’) that the matrix verb Agrees with. One also wonders why ‘propagation’ of Case features is apparently obligatory, and ostensibly cannot proceed in the opposite direction, with the *wh*-constituent in SpecCP ‘propagating’ its Case feature to CP. These are important questions that suggest that a ‘propagation’ approach to the problem is unlikely to be successful (even assuming that the notion of ‘propagation’ itself can be sufficiently formalised).

The problem that the facts in (104) pose is how to ensure that the matrix verb ends up Case-agreeing with the *container* of the constituent that it is *wh*-agreeing with.<sup>67</sup> And the good news is that no ‘propagation’ is necessary to make the facts in (104) come out right: they actually follow straightforwardly from Rackowski & Richards’ (2005) take on the formation of long-distance A’-movement dependencies, represented by (2). Recall that in this derivation, the matrix *v* engages in a (first-pass) Agree relationship with the embedded clause; once this Agree relationship has been established, the embedded clause ‘opens up’ (technically, it can be ignored for Agree relationships subsequently established), and the matrix *v* can *wh*-Agree with the *wh*-constituent inside CP, and attract it to its edge. The picture in (106) spells this out graphically.

67 Note that it does not seem to be the case in Chamorro that Case-agreement with the (notional) container of the constituent that it is *wh*-agreeing with is *generally* possible — in particular, it fails in cases of possessor subextraction, as shown in (ib).

- (i) a. hu-li’i’ i taotao ni un-sakki salape’-ña *ec* (Chamorro)  
 AGR-see the person COMP AGR-steal money-AGR  
 ‘I saw the person whose money you stole’  
 b. \*hu-li’i’ i taotao ni sinakke-mmu salape’-ña *ec*  
 AGR-see the person COMP WHOBJ-steal-AGR money-AGR

Chung (1998:255) states clearly that ‘a possessor *Wh*-trace *cannot* cause the [+V] predicate in its vicinity to be inflected for the Case of the entire possessed DP’ (orig. italics). In this respect, possessor extraction from a possessed noun phrase is strikingly different from *wh*-extraction from a clause. Chung does not address the question of why possessor extraction from a possessed noun phrase and *wh*-subextraction from a clause should differ in this respect. My suspicion is that the reason why *wh*-agreement for the Case of the container of the *wh*-possessor, as in (ib), is ungrammatical is that possessor extraction from possessed noun phrases in Chamorro is not a case of extraction — that is, *ec* ≠ *t* in (i); the possessor originates outside the possessed noun phrase and binds a (resumptive) pronoun inside it (cf. ‘I saw the person who you stole his money’). This is plainly an empirical matter, to be settled on the basis of questions concerning the transparency/opacity of DP for other cases of extraction, the kind of agreement triggered on the possessed noun by internal and external possessors (see e.g. Hungarian; Den Dikken 1999), and possibly other considerations as well. I cannot address it here.



These complementiser agreement facts seem to confirm that long-distance A'–dependencies are not established via successive-cyclic movement through SpecCP in Chamorro: if they were, one would naturally expect complementiser agreement to be manifest on *every* complementiser along the A'–movement path, *quod non*. The Rackowski & Richards (2005) strategy of forming long-distance A'–dependencies, shown in (2)/(106), thus seems to get both the *wh*–V agreement and the *wh*–C agreement facts of Chamorro right. The classical successive-cyclic A'–movement strategy, (1), by contrast, cannot deliver the Chamorro facts in (104) and (107) in any straightforward way (if at all). I conclude that Chamorro lends support for the existence of the long-distance A'–movement scenario in (2), and once again fails to confirm the possibility of successive-cyclic movement via SpecCP, as depicted in (1).<sup>69</sup>

### 5.5 Summary

At the end of this revisionist mini-history of the arguments for successive-cyclic movement via SpecCP, along the lines of (1), we have come to the conclusion that literally none of the extant empirical arguments make the case that they have standardly been taken to make. In some cases, no movement to or through SpecCP is crucially implicated at all; in others, though movement to a subordinate SpecCP position arguably does take place, there is good reason to believe that such movement is actually terminal, and does not feed onward A'–movement. I conclude that there is no case to be made for successive-cyclic movement through SpecCP: all movement to SpecCP is terminal (as codified in (7)).<sup>70</sup> Along the way, we have had occasion to study some of the phenomena in more detail than in the existing literature (Afrikaans medial P–stranding being the most significant example), and we have uncovered important support for some of the key ingredients of the three ways of forming long A'–dependencies that this paper has endowed UG with: successive-cyclic movement via *v*P–edges, resumptive prolepsis, and scope marking (either with or without (full or partial) concord).

## 6 Conclusion

In this paper, I have argued from a number of different angles that successive-cyclic movement via SpecCP (as in (1)), a staple of generative-syntactic research for more than half a century, does not exist. The perennial questions surrounding (1) thus evaporate. Successive-cyclic A'–movement *per se* remains an option, but can take place only via *v*P–edges (as in (2)). Resumptive prolepsis (3) and scope marking (4), with varying degrees of concord, take care of the rest of the empirical palette. The resulting theoretical typology of long A'–dependencies is both descriptively and explanatorily adequate.

69 Selayarese seems at first to turn the Rackowski & Richards (2005) strategy for the formation of long A'–dependencies on its head, with apparent long A'–fronting precisely *prohibiting* the matrix verb from entertaining an agreement relationship with the embedded clause. But recall from the discussion in section 5.4.3 that in more recent work, *Finer* (2003) has reanalysed the apparent long A'–movement cases in terms of clausal pied-piping, with the focused constituent moving no further than the SpecCP position of the clause in which it originates, and subsequent movement involving the entire subordinate CP (from which most material eventually extraposes later in the derivation; this is immaterial here). The obligatory absence of the absolutive marker *-i* on the matrix verb is reanalysed from the perspective of a new outlook on *-i*, which *Finer* now treats as 'the default topic in the clause' — since the subordinate CP in *Finer's* (2003) new analysis is fronted to a focus position in the matrix clause, which is incompatible with a topic interpretation, the clitic *-i* is prevented from surfacing. Viewed this way, the Selayarese facts actually do not bear on the Rackowski & Richards (2005) analysis of Tagalog (which I have extended to Chamorro): Selayarese does not perform long A'–fronting at all.

70 *Bošković* (2002) argues against feature-checking successive-cyclic movement through SpecCP, based on ellipsis licensing — in particular, the fact that (ib) is ungrammatical, which would be unexpected (from the perspective of *Lobeck's* 1995 analysis) if the most deeply embedded C–head engaged in a feature-checking relationship with an intermediate trace/copy of *who*. But this argument is not airtight: ellipsis licensing is arguably sensitive to *phonological* features. This explains the contrast between (ia,b).

- (i) a. he was talking to someone, but I don't remember [<sub>CP</sub> who [<sub>C'</sub> C [<sub>TP</sub> he was talking to]]]
- b. \*he was talking to someone, but I don't remember who she said [<sub>CP</sub> who [<sub>C'</sub> C [<sub>TP</sub> he was talking to]]]

## Acknowledgements

Many thanks to the participants of the Minimalist Approaches to Syntactic Locality conference at the Research Institute for Linguistics of the Hungarian Academy of Sciences, expertly organised by Balázs Surányi, for their invaluable input. Special thanks are due to my Hungarian informants, to Judit Gervain and Anikó Lipták for their continued help with the Hungarian agreement facts over the years, and to Antje Lahne for extensive discussion of many ingredients of the paper.

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