Phase Extension: A reply

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Phase Extension is a theory of 'domain widening' resulting from movement of the head of a phase (either an inherent phase or a derived phase that is itself the result of Phase Extension) to the next head up the tree. Phase Extension is the automatic and unavoidable result of movement of such head movement.[1] It saves some operations that would be ungrammatical without its application, but it blocks others that would have been perfectly legitimate if no Phase Extension had taken place. In my target paper, I presented a variety of empirical domains in which Phase Extension provides an explanatory account for otherwise often quite recalcitrant data. In the following pages, I address many of the comments and questions raised by my commentators regarding some of the empirical proposals, the technical ingredients of the theory, and their conceptual underpinnings. In the closing section, I will consider Pesetsky's alternative 'property delay' model, and point to some areas where it makes predictions that are different from, and as far as I can see less accurate than, those made by the Phase Extension theory.

1   Predication and phasehood

I should start by addressing what is perhaps the most fundamental bone of contention among several of the commentators: the definition of an inherent phase. Central to this theory is the idea that all syntactic locality is ultimately rooted in the property that makes an inherent phase a phase: *predication*. Inherent phases are predications. Several of my commentators have raised questions in connection with this declaration. Boeckx asks: 'Why should subject-predicate structures be inherent phases?' My answer here can be brief: Because they are, by definition. But then Matushansky points out that a formal definition of predication is necessary in order to evaluate the claim that phases are predications; and Boeckx adds: 'I don't know of any *uncontroversial* definition of what predication is' (original italics).

It seems to me that the relevant question here is not whether there are any uncontroversial definitions of predication available in the literature — there are no uncontroversial definitions of 'proposition' in the literature either, to my knowledge,[2] but that has not prevented the field from basing its definition of a phase on this notion. The real question is whether some definition can be given that is descriptively adequate and can serve as input to a formal definition of a(n inherent) phase. What I argued in Den Dikken (2006) (and continue to assume here) is that predication in semantics is property ascription, and in syntax involves an asymmetrical structure including the predicate, its subject, and a functional element (the RELATOR) mediating the uniformly asymmetrical (but non-directional) relationship between the predicate and its subject.

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1   It is not the case, however, that the mere Merge of a phase-external head automatically results in Phase Extension — that is, Boeckx's statement, in his comments, that 'as soon as an inherent phase merges with another category, there is no way of avoiding phase extension' is false. Neither Phase Extension *per se* nor phase-extending head movement is the automatic result of Merge of a phase-external head; Phase Extension is the result of head movement that takes place for some reason. The original paper discusses a number of reasons why phase-extending head movement may take place — including facilitation of Predicate Inversion, licensing of RELATOR heads at LF ('small clause restructuring'), etc. It is under such circumstances, and such circumstances alone, that Phase Extension will come about; it certainly is not an automatic consequence of the merger of a phase-external head. In the general context of automatic consequences, also note that the Phase Extension theory does not claim that phase-extending head movement automatically gives rise to things like Predicate Inversion; rather, Predicate Inversion happens for independent reasons (discussed in Den Dikken 2006), and must be facilitated by phase-extending head movement. Frank is right, therefore, in concluding that 'there is nothing about the head movement, so far as I can tell, which requires the P[redicate] I[nversion] movement to take place' — that is correct; but it does not present a problem for the theory proposed.

2   The remarks made by Gallego & Uriagereka on the subject of 'propositionality', in their comments on my paper, should serve to illustrate this. Gallego & Uriagereka are mistaken, however, in holding the controversial status of 'propositions' against my definition of inherent phases: my definition is not couched in terms of 'propositionality' at all; instead, it is based on 'predication'.

This is a fairly broad notion of predication, and it plausibly includes such relationships as that between a topic and a comment (in topic-comment structures, with the comment serving as the predicate of the topic), and between a focus and the constituent representing the background or presupposed material (this time with the focus as the predicate). There is some relevant discussion of the application of the RELATOR structure to topic-comment and focus constructions in Den Dikken (2006:sect. 2.5.3, 2.5.4). In an information-structurally neutral TP, the subject in SpecTP typically serves as a topic, with the complement of T being the comment, and T being the structural RELATOR of the topic and the comment. Such TPs, therefore, are arguably predication structures, and hence, by the logic of the approach to phases taken in my work, inherent phases. For this and other reasons, I thus agree with Gallego & Uriagereka's comment that T can establish predication dependencies under certain circumstances — and I said as much in section 6.3 of the paper.[3]

Note, then, that I am explicitly not assuming that 'TP is "special"', as Boeckx puts it in his commentary (nor, by the way, do I agree that 'Chomsky 1986 established that' — i.e., the 'specialness' of TP: all that Chomsky 1986 'established' was that TP (or IP, as it was then called) was a major embarrassment to the barriers algorithm). There is in fact nothing special about TP: it is an inherent phase whenever T serves as the RELATOR of a predication; and even when T is not inherently the RELATOR of any predication, TP can still become a phase as a result of phase-extending head movement up to T. The original paper provides an explicit theory answering the question of why certain categories are phases in the structural environments in which they occur — contrary to what Boeckx believes, that question is not being begged or skirted.

With this basic question out of the way, let me now proceed by discussing two important theoretical issues raised in the commentaries, one concerning my account of Holmberg's Generalisation, and the other addressing the LF Phase Extension analysis of the difference in scopal behaviour between ECM-subjects of small and *to*-infinitival clauses.

2   Two empirical issues and their theoretical implications

2.1   *Object Shift and Holmberg's Generalisation*

My discussion of Object Shift and Holmberg's Generalisation in the target paper confined itself to the simple cases, the ones in which overt verb movement is clearly implicated. Holmberg's (1999) more recent work has led to some skepticism about the role of overt verb movement in the distribution of Object Shift. On the one hand, there are cases in which the verb clearly moves yet Object Shift continues to be blocked (as in (1a) and (2a)) *unless* the non-verbal element immediately preceding the pronominal object is itself manoeuvred out of the way (as in (1b) and (2b)); on the other hand, there are cases in which Object Shift succeeds despite the fact that it seems plain that there can be no head movement of the verb (as in the remnant VP topicalisation case in (3b), from Fox & Pesetsky 2005a, which contrasts with (3a), where Object Shift is impossible).

(1)	a.	dom	kastade	<*mej>	inte	ut <mej>
		they	threw	me	not	out me
	b.	ut	kastade	dom	mej	inte (bare ned för trappan)
		out	threw	they	me	not (only down the stairs
(2)	a.	jag	gav	<*den> inte *Elsa* <den>		
		I	gave	it not Elsa it		
	b.	vem	gav	du	den	inte?
		who	gave	you	it	not

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3   Gallego & Uriagereka's allegation that, in my theory, 'only *v** is inherently phasal, T and C becoming so by inheritance' is thus false, at least with reference to T. As for C, it seems to me doubtful that it itself ever establishes a predication relationship. While it is true that CPs can be predicative (relative clauses, CPs in *tough*-movement constructions), no predication relationship seems to be established by C, between its complement and its specifier — C never seems to be a RELATOR of predication; C's projection can, under certain circumstances, be the predicate of a predication relationship established by some CP-external RELATOR. (See Den Dikken 2006:241–42 for a snapshot of my perspective on the structure of relativised noun phrases.)

(3)	a.	jag	har	<*den>	inte	gett	henne	<den>
		I	have	it	not	given	her	it

	b.	⁷[gett	henne]	har	jag	den	inte
		given	her	have	I	it	not

Pesetsky, in his comments, is right to point out that the ungrammaticality of (1a) and (2a) with Object Shift can be blamed, on my outlook on the structure of verb-particle and double object constructions, on the intervention of the particle or indirect object (see Den Dikken 1995 and Den Dikken & Mulder 1991 for relevant discussion, which I will not be able to reproduce here).[4] And of course (3a) is straightforwardly impossible with Object Shift as well. But how does fronting of the particle, indirect object, or remnant-VP suddenly make things grammatical?

The biggest challenge here is (3b),[5] which seems to pose a major derivational paradox: we know that (3a) is impossible with Object Shift, but *gett henne* seems to be the remnant of a VP from which the direct object must have been removed prior to topicalisation; so how can we create the remnant VP if Object Shift is impossible at the point in the derivation at which it is supposed to take place? Fox & Pesetsky (2005a) have presented one particular perspective on (3) (and (1) and (2) as well) that solves the mystery with an appeal to Cyclic Linearisation and Order Preservation — a perspective that is not compatible with the Phase Extension model, for reasons outlined in Pesetsky's commentary. In what follows, I will present a different perspective — one that reconciles the facts with the theory of Phase Extension, and which, in the process, introduces some ancillary data about remnant VP topicalisation constructions that I believe are highly relevant in the context of the question of what the proper analytical treatment of this phenomenon should be.

Let me start by shifting the empirical focus over to Dutch, which is well known to liberally allow remnant VP topicalisation as well. Not surprisingly in light of this, Dutch has a counterpart to Swedish (3b), illustrated in (4a). Interestingly, however, (4b), featuring a pronoun (*dat*) in the position immediately preceding the finite verb which resumes the topicalised partial VP, is grammatical as well.

(4)	a.	[haar	gegeven]	heb	ik	het	niet
		her	given	have	I	it	not

	b.	[haar	gegeven],	*dat*	heb	ik	het	niet		(cf. *dat heb ik het haar niet gegeven*)
		her	given	that	have	I	it	not			that have I it her not given

Hoekstra (1999) and Zwart (1993:260–61) show that simple VP topicalisation constructions like (4a) as a rule show parallel behaviour to *d*-word left-dislocation cases of the type represented by (4b). And throughout, whenever there is an empirical basis on which to decide whether simple VP topicalisation involves movement of the VP from a sentence-internal position to the left-peripheral topic position or instead involves base-generation of the VP in sentence-initial position, the facts indicate that the latter approach is the correct one.

4	Haider claims that Object Shift in (2a) should be grammatical 'since V-movement beheads the VP and thereby extends the phase and makes it transparent for Object Shift'. But he overlooks the fact that, entirely separately from the fact that overt verb movement has taken place here, the indirect object, sitting in SpecFP (an A-position asymmetrically c-commanding the direct object's base position), counts as an intervener for A-movement (here Object Shift) of the direct object in a double object construction. Haider is certainly right that 'Object Shift is not the chief witness for phase extension by head movement' — nor was it claimed to be. In the opening statement of his commentary, Haider recapitulates the Phase Extension theory as follows: 'Phrases cease to be phases once the head raises out of the phrase. ... So, in the simplest case, one would expect a direct correlation between overt head-movement and phrasal transparency properties for extraction constructions in typical cases of head-movement, as for instance V movement'. But this characterisation only holds 'in the simplest case': other things (in particular, things like Predicate Inversion) may happen in the course of the derivation that will create opacity for certain dependencies, trumping the transparency resulting from phase-extending head movement.

5	I will not have the opportunity here, for reasons of space, to address (1b) and (2b) directly. See Den Dikken (1995:Ch. 4) for discussion of data that are relevant in connection with the facts in (2).

One particularly telling piece of evidence is the fact that in VP topicalisation constructions featuring matrix verbs that normally select only *te* 'to' infinitives (such as *proberen* 'try'), the topicalised subordinate VP preferably shows up 'bare', without the infinitival marker *te* — regardless of whether a resumptive *d*-word is present or not, and irrespective of whether we are dealing with a full or partial VP in initial position (as witness the flexible placement of the indirect object pronoun *haar* in (5b)):

(5)   a.   ik heb <haar> nog nooit geprobeerd <haar> die theorie uit *(te) leggen
                I have her yet never tried her that theory PRT to explain
        b.   [<haar> die theorie uit ([?]te) leggen] (dat) heb ik <haar> nog nooit geprobeerd
                  her that theory PRT to explain that have I her yet never tried

If (remnant) VP topicalisation invariably involved movement of the topicalised constituent from a clause-internal position, the versions of (5b) lacking *te* would involve a selectional mismatch of a kind that is otherwise unheard of in indisputable cases of movement.[6] The conclusion to draw from these data is that not all VP topicalisation involves movement of the initial VP; there must be a derivation for VP topicalisation constructions (including 'remnant' cases) in which the initial VP is base-generated in topic position, and is associated with a placeholder in the matrix clause, optionally spelled out (in Dutch) as the *d*-word *dat* 'that'.

    Suppose, then, that we are dealing with a base-generation *cum* (covert) *d*-word resumption derivation for the examples in (4a,b) and (3b). On such an analysis, the matrix clause contains just a single verb, and this verb is finite and raised out of VP all the way up to C — in other words, we are presented with an environment in which Object Shift is licensed. The grammaticality of (3b) is then unsurprising; no derivational paradox presents itself. Unfortunately, direct evidence for a base-generation *cum* resumption analysis of (3b) in the form of an overt resumptive pronoun (*det* in Swedish) is not forthcoming: Anders Holmberg (p.c.) informs me that (6b) is ungrammatical; resumption is grammatical only in cases in which a VP is topicalised in its entirety, not in remnant VP topicalisation cases.

(6)   a.   [gett henne boken], *det* har jag inte
                given her the-book that have I not
        b.   *[gett henne], *det* har jag den inte
                given her that have I it not

But this need not defeat the base-generation *cum* resumption analysis: after all, the Dutch facts make it clear that the resumptive is not necessarily overt; it is entirely possible that, as a consequence of conditions that remain to be pinpointed, the resumptive, while structurally present, is forced to remain silent in *remnant* VP topicalisation constructions in Swedish. What may very well support this null resumption analysis for Swedish (3b) is the fact (again pointed out to me by Anders Holmberg, p.c.) that, whereas long-distance VP topicalisation is normally perfectly grammatical in Swedish, (7b) and similar cases of long-distance *remnant* VP topicalisation crash.

(7)   a.   [gett henne boken] vet jag att jag har
                given her the-book know I that I have
        b.   *[gett henne] vet jag att jag har den
                given her know I that I have it

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6   In English, one occasionally finds selectional mismatches in constructions involving displacement as well. Particularly germane to the main-text discussion is the appearance of a bare infinitive in lieu of a past participle in (i) (see Emonds 1976), which suggests that VP topicalisation in English may or even must involve base-generation as well. Also interesting is (ii) (from Wilder 1991), which Mulder & Den Dikken (1992) interpret as providing support for a null operator movement analysis of *tough*-movement constructions in which the null operator is not coindexed with/bound by the matrix subject.

(i)   a.   he has kiss-*(ed) Mary   (ii)   a.   it's hard to believe (*for) him to be top of the class
        b.   [kiss-(*ed) Mary] he has   b.   [*(for) him to be top of the class] is hard to believe

Assume that, unlike *det* itself, the null counterpart of resumptive *det* does not front,[7] being subject to a formal licensing condition that forces it to stay in clause-internal position. Assume further that the null resumptive is subject to an identification condition that requires it to be a clause-mate of its associate (the topic that it resumes). With these assumptions (which strike me as perfectly plausible working hypotheses) in place, the ungrammaticality of (7b) follows as a matter of course — so long as (7b) *must* in fact be a case of base-generation *cum* (covert) resumption: if a movement analysis were available for (7b), there would be no obvious cause for the fact that it is so much worse than (7a) or any other case of unobstructed extraction from a non-island complement clause. Thus, I take (7b) to confirm that (3b) is *not* a case of movement-derived VP topicalisation, but instead involves base-generation of a partial VP in sentence-initial position. The matrix clause of (3b), featuring the direct object undergoing Object Shift, then features just a single verb in Verb Second position, rendering this sentence perfectly compatible with a Phase Extension approach to Object Shift of the type I advocated in my target paper.[8]

2.2 Small-clause subjects vs to-*infinitive subjects: The scope facts and beyond*

In my very brief discussion of the difference in behaviour between small-clause subjects and *to*-infinitive subjects in the domain of scope, I singled out the case in (8) as an argument for the idea that Stowellian 'small clause restructuring' (cast in terms of LF-incorporation) is a case of phase-extending head movement, with the RP phase being extended up to VP. The lack of a $\forall>\exists$ reading for the version of (8) lacking *to be* (pointed out in Hornstein 1995[9]) was argued to follow from the fact that, with LF-movement of the RELATOR-head of the small clause to V extending the phase up to VP, the small-clause subject is 'trapped' inside the extended phase, and cannot gain scope over the subject. Several of my commentators correctly point out that (8) is not an isolated fact, and that the empirical lie of the land is considerably more complex. They claim that, once a broader array of facts is taken into account, the Phase Extension account of (8) can no longer be upheld. My purpose in this subsection is to argue that, with the full range of relevant facts taken into consideration, the Phase Extension analysis of (8) is actually supported. To this end, let me start by broadening the picture emerging from the commentaries (which presented (9)–(12)) by adding (13) (due to Postal 1974:194, who based himself on an initial observation in Chomsky 1973:254).

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7 The idea that the overt resumptive and its null counterpart are in different structural positions can be supported on the basis of the fact that while (4b) forces comma intonation following the topic, (4a) resists a comma, suggesting that the VP-topic in (4a) is itself in the immediately preverbal structural position, the same position that is occupied by *dat* in (4b), which likewise cannot be separated from the finite verb by a pause.

8 I will not fill in any of the specific details of the base-generation *cum* (covert) resumption analysis of VP topicalisation here. See Hoekstra (1999), Hoekstra & Zwart (1994), and Zwart (1993) for relevant discussion; and see Grohmann (2003) for a different perspective (one which, however, does not directly address the remnant topicalisation data presented here). Note that none of what I argued in the foregoing counts as a disqualification of the Fox & Pesetsky approach to Object Shift: all I desired to show in these paragraphs was that the Phase Extension analysis is not counterexemplified by (3b) and such like. An important empirical test case that *will* potentially differentiate between the Fox & Pesetsky approach and mine would be the status of remnant VP topicalisation constructions in which the matrix clause includes more than just one (finite) verb — i.e., sentences such as (i). Holmberg (2005), in his comments on Fox & Pesetsky's (2005a) target paper in *Theoretical Linguistics*, rejects VP topicalisation altogether in the kind of multi-auxiliary context needed to set up the test. Fox & Pesetsky (2005b:253), in their reply, intimate that some speakers do allow it; but more careful study will be needed before the test based on sentences such as (i) will be executable. Though verifying them may be difficult, the predictions are clear: if Fox & Pesetsky's Cyclic Linearisation approach is right and 'there is no Spell-out domain that contains [*ha*] ... while excluding the landing site of OS, [their] approach predicts that the result should be acceptable' with *den* either following or preceding *ha* (Fox & Pesetsky 2005b:253); on my approach, by contrast, (i) should be ungrammatical with *den* preceding *ha* (which is non-finite and has not moved, barring Object Shift).

(i)   [gett   henne] skulle jag <den> ha   <den>
         given her   should I   it   have it

9 Though several speakers have confirmed the Hornstein judgement (which I will continue to base myself on), others point out that for them the scope contrast is not robust or even non-existent, esp. in contexts desiring $\forall>\exists$ — thus, note the following internet-token of *be*-less (8), whose context suggests a wide-scope reading for the $\forall$QP: *Someone considers every power in the powerset useful, even those considered useless by the majority of Regeneration scrappers*. (Thanks to David Pesetsky, p.c., for this example.)

(8)   someone considers every congressman *(to be) a fool   (on ∀>∃ interpretation)
(9)   someone seems *(to be) sick   (on *seem*>∃ interpretation)
(10)   the DA proved two assumptions *(to be) false   (on *prove*>2 interpretation)
(11)   the DA proved the defendants (to be) guilty during each other's trials
(12)   the DA proved none of the defendants (to be) guilty during any of the trials
(13)   a.   the DA is hard to consider (*to be) competent
        b.   the defendant is easy to prove (*to be) guilty

What we find is that the data divide into three subsets — one in which the absence of *to be* eliminates a particular interpretation that is available with *to be* included (see (8)–(10)), a second subset in which the presence or absence of *to be* is innocuous and the ECM-subject always seems to gain command over a constituent of the matrix clause (see (11)–(12); Frank and Surányi mention some other pieces of data that are part of the same family, but which I will suppress here for reasons of space[10]), and a third (not mentioned by the commentators, and rarely discussed in the literature) in which the presence of *to be* actually results in ungrammaticality (see (13)). The full picture thus turns out to be an intricate case of '*to be* or not *to be*' — sometimes something succeeds only when *to be* is present; sometimes something succeeds only when *to be* is absent; and sometimes things succeed either way.

Matushansky, in her commentary, rightly points out that (9) (due to Williams 1983:293) is straight-forwardly compatible with the Phase Extension account I presented for (8). To make the account concrete, I assume that scope reconstruction sites must be on the edges of (LF) phases. That said, there is no scope reconstruction site for *someone* below *seem* in the version of (9) lacking *to be*, in which (on the assumptions laid out in my paper) the RELATOR-head of *seem*'s small-clause complement raises up to *seem* at LF, thereby extending the phase up to *seem*'s VP at that level. The lowest scope reconstruction site for *someone* thus becomes the matrix VP, which is still above *seem*; it is correctly predicted on this approach that *someone* cannot be in the scope of *seem*, even though *someone* does in fact bind a trace in the complement of *seem*.[11]

While (9) can thus be taken to support the Phase Extension analysis of (8), (10) may seem to be problematic for it. The fact here is that, in the absence of *to be*, the ECM-subject *two assumptions* is forced to scope over the matrix verb *prove*. Matushansky is right that, if *two assumptions* were frozen in the SC-subject position in *the DA proved two assumptions false*, one would not expect the *prove*>2 reading to be unavailable. But in my paper, what I derived was not that the SC-subject is necessarily 'frozen in place', but rather that it is 'trapped' in the extended phase, the projection of the matrix verb. I assumed (for concreteness) that the SC-subject cannot adjoin to the extended phase (on the hypothesis that VP is ineligible as an adjunction site); but the unavailability of a ∀>∃ reading for (8), my original case, will continue to be guaranteed if we do allow the SC-subject to adjoin to the extended phase (VP): even then, it still will not c-command any member of the chain of the existential quantifier (which originates in the matrix Spec*v*P); so long as we ensure that successive-cyclic QR beyond the extended VP-phase is illegitimate,[12] the Phase Extension account

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10   The ACD facts brought up by Surányi (*I consider {every politician/more politicians} corrupt [{that/than} you do e*$_{VP}$]), featuring the relative or comparative clause in 'extraposed' position, are entirely straightforward. For a broader discussion of the empirical and theoretical vicissitudes of ACD in Phase Extension contexts, focusing specifically on copular inversion environments, see Den Dikken (2006:sect. 4.4.4.4).

11   Note that this way, we get an account of (9) that does not force us to forfeit a small-clause internal trace for *someone seems sick*. This is desirable in light of Kratzer's (1995) argument for the presence of a low base-generation site for the subjects of stage-level predicates (e.g. *sick*) in contradistinction to individual-level predicates, whose subjects are argued to have a higher base position.

12   This will be ensured if LF-movement is never successive-cyclic, an assumption that will procure a straightforward account of the fact that QPs embedded in a finite complement clause (which inevitably is or dominates a phase boundary) can never gain scope over a constituent in the matrix clause. As a consequence of *universal* LF head-movement all the way up to C (see section 6.2 of my target paper; I thus disagree with Frank's 'assumption that there is no covert movement of T to C'), the entire extended projection of a verb is one single phase at LF (except in contexts of small-clause restructuring), allowing for scope ambiguities within single finite clauses without the need for successive-cyclic QR arising; scope ambiguities across finite clause boundaries are ruled out, however, by the ban on successive-cyclic QR. I will not address the question of how the non-successive-cyclic nature of QR is derivable.

of (8) will remain in effect with *every congressman* adjoining to the matrix VP at LF.[13] This said, let us now return to (10), and the fact that it forces the SC-subject to scope over the matrix verb, *prove*. This now follows from Phase Extension in conjunction with the assumption (made previously, in connection with (9)) that only LF phase edges are available as scope sites: with the phasal status of the small clause (RP) annulled as a result of LF 'small clause restructuring' (i.e., R-to-V movement), the first position from which *two assumptions* can take scope is a position adjoined to the VP of *prove*; from this position, *two assumptions* asymmetrically c-commands (the LF-interpreted base copy of) *prove*, whence the unavailability of the *prove*>2 reading.[14]

The discussion of (8)–(10) has shown that Phase Extension delivers the desired results for cases in which the presence or absence of *to be* in the verb's complement influences the availability of certain *interpretations* for sentences that are grammatical regardless of the presence of *to be*. I will now move on to cases in which the presence or absence of *to be* directly influences *grammaticality* — Postal's (1974) examples in (13). In these sentences, inserting *to be* leads to ungrammaticality. This has everything to do with the fact that these are cases of null operator movement. Null operators are well known to impose restrictions on the positions from which they can be extracted. Stowell (1986) sought to recast these restrictions in large measure in terms of the ECP (the licensing condition on traces), in conjunction with the specific assumption that antecedent-government succeeds only in chains headed by a non-null category — null operators, therefore, are unable to antecedent-govern their traces; so whenever head-government fails as well, an ECP violation results.[15] An updated version of Stowell's account would require that the base position of a null operator not be separated from a verb by a phase boundary at LF — an LF-representational requirement on the licensing of null operators. This requirement is straightforwardly met in the versions of (13a,b) lacking *to be*, where the overt-syntactic phase boundary between the verb and the null operator's base position is effaced at LF as a result of phase-extending movement of the RELATOR up to V. In the *to*-infinitival versions of (13a,b), by contrast, no phase-extending movement to V takes place, and as a result the matrix verb and the null operator's base position will be separated by a phase boundary (probably the TP in the verb's complement, which arguably becomes a phase as a result of (LF) movement of *be* to T). I present these remarks as tentative suggestions; obviously a lot more work will need to be done before we can confidently claim to have understood these null operator restrictions.[16] But if it is true that reference should be made to the presence or

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13   With VP now being postulated as a QR-site, no blanket assumption to the effect that VP is ineligible as an adjunction site can be made (contrary to what I assumed in my target paper). Rather, the availability of adjunction to VP will depend (perhaps among other things) on the question of whether VP is phasal. Naturally, any and all allusions to phasehood in connection with the distribution of adjunction sites call for a principled theory of adjunction embedded within the phase-based model of syntax. I have no such theory in place at this time; but it would seem to be desirable, at a general conceptual level, to make the distribution of adjunction sites sensitive to phasehood.

14   I will not have the opportunity in this brief reply to explicitly spell out the way in which the *to*-infinitival version of (10) accommodates both the 2>*prove* reading shared by both versions of (10) and the *prove*>2 reading. Nor can I discuss in detail the fact that *you're allowed to consider no person guilty prior to the verdict* forces the negative QP to scope over the modal, and that in *I don't consider someone in England well-paid* the existential QP must scope over the matrix negation. (Surányi brings these cases up in a footnote to his commentary, attributing the latter to Johnson & Tomioka 1997.) These scope facts may follow in a way analogous to the account of the discussion of (10), provided that, in the LF representation, *allowed-to-consider* and *not-consider* are units.

15   Takahashi's (2002) attempt to derive the facts from the EPP (on the assumption that a null category, here *Op*, cannot satisfy the EPP) is unlikely to be successful: since the EPP holds in small clauses as well as *to*-infinitives (cf. *they consider *(it) (to be) unlikely that S*), the different behaviour of *to*-infinitives and bare small clauses with respect to the null-operator restriction (even in EPP environments: *the DA is hard to consider (*to be) likely to be competent*) suggests that the EPP is not a key player in this context.

16   The restriction formulated in the main text may be assimilable to Rizzi's (1986) formal licensing condition on *pro* (formulated in terms of government, now most likely to be updated in terms of phase theory). A formal assimilation of the two restrictions may in fact be required if null operators (at least the ones used in *tough*-movement constructions and infinitival relatives; Stowell 1986:476 duly notes that there are null operator constructions that do not seem to be (fully) subject to the text restriction, including finite relatives and, to a certain extent, parasitic gap constructions) are *pro*'s, with the copy of *pro* in the null operator's base position then being subject to the same licensing restrictions that garden-variety *pro*'s are subject to.

absence of a phase boundary between the verb and the null operator's base position, these null operator restrictions will further support the Phase Extension analysis I originally proposed for (8).

  Let me now turn to the examples in (11) and (12) (see Lasnik & Saito 1991 and a lot of work in its wake). Here the presence of *to be* (or the size of the verb's non-finite complement) seems to be entirely innocuous: regardless of whether the verb takes a bare small clause or a *to*-infinitive, the ECM-subject is capable of gaining command over a constituent within an adjunct that must belong to the matrix clause. In these kinds of circumstances, Lasnik and others have argued, the ECM-subject must undergo movement into a position in the matrix clause outside the projection of the lexical verb. Moreover, it has become increasingly clear (especially in light of the NPI facts in (12)) that this movement step should be taken already in the overt syntax. That there can be overt-syntactic movement of the ECM-subject into a position above the matrix verb is also clear from the fact (already pointed out by Postal 1974; see also Johnson 1991) that the ECM-subject can surface in the linear string to the left of a matrix-clause adverb, as in *I believe John <u>sincerely</u> to be a liar*. The facts here are clear; the question is: do they jeopardise the idea that the non-ambiguity of the *be*-less versions of the examples in (8)–(10) and the ungrammaticality of (13a,b) with *to be* included are a consequence of (lack of) phase-extending movement of the RELATOR up to the verb at LF?

  They would if we were to conclude from the grammaticality of (11) and (12) that the ECM-subject *systematically* raises to a position relatively high up the matrix tree in overt syntax. If indeed it did so raise in *all* cases, the ECM-subject should behave like a matrix-clause constituent in *all* respects — *quod non*, as we have already seen. The solution to the puzzle, it seems to me, is as follows. We know there is evidence for overt raising of ECM-subjects in some cases (esp. (11)–(12)); so we know that overt-syntactic movement of ECM-subjects should be allowed by the theory — and of course it is, in my theory as in everybody else's. But if there is evidence that Object Shift is *sometimes* overt, is that a reason to believe that it *always* is? It seems to me that it is not. Fox & Pesetsky (2005b:240), in their reply to the commentaries on their *TL* target paper (and with reference to a different empirical case, involving Quantifier Movement rather than Object Shift), present the general case thus: 'It is forced for principled reasons in exactly those constructions ... in which we seem to detect its obligatoriness — and is *not* required elsewhere'. Let me rephrase this slightly, tightening it in the process: It is allowed to take place *only* if it has an effect on grammaticality/convergence. Put differently, by default Object Shift will not take place ('Procrastinate'/'Don't move'); but if applying Object Shift is the only way to derive a grammatical output, then it will.[17] For the cases discussed by Lasnik and others (cf. (11)–(12)), Object Shift is required for convergence. But (8)–(10) will always be grammatical, regardless of Object Shift, so Object Shift is not allowed (since it does not have an effect on grammaticality/convergence; delivering additional scope readings at LF is *not* a matter of grammaticality, hence not something that can be 'anticipated' by applying overt Object Shift). If this is the right way of looking at things, it leaves my earlier account of (8)–(10) entirely intact. Similarly, (13a,b) with *to be* included will always be *un*grammatical, regardless of Object Shift: the requirement that the null operator's *base* position not be separated from the verb by a phase boundary obviously cannot be circumvented by overt Object Shift.

  This approach of course makes predictions. One straightforward prediction, and one that is also straightforwardly confirmed, is that it should be grammatical to replace the two QPs in (1) with (simple) *wh*-words, thus forming a multiple, pair-list *wh*-question with a *wh-in-situ* in the position of the ECM-subject:

(14)   who considers who(m) (to be) a fool?

The reason why (14) is predicted to be grammatical even with *to be* left out is that here, in contradistinction to (8), performing Object Shift to the ECM-subject is a requirement for convergence in the version of the sentence lacking *to be*: leaving *whom* in the SC-subject position in overt syntax will 'trap' it there at LF, where 'small clause restructuring' takes place; but 'trapping' *whom* in the SC-subject position will prevent LF *wh*-movement of the *wh-in-situ*, and thereby the formation of a well-formed LF-representation for a pair-list

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17   This is of course reminiscent of Chomsky's (1995:Ch. 3) idea that Procrastinate can be overridden for convergence.

multiple *wh*-question.[18] So in (14) Object Shift is required for convergence — and since Object Shift as a last resort is indeed applicable precisely with an eye towards convergence, we expect, correctly as it turns out, that (14) will be grammatical with or without *to be*.

A further (and considerably more subtle) prediction leads us back to our initial data in (8) (repeated here as (15a,b)). Suppose that, in order for (16) to license *him* as a bound variable (with the adjunct construed as a matrix modifier), *every congressman* should undergo overt-syntactic Object Shift (Gallego & Uriagereka assume so in their discussion of Spanish VOS sentences; but see Sharvit 1999 and references there for cases of bound-variable construal without syntactic c-command, in copular environments). Then it should be possible, with *every congressman* undergoing overt Object Shift for convergence in both (16a) and (16b), to obtain a reading for it in which it scopes over the existential subject regardless of whether *to be* is present or not.

(15)   a.   someone considers every congressman a fool
        b.   someone considers every congressman to be a fool
(16)   a.   someone considers every congressman$_i$ a fool before/without even meeting/knowing him$_i$
        b.   someone considers every congressman$_i$ to be a fool before/without even meeting/knowing him$_i$

Preliminary results for speakers reporting the Hornstein judgement on (15a) (*∀>∃; recall fn. 9 on speaker variation) indicate that for some of them, a bound-variable reading for *him* coupled with *wide* scope for *every congressman* is indeed grammatical in (16a). These speakers' judgements confirm the prediction directly. I have also found speakers, however, who find that (16a) supports a bound-variable interpretation for *him* but still blocks wide scope for *every congressman*. A way of interpreting these speakers' judgements is that (for them) *every congressman* does not have to Object Shift to be able to bind *him*: it is sufficient for it to undergo QR to VP (the extended phase, via 'small clause restructuring'), with the adjunct attached relatively low in the matrix. No speaker I asked has reported that (16a) is ungrammatical on a bound-variable interpretation.

The facts here certainly deserve further investigation. But the picture that seems to emerge is entirely compatible with the Phase Extension approach to (8)–(13). For speakers who allow low matrix attachment for the *before/without*-adjunct, the scope and binding facts follow without Object Shift being necessary (suggesting that Lasnik *et al.*'s conclusion based on (11)–(12) merits qualification); for those attaching the adjunct high, Object Shift is forced to apply to procure a grammatical variable binding configuration, and concomitantly (and in line with the prediction), the universal QP gains scope over the existential subject. This confirms that Object Shift only applies in environments in which ungrammaticality would result if it did not, and thereby helps assuage and perhaps even eliminate the threat for the LF Phase Extension account of (8) posed by (11)–(12). But now that LF Phase Extension has (hopefully) been saved from the empirical challenges it seemed to face, I need to address some theoretical issues that arise in connection with it. I turn to these next.

3   Theoretical issues

3.1   *Overt vs covert movement*

Boeckx is right to comment that in the original paper I am 'not very explicit about what kind of architecture of grammar' I assume. 'Do covert operations follow overt ones? In the same component, or in distinct ones?', he asks. The discussion of 'small clause restructuring' in my target paper commits me to the view that covert operations exist, that they follow overt ones, and that the two take place in distinct components. To elucidate this, I will highlight some of the properties of the general account in reply to Marušič's concerns about covert phase-extending head movement, and that this is the way in which 'LF only' phases are created.

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18   I assume here a standard account of the LF of multiple *wh*-questions in terms of LF-movement of the *in-situ wh*-constituent. Of course, if no LF-movement of the *wh-in-situ* is involved in the derivation of (14), the example is straightforwardly grammatical regardless of the presence of *to be* and regardless of the application of Object Shift. (14) only raises interesting questions on the LF-movement account of *wh-in-situ* (explicitly not adopted in Den Dikken 2006:131), which is why it is being discussed in these terms.

How can covert head movement proceed at all to create 'LF only' phases?[19] Marušič is certainly right that it should be impossible to 'have covert movement from a spelled-out phase to some higher point in the structure that has not been spelled-out yet'. But note that, as I point out in section 6.5 of the target paper, in order for the Phase Extension theory to work, it must be assumed that phases do not get spelled out upon their own completion — their spell-out is determined upon the merger of the next higher head (much as in Chomsky's original outlook on phase-based spell-out, where spell-out was not immediate either): if that head attracts the phase head, Phase Extension obtains and spell-out is delayed; if no phase-extending head movement takes place, the domain of the phase is spelled out.[20] Plainly, if spell-out of the entire phase were immediate (i.e., upon the completion of the phase), no Phase Extension could ever arise.

Consider now a configuration in which a transitive *v*+V takes a small-clausal (RP) complement, and the *v*P phase is not extended by phase-extending movement of *v* up to T. Upon the merger of an outside head (T), the domain of *v*P gets shipped off to PF and LF. At PF, all material in the domain of *v*P is eventually provided with a bundle of phonological features and thus phonologically spelled out; but prior to phonological realisation, certain operations can take place (taking the product of the syntactic derivation as their input) that change the output of syntax by, for instance, deleting or relocating some (bundles of) features — these are the operations that are assumed to be a part of the Morphological Structure component of Distributed Morphology. Similarly, at LF, all material in the domain of *v*P is eventually provided with a semantic interpretation; but once again, certain operations that need to be performed in order to facilitate full semantic interpretation can manipulate the output of the syntactic derivation — including operations that formally license and identify empty material, and also QR: operations that apply only in the LF wing of the grammar and have no PF reflex. The 'window' of the structure that is 'in view' at the point at which the domain of *v*P is spelled out includes the head and the edge of the RP phase and VP. That is exactly the right chunk of structure for the application of LF head movement in 'small clause restructuring' constructions: the 'window' contains the RELATOR-head of the small clause as well as the base copy of the V-head. 'Small clause restructuring' is thus successful — and it can be legitimately followed by QR of the small-clause subject to VP but no further, thus ensuring that the SC-subject can take scope over the matrix verb but not over the matrix subject (which is not part of the 'window' which is being operated upon at the relevant point in the phase-by-phase derivation).[21]

3.2 Head movement and Phase Extension

The theory of Phase Extension is candid and clear about its exploitation of head movement in syntax — both overt and covert syntax. Head movement must exist as a genuine syntactic operation in order for Phase Extension to materialise. But the status of head movement as a legitimate narrow-syntactic operation has repeatedly been called into question in recent work. Boeckx reads the literature thus: 'It is now quite clear that head-movement as a syntactic operation is an extremely problematic notion in a minimalist approach to grammar.' Pesetsky (who alludes to these problems in his fn. 1) stresses that 'the posited head movements [in the Phase Extension case-studies] ... have no phonetic reflex', which would make them even more misty or mystifying.

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19   Let me make it clear, to allay any lingering suspicions, that it is not the case that for me covert head movement is *the* (i.e., the one and only) way in which 'LF only' phases are created: I put covert head movement forward as *a* way of deriving such phases; there may very well be others (such as the ones discussed by Marušič 2005 in his fascinating dissertation), but it seems to me that covert head movement definitely is one.

20   The Phase Impenetrability Condition (PIC) works exactly as in Chomsky's work, as far as I can see. (Fox &) Pesetsky's Cyclic Linearisation work does not assume the PIC, of course; I will address Pesetsky's alternative construal of 'property delay' below.

21   Marušič's discussion of the scope-freezing effect of Predicate Inversion omits mention of the literature on these effects, which includes Kuno (1971) for locative inversion, Moro (1997) and Heycock & Kroch (1999) for copular inversion, and Aoun & Li (1989) and, more recently (and in more detail), Bruening (2001) for dative inversion. Den Dikken (2006:sect. 4.4.4.3) addresses the relevant data in a comprehensive way, showing that they follow from the theory. I do not have the space to go over this here. Unfortunately I also will not have an opportunity here to discuss Marušič's interesting DP-internal inversion data from Slovenian.

However, Den Dikken (2006) shows in detail that RELATORs are often overt (as Pesetsky acknowledges), and even when they are null, raising of a RELATOR in environments such as those involving Predicate Inversion typically does have a phonetic reflex, resulting in the appearance of a LINKER element (I will return to this in section 4). Besides, the alleged general problem with head movement (viz., that the trace left behind is apparently not c-commanded by its antecedent) surely is not fatal (see also Pesetsky's fn. 1): Kayne (1994) shows that there is ample independent support for a May-style definition of c-command in terms of domination, with adjuncts c-commanding outside their hosts. This is clear for phrasal relationships (cf. *nobody's articles ever get published on time*, where *nobody* manages to establish a c-command relationship with *ever* under which the latter, a negative polarity item, is licensed); one would expect, therefore, that such a definition of c-command would apply to head-level relationships as well.

Even if one agrees that head movement has a place in narrow syntax, however, one might still disagree that it can take place in the particular structural configuration in which I take it to obtain under Phase Extension, and one could wonder about its effects on the demarcation of phases. Regarding the former, Boeckx says that 'as soon as some version of Bare Phrase Structure is adopted, nothing is gained by moving X^0 to Y^0, since the sisterhood relation thus created was already created upon merging Y^0 and XP — rendering head-movement vacuous'. This point is interesting, but like some other suggestions in the literature to the effect that certain movement operations should not be allowed to transpire because they are in some sense redundant, it sidesteps the question of whether there could be some reason (or trigger) *independent* of the establishment of some configurational relationship (such as sisterhood) that could set things in motion. Thus, Abels's (2003) ban on movement of the complement of a head into a specifier or adjunction position to the projection of the same head will not follow if the head in question has the EPP property: on standard assumptions, the EPP is not satisfiable under complementation; and if it so happens that the complement of the head is the only thing that has the right kind of features to be able to Agree with the head, raise into the left periphery of the head, and thereby satisfy the head's EPP property, such complement-to-local-specifier/adjunct movement should not only be legitimate but in fact forced. By the same token, movement of some noun phrase that is born as the specifier of V (in a Larsonian structure, say) into a higher position that serves as the specifier to a functional head that receives the verb in the course of the derivation[22] should be grammatical despite the fact that the same relationship (a head-spec relationship between V and the noun phrase) is established twice over: each of the movement operations (NP-movement and head movement) is individually triggered by some feature in the functional domain of the structure. And similarly, raising of a head X to a higher head Y that takes XP as its complement should be grammatical if it is forced. In my analysis of Predicate Inversion, this latter kind of movement is an integral part of the licensing of Predicate Inversion: without it, the derivation would crash. Similarly, in the other instances of head movement postulated, there is always some sort of trigger for movement. I take it, then, that such X-to-Y movement is licit.

But Boeckx still has more questions: 'Why should head-movement extend phasal domains? Why should inherent phases lose their phasal character under head-movement?' Later in his commentary, he goes on to say that 'it is not clear how something like phasehood can be inherited in a framework that assumes Inclusiveness ... Is phasehood a lexical property? How can it be transferred upon head-movement? How can it be lost under head-movement, since movement is copying?'. These questions are entirely to the point. One surely would not want to say that phasehood is a lexical property of the phase head — it plainly makes no sense to say so in a theory that defines phases as predications (i.e., as *relationships*, structurally mediated by a RELATOR, between a predicate and its subject).[23] So if phasehood is not a lexical property, how can it (as Pesetsky puts it) 'travel with' a raising RELATOR?

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22   For concreteness, one can think here of NP-movement to SpecTP and V-movement to T in a sentence like *the tree fell to the ground* (in a language with V-to-T raising), on the assumption (made in Hale & Keyser 1993 and later work, but not endorsed here; see Den Dikken 2006:sect. 2.4) that the structure of this sentence includes the subpart [$_{VP}$ *the tree* [$_{V'}$ *fell* [$_{PP}$ *to the ground*]]].

23   In contrast, in Pesetsky's version of 'property delay', outlined in his commentary, 'the licensing of a particular flavor of specifier might be understood as a *lexical* property of the kinds of elements that build phases'.

In the original proposal I conceived of F in configurations of the type in (17) as a radically empty and meaningless place-holder whose sole purpose it is to provide a landing-site for phase-extending movement of the RELATOR,[24] thereby facilitating Predicate Inversion (movement of YP to SpecFP) — much as in Larson's (1988) 'VP shell' approach to the structure of triadic constructions, where the head of the outer VP is radically empty and meaningless V-node. As a matter of fact, the two approaches are indeed very similar: movement of the RELATOR up to F is typically (though perhaps not systematically) a case of *substitution* rather than adjunction, so the result of substituting R-to-F movement is effect an 'RP shell' structure.[25]

(17) $[_{FP}$ Spec $[F [_{RP}$ SUBJECT [RELATOR PREDICATE]]]]

Assume this much. Then, with R-to-F movement being substitution, and with FP=RP upon substitution of the RELATOR for F, Phase Extension is an automatic result of movement of the RELATOR: the boundaries of the original RP phase are simply stretched up to FP, with the original RP (which is reduced to a segment of the new, bigger RP) automatically losing its status as a phase in the process.

To be sure, while R-to-F movement in Predicate Inversion constructions is a likely case in point, not all instances of Phase Extension discussed in the target paper are obvious candidates for a substitution approach along these lines. Heads that serve as receptacles for phase-extending head movement are not necessarily radically empty. But it is likely that they will always be in the 'extended projection' (in Grimshaw's 1991 sense) of the moving head, in which case they will still count, in the relevant sense, as heads of 'shells' ultimately emanating from the inherent phase head (cf. also Gallego & Uriagereka's 'v*/T' amalgam). If so, this outlook on Phase Extension probably extends beyond the core Predicate Inversion examples to the general case (but more work is needed to make the details precise; the above serves as a general perspective).

3.3   The adjunction prohibition eliminated

Moreover, with R-to-F movement being substitution, we will probably manage to do away with one thing that virtually all of my commentators have taken issue with: the adjunction prohibition in (18) (going back to (100) in Den Dikken 2006:123):

(18)   adjunction to meaningless categories is disallowed

I agree with my critics that (18) is not pretty, and that it is not exactly straightforward how to interpret 'meaningless'. Rather than trying to patch (18) up or providing a rationale for it (which would probably be a rather pointless exercise), here I would like to suggest that (18) can be dispensed with altogether by looking more carefully at the kinds of structures resulting from phase-extending head movement.

If, as I suggested in the previous subsection, phase-extending head movement is a substitution operation creating a 'shell'-like structure, adjunction of XP to the derived phase (FP=RP), as in (19), would be a case of a specifier of RP adjoining to RP — an operation that is standardly considered to be illegitimate in simple phrases (see Ko 2005, and also Pesetsky's comments on my paper): something that is already an 'inner specifier' of a particular projection cannot be made an 'outer specifier' of or adjunct to that same projection in the course of the derivation.[26]

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24   In this respect, F is perhaps most similar to the 'proxy heads' of Nash & Rouveret (1997). F is not an Agr-type head, which probably should not exist — but not (just) because it is empty. As I said in fn. 16 of the target paper, I consider the mainstay of the argument against Agr-heads to be the fact that agreement is a *relationship*, not a *head*. Chomsky (1995:4.10.1) capitalises on Agr's consisting of –Interpretable formal features only; but I do not take this to constitute a blanket argument against empty heads in syntax.

25   One could (if one so desired) think of the FP layer of the structure in (17) as resulting from *remerge* of the RELATOR with its own projection, followed by *reprojection* of the RELATOR, resulting in an 'RP shell'. A similar reinterpretation is of course available for the ontogeny of Larsonian 'VP shell' structures as well. Since nothing here will hinge on the question of whether these structures result from remerge and reprojection or not, I will not elaborate on this issue here.

26   Here I assume, in line with Kayne (1994), that there is no fundamental difference between adjunction and specification; adjuncts are for all intents and purposes equivalent to ('outer') specifiers.

(19) $*[_{FP=RP}$ SUBJECT$_k$ $[_{FP=RP}$ PREDICATE$_j$ $[F=$RELATOR$_i$ $[_{RP}$ t_k $[t_i$ $t_j]]]]]$

If (19) can be rejected along these lines as an illegitimate case of 're-adjunction' to the same projection, an appeal to (18) will no longer be necessary to rule out A′–extraction of the subject of an inverted predicate.[27]

4   The nature of 'property delay': Cyclic Linearisation vs Phase Extension

Finally, let me discuss an alternative to Phase Extension proposed in Pesetsky's commentary – one that is close in spirit to my original proposal but quite different in its workings and in the theoretical assumptions it embraces. Pesetsky suggests that movement of a phase head to a higher head does not result in the extension of the phase up to the projection of the higher head (as in my proposal).[28] Instead, it brings about a shift in the nature of the movement (A or A′) targeting the edge of the the phase head's original projection and that of its host higher up the tree. Pesetsky's leading idea is that phase heads (and only phase heads) trigger A′-movement: while a landing site on the edge of a phase head's projection is an A′-position, all other

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27   In Den Dikken (2006:124–26), an information-structural perspective is presented on the ban on extraction of the subject of an inverted predicate. In the context of that discussion (on p. 122), I mention the fact (also pointed out in Pesetsky's commentary) that *sub*extraction from the subject of an inverted predicate fails in copular inversion cases but *not* in dative or 'beheaded' locative inversion constructions — contrast **who is the #1 best-seller in the country a book about?* (derived from *the #1 best-seller in the country is a book about x*) with *what did you send your students out copies of?* (derived from *I sent my students out copies of x*). The complete picture of the extraction restrictions in Predicate Inversion constructions is more complex than I indicated in my target paper; see Den Dikken (2006) for fuller discussion. Haider, in his commentary, adds two observations to the empirical puzzle. The first observation (not made in my work or in any other work I am familiar with; the statement that 'the reason for the transparency of [(ib)] for wh-movement [is] spelled out in the paper under discussion', i.e., my target paper, thus seems rather awkward) is that extraction of the direct object in a double-object particle construction is grammatical with the particle in verb-adjacent position, as in (ib) (contrasting with (ia), which I discuss in my work). I am not sure this datum is real — verb-adjacent particle placement is not normally grammatical in double-object particle constructions, for most speakers; moreover, I exercise caution because some of the data reported in Haider's commentary do not seem real, at least not for the varieties of English that I am familiar with: thus, contrary to Haider's claims, *will the #1 best-seller be this book (or that one)?* is grammatical, and so is *it is unclear whether the #1 best-seller was this book (or that one)*. But if the contrast in (ia,b) is indeed real, it could perhaps be made to follow from the analysis that I have developed for double object constructions (which normally delivers only the 'V–IO–Prt–DO' order) by manoeuvring the particle into V-adjacent position via phase-extending (right-adjoining) incorporation of the particle into the verb (in effect, an overt instantiation of 'small clause restructuring'), which, followed by overt movement of V+Prt to *v*, will deliver *v*P as the first phase dominating the direct object *wh*-phrase. A′-extraction of the direct object should then be legitimate via intermediate adjunction to *v*P.

(i)   a.   *which papers did you send your students *out*?   (datum based on Stowell 1981:342)
        b.   which papers did you send *out* your students?   (datum from Haider's commentary)
        c.   which papers did you send *them* out?   (datum from Haider's commentary)

The second observation made by Haider is that (ia) becomes grammatical once the indirect object is pronominalised, as in (ic). If true, this may indicate that pronominal objects in English undergo movement to a position outside the verb's complement. I am not in a position at this time to make the analysis of (ic) more precise.

28   Gallego & Uriagereka take it to be a virtue of their Phase Sliding (PS) that it 'isn't forced to claim that phases vary cross-linguistically'. But it seems to me that languages do differ in this respect in the PS model: in Spanish, where *v**-to-T takes place, 'the amalgamated new head *v**/TP is a phase boundary', so 'the *v**P phase is pushed up to TP' (elsewhere in the same discussion, however, Gallego & Uriagereka say that 'PS doesn't make TP a phase' and that '*v** retains "phasehood"'); but in languages in which *v**-to-T does not happen, it is just the *v**P that is phasal. Gallego & Uriagereka's closing statement that 'φ-features [are] the key property of phases (... ultimately related to morphological richness)' further reinforces the conclusion that phasehood is subject to variation. While the Phase Sliding and Phase Extension theories differ on some non-trivial points (though I add that, as far as I can see, Gallego & Uriagereka's account of their Spanish VOS facts is available, *mutatis mutandis*, in the Phase Extension theory as well), it seems to me they agree (and differ from Pesetsky's alternative) on the claim that there is language variation with respect to the demarcation or identification of phases. A *rapprochement* between the two models would thus seem readily possible. (Incidentally, Gallego & Uriagereka's other main reason for preferring Phase Sliding to Phase Extension, viz. that the former 'sticks to recent versions of the theory (without invoking such notions as "equidistance")', is ultimately a non-issue: Surányi is actually right to point out in his comments that equidistance, as defined in the paper, is 'irrelevant to the availability of Predicate Inversion'; so with equidistance set aside, there is no competition between Phase Sliding and Phase Extension as far as 'theoretical up-to-date-ness' is concerned.)

landing sites of phrasal movement are A-positions, by default. He weds this idea to my notion of 'property delay' in an interesting way, suggesting that when a phase head raises to a higher head position, the phase-head property of A/A′ determination is carried over to the head that receives the raised phase head and is lost on the phase head's original position.

For Predicate Inversion constructions, Pesetsky argues that this theory allows us to preserve a major result of the Phase Extension approach: the fact that the RELATOR of the predicate and its subject must raise to a higher, small-clause external position (my F) to make Predicate Inversion legitimate — specifically (for Pesetsky), to make it legitimate for the predicate to make an intermediate landing in an *A*-position on the edge of the RELATOR phrase. Pesetsky maintains that such an intermediate landing is necessary, on (Fox &) Pesetsky's assumptions regarding Cyclic Linearisation, in order for the predicate to be able to invert with its subject; and this stopover must be made in an A-position in order for the predicate to be allowed to subsequently raise on to a higher A-position without committing 'improper movement'.[29] Importantly, for Pesetsky, head movement of the RELATOR up to F does not actually extend the RP phase up to FP: RP remains a phase; phasality is not 'transportable' or 'transmittable', but *lexical* properties of phase heads (in particular, the ability to trigger A′-movement) *are* transported up the tree under movement of the phase head (recall section 3.2 and fn. 23, above). Since, then, RP remains a phase, extraction from the phase would have to proceed via the edge of the phase; but since movement of the RELATOR up to F has robbed the base copy of the RELATOR from the ability to trigger A′-movement, the only kind of movement that can proceed out of the small clause is A-movement. This then explains in what seems to be a very elegant and simple way the ban on A′-extraction of and from the subject of an inverted predicate.

One wonders, however, whether this result truly presents itself in fully general terms (even just in the case of Predicate Inversion; I have not investigated how the Pesetskyan approach might carry over to some of the other instances of Phase Extension, apart from Object Shift, that I discuss in the target paper). The interesting thing about sentences in which both the subject and the predicate are removed from the small clause (= RELATOR phrase) *and* the subject ends up higher than the raised predicate (as a result of A′-move-ment) is that it should logically be possible, in the Cyclic Linearisation model, for movement of the subject and the predicate *not* to proceed via the edge of the RP phase at all so long as the word order inside the RP phase is preserved at the next spell-out point, much as in Object Shift constructions, where movement likewise proceeds without an intermediate stopover on the edge of the first phase. So if linearisation at RP yields subject < copula < predicate (which it will if there is no movement of the predicate to an outer specifier position of RP, and the RELATOR is spelled out as a copula), all is well if linearisation at the next phase once again yields subject < copula < predicate. Suppose, then, that we start out with a predication such as [$_{RP}$ *these facts* [BE *the biggest problem*]]], and we make this input to a derivation in which we perform *both* Predicate Inversion (resulting in finite verb agreement with the singular predicate nominal: *the biggest problem is/*are these facts*[30]) *and* A′-extraction of the subject of the inverted predicate (in the form of *which facts*). The result will be (20b), which is ungrammatical (unlike (20a), where the finite verb agrees with *which facts*: a garden-variety case of a canonical copular sentence involving A′-movement of the subject).

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29   In her commentary on my proposal, Matushansky asks why the predicate cannot adjoin to RP on its way to SpecFP, rendering head movement unnecessary. I agree with Pesetsky in rejecting this kind of derivation with an appeal to 'improper movement' (adjunction always being A′-movement, hence never feeding A-movement).

30   Matushansky claims, in her comments, that 'the hypothesis that the subject of the small clause is not visible outside the extended small clause (FP) is ... empirically incorrect' because 'as observed by Heycock and Kroch 1998, in copular inversion the copula agrees with the post-copular NP'. In support of this claim, she mentions the example in (ia). But as Heycock (1994, 1998) discusses in detail, inversion constructions of the type in (ia) are in fact atypical: in the typical case, copular inversion leads to agreement between the finite copula and the pre-copular predicate nominal, as in (ib). Heycock in fact presents a range of other systematic differences between regular copular inversion and cases like (ia), reproduced in Den Dikken (2006:152–60), where an analysis of the latter is presented that treats them as topic-comment structures.

(i)   a.   delinquency is a menace to our society; also a menace are/*is factory closings and fascist propaganda
          b.   the biggest problem is/*are the factory closings

(20)   a.   which facts are the biggest problem?   < these facts are the biggest problem
        b.   *which facts is the biggest problem?   < the biggest problem is these facts

The Cyclic Linearisation model would seem not to rule (20b) out: at the point of linearisation of RP (prior to Predicate Inversion), the noun phrase of *facts* precedes the copula which in turn precedes the predicate nominal headed by *problem*; and at the point of linearisation of CP, the next phase up, this linear relationship between the three players is preserved.[31] The Phase Extension approach, by contrast, straightforwardly rejects (20b). Here, then, we may have encountered an empirical reason to prefer the Phase Extension model to Cyclic Linearisation.

It seems to me that the distribution and linear placement of LINKER elements in Predicate Inversion constructions may also provide us with a basis on which to differentiate between the Phase Extension and Cyclic Linearisation *cum* 'property delay' models. Consider a predication in which the RELATOR head is not spelled out by a copular element, but as a result of Predicate Inversion, a copular LINKER obligatorily shows up between the raised predicate and its subject. On the assumptions of the Phase Extension theory, this is a reflex of *(a)* Predicate Inversion targeting the A-specifier position of a functional head (F) projected immediately outside the small clause (= RELATOR phrase), and *(b)* raising of the RELATOR up to F (resulting in the spell-out of a LINKER) being a prerequisite for *(a)*. Concretely, then, the Phase Extension theory delivers predicate < F=LINKER < subject as the output of Predicate Inversion, with F realised as a copula. For Pesetsky, raising of the RELATOR up to F *(b)* is also obligatory, if the predicate raises on beyond the outer specifier position of RP to a higher A-position: if the RELATOR did not raise up to F, movement of the predicate to the outer specifier of RP would qualify as A′-movement, and onward A-movement of the predicate would be prohibited. But Pesetsky does not get *(a)*. It is not obvious to begin with why a Predicate Inversion derivation could not simply stop at (21a), so it is not clear, on these assumptions, why Predicate Inversion typically goes hand-in-hand with the emergence of a meaningless LINKER element. But even if the predicate does A-move on beyond the outer specifier of RP (so that F must be projected, and the RELATOR must raise to F), it will not end up in a Spec-Head relationship with the element lexicalising F (as in (21b)): the predicate *cannot* raise to SpecFP because movement triggered by F (which inherits the phase-head property from the RELATOR) is A′-movement; so the predicate must skip SpecFP altogether, and moreover (assuming that Pesetsky's proposal works the same way as does Phase Extension in carrying 'property delay' all the way up the tree in successive-cyclic head-movement cases) it must never end up in a position that serves as the specifier to F+RELATOR in any of the latter's derived positions further up the tree — i.e., the head 'X' in (21c) must not receive F+RELATOR; the two heads must remain separate, at least in overt syntax.

(21)   a.   [$_{RP}$ PREDICATE$_i$ [$_{RP}$ SUBJECT [RELATOR t_i]]]
        b.   [$_{FP}$ (*PREDICATE$_i$) [F+RELATOR$_j$ [$_{RP}$ PREDICATE$_i$ [$_{RP}$ SUBJECT [t_j t_i]]]]]
        c.   [$_{XP}$ PREDICATE$_i$ [X(*+[F+RELATOR$_j$]$_k$) [$_{FP}$ [F+RELATOR$_j$ [$_{RP}$ PREDICATE$_i$ [$_{RP}$ SUBJECT [t_j t_i]]]]]]]

If this were right, we would expect the relationship between a raised predicate and the copula to be 'looser' (structurally more distant, hence more easily interrupted) than that between a subject and the copula. But as far as I am aware, the two relationships are just as tight: no element that cannot sever a subject from a copula can come in between a raised predicate and the copula. The distribution and linear placement of copular elements, then, may be a second empirical basis on which to tell apart the Cyclic Linearisation *cum* 'property delay' and Phase Extension models.

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31   I am assuming here, perhaps not innocuously, that the agreement form of the copula is *is* throughout the derivation of (20b) because the agreeing copula is inserted early in a fully inflected form whose φ-features eventually get checked. Alternatively (and perhaps equivalently for the text discussion's purposes), φ-feature agreement is inserted late, after spell-out, in the Morphological Structure component on the PF-wing of the grammar. Exactly how the agreement difference between canonical and inverse copular sentences is to be regulated in the Cyclic Linearisation model is not entirely clear to me. It is not immediately clear either how Pesetsky's proposal would account for the ban on A-movement of the subject of an inverted predicate.

References

Abels, Klaus. 2003. Successive cyclicity, anti-locality, and adposition stranding. Doctoral dissertation, University of Connecticut.

Aoun, Joseph & J.-H. Audrey Li. 1989. Scope and constituency. *Linguistic Inquiry* 20. 141–72.

Bruening, Benjamin. 2001. QR obeys Superiority: Frozen scope and ACD. *Linguistic Inquiry* 32. 233–73.

Chomsky, Noam. 1973. Conditions on transformations. In Stephen Anderson & Paul Kiparsky (eds), *A festschrift for Morris Halle*. New York: Holt, Rinehart & Winston. 232–86.

Chomsky, Noam. 1986. *Barriers*. Cambridge, MA: MIT Press.

Chomsky, Noam. 1995. *The minimalist program*. Cambridge, MA: MIT Press.

Dikken, Marcel den. 1995. *Particles: On the syntax of verb-particle, triadic and causative constructions*. Oxford/New York: OUP.

Dikken, Marcel den. 2006. *Relators and linkers: The syntax of predication, Predicate Inversion, and copulas*. Cambridge, MA: MITPress.

Dikken, Marcel den & René Mulder. 1991. Double object scrambling. In Jonathan Bobaljik & Anthony Bures (eds), *MIT Working Papers in Linguistics* 14. 67–82.

Fox, Danny & David Pesetsky. 2005a. Cyclic linearization of syntactic structure. *Theoretical Linguistics* 31. 1–45.

Fox, Danny & David Pesetsky. 2005b. Cyclic Linearization and its interaction with other aspects of grammar: A reply. *Theoretical Linguistics* 31. 235–62.

Grimshaw, Jane. 1991. Extended projection. Ms., Brandeis University; in Grimshaw (2005), *Words and structure*. Stanford: CSLI.

Grohmann, Kleanthes. 2003. *Prolific domains: On the anti-locality of movement dependencies*. Amsterdam: John Benjamins.

Hale, Kenneth & S. Jay Keyser 1993. On argument structure and the lexical expression of syntactic relations. In Kenneth Hale & S. Jay Keyser (eds), *The view from Building 20*. Cambridge, MA: MIT Press. 53–104.

Heycock, Caroline. 1994. The internal structure of small clauses. *Proceedings of NELS 25*. Amherst: GLSA. 223–38.

Heycock, Caroline. 1998. Is this the solution or is the solution this? Review of *The raising of predicates* by Andrea Moro. *GLOT International* 3:4. 16–19.

Heycock, Caroline & Anthony Kroch. 1998. Inversion and equation in copular sentences. In Artemis Alexiadou, Nanna Fuhrop, Paul Law & Ursula Kleinhenz (eds), *ZAS Papers in Linguistics* 10. Berlin: Zentrum für Allgemeine Sprachwissenschaft. 71–87.

Heycock, Caroline & Anthony Kroch. 1999. Pseudocleft connectedness: Implications for the LF interface level. *Linguistic Inquiry* 30. 365–97.

Hoekstra, Eric. 1999. On d-pronouns and the movement of topic-features. *Folia Linguistica* 33. 59–74.

Hoekstra, Eric & Jan-Wouter Zwart. 1994. De structuur van de CP: Functionele projecties voor topics en vraagwoorden in het Nederlands. *Spektator* 23. 191–212.

Holmberg, Anders. 1999. Remarks on Holmberg's Generalization. *Studia Linguistica* 53. 1–39.

Holmberg, Anders. 2005. Linearization in two ways. *Theoretical Linguistics* 31. 147–57.

Hornstein, Norbert. 1995. *Logical Form*. Oxford: Blackwell.

Johnson, Kyle. 1991. Object positions. *Natural Language and Linguistic Theory* 9. 577–636.

Johnson, Kyle & Satoshi Tomioka. 1997. Lowering and mid-size clauses. In Graham Katz, Shin-Sook Kim & Heike Winhart (eds), *Reconstruction: Proceedings of the 1997 Tübingen Workshop*. Universität Stuttgart & Universität Tübingen. 185-206.

Kayne, Richard. 1994. *The antisymmetry of syntax*. Cambridge, MA: MIT Press.

Ko, Heejeong. 2005. Syntactic edges and linearization. Doctoral dissertation, MIT.

Kratzer, Angelika. 1995. Stage-level and individual-level predicates. In Gregory Carlson & Francis Jeffry Pelletier (eds), *The generic book*. Chicago: University of Chicago Press. 109–37.

Kuno, Susumu. 1971. The position of locatives in existential sentences. *Linguistic Inquiry* 2. 333–78.

Larson, Richard. 1988. On the double object construction. *Linguistic Inquiry* 19. 335–91.

Lasnik, Howard & Mamoru Saito. 1991. On the subject of infinitives. *CLS* 27. 324–43; reprinted with minor revisions in Lasnik (1999), *Minimalist analysis*. Oxford: Blackwell.

Marušič, Franc. 2005. On non-simultaneous phases. Doctoral dissertation, Stony Brook University.

Moro, Andrea. 1997. *The raising of predicates: Predicative noun phrases and the theory of clause structure*. Cambridge: CUP.

Mulder, René & Marcel den Dikken. 1992. Tough parasitic gaps. In Kimberley Broderick (ed.), *Proceedings of NELS 22*. Amherst: GLSA. 303–17.

Nash, Léah & Alain Rouveret. 1997. Proxy categories in phrase structue theory. In Kiyomi Kusumoto (ed.), *Proceedings of NELS 27*. Amherst: GLSA. 287–304.

Postal, Paul. 1974. *On raising*. Cambridge, MA: MIT Press.

Rizzi, Luigi. 1986. Null objects in Italian and the theory of *pro*. *Linguistic Inquiry* 17. 501–57.

Sharvit, Yael. 1999. Connectivity in specificational sentences. *Natural Language Semantics* 7. 299–304.

Stowell, Tim. 1981. Origins of phrase structure. Doctoral dissertation, MIT.

Stowell, Tim. 1986. Null antecedents and proper government. In Stephen Berman, Jae-Woong Choe & Joyce McDonough (eds), *Proceedings of NELS 16*. Amherst: GLSA. 476–93.

Takahashi, Daiko. 2002. The EPP and null operator movement. Ms., Tohoku University.

Wilder, Chris. 1991. Tough movement constructions. *Linguistische Berichte* 132. 115–32.

Williams, Edwin. 1983. Against small clauses. *Linguistic Inquiry* 14. 287–308.

Zwart, Jan-Wouter. 1993. Dutch syntax: A minimalist approach. Doctoral dissertation, University of Groningen. **02/20/2007**