

A reappraisal of vP being phasal — A reply to Legate

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Incorporating insights from work by Fox (1998) and Nissenbaum (1998) and adding some of her own, Legate (2003) has recently presented four empirical arguments for the status of vP as a phase, all coming from the interface properties of vP . Three of her arguments (from reconstruction, ACD and parasitic gap constructions) center on the LF interface; the fourth argument (from the nuclear stress in English) addresses the PF interface. All four arguments capitalize on the need for escape-hatching movement out of vP in the syntactic derivation, via the edge of the vP phase, both in the domain of A' -movement and in that of A -movement. Legate argues that these arguments all apply with equal force not just to transitive v^*P (the one originally proposed in Chomsky 1995:Chapter 4), but to the generalized vP of unaccusative and passive sentences as well.

In this brief reply to Legate 2003, I will show that none of the four arguments of vP 's status of a phase is conclusive. The first two arguments dissolve because the premises on which they are built are not valid; the parasitic gap argument is not obviously an argument for the status of vP in *syntax*; and the stress-based argument is inconsistent with a broader range of data. This reply is not aimed at the elimination of vP from the grammar or at establishing that vP is not a phase: though the ones Legate provides fail, there are nonetheless good conceptual and empirical reasons for believing that vP exists and is phasal. I will hint at these in the closing section. The structure of this reply follows exactly the structure of Legate's original squib, even using the same section headers; I have merely added question marks to the titles of sections 1 and 2.

1 Evidence for Movement to the Phase Edge?

1.1 Reconstruction Effects¹

In her opening move, Legate presents the contrast in (1) as an argument from what she refers to as reconstruction effects in favor of the need for intermediate adjunction to vP in the course of A' -extraction from vP .

- (1) a. [Which of the papers that he_i gave Mary_j] did every student_i ✓ ask her_j to read *_carefully?
b. *[Which of the papers that he_i gave Mary_j] did she_j *_ask every student_i to revise *_?

The interesting thing about (1a) is that the extracted *wh*-phrase contains both an R-expression, *Mary*, which is successfully free from *her*, and a pronoun, *he*, for which an interpretation is available as a variable pronoun bound by *every student*. Reconstructing the entire *wh*-phrase into its base-generation site between *read* and *carefully* is obviously not going to deliver the desired result: though a binding relationship between *every student* and *he* is then made possible, such reconstruction would lead to a violation of Binding Principle C. If we are to get (1a) via reconstruction, we therefore need to reconstruct the *wh*-phrase into a position in between *every student* and *her* — a vP -adjoined position. Reconstruction of the *wh*-phrase into this position will still succeed in ruling out (1b), where the feminine pronoun and the universal QP have chanced places.

Even if we grant its premises, this argument does not seem airtight. We could, it seems, just as easily conclude from (1a) that the tick-marked reconstruction site is on the edge of *TP* — either immediately below the Spec*TP* position occupied by *every student* (with the *wh*-phrase 'tucking in' (Richards 2001) below the subject's landing-site) or above it (with QR of *every student* to a higher *TP*-adjoined position deriving the desired c-command relation between it and the variable pronoun). Oblivious to antecedent declarations in Chomsky's work to the effect that (a) there is a vP , (b) vP is a phase, and (c) *TP* is not a phase, one could therefore have construed (1) as evidence for the phasehood of *TP* rather than vP .

1 This argument is already made, without reference to vP , in Fox 1998:157, 1999:175.

But the central premise on which the argument based on (1) is built is itself invalid. For it is not true that the desired reading for (1a) can be derived only via *reconstruction* of the *wh*-phrase into a position below the universal quantifier. On the intended reading of the sentence, (1a) has a pair-list interpretation, with the universal QP scoping over the *wh*-phrase, representable as in (2a). The narrow-scope reading for the universal QP is unavailable with preservation of the binding dependencies indicated in (1a): the first *x* in (2b) is unbound.

- (2) a. $\forall x, x$ a student, which *y*, *y* [one of the papers that *x* gave Mary_{*j*}], *x* asked her_{*j*} to read *y*
 b. *which *y*, *y* [one of the papers that *x* gave Mary_{*j*}], $\forall x, x$ a student, *x* asked her_{*j*} to read *y*

From É. Kiss's (1993) work on pair-list *wh*-questions with quantified noun phrases, the conclusion emerges that the pair-list reading results from movement of the quantified noun phrase to a position c-commanding the *wh*-phrase. For Hungarian, this is straightforwardly done: *wh*-phrases in a Hungarian *wh*-questions land in a relatively low position in the tree (often referred to as SpecFocP), below the designated landing-site of universal quantifiers (which recent work has identified, in the tradition of Beghelli and Stowell 1997, as SpecDistP). English is a little more complex. But for root *wh*-questions, den Dikken and Giannakidou's (2002) arguments to the effect that *wh*-fronting in English root *wh*-questions targets the same position that Hungarian *wh*-fronting does allow us to syntactically derive the LF in (2a) without reconstruction:²

- (3) [_{DistP} every student_{*i*} [_{Dist} [_{FocP} [which of the papers that he_{*i*} gave Mary_{*j*}]_{*k*} [_{Foc} ... *t_i* ... her_{*j*} ... *t_k*]]]]

So with the appropriate LF for (1a) derived via raising of the quantifier above the *wh*-phrase, bound variable binding can proceed unproblematically and BT–C trouble can be avoided without there being any need for reconstruction, hence also without the need for any *vP*-adjoined intermediate landing-site.³ There is no argument for intermediate *vP*-adjunction based on (1a), therefore.

For (1b), Fox (1999:174) notes that its ungrammaticality lies crucially in the presence of the R-expression coindexed with the pronoun — (1b') is grammatical.

- (1b') [Which of the papers that he_{*i*} gave her_{*j*}] did Mary_{*j*} ask every student_{*i*} to revise?

Fox (1999:174) also notes that a similar contrast emerges in (4) (lightly adapted from his paper):

- (4) a. *[Which of the papers that he_{*i*} asked Mary_{*j*} for] did she_{*j*} give every student_{*i*}?
 b. [Which of the papers that he_{*i*} asked her_{*j*} for] did Mary_{*j*} give every student_{*i*}?

This is evidence for reconstruction — but not for reconstruction to an *intermediate*, *vP*-adjoined position: reconstruction of the *wh*-phrase into the base-position to the right of *every student* will also result in a BT–C violation. Again, we find no argument for the phasehood of *vP* here.

2 The Hungarian example in (ia), where the universal QP linearly precedes the *wh*-phrase at S-structure, overtly corresponds to the LF structure in (3), and is grammatical (though not brilliant; the same is true, however, for (ib), so this does not have anything to do with the displacement of the universal QP to SpecDistP).

- (i) a. [?]Minden diák_{*i*} [melyik Mari_{*j*}-nak adott cikké_{*i*}-ről] kérte meg őt_{*i*}/*pro_j*, hogy *pro_j* tartson előadást?
 every student which Mari-DAT given paper-3SG-about asked PV her that keep-SUBJ talk-ACC
 b. [?][Melyik Mari_{*j*}-nak adott cikké_{*i*}-ről] kérte meg őt_{*i*}/*pro_j* minden diák_{*i*}, hogy *pro_j* tartson előadást?
 both: 'about which paper of his_{*i*} (that was) given to Mari_{*j*} did every student_{*i*} ask her_{*j*} to give a talk?'

3 For non-root *wh*-questions in English, den Dikken and Giannakidou (2002) argue that the landing-site of *wh*-movement is SpecCP, above the highest position that distributive quantifiers can reach (SpecDistP). In the embedded version of (1a) (*I wonder ...*), therefore, reconstruction of the *wh*-phrase *will* be needed in order to obtain the desired interpretation. But even here, reconstruction need only go down to a position in the c-command domain of the raised universal QP in SpecDistP. There are obviously plenty such positions in the tree, one of them likely being the SpecFocP position through which the *wh*-phrase transited on its way to SpecCP. Even here, therefore, we are not likely to find an argument specifically for intermediate adjunction to *vP*.

The question that remains is why the QP *every student* cannot, in the examples in (1b) and (4a), raise above the landing-site of the *wh*-phrase and thus gain scope over the *wh*-phrase, yielding a pair-list reading without any binding problems arising. Put differently, why must the pair-list reading of (1b') and (4b) result from reconstruction, whereas the pair-list reading of (1a) can result from raising the QP to a position above the *wh*-phrase, as in (3)? This question is likely related to another, posed by an observation first made, to my knowledge, by Hornstein (1995). He points out that in a double object construction in which there is a binding relationship between the subject and a subconstituent of the direct object, the indirect object cannot scope over the subject. Thus, on a reading in which (5b) is equivalent to (5a) (i.e., a reading in which *his* is bound by *someone*), a distributive reading is unavailable; and similarly, (6) (from Hornstein 1995:180) supports wide scope for *everyone* only if the subject does not bind the variable pronoun inside the direct object. The examples in (1b,b') and (4) share with those in (5b) and (6b) the fact that there is a binding relation between the subject and constituent of the direct object. For reasons that are too complex to go into here (see Hornstein 1995:180 for a proposal), this prevents the indirect object from raising above the subject. Therefore, reconstruction of the *wh*-phrase below the indirect object is the only way to obtain a pair-list reading for (1b') and (4b). But such reconstruction is blocked in (1b) and (4a) on account of BT–C, which explains their deviance.

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|-----|----|--|---------------------------|
| (5) | a. | Someone congratulated everyone. | $\exists > / < \forall$ |
| | b. | Someone _i gave everyone his _i congratulations. | $\exists > / * < \forall$ |
| (6) | a. | A girl gave everyone _i his _i picture. | $\exists > / < \forall$ |
| | b. | A girl _j gave everyone her _j picture. | $\exists > / * < \forall$ |

In this section, we have seen that neither the grammaticality of (1a) nor the ungrammaticality of (1b) on the intended readings provides an argument for an intermediate stopover on the edge of *vP*. Their value as evidence for the phasehood of *vP* is thereby annulled.⁴

1.2 Quantifier Raising in Antecedent-Contained Deletion

Legate's second argument for a *vP*-adjoined trace comes from Quantifier Raising in ACD constructions, and is based on the examples in (7) (Legate's (4)).

- | | | |
|-----|----|--|
| (7) | a. | Mary didn't t [_{VP1} introduce John to [_{DP} anyone you did [_{VP2} e]]]. |
| | b. | Some woman [_{VP1} gave John [_{DP} every message you did [_{VP2} e]]]. |

In these examples, we need to accomplish two tasks: (a) avoiding infinite regress by finding an antecedent for the elliptical VP that does not contain the ellipsis site itself, and (b) ensuring that the NPI *anyone* can be licensed by negation, and the universal QP *every message* can be interpreted within the scope of the existential QP *some woman*. For Legate, (a) requires QR (in line with Larson and May 1990 and most subsequent work on ACD) — and (b) then calls for a landing-site of QR below negation and the subject, on *vP*'s edge.

The argument based on the scope facts in (7b) is diminished by a reanalysis of Quantifier Raising along the lines of Beghelli and Stowell (1997), and will not be discussed further here. But the one based on (7a) faces several difficulties as well. First of all, note that if Legate is right that in (7) QR targets a *vP*-adjoined position, and if, as is generally assumed, segments of multi-segment categories are not independently manipulable, then (7) must involve ellipsis of the root VP, not of *vP*, in order to ensure categorial identity of the ellipsis site and its antecedent. But the idea that the elliptical material in (7) is the root VP clashes with Chomsky's (2000) claims regarding the 'relative independence' of phases 'in terms of interface properties': non-phases (including VP) should not be allowed to undergo ellipsis.

4 We would only be able to sidestep the disturbing effect of the different ways in which a pair-list reading can be obtained if we could construct examples in which reconstruction is forced independently of the quantificational properties of some constituent further downstream. Fox's (1999:176–78) examples involving adverbs such as *usually* are not of the desired type — *usually* is a quantificational adverb, hence eligible in principle for raising to a position above the fronted *wh*-phrase, à la É. Kiss 1993. I have not been able to construct relevant examples forcing reconstruction independently of quantification.

A possibility that presents itself to deal with (10b) is a return to the spirit of Baltin's (1987) approach to the avoidance of infinite regress in ACD: extraposition of the relative clause, *à la* (8b).⁷ On the assumption that the extraposed constituent is outside the VP, an extraposition approach has the desired effect of producing a VP that does not contain the relative clause encapsulating the elliptical VP without moving the noun phrase that hosts the relative clause — hence without getting into conflict with the apparent immobility of this noun phrase. Of course, by invoking an extraposition approach to ACD cases that are problematic for a QR-based analysis, one is in no way committed to a wholesale adoption of a Baltin-style approach to ACD in general — a QR-based analysis is likely to be available for other, simpler cases.⁸ But since the QR-based analysis cannot exhaust the full range of ACD data (for it cannot account for (9) and (10)), and an alternative account must therefore be made available by the theory, one cannot use the QR account as a premise for an argument for *vP*-adjunction. On the alternative, Baltin-style analysis, *anyone* in (7a) and *every message* in (7b) can stay in a position *c*-commanded by negation and the subject throughout, without a need for *vP*-adjunction arising.

So (7) is not an argument for *vP*-adjunction, hence not an argument for *vP*'s phasehood, if, as seems independently likely, infinite regress resolution is possible in ACD constructions in ways other than QR.

1.3 Parasitic Gaps

Legate continues her search for evidence for the interface properties of the *vP* phase by bringing up the syntax of parasitic gap constructions: 'Nissenbaum (1998) argues for an analysis of PGs whereby a *vP*-level *wh*-trace is crucial for the interpretation of these constructions' (Legate 2003:510). From this quote, it is immediately apparent that Legate's PG-based argument is entirely dependent on Nissenbaum's particular approach to PG-licensing, and, more specifically, on a requirement imposed on the structure of PG constructions by their *interpretation*. In other words, Nissenbaum's motivation for a *vP*-adjoined trace is based on a *semantic* argument, having to do with a type mismatch that would arise if intermediate adjunction did not take place — a motivation that does not refer in any direct way to phases. It is entirely possible that the syntax delivers the requisite semantic structure by ensuring that *wh*-movement proceed via an intermediate *vP*-adjoined position. But in semantics, there are several non-syntactic ways of dealing with type mismatches (type shifting, type lifting); it is not *a priori* obvious that the solution to the type mismatch that parasitic gap constructions present us with would have to be 'anticipated' in syntax via *vP*-adjunction. So the Nissenbaum argument for *vP*-adjunction, depending as it does on the exigencies of semantics, need not necessarily tell us anything about phases in syntax.

7 If we want this approach to cover (9b) as well, such extraposition will need to apply in *covert* syntax (in light of the fact that the relative clause harboring the elliptical VP is obviously not sentence-final in (9b)). Of course, by invoking an extraposition approach to (10b) and perhaps (9b) as well, one is in no way committed to a wholesale adoption of a Baltin-type approach for ACD in general — a QR-based analysis is very likely correct for other cases.

8 Larson and May (1990) argue that there are several contexts in which a QR-based account is empirically superior to a Baltin-style approach. One involves the *de re/de dicto* ambiguity of ACD sentences such as *John wants to visit every city you do*, whose 'every city you want to visit' reading is problematic for an extraposition approach if, as Larson and May assume, relative clause extraposition is clause-bounded; but they note in their fn. 8 that this assumption is in fact by no means straightforwardly correct. A second context where they claim a Baltin-style approach is inferior involves non-clause-final relative clauses, as in (9b) — but as we have seen, many such cases are actually highly problematic for the QR approach itself, so they do not adjudicate the matter. Their simplest and potentially most powerful argument is based on the distribution of relative clauses lacking a relative pronoun or *that*: these do not occur in physically (i.e., non-vacuously) extraposed contexts (*I visited a man recently {who/that/* \emptyset } John had talked to me about*), which may indicate that extraposed relatives may not have a null C-domain. Larson and May embrace an ECP based account of this (following Stowell 1981), and then proceed to pointing out that relative clauses with a null C-domain are perfectly grammatical in ACD constructions. If extraposed relatives are generally forced to have an overt C-domain, this obviously compromises a Baltin-style analysis very seriously. It is fair to say, however, that the account of the ungrammaticality of *physically* extraposed relatives with null C-domains is up in the air at this time; without a clear picture of what is responsible for it, it is impossible to decide whether the theory would equally rule out *vacuously* extraposed relatives with null C-domains.

2 Evidence for Phases at PF?

While the three arguments just reviewed sought to provide evidence for *vP*'s status as a phase based on its LF-interface properties, Legate's fourth and final argument for *vP*'s phasehood comes from the PF wing of the grammar: the Nuclear Stress Rule (NSR), which assigns nuclear stress to the most deeply embedded constituent in the VP.

Legate's central explanandum in this context is Bresnan's (1972:75) contrast in (11), where (11a) involves a noun-complement clause and (11b) a relative clause.⁹ Bresnan interprets this as evidence for cyclic application of the NSR — assuming (as in Vergnaud 1974, Kayne 1994) that the 'head' of the relative clause in (11b) originates inside the relative clause and raises out of or at least to the edge of it, there is a point at which *proposal* is physically inside the relative clause as the innermost complement, hence the target of nuclear stress assignment; with the NSR applying on the first cycle, that will endow *proposal* with nuclear stress, which it keeps subsequently (see (11b')).

- (11) a. Mary liked the proposal that George LEAVE.
 b. Mary liked the proPOSal that George left.
 b'. Mary liked the [_{CP} ____ [that George left [_{NP} proPOSal]]]

Legate (2003) follows Bresnan in assuming that the NSR applies cyclically, updating this hypothesis with reference to the *phase*: 'the NSR applies to the phase, thereby providing evidence for the existence of phases ...: an element moving from a VP-final position out of the phase should bear primary phrasal stress, while an element moving from a VP-internal position to a position within the same phase should not' (p. 513). The reference here to the distinction between movement 'out of the phase' and movement 'to a position within the same phase' is essential. For not all constituents that start out in the innermost complement position and move at a later point in the derivation attract nuclear stress. There are noun phrases that arguably have undergone movement from innermost complement position but which nonetheless do not attract nuclear stress:

- (12) a. I'll look up MARY. V [_{PTP} ____ [up [_{DP} MARY]]]
 b. I'll look her[/]Mary UP.
 c. Please put away the DISHes. V [_{PTP} ____ [away [_{DP} the DISHes]]]
 d. Please put them[/]the dishes AWAY.

For Legate, the key factor distinguishing between cases of moved innermost complements that do and those that do not attract nuclear stress is whether they move out of a phase or inside a phase: in the derivation of (11b) based on (11b'), the NP raises out of the *vP* phase of transitive *left*, but in the derivation of (12b) from the structure to the right of (12a), and that of (12d) from the structure to the right of (12c), by contrast, no phase boundary is crossed.¹⁰

9 Unlike Legate, I will use small capitals to indicate nuclear stress.

10 Legate does not address transphasal A'-movement operations that do not result in retention of nuclear stress. While transphasal A'-movement in relative clauses does (as in Bresnan's (11b)), not all A'-movement out of the *vP* results in retention of nuclear stress — movement of simple *wh*'s in questions does not (*What did you EAT?*), which is all the more surprising in light of the fact that *wh*-phrases in questions are foci. See Kahnemuyipour (2003, 2004) on critical discussion of Legate's proposal zooming in specifically on this point, and for an alternative account based on (i), which also deals straightforwardly with passives and unaccusative constructions, crucially in such a way that if there is a *vP* in these constructions, it must not be a phase.

(i) *Sentential Stress Rule*
 Sentential stress is assigned at the phase to the highest element (i.e. the phonological border) of the spelled out constituent or the SPELLEE.
 [_{HP} XP [H YP]]: If HP is a phase, YP = SPELLEE

But Legate does not discuss cases of not strictly phase-internal A–movement that do not result in attraction of nuclear stress. Consider sentences such as (13) (based on Johnson 1991):

- (13) John put the book quickly/carefully DOWN.

Here, *quickly/carefully* is a constituent belonging to the (extended) projection of the verb, adjoined to *vP* at the lowest (assuming, with Chomsky 1995, that adverbial adjunction to the root VP is illegitimate). The fact that the object appears to the left of the adverb indicates that it has undergone overt Object Shift. So (13) involves movement of the object out of the *PrtP* in (12) and to a position either on the edge of the *vP* phase (into a position identical with the intermediate landing-site of the A'–moved object in (11b)) or altogether outside the *vP* phase (*SpecAgrOP*, *SpecAspP*). Whatever the exact landing-site of the object in (13), object movement in this example is not an instance of ‘an element moving from a VP-internal position to a position within the same phase’ (Legate 2003:513). Thus, (13) seems to be more like (11b) than like (12b) as far as its syntax is concerned. But unlike in (11b), stress on *book* can only be focal or contrastive; nuclear stress in (13) must fall on the particle, just as in (12b). So sentences such as (13), given reasonable assumptions about the location of adverbial modifiers like *quickly/carefully*, provide an empirical counterargument to Legate’s PF-based argument for the *vP* phase.

3 Conclusion

Let me close by pointing out that, though none of Legate’s (2003) arguments for the phasehood of *vP* seems to stand up to scrutiny, we can arguably still derive syntactic evidence for *vP*’s phasehood (restricted, though, to transitive *v*P*) by broadening the scope of our investigation to include small clauses (i.e., tenseless subject–predicate configurations) more generally. Den Dikken (2006:Chapter 4) presents an extended argument, based on the syntax of Predicate Inversion constructions (including Copular Inversion, Locative Inversion, and Dative Inversion) to the effect that small clauses are phases, based on a detailed investigation of the syntax of Predicate Inversion constructions. Transitive *v*P* is a small clause, so if the argument for small clauses in general being phases goes through, it is an argument for the phasehood of *v*P* as well. Den Dikken (to appear) argues that the *only* syntactic constituents that are *inherently* phasal are subject–predicate structures (including *v*P*), and that phasehood can be projected up the tree as a result of movement of the head of the inherent phase (a process referred to as Phase Extension, originally presented in den Dikken 2006). I do not have the space here to present the evidence for this position in any detail here. But at the end of the day, it seems to me that the evidence for *v*P* being a phase is solid — though of a different type from the evidence that Legate (2003) has constructed.

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