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On what projects in Vietnamese

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Abstract By comparison with other areally- and typologically-related languages, the Vietnamese language disposes of a large and diverse set of (non-affixal) grammatical particles: these display interesting parallels with functional heads in familiar Western European languages. Most of these grammatical morphemes are 'multifunctional' in the sense that their meaning is largely—in some cases, exclusively—determined by their clausal distribution; alternatively, by their configurational relationship to other grammatical morphemes. In this paper, I document the distribution of these particles, working down the clausal spine. I also present a set of analyses of those cases where particles interact with one another, with each group considered in its own terms. Following this presentation, some broader implications of these analyses are briefly considered: it is suggested that a more satisfactory explanation of Vietnamese grammar can be found if it is assumed that grammatical meaning inheres in syntax, rather than in lexical representations.

Keywords Vietnamese phrase structure · Multifunctionality · Syntactic cartography · Outer versus inner aspect · Tense and clausal negation

1 Introduction

This paper offers a cartographic study of Vietnamese clause structure. While the empirical coverage of the paper is broadly commensurate with that of preceding versions, its goals are more modest: for the most part it aims at purely observational—at best descriptive—adequacy, in the sense of Chomsky (1965). Through a systematic exposition of the
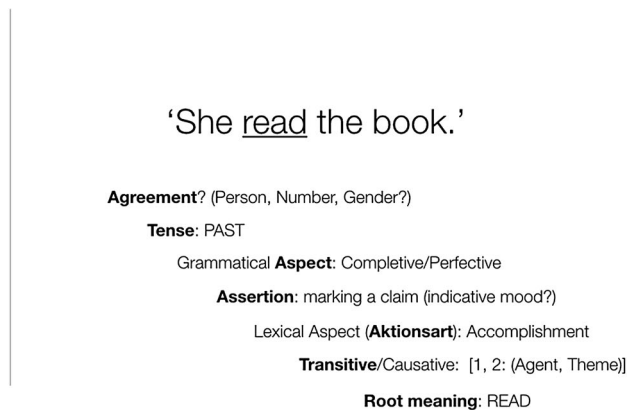
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distribution and interpretation of grammatical morphemes above and within the thematic verb phrase (or predicate phrase) the primary goal of this article is to establish a body of syntactic facts that any more adequate theoretical analysis should be able to account for.

Vietnamese is a particularly rewarding language to study since it exhibits ambiguous, and contrary, morphological and syntactic properties. A naïve consideration of Vietnamese sentences from the perspective of Western Indo-European languages suggests that Vietnamese is the archetypal 'isolating' language variety (see, for example, Whaley 1997) in as much as it is devoid of bound inflectional morphology, and—aside from a (proclitic) reflexive element—also lacks any bound derivational morphology (causative, passive, (de-)transitivizing morphemes) that might plausibly be considered to be syntactically active; *cf.* Baker (1985, 1988). Temporal relations are generally expressed through tense adverbials and conjunctions, or inferred contextually; also, as we shall see, transitivity alternations are handled analytically. However, even though it completely lacks affixation, Vietnamese has a rich inventory of grammatical morphemes—albeit optionally expressed: whenever these elements are syntactically projected, their distribution and interpretation is strikingly familiar from a Western perspective and correspondingly alien from the point of view of speakers of other South East Asian languages, especially Sinitic varieties; see also Alves (1999).

Viewed in a more universalist light, Vietnamese reveals itself as a near-perfect blend of the layered functional syntax that was originally motivated by inflectional categories of Western languages—hence the anachronistic terms '*INFL*', *IP*, *AgrS*, *AgrO*, etc.—with the syntactic transparency of isolating East Asian languages, whose underlying structure is unobscured by morphologically-driven head-movement. That at least is what is suggested by the data presented here.

Figure 1 below articulates the layers of grammatical meaning involved in a typical English sentence with past time reference, such as in example (1a); examples (1b) and (1c) show the Dutch and Vietnamese equivalents.

'She <u>read</u> the book.'

Agreement? (Person, Number, Gender?)

Tense: PAST

Grammatical **Aspect**: Completive/Perfective

Assertion: marking a claim (indicative mood?)

Lexical Aspect (**Aktionsart**): Accomplishment

Transitive/Causative: [1, 2: (Agent, Theme)]

Root meaning: READ

What's within? Hidden elements of grammatical meaning, in English

Fig. 1 Layers of meaning in an English indicative sentence
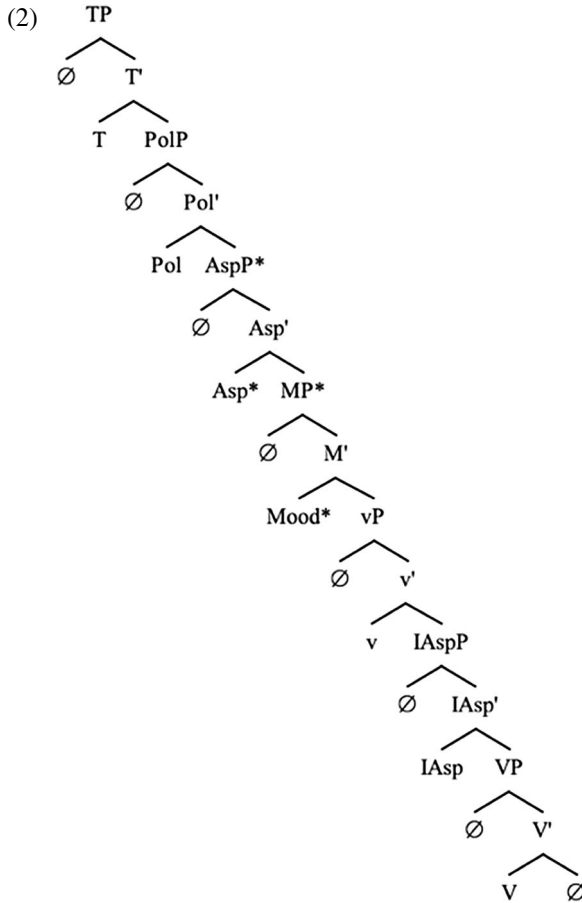
(1) a. She read the book.
      b. Ze heeft het boek gelezen.
      c. Cô ấy (đã) đọc quyển sách.
          PRN DEM (ASP) read CL   book
          'She (has) read the book.'

Intuitively, the English sentence comprises the following elements of grammatical meaning. Working from the bottom up, we first encounter the root meaning of the lexical predicate READ: stripped of its argument structure, READ (inherently) denotes an ACTIVITY of interpretation or information transfer (*cf.* 'she read the book/my mind/_ to her children/the weather'). The addition of an object—i.e., the transitivization of READ—introduces the possibility of a BOUNDED EVENT though it does not by itself force a change of Aktionsart from activity to accomplishment (*cf.* 'She read the book for hours at a time.'). The addition of a subject argument implicates a CAUSATIVE meaning of some kind: whereas previously this may have been treated as a primitive thematic relation ('Agent', 'Actor') borne by the subject DP, most recent syntactic analyses treat this added interpretation relationally, analyzing the subject as the argument of a covert causal predicate, e.g., *v*: see Baker (1997), also Copley and Martin (2014). The examples in (1) also involve Assertion Validity in the sense of Klein (1998): as discussed below, finite indicative sentences involve the claim that a given proposition holds or held—or does/did not hold, in the case of negative sentences. Finally, tense morphemes serve to situate these meanings relative to the time of utterance in a particular universe of discourse. In the cases at hand, the English preterite form <u>read</u> in (1a) unambiguously marks PAST TENSE whereas the Dutch present perfect form is ambiguous between a present perfect and a preterite interpretation. As we shall see directly, the Vietnamese sentence in (1c) exhibits the same ambiguity as is found in the Dutch example, thanks to the pre-verbal morpheme *đã*.

Though few would deny that these hidden meanings are a crucial part of clausal interpretation, the idea that they correspond directly to syntactic functional projections *is* disputed; even more controversial is the idea that this functional architecture is universal. In what follows, however, I will suggest that these ideas are true and that Vietnamese makes the best possible case for them. Specifically, I will argue for the cartography of Vietnamese given in (2), in which layered functional projections appear in two regions: (i) outside the thematic domain, in what is conventionally termed the IP-domain; (ii) within the thematic *v*P, which—following Travis (2010)—I will term the 'Inner Aspect' domain. (The Kleene star symbol in (2), below, denotes iterable projections of the same semantic kind: for example, different sorts of aspectual projection).

The rest of the paper is organized as follows. Section 2 is concerned with functional projections in (2) above the thematic verb phrase: its first subsection provides motivation for the projection of Tense, (Outer) Aspect and Negation as autonomous syntactic positions, the second subsection deals with Assertion (Mood) and Modality. In Section 3, the focus is on justifying the existence of functional

heads within the thematic verb phrase: Inner Aspect and causative *v*. Section 4, which concludes the paper, considers more general implications of the observed multifunctionality of grammatical morphemes in Vietnamese.

(2)

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            TP
           /  \
          Ø    T
              /  \
             T    PolP
                 /   \
                Ø     Pol'
                     /   \
                   Pol    AspP*
                         /   \
                        Ø     Asp'
                             /   \
                          Asp*    MP*
                                 /   \
                                Ø     M'
                                     /   \
                                  Mood*   vP
                                         /  \
                                        Ø    v'
                                            /  \
                                           v    IAspP
                                                /   \
                                               Ø     IAsp'
                                                     /   \
                                                  IAsp    VP
                                                         /  \
                                                        Ø    V'
                                                            /  \
                                                           V    Ø
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2 IP and vP syntax in Vietnamese

2.1 Tense, aspect and negation

Following Pollock (1989), Chomsky (1989), and innumerable subsequent 'Split-INFL' treatments of clausal phrase structure, I will assume that aspectual auxiliaries in both French and English are initially merged with the predicate phrase prior to merger of Negation and Tense and that surface word-order in finite, indicative clauses

involving auxiliaries is the result of Asp-T movement. No such movement is observed in English non-finite clauses, where T is filled by *to* (see also Roberts 1993); in French non-finite clauses, this movement is assumed to be optional. French and English are thus primarily distinguished by the lack of main-verb raising in finite contexts and by the consequent appearance (in English) of *do*-support in cases where lowering is blocked, such as negative and emphatic contexts. The paradigms in (3) and (4) below illustrate the parallels and contrasts between these two languages:[1]

(3) a. She does not often read letters written by hand.
     b. She has rarely read a letter written by hand.
     c. ?She claims to not have read such a letter.
     d. She may not have read such a letter.
     e. I suggest you not be here when I get back.
     f. For you to have been living there for six years without learning the
         language is disgraceful.

(4) a. Elle ne *lit*   pas   souvent   de   lettres manuscrites.
         she   writes NEG   often   DET   letters handwritten
         'She doesn't often read letters written by hand.'
     b. Elle   n'*a*   pas   récemment *lu*   une   lettre manuscrite.
         she   has   NEG   recently   read   a   letter handwritten
         'She hasn't recently read a letter written by hand.'
     c. Elle   regrette de ne   pas   *avoir* lu   sa   lettre.
         she   regrets to   NEG   have   read his   letter
         'She regrets not having read his letter.
     d. Elle   nie   absolument (d')   *avoir* écrit la   lettre.
         she   denies   absolutely to   have written DET letter
         'She absolutely denies having written the letter.'

To determine whether Tense and Aspect are syntactically projected in the same fashion in Vietnamese, one needs first to address the more fundamental question of whether Vietnamese has tense at all. The more descriptive literature on Vietnamese offers a full spectrum of views on this matter. At one extreme, one finds the categorical denial of Nguyễn, Đ.D (1996),[2] who insists that '*[T]rong tiếng Việt không có phạm trù thì*… [In Vietnamese, there is no tense]'; at the other end, Lo Cicero (2001) claims a direct correspondence between the French past, present, and future tenses and the Vietnamese elements *đã*, *đang*, and *sẽ*':

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[1] For present purposes, I ignore the French pre-verbal clitic negation marker *ne* (Pollock 1989) explains its distribution in terms of obligatory Neg-T raising; however, the sole motivation for this move would seem to be to account for its unexpected position. Similarly, I ignore the fact that in English non-finite clauses, negation more typically precedes English *to*; cf. (3c) above. It is plausible to think that these anomalies are related.

[2] See also Cao (1998:10), for a near identical claim.

'La correspondance des temps verbaux du vietnamien aux français, si l'on peut dire ainsi, est simple d'une manière générale: 'đã' exprime les temps du passé, 'đang'—ou sans 'đang'—le présent, et 'sẽ' le futur, ces termes précèdent les verbes vietnamiens. Pour mettre en valeur le moment de l'action, la langue vietnamienne se sert donc de termes ou marqueurs comme 'đang, đã, sẽ.'[3]

The evidence presented directly below suggests that both of these views are mistaken though Nguyễn's position is closer to being correct, in the literal sense that there are no pure tense morphemes in the language; Lo Cicero's claim, by contrast, can readily be shown to be empirically false. However, just because there are no tense morphemes in Vietnamese, this does not mean that there is no TP projection.

Consider first, the examples in (5–7) below, which indicate the distribution of *đã*, *sẽ*, and *đang* relative to three VP-external elements: the clausal negation marker *không* (5), manner adverbials such as *cẩn thận* ('carefully') (6), and temporal adverbs, such as *hôm qua* ('yesterday') (7). It should be clear that *đã* and *sẽ* display the same distribution as tensed auxiliaries in English (finite) clauses: *đang* shows more variability, but it generally behaves much more like an aspectual auxiliary (*cf.* English progressive *be*) than as a tense morpheme. Notice also that just in negative contexts (5a) *đã* has an exclusively preterite, rather than perfect, interpretation (a point to be returned to directly).

(5) a. Tôi (đã)   không (*đã)   làm việc   đó.
         PRN PAST   NEG   ASP   do   job   DEM
         'I didn't do that.'
     b. Tôi (sẽ)   không (*sẽ)   làm việc   đó.
         PRN FUT   NEG   FUT   do   job   DEM
         'I will not do that.'
     c. Tôi (đang) không (đang) ăn   cơm.
         PRN ASP   NEG   ASP   eat rice
         'I am not having a meal.'

(6) a. Tôi   (sẽ) cẩn thận (*sẽ)   viết lá thư này.
         I   FUT   carefully FUT   write letter DEM
         'I will write this letter carefully.'
     b. Anh ấy (đã) cẩn thận (*đã)   đọc   quyển sách này.
         PRN DEM ANT   carefully ANT   read CL   book DEM
         'He (has) read the book carefully.'

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[3] 'Broadly speaking, there is a straightforward correspondence between French and Vietnamese tense systems: đã expresses past tense, đang (or without đang) the present and sẽ the future, each of these elements preceding the [lexical] verb. To indicate the time of an action, Vietnamese thus uses markers such as 'đang, đã, sẽ.' [my translation: NGD]'

(7) a. *Anh   Lài   đã   hôm qua   giúp tôi.
        PRN   Lai   ANT   yesterday   help me
        'Lai helped me yesterday.'

    b. ?[$_{TP}$ Anh   Lài hôm qua   đã   [$_{VP}$ giúp tôi]].
        PRN   Lai yesterday ANT   help me
        'Lai helped me yesterday.'

    c. [$_{TopP}$ Anh Lài thì   [$_{TP}$ hôm qua [$_{TP}$ pro đã giúp   tôi]].
        PRN   Lai TOP   yesterday   ANT help   me
        'Lai, he helped me yesterday.'

With respect to *đang*, the examples in (8) quickly dispel Lo Cicero's claim that this is a marker of present tense: examples (8a) and (8b) show that *đang* can readily appear in past and future time contexts, respectively, while examples (8c) and (8d) express generic—timeless—assertions. Taken together, these examples confirm that *đang* is an aspectual morpheme, expressing durativity (progressive aspect).

(8) a. Lúc   đó,   họ   đang chơi quần vợt.
        time   DEM   PRN   ASP   play tennis
        'At that time, they were playing tennis.'

    b. Sang   năm,   vào   ngày này, chắc   tôi đang
        cross   year   enter day   DEM   sure   I   ASP
        làm   ở   Pháp.
        work   in   France
        'By this time next year, I shall be working in France.'

    c. Trẻ   em   đang biết rất   nhiều điều không nên   biết.
        young PRN   ASP   know very much   thing NEG   should know
        'Young people know (*lit.* are knowing) a lot of things they shouldn't.'

    d. Hãy   quý   những gì   mình đang   có.
        IMP   treasure PL   what self ASP   have
        'Treasure what you have (*lit.* are having).'

The tenseless nature of *đang* is reinforced by the grammatical examples in (9) and (10), which show that *đang*, just like the English progressive *be_ing*, is fully compatible with perfect *đã* (9) and future *sẽ* (10a) morphemes; this immediately contrasts with the complementary distribution of *đã* and *sẽ*, exemplified in (10b).

(9) a. Lúc   tôi   đến,   nó   đã   đang ngủ rồi.
        time   I   come PRN   ASP ASP sleep already
        'When I came, he had been sleeping.'

    b. Vào   giờ   này   tuần   tới   tôi   đã   đang   nghỉ-mát
        come   hour   DEM   week   next I   ASP   ASP   holiday
        ở   Hawaii rồi.
        BE   Hawaii already
        'By this time next week I will have been holidaying in Hawaii.'

(10) a. Đừng   gọi điện từ   7 đến   8 giờ.   Lúc đó chúng tôi sẽ
          NEG.IMP call tel. from 7 to   8 hour   time DEM PL   I   FUT
          đang   dùng   cơm   tối.
          ASP   have   meal   even.
          'Don't call me between 7 and 8! At that time we shall be having dinner.'

      b. Vào   giờ   này   tuần   tới   tôi   (*sẽ)   đã nghỉ
          come   hour   DEM   week   next I   FUT   ASP holiday
          mát ở   Hawaii   rồi.
          be   Hawaii   already
          'By this time next week I will have been on holiday in Hawaii.'

Hence, the distributional evidence of examples (5)–(10) is consistent with the idea that *đã* and *sẽ* are pronounced in T and that *đang* occupies some lower aspectual position. In so far as *sẽ* has an invariant future interpretation and appears devoid of aspectual interpretation, I will assume that it is base-generated in this position. (This assumption is further supported by its exclusion from *Yes-No* questions; see below.) By contrast, even though *đã* appears in T, its primary interpretation is not as a past tense marker but as an aspectual morpheme. This is supported by two pieces of evidence. First, the future perfect and counterfactual examples in (11) demonstrate that *đã* freely occurs in contexts incompatible with a past tense morpheme:

(11) a. Bằng   giờ   này   năm sau, chị   đã   là   giáo.viên rồi.
          by   time   this year next she   ANT   COP   teacher   already
          'By next year, she'll *already b*e working as a teacher instead.'

      b. Đến   cuối   năm nay, tôi   đã   ra.trường.
          arrive   end   year DEM   PRN   ANT   go.out.school
          'I *shall have* graduated by the end of the year.'

      c. (Nếu)   ông   nói   với tôi   sớm.hơn thì   tôi   đã
          (if)   PRN   say   with me   earlier TOP   I   ANT
          săn.sóc đến việc   ông.
          take.care   work   PRN
          'If you had told me about it earlier, I *would have* taken care of that
   business of yours.'

Second, the examples in (12) show that outside of negation contexts—compare (5a) and (14) below—*đã* expresses *anteriority* (prior inception). As one expects of an aspectual morpheme, the precise interpretation of *đã* is sensitive to the properties of the associated lexical predicate: thus, with stative predicates such as *sáng* (12a), addition of *đã* signals a change of state (the sky became brighter prior to the Topic Time); with achievement predicates such as *thắng* (12b), *đã* carries the assertion that the event occurred prior to the utterance time as well as the implication that it had not occurred previously; however, with activity and accomplishment predicates (12c-d), *đã* signals that the inception of the event or activity precedes the Topic Time (Klein 1994). See Phan (2013) for further discussion.

(12) a. Ngoài   đường trời   đã   sáng.
          out   road   sky   ANT   bright
          'It got bright out there.'   [from Trần, K.P. (2008:73)].
      b. Cuối cùng Andy   Murray *đã*   thắng cuộc.   [from Phan (2013)]
          Finally   Andy   Murray ANT   win   contest
          'Finally, Andy Murray won the contest.'
      c. Tàu   đã   chạy.
          train   ANT   run
          'The train has departed.'
      d. Nó   đã   viết   bài   ở   văn.phòng.
          3SG   ANT   write paper at   office
          'He wrote a paper at the office. '

Crucially, the perfect/anterior value contributed by *đã* should be distinguished from perfectivity or completion (which is signaled by post-verbal particles; see below): except for achievement predicates, where event completion prior to the utterance time is entailed by their meaning, *đã* does not entail, or even imply, completion of the event or situation. This is supported by the absence of any completion entailment in the examples in (13) below (similarly, (12b) may be true of a situation in which the paper has been started but is still unfinished):

(13) a.i Tàu   đã   chạy   rồi   mà   giờ   nó   lại   dừng.
          train ANT   run   already   but   now   PRN   again   stop
          'The train has already run [= set off], but it has now stopped again.'
     a.ii Tàu   *đã*   chạy   rồi   và   giờ   nó   vẫn   chưa   dừng.
          train ANT   run   already   and   now   PRN   still   not.yet   stop
          'The train has already run [= set off], and hasn't stopped yet.'

(14)
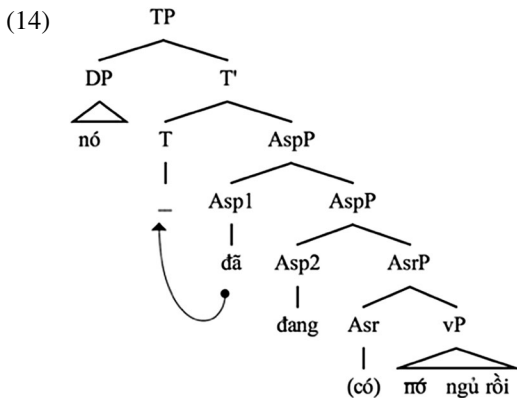
All of the preceding examples involving *đã* are consistent with the analysis sketched in (14), in which *đã* is initially merged in Asp and subsequently raised to T. On this analysis, the complementary distribution of *đã* and *sẽ* in (15a-b) exactly

mirrors the complementarity of modals with finite aspectual auxiliaries (or *do*-support) in English (15c-d).

(15) a. Đến   cuối   năm   nay,   tôi   (*sẽ) đã   ra. trường.
        arrive end   year   DEM   PRN   FUT   ANT   go.out.school
        'I *shall have* graduated by the end of the year.'
    b. Vào   giờ   này   tuần   tới   tôi   (*sẽ) đã   nghỉ-mát
        come   hour   DEM   week   next I   FUT   ASP   holiday
        ở   Hawaii rồi.
        be   Hawaii already
        'By this time next week I will have been on holiday in Hawaii.'
    c. *She will has graduated by the end of this year.
    d. *Kerry might does indeed know the way to solve this.

To this point, the Vietnamese data are fairly mundane when considered from a theoretical perspective: the interim conclusion must be that Vietnamese does have syntactic tense (TP) but that the T position, when lexicalized, is primarily occupied by an aspectual morpheme. However, matters become more interesting when negative contexts are taken into consideration. So consider now the interactions and interpretive alternations involving *đã*, the default clausal negation morpheme *không* ('not'), and its perfect alternant *chưa* ('not yet'), exemplified in (16)–(18) below, many of which also feature the 'assertion' marker *có*.

First, the examples in (16) demonstrate the mutual compatibility of *đã*, *không*, and *có* in emphatic declarative clauses. While the distribution of these elements is exactly as predicted, the interpretive restriction—already seen in (5a)—is not: here (i.e., in negative sentences), the aspectual reading is canceled; *đã* is exclusively interpreted as a preterite marker.

(16) a. Hôm qua anh   ấy   đã   *không* có   đến   nhà   chị.
        yesterday PRN   DEM   PAST NEG   ASR   arrive house PRN
        'He didn't go to your house yesterday.'
    b. Trong   bản   khai,   nó   đã   *không* có   nói   gì
        in   CL   statement PRN   PAST NEG   ASR   say   what
        đến   tổ chức   cả.
        about   organization all
        'In his statement, he didn't say anything at all about the organization.'

The observation that *đã* is unambiguously a past time marker in negative contexts is originally due to Trinh (2005), who presents the minimal contrast in (17a) and (17b) below. Trinh (2005) treats this restriction as a case of lexical homophony: on his account, there are two separate lexical entries in the Vietnamese lexicon—perfect $đã_1$ and preterite $đã_2$, each occupying distinct underlying positions. In affirmative contexts, perfect $đã_1$ is taken to be initially inserted under PERF, an aspectual category close to—or just inside—the VP, and raised to T. Negation is assumed to block this raising, leading to the insertion of an alternative morpheme—$đã_2$—directly to the T node, which yields the exclusive preterite reading in negative contexts.

(17) a. Nó   *đã*   đọc   sách.   [perfect ∼ preterite]
          PRN   PAST/ASP   read   book
          'He read books/has read books.'
      b. Nó   *đã*   không   đọc   sách.
          PRN   PAST   NEG   read   book
          'He did not read books./*He has not read books.'
      c. Nó   *chưa*   đọc   sách.   [perfect (negative)]
          PRN   not.yet   read   book
          'He has not read books.'
      d. Nó   *đã*   *chưa*   đọc   sách.   [past perfect (negative)]
          PRN   PAST   not.yet   read   book
          'He had not read books.'

Duffield (2013a, b) offers an analysis that is very close in spirit to Trinh's original treatment but which dispenses with homophony: on the revised ('multifunctional') analysis, only one underspecified *đã* is lexically represented: this inherits a *dual* interpretation if inserted in Asp and moved to T but only has a temporal interpretation if inserted directly into T. Aside from the massive redundancy implied by Trinh's analysis—as Duffield points out, *đã* is wholly typical of most Vietnamese functional morphemes whose interpretation varies systematically according to their structural position (*không* and *có*, for example, and most of the other functional morphemes discussed in this article likewise have multiple interpretations)—the homophony account fails to explain two cross-linguistic facts. The first observation is that affirmative 'present perfect' forms in Modern Romance and Germanic varieties also display perfect ∼ preterite ambiguities: the addition of a temporal adverbial (*gisteren* 'yesterday') to the Dutch sentence in (1b), for example, automatically yields a preterite interpretation; alternatively, with respect to Chinese, Lin (2005) claims that the aspectual particle *le* displays a similar ambiguity. The second point to observe is that other languages also exhibit constraints on negative/perfect interactions—see Matthews (1990); also Miestamo and Van der Auwera (2011): once more in Chinese, *le* appears to be incompatible with both *bu* (18b) and *meiyou* (18c). Hence, treating the Vietnamese interaction in terms of an arbitrary lexical specification would seem to miss a significant cross-linguistic generalization.

(18) a. ta   qu   le   faguo.
          3SG   go   LE   France
          'He went to France.'/ 'He has been to France.'
      b. *ta   bu   qu   le   faguo.
          3SG   NEG   go   LE   France
          'He did not go to France.'   (Li 1999:235)
      c. *ta   meiyou   qu   le   faguo.
          3SG   not.have go   LE   France
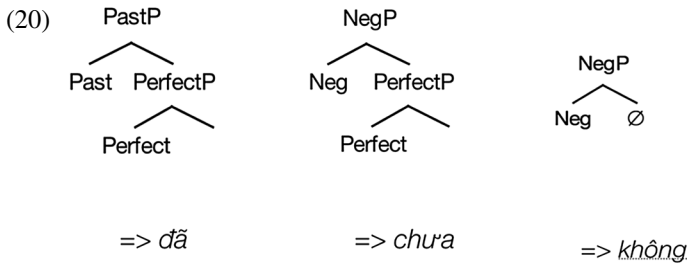   'He hasn't been to France.'   (Linda Badan, p.c.)

In fact, Trinh's observation needs to be understood as part of a wider paradigm of interactions between past, perfect, and negation morphemes in Vietnamese, a paradigm that (minimally) includes the pair of sentences containing *chưa* in (17c) and (17d) above. Example (17c) shows that it is wholly grammatical to make a perfect/negative assertions—just as long as *chưa* replaces both *đã* and *không*—while the acceptability of (17d) demonstrates that that there is no structural incompatibility between *đã* and *chưa* but makes clear that the negative constraint still holds: rather than the expected perfect interpretation, *đã chưa* only admits a past perfect reading (as indicated by the gloss).

Both previous proposals, Trinh (2005) and Duffield (2013a, b), share the assumption that clausal negation blocks what would otherwise be a licit connection between T and a lower functional head (Asp) (implicitly transferring to Vietnamese the Chomsky/Pollock 1989 analysis of *do*-support as a failure of T-lowering). The obvious embarrassment for both accounts, however, is the fact that double insertion of *đã*—simultaneously above and below negation—is ungrammatical, as shown by the examples in (19) below: indeed, in contrast to English or French, unraised perfect *đã* is never possible.

(19) a. *Anh-ấy *đã*   không   *đã*   đến.
         PRN   PAST NEG   ANT   come
         'He didn't come.'
     b. *Anh-ấy *đã*   chưa   *đã*   đến.
         PRN   PAST NEG_PRF ANT   come
         'He hadn't come.'

On earlier movement analyses, there is no way to explain this constraint other than through appeal to the avoidance of syntactic haplology, which seems *ad hoc* at best: any strategy involving morphological feature-checking seems even more unlikely given the isolating nature of the language. In response to this difficulty, Phan and Duffield (2016) offer an alternative Nanosyntax solution, which covers the data in (15)–(17) and which also explains the impossibility of double-*đã* insertion.

Nanosyntax (Starke 2009; Baunaz and Lander to appear; Caha 2013) conceives of lexical entries as competing pre-formed syntactic fragments—or L-trees—which can be combined to derive syntactic representations (S-trees) in a one-to-many fashion; that is, a given L-tree may fit a larger or smaller set of structural nodes. The various principles that determine which L-tree best satisfies a particular section of a syntactic build—Superset Principle, Cyclic Override Principle, Elsewhere Principle, etc.—account for collocational restrictions and cases of morphological suppletion while dispensing with the need for head-movement operations. In the case at hand, the lexical entries (L-trees) for *đã*, *chưa*, and *không* are plausibly as in (20) below; the relevant Nanosyntactic principles are given in (21):

(20)

PastP
   Past   PerfectP
           Perfect

NegP
   Neg   PerfectP
           Perfect

NegP
   Neg   ∅

=> đã   => chưa   => không

(21) a. Superset Principle. An L-tree can match more than one S-tree: for a successful match, the L-tree must be the same size or larger than the S-tree (Caha 2009, 2013);

    b. Elsewhere Principle. When more than a single L-tree can lexicalize an S-tree, the L-tree with the fewest unused features is chosen;

    c. Principle of Cyclic Override. Assuming that derivation is built bottom-up, later, higher-level spell-outs cancel out previous, lower-level spell-outs (Lander 2016).

Phan and Duffield (2016) offers a fuller description of this analysis. Here, it suffices to consider how the analysis derives (a), the ambiguity of *đã* in affirmative contexts (17a); (b), the preterite-only interpretation in negative contexts with *không* (17b); and (c) the blocking effects of perfect *chưa* (17c, d).

- In the case of affirmative perfect contexts, only PerfectP is projected. The lexicon offers two ways of spelling out the perfect: *đã* or *chưa*: by the Superset principle, both L-trees for *đã* in and *chưa* in (20) are supersets of S-tree PerfectP. The Elsewhere Principle resolves the competition: the L-tree for *đã* wins out since it has fewer unused features. PerfectP spells out as *đã*.
- As for the preterite interpretation of *đã* in affirmative contexts, two derivational steps are involved:

  - At the first step, we also begin from PerfectP; as before, the best match in the lexicon is the L-tree of *đã*, so PerfectP is spelled out by *đã*.
  - Next, PastP is inserted on top of PerfectP. There is an L-Tree match for the whole trunk PastP > PerfectP in the lexicon, which is spelled out by *đã*, over-riding the first spell-out. *đã đã is ruled out by the principle of Cyclic Override.

- In case of past negative contexts involving *không*, there are once again two steps in the derivation of this section:

  - Beginning with NegP, there are two matches in the lexicon: *không* or *chưa*. The Elsewhere Principle resolves the competition: the L-tree for *không* involves fewer unused features, and thus NegP spells out as *không;*
  - Next, PastP is built on top of NegP (there being no match for the whole trunk section PastP > NegP in the lexicon). Here, the lexicon only allows one

scenario: NegP is spelled out by *không*, PastP is spelled out by *đã*. This yields the correct word order (*đã* precedes *không*), with the right interpretation (*đã* is interpreted as preterite only).

- Perfect negative contexts involving *chưa* also involve several steps in the derivation:

  - For perfect negative *chưa* contexts (example 17c), the derivation starts from PerfectP: the best match in the lexicon is the L-tree of *đã*, so PerfectP is spelled out by *đã*. The derivation continues, building NegP on top of PerfectP: for this, there is one match for the NegP > PerfectP in the lexicon, spelled out as *chưa* (the L-tree for *chưa)*. This higher spell-out *chưa* cancels out the previous spell-out *đã* (so **chưa – đã* is ungrammatical due to the Cyclic Override principle).
  - In case of past perfect (17d), PastP is built on top of NegP > PerfectP. There is no match for the whole trunk in the lexicon. Here, the lexicon only allows one possibility: NegP > PerfP is spelled out by *chưa*, and PastP is spelled out by *đã* (by the Superset Principle). *Double-*đã* (19) is ungrammatical due to the Cyclic Override principle.

To a first approximation, this analysis derives the paradigm in (17) above. On the understanding that certain issues concerning *không* remain unresolved, we may now turn attention to functional categories situated lower within the IP domain, specifically, those concerned with Assertion, Mood, and Modality.

2.2 Assertion, mood and modality

For Klein (1998), the notion of Finiteness is viewed as composite of two separate concepts: Tense and Assertion (aka 'assertion validity'): whereas Tense expresses the time of a given event or situation, assertion 'marks the claim—the fact that the situation described by the utterance indeed obtains, in contrast to the opposite claim (Klein 1998).' (In other frameworks, assertion validity seems to be close to the notion of 'realis', or event actualization; see, for example Desclés 2016). Klein draws attention to the intonation contrasts given in (22) to (24) below: these show that in English, emphasis placed on finite auxiliaries may contrast either tense ((22b)) and/or assertion validity ((22c)) whereas emphasis on tensed verbs serves only to contrast tense and/or lexical meaning ((23b, c)); in order to focus assertion validity in sentences without aspectual auxiliaries, *do*-support must be invoked, as in (24). As discussed in Duffield (2007, 2013b), these paradigmatic distinctions imply that *do*-support is more than a 'last resort' strategy to save Tense inflection; within the Pollock/Chomsky (1989) framework adopted here, they also imply that—unlike tense features—assertion features may not be lowered (even in the absence of negation).

(22) The book *was* on the table.
    b. The book is on the table.
         — No, the book *was* on the table.
    c. The book was not on the table.
         — No, that's wrong, the book *was* on the table.

(23) a. John loved Mary.
      b. John *loved* Mary, but he doesn't love her now.
      c. John *loved* Mary, but he didn't adore her.

(24) The idea that he didn't love her is plainly wrong.
              — John (really) *did* love Mary.

Exactly this (pure) assertion function is expressed in affirmative Vietnamese sentences by the preverbal particle *có*, which is the next element encountered after Tense > Negation > Aspect, moving down the clausal spine. The examples in (25) demonstrate the contrastive function of *có*, including its compatibility with sentential negation (25b); those in (26) reinforce the point that *có* occurs relatively low in the clause, even below the progressive auxiliary *đang* but still above manner adverbials (26c):

(25) a. Anh   có   mua sách!
          PRN   ASR   buy   book
          'He DID buy the book!'
      b. Anh   *không*   có   mua   sách!
          PRN   NEG   ASR   buy   book
          'He did NOT buy the book!'
      c. Bà   *đâu*   có   phải là   người   Hành-thiện!
          PRN   DAU   ASR   right cop   person Hanh-Thien
          'She is NOT a native of Hanh Thien, I tell you!'
      d. Có (chứ!)
          ASR (exclamative)
          '(He) did (indeed)!'

(26) a. Tôi   (*đã*) có   (*đã*) gặp   anh   Phòng một lần   từ
          I   ANT   ASR   ANT   meet   PRN   Phòng one time   from
          thời còn   ở   Tiên Phước.
          time still   be.LOC   Tien Phuoc
          'I met Phòng once when I was still in Tiên Phước.'
      b. Tôi   biết   là   [chị   (*đang)* có (*đang)* yêu   một người].
          I   know   COMP PRN   PROG   ASR PROG   love one person
          'I know that she's in love with someone.'
      c. Anh ấy   đã   (?có)   cẩn thận (?có) đọc quyển sách này.
          PRN DEM ANT   ASR   carefully ASR   read CL   book DEM
          'He (has) read the book carefully.'

These data thus provide further prima facie evidence for the structure in (14) above. A question that arises at this point, however, is whether assertion (validity) is best viewed as an atomic property or as one feature of a multivalued functional node. The latter conclusion is suggested by the fact that *có* exhibits even greater multifunctionality than English auxiliary *do*: as illustrated by the examples in (27), *có* also appears in Yes-No questions ((27a)), as a stand-alone light verb (≈ 'have' (27c)), and as an existential predicate in (27d) (with unraised subject; note the clause-initial position of the future morpheme *sẽ*, indicating an empty {Spec, TP}). What is more, *có* also occurs in negative imperatives, as will be seen directly:

(27) a. Chị   (có)   mua   cái   nhà   không.
          PRN   ASR   buy   CL   house   NEG
          'Did you buy the house?' (*not* 'You didn't buy…)

      b. Con   uống   thuốc   chưa?
          PRN   drink   medicine not.yet
          'Have you taken your medicine?'
          cannot mean 'You [child] have not taken your medicine.'

      c. Cô ta *sẽ*   có   quá   nhiều   tiền   mà   không
          PRN   FUT   HAVE   so   much   money   RM   not
          thể   đếm   được   hết.
          can   count   can   all-up
          'She will have so much money that she won't be able to count it.'

      d. Sẽ   có   người cần anh.   (song title)
          FUT   exist   person need you
          'There will be someone who needs you.'

Notice in passing the (obligatorily) final position of the negation morpheme *không* in construction with *có* in Yes-No questions. A similar brace construction is observed with *đã…chưa* in (27b): significantly, in contrast to indicative constructions, *cf.* (17d), *đã* in Yes-No questions has a perfect, rather than past perfect, interpretation. Although space constraints preclude full discussion of this Neg ∼ Q alternation, which is analyzed in Duffield (2013a), the facts presented there are most consistent with the phrasal movement analyses sketched in (28) and (29) below:

(28)

(29)
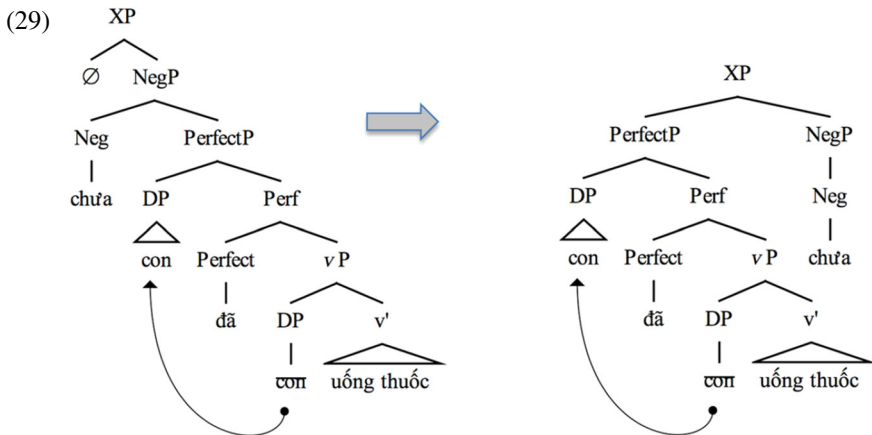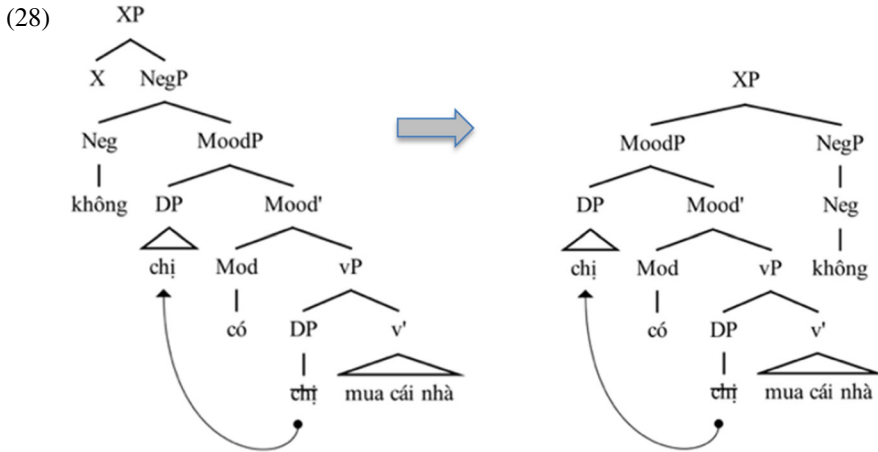
These analyses are hardly immune to criticism: see, for example, Nguyễn Đ. H. (1997) and Law (2015) for alternative accounts. The treatment in (29) of (perfect) *đã…chưa* in (27b) is also hard to reconcile with the Nanosyntactic derivation of *chưa* perfect structures, such as (17c) above.[4] Given this, it seems likely that this analysis should be reconsidered. Whatever supersedes it, however, will need to capture the intuition that medial and clause-final *không* are instances of the same multifunctional morpheme, arguably of the same functional projection. This is strongly suggested by the fact that there are no negative Yes-No questions in

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[4] The two analyses can be reconciled, but one would need to assume that *chưa* is attached only after the PerfP has been raised out of the scope of NegP; otherwise the Cyclic Override Principle should cancel the lower *đã*. If that were the case, however, then the Elsewhere Principle would seem to favor insertion of *không*, rather than *chưa*, as the realization of bare negation. There is thus an obvious analytic tension here, which must be resolved.

Vietnamese (in direct contrast to tag questions), as evidenced by the paradigm in (30):

(30) a. Anh   ấy   không đến   *không/(có) phải   không?
        PRN   DEM   NEG   come   NEG   ASR   right   NEG
        'Isn't he coming?/He isn't coming, is he?'
     b. Bạn   chưa   xem   phim này   *không/(có) phải   không?
        friend NOT.YET see   film DEM   NEG   ASR   right   NEG
        'Haven't you seen the film yet?/You haven't seen the film yet, have you?'
     c. *Mày   không có   xu   nào   không/(có) phải   không?
        PRN   NEG   have money which   NEG   ASR   right   NEG
        'Haven't you got any money?/You haven't any money, have you?'

It should be clear that this constraint follows directly from the analyses in (28) above, as does the fact that preterite *đã* is excluded from Yes-No questions: this is shown by the minimal contrast between (31a) and (31b = 16a).[5]

(31) a. Hôm qua anh ấy   (*đã) có   đến   nhà   chị   *không*?
        yesterday PRN DEM² PAST ASR   arrive house PRN   NEG
        'Did he go to your house yesterday.'
     b. Hôm qua anh ấy   đã   *không* có   đến   nhà   chị.
        yesterday PRN DEM² PAST NEG   ASR   arrive house PRN
        'He didn't go to your house yesterday.'

Returning now to the other functions of *có*, the examples in (27) imply that *có* expresses a mixture of modal (Mood) and argumental properties: on the one hand, it is often interpreted as a *realis* marker Duffield (2013b); at the same time, as discussed in Duffield (2007, 2011), *có* seems to function as an 'Event Argument', where the presence of *có* in a sentence implies a specific event or situation (stage-level property). Klein's own discussion (1998) of the concept of assertion validity suggests that it should alternate with other modal (Mood) features. He writes:

> It is plausible to assume that tense only marks that some arbitrary time span, for which we keep the term TT, placed somewhere on the time axis, and that either ASS or, depending on the particular illocution, some other "modality marker" assigns a special function to this time span. So, TT can be the time span for which a claim is made, but it can also be the time span at which some obligation is put into force (or *in whichever way we want to analyse the role of the imperative*) [emphasis mine].

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[5] It seems very likely—as Nguyễn Đình Hoà (1997) supposes—that *Yes-No* questions developed diachronically from alternate bi-clausal 'Yes-or-No' questions involving predicate reduplication, and in which *có* functioned as an emphatic affirmative marker ('indeed-VP (or) not-VP'): that is to say, the original construction involved ellipsis under identity of the second predicate phrase; see also Law (2015). However, final *không* now appears fully grammaticalized within a monoclausal structure in Modern Vietnamese, so some alternative treatment is required.

With this in mind, observe that imperative morphemes in Vietnamese occupy a sentence-medial position very similar to that of *có*: to the right of the subject, (apparently) immediately above the predicate phrase. The examples in (32) illustrate the distribution of the affirmative imperative markers *hãy* and *cứ* ((32a, b)), as well as the negative imperative *đừng* chớ ((32c)); see also (10a) above.

(32) a. (Các anh) *hãy* đọc bài này!
        PL PRN IMP read lesson DEM
        'Read this text!'
   b. (Anh) *cứ* hỏi!
        PRN   IMP ask
        'Go ahead. Ask!'
   c. (Anh) *đừng* nói to!
        (PRN) NEG.IMP talk loud
        'Don't speak loudly!'

Klein's speculation regarding Mood implies that *có* should be in complementary distribution with imperative morphemes. It turns out, though, that this is only true of affirmative imperatives: negative imperatives, as in example (33c) below, are perfectly compatible with *có*, suggesting something like the phrase structure trees in (34):

(33) a. *Các anh   hãy có đọc bài này.
        PL   PRN   IMP ASR read lesson DEM
        '(you$_{pl}$) Read this text!'
   b. *Anh cứ   có hỏi.
        PRN IMP   ASR ask
        'Go ahead. Ask!'
   c. (Anh) đừng/chớ có nói to!
        PRN   NEG.IMP ASR talk loud
        '*Don't* speak loudly!'

Hence, though it may be no more than coincidence, Vietnamese *có* finds a further parallel with English *do*–support in imperatives, which is excluded, in most English varieties, in affirmative contexts (%'Do come and see me next week') but obligatory in negative contexts ('Don't be an idiot!'/*'Be not an idiot'). Nevertheless, exactly why *do*-support is necessary in English negative imperatives—but not, say, in subjunctive contexts ((3e) above)—remains unclear: see Pollock (1989); compare Henry (1995).
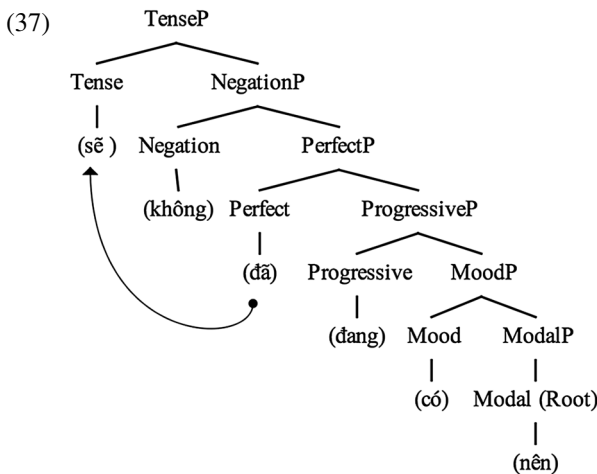
(34)
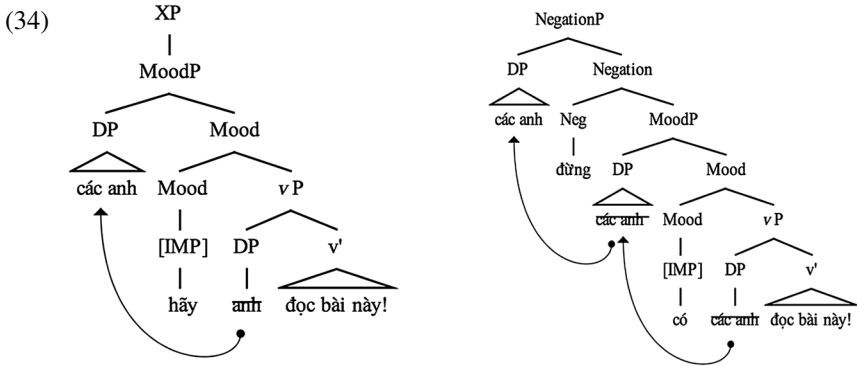
Now, if it is correct that (indicative) *có* and (imperative) *hãy* occupy the same low 'modal' position, one might wonder about the position of root modal auxiliaries (*nên*, *được*, *phải*), which also appear low in Vietnamese structure, below negation (35a), and which—in contrast to English—are fully compatible with both temporal (35b) and aspectual auxiliaries (35c, d):

(35) a. Những   ai   yêu   bóng.đá thì   (*nên)   <u>không</u> (nên)   bỏ lỡ
            several   who   love   football TM   should   NEG   should   miss
            clip   này.
            clip   DEM[1]
            'Those who love football, (they) should not miss this clip.'
      b. Tôi   (*nên)   <u>sẽ</u>   (nên)   làm   gì   nếu   bị   sa.thải?
            PRN   should   FUT   should   do   what   if   PASS   fire
            'What should I do if I get fired?'
      c. Lẽ   ra   lúc   này   họ   (*nên)   <u>đã</u>   (nên)   đi rồi.
            right   out   when   DEM   PRN   should   ANT   should   go already
            'They (should) have left already.'
      d. Lẽ   ra   lúc   này   mình   (?nên)   <u>đang</u> (nên)   làm
            right   out   time   DEM   PRN   should   DUR   should   do
            một   thứ   gì   đó.
            one   thing   what   DEM
            'I should have been doing something at the moment/by now.'

Once more, the simplest assumption—*viz.*, that Mood and modals compete for the same structural position—proves to be incorrect. This time however, the shift is in the opposite direction: as the *Googled* examples in (36) attest, interrogative *có* appears to the left of root modals:

(36) a. Em   có   nên   mua   Audi   A4   2010 không ạ?
        PRN [+Q] should buy   Audi   A4   2010 NEG   EXCL
        'Should I buy a 2010 Audi A4?'

    b. Em   có   nên   bỏ   chồng   không?
        PRN [+Q] should leave husband NEG
        'Should I leave my husband?'

On the continuing assumption that indicative, interrogative, and imperative *có* instantiate the same functional node, the position of root modals implies the existence of one final functional position, immediately above the thematic predicate phrase. Combining all of these distributional facts yields the extended IP-cartography in (37) (with the proviso that some projections are mutually exclusive):

(37)

```
                    TenseP
                  /        \
              Tense      NegationP
                |        /        \
             (sẽ )  Negation      PerfectP
                       |         /        \
                   (không)   Perfect   ProgressiveP
                              |        /        \
                            (đã)  Progressive   MoodP
                                    |          /     \
                                 (đang)     Mood   ModalP
                                             |        |
                                           (có)   Modal (Root)
                                                      |
                                                    (nên)
```

This concludes the basic description of the Vietnamese IP-domain. Before examining functional categories within the thematic domain—that is to say, to the right of the underlying subject—it is worth paying some more attention to modal auxiliaries since they exhibit two interesting properties: first, as indicated by the examples below, they are the only functional categories that may appear both pre- and post-verbally in indicative clauses; second, they offer near-canonical examples of grammatical multifunctionality in the sense of Travis et al. (1998):[6]

A multifunctional functional category (MFC) is one that is 'inherently underspecified with the unspecified properties of the host head…[where]… syntax can provide additional information not available in the lexical entry of the item. The lexical entry encode[s] the intersection of the uses of the item…

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[6] The quoted text appears in a grant application submitted by the authors cited: for a variety of reasons, the idea was not subsequently developed by them.

[d]ifferent senses [of a multifunctional item] follow from the different head positions in which it occurs (Bobaljik, Travis, and Lefèvbre 1998).

Consider, then, the paradigm for *được* (≈ CAN) in (38), from Duffield (1998, 1999):

(38) a. Ông Quang *được* mua cái nhà.   [pre-verbal = root]
       PRN Quang CAN buy CL house
       'Quang was allowed to buy a house.'
   b. Ông Quang mua *được* cái nhà.   [immediately post-
       PRN Quang buy CAN CL house   verbal = aspectual]
       'Quang has bought (was able to buy) a house.'
   c. Ông Quang mua cái nhà *được*. [post-vp = abilitative/
       PRN Quang buy CL house CAN epistemic]
       'Quang is able to buy a house/Quang may possibly buy a house.'

The examples in (38) demonstrate how Vietnamese word order quite clearly disambiguates different readings of modal *được*: where the modal appears pre-verbally, the only available reading is deontic whereas in immediately post-verbal position (before the object noun-phrase), the reading is aspectual (perfective) instead of modal.[7] A point worth mentioning in passing is that unlike post-verbal modals, which compete for a single functional slot, pre-verbal modals are iterable: where this happens, the higher modal (further to the left) is interpreted epistemically (epistemic > deontic), as in (39):

(39) a. Cô ấy *nên* *được* kiếm việc.
       PRN DEM should obtain find job
       'She should be allowed to find a job.'
   b. *Cô ấy *được* *nên* kiếm việc.
       PRN DEM obtain should look-for job
       (translation as (39 a))

What is especially interesting about post-verbal *được* (38b) is that its modal meaning seems to have been almost entirely bleached in this position: as the examples in (40) illustrate, modals that have distinct semantics in pre-verbal position are interpreted in exactly the same way whenever they are inserted post-verbally (as asserting that a particular event actually took place):

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[7] For present purposes, I set aside the post-VP occurrence of *được* ((38c)). The main justification for this is that whereas all of the other modal auxiliaries participate in the pre-verbal/postverbal alternation—see examples (39)–(41) below—*được* is the only modal auxiliary to occur after the VP. For analyses of final *được* see Duffield (1998, 1999); *cf.* also Simpson (1998, 2001), for discussion of a similar phenomenon in Thai.

(40) a. Họ   làm   *nên*   việc   lớn.
       PRN   do   ASP   job   big
       'They did (made) great things.'

    b. Cô   ấy   kiếm   *được*   việc.
       PRN   DEM   seek   ASP   job
       'She found a job.'

    c. Cô   ấy   kiếm   *phải*   việc.
   PRN   DEM   seek   must   job
       'She found a job.'

At first glance, this reading of the post-verbal modal might seem to be no more than 'actuality entailment' in the sense of Bhatt (1999), which arises quite generally when ability modals combine with perfective aspect. So, for example, whereas (41a) only expresses potential, (41b) suggests that the event was in fact realized.

(41) a. Quang is able to buy the house.
    b. Quang was/has been able to buy the house.
    c. Quang was/has been able to buy the house (for some time), but in the end he (has) decided against it.

On the basis of the cancellability of this inference in English ((41c)), Hacquard (nd., 2009) argues that the effect is an implicature rather than an entailment. Vietnamese, however, supports Bhatt's original label since consultants are agreed, for example, that (40b) and (40c) both mean that the woman got the job: any ambiguity in the English translation is removed by the fact that the potential reading is expressed by a post-VP modal (compare (40c)). Whatever the correct label may be, there is a consensus that perfective—as distinct from perfect—aspect is involved. As will be discussed directly, it is unsurprising from a cartographic perspective that perfective aspect is associated with a position immediately to the right of the lexical verb, what—adopting the label of Travis (2010)—I will refer to as 'Inner Aspect.'

3 *v*P-internal functional syntax

In this penultimate section, I turn attention to those aspects of hidden meaning, first mentioned at the outset, that are most intimately associated with the argument structure of the thematic core: (working this time from the bottom up) (i) the boundedness introduced by specific objects, and (ii) the causativity reading implicated by the (underlying) subject DP. The facts presented below suggest that these semantic properties are directly mapped to functional structure, as in (42) below. Once again, thanks to the isolating character of Vietnamese, this mapping is perfectly transparent in particular grammatical constructions.

(42)
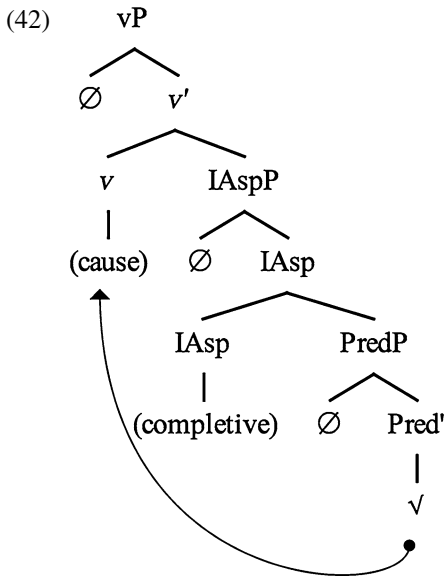
Let us first consider the position of post-verbal perfective (or completive) morphemes in Vietnamese, a set that includes *xong* ('finish'), *ra* ('out'), and *hết* ('end, up'); see Phan (2013) for more extensive discussion. For purposes of illustration, we focus on the first of these elements. As shown by the alternation in (43) below, completive particles may either precede ((43a)) or follow ((43b)) the object noun phrase (here, the bare noun *sách* ('books')). Though both orders are permitted, the change has immediate interpretive consequences: where the object appears to the left of the completive particle, it is obligatorily interpreted as specific (in spite of the absence of any determiner). This constraint is also reflected in the impossibility of fronting overtly marked non-specific indefinites such as *một cái xe* ('one car'), as shown in (44):

(43) a. Nó đã   đọc *xong* sách rồi.
          PRN ANT read PTC   book already
          'He has finished reading (the) books.'
      b. Nó đã   đọc sách *xong* rồi.
          PRN ANT read book PTC   already
          'He has finished reading the books.'

(44) a. *Nó sửa một cái xe *xong* rồi.
          PRN fix one CL   car PTC   already
          'He finished fixing one car.'
      b. Nó sửa *xong* một cái xe   rồi.
          PRN fix PTC   one CL   car already
          'He finished fixing one car.'

These interpretive contrasts find obvious and immediate parallels with sentences in Germanic languages involving telic particles. In Dutch, for example, as discussed in van Hout (1996, 2000) and Thrift (2003), only specific objects may precede the telic particle *op* (≈ Vn. *hết*).[8]

(45) a. *Het meisje eet   koekjes op.
          the girl   eats   cookies PTC
          'The girl eats up cookies.'
      b. *Het meisje eet   brood   op.
          the girl   eats   bread   PTC
          '?The girl eats bread up.'
      c. Het meisje   eet   het   brood op.
          the girl   eats   the   bread PTC
          'The girl eats the bread up.'

In previous analyses of OBJECT-PTC word order in Germanic (e.g., Borer 1994; Van Hout 2000; Johnson 1991; Travis 2010) it has been assumed that the specific object has been raised from its base position to the Specifier of the aspectual projection headed by the telic particle. The fact that finite verbs in Dutch raise out of the thematic domain—Dutch being a Verb-Second language—as well as the complications that arise from restructuring in infinitival constructions (Wurmbrand 2001/2003) leave it unclear whether this aspectual projection in Dutch is *external* to *v*P, as more generally assumed, or *internal*, as diagrammed in (42) above. Travis (2010) argues for the latter position: if this is correct, then the Vietnamese and Dutch facts are directly assimilable to one another.

The minimal contrasts in (46) offer further evidence of the aspectual function of *xong*, in demonstrating that telic particles ((46b)) and quantified objects ((46c)) play an equal and complementary role in signaling an entailment of completion. (Example (46a), where no such entailment is observed, reinforces the claim, made earlier, that preverbal *đã* is a perfect, not perfective marker: that is, it signals inception, not completion.)

(46) a. Nó   đã   viết   bài,   nhưng   vẫn   chưa   xong.
          PRN   ANT   write   paper   (but   still   NEG   finish)
          'He wrote (= has started writing) the paper (but he hasn't finished it yet).'
      b. Nó   đã   viết   *xong*   bài   (*nhưng vẫn   chưa   xong).
          PRN   ANT   write   PTC   paper   (but   still   NEG   finish)
          'He wrote (up) the paper (*but he hasn't finished it).'
      c. Nó   đã   viết   hai   bài,   (*nhưng vẫn   chưa   xong).
          PRN   ANT   write   two   paper   (but   still   NEG   finish)
          'He wrote two papers (*but he hasn't finished them yet).'

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[8] The Dutch ∼ Vietnamese parallelism is not complete since Dutch does not tolerate leaving indefinites below *op* (*in situ*) in finite clauses (*Het meisje eet op koekjes*). Presumably, this is ruled out for independent reasons, perhaps having to do with Case.

The examples just cited ((43–44, 46)) thus provide *prima facie* support for a *v*P-internal aspectual projection in Vietnamese, such as that diagrammed in (42). Given this, one question that now arises is whether this aspectual head is the same position occupied by the post-verbal modals exemplified in (40) above.

This turns out not to be the case. As discussed in Phan ([2013](#)), post-verbal modals[9] are fully compatible with post-verbal *xong*, *ra*, *hết* etc. Upon reflection, this is perhaps unsurprising since the two elements serve different semantic functions: as Phan points out, unlike completive particles, which are restricted to lexically atelic predicates, post-verbal modals are more correctly described as *resultative* particles. The examples in (47) below show that where both elements are projected, they appear in a fixed order (completive precedes resultative):

(47) a. Cuối-cùng nó   cũng lau   (*được) xong (được) cái bàn.
       final   PRN also   wipe   RES   ASP   RES   CL table
       'He finally finished wiping down the table.'
     b. Họ   đã   tìm   (*được) ra   (được)   cách chữa bệnh AIDS
       3p   PRN   seek   RES   out   RES   way   treat disease AIDS
       'They have found the cure for AIDS.'

While this 'resultative-last' constraint is unremarkable from a cross-linguistic perspective (see for example, Nicol [2002](#)), it is nonetheless striking just how transparently the span of events ∼ situations—from anticipation (*sẽ*) to inception (*đã*) to duration (*đang*) to completion (*xong*) to result (*được*)—is iconically reflected in the cartography of Vietnamese clauses; *cf.* Rizzi ([2002](#)), Cinque and Rizzi ([2008](#)), and Ramchand ([2008](#)); see also Haiman ([1980](#), [1985](#)).

Before concluding this examination of the functional syntax of Vietnamese, it is necessary (for the sake of completeness) to consider the realization of the higher *v* node diagrammed in (42), which, at least since the work of Hale and Keyser ([1993](#)) has generally been taken to license the 'external' argument or 'underlying subject' argument in regular finite clauses. The Vietnamese examples considered thus far have all involved active, non-ergative, and *inherently* causative predicates: in all of these cases, I will assume the same V-*v* raising analysis that is normally assumed for English.[10] But what about contexts where cause is not inherent and is

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[9] It should be acknowledged that post-verbal resultative CAN is an areal phenomenon—see, for example, Enfield ([2001](#), [2004](#)), and Cheng and Sybesma ([2004](#)); also Simpson ([1998](#)) and Simpson and Wu (2000), for clause-final CAN in Thai.

[10] An obvious difference between the two languages is that this internal verb-raising 'skips' the Asp node—and any other *v*P-internal functional categories—in Vietnamese, apparently in violation of the Head Movement Constraint (HMC, Travis [1984](#)). This could be viewed as a significant problem, unless—as seems reasonable—the HMC is taken only to apply to movement steps that are morphologically driven. As an aside, it is plausible to think that the distributional and interpretive differences between Cantonese post-verbal *dak* (Cheng and Sybesma [2004](#)) and Vietnamese post-verbal *được* can be derived according to whether V incorporates with the modal head on its way to *v* (*yes* in Cantonese—V-R-*v*, *no* in Vietnamese V-*v*); see Duffield and Phan ([2011](#)).
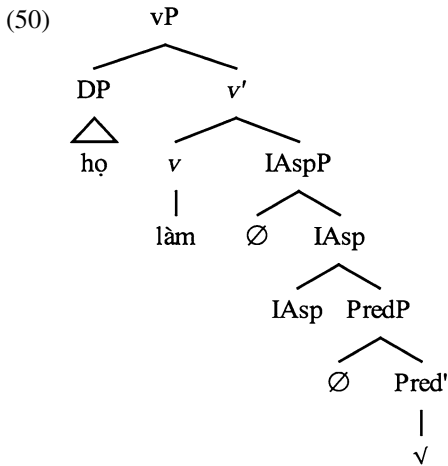
added in the course of the syntactic derivation? In the absence of derivational morphology, how does Vietnamese do causativization?

Vietnamese has two analytic causative constructions: an unrestricted bi-clausal construction involving the light verbs *làm* and *cho* (literally, 'make give') and a mono-clausal construction involving just the first of these bare causative predicates (that is, *làm* alone). The examples in (48) and (49),[11] which feature the reciprocal anaphor *nhau* as DP_2 subject, offer direct evidence of this bi-clausal versus monoclausal contrast: *cf.* Kwon (2004). Example (48b) shows that *làm cho* patterns with *muốn* ('want') in selecting a clausal complement: here, the DP_1 subject antecedent *họ* is unable to bind *nhau* while the lower verb *khóc* ('cry') can be modified by a modal *phải*. Conversely, in (49b) the lower subject under *làm* may be bound by *họ*; on the other hand, the lower predicate must now be bare. ((49c) shows that the re-introduction of *cho* blocks A-binding.)

(48) a. Họ   muốn [là   [John/*nhau sẽ   sống   hạnh phúc]]
         they want COMP   John/e.o. FUT   live   happy
         'They want John/each other to live happily.'
     b. Họ   làm   [(cho) [John/*nhau   phải   khóc]].
         they make give   John/e.o.   must   cry
         'They made John/Each other have to cry.'

(49) a. ?Họ. nhìn.thấy   nhau   làm việc.
          they see   e.o.   do   work
          'They saw each other working.'
     b. Họ   làm   nhau   (*phải) khóc.
         they make e.o.   must   cry
         'They made each other cry.'
     c. *Họ làm   [cho [nhau khóc]]
          they make give e.o.   cry
          'They made each other cry.'

Postponing any further analysis of the bi-clausal construction, consider now the possibility that simple *làm* is a pure lexicalization of (causative) *v* in (42), with DP_1 in its specifier, as in (50).

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[11] The data in (48) and (49) are originally due to Tue Trinh (personal communication).

(50)

```
              vP
            /    \
          DP      v'
          /\     /  \
         ho   v      IAspP
              |      /    \
             làm   Ø      IAsp
                          /   \
                      IAsp    PredP
                              /   \
                            Ø     Pred'
                                   |
                                   √
```

This analysis immediately yields the prediction that transitive and strongly unergative predicates cannot be embedded under simple *làm* since the projection needed to license their (DP$_2$) subjects is already filled by DP$_1$ (underlyingly). As the examples in (51), from Duffield (2011), show, this prediction is fully borne out: in direct contrast to parallel cases where *cho* is inserted, all of these examples are markedly unacceptable:

(51) a. *Tôi làm   [đứa con gái *giúp*   anh ấy].
          I   make CL   CL girl help   PRN DEM
          'I make the girl help him.'
      b. *Tôi làm   [đứa con gái *nhảy*].
          I   make CL   CL girl dance
          'I make the girl dance.'
      c. *Tôi làm   [đứa con gái *hát*].
          I   make CL   CL girl sing
          'I make the girl sing.'
      d. *Tôi làm   [đứa con gái *ngủ*].
          I   make CL   CL girl *sleep*
          'I make the girl sleep.'

At the other end of the thematic spectrum, where the sole argument of the lower predicate is a pure (change of state) Theme, simple *làm* causatives are fully grammatical: in such cases, as shown in (52) and (53), an alternation is observed

between a (preferred) post-verbal position for DP$_2$ and a marginal—though still acceptable—pre-verbal position:[12]

(52) a. Tôi làm *gẫy* cái que.
     I make break CL stick
     'I broke the stick.'
   b. Tôi làm *rách* tờ giấy.
     I make torn CL paper
     'I tore the sheet of paper.'

(53) a. ?Tôi làm cái que *gẫy*.
     I make CL stick break
     'I broke the stick.'
   b. ?Tôi làm tờ giấy *rách*.
   I make CL paper torn
     'I tore the sheet of paper.'

In principle, there are a number of different ways of deriving this alternation: it might be that the object shifts within the lower VP, as in (54.i) below; alternatively, the object might be base-generated in {Spec, VP} while the verb optionally raises to Asp (54.ii); or, given the possibility of a resultative phrase below Asp, transitive predicates may generally raise this far (54.iii) (with optional raising of DP$_2$ to{Spec, Result} or {Spec, Asp} (54.iii). Other analytic combinations cannot be excluded.

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[12] In this respect, Vietnamese diverges from its neighbors: Chinese shows no unergative-unaccusative split in causatives: Thai, Lao, Khmer, and Burmese disallow inversion quite generally.

(54)
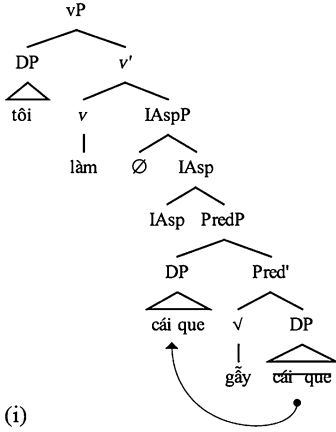
(i)
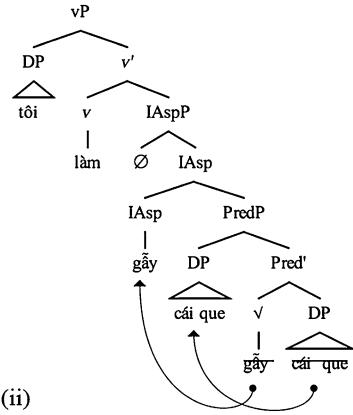
(ii)
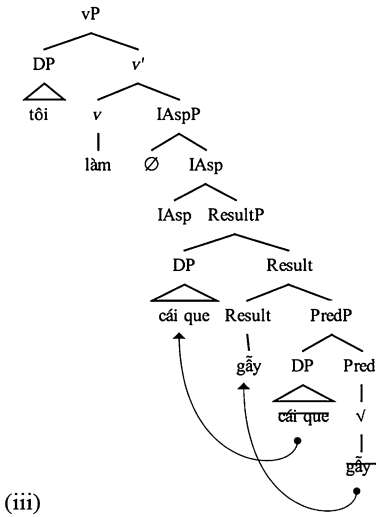
(iii)

However this alternation affecting Themes is ultimately analyzed, all of the analytic options presented above offer a position for a DP$_2$ argument 'halfway' between an Agent (the argument of a CAUSE head) and a Theme (the argument of a root predicate/root+RESULT in (54.iii)): if CAUSE/v can license its own argument, then there is no conceptual reason that ASP should not be able to do the same. In fact, this is precisely what is argued in Travis (2000, 2010), on the basis of the Malagasy data in (55) and (56) below, involving the transitivizing prefix -ha- (Phillips 2001).

(55) a. mijery 'to look at' ∼ ma**ha**jery 'to notice'
      b   mandinika 'to examine' ∼ ma**ha**dinika 'to remark'

Travis and Phillips observe that this Malagasy prefix participates in two kinds of derivational alternation: when attached inside an already transitive atelic stem such as *mi-jery* ('look at') (55a), its effect is to alter the meaning to that of a bounded event (where the subject is construed as an Experiencer instead of an Agent). By contrast, when *-ha-* is added to an intransitive predicate such as *tsara* ('beautiful'), the result is a transitive construction whose subject is necessarily non-agentive—an 'inadvertent cause' (Duffield 2011, 2014a); hence, *voninkano* ('flowers' (56b)), but not *Rabe* (man's name (56c)), can make the house beautiful.

(56) a. Tsara   ny   trano.   [from Travis (2000)]
       beautiful   the house
       'The house is beautiful.'
    b. Maha-tsara   ny   trano ny   voninkano.
       PRES.a.ha.beautiful the house the   flowers
       'The flowers make the house beautiful.'
       (literally, '… beautified the house')
    c. *Maha-tsara   ny   trano Rabe.
       PRES.a.ha.beautiful the house Rabe
       'Rabe makes the house beautiful.'

If the same functional projection that licenses inadvertent causes in Malagasy is active in Vietnamese, then it could be expected that the arguments of unaccusative (and other weakly agentive) predicates would occur in this position: in simple *làm* causatives, unaccusative DP_2 subjects should be licensed but only pre-verbally—in contrast to the Theme DPs in (52). Once more, this prediction is directly borne out, as evidenced by the contrast between examples in (57) and (58) below, which work in just the opposite direction from those in (52) and (53) above:

(57) a. ?? Tôi làm   *ngã*   thằng.bé.
         I   make fall   boy
         'I made the boy fall.'
    b. ?? Tôi làm   *biến-mất* thằng.bé.
         I   make disappear boy
         'I made the boy disappear.'

(58) a. Tôi làm   thằng.bé *ngã*.
       I   make boy   fall
       'I made the boy fall.'
    b. Tôi làm   thằng.bé *biến-mất*.
       I   make boy   disappear
       'I made the boy disappear.'

Notice further that it *is* possible to embed an unergative predicate such as *nhảy* ('dance') under a *làm* causative just as long as its DP$_2$ subject is construed as non-agentive/non-volitional: thus, though one cannot make someone dance or sing ((*51b, c)), it is quite possible to make someone cry or laugh (non-volitionally) ((59a, b)) or even to make a puppet or doll dance ((59c)). Once again, as required by the phrasal architecture in (60) below, the non-volitional argument may only appear pre-verbally (assuming a bar on argument lowering).

(59) a. Tôi   làm   đứa   con   trai   khóc.
         I   make   CL   CL   male   cry
         'I made the boy cry.'
     b. Tôi   làm   đứa   con   trai   cười.
         I   make   CL   CL   male   laugh
         'I made the boy laugh.'
     c. ?Tôi   làm   con   búp-bé nhảy/hát.
         I   make   CL   puppet dance/sing
   'I make the puppet dance/sing.'

(60)

```
                        vP
                      /    \
                   DP        v'
                   /\       /   \
                 tôi      v      IAspP
                          |     /     \
                        làm   DP        IAsp
                             /\        /     \
                    đứa con trai    IAsp    ResultP
                                    |         |
                                  khóc     Result
                                            /\
                                       Result  PredP
                                                 |
                                               Pred'
                                                 |
                                                 √
                                                 |
                                               khóc
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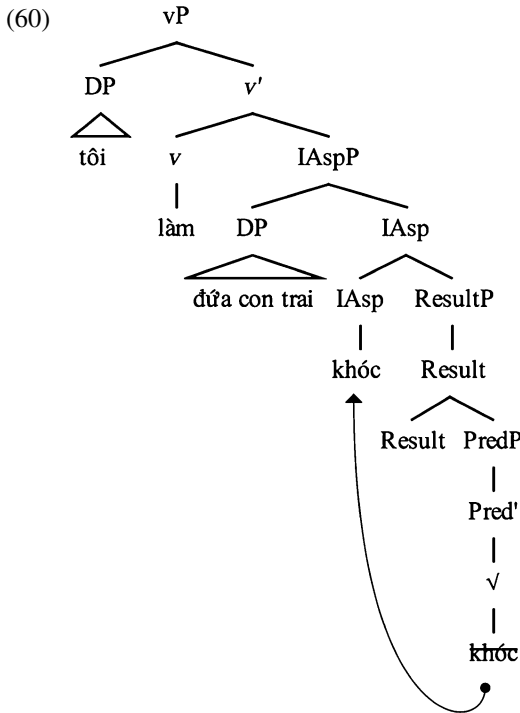
Finally it may be observed that the structure in (60) permits an explanation of the fact that *làm* causatives are also acceptable where both DP$_1$ and DP$_2$ are construed non-agentively: the grammaticality of examples such as those in (61)—which

proved an embarrassment for previous analyses, in which only {Spec, IAsp} was
available (Duffield 2011)—can now be handled if {Spec, Res} is also allowed to
license arguments, as in (62):[13]

(61) a. Con   gió   làm   thằng.bé ngã.
          CL   wind   make   boy   fall
          'The wind blew the boy over.'
      b. Cái   chuyện đó   làm   thằng.bé cười.
          CL   story   DEM   make   boy   laugh
          'The story made the boy laugh.'

(62)
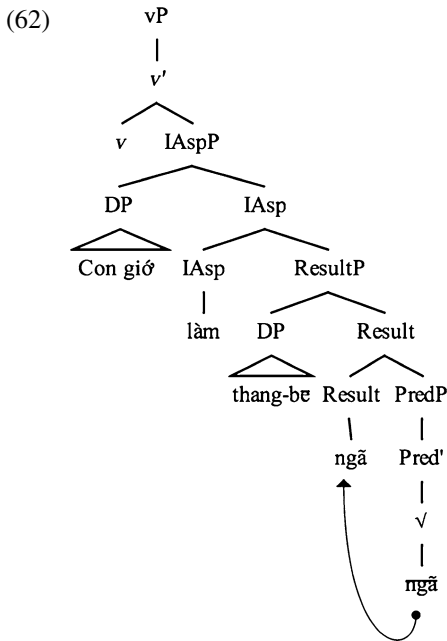
4 Conclusion

The principal goal of this paper has been to provide an observationally adequate
description of Vietnamese phrase structure. By systematically plotting the
distributions and varying interpretation of functional categories in Vietnamese, all
of which are expressed as free morphemes, it has been possible to construct a

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[13] It will not escape close attention that *làm* lexicalizes *v* in the trees above whereas in (62), below, it
lexicalizes Asp. This is not as *ad hoc* as it may at first appear since Vietnamese causatives typically have a
much more inadvertent character than English analytic causatives. This inadvertence is also holds true of
Thai causatives—see Vichit-Vadakan (1976)—and may be a more widespread areal phenomenon.

detailed cartography of the 'IP-domain' above the thematic predicate phrase, as well as to chart the functional structure to the right of the lexical verb.

Two properties of the description are especially noteworthy. First, from a cross-linguistic perspective, it is remarkable how directly the order of free grammatical morphemes in Vietnamese aligns with functional projections established on the basis of diverse languages with richer inflection. The more theoretically interesting point concerns the prolific multifunctionality of grammatical morphemes in Vietnamese: with very few exceptions, each of the functional morphemes discussed above[14] can lexicalize more than one—usually several distinct—syntactic position(s); when they do, their interpretation is significantly altered. It should be clear that multifunctionality is a phenomenon, not a theory: though I have argued elsewhere that this phenomenon is best handled in terms of 'Anti-Projection' (Duffield 2014b), that is evidently not the only conceivable approach. Whatever tack is taken, however, it should be one that meets the empirical challenges set by the data presented here.

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[14] There are many others besides these, including especially the $wh \sim NPI \sim$ universal quantifier elements *ai, gì*, etc., as well as the copula $\sim$ complementizer $\sim$ topic marker *là*. See Duffield (2013b, 2014b) for further discussion.

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