'Down, Down, Down': how many layers can there be to Inner Aspect?[1]

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SUMMARY

The Head Movement Constraint (Travis 1984) and the Inner Aspect Hypothesis (Travis 1991, 2010) are two of the most interesting and valuable theoretical constructs in generative syntax. Adopting these ideas has allowed generative researchers to explain, and to predict, systematic alternations in word-order across a diverse range of languages, including Malagasy, Modern Irish, and—my own personal favourite since 1994—Vietnamese. That is the good news, and it is of course very good. The bad news, if the conclusions of this article are well-founded, is that these two constructs are mutually incompatible— inside vP, at any rate. There is a choice to be made.

RÉSUMÉ

La Contrainte sur le mouvement des têtes (HMC, Travis 1984) et l'Hypothèse de l'aspect intérieur (IASP Travis 1991, Travis 2010)) comptent parmi les constructions théoriques les plus intéressantes et les plus valables de la syntaxe générative. L'adoption de ces idées a permis aux chercheurs d'expliquer, et de prédire, des alternances systématiques dans l'ordre des mots dans un large éventail de langues, y compris le malgache, l'irlandais moderne, et –ce qui est mon favori personnel depuis 1994 –le vietnamien. C'est une très bonne nouvelle, en effet. Le seul problème, si les conclusions de cet article sont bien fondées, c'est que ces deux constructions sont mutuellement incompatibles—du moins à l'intérieur de vP. Ainsi, il faut choisir entre les deux.

1   HANGIN' ON TO THE BACK OF A TRAIN…

When I was an undergraduate in the early 1980s, grammatical life was simpler, and syntacticians knew their place. Above VP was their only domain, except in sentences like this one:[2] their only

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2 At d-structure, at any rate.

objects of inquiry clausal subjects, auxiliaries, and negation, plus the occasional complementizer, whose status was poorly understood—and remains so, if truth were out. By the time I left graduate school in 1991, life had become more complicated, configurationally speaking. What with the fractionation of INFL and the possibility of VP-internal subjects, there were just so many giddying combinations of {Spec, Head} relations to play with that it was hard to fit a regular syntactic tree into a one-page abstract, and still leave room for text. And so the two-page abstract was born. Yet in spite of many people's best efforts to misconstrue the original VP-ISH proposals[3]—Koopman & Sportiche (1988, [1991]), for example, did *not* claim that thematic subjects were truly internal—the VP-boundary remained basically intact throughout the 1990s, in mainstream work. Whatever consensus may have developed about the origins of thematic subjects (Hale & Keyser 1993, Kratzer 1996), and dissociations between nominative case licensing and {Spec, TP}—see, for example, McCloskey (1994, 2001)—conversely, however syntactic the descriptions of predicate-argument structure were becoming (Pustejovsky 1991, Tenny & Pustejovsky 2000), the 'blood-brain barrier' between functional projections and their associated predicate phrases had not yet been fatally breached. For the most part, syntacticians were content to tinker with head-movement and long-distance dependencies, to focus on clausal subjects, and to leave predicate-argument relations to people who considered meaning to be more interesting, and telling, than formal architecture.[4] It used to be said that 'good fences make good neighbors', and while the proverb appears more sinister in 2018 than it did in happier days, the voluntary apartheid between syntax and lexical semantics worked pretty well for both sides. Even if good friends don't need fences at all.

Developments in the early 1990s ended this harmonious co-existence. First came the Minimalist austerity measures, initiated by Chomsky in 1993 and carried further two years later (Chomsky 1995), which aimed at eliminating functional heads that only hosted uninterpretable features, including Agr^s, Agr^O, Agr^{IO} and Agr^x (where x was any DP that needed a home away from home).[5] This shock treatment might have halted the proliferation of unnecessary nodes in its tracks—so offering a return to one-page abstracts—had it not coincided with the discovery of that these same nodes were actually necessary after all, to account for the varying position of displaced internal arguments across a wide range of languages; see, for example, Johnson (1991), Koizumi (1993), Vikner (2007) [review article], amongst many others. Significantly, this kind of fronting could not be simply be analyzed as a kind of scrambling, since these intermediate nodes were dedicated to licensing particular kinds of arguments; leaving aside the fact that many languages that requires objects to be moved generally prohibit scrambling of other constituent phrases. This tension forced a rift of a different kind. On one side there were the fundamentalists, whose concern with theoretical elegance and purity—'beyond explanatory adequacy'—clearly outweighed any interest they might have had in accounting for generalizations about surface word-order, and who pursued a policy of disregarding or trivialising syntactic diversity; by 2005, this had culminated in the virtual eradication of parametric variation from the theory of grammar (Chomsky 2005, Boeckx 2006). On the other side were the rest of us, many of whom had only been attracted to the theory in the first place by its promise of an insightful description of that self-same crosslinguistic variation (Chomsky 1981, 1982). For these dissenters, the simple alternative to eliminating Agr projections was to retrofit the nodes with interpretable features.

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[3] Including my own (Duffield 1995).

[4] Which side has the blood and which the brains in this metaphor rather depends on who you are talking to.

[5] *Cf.* KP, as in Bittner & Hale (1996), also Travis & Lamontagne (1992).

This rebranding exercise took place in two phases (!), moving first down, then up the cartographic tree, from T. Whereas the focus after 1995 was on, well, Focus...and...Topic...and Force...and Topic (again)—none of which posed any threat to the VP-barrier[6]—the earlier drive to renew phrase-structure came at a point, below Tense but above Mood (voice), where the most plausible interpretable features seemed to be aspectual in some way or other. It is here that things became awkward, and lexical semanticists—fearful for their jobs—quite nervous. This was not because of 'grammatical aspect' (GA), which may have been, and may still be, none of their concern, but because of lexical aspect (LA), which is, as the name suggests, very much [of their concern]. Rather, the difficulty lies in the fact that LA morphology in some languages looks very much like GA morphology in others: in some varieties, both are lexically conditioned—their morphophonology and/or interpretation being sensitive to properties of the root predicate— whereas in others, including Vietnamese, both kinds of aspect are realized as free morphemes, apparently subject to general syntactic conditions, such as the Head Movement Constraint:[7] it certainly looks like 'syntax all the way down'. In short, aspectual categories occupy a borderland, and unless the border itself is clearly guarded, such areas invite incursions, smuggling, and—in more extreme cases—total annexation.
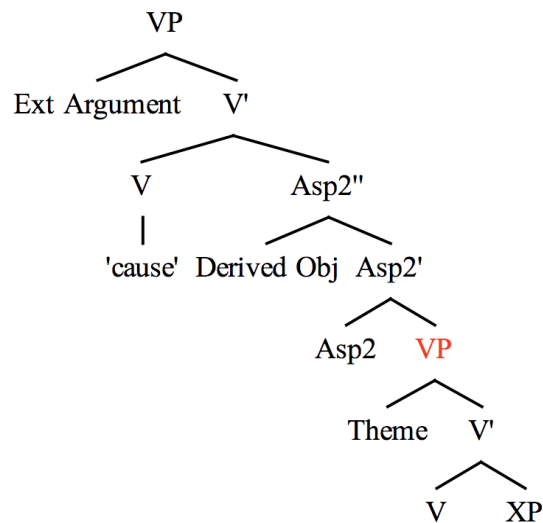

Figure 1. Inner Aspect (Travis 1991)

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[6] See Rizzi (1997, 2002); Cinque (2002), Haegeman (2012).
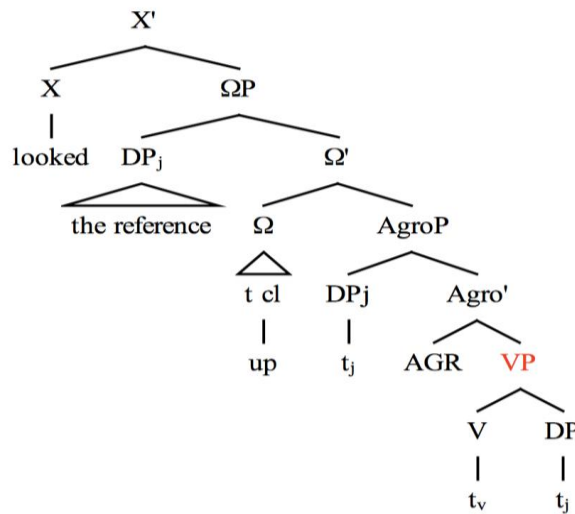[7] Except that they're not, apparently, as we shall see in Part II.

Figure 2. AgroP (Koizumi 1993)

Of course, Lisa Travis is not a person to take what doesn't belong to her. (Even if she were, I'm hardly the sort of person to say so in a Festschrift article). On the contrary, two of her best known contributions to syntactic research—the Head Movement Constraint and Inner Aspect—have been great gifts, both to the theory and to grammatical description. More to the point, Lisa's Inner Aspect (Travis 1991), like Masatoshi Koizumi's low Agr^{o} projection (Koizumi 1993), *approaches*, but does not *encroach on*, VP-territory.[8] Compare Figures 1 and 2 above: in both cases, the core predicate domain remains intact. Hence, the problem is not with Lisa's original spells, but with their fate in less scrupulous hands. Such as mine.

Having once mixed at least three metaphors to good effect, the French rationalist in me would stop. Now. I have always wanted to publish a linguistics paper without a single example, and without getting to the point, and this may well have been that unique *occasion*. Unfortunately, that Frenchman is an imposter—as should be obvious from the *style désinvolte*—and the British empiricist who occupies the same space in my head (but who moved in a long time before his Continental cousin)[9] refuses to let this happen. With him in mind, let's look at some data.

2   'AND THE DEVIL CRIED OUT HIS NAME...

Consider first the Malagasy examples in (1a-c), taken from Travis (2002),[10] involving the transitivizing prefix *-ha-*:

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[8] Unlike Ramchand (2008)'s *First-We-Take-Manhattan* approach a few years later, which left lexical semanticists with nothing to call their own.

[9] Presumably, he can't have been there from the beginning, since nothing was; that's the way of it if you're an empiricist. He's an imposter too, so he is, just an older one.

[10] Before that, Phillips (2001).

(1) a.   Tsara   ny trano.
            Beautiful the house
            'The house is beautiful.'
     b.   Mahatsara   ny trano   ny voninkazo.
            PRES.a.ha.beautiful   the house   the flowers
            'The flowers make the house beautiful.'
     c.   Mahatsara   ny trano   Rabe.
            PRES.a.ha.beautiful   the house   Rabe
            'Rabe makes the house beautiful.'

As will be familiar to many readers, the effect of adding this prefix [11] to an intransitive predicate stem is to license an external argument—*ny voninkazo*, *Rabe,* in (1b) and (1c), respectively. One crucial feature[12] of the morpheme is that it does not license regular controlling Agents in this context, but only *non-volitional* ones: hence, (1c) is ungrammatical on the reading where Rabe actually does something to make the house beautiful, but acceptable if the sentence is interpreted to mean that Rabe beautified the house simply by his presence. (Travis draws a terminological distinction between AGENTS and CAUSES; in my work on Vietnamese, I refer to the latter as INADVERTENT CAUSES (IC). The same difference, I'd suppose).

(Ma)ha is only one of a large set of complex causative and/or aspectual prefixes in Malagasy and Tagalog that were used by Lisa and her colleagues, from 1991-2010, to motivate and to extend the phrase-structure in Fig. 1. above. To me, however, it is by far the most interesting morpheme—since when I started work on Vietnamese, shortly after arriving at McGill in 1993—its analysis was a godsend, offering a ready-made solution to alternations inside the Vietnamese *v*P. In fact, I argued at the time (when I knew less, and the picture seemed clearer) that the analysis actually works better for Vietnamese; or rather—adopting a theoretical stance—*Vietnamese works better for the analysis,* the Mad Hatter might have quipped.

The problem with Austronesian languages, as with most other agglutinative or fusional languages, is that they give and take away in almost equal measure: first, they offer up an ordered array of derivational affixes attached to the predicate root that clearly implicate a series of functional heads—cause, asp, voice, *etc*; but then the fact that these are bound morphemes means that their surface position, post-conflation, provides only indirect clues to their structural origins; just as importantly, to where their associated arguments started out. The same problem also shows up in English (a language that doesn't even have the good grace to provide clear morphology), in respect of non-canonical subjects: thus, while the contrast in (2) might lead us to conjecture that clausal subjects interpreted as Agents occupy a different underlying position from those interpreted as Inadvertent Causes, the fact that both kinds of argument get moved to clause-initial position {Spec, TP} makes this hard to demonstrate; see Duffield & Phan (in prep.)

(2) a.   John was [*t* travelling   [$_{VP}$ across Central Asia on a 50cc scooter].
     b.   John was [travelling [*t*   [$_{VP}$ at 70mph]]] when he dozed off.
     c.   Lisa [t gave [me a good idea.]][13]
     d.   That analysis [gave *t* [me   a good idea]].

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[11] Malagasy *-ha-* always appears in conjunction with the present tense prefix *m(a)-*.

[12] I'll come to the other point presently.

[13] For original discussion of (2c-d), see Fujita (1996), also Pesetsky (1995), Harley (1995).

In Vietnamese on the other hand, all of these positions are more clearly exposed, since *like* Malagasy, Vietnamese has a healthy selection of functional morphemes to choose from but, *unlike* Malagasy, these free morphemes never get merged with any stem. With this in mind, consider now the partial paradigm in (3) below, which illustrates the restrictions on (mono-clausal) 'simple *làm'* constructions in Vietnamese:[14] in (3c)-(3g), the original argument DP_2 is underlined.

(3) a.   Cái que   gẫy.
          CLF stick broken
          'The stick is broken.'
     b.   *Tôi gẫy   <u>cái que</u>.
           I   break   CLF stick
          Cf. 'I broke the stick.'
     c.   Tôi làm   gẫy <u>cái que</u>.
           I   make   break CLF stick
          'I broke the stick.'
     d.   *Tôi làm   <u>đứa con gái</u> giúp anh.ấy.
      I   make   CLFCLF girl   help PRN.DEM
          'I make the girl help him.'
     e.   *Tôi làm <u>đứa con gái</u> nhảy/hát/ngủ.
           I make CLFCLF girl dance/sing/sleep
          'I make the girl dance/sing/sleep.'
     f.   Tôi làm   <u>thang-be</u> ngã.
           I make   boy   fall
          'I made the boy fall (I tripped the boy.)'
     g.   Họ làm <u>nhau</u>   khóc.
          They make each.other   cry
          'They made each other cry.'

Taking *làm* to be an exponent of causative *v*—a fairly natural[15] assumption, given that it translates as 'do, make' whenever it appears as a main verb, and that it licenses the higher of the two arguments in the transitive examples in (3c-g) above—all of the thematic restrictions on causativization follow directly from an analysis exactly in terms of Travis' Fig. 1 above. To wit, the tree explains: (i) the *post*-verbal positioning of DP_2 whenever this argument is interpreted as a (true) Theme; (ii) the impossibility of transitive or strongly unergative complements of *làm* *(2d/e)—since *v* cannot simultaneously license *tôi* ('I') and *đứa con gái* ('girl') see Figure 3; finally, (iii) the *pre*-verbal positioning of DP_2 arguments of unaccusative verbs (3f), as well as of 'weakly unergative' verbs such as *khóc* ('cry'), where DP_2*nhau* is interpreted as non-volitional. Moreover, even strongly unergative predicates such as *nhảy* (dance), *hát* ('sing') may be transitivized as long as DP_2 is deprived of agency, as shown by the examples in (4):

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[14] See Duffield (2011) for evidence that these really are monoclausal sentences, in contrast to their biclausal *làm cho* causatives, which display none of these restrictions. See also Kwon (2004), *cf.*Nguyễn (2018).
[15] Even if the assumption may be an incorrect one (see below).
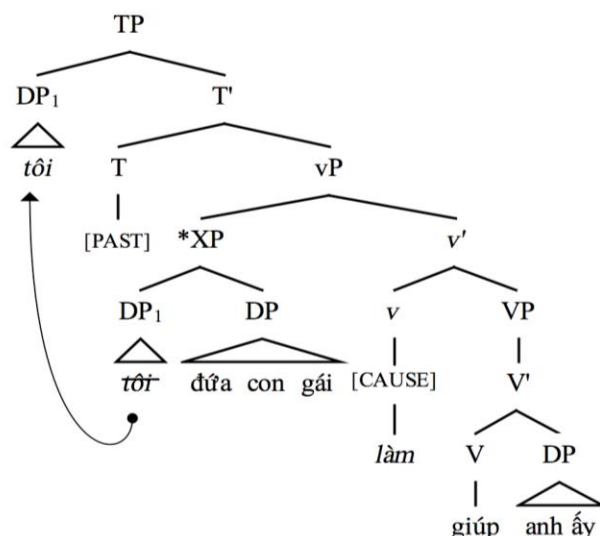
Figure 3. A ban on transitive & unergative causatives

(4)   ?Tôi làm <u>con   búp-bê</u> nhảy/hát.
       I make CLF. puppet dance/sing
       'I make the puppet dance/sing.'

At first glance, this all looks perfect (especially since Fig. 1 appeared three years before I had ever understood a word of Vietnamese). Of course, what seems to be perfect at a distance almost always reveals itself to have been airbrushed, or photoshopped in some other way. In this case, there are at least three complicating factors,[16] the last of which strongly implies that Inner Aspect—in Vietnamese, at any rate—must be more *inner* than Travis' theory predicts. As inner as it gets, in fact. And once that VP-barrier is breached, it's all downhill from there.

3 'HE SCREAMIN' DOWN ROUND THE BEND…

The first two objections are closely related, and are amenable to the same general remedy. The first, empirical, problem, pointed out to me by Gillian Ramchand following an early presentation of the data in 2007, runs as follows: if Travis' analysis blocks two Agent arguments in the same clause—see Fig. 3 below—then it should also block the co-occurrence of two Inadvertent Cause arguments; *the wind blew the boy over,* or *the story made the child laugh*, for example. Unfortunately, this prediction is false, as shown by the acceptability of the examples in (4) below. To maintain the theoretical intuition behind Fig. 1, given these facts, requires us to postulate at least one other functional projection between *v*P and the VP boundary. Moreover, the acceptability of the examples in (5) may also be taken to suggest that *làm* does not necessarily

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[16] There are more than three, but with only a few pages left to play with, this will have to do for now. For further discussion, see Duffield & Phan (in prep.). Also, 'three factors' has some familiar ring about it.

lexicalise *v* (initially, or perhaps at all)*:* it could as well occupy the head that licenses the higher of the two IC arguments.[17]

(5) a.   Con gió   làm   thang-be   ngã.
           CLF wind   make boy   fall
           'The wind blew the boy over.'
     b.   Cái chuyện đó   làm   thang-be   cười.
           CLF story DEM   make boy   laugh
           'The story made the boy laugh.'

A related, theoretical, problem with Figures 1 and 3 is that internal arguments are base-generated/merged as *sisters* to V, rather than as specifiers of the core VP. Whilst this assumption may have been fairly unexceptionable at the time, the balance of evidence against it had already begun to shift with Larson (1988)'s analysis of double objects, such that a decade later, by the time of Baker (1997), it was common to assume that 'Specs are [not just] for subjects' (Stowell 1983, 1989), but for all other grammatical relations as well. If this is true, however—i.e., if Theme arguments are generated at the left edge of VP—then 'post-verbal objects' in Vietnamese causatives (2c) imply internal verb-raising: (V-*f*), where *f* is some functional head, intermediate between V and causative *v*. Addressing these two objections simultaneously leads to the revised phrase-markers in Figs. 4-7 below, for (3c), (3f) and (5b) [two analyses], respectively: in each case, the highest thematic argument is raised to {Spec, TP}, and the root verb has moved up from its base position V (to *f2)*.

Although these revisions complicate matters somewhat, and create new problems of overgeneration,[18] they are still (just about) in the spirit of Travis' original proposal. The '*projection-formerly-known-as-Inner Aspect*' may be recursive, but it has not yet found its proverbial hand-basket. Thus far, at least.
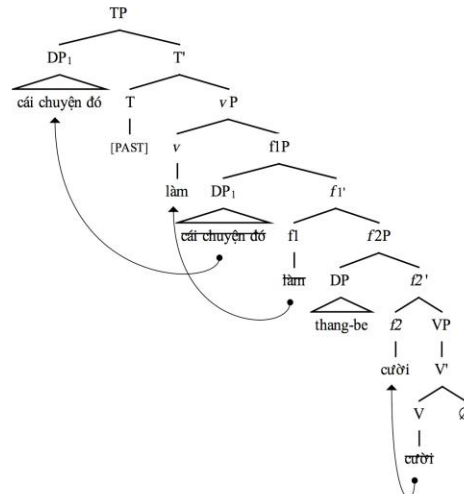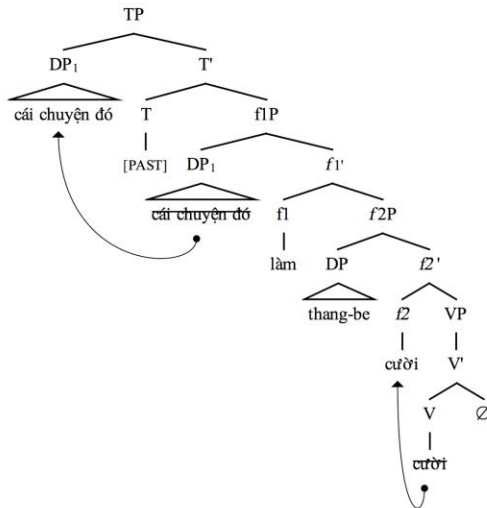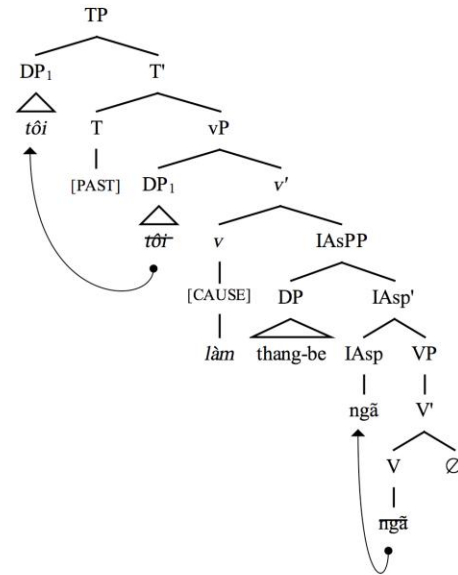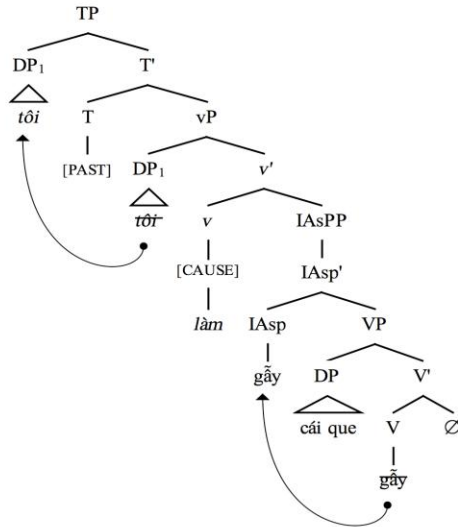
4   '...THE BOY WENT SOLID DOWN'

At the outset, I mentioned that Malagasy *-ha-* had two distinguishing properties to justify its label. Its thematic properties having been discussed, I'll turn now to its putative aspectual role, namely, as a marker of telicity. Travis' initial justification for treating *-ha-* as a [+telic] morpheme is based on the fact that with respect to a different set of transitivity alternations the addition of *-ha-* appears to convert atelic activity predicates into achievements, as is illustrated by the interpretive contrasts in (6) and (7) below. (The minimal contrast between (7a) and (7b) shows that the addition of *-ha-* entails completion of the event; (7b') yields a contradiction).

(6) a.   mijery 'to look at' ~ ma*ha*jery 'to notice'   [Travis (2002), Phillips (2001)]
     b.   mandinika 'to examine' ~ ma*ha*dinika 'to remark'

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[17] Incidentally, this alternative would explain why even the more agentive *làm* causatives, such as (3c), have an inadvertent (ethic dative) feel about them, something that is also observed in Thai; see Vichit-Vadakan (1976).
[18] Absent some stipulations—about Case for example—there seems to be nothing to block sequences such as the Vietnamese equivalent of *'I made the story the boy laugh' = *cf*. I made the story amuse the boy (by rewriting it).

TP
DP₁ — T'
 tôi
 T — vP
 [PAST] DP₁ — v'
  tôi
  v — IAsPP
  [CAUSE] IAsp'
  làm IAsp — VP
  gẫy DP — V'
  cái que V ∅
  gẫy

TP
DP₁ — T'
 tôi
 T — vP
 [PAST] DP₁ — v'
  tôi
  v — IAsPP
  [CAUSE] DP — IAsp'
  làm thang-be IAsp — VP
  ngã V'
  V ∅
  ngã

TP
DP₁ — T'
 cái chuyện đó
 T — f1P
 [PAST] DP₁ — f1'
  cái chuyện đó
  f1 — f2P
  làm DP — f2'
  thang-be f2 VP
  cười V'
  V ∅
  cười

TP
DP₁ — T'
 cái chuyện đó
 T — vP
 [PAST] v — f1P
  làm DP₁ — f1'
  cái chuyện đó
  f1 — f2P
  làm DP — f2'
  thang-be f2 VP
  cười V'
  V ∅
  cười

7) a. namory   ny ankizy ny mpampianatra…
       PST.AN.meet   the children the teachers
       'The teachers gathered the children.'…
    a'. …nefa tsy   nanana   fotoana izy.
         …but   NEG   PST.have time they
         '… but they didn't have time.'

     b.   na*ha*vory   ny ankizy ny mpampianatra
           PST.A.HA.meet the children the teachers
           'The teachers gathered the children...'
     b.'   * ...nefa tsy nanana fotoana izy.

As discussed in some detail in Phan (2013a, 2013b),[19] Vietnamese has a respectable set of telic predicates, including {*ra, xong*, [post-verbal] *được*, and *hết*} which serve a near-identical aspectual function to those in Malagasy. The examples in (8) demonstrate that these element induce the same kinds of interpretive effect as *-ha-* does in Malagasy (converting activities to achievements). In addition, the alternation in (9) reveals a definiteness effect of the kind associated with Germanic object-shift in telic contexts—*sách* ('books') must be interpreted as definite where it appears to the left of the telic particle.

(8) a.   Chú bò tìm   (ra)   bạn.
           CLF cow   search (PTC) friend
           'The cow looked for (and found) his friend.'
     b.   Cô ấy kiếm (được)   việc.
           PRN DEM seek (can)   work
           'She was looking for/(and got) a job.'
     c.   Anh ấy ăn lót lòng (xong).
           PRN DEM eat breakfast finish
           'He ate his breakfast/(up).'
     d.   Tôi đã soạn đồ hanh-lý (ra xong).
           PRN ANT unpack suitcase (go-out finish)
           'I started unpacking (and finished).'

9.   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.'

So, Vietnamese is just like Malagasy, except for the obvious—and obviously awkward—fact that the root predicate (as well as the definite object) appears to the left of the aspectual particle. The Vietnamese data thus offer a bitter-sweet confirmation of both parts of Travis' Inner Aspect thesis: first, that Agents and (Inadvertent) Causes are licensed in distinct syntactic positions, with IC subjects being projected just below *v*/V1; second, telicity is syntactically projected independently of lexical roots. The problem is that these two projections are separate from one another in Vietnamese, and Inner Aspect is much more inner than the Austronesian data suggests.
    It turns out that this problem can be solved, but there's a price to be paid. Either way. One possibility is that telic particles are generated very low in the structure, within VP; in derivational terms, they are merged with the object DP *before* the root verb is introduced. This analysis does not merely compromise the VP-barrier, it pretty much eliminates the functional~lexical

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[19] See also Duffield & Phan (in prep.),

distinction entirely, as Ramchand does in her work (Ramchand 2008). Indeed, it goes further than Ramchand in overturning a core assumption of generative syntax, namely, the supervenience of functional categories; see Duffield & Phan (in prep.). But it does allow us to maintain the Inner Aspect hypothesis.

An alternative, first outlined in Phan (2013a), is to keep Inner Aspect outside of VP—in a position immediately below the IC projections in clauses where these are projected—and to raise the root verb around it, as in Fig. 8. But this, of course, means abandoning the evidence from Inadvertent Cause constructions, whose arguments are licensed separately from IAspP. It also means that the HMC cannot apply inside *v*P:
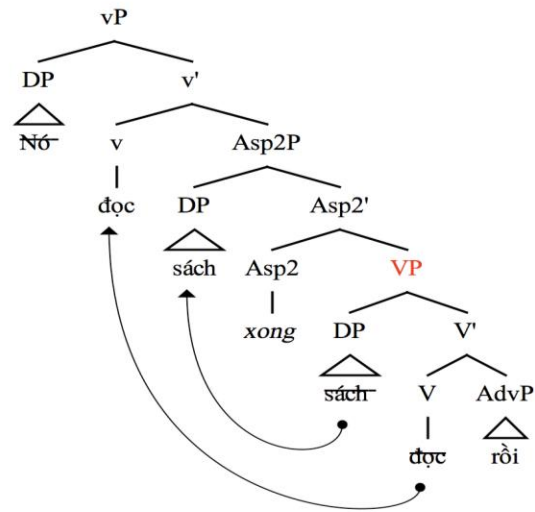

Figure 8. Outer-Inner Aspect

IAspP or HMC? It should be clear, under the circumstances, why I am loathe to choose between these alternatives. But I think I know who best to ask.

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