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FOCUS, PRESUPPOSITION AND LIGHT PREDICATE RAISING IN EAST AND SOUTHEAST ASIA

In a group of genetically unrelated and otherwise fully regular head-initial SVO languages a particular modal verb is consistently found to occur in predicate-final position, posing a strong empirical challenge to the Universal Base Hypothesis argued for in Cinque (1999). Detailed investigation indicates that the surface forms are however derived from fully regular underlying structures via a process of focus-driven light predicate raising. Cross-linguistic variation in the paradigm then shows that the basic modal structure is currently in different stages of development in the languages investigated. In Cantonese in particular it is argued that the trigger for VP-raising has now become fully fossilized and no longer reflects its original motivation. The paper concludes that certain movement operations may in general occur without any clearly understandable synchronic trigger. Formally, Chomsky's 'strong categorial/ EPP features' are suggested to correspond precisely to this type of movement whose original motivation has weakened and become hidden during the course of language change.

1. INTRODUCTION

This paper sets out to provide an account of a rather odd distributional patterning found with certain modal verbs in a number of SVO languages of southeast Asia, the occurrence of a particular alethic modal in predicate-final position. The actual paradigm and how it is arguably the result of borrowing and transfer amongst the various languages is initially described below. Its relevance for Cinque's defence of the Universal Base Hypothesis is then indicated in section 3, and this is followed by a close examination of the modal's patterning in contemporary Thai. An analysis is ultimately arrived at which makes critical reference to aspects of the informational structure of the modal construction, and the close connection with focus is examined in section 4. Section 5 introduces diachronic data in support of the light predicate raising hypothesis from Middle and Early Chinese. Section 6 then charts the development of the construction in Vietnamese and Cantonese away from its hypothesized original form and discusses how the syntax of present-day Cantonese forms may really be clearly understood only with reference to the wider cross-linguistic and diachronic forms. It is argued that the construction in Cantonese is essentially still powered by a trigger whose semantic force has now been fully lost and which remains as a pure fossil of an earlier stage in the language's history.

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2. Predicate-Final Modals – The Paradigm

Standard (Central) Thai is a fully regular head-initial SVO language of the Tai language family, spoken in Bangkok and the greater part of central Thailand. In Standard Thai it is found that all modal verbs regularly occur in standard positions preceding the VP with the curious exception of a modal element meaning 'to be able/can', which occurs *after* the verb. The regular pre-VP position of modals is illustrated in (1) below, and the post-verbal pattern in (2):[1]

(1) Daeng aat-ca/doong/khong maa — Thai
Daeng may/must/is-sure-to come
'Daeng may/must/is sure to come.'

(2) khaw khian dai — Thai
he write can
'He can write.'

This odd positional property of *dai* 'can' in Thai is also characteristic of Cambodian, Vietnamese, and Hmong, all SVO Mon-Khmer languages. In Cambodian, modals occur before the VP with the exception of the potential modal (pronounced *baan*) meaning 'to-be-able/can', which occurs *after* the verb, as illustrated in (3) and (4):

(3) k'nyom dtrou jaak-jeun — Cambodian
I must leave
'I must leave.'

(4) goa'at root-ut baan — Cambodian
he run can
'He can run.'

In Vietnamese, modal verbs are similarly all positioned in front of the VP with the exception of a single modal meaning 'can/be able to' (pronounced [düək]), which occurs in a post-verbal position, as in (5) and (6)

(5) toi phai di mua cam — Vietnamese
I must go buy orange
'I must go and buy oranges.'

(6) anh-ta den duoc — Vietnamese
he come can
'He can come.'

The same distribution is also repeated in SVO Cantonese. Here the relevant post-verbal modal meaning 'be able to' is pronounced [tɐk]:

(7) keoi jiu/ho-ji tung ngo heoi — Cantonese
he must/may with me go
'He must/may go with me.'

(8) keoi lai dak — Cantonese
he come can
'He can come.'

This repeated occurrence of such a highly marked paradigm in so many neighbouring languages would strongly seem to indicate that some kind of borrowing and transfer from a single 'irregular' source has taken place. It is also of note that all of the relevant potential modals have parallel homophones, lexical verbs meaning 'to get' or 'to have', illustrated in examples (9–12), strengthening the suspicion that there is a connection here:

(9) ngo dak saam-man ze — Cantonese
I have 3-dollars only
'I only have $3 left.'

(10) phom dai botbaat thii dii — Thai
I got role Rel good
'I got a good role.'

(11) k'nyom jong baan bee-a moo-ay dorp — Cambodian
I want get beer one bottle
'I want to get/have a bottle of beer.'

(12) Toi duoc tho cua gia-dinh toi — Vietnamese
I got letter family me
'I got a letter from my family.'

Assuming then that some pattern of borrowing is responsible for the spread of this structure and that it did not just spontaneously evolve in this way in so many geographically close languages, I would like to suggest that the most likely source for the hypothetical modal is actually Middle Chinese. Although forms like Cantonese (8) do not occur in Modern Mandarin, they are commonly found up until the 13thC in Middle Chinese, as in (13):

(13) yi ren ji de (Lunheng) Middle Chinese
one person play can
'One person can play (it).'

If one does take Middle Chinese to be the original source of the modal throughout the various languages mentioned, this allows one to suggest a highly plausible route of transfer out of Middle chinese and into the other languages which simultaneously allows for an explanation of the difference in pronunciation. First of all, it is commonly argued that the Tai people originally inhabited parts of southeastern China and later emigrated to modern Thailand, Laos, and parts of Vietnam around the 11th/12thC as a result of increased Mongol pressure from the north (Rong (1973); Wood (1926); Wyatt (1984)). Consequently the Tais were located in the Chinese speaking area precisely at the time when the modal structure existed in Middle Chinese and migrated away just before its decline, a rather suggestive fact consistent with the possibility that the modal was first borrowed into Thai and then exported before the structure was lost in Chinese.[2] It is also believed that the Chinese modal was pronounced as [dei] at this earlier time (see Sun (1996)), a pronunciation maintained in the modern Mandarin deontic modal written with the same character, so the sound change to [dai] would have been relatively minor.[3] Turning to Cambodian, there would *not* seem to be any phonetic similarity between Cambodian *baan* and Middle Chinese *dei*. However, the Cambodian pronunciation can be explained by the fact that Thai developed a second post-verbal modal with the same properties and meaning as *dai* but pronounced [pen], so this is arguably the form which got borrowed into neighbouring Cambodian during the many years of Thai-Cambodian cultural exchange (see Huffman (1973) on the borrowing of Thai *pen* as/into Cambodian *baan*). Finally the Vietnamese form [düək], with its syllable-final voiceless stop, is clearly closer to Cantonese [tɐk] and may be taken to reflect borrowing from Chinese at an earlier period when it is known that syllable-final stops were indeed still common in the dominant form of Chinese. The long contact between China and Vietnam also provides an obvious route of transfer from one language into the other.

There is consequently not unreasonable motivation for assuming that a process of borrowing and transfer has indeed resulted in the creation of a regional typological feature of some significance – the occurrence of a *post*-verbal modal in a set of otherwise fully regular head-initial V-O languages, and it will henceforth be assumed that the modals in all these languages do indeed constitute or at least derive from a single basic paradigm.[4]

3. Cinque (1999) and the Universal Base Hypothesis

The patterning of the modal documented above is not only at odds with the regular positioning of other modals in the languages considered, it also presents a serious empirical challenge to the Universal Base Hypothesis defended at length in Cinque (1999), i.e., the idea that clausal architecture is in a large way predetermined to follow some *universal* blue-print.[5] In Cinque (1999) it is suggested that the ordering of tense, modality, and aspectual projections is universally fixed across languages and that these elements occur hierarchically arranged in the functional super-structure of the clause c-commanding the lexical descriptive core, i.e., the VP, very approximately as in (14):[6]

(14) epistemic modals > tense > deontic modals > alethic modals > aspectuals > VP

The modal paradigm noted here for Thai, Vietnamese, and the other languages in the group strongly seems to go against such predictions: whereas modals are expected to occur dominating the VP and hence to its left in all these V-O languages, the potential modal is consistently found to occur in a *post*-verbal position and so might even appear to be *within* the VP. In what follows, the structure of these modal sentences is closely examined in order to determine what underlying factors might give rise to their apparent 'deviance' and whether they do indeed constitute genuine counter-examples to the universalist hypothesis.

3.1. *Syntactic Properties of the Potential Modal: An Examination of Thai*

One possible way of avoiding the conclusion that the patterning of this modal series appears to be in violation of the Universal Base Hypothesis might be to suggest that the modal element in Cantonese, Thai, and the other languages is actually a suffix attached to the verb and that as inflectional suffixes these elements simply raise up with the verb at LF to be checked and licensed by some higher functional head which would indeed dominate the VP. This is quite possibly the case in a language like Japanese, where one available expression of modal potentiality is indeed by means of a verbal suffix, as in (15):

(15) hanas – e – ru
speak – Potential – Tense

'can speak'

However, a brief inspection of other data indicates that this is not a possible

analysis in general, as many elements may actually intervene between the verb and the modal, as in the Thai example (16), where both a prepositional phrase and an adverb occur separating the lexical verb from the modal:

(16) khun pai kap khaw phrung-nii dai
you go with him tomorrow can
'You can go with him tomorrow.'

It therefore appears that *dai* is in fact an independent modal verb and cannot be analyzed as a verbal suffix. The post-verbal position it occurs in might then seem to constitute a genuine problem for the universalist hypothesis, which is otherwise very well supported. Considering the patterning further however, and staying with Thai as a representative of the paradigm, there are a number of vital clues which indicate that the surface position of the modal is not in fact within the VP but somehow higher. The first of these relates to question-forms. Yes-no questions in Thai (and all of the languages under consideration) are answered in the affirmative by repetition of the highest verbal element present in the string). This is the verb form which can be taken to be associated with the finite specification of the clause.[7] Illustration of this is given in (17):

(17) phom doong pai mai
I must go Q
'Must I go?'

A: doong
must
'Yes.'

In *dai*-sentences we find that an answer-form consists in the repetition of the modal *dai* rather than the linearly first lexical verb, indicating that it is *dai* which is in fact the hierarchically higher verbal element associated with the finiteness of the clause rather than the lexical verb, despite the surface ordering. This is shown in (18) below:

(18) khaw phuut phasaa thai dai mai
he speak language thai can Q
'Can he speak Thai?'

A1: dai
can
'Yes'

A2: *phuut
speak

The position of sentential negation in *dai*-sentences also offers a vital clue as to the structure of the clause; sentential negation occurs immediately before *dai* and following the lexical verb and its object/adverbs, as in example (19):

(19) khaw phuut phasaa thai mai dai
he speak language thai Neg can
'He cannot speak Thai.'

If one makes the fairly standard assumption that sentential negation occurs external to and higher than the VP, then it is not possible to suggest that there is a VP constituent in (19) containing both the lexical verb and *dai* as this would then simultaneously also contain the sentential negaton. Consequently *dai* would again *not* seem to be inside the VP. It is also quite important to note that normally verbs may *not* in fact precede sentential negation, i.e., there is no overt V-to-I in Thai or any of these languages, as seen in the ungrammaticality of (20):

(20) * khaw pay mai
he go Neg

The patterning of constituent negation in Thai provides further information concerning the internal structure of *dai*-sentences. In (21) the constituent negation has scope *only* over the underlined string and critically *not* over the modal *dai*:

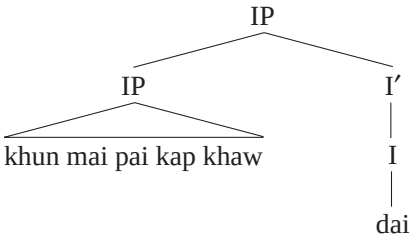
(21) khun mai pai kap khaw dai
you Neg go with him can
'You can (choose) not (to) go with him.'

In order to account for this, one must assume that negation in (21) does not c-command *dai* and hence that the underlined string in (21) is a constituent which excludes *dai*.[8]

Putting this information together, that the modal *dai* is not simply lower down in the VP headed by the lexical verb and actually is the element interpreted as finite and so relating to the tense specification of the clause, one might suggest that these structures in fact contain sentential subjects, i.e., that all of the material preceding *dai* in (21) is predicated of *dai* as its subject. In such a sentential subject structure *dai* would be the "finite" higher verbal element relating to Tense, and constituent negation would

indeed not c-command *dai*, accounting for the interpretation of (21). Such a structure clearly avoids the rather odd conclusion that *dai* is a modal verb located below the lexical verb and its object inside the VP. (22) is a hypothetical representation of (21) as a sentential subject structure, the whole of the string preceding the modal being predicated of *dai* as its subject, similar to other cases of sentential subjects common in the language:

(22)



However, despite a certain initial plausibility, there are reasons to believe that a sentential subject analysis is not in fact appropriate here. The first of these has to do with selectional restrictions. Root modals (as opposed to epistemic modals) clearly impose selectional restrictions on their subjects and may be taken to assign some kind of theta role to them. (23) below is odd in both Thai and English as the modal *dai*/'can/be able' requires a +animate subject to assign its theta role to:

(23) ?? fon tok dai
rain fall can
?? 'The rain is able to/can fall.'

Considering (22), if the pronominal *khun* 'you' is analyzed as being inside a sentential subject, it should not be possible for *dai* to assign its theta role to this position, as there is in general no possible theta/predicational relation betwen a predicate and an element which occurs inside the subject of that predicate. So, for example, 'be good' may not be predicated of 'John' in the sentential subject (24), and (24) does therefore not entail (25):

(24) [That John is coming tomorrow] is good.

(25) John is good.

Consequently, in order to allow a theta relation between *khun* 'you' and *dai* in (21) (and elsewhere), some other type of structure must be assumed for *dai*-sentences.

Further evidence arguing against a sentential subject analysis relates to

extraction asymmetrics which can be noted when comparing *dai*-sentences with other clear sentential subject structures. Relativization and topicalization from the latter is fully unacceptable, as shown in (26) and (27). In (26) relativization of the object of the verb in the sentential subject is completely unacceptable, and parallel topicalization from within a sentential subject in (27) is also ungrammatical, just as in English:

(26) * phuu-chaai O_i thii [loon khop t_i] mai dii
man Rel she associate with Neg good
ko khuu . . .
then be-namely . . .
'The man who that she associates with is bad is . . . (e.g., John)'

(27) * sing-law-nan-na_i [khaw phuut t_i] may dii
things-grou-that-Top he speak not good
*'Those things$_i$, [that she says t_i] is bad.'

If *dai*-sentences were sentential subject structures, one would expect that extraction of an element preceding *dai* should result in a violation equivalent to that in (26/27). However, parallel relativization or topicalzation with *dai*-sentences is perfectly acceptable, indicating that they are *not* structurally equivalent to sentential subject structures, this being illustrated with relativization in (28) and topicalization in (29):[9]

(28) phuu-chaai O_i thii [loon khop t_i] mai dai ko khuu . . .
man Rel she see Neg can is
'The man who she may not date/see is . . . (John)'

(29) sing-law-nan-na_i, [chan phuut t_i] mai dai, (khoothoot
thing-type-that-Top I speak Neg can (sorry
khrap)
Pol)
'Those things I just can't reveal/say, (I'm sorry).'

Relative scope facts in sentences containing multiple occurrences of modal elements also argue against a sentential subject analysis. In (30) the modal *doong* 'must' obligatory takes scope over *dai*, and in (31) *naa-ca* 'should' must also take scope over *dai*:

(30) khun doong phoo phuut phasaa thai dai nit-nooi
you must suffice speak language thai can a little
'You must be able to speak a little Thai.'

(31) khaw naa-ca pen pheuan kan dai
they should be friend together can
'They should be able to be friends together.'

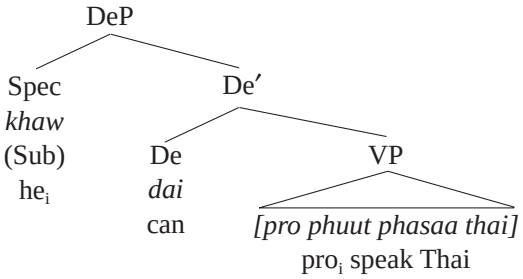
Were all the material preceding *dai* in (30) or (31) to be analyzed as a sentential subject, then *doong* and *naa-ca* would not be a position in which they would c-command *dai* and hence would not be expected to be able to take scope over *dai*. Once again then this strongly suggests that *dai*-sentences have a structure quite different from that of sentential subjects.

3.2. *Dai-sentences as Light Predicate Raising Structures*

The structure that I would actually like to suggest is appropriate for *dai*-sentences is one in which *dai* heads a modal projection which selects a predicate VP as its complement and projects a Specifier filled here by the lexical subject NP. I label the modal phrase as 'DeP' as it is intended not just to be Thai-specific but to occur in all the languages under consideration here and represent a regular low alethic modal projection. The choice of "*de*" as the label is meant to reflect the modal's suggested origins in Chinese. (33) is a representation of how the various parts of (32) are suggested to be base-generated, with a null pronominal pro assumed present in SpecVP, controlled by the DP in SpecDeP:[10]

(32) khaw phuut phasaa thai dai
he speak language thai can
'He can speak Thai.'

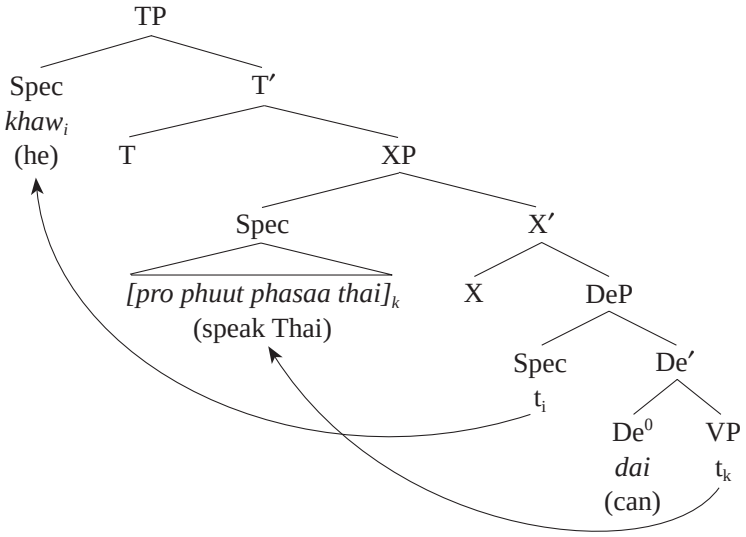
(33)



A surface form such as (32) will then be derived from (33) via two applications of movement. The subject DP in SpecDeP will raise to SpecTP to satisfy the EPP (Extended Projection Principle), and the predicate VP will raise to a position between T^0 and DeP, as illustrated in (34). The landing-site of this latter movement is not made explicit; assuming the existence of a variety of higher modal projections as in Cinque, the VP

may be taken to raise to the specifier of one of these projections (or alternatively adjoin to such a specifier position), and I simply label this projection as XP.

(34)



Such an analysis would seem to be able to capture all of the key properties of *dai*-sentences noted in section 3.1, specifically:

(a) *dai* theta marks and constrains the choice of the lexical subject; here the subject is base-generated in SpecDeP, where it receives its theta role from *dai*.

(b) *dai* is suggested to be base-generated in a head position higher than that of the lexical verb in the VP; consequently, it is *dai* which is the verbal element associated with Tense and which appears in answer-forms (and possibly *dai* or its features raise to T^0 at LF).

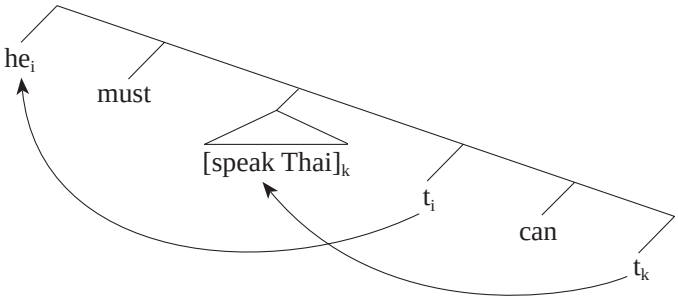
(c) There is no sentential subject structure; object relativization-extraction may take place out of the VP in its complement position, hence not causing any CED violation.[11]

(d) The structure suggested allows a simple account of the negation facts; sentential negation is base-generated between the XP and DeP, hence higher than the VP. The fact that the lexical verb and its object appear higher than sentential negation is simply due to the movement of the VP. That it is a VP maximal projection rather than a head which moves also accounts for why there would seem to be no Head Movement Constraint violation when the lexical verb is found to precede Negation (it has also already been noted that lexical verbs may otherwise *not* normally precede Negation). 'Constituent negation' will be base-gen-

erated between De^0 and the VP and raise together with the latter. Consequently it will not c-command *dai*, accounting for the lack of scope over *dai*.

(e) Sentences such as (30) and (31) with a second modal verb obligatorily taking scope over *dai* may be assigned a structure in which *doong*/'must' heads a higher modal phrase occurring between TP and the XP, so that the resulting c-command relations between the two modals in such a structure straightforwardly accounts for their relative scopes, schematically as in (35) (using English words for the Thai in (30)):

(35)



3.3. *NPI-Licensing and Ellipsis Phenomena*

The analysis above in section 3.2 also allows for an explanation of two other sets of facts. The first of these relates to the licensing of Negative Polarity Items (NPIs). NPIs in Thai are essentially like (certain) NPIs in Chinese formed from *wh*-question-word bases (see, e.g., Cheng (1997)) and may be interpreted as *wh*-question words, NPIs, or sometimes as existentials, this being illustrated in (36):

(36) a. khaw book arai?
he say what
'What did he say?'

b. khaw mai book arai
he Neg say anything
'He didn't say anything.'

c. khaw book arai, chai mai?
he say something correct Q
'He said something, right?'

Now, in the clear sentential subject structure (37) the element *arai* can only be interpreted as a *wh*-phrase meaning 'what' and not as an NPI 'anything', so (37) must mean 'What thing X is it good that he doesn't say X?' and cannot mean: 'That he says nothing is good." However, parallel elements in what appear to be similar positions in *dai*-sentences such as (38) are indeed perfectly acceptable with an NPI interpretation. If one assumes that NPIs must be c-commanded by their licensor at least at some point in the syntactic derivation, then assuming the VP predicate to be base-generated lower down in the structure will mean that it will indeed be c-commanded by Negation prior to the VP-movement, this supporting the movement analysis in (34):[12]

(37) [khaw phuut arai] mai dii
he say what Neg good

not: 'That he says nothing is good.'
only: 'What thing X is it good that he doesn't say X?'

(38) khaw [phuut arai]$_i$ mai dai t_i
he say what Neg can

'He can't say anything.'

Secondly, the patterning of ellipsis can be given a natural and easy account in this kind of analysis: examples such as (39) can be treated as straight-forward cases of VP-ellipsis:

(39) Lek [phuut phasaa ciin] dai, dae Dam-na, khaw mai
Lek speak Chinese can but Dam-Top she Neg
dai
can

'Lek can speak Chinese, but Dam can't'

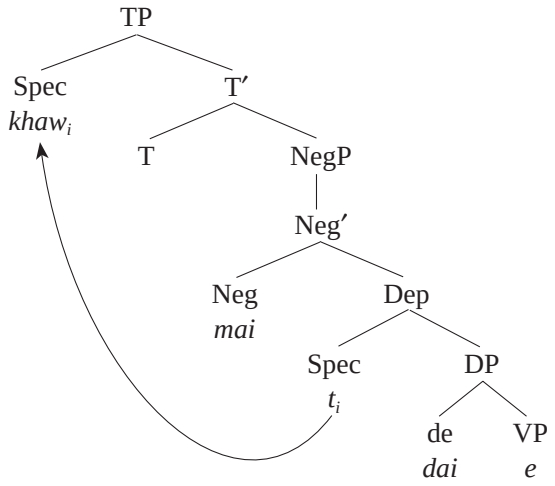
In (39) the string *phuut phasaa ciin* 'speak Chinese' has been elided from the lower conjunct. This kind of ellipsis is rather difficult to explain for an account which would assume either that the modal is a lower constituent in the VP or that what precedes the modal is a sentential subject. If the modal were base-generated lower down in the VP, one would have to posit ellipsis of a non-consitutent – the upper portion of the VP only, excluding the modal. A sentential subject analysis on the other hand would need to assume ellipsis of only *part* of the sentential subject, leaving behind *khaw* 'he' in (39) (noting that *khaw* cannot be in topic position as this is occupied by *Dam*). It would also suggest that ellipsis in Thai should be

able to delete all of the material in an IP (the hypothetical sentential subject here) except for the subject; however, this is generally not possible in Thai, as (40) shows:

(40) * Mary pai Parii laew John
Mary go Paris and John
intended: 'Mary went to Paris *and* John.'[13]

In the present suggested analysis however, the bracketed sequence in (39) essentially just corresponds to a VP base-generated to the right of the modal, as in (41), and so (39) would really be just a very common instance of VP-ellipsis:

(41)



Finally and importantly, in a structure such as (33/34) *dai* no longer is an exceptional modal occurring merged in a highly irregular VP-internal position, and one is indeed able to successfully maintain Cinque's Universal Base Hypothesis.[14] What is in need of explanation is now not the base-generated position of *dai* but rather the movement of its complement VP, and this I will turn to presently.[15]

3.4. *Aspectual Yuu*

Before considering what might motivate movement of the VP with *dai*, I would first like to note that if one does assume such a productive process of predicate raising to be possible in Thai, this may allow for a similar account of a second rather odd property found in the language, the occurrence of VP-final *aspectual* verbs such as *yuu* encoding progressive aspect.

This aspectual verb is derived from the homophonous lexical verb *yuu* meaning 'to be at', shown in example (42):

(42) khaw yuu thii-nii
he be here
'He is here.'

Aspectual *yuu* is found to occur *after* the verb as in (43), and in this sense it may seem like the post-verbal progressive aspect-marker *-zhe* in Chinese in (44):

(43) khaw wing yuu
he run Asp
'He is running.'

(44) men kai-zhe
door open-Asp
'The door is open.'

In fact the Thai aspectual element *yuu* is very probably related to the Old/Middle Chinese element *yu*. *Yu* both appears as a progressive aspectual marker with stative verbs in earlier forms of Chinese, as in (45), and still occurs in modern Chinese with the locative meanng 'be at' in formal written forms such as in (46):

(45) mang-yu — ji-yu
be busy-Asp — worry-Asp
'be busy' — 'be worrying'

(46) ta sheng-yu Beijing
he be born at Beijing
'He was born in Beijing.'

However, whereas Chinese *-zhe* and *-yu* seem to be verbal suffixes, Thai *yuu* is not, and *yuu* may be separated from the verb by the verb's object and adverbs as shown in (47):

(47) khaw fang phleeng phloen yuu
he listen song happily Asp
'He is happily/dreamily listening to songs.'

Essentially then one encounters the same type of problem as with the potential modal *dai*: aspectual projections are expected to be found dominating the VP and hence to its left in head-initial languages, yet here there

is an aspect-marker in an odd VP-final type position. As (47) shows it is not possible to analyze the aspect-marker as a suffix which could then be carried up by the verb to be checked or licensed against a higher Aspect head, so again there appears to be a problem for the Universal Base Hypothesis.

It is in fact quite common cross-linguistically for lexical verbs with the meaning 'to be at' to become used as progressive markers, this occurring in Burmese, Welsh, Cambodian, and a variety of other languages. Modern Mandarin also has such an element: a free-standing non-affixal progressive aspect verb homophonous with a verb meaning 'to be at', pronounced *zai*, but importantly this aspectual verb comes before the VP, precisely as would be expected for a regular head-initial language:

(48) ta zai gen wo shuo-hua
he Asp with me talk
'He is talking with me.'

The problem presented by the VP-final positioning of the aspectual verb in Thai may be explained away if it is assumed that the structure underlying (49) is actually (50) with *yuu* selecting for a rightward VP-complement, this VP then undergoing raising parallel to the VP-complement of *dai*, as in (51):

(49) khaw phuut phasaa thai yuu
he speak language thai Asp
'He is speaking Thai.'

(50) khaw yuu [$_{VP}$ phuut phasaa thai] (underlying structure)
he Asp speak language thai

(51) khaw [$_{VP}$ phuut phasaa thai]$_i$ yuu t_i

In this way one is also able to explain the relative ordering of *yuu* and *dai* when they co-occur in sentences such as (52):

(52) khrai ja mii ka-jai moong-duu thiang yuu dai
who would have heart look-look candle Asp can
Lit: 'Who has the heart to be able to be looking at the candle?'
'Who would dare look at the candle?'

Here we find the linear order: *progressive aspect – root modal*, i.e., *yuu* before *dai*. Cross-linguistic evidence would however lead one to expect the opposite order. If Modality is situated higher in the functional structure than Aspect as suggested by Cinque and others on the basis of

considerable empirical evidence, one would expect this to result in the linear order modal verb preceding aspectual verb in a head-initial language. The odd relative ordering in (52) can be simply explained by a double application of predicate raising: first the complement to the aspectual verb *yuu* will raise over the aspectual verb, perhaps to its Spec, so from the base structure in (53) giving rise to the intermediate representation (54), and then the complement of *dai* will raise further over *dai* resulting in the attested surface order (55):[16]

(53) . . . [$_{DeP}$ dai [$_{Asp}$ yuu [$_{VP}$ moong-duu thiang]]]
can be look candle

(54) . . . [$_{DeP}$ dai [$_{Asp}$ [$_{VP}$ moong-duu thiang]$_i$ [$_{Asp}$ yuu t_i]]
can look candle be

(55) . . . [$_{Asp}$ [$_{VP}$ moong-duu thiang]$_i$ [$_{Asp}$ yuu t_i]]]$_k$ [$_{DeP}$ dai t_k]
look candle be can

Such an analysis if correct also indicates that the constituent which undergoes raising in *dai* sentences may be larger than a VP and correspond to an AspP of some type, as was suggested in footnote 10.

4. A Motivation for Raising – Focus and presupposition

If there are indeed good syntactic reasons to argue for the raising structure proposed, the question clearly arises as to *why* this movement should take place, what might be its motivation? Many large scale pied piping operations are proposed in the literature, supported by a variety of evidence (or simply invoked in order to capture the observed word order), but it is not always at all clear what triggers the movement. This possibly does not mean that there is or *was* no understandable motivation, just that perhaps it is now no longer so easy to detect. Here however it would seem possible to offer some kind of explanation for the movement hypothesized, by relating this movement to the particular informational structure of *dai*-sentences.

A significant fact so far left unmentioned is that under certain circumstances it is actually possible for the object of the lexical verb to occur clause-finally *after dai*, as in (56) and (57), rather than immediately after the lexical verb as in all previous examples:

(56) . . . kwaa ca thaai dai sak-phaap-nung . . .
. . . before irrealis take can even picture one
'. . . before I could take even a single picutre, . . .'

(57) khaw phuut dai laai phasaa
he speak can many languages
'He can speak *many languages*.'

This may only happen however if the object is strongly *focused*. Furthermore if the object is so focused, it *must* occur in this position and is highly unnatural/unacceptable preceding *dai*.[17] In addition to this, one can also note that if no focused object follows *dai*, i.e., if *dai* is final in the clause, then *dai* itself automatically carries a focal stress as, e.g., in (58–60):

(58) khaw phuut phasaa thai mai dai
he speak language thai Neg can
'He *can't* speak Thai.'

(59) khun pai duu nang dai
you go see film can
'You *can* go to the movies.'

(60) thaan dai laew!
eat can now
'We can eat now!'

What can be concluded from this is that *dai*-sentences would always seem to be associated with some kind of focus. I would therefore now like to suggest that these focus-effects are indeed critically responsible for the 'exceptional' behavior observed in *dai*-sentences and that the motivation and function of the proposed VP-raising is principally to *de-focus* the predicate by moving it away from the final focus position, allowing for either *dai* itself or alternatively an object following *dai* to receive the focus intonation and interpretation.[18]

The force of *dai*-sentences is then to emphasize the possibility, ability, or permission of carrying out a certain action (with stress on *dai* itself) or to emhasize a particular element relating to this possible action (with stress on a final object as in (56) and (57)). The VP predicate in a sense then represents *pre-supposed* old information while the new/focused information is clearly the affirmation of the positive (or negative) possibility of the content of the predicate (or some element related to the predicate).[19, 20]

This presuppositional nature of the predicate in *dai*-sentences is well captured and best translated by adding a stress to the modal in English equivalents, e.g.:

(61) He *CAN'T* speak Thai. (negative sentence)

(62) *CAN* I invite him along? (question)

(63) You *MAY* indeed go to the movies.
(act of granting permission)

Once the modal is stressed (as it is in Thai), one can only interpret the predicate in sentences such as these as being presupposed, in the sense that its content is already under discussion in the conversation prior to the utterance of any of (61–63). Similar effects are found where the VP is actually raised in English, its content then also being pre-supposed/old, as in (64) and (65):

(64) [Speak Thai] I can't, I'm afraid to say.

(65) [Go to the movies] you certainly may not!

A parallel focus-presupposition distinction is also to be found rather clearly in another related structure in Chinese which is based on the *dai/de* modal element. In both Cantonese and Mandarin there are essentially two ways of embedding a manner adverbial in a clause. In one of these the adverb occurs in a fairly regular position above the VP, as in Cantonese (66):

(66) keoi hou faai gam zaa ce Cantonese
he very fast so drive car
'He drove very fast.'

The second strategy is based on and derived from the potential modal *dak* (the Cantonese equivalent to *dai*; Mandarin *de* patterns in essentially the same way); here the adverb follows *dak*, and the verb precedes it, as illustrated in (67):

(67) keoi zaa dak hou faai Cantonese
he drive DAK very fast
'He drove very fast.'

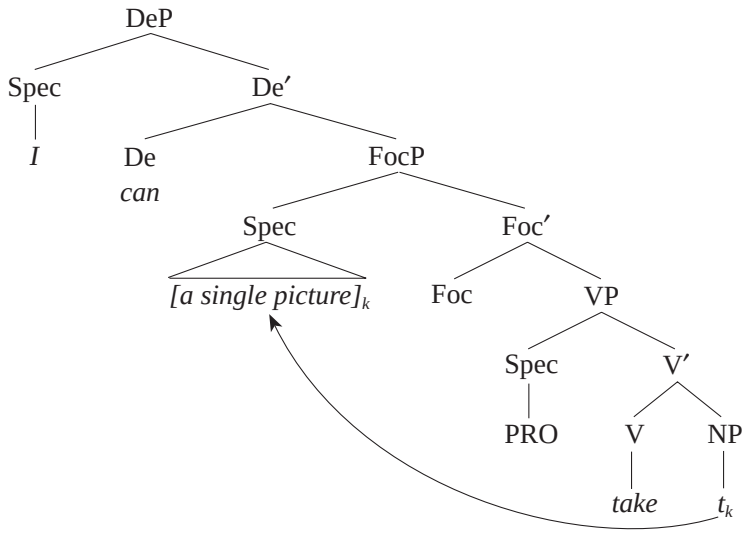
Parallel to the Thai cases considered just now, here it is evident that in this second strategy, where some element *follows* the *dai/de/dak* modal element, this element constitutes the focussed new information, and what precedes the modal is presupposed and old. A consequence of this is that an answer to a question of the type in (68) 'What did he do?' can only be the first form (66) and not (67) because a new value for the *entire* VP is requested in (68), but in the modal-based adverbial structure (67) the verb or the VP preceding the modal is necessarily presupposed and old, hence inappropriate as an answer-form:

(68) keoi zou matje aa? Cantonese
he do what Q
'What did he do?'

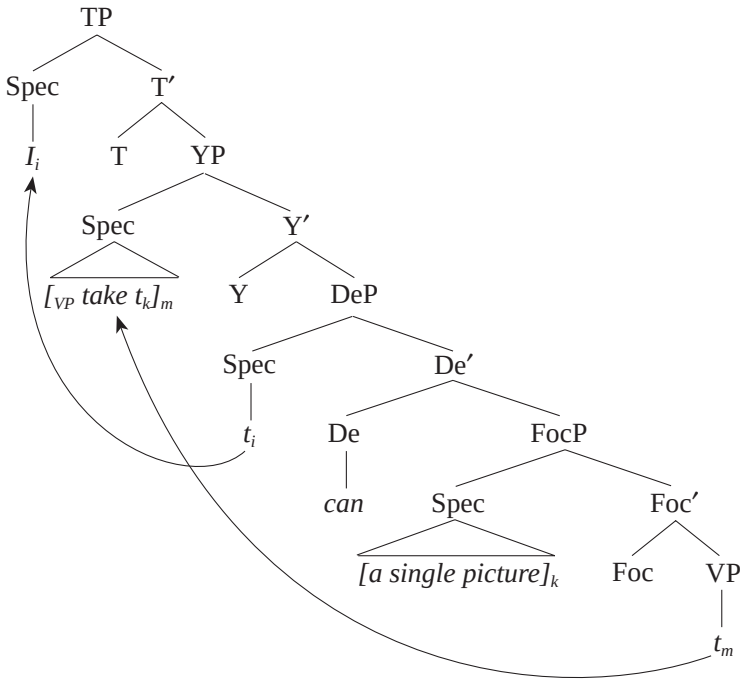
4.1. *A Focus Projection and Remnant Movement*

So, if raising of the VP then occurs as proposed in order to de-focus the predicate, it still needs to be explained how it is possible for a focused object to occur after *dai*. That is, if the entire VP raises past the modal, how is it that the object can remain in final position (as in (56) and (57))? Here I would like to suggest that what is ultimately exceptional about the modal *dai* is that it actually selects for a focus projection as its complement and that when a focused object follows *dai* it has in fact raised out of the VP to the Specifier of this FocusPhrase. This focus-movement is then followed by VP-raising to the position preceding *dai*, as indicated in the sequence (69) and (70) (again using English glosses for the relevant Thai words in (56)), deriving the sequence: '. . . (before) I take can a single picture . . .' from: '. . . (before) I can take a single picture . . .':[21, 22, 23]

(69)



(70)



Such a derivation is therefore suggested to be a case of Remnant Movement as discussed for German in den Besten and Webelhuth (1987, 1990) and others, used to explain how VPs in German may topicalize without all VP-internal material necessarily raising. For example, (71) is argued to be derived in a two-step process; first the object *es* 'it' raises out of the VP as in (72), and then the VP-Remnant is raised higher to the SpecCP position (73), essentially just as proposed for the Thai cases above:[24, 25]

(71) [$_{VP}$ Ein Aussenseiter gewonnen] hat es hier noch nie
an outsider won has it here still never
'An outsider has never won it before.'

(72) (hat) [es]$_i$ hier noch nie [$_{VP}$ Ein Aussenseiter t_i gewonnen]

(73) [$_{VP}$ Ein Aussenseiter t_i gewonnen]$_k$ hat [es]$_i$ hier noch nie t_k

5. Middle Chinese and Old Chinese

A fairly detailed investigation of contemporary Thai has led to an analysis of *dai*-sentences which might seem to offer a principled and coherent account of the otherwise puzzling post-verbal position of this modal, one which importantly also turns out to be quite in line with the Universal Base Hypothesis as developed in Cinque (1999). In introducing the paradigm earlier it was suggested that these structures in Thai in all likelihood have been borrowed from Middle Chinese. Consequently their syntactic properties might naturally be expected to be those of Middle Chinese *de*-constructions.[26] Now turning back to earlier forms of Chinese, there would indeed seem to be evidence of two basic types which both indicate that the syntax of Thai *dai*-constructions is indeed that of Middle Chinese *de*, adding strong support to the proposed analysis of focus-related VP-raising.

First of all, if one considers the patterning of the object of the lexical verb in Middle Chinese *de*-constructions, it would indeed appear to mirror the distribution found in Thai and therefore arguably be dictated by the same presupposition/focus distinctions. As occurs frequently in Thai *dai*-structures, one often finds that the object is deleted/a pro, as in example (74). Because a pro may normally only be used where its content is already assumed and identifiable in the discourse, the regular occurrence of an object pro here *may* be argued to reflect the fact that possibly the content of the whole VP including the object is presupposed in these structures.[27]

(74) yi ren ji de (Lunheng)[28]
one person play can

'One person can play (it).'

Where an object is overt but indefinite/unstressed it is found to occur 'raised' in the VP (i.e., sandwiched between the lexical verb and the modal *de*). Examples such as (75) strongly resemble those found in Thai:

(75) shi qie [yao shou] bu de (Hanshu)
cause wife wave hand Neg can

'It caused the wife not to be able to wave her hand.'

Finally one finds that strongly focused objects occur after *de*, exactly as in Thai:

(76) cheng de ge shenme-bian shi? (Zutangji 3/105/7)
succeed can Cl what matter

'What can one accomplish?'

A second set of data which support the proposals for Thai comes from *de*-structures found earlier still in Old Chinese. In the preceding sections it has been shown that a variety of arguments all converge on the same conclusion, namely that the surface strings found in *dai*-sentences are actually derived from structures in which the modal underlyingly selects a VP complement to its right, this VP subsequently undergoing raising for reasons relating to focus. Turning to *de*-constructions in Old Chinese, one significantly finds that at this period in its history *de* in fact preceded the VP, showing precisely what has been argued to be the base-generated form of *de* and *dai*-sentences in Middle Chinese and Thai and indicating that the VP/predicate clearly was a (rightward) complement to *de* in its origin:[29]

(77) Zikuai bu de [$_{VP}$ yu ren yan] (Mengzi 16/2B/8)
Zikuai Neg permit give other Yan
'Zikuai is not allowed to give others the state of Yan.'

(78) ni de [$_{VP}$ ru men ye] (Zutangji 1/153/3)
you can enter door Prt
'You can enter.'

Returning once again to Middle Chinese, Sun (1996) reveals that such *de*-initial (*de*-VP) structures actually remained present for some time alongside other post-verbal *de*-constructions, so there was consequently a period in Middle Chinese when both types of *de*-VP and VP-*de* structures simultaneously occurred. One can therefore suggest that the later *de*-final (VP-*de*) type found only in Middle Chinese developed from the earlier *de*-initial (*de*-VP) forms, quite plausibly as a stylistic variant triggered by the informational-discourse reasons already outlined: the rightward VP complement became raised whenever there was a need to de-focus it. This raising was clearly optional in early Middle Chinese (when it may be assumed that not all *de*-sentences necessarily had predicates whose content was presupposed) but later became obligatory, at least in Thai, as part of the meaning of such constructions.

Consequently then, diachronic data from Old and Middle Chinese strongly seem to bear out and support the analysis developed on the basis of Thai and can be suggested to indicate that a period where there existed competing stylistic forms ultimately led to the establishment of one of these as the sole and exclusive option, conceivably as a classic result of 'overuse' of this particular variant.

6. VIETNAMESE

I would now like to turn briefly to Vietnamese and from there on to Cantonese. Earlier on it was mentioned in a footnote that there are certain interesting differences in the contemporary patterning of the modal construction among the various languages which contain it. One of these relates to the position that the object of the lexical verb occurs it. Considering at least the northern dialects of Vietnamese and the position of the object, one seems to find the familiar pattern which occurs in Thai and Middle Chinese. There seems to be a heavy preference for indefinite non-focussed objects to precede the potential modal and for focussed DPs to follow it, as in (79) and (80):[30]

(79) a. toi lai xe duoc
I drive car can
'I can drive (cars).'

b.?(?)toi lai duoc xe
I drive can car

(80) a. ong-ai noi duoc moi-tieng
he speak can every language
'He can speak every language.'

b.??ong-ai noi moi-tieng duoc
he speak every language can

However, it transpires that *definite* but non-focussed DPs can also readily occur either before the modal or after it, as in (81):

(81) a. ong-ai noi tieng anh duoc
he speak English can
'He can speak English.'

b. ong-ai noi duoc tieng anh
he speak can English
'He can speak English.'

This is somewhat unexpected and different from what is found in Thai. As noted earlier, in Thai it would not be possible to have a definite but non-focused object in the post-modal position. If the modal construction in Vietnamese stems from the same basic source that Thai does in Middle Chinese, as seems to be more than likely, this difference may be taken as

indication that the focussed interpretation of an object occurring after the modal has over time undergone substantial weakening so that ultimately this position has become a fully regular position for definite DP objects with no necessary focus association. One could then imagine that possibly after further time the definiteness restriction on post-*duoc* objects might also disappear and that indefinite objects would also occur in this position. What may have originally been clearly focus-driven movement may gradually become re-analyzed over time as simply movement for the licensing of *all* types of objects, possibly overt movement to the specifier of a low Agreement or Aspect Phrase where objective case may be checked. Such a further development is arguably what has indeed occurred in Cantonese, which shows additional differences from Thai and Viet with regard to object positioning.[31]

7. CANTONESE

In Cantonese it is found that objects of all types do indeed occur after the modal, even those which may be non-referential parts of verb-object idiom sequences, hence NPs which are not available for focusing at all, as in (82); example (83) shows that the object *cannot* in fact precede the modal:[32]

(82) keoi m jau dak seoi
he Neg travel can water
'He can't swim.'[33]

(83) * keoi m jau seoi dak
he Neg travel water can

This actually makes the modal look quite like a suffix in Cantonese. There is however a variety of evidence that *dak* is still an independent modal in Cantonese and that the syntax of *dak* constructions essentially parallels the derivation suggested for Thai and Middle Chinese, though now for somewhat different re-analyzed motivations.

First of all, it is found that *dak* need *not* always occur attached to a verb: in simple answers to *dak*-questions a short answer-form comprising *dak* alone is prefectly acceptable, as seen in (84), indicating that *dak cannot* be taken to be a verbal suffix or clitic:

(84) ngo tai dak nei-bun-syu maa?
I read can your-Cl-book Q
'Can I read your book?'

A: dak
can
'Yes.'

The behavior of *dak* here contrasts with that of other aspectual elements which attach to the right of verbs and do seem to be suffix-like as they may not occur separated from the verb in short answer-forms. For example, (85) shows that the completive aspect marker *jyun* may not occur as an independent answer-form:

(85) nei tai jyun go-bun-syu maa?
you read Asp that-Cl-book Q
'Did you finish reading that book?'

A1: *jyun
Asp

A2: tai-jyun
look-Asp
'Yes.'

Examples such as (86) in which the aspectual marker *jyun* appears together with the modal *dak* provide a second reason for rejecting the *dak*-as-suffix possibility. If the aspectual marker *jyun* in (86) is a suffix analyzed as attaching to the verb *tai* 'read', then *dak* would also have to be analyzed as being a suffix. However, this ordering of suffixes attaching to the verb would seem to violate either the Mirror Principle (Baker (1988)) or Cinque's (1999) universal template of clausal structure. In (86) the order of elements is seen to be: main verb – Modal(*dak*) – Aspect(*jyun*):

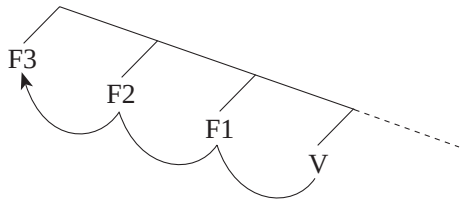
(86) ngo m tai dak jyun bun-syu
I Neg read can Asp Cl-book
'I can't finish reading the book.'

Now, cross-linguistic evidence has consistently been taken to indicate that those inflectional affixes which occur closest to the verb stem correspond to functional heads which are lower in the clausal structure. So in the schema below in (87) showing a verb with three suffixes, Affix-1 closest to the verb will be checked against the lowest functional head F1, Aff_2 against F2,

and so on. If *dak* and *jyun* are suffixes in (86), the fact that *dak* occurs closer to the verb than *jyun* should then indicate that root modality in Cantonese is lower than completive aspect. However, Cinque presents much evidence that root and all other modality is universally ordered higher than the various types of aspect, so either the ordering of the suffixes here would have to be admitted as a singular exception to this ordering, or one would have to assume that the Mirror Principle is incorrect, neither an attractive possibility.

(87) a. $V - Aff_1 - Aff_2 - Aff_3$

b.



A third clear reason to reject the *dak*-as-suffix possibility is that examples with constituent and sentential negation occurring in a single string indicate that *dak* need not be immediately adjadcent to the verb and hence cannot be a verbal suffix. In (88) *dak* is separated from the verb by sentential negation.

(88) nei [m lai] m dak
you Neg come Neg can
'You can't not come' = 'You must come.'

It can therefore be assumed that *dak* is an indepdnent modal occurring in a low root modality head and that the order of *lexical verb-dak* is the result of movement of the verb to its position preceding *dak*.[34] Again consideration of various aspects of this raising may lead one to conclude that this is in fact movement of a VP remnant and not just of a verbal head. If just the verb moved to this position over the modal head, this should result in a violation of the Head Movement Constraint (HMC) or the Minimal Link Condition (MLC)/Shortest Move, yet all these forms are perfectly acceptable. Furthermore, where we introduce constituent negation as well as sentential negation in (88), we find that the verb actually occurs in a position higher than sentential negation. Again head-movement of just the verb over this (sentential) negation might be expected to violate the HMC, noting also that verbs may normally *not* be raised over negation in Cantonese, as (89) shows:

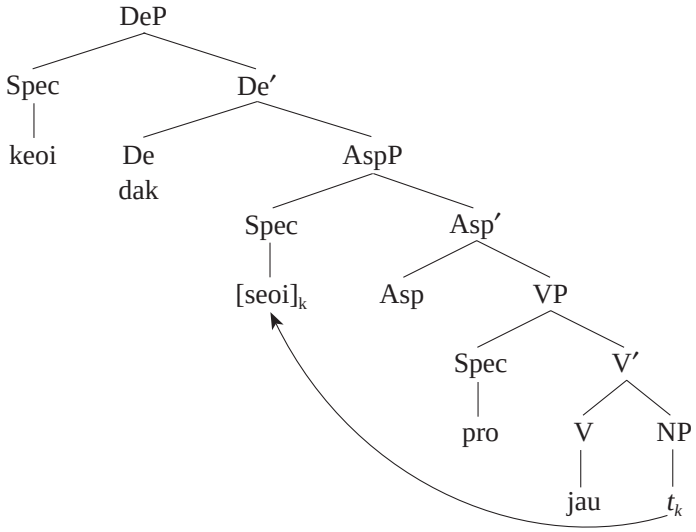
(89) * ngo heoi m Hoeng-Gong
I go Neg Hong Kong
intended: 'I'm not going to Hong Kong.'

Lastly, the fact that the constituent negation appears raised up with the lexical verb in (88) also strongly suggests that what has been raised is a unit which is larger than a head, and hence arguably a lower NegP + a VP remnant.

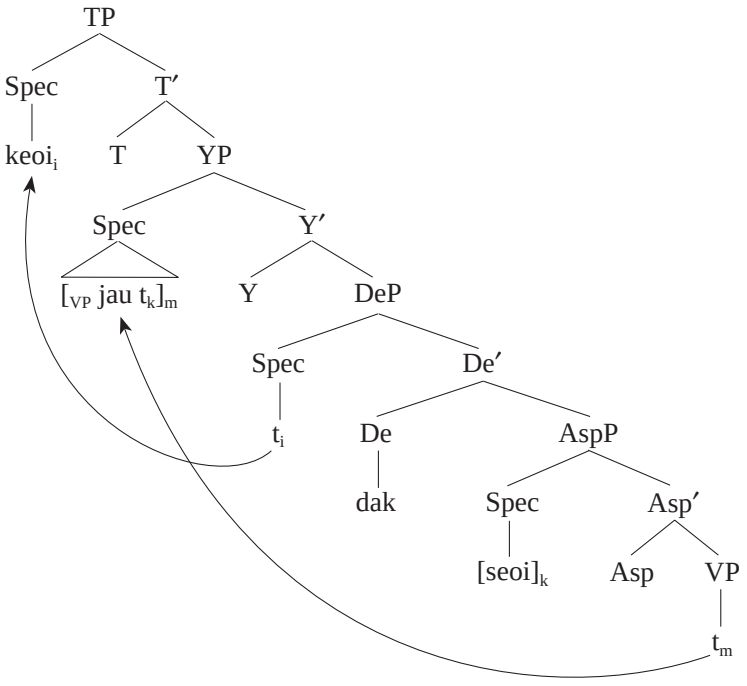
There is then sufficiently good reason to believe that the derivation in Cantonese follows the same steps as in Thai and Middle Chinese. The crucial difference between Thai and Cantonese is that the object in Cantonese is always forced to raise out of the VP to some position lower than the modal before the VP-remnant raises higher while in Thai this only ever occurs when the object is focused. As noted a little earlier, an object DP in Cantonese need not be focused to appear after the modal, and *all* objects occur in this position. I would therefore like to suggest that the process of development away from a purely focus-oriented construction seen underway in Vietnamese has indeed proceeded a further significant step in Cantonese. Perhaps the over-use of semi-stylistic object focus-movement has over time been fully reinterpreted as regularized object-shift to a position which is involved in licensing *all* object types, possibly the Specifier of an Aspectual Phrase lower then the modal. The derivation of a simple *dak* structure such as (90) would then follow the steps in (91–92). From an underlying structure in which the VP predicate occurs to the right of the modal, the object raises up to the Specifier of a low AspectPhrase (90); this is then followed by VP-remnant movement to a position preceding the modal *dak*:

(90) keoi jau dak seoi
he travel can water
'He can swim.'

(91)



(92)



The end result of such a derivation is a surface form where the modal really looks as if it could be a verbal suffix as only the verb is present in the VP-remnant which undergoes raising, and nothing breaks up the linear verb-modal sequence. One can in fact easily imagine that given further time

such sequences might indeed get reanalyzed as verb + suffix and that this is a rather different means by which suffixes may develop.[35] All that it would essentially take for this reanalysis process of *dak* as a genuine suffix to be complete would be that the evidence in favor of *dak* being an independence modal would disappear. Hence one might imagine increased use of answer-forms where the lexical verb and *dak* appear together rather than just *dak* on its own, a loss of sequences where *dak* is followed by a dependent aspectual element such as in (86), and the discontinuation or freezing of forms with constituent and sentential negation co-occurring, as in (88). For the present, though, one may argue that transitive *dak* constructions do still follow the syntax of the original modal construction in Middle Chinese and its counterpart in contemporary Thai.

Before leaving Cantonese, a few final remarks are in order concerning the motivations and triggers for movement. In contemporary Cantonese it is argued that there no longer is any focus interpretation in examples such as (90) and it can therefore no longer be assumed that the movement of the VP takes place for reasons of defocusing, as suggested for Thai/Middle Chinese, etc. As there are also no other semantic or discourse-oriented explanations available for the VP-raising in modern Cantonese, one is forced to conclude that there actually is no obvious synchronic trigger for the movement. Noting that cross-linguistic and diachronic evidence provide reason to believe that the VP-raising nevertheless did have an earlier understandable defocusing motivation, it can be suggested that the VP-movement hypothesized in modern Cantonese (and supported by synchronic patterns) should be viewed as something like an automatic 'fossilized' reflex of an earlier stage of the language. Due to developments within the language, it can be suggested that the semantic (focus) force of the modal construction has been lost in Cantonese itself but has left behind a legacy of these two discrete movements, one becoming reinterpreted as raising for case, the other however being left behind without any clear motivation. If such assumptions are correct, the significant conclusion is that there may indeed exist movements in syntax (such as the Cantonese VP-raising) which do not have any clear synchronic trigger in obviously identifiable semantic or morphological terms. Such movements may have become embedded and fossilized in a language as the result of diachronic change and appear to occur synchronically for no clearly understandable reason.

The Minimalist Program (Chomsky (1993, 1995)) does however provide a technical mechanism to allow for such movement in the assumption that movement may be triggered by the presence of (strong) categorial/EPP features on a functional head. I would now like to suggest that such a mechanism may be precisely what is involved in many instances of language

change and reanalysis. When a clear semantic (or possibly morphological) trigger for movement disappears over time, as in the case of the Cantonese modal construction, it is possible that speakers may continue to effect the relevant movement with a different purely formal trigger in the form of an EPP feature-checking requirement imposed on the attracting functional head. A speaker's grammar would thus reanalyse a particular movement as being driven instead by pure categorial/EPP features, and the introduction of such a feature-checking requirement can be understood to be a general formal means which grammars allow themselves for the continued legitimization of movements whose original characteristics have undergone change and loss. In the case of Cantonese, then, a set of strong *v*-features introduced on a high clausal head would constitute the new formal trigger for raising of the VP.[36, 37]

8. Concluding Remarks

This paper began with the suggestion that large-scale lexico-syntactic borrowing has resulted in the creation of a distinctive modal paradigm connecting various genetically-unrelated languages in East and southeast Asia. It was then pointed out that the patterning observed seems to present a strong empirical challenge to the Universal Base Hypothesis as a single modal verb consistently occurs out of place in an unexpected predicate-final position. A close investigation of the syntactic properties of the modal in contemporary Thai then however showed that a variety of evidence suggests that the predicate actually occurs in its surface position as a result of being raised there from a base structure which significantly does correspond to Cinque's (1999) predictions and support the UBH. The motivation for the raising of the predicate was then suggested to be a need to de-focus the VP as pre-supposed information in what was shown to be a focus-oriented construction, such an analysis receiving further diachronic support from a consideration of Early and Middle Chinese. The paper subsequently suggested that the original construction has developed and undergone re-analysis to different degrees in Viet and Cantonese, giving rise to cross-linguistic variation in the position of the object in these structure and the impression that the modal is actually a suffix in Cantonese. Synchronic evidence indicated however that the modal construction in Cantonese nevertheless does still follow the basic VP-raising pattern suggested for Thai and Middle Chinese. As all earlier association with focus has now disappeared from contemporary Cantonese, and there is no way to motivate the VP-raising in other semantic/functional terms, it was argued that this movement has now become simply fossilized in Cantonese and continues

to be made without any clear semantic motivation. A general conclusion to result from this then was that there are indeed instances of movement which do not have any obvious purely synchronic semantic explanation and that the process of language change may often result in once clearly understandable motivations for movement simply becoming lost over time. The paper closed with the suggestion that the introduction of strong categorial/EPP features onto a functional head is quite possibly a mechanism made available by language to legitimize the continued existence of movement dependencies which have lost their original motivation, permitting the reinterpretation of a semantic trigger in terms of a purely formal syntactic requirement.

NOTES

[1] Thai data throughout the paper is taken from newspapers, novels, general conversation, and television shows. The same is true of the Cantonese data. The Cambodian examples are due to David Smyth (p.c.), and the Viet examples from Dana Healy (p.c.), Nguyen Binh (p.c.), and Vietnamese students interviewed in Los Angeles and London.

[2] It can be noted here that although Thailand saw a lot of Chinese immigration in the 19th and 20th centuries, the group which immigrated in is the Ciu Zau/Dae-Jiu group, and this dialect does *not* have this particular modal construction. The construction might therefore seem to be an old export from China rather than a recent import.

[3] Sun (1996) suggests that the Middle Chinese potential modal pronunication *dei* is suggested to have turned into the modern Mandarin pronouncation *de* due to a process of grammaticalization and being sandwiched in the middle of the two-verb structures V-de-V forms illustrated below:

(i)	a.	kan-de-jian look-can-meet	b. ting-de-dong listen-can-understand
		'is able to see'	'can understanding (when listening)'

[4] There are in fact certain interesting differences in the contemporary pattern found amongst Thai, Viet, Cantonese, and Cambodian, relating primarily to the positions of negation and objects. Later on it will be argued that these differences are the result of ongoing historical change.

[5] The Universal Base Hypothesis argued for in Cinque (1999) is antcipated to some degree in work on the development and ordering of modal and aspectual verbs in Bybee, Perkins and Pagliuca (1994) though no claims to full university are made in this work.

[6] Note that the idea that there is a universal *hierarchical* ordering to tense, mood, and aspect projections (i.e., the UBH) does not imply that there must also be any universal *linear* ordering of these projections. In addition to the head-initial ordering in (16), it is possible that languages in principle might also comply with the UBH in a head-final ordering as in (i):

(i) VP < aspectuals < alethic modals < deontic modals < tense < epistemic modals

[7] None of these languages exhibits any overt tense/agreement morphology.

[8] In a structure such as (23), it is possible for the constituent negation to apply its force to the object following the lexical verb, i.e., the negation in (i) can apply to *Daeng* rather than the verb. This indicates that such negation must be able to c-command more than just the

verb. The lack of scope over *dai* can therefore not be suggested to be due to the negation here being simply adjoined to the V^0.

(i) khun mai pai kap Daeng dai
you Neg go with Daeng can
'You cannot go with *Daeng* (if you really don't like her).'

[9] The bracketing in these examples would be correct if *dai*-sentences were sentential subject structures and is intended to highlight the fact that relativization and topicalization is made from a position which *would* be within the sentential subject (if *dai*-sentences contained sentential subjects), fully parallel to the ungrammatical (26) and (27).

[10] (33) actually simplifies things somewhat. With Cinque I assume that below modal projections there are first aspectual phrases of various types and then the VP (even if there are no overt aspect-heads). Consequently what is labelled as VP in (33) may in fact be an AspectPhrase of some type. Essentially all results here are the same whether the constituent is labelled as VP or as AspP with an empty Asp head, and so I take the former option for simplicity.

[11] This might seem to imply that relativization/topicalization must take place *before* raising of the VP to the higher Spec position. If such a sequence of operations is seen as potentially counter-cyclic, there are a number of alternate ways to attempt to account for the patterning. One possibility would be to suggest that movement of an empty operator in both relative clauses and topic constructions takes place following VP-movement from the VP *copy* left behind in complement position. A second possibility might be to argue that empty operator movement only occurs at LF following reconstruction of the VP to its complement position. A third route of explanation would be to suggest that when the VP raises to the higher Spec position it retains its earlier L-marked status, and this allows for extraction of the object from the left branch Specifier. Finally it might also be possible to suggest that the VP-raising actually occurs as an instance of movement at PF following syntactic relativization/topicalization (and therefore just *appears* to be counter-cyclic). Whichever of these options is pursued, it remains that the strong contrast in grammaticality between (26/27) and (28/29) seems to indicate that the VP must at some point in the derivation be in complement position and therefore allow for extraction.

[12] A reviewer points out that if NPIs might be licensed at any point in the derivation when c-commanded by Negation, this might incorrectly predict that the English cases (i) and (ii) below would be good:

(i) *Anybody wasn't arrested by the government.

(ii) *Anybody didn't come.

The reviewer suggests that one possibility to account for the Thai data might be to assume that NPIs are licensed at LF following reconstruction of the predicate to its base-position c-commanded by negation. Given that there is evidence that predicates do indeed reconstruct at LF (Huang (1993), Heycock (1995)) but that elements in A-positions do not, this would allow for an account of both the Thai and the English NPI patterns in a uniform way.

[13] With the correct intonation, the English in (40) is certainly acceptable in many British dialects.

[14] A reviewer suggests that the patterns found here might also be compatible with an analysis in which *dai* selects its complement exceptionally to its left, i.e., *dai* is *head-final* in its projection, and the VP is simply unmoved in its base-generated position to the left of *dai*. Such a possibility cannot however be correct given the position of sentential negation in *dai*-sentences. As noted in example (19) (also (28), (29)), sentential negation occurs preceding *dai* and following the VP. As such negation has scope over both the VP and *dai* (in contrast with simple VP constituent negation in (21)), it has to be assumed that it instantiates a

NegP which is critically higher than *dai*. Consequently, the VP to the left of this negation cannot be *in situ* as a simple leftward complement of *dai* (as then the sentential negation between the VP and *dai* would also have to be analyzed as being lower than *dai* and would incorrectly be expected to have the interpretation of VP constituent negation as in (21)). Instead it must be assumed, as argued, that the VP indeed undergoes leftward raising to its surface position above the sentential negation. Note also that data rom Middle/Early Chinese reviewed in section 5 show that leftward VP-movement clearly occurs in the diachronic source of the present modal construction.

[15] VP-movement is thus argued to occur in *dai* sentences and shortly also in sentences with predicate-final aspectual *yuu*. Elsewhere V (and the VP) are assumed to remain in situ in the overt syntax.

[16] Note that the hypothetical raising of the VP complement of *yuu* to SpecAsp is fully automatic and that it is not possible for the VP to optionally remain in situ following *yuu*. Consequently the only linear ordering available and expected is indeed [VP *yuu dai*], as observed.

[17] Thus if a focused object precedes *dai* with the focus-like particle *sak* or with heavy stress, this is quite unacceptable. Compare (i) with (56):

(i) */?? . . . kwaa ca thaai sak-phaap-nung dai
. . . before Irrealis take even picture one can

[18] Cinque (1999) argues for similar effects in Italian. In (ii) below, suggested to be derived from the neutral order in (i), raising of the indirect object over the direct object is argued to put the latter into focus:

(i) Hanno dato [uno schiaffo] [al figlio di Maria]
(they)-have given a slap to-the son of Maria
'They slapped Maria's son.'

(ii) Hanno dato [al figlio di Maria]$_i$ [uno schiaffo] t_i
(they)-have given to-the son of Maria a slap
'They *slapped* Maria's son.'

Raising of the indirect object then has for effect that the indirect object is no longer a possible focus candidate.

Another de-focusing device well-discussed in the literature is the *ba*-construction in Chinese. When an object is preposed before the verb and marked with *ba*, the object is clearly being placed out of focus (see among others Sybesma (1991), Li and Thompson (1981), Chiu (1993)):

(iii) ta ba haizi da-le yi dun
he BA child hit-Asp one measure
'He *hit* the child.'

[19] Cinque (1999) also makes the point that material de-focussed via raising is commonly interpreted as presupposed, as for example the indirect object in example (ii) of footnote 18.

[20] The characterization of *dai*-sentences as encoding presupposed information in the VP preceding *dai* may also arguably be supported by the fact that they occur with a high degree of frequency in negative sentences, questions, and acts of granting permission. All of these are instances where the content of the predicate may often (though certainly not always) be information presupposed in the discourse. For example, the granting of permission to carry out some action is commonly preceded by some discussion of the potential action or a request for permission, and the negation of a statement frequently entails that its positive counterpart is entertained as a possibility and in this sense presupposed.

[21] Note that to account for the surface position of the object in (56), it is indeed necessary to assume some kind of special movement of the object in *dai* sentences. Only if the object first raises forward out of the VP to some higher position between *dai* and the VP will it be possible for the VP remnant to then raise higher and leave the object in clause-final position. Note furthermore that there is normally no overt movement of the object to any pre-VP position in Thai, and forms such as (i) are quite impossible:

(i) * khaw saamaat [laai phasaa/phasaa Thai]$_i$ phuut t_i
he can many language/language Thai speak

Consequently the object-movement necessary to generate forms such as (56) is a phenomenon which occurs *only* in sentences with *dai* and cannot be interpreted as any kind of regular object-shift which might elsewhere be available in Thai. As the use of *dai* clearly induces a focus interpretation into the structure, it is arguably most natural to assume that the object is indeed targeting a dedicated focus projection here when it undergoes this special movement (and therefore is parallel to focus-movement to specific focus projection in other languages such as Hungarian, as in Brody (1990)).

[22] A reviewer asks why the VP should have to undergo raising in (70), suggesting that if the object is focused through movement to the Focus projection, one might expect that the VP could then possibly remain in situ. In response to this I would like to note here that the interpretation of an element as focused is frequently associated not *just* with occurrence in a particular position but also critically with some additional phonological effect, most commonly the addition of stress to a focused element. In *dai*-focus structures I would like to suggest that in order for stress to be assigned and phonologically realized on the focused object DP, this element may need to be in sentence-final position. To avoid receiving the sentence-final stress induced in *dai* structures and to allow this to be naturally placed on the element in focus, the VP remnant therefore raises out of the way to a higher position, undergoing de-focusing. Similar kinds of de-focusing movements can be observed in other languages where there is clear movement to a dedicated focus projection. For example, in Bangla a focused DP or a *wh*-element raises overtly to a focus-position/projection which is located below the subject but above the VP. Such raising then normally triggers the additional raising and de-focusing of any elements which would otherwise intervene between the raised focus and the verb, as in (i) (discussed in Simpson and Bhattacharya (forthcoming)):

(i) jOn SOAS-e_k kal_m [kon boi-Ta]$_i$ t_k t_m bollo [meri t_i kinlo]?
John SOAS-in yesterday which book said Mary bought
'Which book did John yesterday in SOAS say that Mary bought?'

While it is nevertheless possible for such elements to occur between the raised focus and the verb, it is much preferred for them to be fronted and moved away from the focus position. Similar effects have been noted in Malayalam and various other south Asian languages. It is consequently assumed that there are two requirements on the licensing of focus on an object in Thai *dai*-structures: a syntactic requirement that the object be raised to the focus projection and the phonological requirement that it be assigned stress, this resulting in the de-focusing movement of the VP away from the sentence-final stress position. Finally note that it is not sufficient for an object to simply occur in situ in S-final position to be focused as in (ii). Although it might technically be possible for the object to receive stress in such a position, it appears that it must also be overtly raised to the focus position in order to be interpreted as focused (and this will then ncessitate further raising of the VP-remnant):

(ii) *khaw dai phuut laai phasaa
he can speak many languages

[23] Note that if the object is not focused, and the VP is also de-focused by raising it higher

than *dai* as in examples such as (19), then *dai* will essentially be interpreted as focused by default, i.e., if all other constituents are clearly placed *out of focus* by raising them higher than *dai*, *dai* will itself be understood to be the only possible new/focus-type information. Furthermore, being the element which is inherently responsible for introducing focus into the sentence in the form of a potential focus projection, it can be suggested that *dai*, unlike other elements such as objects, does not need to identify itself as focus by any kind of movement or occurrence in the focus projection. In the absence of other elements being explicitly associated with focus, *dai* will itself be interpreted as encoding this value.

[24] A reviewer asks whether it is natural for Focus to occur between a modal and the predicate and whether this perhaps might not be in accord with the UBH if Focus is otherwise assumed to be higher in the clause, as in Rizzi (1997). Here I would like to suggest that Focus may be regarded in the same way that Negation is in Cinque (1999). Following work in Zanuttini (1997), Cinque suggests that Negation may potentially occur as a functional projection in four different locations in the clause though of these four locations one or two positions are much more frequently instantiated by Negation than others. I would like to suggest that the same may be true of Focus and that whereas it may be common for Focus to occur in a high clausal position under the topic, it may also be possible for Focus to occur in a restricted range of other positions, as found here induced by a modal in DeP.

[25] Note that an operation of VP-raising similar to that suggested here might also provide an alternative explanation for certain "object-shift" phenomena. In Scandinavian it has been noted (Holmberg (1986)) that an object can only raise to its left over negation when this is accompanied by leftwards movement of the lexical verb, as in (i) vs (ii):

(i) Eg veit$_i$ tey$_k$ ikki t_i t_k Faroese
I know them not
'I don't know them.'

(ii) *Bornini hovthu tey$_k$ ikki saeth t_k Faroese
children-the had them not seen

Quite possibly such patterns can be reinterpreted in a different way, and it can be suggested that "object-shift" appears to be dependent on verb-movement precisely because what undergoes raising is actually the entire VP. In other words, there would not be two independent movements in (i) but a single movement of the VP containing both the verb and its object. When the VP containing its V^0 head does not undergo raising, the object cannot independently raise higher. Furthermore, the objects which most commonly undergo raising are those which are referentially *presupposed*, notably pronouns, and objects left in situ following negation receive a contrastive *focused* interpretation (Diesing (1996)). The parallel with Thai would therefore appear to be potentially quite significant.

[26] As in Thai, Viet, Cambodian, etc., *de* is the only modal verb which is found following the lexical verb in Middle Chinese, and all other modals occurred preceding the VP, as one might expect (Chaofen Sun, p.c.).

[27] Middle Chinese is taken to be regularly S-Aux-V-O in its basic word order, essentially following Light (1979), Bennett (1981), Sun and Givon (1985), and many others.

[28] All of the examples in this section are taken from Sun (1996).

[29] In fact, Sun (1996) notes that *de*-VP forms can in fact still be found in modern legal prose:

(i) ku-fang zhong-di bu de [$_{VP}$ ru nei]
warehouse premises NEG can enter inside
'Trespassing is not allowed on the warehouse premises.'

[30] The judgments in (79)–(81) were originally collected from various Vietnamese speakers interviewed in Los Angeles and London during 1996. Subsequent to this, certain other speakers have indicated to me that they can in fact accept sentences such as (79b), where an indefi-

nite object occurs after the modal. While the differences in judgments initially suggested a dialect split between speakers of the southern Saigon dialect (accepting (79b)) and speakers of the central Hue and northern Hanoi dialects (rejecting (79b)), further investigation has revealed that the situation may be more complicated than this and not relate to clear geographical divisions. Those speakers who are able to accept (79b) can be taken to represent the further natural stage of development suggested in the text, where focus and definiteness restrictions on elements occurring in the post-*duoc* position eventually disappear, and the position develops into a simple object-licensing position, as discussed in section 7on Cantonese.

[31] I am grateful to one of the reviewers of the paper for pointing out that adverb placement in *duoc* sentences would also seem to show signs of the suggested focus pattern. A manner adverb such as 'fast' may be placed either before *duoc* or altenatively following it and if the latter position is selected, this corresponds with a natural focused interpretation of the adverb (data here from Nguyen Binh, p.c.):

(i) anh-ay chay nhanh duoc
he run fast can
'He can run fast.'

(ii) anh-ay chay duoc nhanh
he run can fast
'He can run fast.'

The same pattern is found in Thai, with a post-*dai* adverb having a focused interpretation which is absent from the pre-*dai* positioning of the same adverb:

(iii) khaw wing dai rew
he run can fast
'He can run fast.'

(iv) khaw wing rew dai
he run fast can
'He can run fast.'

Similar effects were also reported in section 4 with adverb positioning in Mandarin and Cantonese.

[32] A reviewer points out that where an object occurs with a possessive marker, it is not so natural in object position in statements with *dak* although it is fine in questions such as (84) and (85):

(i) ?? nei tai dak ngo-bun-syu
you read can I-Cl-book
'You can read my book.'

The same is true when an object occurs with a demonstrative, and it is preferred for such elements to be topicalized in statements:

(ii) go-bun-syu, nei jat-ding tai-dak
that-Cl-book you certainly read can
'That book you can certainly read.'

As the reviewer observes, the "best" objects in statements with *dak* might seem to be the non-referential type (although it has to be admitted that pronouns are definite and perfectly acceptable as objects), and objects whose definiteness is emphasized by demonstratives and possessives are more naturally placed in topic position (though not ungrammatical in situ and, as noted above, fully acceptable in situ in questions).

[33] A reviewer points out that although *dak* may be naturally glossed with English 'can', there

are some subtle differences in meaning between *dak* and 'can'. Specifically *dak* seems to be used to refer to temporary ability rather than permanent skills (for which *sik* 'know how to/can' is normally used). Consequently (82) does not mean that the subject does not know how to swim but rather that something must have happened to the person so that he is unable to swim at the time referred to in the statement. Similarly in (i) below, the subject may in fact generally be able to speak English, but a situation arises such that he cannot speak English at the particular time referred to. For example, the subject might be in the presence of seniors who do not tolerate English being used (Evelynne Mui, p.c.):

(i) keoi m gong dak yingmun
he Neg speak can English
'He cannot speak English.'

[34] Although the VP is able to raise over the sentential negation in (88) when the lexical verb is preceded by constituent negation, such movement is not possible in the absence of constituent negation:

(i) * nei lai m dak
you come Neg can

It is not clear why the presence of constituent negation should somehow permit the VP to raise over sentential negation nor why the movement is otherwise blocked/disallowed. However, the relevant and important point remains that examples such as (88) do clearly show that *dak* is not a verbal suffix: in (88) the verb and *dak* most definitely do not constitute a single morphological unit.

Another reviewer makes the interesting point that the lexical verb can precede negation if *dak* is followed by a resultative verb as in (ii):

(ii) ngo haang m dak jyun
I walk Neg can far
'I can't go far.'

Such a patterning is not available if a simple NP object follows *dak* instead of a resultative verb:

(iii) * ngo sik m dak lunghaa
I eat Neg can lobster

It is not immediately obvious how one should attempt to explain the acceptability of (ii) and still rule out (iii). The same reviewer also points out that (ii) alternates with (iv), where the lexical verb follows negation and notes that (ii) and (iv) have slightly different interpretations. (ii) simply implies that the speaker's ability to walk far is limited whereas (iv) also additionally implies that the speaker is not allowed to go far even if this were physically to be possible:

(iv) ngo m haang dak jyun
I Neg walk can far
'I can't go far.'

Possibly one might attempt to argue that *dak* occurs in different modal head positions in (ii) and (iv), being lower in the clause in (iv) with the result that the VP in (iv) raises to a lower position under negation. However, this leaves many questions unanswered and it is particularly difficult to allow in (ii) in a regular way and still rule out (iii).

[35] It is possible that *dak* elsewhere has in fact become a suffix. A reviewer makes the interesting point that *dak* can apparently be used to convert transitive verbs into adjectives/stative verbs. When *dak* occurs following a transitive verb with no object, the verb

can be preceded by *hou* 'very/well' which otherwise only precedes stative verbs (like Mandarin *hen*):

(i) keoi hou sik-dak
he very eat-DAK
'He really can eat. = He eats a lot.'

When *hou* co-occurs with a verb and *dak* in this way, it is no longer possible for the verb to license an object:

(ii) *keoi hou sik-dak juk
he very eat-DAK meat

[36] Such an account would also need to block attraction of the modal *dak* instead of the VP, on the assumption that modals are verb-like elements. An additional feature [+lexical] might be able to effect this finer discrimination.

[37] A question which arises here is why a particular movement is not simply discontinued when its original motivation becomes lost? In other words, why would a language choose to *re-analyse* a movement as being triggered by categorial features rather than just stop the movement? (So in Cantonese, why does the VP continue to raise after loss of the focus effects in the construction when it could just remain in situ?) Here one can really only speculate, but I believe that speakers may possibly prefer to blindly mimic a movement they do not fully understand (with re-analysis) rather than choose the more radical alternative of changing their speech to a non-movement form for no stylistic gain. Further research is certainly necessary into whether languages ever do retreat to earlier non-movement stages when the semantic trigger for a movement is lost, but I suspect that languages actually might not tolerate such purely backward steps, and it may be that there are various pressures to *compensate* for loss and favor re-analysis rather than to opt for pure and simple regression.

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