

CLAUSE-FINAL MODALS IN MAINLAND SOUTHEAST ASIA

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1. Introduction

This paper sets out to examine the properties of modals such as dai in Thai. Dai is unusual in that it occurs in some position *following* the verb, whereas other modals in the language precede the VP as is elsewhere common in V-O languages:

- 1) *khaw* *khian* ***dai***
 he write can
 ‘He can write.’
- 2) *khaw* ***doong/aat-ca*** *pay*
 he must/may go
 ‘He must/may go.’

Further investigation reveals that this curious positional property of *dai* is also attested in a highly similar way in many other languages of the region. In SVO Cambodian, Vietnamese and Cantonese modal verbs occur as expected before the lexical predicate with a single interesting exception - a modal with the same meaning as *dai* is found to follow the main verb (Hmong is also reported to pattern in this way):

- | | | | | |
|----|----------------|---------------|--------------------|------------|
| 3) | <i>goa'at</i> | <i>roo-ut</i> | <i>baan</i> | Cambodian |
| | he | run | can | |
| | 'He can run.' | | | |
| 4) | <i>anh-ta</i> | <i>den</i> | <i>duoc</i> | Vietnamese |
| | he | come | can | |
| | He can come. | | | |
| 5) | <i>kui</i> | <i>lai</i> | <i>dak</i> | Cantonese |
| | he | come | can | |
| | 'He can come.' | | | |

The repeated occurrence of such a marked paradigm in so many neighbouring languages might strongly seem to indicate borrowing and transfer. The suspicion that the modals in these languages are indeed related is further strengthened by the observation that they *all* have parallel homophones, lexical verbs with the meaning 'get/have':

- 6) *phom dai botbaat thii dii* (Thai)
 I got role Rel good
 ‘I got a good role.’
- 7) *k’nyom jong baan bee-a moo-ay dorp* (Cam.)
 I want get beer one bottle
 ‘I want to get/have a bottle of beer.’
- 8) *toi duoc tho cua gia-dinh toi* (Viet)
 I got letter family me
 ‘I got a letter from my family.’
- 9) *ngoh dak saam-man je* (Cant.)
 I have 3-dollaronly
 ‘I only have \$3 left.’

If the modal series is indeed connected via borrowing, one clearly needs to ask both what the original source might have been and how the differences in phonetic form among the languages may be given explanation. We would like to suggest that the relevant hypothetical source was actually Middle Chinese and that there is a highly plausible route of transfer out of Middle Chinese and through the languages in the group.

Although forms like Cantonese (5) do not occur in Modern Mandarin, they are commonly found up until the 13th century in Middle Chinese (*see* Sun 1996):

- 10) *yi ren ji de* Middle Chinese
 one person play can
 ‘One person can play (it).’

In (10) one observes the occurrence of a post-verbal potential modal de, essentially just as in the patterns noted earlier. Now, given the assumption that the Tai people originated from S.E. China and subsequently migrated southwestwards between the 11th and 13th centuries, it is clear that they were in the Chinese-speaking area precisely at the time when this post-verbal de was common, and migrated away just before its decline, a highly suggestive fact. We therefore propose that de was borrowed into Thai as dai. There are also reasons to believe that the pronunciation of de in Middle Chinese was actually more like /dei/ (*see* Sun 1996), so the posited phonetic change to /dai/ is hardly major.

Concerning the modal in Cambodian ‘baan’, this may be taken to have actually been borrowed from Thai, which developed a second modal with the same positional property as dai pronounced /pen/ (as indeed suggested in Huffman 1973). As for Vietnamese duoc, the occurrence of a

syllable-final voiceless stop is obviously similar to that in Cantonese dak, and arguably can be said to reflect either borrowing from Chinese at a period in the Middle Ages when the use of syllable-final stops was known to be more widespread, or borrowing from one of the southern Chinese dialects such as Cantonese which retained such voiceless stops longer. The centuries of contact and exchange between Cambodia and Thailand and Vietnam and China also clearly provide a straightforward route for the hypothetical transfer.

So, there would indeed seem to be quite reasonable motivation for assuming that a process of borrowing and onward transfer has here resulted in the creation of a regional typological feature of some significant importance - the occurrence of a *post*-verbal modal in a set of otherwise fully regular head-initial V-O languages. We now attempt to probe the syntactic properties of this modal, concentrating primarily on Thai where we believe the vital clues to understanding the paradigm in general are located.

2. Thai

Above we have noted that the position of the potential modal in the languages considered is rather exceptional, essentially for the reason that cross-linguistic evidence consistently shows modals occurring to the left of the lexical predicate in head-initial languages. Recently it has been suggested that this evidence is in fact so pervasive that a 'universal template' may be argued for, with modal and aspectual verbs all occurring in a pre-determined hierarchical ordering dominating the VP-predicate (Cinque 1996). The occurrence of a group of modals in some position to the right of the verb as found in Thai, Viet etc is consequently not only unexpected and but also a strong theoretical challenge to this universalist hypothesis. Below we subject these modal structures in Thai to some careful scrutiny to see what kind of structure may be assigned to them and how this may bear on the universalist issue.

One may quickly discount the possibility that the modals here are some kind of verbal suffix similar to the *-e-* potentiality marker in Japanese (as in: *hanas* - *e* - *ru* - speak - Pot - Tense 'can speak'); the fact that objects, adverbs and other elements intervene between the main verb and dai indicates that the latter is a fully independent modal element:

- 11) *raw* *jee* *kan* *prung-nii* *dai*
 we meet together tomorrow can
 'We can meet tomorrow.'

A variety of evidence indicates however that there is more to the post-verbal position of the modal than initially meets the eye and it is not simply VP-final but somehow 'higher' in the clause. First of all, consider

the patterning of *yes-no questions*; these are answered in the positive by repetition of the leftmost or 'highest' verbal element in any string, as in (12):

- 12) *phom doong pai mai* A: *doong* B: **pai*
 I must go Q must go
 'Must I go?' 'Yes.'

In dai-sentences it is found that an answer-form consists in the repetition of dai rather than the linearly first lexical verb, indicating that it is dai which is the hierarchically higher verbal element rather than the lexical verb, despite the surface ordering:

- 13) *khaw phuut phasaa thai dai mai* A: *dai* B: **phuut*
 he speak language thai can Q can speak
 'Can he speak Thai?' 'Yes.'

The position of *sentential negation* in dai-sentences offers a further indication of the structure of the clause; sentential negation occurs immediately before dai, and following the lexical verb and its object/adverbs:

- 14) *khaw phuut phasaa thai mai dai*
 he speak language thai NEG can
 'He cannot speak Thai.'

If one makes a 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 (14) containing both the lexical verb and dai, as this would then simultaneously also contain the sentential negation. Consequently dai would again *not* seem to be inside the VP.

The patterning of constituent negation adds a further informative clue. In (15) the negation *only* has scope over the underlined string and critically *not* over dai:

- 15) *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 (15) does not 'c-command' dai, and hence that the underlined string in (15) is a constituent which excludes dai.

In view of the above, one might instead entertain the possibility that all of the material which precedes dai is actually predicated of dai as its

subject, hence that *dai*-sentences are in fact *sentential subject* structures. Such an analysis would indeed be able to account successfully for all of the phenomena noted thus far. However, despite a certain initial plausibility, there are reasons to believe that a sentential subject approach is also not appropriate here. To begin with, root modals clearly impose *selectional restrictions* on their subjects; (16) is accordingly odd in both Thai and English as the modal *dai/can/be able* requires a +animate subject:

- 16) ??fon dok dai
rain fall can
 '??'The rain is able to/can fall.'

Considering examples such as (15) above, it is the pronoun *khun* 'you' which satisfies the selectional restrictions of *dai*. This should however technically not be possible if the pronoun is analyzed as being inside a sentential subject, because there is no possible predication (hence selectional) relation between a predicate X and an element which occurs *inside* the subject of X. (16) below is illustration of this - 'be good' may not be predicated of 'John', hence (16) cannot entail (17):

- 16) *[That John is coming tomorrow] is good.*
17) John is good.

Further evidence arguing against a sentential subject analysis relates to *extraction asymmetries* which can be noted when comparing dai-sentences with clear sentential subject structures. Relativization (or topicalization) from the latter is fully unacceptable as seen in (18) (_ marks the extraction-site):

- 18) **phuu-chaai thii [loon khop_] may dii ko khuu..*
man Rel she be-with Neg good is
'The man who that she sees is bad is..(e.g. John)'

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 (18). However, parallel relativization (or topicalization) with dai-sentences is perfectly acceptable, indicating that they are *not* structurally equivalent to sentential subject structures:

- 19) *phuu-chaay thii loon khop _ may dai ko khuu..*
 man Rel she see Neg can is
 'The man who she may not date/see is ... (John)'

The same contrasts are found where an object of the lexical verb seems to have been moved to a sentence-final position. Such extraction is completely unacceptable from clear sentential subjects but fully grammatical in dai-sentences:

- 20) **[khaw beet-pheey _] mai dii khwaam-lap*
 he reveal Neg good secret
 *‘[That he revealed _] is not good the secret.’
- 21) *kwaa ja thaai _ dai [sak phaap-nung]*
 before Irr take can Prt picture-one
 Before I could take a single picture,...

Finally, relative scope facts in sentences containing more than one modal similarly argue against a sentential subject analysis. In (22) the modal doong ‘must’ obligatorily takes scope over dai:

- 22) *khun doong phoo phuut phasaa thai dai nit-nooy*
 you must suffice speak language thai can a little
 ‘You must be able to speak a little Thai.’

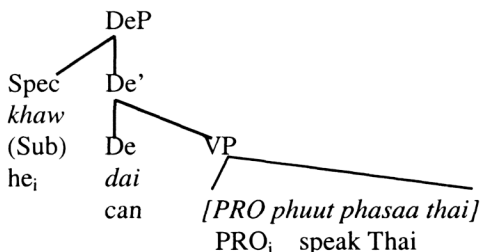
Were all the material preceding dai in (22) to be analyzed as a sentential subject, then doong would not be expected to be able to take scope over dai and its scope should instead be limited to the sentential subject itself (as in: ‘[That John must leave] is possible.’ where must does not take scope over be-possible). Once again this strongly suggests that dai-sentences have a structure quite different from that of sentential subjects.

2.1 The proposal: VP-raising

We would now like to propose that the many syntactic properties observed above may be neatly captured by assuming that dai-sentences such as (23) are in fact derived from underlying forms where the modal selects a rightward VP-complement, as in (24):¹

- 23) *khaw phuut phasaa thai dai*
 he speak language thai can
 ‘He can speak Thai.’

24)

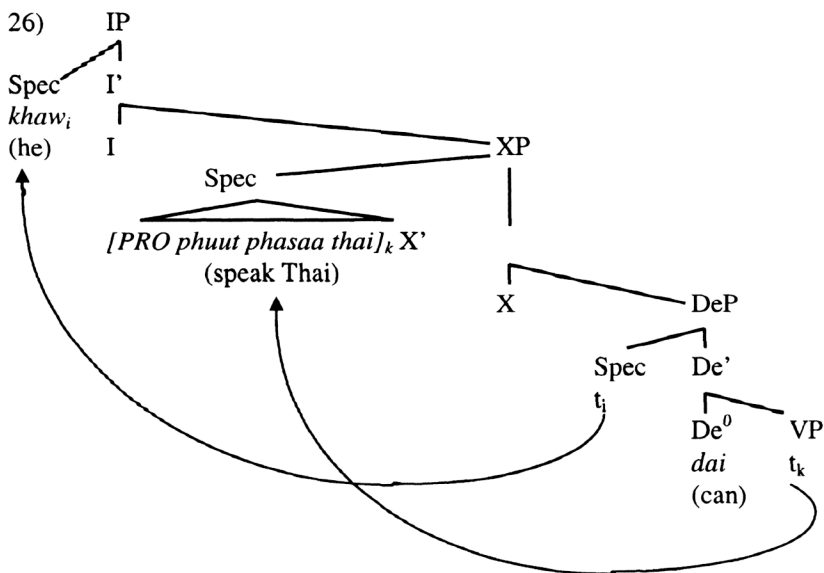


We suggest that (23) is derived from (24) via two applications of movement. The overt pronominal subject will raise to the canonical subject position ('SpecIP' in Chomskyan terms) and the predicate VP will undergo movement to a position between the subject and *dai*, informally this being something akin to 'inner topicalization'. This is schematized linearly in (25) and hierarchically overleaf in (26):²

25) $khaw_i$ $[_{VP}phuut phasaa thai]_k$ t_i dai t_k

Such an analysis captures the following assumptions/patterns:

- a) dai imposes selectional restrictions on its subject; this is effected in a regular 'Spec-head' predication relation in (24).
- b) dai is underlyingly the verbal element which is hierarchically higher and therefore the element which occurs in answer-forms.
- c) There is no sentential subject structure; object extraction may take place when the VP is in its complement position, allowing for a straightforward account of the contrast with attempted object extraction from genuine sentential subjects.



d) The structure posited allows a simple account of the negation facts; sentential negation occurs 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. 'Constituent negation' will be base-generated between De^0 and the VP and raise together with the latter. Consequently it will not c-command dai (even in its surface raised position), and so will not have scope over dai.

e) Sentences such as (22) 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 IP and the XP, the resulting c-command relations between the two modals in such a structure automatically accounting for their relative scopes.

The analysis also allows for an explanation of two further phenomena - the licensing of Negative Polarity Items (NPIs) and VP-Ellipsis. *Wh*-question words in Thai may be licensed as NPIs in negative dai-sentences but not in corresponding negative sentential subject structures indicating another clear difference between these forms, this seen below in (27-28):

- 27) *khaw* [*phuut* *aray*]_i *mai* *dai* *t_i*
 he say what Neg can
 'He can't say anything.'

- 28) [*khaw* *phuut* *aray*] *mai* *dii*
 he say what Neg good
 not: 'That he says nothing is good.'
 only: 'What is it good that he doesn't say?'

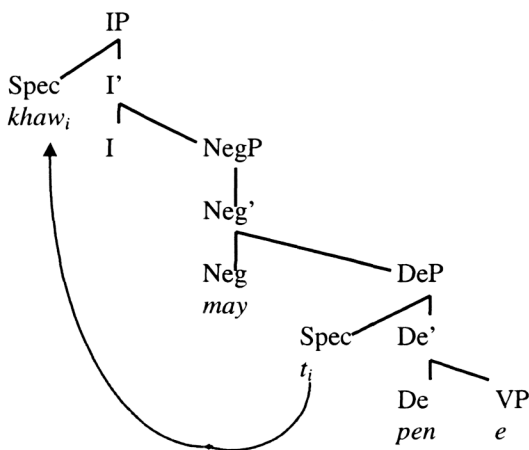
If interpretation as an NPI requires a c-commanding licenser, this interpretation of aray in (27) may be licensed when aray is in the VP c-commanded by Negation *prior* to the hypothesized movement of the VP. The sentential subject in (28) by contrast will not have raised from within the scope of Negation and so an NPI reading of aray is not available.

Consider also ellipsis structures such as (29):

- 29) *Lek* *phuut phasaa jiin* *dai*, *tae* *Dam-na*, *khaw* *mai* *pen*
 Lek speak Chinese can but Dam-Top she Neg can
 'Daeng can speak Chinese, but Dam can't.'

Here the underlined string in the first conjunct has been ellided from the second.³ If one makes the standard assumption that what undergoes ellipsis must always be a syntactic constituent, the possibility of structures such as (29) argues both against a sentential subject analysis of dai-sentences and one in which dai is taken to be in some lower position within the VP. For the latter view, prior to ellipsis, the VP of the second conjunct should consist in the string [_{VP} *phuut phasaa jiin + pen*]. It should not be possible to ellide just the upper half of this VP *phuut phasaa jiin* leaving behind simply *pen* as the former would not be a syntactic constituent in such an analysis, yet *pen* may indeed be stranded in these structures. In a sentential subject account, the (sentential) subject of the second conjunct prior to ellipsis should be *khaw phuut phasaa jiin*.⁴ Here again one might not expect that it should be possible to ellide just a sub-part of this constituent *phuut phasaa jiin*, yet this is the string which clearly seems to have been ellided in (29). For the analysis suggested here, (29) is really just a very typical example of VP-ellipsis, the string *phuut phasaa jiin* is a VP complement to dai which does not include khaw (nor pen of course). This VP is ellided straightforwardly from the position marked *e=empty* in the second conjunct's structure, as below:

30)



Finally and importantly, in a structure such as (26) dai is no longer taken to be an exceptional modal occurring in some highly irregular VP-internal position but rather inserted in a position dominating the VP alongside all other ‘regular’ modal verbs; Cinque’s universalist hypothesis would therefore seem to be successfully maintained (or at least not disproved by dai). What is exceptional about dai and in need of explanation is not its base-generated position but rather the movement of its complement VP, and to this we now turn in section 2.2.

2.2 Motivations for VP-raising

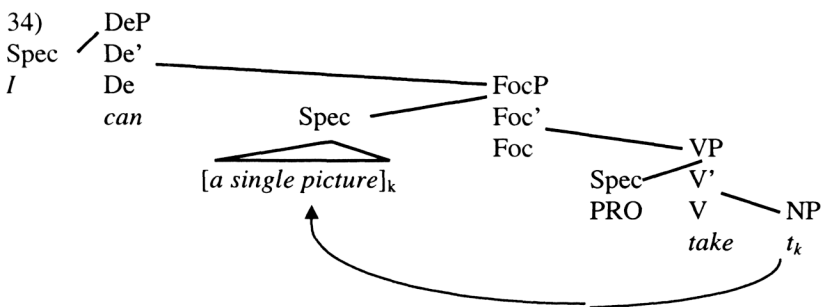
Above we have offered a wide variety of syntactic arguments as support for the raising analysis proposed. The question now arises as to *why* this VP-movement should take place, what *might* be its motivation? We believe a plausible explanation relates to the particular *informational structure* of dai-sentences. Earlier we noted that it is possible for the object of the lexical verb to occur clause-finally *after* dai - see example (21), rather than immediately after the lexical verb as in all other examples. 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. In addition to this it may also be noted that if no focused object follows dai, i.e. if dai is final in the clause, then dai itself automatically carries a focal stress. What can be concluded from this is that dai-sentences would always seem to be associated with some kind of focus. We would now like to suggest that these focus-effects are indeed critically responsible for the ‘exceptional’ behaviour 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.

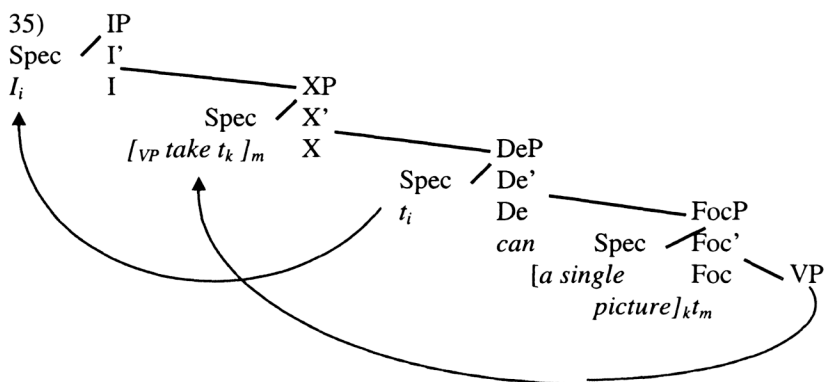
The pragmatic/stylistic force of dai-sentences is then to emphasize the possibility/ability/permission of carrying out a certain action (stress on dai itself) or to emphasize a particular element relating to this possible action (stress on a final object as in (21)). The VP predicate in a sense then represents *pre-supposed* information, while the new/focused information is the affirmation of the positive (or negative) possibility of the content of the predicate (or some element related to the predicate). Such a view of dai-sentences is arguably supported by the fact that they occur with a high degree of frequency in negative sentences, questions and acts of granting permission, all instances where it may be argued that the content of the predicate is quite likely to be information presupposed in the discourse. Indeed this presuppositional nature of the predicate can be better captured by adding a stress to the modal in English translations, e.g:

- 31) *He CAN'T speak Thai.* (negative sentence)
 32) *CAN I invite him along?* (question)
 33) *You MAY indeed go to the movies.* (permission)

Once the modal is stressed (as dai would be in Thai), one can only interpret the predicates here as being presupposed.

If raising of the VP then occurs as proposed in order to de-focus it, we also need to explain how it is possible for a focused object to occur after dai - i.e. if the entire VP raises past the modal, how is it that the object can remain in final position (as in (21))? We 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 (34) and (35) (using English glosses for the relevant Thai words in (21)):





3. Middle Chinese and Old Chinese

Above we have developed 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 furthermore turns out to be quite in line with Cinque's universalist hypothesis. Earlier in section 1 we suggested it seems likely that these structures in Thai have in fact been borrowed from Middle Chinese, and hence that their syntactic properties may well be those of early '*de*'-constructions. We now turn briefly to the latter to see if they may provide any additional evidence for the proposed account.

We suggest that there is data present in two basic forms which do indeed strongly support the conclusions of section 2. First of all, if we consider the patterning of the object of the lexical verb in Middle Chinese *de*-constructions, it appears to closely mirror the distribution found in Thai and therefore arguably be dictated by the same presupposition/focus distinctions.

Where an object is indefinite and unfocussed it occurs sandwiched between the lexical verb and *de* precisely as in Thai (also note the position of negation parallel to Thai):

- 36) *shi* *qie* [*yao* *shou*] *bu* *de*
 cause wife wave hand Neg can
 'It caused the wife not to be able to wave her hand.'

Strongly focused objects are however found to occur *after de*, again exactly as in Thai:

- 37) *cheng* *de* *ge* *shenme-bian* *shi*?
 succeed can Cl what matter
 'What can one accomplish?'

The patterning is thus entirely as expected if Thai *dai*-constructions have indeed been borrowed from Middle Chinese and if focus is an important determining factor in the syntax of these structures.

A second set of data heavily supporting the analysis of section 2 comes from de-constructions found earlier still in Old Chinese. Throughout section 2 a variety of synchronic theoretical arguments all appeared to converge on the conclusion that dai-sentences are derived from structures where the modal selects a VP complement to its right, this VP subsequently undergoing raising for reasons relating to focus. Turning to de-constructions in Old Chinese the significant discovery is made that at this period in its history de in fact *preceded* the VP, showing precisely what has been argued to be the underlying form of de and dai-sentences in Middle Chinese and Thai, and indicating that the VP/predicate clearly was a (rightward) complement of de in its origins.

38) *Zikuai bu de [VP yu ren yan]*
 Zikuai Neg permit give other Yan
 Zikuai is not allowed to give others the state of Yan

39) *ni de [VP ru men ye]*
 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-final constructions. There was consequently a period in Middle Chinese when both types of de-VP and VP-de structures simultaneously occurred. One may therefore suggest that the later de-final (VP-de) type found only in Middle Chinese (and the form which has by hypothesis been borrowed into Thai, Viet etc) developed from the earlier de-initial (de-VP) forms as a stylistic variant triggered by the informational-discourse reasons outlined in section 2 - 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 in which 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 'over-use' of this particular variant.

4. Summary

We now close the paper with a brief summation of its main points. The paper began by suggesting that there exists in mainland S.E. Asia a

significant paradigm of post-verbal modals connecting Thai, Cambodian, Viet, Hmong and Cantonese, with a source which ultimately goes back to Middle Chinese. We then pointed out that the apparent clause-final nature of the potential modal would seem to constitute important empirical evidence against Cinque's recent universalist hypothesis on clausal architecture. Selecting Thai as a general hypothetical representative of the paradigm for further detailed investigation, a range of syntactic tests subsequently all suggested that this initial conclusion was however most probably incorrect. Synchronic evidence indicates that a VP predicate linearly preceding the modal behaves in all syntactic respects as if it were a rightward complement of the modal. We therefore argued that a natural analysis of the patterning is to assume that the VP is in fact base-generated to the right of the modal and later raised to its surface position. We then went on to show that this possibly rather unexpected hypothetical movement of the VP may actually be ascribed a clear and simple motivation relating to the informational structure of sentences containing the modal; the VP instantiates presupposed information in these cases and undergoes raising in order to remove it from a final focus position where new information is critically encoded. Section 3 added further evidence in support of this analysis, showing that the VP was indeed a rightward complement of the modal back in Old Chinese, and that this later led to a period where it optionally occurred either before or after the modal, quite arguably as a result of stylistic movement triggered for focus-related reasons. Ultimately then an in depth examination of what initially appeared to be a strong set of counter-examples to Cinque's universalist hypothesis has revealed that they may actually be seen as fully according with such a theory, stressing the need for careful research before potentially significant conclusions are drawn and also positively highlighting the considerable value of comparative cross-linguistic and historical investigations.

Finally we would like to note that the analysis developed here primarily on the basis of Thai and Old/Middle Chinese is also tentatively suggested to be valid in its underlying fundamental design for other members of the paradigm such as Viet, Cambodian etc. Viet and Cantonese are investigated elsewhere in Simpson (1997) and an account of certain differences relating to the position of sentential negation and varying constraints on the distribution of the object is proposed. Essentially it is suggested that the freer positioning of the object found in Viet and its post-modal occurrence in Cantonese are the results of historical re-analysis away from a focus-related construction.

Notes

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¹ The projection is labeled 'DeP' as it is intended to be not just Thai-specific but to occur in all the languages under consideration here; 'De' is

chosen in recognition of the origins of the modal. 'PRO' is a null pronominal whose reference is controlled by the overt subject khaw.

² In (26) I stands for Infl and is intended to be the locus of the finiteness of the clause. The landing-site of the movement is not formally identified, and XP could instantiate any of the higher modal projections which we believe are present in the structure, as per Cinque (1996).

³ In the second conjunct we use pen rather than dai just for contrast; as noted earlier, pen is parallel to dai in syntax and in meaning.

⁴ Note that we have included a topic Dam-na in the second conjunct so that khaw may not be analyzed as a topic and therefore 'outside' of the subject.

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