MODAL VERBS AND GENERATIVE GRAMMAR
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Notes: To avoid the inconvenience of footnotes, references will be cited in the text by author and page number, e.g. (Author, p. 5). Data will be numbered according to the section of occurrence, e.g. 4.1-3 is the third item given in section 4.1. The symbol * will be used to indicate an unacceptable or ungrammatical sentence or phrase, e.g. * I not can go. Items in brackets [ ] are numbers or explanations to clarify quoted material.

1. Introduction
Verb concatenation or verb serialization is a widespread phenomenon in Southeast Asian languages (see Goral) and in other linguistic areas as well. In a previous study (Goral), I addressed the following problem: Given that in various Southeast Asian languages there are commonly found strings of verbs which are uninflected in the sense of European languages, what syntactic and semantic information is available to allow these strings to be interpreted by the layperson, or to be analyzed by the linguist?

In the course of my investigation, I found that generative grammar was virtually useless. At the outset, I had the problem of distinguishing verbs from other lexical categories. What did generative grammar have to say on this matter? If I examined a hypothetical "lexicon", I would find some items marked [+V]. No characterization of verbs appeared in the literature. In most European languages, identifying verbs may not be a pressing problem, but if generative grammar has any claims to universality then such categorization principles must be developed. Furthermore, once I had identified the verbs in the languages being studied, generative theory offered no assistance in analyzing verb series. Most of the specific rules relating one type of sentence to another were motivated by examples from English, or other languages which do not exhibit verb concatenation.

As a part of my general analysis of verb series, I proposed a definition of modal verbs which accounted for my data in Burmese, Cambodian, Indonesian, Thai, and Vietnamese. Now, I would like to consider the implications for generative grammar of this analysis of modal verbs and of the cross-linguistic approach which motivated it. Several questions arise as a result of this consideration of modal verbs.
1) Is generative grammar fundamentally inadequate to handle significant linguistic questions?
2) Can linguistic analyses made without regard to generative principles be incorporated in a generative theoretical framework?
3) How is the study of such phenomena as modal verbs relevant to theoretical issues such as the nature of phrase structure rules, the structure of the lexicon, and the relationship of semantics to syntax?

2. Previous Characterizations of Modal Verbs in English

The category of modal verb is introduced in the grammars of many languages, but the term is often used only implicitly. The explicit criteria, syntactic and semantic, for modal verbs vary from work to work. My initial motivation for seeking a characterization for modal verbs was that the term appeared in the grammars of the languages which I was comparing with respect to verb concatenation.

Modal is the adjectival form of mode, which is related to mood, which has the following dictionary definition:

"1. in grammar, a) in many languages, that aspect of verbs which has to do with the speaker's attitude toward the action or state expressed, indicating whether this is regarded as a fact (indicative mood), as a matter of supposal, desire, possibility, etc. (subjunctive mood), as a command (imperative mood), etc.: mood is shown by inflection, as in Latin and Greek, or by auxiliaries, as English may, might, should, or by both..." (Webster's, p. 955).

Chomsky simply takes modal as a given grammatical category. "To take just one example, consider the analysis of the English Verbal Auxiliary. The facts are that such a phrase must contain Tense (which is furthermore, Past or Present), and then may or may not contain a Modal and either the Perfect or Progressive Aspect (or both), where the elements must appear in the order just given." (Chomsky, p. 42). In a later argument, the word may is given as an example of a modal (Chomsky, p. 65). In this generative analysis, phrase structure rules in the base component include rewrite rules such as:

\[
S \rightarrow NP \cdot Aux \cdot VP \\
Aux \rightarrow M \\
M \rightarrow \text{may} \text{ , where } S = \text{sentence, } NP = \text{noun phrase, } Aux = \text{auxiliary, } VP = \text{verb phrase, } M = \text{modal.} \\
\]

(Chomsky, pp. 68-69)

This analysis does not explain anything. It is simply a formal representation of facts which are assumed to be true, without explanation or motivation.

One descriptive grammar of English contains the following characterization of modals:
"Two or more words may be joined together into a single verb phrase that functions as the full verb of the predicate. The first part of the verb phrase is the auxiliary (or auxiliaries), and the second part is the lexical verb (will be, arriving). The lexical verb carries the chief burden of semantic content. The auxiliary verb acts as a "helping" verb to the lexical verb by adding either (1) a structural element that marks differences in tense, voice, mood and aspect, or that signals questions and negatives; or (2) a semantic coloring such as ability, possibility or necessity (modal auxiliary)...  

3 The lexical verb is often called the main verb, but, in order to avoid confusion, we are reserving the term main verb for the verb in the main clause. Other names for lexical verb are notional verb, principal verb, meaningful verb." (Frank, p. 50).

In English, modal auxiliaries are distinguished from other verbs by several grammatical properties.

"Modal auxiliaries generally have no -s suffix for third person, and no infinitive or participial form. They have only two formal tenses, the present and the past, which are used with the simple form of the lexical verb (may offer, might offer), the progressive form (may or might be offering), the perfect form (may or might have offered) or the passive form (may or might be offered)." (Frank, pp. 95-96).

Ross presented a transformational argument that purported to show that English auxiliary verbs were actually main verbs in deep structure. Since generative grammar has changed greatly since that paper, the details of the argument need not be given here. Essentially, it was claimed that because a certain transformational rule was known to apply to verbs, and it also applied to auxiliary verbs, then it had to follow that auxiliary verbs were also verbs. The possibility that the transformational rule applied to a class wider than verbs was not considered. Also, the categories of verb and auxiliary verb were evidently taken as given; no definitions or explicit characterizations were provided.

The above characterization of English modal auxiliaries is irrelevant to verbs in Asian languages such as Burmese, Cambodian, Chinese, Indonesian, Thai, and Vietnamese. These languages have no grammatical tense, in that the verb does not change form to indicate the time of an action. Indeed, there is no verbal morphology except in Indonesian, and there it is related to features such as transitivity that are not related to the semantic idea of modality as expressed in Webster's Dictionary.

3. Motivation for Characterizing Modal Verbs in Asian Languages

If verb modality is restricted to English or to Indo-European languages, then there is no need to be concerned about
characterizing modal verbs in Asian languages. Since the English morphological and tense properties of modal verbs cannot be extended to Asian languages, then the semantic properties must be made precise and extended, new syntactic properties - which apply to Asian languages - must be discovered, or the attempt to develop a cross-linguistic category of modal verbs must be abandoned. My first observation in relation to this issue was that many grammars of Asian languages introduced such categories as modal verbs, some using the term explicitly and others coining new terms referring to words with similar semantic and/or syntactic properties to those of English modal verbs. I decided that there was a sufficient amount of shared properties to justify the search for a cross-linguistic characterization of modal verbs.

My geographical scope of investigation was Southeast Asia as a linguistic area, that is, a place in which "languages belonging to more than one family show traits in common which do not belong to the other members of (at least) one of the families" (Emeneau, 1980, p. 1). The genetic relations among the languages studied are not settled. A conservative language grouping would put each language into a different family: Burmese in Sino-Tibetan, Cambodian in Austronesian, Indonesian in Austronesian, Thai in Tai, Vietnamese in Viet-Muong (Keyes, pp. 339-341). A more controversial grouping puts Burmese in Sino-Tibetan, Indonesian and Thai in Austro-Thai, and Cambodian and Vietnamese in Austro-Asiatic (Matisoff, pp. 84-85). Whether syntactic and semantic similarities among these languages result from genetic relationships or from linguistic borrowing across genetic boundaries is not at issue here. Either factor provides a motivation for cross-linguistic patterns. In addition, there may be human psychological or neurophysiological factors causing the observed cross-linguistic patterns, in which case the patterns might be expected in widely separated or genetically unrelated languages. A putative cross-linguistic category of modal verbs can be viewed from another perspective. If such a category can be justified as a synchronic descriptive aid, then it could help in resolving questions of genetic relationship and borrowing.

4. Previous Characterizations of Modal Verbs in Southeast Asian Languages.

4.1 Cambodian

Huffman states that "Modal verbs precede, and in some way limit or modify a following main verb or another modal verb, as in the utterance:


Some modal verbs occur also as full verbs, e.g.:


and some occur only as modal verbs, e.g.