

WORD-MEDIAL EPENTHESIS IN SPANISH:
A LEXICAL PHONOLOGICAL APPROACH¹

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0. INTRODUCTION. The fact that Spanish has a phonotactic constraint that disallows a word to begin with the cluster /sC/ was recognized by classical generative phonologists as a process that was predictable, and therefore should be derived by rule:

1. $\emptyset \rightarrow e / \# _ s [+consonantal]$

The productivity of such a rule is evidenced by its application to loan words: English 'standard' becomes 'estándar' and 'stress' becomes 'estrés.' Epenthesis has received a number of different treatments within different theoretical models.² Implicit within all of these treatments is the supposition that epenthesis before /sC/ clusters word-medially cannot occur. For example, Cressey claims that rule 1 applies exclusively in word-initial position, and never root-internally or morpheme-internally (1978:86). Similarly, the lack of epenthesis in words such as 'hemisferio' and 'arteriosclerosis' is taken by Harris as evidence that epenthesis does not occur in the stratum in which affixes are added to the root, nor in the stratum in which affixes are added to the stem, but only in a later stratum

to complete words (1987:108-110). This generalization is indeed valid for a number of lexical items:³

2. /strato/ → estrato 'stratum'
3. /sub+strato/ → substrato, *subestrato 'substratum'
4. /sfera/ → esfera 'sphere'
5. /hemi+sferio/ → hemisferio 'hemisphere'
6. /scribir/ → escribir 'to write'
7. /in+scribir/ → inscribir, *inescribir 'to inscribe'

There is, however, contradicting evidence in which epenthesis does, in fact, apply in word-medial, root-initial position:

8. /anti+stetico/ → antiestético, *antistético 'unaesthetic'
9. /in+sperado/ → inesperado, *insperado 'unexpected'
10. /semi+sfera/ → semiesfera, *semisfera 'semisphere'
11. /super+strato/ → superestrato, *superstrato 'superstratum'

There are also apparent cases of optional epenthesis word-medially:

12. /yugo+slavo/ → yugoslavo/yugoeslavo 'Yugoslavian'
13. /sobre+stadía/ → sobrestadía/sobreestadía 'extra lay day'

The application of Harris' rules, for example, would incorrectly yield the starred forms in 8 through 11.

In addition to the inability of extant analyses of epenthesis to account for the alternations between /e/ and / \emptyset /, they have left another question unanswered: Why is the epenthetic vowel inserted to the left of the cluster /sC/, thereby forming the closed syllable σ [es], instead of breaking up the cluster yielding the open syllable σ [se]? A process which operates to generate a closed syllable runs counter to a myriad of other phonetic tendencies in Spanish which ultimately serve to convert closed syllables into open ones. The exceptional nature of epenthesis in this regard merits a more detailed explanation.

¹I am indebted to Jean-Pierre Montreuil and Scott Myers for their input to, and criticism of, this paper. However, I alone claim full responsibility for its contents.

²Cressey 1978; Harris 1983; Harris 1987; Hooper 1976; Morgan 1984.

³Since the major phonetic alternation that will be dealt with is the presence or lack of /e/ in certain contexts, I will transcribe those examples in standard Spanish orthography for clarity's sake.

The purpose of this study, then, is to present a descriptively adequate account of epenthesis in /sC/ clusters. In addition to explaining the anomalous nature of epenthesis in regards to the resulting syllable structure, the most crucial test of such an account will be its ability to deal with epenthesis or the lack thereof in examples 2 through 13. This paper defends the proposal that the place of epenthesis in /sC/ clusters may be best accounted for by assuming that epenthesis respects the integrity of the morpheme, and more importantly, that word-medial epenthesis can be explained if it is considered to be a prosodic phenomenon that is carried out within the stratum-concatenation framework of lexical phonology.

1. PLACE OF EPENTHESIS. It has often been noted that Spanish tends toward a CV syllable structure. The great number of consonantal 'weakenings' and deletions in syllable final position is primarily responsible for that notion. As has already been cited, the fact that epenthesis results in the formation of a closed syllable goes against the grain of such a tendency. Along with, and related to, the preference for open syllables, Spanish also maximizes syllable onsets. Harris, for example, demonstrates that across word boundaries, Spanish favors maximization of the onset (1983:43-44). Núñez-Cedeño's (1985) explanation of 's aspiration' (s → h / __]σ) and 'n velarization' (n → ŋ / __]σ) also require syllabification that maximizes the onset. Furthermore, in Morgan's (1984:71-76) and Hualde's (1989:822) lexical analyses, onsets are maximized at Stratum I, but are not maximized in subsequent strata. Once again epenthesis proves to be the black sheep in that its application maximizes the coda, not the onset.

In a recent paper, Itô presents a prosodic theory of epenthesis in which she proposes a language universal principle to the effect that languages prefer to contain syllables with onsets rather than syllables without onsets (1989:223):

14. Onset Principle: Avoid σ[V

She further claims that epenthesis processes abide by this rule. Spanish is an exception to this principle. The place of epenthesis in Spanish, therefore, is not only irregular as far as Spanish itself is concerned, but according to Itô, runs counter to a more universal principle.

Hooper seems to have sensed the anomalous nature of epenthesis when she states that epenthesis probably takes place to the left of /sC/ in

order to avoid breaking up the underlying /sC/ cluster (1976:234-235). This is consistent with the fact that the majority of the rules which apply in the lexicon modify only the elements at a morpheme's edge. Epenthesis, then, respects the integrity of morphemes, and therefore does not insert /e/ into the middle of an underlying morpheme, but only to its margin. This observation is valid both word-initially and internally:

15. e [scribir]; [re] e [scribir]; *[sescribir].

and it is responsible for the oddity of epenthesis in /sC/ clusters in relationship to syllable structure. However, the problem with this observation is that it does not hold for another alternation which has been thought to be the result of epenthesis.

Harris (1977:274; 1983:37) identifies the /θ/ vs. /e/ alternation in examples 16 through 19 as due to a rule of epenthesis which operates in the environment /C__rC/:

- | | | |
|-----|--------------------|-------------|
| 16. | ab <u>e</u> rtura | abrir |
| 17. | co <u>b</u> ertor | cubrir |
| 18. | frat <u>e</u> rnal | fratricidio |
| 19. | ped <u>e</u> rnal | pedra |

Epenthesis in this environment is similar to epenthesis in /sC/ clusters in that it also creates closed syllables, and violates the Onset Principle. The difference between the two lies in the fact that in /sC/ clusters the epenthetic vowel is inserted outside of the underlying morpheme. In the /CrC/ environment, on the other hand, epenthesis does not respect the integrity of the morpheme:

20. [aber][tura]; *[abr] e [tura].

It could be argued that epenthesis operates in such a way that it respects the integrity of the morpheme, but that the appearance of /e/ in /CrC/ clusters is not the result of epenthesis, or at least is not a synchronically productive rule of epenthesis, while epenthesis in /sC/ clusters is. Historically, the alternation between /θ/ and /e/, which Harris cites as evidence of epenthesis in /CrC/ clusters, derives from two sources. In

many cases, it is an alternation that existed in Classical Latin, and which was passed directly on to Spanish:

21. FRATERNUS > fraternal; FRATRICIDIUM > fratricidio.

In the remaining examples, the alternation arose historically, not from the addition of epenthetic vowels, but from the deletion of unstressed vowels:

22. APERIRE > abrir; APERTURA > abertura.

The appearance of /e/ before /sC/ clusters, in contrast, was diachronically the result of epenthesis. There were, of course, sporadic instances of epenthesis before /sC/ clusters in Latin, but it did not become an exceptionless phonotactic constraint in Latin or Romance, but only later in Spanish.

There is also evidence which suggests that epenthesis is productive before /sC/ clusters, but unproductive in /CrC/ clusters.⁴ The most convincing argument that epenthesis in /sC/ clusters is productive at some level is the great extent to which Spanish speakers apply it to such clusters in foreign languages.⁵ To my knowledge, a similar interlanguage phenomenon has not been described in /CrC/ clusters.⁶

Another fact that argues against the view that epenthesis occurs in /CrC/ clusters is that the resulting /e/ may at times undergo diphthongization: *abertura*, *abere*, *abeuerto*; *cobertura*, *cubre*, *cubuerto*. It would be difficult to propose that an /e/, which has been inserted epenthetically, contains the feature [+diph] (Harris 1977), or that adjacent to it is an empty prosodic slot (García-Bellido 1986; Harris 1985) which triggers diphthongization. All extant treatments of diphthongization convert vowels

⁴Nevertheless, it has been argued that epenthesis in /sC/ clusters is unproductive (Terrell 1983).

⁵See Carlisle 1991, for example.

⁶In an informal study, I asked four native speakers to attempt to read a text, which they were informed was Polish. The text contained several examples of /sC/ and /CrC/ clusters. /e/ was commonly inserted before /sC/ clusters, but only in one instance into a /CrC/ cluster. In the remaining cases, either one of the consonants was deleted or the speaker made an effort to pronounce the entire cluster.

which are underlying into surface diphthongs.⁷ Yet, even a synchronic analysis which could somehow derive diphthongs from epenthetic /e/ in a /CrC/ cluster does not become a diphthong: *entrer*, 'enter', *interno*, 'internal', **intierno*; *ofrecer*, 'offer', *oferta*, 'offering', **ofierta*.

In summary, the fact that epenthesis occurs to the left of /sC/ clusters is somewhat unusual. One explanation for this anomaly is that epenthesis applies to the edge of a morpheme, as do so many other rules which apply lexically. Epenthesis in /CrC/ clusters occurs morpheme-internally, but I suggest that it is critically different from epenthesis in /sC/ clusters, and should perhaps be reanalyzed in terms other than epenthesis.

3. A LEXICAL PHONOLOGICAL ANALYSIS. I hope to have demonstrated that extant analyses of epenthesis in Spanish are inadequate in that they are unable to account for many instances of word-internal epenthesis in /sC/ clusters. I submit that epenthesis is indeed a prosodic process, as the recent literature on the subject has demonstrated. However, in order to adequately account for epenthesis word medially, a prosodic rule⁸ alone is not sufficient until it is considered in conjunction with morphological strata.

Consider pairs of words such as 'reescribir' vs. 'suscribir' and 'adstrato' vs. 'superestrato' which share the same root yet differ in regards to the appearance of epenthetic /e/. The differentiating factor in each pair is clearly not the roots, but the prefixes. Based on this observation, Spanish prefixes may be classified into two distinct groups.

3.1. CLASS I PREFIXES. The prefixes *pro-*, *hemi-*, *tele-*, *ad-*, *hipo-*, *peri-*, *arterio-*, and *trans-* constitute a unified group, which I will designate as Class I prefixes. Words in the first column in table 1 show that no epenthesis occurs in the roots which these affixes precede:

⁷Norman and Sanders (1977), conversely, propose underlying diphthongs which are monophthongized on the surface.

⁸For the purposes of this paper, a rule of epenthesis such as Harris' (1987) or Morgan's (1984) is thought to apply.

TABLE 1. *Examples of Class I prefixes*

proscribir	'expatriate'	escribir	'write'
prostático	'prostatic'	estático	'static'
prosperar	'prosper'	esperar	'hope'
hemisferio	'hemisphere'	esfera	'sphere'
telescopio	'telescope'	_____	_____
telesquí	'ski lift'	esquí	'ski'
adstrato	'adstratum'	estrato	'stratum'
adscrito	'assigned'	escrito	'written'
hipóstilo	'column- supported'	estilo	'style'
hipostático	'hypostatic'	estático	'static'
periscopio	'periscope'	_____	_____
arterio- sclerosis	'arterio- sclerosis'	esclerosis	'sclerosis'
transcribir	'transcribe'	escribir	'write'
transpirar	'perspire'	espirar	'exhale'
transcurrir	'elapse'	escurrir	'drain'

In these words, no consonants are left unsyllabified after the syllabification of the underlying form has taken place. As a result, the structural description of epenthesis is not met, and, as predicted, no epenthesis occurs.

3.2. CLASS II PREFIXES. The second class of prefixes includes *contra-*, *anti-*, *semi-*, *pre-*, *sobre-*, *post-*, *inter-*, and *super-*. These constitute a group in that a root beginning with an /sC/ cluster, to which they are affixed, undergoes epenthesis. It is the appearance of an epenthetic /e/ in these words that escapes explanation in other prosodic accounts of epenthesis. Prosody requires that an /e/ be inserted before a consonant that is unsyllabified. Yet, when Class II prefixes are attached to the initial /sC/ consonant of a root, the result is a string that may be completely syllabified, leaving no unsyllabified consonant behind.⁹ The /s/ in

⁹Words with the prefix *post-* are an exception, since the cluster [stsC] (e.g. /post+scolar/) is clearly illicit and requires the addition of an epenthetic vowel.

underlying /sfera/, for example, is stranded after syllabification, which triggers epenthesis: [s] σ[fe] σ[ra]. In /semi + sfera/ → [semiesfera], however, /s/ is not left unsyllabified: σ[se] σ[mi] σ[fe] σ[ra], yet the root undergoes epenthesis. That is, epenthesis occurs in spite of the fact that its structural description is not met.

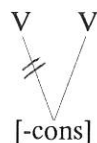
TABLE 2. *Examples of Class II prefixes*

contra- espionaje	'counter- espionage'	espionaje	'espionage'
antiestético	'unaesthetic'	estético	'aesthetic'
antiesclavista	'abolitionist'	esclavista	'pro-slavery'
semiesfera	'semisphere'	esfera	'sphere'
sobre- (e)stadía	'extra lay day'	_____	_____
sobre- (e)sdrújula	'preante- penultimate'	esdrújula	'ante- penultimate'
postescolar	'after-school'	escolar	'school'
interestelar	'interstellar'	estelar	'stellar'
preescolar	'preschool'	escolar	'school'
pre- establecido	'pre- established'	establecido	'established'
superestrato	'super- stratum'	estrato	'stratum'
super- estructura	'super- structure'	estructura	'structure'

3.2.1. OPTIONAL EPENTHESIS IN CLASS II PREFIXES. It must be noted that the orthographic representation of words with the prefix *sobre-* makes it appear that epenthesis is optional in these words. This is nothing more than a mere spelling convention. Lexical items beginning with *sobre-* and *pre-* contain the /e/ of epenthesis as well as the /e/ of the prefix at some point in the derivation.¹⁰ After that, however, they are subject to the same optional phonetic rule that other words containing identical vowels (e.g. leer, alcohol, moho, creer) obey:

¹⁰This same argument applies to the prefix *re-*₂ which will be discussed later.

23. Identical Vowel Simplification [Domain: any] (optional)



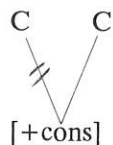
In the case of words beginning with *sobre-*, the optional application of rule 23 is reflected in the optional spelling. Although words containing the prefix *pre-* (e.g. *preestablecido* 'preestablished') demonstrate no spelling variation, they show the same variation phonetically ([pre:staβleθiðo] or [pre:staβleθiðo]). The same does not hold true for the Class I prefix *tele-*; *telescopio*, for instance, is never written with a geminate vowel, nor phonetically realized with a long vowel because a root following *tele-* never undergoes epenthesis. This fact serves as further motivation for considering *tele-* to be a Class I prefix.

3.3. LEXICAL STRATIFICATION. It should now be apparent that epenthesis in /sC/ clusters is related to morphology. This relationship between phonology and morphology can adequately be captured by arranging the classes of prefixes into two morphological strata; Class I prefixes become affixed in Stratum I, and Class II prefixes in Stratum II. According to this analysis, epenthesis applies at any point in the derivation in which a consonant has been stranded, that is, where it cannot be incorporated into a legitimate syllable.

Recall that according to Harris' analysis (1987:108-110), epenthesis occurs only at the word level. But in order to explain word-medial epenthesis, epenthesis must apply in strata prior to the word level. However, Harris' observation is valid in the sense that in all lexical items possessing a word-internal epenthetic /e/, the affixes are attached to roots which are unbound morphemes.

One minor rule which needs to be formalized is one which disallows geminate consonants:

24. C C [Domain: any]

TABLE 3. *Sample derivation*

	CLASS I	CLASS II
Stratum I	[pro][scribir]	[pre][scolar]
AFFIXATION OF CLASS I PREFIXES	[proscribir]	—
SYLLABIFICATION		*σ σ σ
EPENTHESIS	—	
Stratum II		
AFFIXATION OF CLASS II PREFIXES	—	[preescolar]
SYLLABIFICATION	—	

This rule is needed in order to eliminate the /s:/ formed when [trans] is affixed to roots beginning with /s/, for example [trans][spirar] → 'transpirar,' (*transspirar).¹¹ Structure preservation should ideally prevent consonant gemination from ever arising in the lexicon, given that geminate consonants are not lexically contrastive in Spanish. However, the concatenation of identical consonants transmorphemically seems to be an exception that may be allowed to arise, but which then must immediately be degeminated.¹² Note that geminate vowels are marginally contrastive in Spanish, ('lee' vs. 'le'), and therefore a word such as 'preestablecido'

¹¹This same rule will apply to *des-*, and applies postlexically across word boundaries: There is never a long /s:/ in 'vamos si quieres.'

¹²For a similar case in English see Borowsky 1986:118-123.

may conceivably leave the lexicon with a geminate vowel, which in turn may be optionally degeminated via rule 23.

3.4. FURTHER MOTIVATION FOR THE CLASSIFICATION OF PREFIXES. Up until now, the sole motivation for dividing the prefixes into two groups has been whether or not the root to which they are affixed experiences epenthesis. However, there are other factors which provide further evidence that such a grouping is correct. It has been observed that the derivational processes that apply in later strata, as well as the affixes that are attached in later strata, are more productive and more semantically transparent (Kiparsky 1982:8; Mohanan 1986:56-58). It is evident that Class I prefixes are semantically opaque and synchronically unproductive in contrast to the semantically transparent and productive Class II prefixes. Of course, the correlation between epenthesis and any given prefix is central to the present study, but these additional factors provide supporting justification for the groupings.

Semantic transparency refers to whether or not linguistically naive speakers associate a specific meaning with a prefix. A prefix such as *pro-*, as in 'proscribir,' would be considered semantically opaque, while the prefix *post-*, as in 'postescolar,' would be transparent. Furthermore, the meaning of a word beginning with a transparent prefix is usually the sum of the meaning of the prefix plus that of the root (post + escolar = 'after-school'). The same does not normally hold true for words with opaque prefixes, (pro + scribir ≠ 'to write in place of'). It also seems to be the case that semantically transparent prefixes presuppose an unbound morpheme as a root, while opaque prefixes do not (Goldsmith 1990:260). A comparison of the words in tables 1 and 2 makes this extremely evident.

The notion of the productivity of a prefix is closely related to that of semantic transparency. A prefix may be considered productive if its meaning combines with the meaning of the root to yield a predictable meaning for the entire word (Aronoff 1976:38-45; Hooper 1976:46). Semantically transparent prefixes are more likely to be employed productively in coining new words than semantically opaque prefixes.

3.5. OTHER PREFIXES. One thing that complicates this lexical analysis is the existence of prefixes such as *in-*, *sub-*, *re-*, *des-*, and *yugo-*, which in some cases appear to belong to Class I, and at others to Class II.

TABLE 4. Prefixes belonging to both Class I and Class II

inspirar	'inspire,' 'inhale'	espirar	'exhale'
inestable	'unstable'	estable	'stable'
inesperado	'unexpected'	esperado	'expected'
inscrito	'inscribed'	escrito	'written'
subscribir	'subscribe'	escribir	'write'
subespecie	'subspecies'	especie	'species'
subestación	'substation'	estación	'station'
substancia	'substance'	—	—
substrato	'substratum'	estrato	'stratum'
subestimado	'under- estimated'	estimado	'esteemed'
reestreno	'second debut'	estreno	'debut'
reescribir	'rewrite'	escribir	'write'
resplandor	'brilliance'	esplendor	'brilliance'
reestructurar	'restructure'	estructurar	'structure'
restablecer	'reestablish'	establecer	'establish'
desespañol- izar	'despanishize'	españolizar	'spanishize'
desestimar	'belittle'	estimar	'esteem'
desesperanza	'hopelessness'	esperanza	'hope'
descampar	'stop raining'	escampar	'stop raining'
yugo(e)slavo	'Yugoslavian'	eslavo	'Slav'

The most obvious way to account for the /e/ vs. /θ/ alternation that follows these prefixes would be to assume that each of these prefixes is, in actuality, two distinct prefixes with the same phonetic shape. Take *des-* as an example. The word 'descampar' would begin with the Class I prefix *des-*₁, which would explain why there is no epenthetic /e/ in 'descampar.' 'Desestimar,' on the other hand, would be composed of the Class II prefix *des-*₂, hence the epenthetic /e/ that follows.

It could be argued that allowing these prefixes to become attached in both strata is merely an ad hoc way of accounting for their unpredictable behavior in regards to epenthesis. However, the semantic transparency and productivity of these prefixes in relation to their roots provides an independent motivation for such a division (Mohanan 1986:56-58). Indeed,

epenthesis occurs when there is a synchronically clear meaning associated with the prefix.

Consider the prefix *in-*. As a Class I prefix, *in-*₁ is not associated with epenthesis (e.g. *inscrito*, *inspirar*). Etymologically *in-*₁ is the locative, but that meaning is not apparent, or at most is obscure to the linguistically naive speaker. On the other hand, the most transparent meaning corresponding to *in-* is roughly 'not.' Roots that follow *in-* with this meaning experience epenthesis (e.g. *inesperado*, *inestable*), and so this prefix will be identified as *in-*₂.

Re- is similarly divided. The *re-*₁ of 'resplendor' has no synchronically evident meaning, and as expected, there is no indication of epenthesis in the way of a geminate 'e' in the spelling, or an optionally long vowel in the phonetic realization. Words with the Class II prefix *re-*₂, conversely, may evidence both of these properties, as can be seen in 'reestructurar.' Here, the meaning *re-*₂ ('again') is synchronically transparent, and *re-*₂ prefixation is extremely productive.

An analysis of *sub-* also demonstrates the need to posit two distinct prefixes.¹³ The meaning of the prefix in 'substancia,' and 'subscribir' is plainly opaque to the common Spanish speaker and belongs to *sub-*₁. In like manner, 'subestimado,' and 'subespecie' follow the criteria for being affixed in Stratum II, hence they are examples of *sub-*₂ which means 'inferior to' or 'under.'

Further motivation for the division of *sub-* into two prefixes is provided by Morgan (1984:75-76). In his study, native informants consistently syllabified the word 'sublevar' (which contains the semantically opaque prefix *sub-*₁) as σ [su σ [ble σ [var. The word 'sublunar,' which begins with the transparent prefix *sub-*₂, on the other hand, was syllabified σ [su σ [blu σ [nar by some, and σ [sub σ [lu σ [nar by others. However, all the informants who originally gave σ [su σ [blu σ [nar as the syllabification changed their minds in favor of σ [sub σ [lu σ [nar once they realized that *sub-* meant 'under.' The words 'sublevar' and 'sublunar' have similar phonological and morphological structures (*sub-* + root). Therefore, what appears to be responsible for the differential syllabification is the semantic opacity or transparency of the prefix.

¹³Both Hualde (1989:822), and Morgan (1984:75-6) demonstrate the need for *sub-* to be affixed in two strata.

There is, of course, one case in which it would be difficult to assume that two prefixes share the same phonetic shape. In order to explain the optional appearance of /e/ in 'yugo(e)slavo,' *yugo-* must be allowed to attach in either of the two strata. I concede that multiple strata affixation here is clearly ad hoc. Perhaps this inconsistent treatment is due to the marginal status of *yugo-* as a prefix. It is possible that speakers who are aware of the existence of the word 'eslavo,' consider *yugo-* a prefix, and use the epenthésized version, while others do not. A more plausible explanation is that the two forms are merely regional variants. Although the unexpected alternation in 'yugo(e)slavo' remains to be resolved, the fact that 'Yugoslavia' presents no such alternation is not. Given the existence of 'eslavo,' the interpretation of *yugo-* as a Class II prefix is conceivable. In 'Yugoslavia,' however, *yugo-* must be categorized with the Class I prefixes. You will recall that Class II prefixes presuppose a root that is an unbound morpheme; not only is 'slavia' a bound morpheme, but '*Eslavia' is not an extant word.

4. CONCLUSION. The inability of prior analyses to account for epenthesis in word-medial /sC/ clusters, is due to the limitations of the theoretical frameworks in which they were carried out. I hope to have demonstrated that the stratum-concatenation framework of lexical phonology is well suited to resolving the enigma of word-medial /e/ vs. / \emptyset / alternations, and moreover, that the division of the prefixes into classes is not established solely on the relationship of the prefixes to epenthesis, but that such a division has an independent semantic motivation. Finally, the fact that epenthesis occurs morpheme externally explains the anomalous nature of epenthesis in regards to syllable structure.

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THE SEMANTICS OF PERIPHRASTIC CAUSATIVES IN KHMER

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1. INTRODUCTION. Khmer, or Cambodian, an Austro-Asiatic Mon-Khmer language of Southeast Asia has a productive periphrastic causative system which is characterized by rich syntactic and semantic patterning.¹ The key element in the periphrastic causatives is the verb **?aoy** which occurs in a serial verb construction with any of a number of other verbs to signal various shades of causative meaning such as 'force', 'tell', 'suggest', 'request', and 'want'. The verb **t^hwɔː**, for example, occurs commonly and encodes a neutral kind of causation, at least from the viewpoint of English.

1. k^hnom t^hwɔː ?aoy mora: mɔːl siwphəw
I do/make --- Mora read book
'I made Mora read the book.'

The Khmer periphrastic causative system has two formal features that correlate in an interesting way with semantic factors. The first involves the relative sequencing of **?aoy** and the Causee noun phrase. As in example 1, **?aoy** often precedes the noun phrase which encodes the Causee. However, the opposite sequence sometimes occurs as well, always with semantic consequences:

¹The basic syntax of Khmer is SVO. I would like to thank my informant, Mr. Sok Huor Chea, a school teacher in Phnom Penh before the time of Khmer Rouge domination, for his patience and insights.