STRESS IN TWO-SYLLABLE AND THREE-SYLLABLE WORDS
IN SEOUL DIALECT

by

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DEDICATION

This thesis is dedicated to the author's parents

Mr. and Mrs. Myung Whan Ahn.

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1. Introduction

1.1. Review of the Literature

Studies carried out on the prosodic features of English have brought fruitful results. In recent years increasing attention has been devoted to the complex linguistic problems of stress in English, and yet the complexities and the elusiveness of stress make difficicult the interpretations of investigations that have been carried out. However, compared to work done in English, studies on the prosodic features of Korean are still in the beginning stages.

The concept "stress" has been defined by various descriptive labels such as loudness, prominence, sonority, intensity, energy, volume, force, effort, etc. Concerning these labels of stress, Wang (1962:20) states that 'the labels have been traditionally used with little regard for precision and measurability' of stress. However, stress is regarded by most authorities as the force of articulation with which a syllable is uttered.

Jones (1950, 2:137) states that 'the force with which a syllable is pronounced is called stress. This force consists chiefly of pressure from the lungs...' and 'the term "stress" refers only to the degree of force of utterance...' (1956:246). For Bloomfield (1933:110, 90), stress, '---that is, intensity or loudness---consists in greater amplitude of sound waves,' and 'consists in speaking one of these syllables louder than the other or others.' Jones (1956:245) looks upon stress as an articulatory gesture, but he too insists on 'the objective impression of loudness.' However, Jones' definitions of stress, intonation, and prominence are quite clear, and his subjective evaluations of their acoustic correlates have been substantiated by psycho-acoustic and acoustic experiments.

Bolinger (1965:21) is quite careful to select the terminology in which

stress is explained, stating 'I shall refer to intensity, the physical term for amplitude of sound waves, rather than loudness, the psychological impression that varies directly with amplitude, because the experiments are based on measurements of intensity.'

Huh (1965), too, defines stress as a strong force of utterance requiring the energetic action of all speech organs. He also sees that because of the energetic action, the speaker can recognize the difference between the strongly articulated sound and the weak one. But from the listener's stand point, it is quite ambiguous to distinguish stress solely by this action. He agrees with Bolinger (1958) on the point that stress accent always occurs simultaneously with the pitch accent. Contrary to this stand is the position of Jones (1956:247): 'a hearer can distinguish by ear and a speaker can distinguish by sensation quite a number of degrees of stress, say four or five.'

Trager and Bloch (1942:35) describe stress as 'degrees of loudness' and Pike (1947, 2:250) considers that it is 'a degree of intensity upon some syllable which makes it more prominent or louder than an unstressed syllable.' Bolinger (1958:111) states that 'the idea that stress may depend on pitch is not new', and assumes stress to be a part of pitch, as a result of John Muyskens' experiment in 1931. However, Pike (1947, 1) and Jones(1956) oppose this argument by pointing out instances in which strong stresses are found in low-pitched syllables in a language. Hill (1958:27) also distinguishes stress from pitch stating that since a partial correlation between pitch and stress is not absolute, 'it remains necessary to treat pitch and stress independently.'

Bronstein (1960:244) assumes, 'stress is part of each syllable we speak, and every syllable possesses some degree of it,.....' His opinion on the

relationship between stress and pitch is that, since they are correlated with each other, a heightening or lowering of one is usually accompanied by a change in the other. Rejecting the theory that stress is associated with acoustic phenomena, Bronstein (1960:262) states that 'stressed utterances do not necessarily possess....longer durations, greater intensities, nor special vocal qualities,' and '....stress can be analyzed more accurately by a study of muscular motion than in terms of any single acoustic phenomenon,' with the indications of studies done by Ladefoged and others (1958). But Pike (1947, 1: 15), discussing an analysis of stress quite different from Bronstein's, states that 'the study of the physical basis of accent, or "stress," frequently involves the assaying of the relative importance of frequency, duration and intensity, in producing it.'

Arnold (1957), in the analysis of stress in English words, postulates the systematic distributional correlation between vowel quality and stress categories. His attitude toward stress, which is considered as an articulatory force in general, 'articulatory force is frequently a difficult and sometimes, an impossible yardstick for the recognition of linguistic stress in English.' (1957:440-441). But in his study this statement is merely concerned with the weak stress, not the strong one.

The opinion of Newman (1946:171) on intensity theory correlated with stress occurrence is that 'altho force of articulation is the primary medium thru which the stress phonemes are externalized, this phonetic feature is not the exclusive medium of stress.'

Chomsky (1966) considers that the stress levels heard by the careful phonetician have no physical basis at all. Since the phonetic contour is largely an acoustic reflection of the syntactic structure, it follows that any one who understands an utterance should be able to predict the phonetic contour

by rules that constitute part of his linguistic competence.

Chomsky and Halle (1968) have shown that the cyclical phonologic rules assign a set of stress degrees to the vowels of a word or phrase. The stress levels that are assigned to a word are a function of the phonemic structure of the word, its syntactic function, and the constituent structure of the derived phrase marker. They also suggest that stress gradations can readily be explained if it is assumed that, as a universal principle, rules assigning primary stress require stress weakening in all previously stressed syllables.

It is known that English has complex prosodic contours involving many levels of stress and pitch and intricate processes of vowel reduction. In general, the phonetic shape of a complex unit is determined by the inherent properties of its parts and the manner in which these parts are combined, and similar rules apply to units of different levels of complexity. This suggests a general principle for the application of rules of the phonological component, namely, the principle of the "transformational cycle." With this device, Chomsky and Halle have tried to solve the question of how the rules of the phonological component apply to the surface structure to determine the phonetic form of the utterance they represent.

There were no infallible rules for determining which syllable of a word should be stressed before Chomsky and Halle's stress rules (1968) were demonstrated. But somehow, rules that govern stress occurrence seem to be still in the experimental stage.

Carrell and Tiffany (1960) believe that the exact physical or acoustic nature of stress has not yet been explained. When a word or sound is stressed, its acoustic energy is increased so that it "stands out." The factors which contribute to the prominence of a syllable are to be found among the variables of pitch, quality, loudness and duration.

It has been found that different syllables of various languages have different degrees of loudness. English is a language in which stress differences are a basic and significant structural device, in contrast to Korean, where stress differences exist, but are not significant. English builds all its metrical patterns on stress differences. A syllable receives stress when it is pronounced with such force as to give it more importance than the surrounding syllables, and to make it stand out among them.

Though several degrees of stress may be perceived when a word is spoken in isolation, at least two degrees of stress, stressed versus unstressed, must be discerned when words are spoken in fluent speech. Thus, investigations on the establishment of two contrasting categories of stress, strong and weak, have been carried out by linguists, and further linguistic studies have set up stress phonemes in English.

Sweet (1892) differentiates the degrees of stress in English as strong, half strong, and weak. Jespersen (1907) suggests four levels of stress. According to Jones (1950, 2:138), it is possible to distinguish four or five degrees of stress, but he limits the numbers because 'it is generally sufficient to distinguish two degrees only---strongly stressed and weakly stressed,' and 'sometimes it is necessary to distinguish an intermediate degree, medium or secondary stress.' Jones seems to be vague about the exact numbers of degrees of stress, but actually he differentiates three degrees.

Trager and Smith (1957) have four degrees of stress including two intermediate categories between strong and weak stresses. They give a clear cut explanation of the degrees of loudness of a syllable. It is not, they observe, the absolute loudness of a syllable which is considered characteristic, but the loudness relative to other syllables in the same utterance. They also present four stress phonemes, each of which, like other phonemes, has a number

of non-distinctively different allophones.

Trager and Bloch (1942) assume that the degree of stress depends primarily on the force with which air is expelled from the lungs, and secondarily on the muscular tension with which the articulation is performed. They (1941) postulate four stress phonemes and demonstrate the high degree of correlation between stress and vowel quality in English words. They try to investigate the distributional relationships between stress phonemes, but the ambiguity may arise that 'medial stress....is often distributed in relation to the loud stress in a fairly regular way; but there are many exceptions to this regularity.' (1941:227).

Hill (1958:16) justifies his four-stress system in English with this statement: 'since a four-stress system is the general rule and since a four-stress system is in accord with the arrangement of contrast elsewhere in the pattern of sounds, the four-stress system is to be regarded as the normal one, and any three-stress system is a departure from the normal.'

Newman (1946) investigates three stress phonemes, heavy, middle and weak, together with two sub-categories of each phoneme that are dealt with by distributional relationships. However, the interplay of vowel quality with stress phonemes is not investigated by him. It is considered that Newman's stress system is somewhat similar to that of Jones.

There are languages in which length, stress, and pitch play no part in making the meaning difference of a word. From the structural point of view, the stress feature of English is different from that of Korean. Stress is not a primary phonemic feature in Standard Korean but has a secondary role to emphasize the meaning of a word. According to Lee (1955), stress functions as (1) the expressive or the emphatic stress and sometimes, (2) the grammatical or the lexical stress. He also states that only in the Kyong Sang Dialect, the

stress, strong or weak, distinguishes meaning differences between words, and ia an emic feature. In fact, Lee is referring to the pitch accent of the Kyong Sang Dialect, instead of the stress accent; Huh (1965) and others consider the Kyong Sang Dialect a tone language, having a level-pitch register system with three tonemes.

Commenting on stress features in Korean, Kim (1963:45) remarks that 'even though the stress accent can be found among several dialects, we are not fully conscious of this feature, so that, together with the pitch accent, stress in Korean does not function even as an etic feature.' Lee (1955) and other scholars concurring with the above statement explain that the speakers of Hamkyong Dialect, especially those who live in the Province of South Hamkyong, have stress accent on the first syllable of a word in the sequence of an utterance.

Huh (1965) describes the placement of stress. In general, stress occurs on the beginning syllable in Korean; sometimes stress moves and the second syllable takes stress. He looks upon the phenomenon of stress occurrence in speech as an obligatory feature and explains that '....when we speak, it is difficult to pronounce with equal level or degree of energy and/or force, and it often happens that some sounds are produced with the stronger force than the others in the sequences of the utterances.' (1965:110).

Having agreed with the opinion that stress is not an emic feature in Korean, Martin (1951:525) says '....if there is, contrary to my view, a phoneme of stress, it belongs with the pitch components to the intonation system.' It is quite certain that those linguists such as Huh, Lee, Kim and Martin, have similar view points; the relative difference in force between stressed and unstressed syllables is not sufficient to make stress function as a distinctive feature, they would concur.

Lee (1955) considers that the occurrence of stress and the vowel length are so closely correlated with each other that any syllable containing a relatively long vowel takes the strong stress. It is true that the length feature in producing a sound or a syllable is one of the critical factors in determining stress occurrence in Korean. The length or the quantity of a sound is the length of time during which it is held continuously in a given utterance.

Since the feature of stress in Korean has correlation with the relatively long vowel, vowel length is discussed in brief. The vowels of Korean are relatively long or short. Long vowels are on the whole twice as long as short ones, impressionistically speaking. These cannot be analyzed as double vowels in Korean.

Hockett (1942:11) observes vowel length as a phonemic feature in English, explaining that 'probably there are ten vowel phonemes and two accentual phonemes, shortness and length, so that every syllable nucleus is a vowel phone plus an accentual phone.'

In vowel phonemes of Korean, the length appears as an emic feature so that a great number of minimal pairs are found in ordinary speech and also in the dictionaries as written forms. If it is not regarded as a distinctive feature, the necessity arises of dealing with large numbers of homonyms.

Admitting the contrasting feature of long and short vowels in Korean, Martin (1951:522) states that 'it is a morphophonemic fact that variable vowel length usually occurs only within the boundaries of a morph; vowels which are long for all speakers usually include a morph boundary.' For him vowel length in Korean seems variable for a given utterance, and he indicates it with a circumflex accent. He (1954) limits the number of words which are in complementary distribution in vowel length to thirty or forty, but actually far more

than those numbers of words are minimally contrasted in length.

Both Huh (1965) and Kim (1963) have the same opinion of the feature of vowel length. They believe that vowel length is emic only in the Central Dialect, spoken in the region centering the Seoul area. This dialect has relatively long and short vowels and they are in complementary distribution. Thus, in the Central Dialect, vowel length is used for distinguishing two morphologically unrelated words such as $[$ kul $]$ 'oyster' : $[$ ku:l $]$ 'cave', $[$ kə-li $]$ 'street' : $[$ kə:-li $]$ 'distance'. The long vowel is different from the double vowel in that the double vowel is not the pure lengthening of a sound but a continuation of producing two same vowels which have a syllable boundary between them. For instance, in English, $[$ beibiiʃ $]$ 'babyish' and in Korean $[$ ko-on $]$ 'high temperature'.

The distinction of degrees of vowel length varies among authorities: for Choi (1959) vowel length consists of three degrees, long, short, and middle; others posit two degrees, long and short.

Kim (1963) indicates that in recent years many Korean speakers have neglected to lengthen the supposedly long syllables in speech so the length feature becomes insignificant in distinguishing the lexical meaning. Even though he agrees that both stress and the length features can contribute to minimizing homonyms in languages, he strongly insists that even without stress accent or vowel length, no difficulty in understanding words arises because in the stream of speech the specific meaning of a certain word among homonyms can be understood within the context. Here this author disagrees with Kim's easy-going attitude and overall suggestion on the problems of homonyms for the reasons that any language that belongs to a specific race or country is not expected to be spoken only by the native speakers of that particular language. The cultural boundaries are getting gradually broken up and the world is being

considered as one large community or unit. If, for example, lingua franca is going to meet this same problem of homonyms, there is no doubt that the difficulties of communication may bring confusion and delay on every aspect of world affairs.

Vowels have characteristic functions in a language. They are syllable carriers and through the vowels of the language, vocal resonance, quality, intensity, and pitch are all heard. Pike (1947, 2) says vocoids under heavy stress are likely to be longer and clearer and perhaps a bit more glided than the same vocoids without stress. Of course, the stressed vowels differ in duration when they appear in different position in the syllable constructions of words or utterances: that is, they have positional variants.

Since both length and intensity are concomitant phenomena in the sound system, Trnka (1968) feels that the long vowels are always tense and the short ones always lax. As tensity is a feature characteristic of relatively long vowels in Korean, the stressed vowels in English borrowed words are very often pronounced as long vowels by the speakers of Korean: thus, ['bʌtə] 'butter' becomes ['b'a:-ta] and ['bʌs] 'bus' becomes ['b'ə:-sɨ].

An utterance in actual speech is always more than merely a succession of consonants and vowels following one another in a certain order. The given utterances containing more than one vowel exhibit marked differences in loudness, concentrated on the syllable carriers. These differences in loudness are found to be consistent in their relative strengths, and their location is seen to be contrasted within the systematic possibilities of variations.

1.2. Statement of the Problem

Though the feature of stress in the sound system of Korean is indicated by linguists such as Huh (1965), Kim (1963), and Lee (1955), no further study has been carried out because it functions as an etic feature in Korean phonology. The linguists agree with the idea that it is not worthwhile nor sensible to deal with a non-distinctive feature. Huh (1965) says it is a matter beyond consideration. This study precipitates some argument on considering the value of the investigation of stress which takes a minor part in the prosodic features of Korean. Assisted and encouraged by Lee (1955), the author investigated the stress occurrences in the two-syllable and the three-syllable words in Seoul Dialect, and drew some fruitful, though tentative, results.

This thesis is an attempt to analyze all the possible syllable structures of the two-syllable and the three-syllable words, and to investigate the systematic stress rules derived from the analyses of words of Seoul Dialect through this pilot study. The author had an interest in the stress phenomenon, particularly in Seoul Dialect, and wondered whether its occurrence on a syllable is correlated with the individual segment of the syllable components or not. If it can be found that stress occurs on a certain syllable as a common rule, there must be some factors that condition the occurrence of stress. It was observed that stress moves to other positions when there exists a syllable with a certain syllable component in the structure.

When a syllable, especially the first syllable, carries a relatively long vowel, stress always occurs on this syllable. When a syllable includes an aspirated stop, stress moves to another syllable conditioned by the

characteristic phonetic nature of the segment itself. In this respect, all the phonological conditioning factors that restrict the occurrences of stress in two-syllable and three-syllable words of Seoul Dialect were analyzed.

So far not much effort has been put on the prosodic features of Korean. The author faced serious difficulties in finding references which could assist and guide this investigation, and also to find the appropriate informants, speakers of Seoul Dialect.

1.3. Justification of the Study

Though it appears that stress in Korean is etic and not emic, it is also apparent that Korean speakers produce it and distribute it in a characteristic way and that it must be accounted for in any thoroughgoing description of how Korean is spoken. It is one of those features that must be mastered by anyone who wants to control the phonology of Korean with anything like a Korean accent, and, conversely, the Korean stress habit is one of those features that seem to handicap Koreans severely and persistently in learning English. This study then, fills a gap in the description of Korean and at the same time provides information that can be of great practical value to learners of Korean and to Korean learners of other language, particularly English.

1.4. Method

Korean syllables can take the canonical forms V, CV, VC, CVC. Initial C may be one of 19 consonants, V may be one of 10 vowels or 12 diphthongs, and final C may be one of 7 consonants. Consonant clusters in a syllable are not permitted, but the stops and / s / may be geminated.

Thus, the following four types are possible to make a single syllable in

Korean.

$$C_i = 0, \quad C_f = 0 \quad : \quad V \quad \text{Example} : \quad /\,i\,/ \quad \text{'tooth'}$$

$$C_i = 0, \quad C_f = 1 \quad : \quad VC \quad " \quad : \quad /\,ip\,/ \quad \text{'mouth'}$$

$$C_i = 1, \quad C_f = 0 \quad : \quad CV \quad " \quad : \quad /\,na\,/ \quad \text{' I '}$$

$$C_i = 1, \quad C_f = 1 \quad : \quad CVC \quad " \quad : \quad /\,\check{c}ip\,/ \quad \text{'house'}$$

where C_i refers to the initial consonant and C_f the final consonant.

From the above syllable types, the total numbers of syllables that might be calculated theoretically are,

$$
\begin{aligned}
V \qquad & \qquad\qquad\qquad 22 \\
VC \qquad & \quad 22 \times 7 = 154 \\
CV \qquad & \quad 19 \times 22 = 418 \\
CVC \qquad & \quad \underline{19 \times 22 \times 7 = 2926} \\
& \qquad\qquad\qquad 3520
\end{aligned}
$$

But the syllables that are practically used are far less than 3,520 because several phonemes have distributional limitations in syllable constructions (Huh, 1965).

Theoretically, 16 syllable types in the two-syllable words and 62 syllable types in the three-syllable words could be derived from the combinations of four canonical forms, V, CV, VC, CVC, of a single syllable.

Lists of two-syllable and three-syllable words actually occurring in Korean were prepared by the author from the theoretical inventory. These lists were given to informants who were asked simply to read the items, one at a time, each in isolation, to the tape recorder. The informants were kept naive as to the purpose of the recording and as to the author's interest in the feature of

stress in their pronunciation of the words in the lists. The three informants were all speakers of Seoul Dialect, and only one has been in the United States for more than a year. They were Mr. So Kwang Choi, PhD Candidate in Chemical Engineering at Kansas State University, his wife, Hyun Ja Choi, and the author's sister, Mrs. Chung Hyun Ahn Oh who resides in New York.

By listening to the tapes the author was able to determine which syllables carried the stress and to mark the manuscript accordingly. Stress placement was then correlated with vowel length and preceding and following segmentals. On this basis, the following tentative stress criteria were set up:

1) stress occurrence correlated with a relatively long vowel in the first syllable.

2) Stress occurrence associated with segmental phonemes, /p^h, t^h, $\check{c}^h$, k^h/.

3) Stress occurrence correlated with fricatives, / s, h /.

4) Stress occurrence correlated with geminated stops, / p', t', č', k' /.

5) Stress occurrence correlated with / p, t, k / in a syllable-final position.

6) Stress occurrence correlated with nasals / m, n, ŋ / and a lateral / l /.

Stress that occurs on the relatively long vowel is a simultaneous component in phonology of Seoul Dialect. Since the vowel length has an important role in stress occurrence in Seoul Dialect, all the vowels were examined, and it was found that any vowel might have either relatively long or relatively short vowel length. It was also found that in general a long vowel could occur only in the first syllable of a single word, and in a compound word when the free or bound form precedes the syllable which has a length feature, the long vowel loses its length and becomes short.

In English a vowel in an unstressed syllable is often reduced to a kind of "murmur", or a schwa. This feature of vowel reduction is mostly conditioned by the occurrence of strong stress on a certain position of a syllable. Unlike English schwa phenomenon, no vowel reduction occurred in the unstressed syllables in Seoul Dialect.

In the following phonemic charts, Korean consonants and vowels are classified according to their point and manner of articulation.

Chart 1. Consonants

		Labial	Dental	Palatal	Velar	Laryngeal
Stops	Lenis-unaspirated	p	t	č	k	
	Aspirated	p^h	t^h	$č^h$	k^h	
	Geminated	p'	t'	č'	k'	
Fricatives	Lenis-unaspirated		s			h
	Geminated		s'			
Nasals		m	n		ŋ	
Lateral			l			
Semivowels		w		j		

Chart 2. Vowels

	Front		Central	Back
High	i	y	ɨ	u
Mid	e	ʊ	ə	o
Low	æ		a	

2. Results

2.1. Stress Findings in Two-Syllable Words

Two-syllable words make up a majority of the Korean vocabulary. In the two-syllable words, sixteen syllable types have been analyzed for stress occurrence and its conditioning factors.

In stating the results of the analyses of stress occurrences hereafter, the consonants of Korean were dealt with in categories for the sake of convenience. The initial consonants were grouped into six, or sometimes seven, categories according to their manners of articulation. The final consonants were categorized into two groups: / p, t, k / and / m, n, ŋ, l /. The syllables containing relatively long vowels were dealt with under Section (b).

The stress marker was indicated on the upper left-hand side of a syllable, " ' ". The symbol " : " was used to indicate the relative length feature. The syllable boundary was marked with " - ".

A. Syllable Type 1, V-V.

(a)	/ a-'u /	'younger brother or sister'
	/ o-'i /	'cucumber'
	/ a-'i /	'child'
	/ u-'a /	'elegance'
	/ i-'ə /	'continuing'
(b)	/ 'i:-ʊ /	'the exception (of)'

The stress occurrences in V-V were observed on the second syllable, but when the first syllable V- had the length feature, its occurrence was found on the first syllable. The observed stress patterns in V-V are V-'V and 'V:-V.

B. Syllable Type 2, V-CV.

    1) V-CV where C_i is p, t, č, or k.

        (a)   / æ-'pi /   'father'

                 / ə-'pu /   'fisherman'

                 / ə-'ti /   'where'

                 / u-'tæ /   'uptown'

                 / ə-'če /   'yesterday'

                 / i-'če /   'now'

                 / a-'ki /   'baby'

                 / ə-'ku /   'fishing implements'

        (b)   / 'e:-pi /   'Look out!'

                 / 'i:-pu /   'two parts'

                 / 'ʊ:-to /   'dissipation'

                 / 'ə:-čo /   'tone of the voice'

                 / 'u:-ču /   'universe'

                 / 'ʊ:-ka /   'one's mother's maiden home'

                 / 'o:-ki /   'pride'

Stress patterns: V-'CV, 'V:-CV.

    2) V-CV where C_i is p^h, t^h, $č^h$, or k^h.

        (a)   / 'ə-p^ho /   'dried slices of fish'

                 / 'æ-t^hi /   'childishness'

                 / 'u-$č^h$a /   'oxcart'

                 / 'u-$č^h$e /   'sending by mail'

                 / 'ok-hi > 'o-k^hi /
                                     'a girl's name'

        (b)   / 'ʊ:-p^hi /   'outer cover'

                 / 'u:-p^ha /   'right wing'

/ 'ɞ:-t^{h}u /   'overcoat'

/ 'i:-č^{h}a /   'the second'

/ 'i:-č^{h}æ /   'brilliance'

/ 'i:-k^{h}ɨ /   'oh!'

Stress patterns: 'V-CV, 'V:-CV.

    3) V-CV where C_i is p', t', č', or k'.

       (a)   / a-'p'a /   'father'

              / o-'p'a /   'a girl's older brother'

              / ə-'t'æ /   'why not?'

              / ə-'č'i /   'how (come)'

              / æ-'k'u /   'one-eyed person'

       (b)   / 'i:-p'ə /   'pretty'

              / 'a:-t'a /   'boy!'

              / 'a:-č'u /   'oh really?!'

              / 'e:-k'i /   'Oh, no!'

Stress patterns: V-'CV, 'V:-CV.

    4) V-CV where C_i is s or h.

       (a)   / 'i-sa /   '(house) moving'

              / 'u-su /   'superiority'

              / 'i-hæ /   'understanding'

              / 'æ-ho /   'tender care'

       (b)   / 'i:-sa /   'director'

              / 'a:-sa /   'starvation'

              / 'i:-hæ /   'gain and loss'

              / 'o:-hu /   'afternoon'

Stress patterns: 'V-CV, 'V:-CV.

5) V-CV where C_i is s'.

    (a)   / o-'s'i /   'Mr. Oh'

           / it-sə > i-'s'ə /   'being existed'

           / it-su > i-'s'u /   'milage'

    (b)   / 'a:-s'i /   'young lady'

           / 'ʊ:-s'i /   'cucumber seed'

Stress patterns: V-'CV, 'V:-CV.

6) V-CV where C_i is m, n, or l.

    (a)   / i-'ma /   'forehead'

           / i-'mi /   'already'

           / a-'ni /   'no'

           / ə-'nɨ /   'which'

           / a-'læ /   'under'

           / i-'li /   'here'

    (b)   / 'a:-mu /   'anyone'

           / 'ʊ:-mo /   'outward appearance'

           / 'o:-nʊ /   'agony'

           / 'i:-læ /   'ever since'

           / 'i:-li /   'a city's name'

Stress patterns: V-'CV, 'V:-CV.

7) V-CV where C_i is j or w.

    (a)   / u-'ju /   'cow's milk'

           / a-'ja /   'ouch'

           / u-'wi /   'a high position'

    (b)   / 'ʊ:-ju /   'trip abroad'

           / 'i:-wi /   'second place'

           / 'o:-wi /   'fifth place'

Stress patterns: V-'CV, 'V:-CV.

In two-syllable words, stress occurs on the first syllable if first syllable contains a long vowel or when second syllable is C_iV where C_i = aspirated stop or fricative (except geminated fricative); otherwise, stress occurs on second syllable. The stress occurrences in V-CV are shown in table 1.

Table 1. Stress Occurrences

in V-CV.

C_i	Stress	
	1st syllable	2nd syllable
p, t, č, k	'V:-CV	V-'CV
p^h, t^h, $č^h$, k^h	'V -CV 'V:-CV	
p', t', č', k'	'V:-CV	V-'CV
s, h	'V -CV 'V:-CV	
s'	'V:-CV	V-'CV
m, n, l	'V:-CV	V-'CV
j, w	'V:-CV	V-'CV

C. Syllable Type 3, V-VC.

        (a)   / ə-'əp /   'fishery'

                / i-'ut /   'neighborhood'

                / a-'ak /   'court music'

                / ə-'ɨm /   'check'

                / ə-'ən /   'so soon'

        (b)   / 'o:-ip /   'debauchery'

                / 'i:-ik /   'profit'

                / 'ə:-ɨm /   'sound of a word'

                / 'i:-im /   'change of post'

In V-VC stress was found on the second syllable, -VC, in general. When V- had the relatively long vowel, stress occurred on it. The derived stress patterns are V-'VC and 'V:-VC.

D. Syllable Type 4, V-CVC.

The stress occurrence in V-CVC was observed under the consideration of the initial and the final consonants of -CVC.

1) V-CVC where C_i is p, t, č, or k and C_f is p, t, or k.

        (a)   / ə-'čok /   'the finny tribe'

                / a-'čik /   'yet'

                / o-'čik /   'only'

                / i-'kət /   'this'

                / u-'kuk /   'patriotism'

        (b)   / 'ə:-put /   'step-'

                / 'i:-tɨk /   'gain'

                / 'ə:-čok /   'language family'

                / 'ŏ:-kuk /   'foreign country'

/ 'u:-pak /   'hail'

Stress patterns: V-'CVC, 'V:-CVC.

  2) V-CVC where C_i is p, t, č, or k and C_f is m, n, ŋ, or l.

      (a)   / a-'pəm /   'father'

               / i-'pul /   'quilt'

               / u-'tɨŋ /   'top grade'

               / a-'tɨl /   'son'

      (b)   / 'o:-pal /   'accidental firing'

               / 'i:-toŋ /   'change'

               / 'i:-čəŋ /   'milage'

               / 'a:-kun /   'our troops'

Stress patterns: V-'CVC, 'V:-CVC.

  3) V-CVC where C_i is p^h, t^h, $č^h$, or k^h and C_f is p, t, or k.

      (a)   / 'i-p^hap /   'boiled rice'

               / 'u-$č^h$æ k /   'stupid scheme'

      (b)   / 'ö:-t^hak /   'one's mother's side'

               / 'u:-$č^h$ɨk /   'right hand side'

               / 'ə:-$č^h$əp /   'His Majesty's record'

Stress patterns: 'V-CVC, 'V:-CVC.

  4) V-CVC where C_i is p^h, t^h, $č^h$, or k^h and C_f is m, n, ŋ, or l.

      (a)   / ö-'p^hal /   'one armed'

               / æ -'t^hoŋ /   'grief'

               / i-'t^hɨl /   'two days'

               / a-'$č^h$im /   'morning'

               / ə-'$č^h$on /   'fishing village'

               / ak-han > a-'k^han /
                          'villain'

(b)　　/ 'iː-pʰal /　　'sixteen'

　　　　　/ 'iː-tʰal /　　'secession'

　　　　　/ 'iː-čʰən /　　'two thousand'

　　　　　/ 'ʊː-čʰul /　　'going out'

Stress patterns: V-'CVC, 'V:-CVC.

　5) V-CVC where C_i is p', t', č', or k' and C_f is p, t, or k.

　　　(a)　　/ a-'t'ɨk /　　　'stunned'

　　　　　　/ u-'t'uk /　　　'high'

　　　　　　/ u-'č'ək /　　　'forcefully'

　　　(b)　No occurrence.

Stress pattern: V-'CVC.

　6) V-CVC where C_i is p', t', č', or k' and C_f is m, n, ŋ, or l.

　　　(a)　　/ ə-'t'ən /　　'what kind of'

　　　　　　/ ʊ-'t'an /　　'isolated'

　　　　　　/ ə-'č'ən /　　'for some reason or other'

　　　(b)　No occurrence.

Stress pattern: V-'CVC.

　7) V-CVC where C_i is s or h and C_f is p, t, or k.

　　　(a)　　/ 'i-sak /　　'an ear (of grain)'

　　　　　　/ 'a-hop /　　'nine'

　　　(b)　　/ 'ʊː-suk /　　'maternal uncle'

　　　　　　/ 'iː-hak /　　'metaphysics'

Stress patterns: 'V-CVC, 'V:-CVC.

　8) V-CVC where C_i is s or h and C_f is m, n, ŋ, or l.

　　　(a)　　/ u-'san /　　'umbrella'

　　　　　　/ ə-'saŋ /　　'fish peddler'

　　　　　　/ i-'sɨl /　　'dew'

/ a-'hɨn /   'ninety'

/ ə-'haŋ /   'glass fish-bowl'

(b)   / 'ʊ:-son /   'grandson (by one's daughter)'

/ 'i:-səŋ /   'opposite sex'

/ 'i:-hal /   'twenty percent'

Stress patterns: V-'CVC, 'V:-CVC.

9) V-CVC where C_i is m, n, or l and C_f is p, t, or k.

(a)   / o-'mok /   'concave'

/ a-'nɨk /   'snug'

(b)   / 'i:-mok /   'public attention'

/ 'o:-lak /   'amusement'

Stress patterns: V-'CVC, 'V:-CVC.

10) V-CVC where C_i is m, n, or l and C_f is m, n, ŋ, or l.

(a)   / ə-'məm /   'housemaid'

/ u-'mul /   'a well'

/ o-'nɨl /   'today'

/ ə-'lɨm /   'ice'

/ o-'lɨn /   'right'

/ i-'laŋ /   'patch'

(b)   / 'o:-mun /   'size five'

/ 'i:-nam /   'south of--'

/ 'ə:-lɨn /   'elderly person'

/ 'i:-lon /   'theory'

Stress patterns: V-'CVC, 'V:-CVC.

11) V-CVC where C_i is j or w and C_f is p, t, or k.

(a)   / u-'juk /   'beef'

/ o-'jat /   'plum'

(b)   / 'oː-jək /   'mistranslation'

/ 'æː-jok /   'love and lust'

/ 'oː-jok /   'disgrace'

/ 'iː-jək /   'double role'

Stress patterns: V-'CVC, 'Vː-CVC.

12) V-CVC where C_i is j or w and C_f is m, n, ŋ, or l.

(a)   / a-'jaŋ /   'coquetry'

/ a-'jən /   'zinc'

/ u-'wəl /   'superiority'

/ æ-'wən /   'appeal'

(b)   / 'ŏː-jaŋ /   'outward appearance'

/ 'iː-joŋ /   'use'

/ 'oː-wən /   'five wən(dollars)'

/ 'iː-waŋ /   'bygones'

Stress patterns: V-'CVC, 'Vː-CVC.

The results of the observations of stress occurrences in V-CVC were
that stress was found, in general, on the second syllable of a word. The
exceptions were found in the syllables which had length feature, and which
contained an aspirated stop or a fricative. Stress occurred on the first
syllable when it had a relatively long vowel. In V-CVC when the syllable-
initial of -CVC was one of the aspirated stops or of the fricatives, and when
the syllable-final was the nasal, m, n, ŋ, or the lateral l, stress remained
on the second syllable of the word. This is probably because of the intensive
sonority in the -V- of -CVC caused by the vibration of the vocal cords
when the segments of C_f were produced. But in the same syllable structure
when the C_i was the same and C_f was one of the lenis stops, p, t, and k,
stress moved to the first syllable, V-. It was also observed that in this

particular case with C_f of p, t, or k, the syllable nucleus of -CVC lost its voicing. For instance, / i-p^{h}ap / became / i-p^{h}a̧p /. The stress placement was correlated with preceding and following segmentals.

Thus, the following stress patterns were derived from the analyses of the above corpuses: V-'CVC, 'V-CVC, 'V:-CVC. The stress occurrences in V-CVC are tabulated in table 2.

Table 2. Stress Occurrences

in V-CVC.

C_i	Stress	
	1st syllable	2nd syllable
p, t, č, k	'V:-CVC	V-'CVC
p^h, t^h, č^h, k^h	'V -CV•p •t •k 'V:-CVC	V-'CV•m •n •ŋ •l
p', t', č', k'		V-'CVC
s, h	'V -CV•p •t •k 'V:-CVC	V-'CV•m •n •ŋ •l
m, n, l	'V:-CVC	V-'CVC
j, w	'V:-CVC	V-'CVC

E. Syllable Type 5, CV-V.

1) CV-V where C_i is p, t, č, or k.

      (a)   / 'pæ -u /   'actor'

                / 'tæ -o /   'ranks'

                / 'ča-a /   'self'

                / 'ko-æ /   'orphan'

      (b)   / 'pæ :-u /   'spouse'

                / 'tæ :-a /   'absolute ego'

                / 'tæ :-ʊ /   'outgoing'

                / 'ko:-ə /   'ancient language'

Stress patterns: 'CV-V, 'CV:-V.

2) CV-V where C_i is p^h, t^h, $č^h$, or k^h.

      (a)   / t^hæ -'a /   'embryo'

                / t^ho-'ə /   'native language'

                / $č^h$i-'a /   'tooth'

                / $č^h$u-'i /   'shift'

      (b)   / 'p^hi:-a /   'self and others'

                / '$č^h$ə:-u /   'remuneration'

Stress patterns: CV-'V, 'CV:-V.

3) CV-V where C_i is p', t', č', or k'.

      (a)   / 'k'o-a /   'to twist'

      (b) No occurrence.

Stress pattern: 'CV-V.

4) CV-V where C_i is s or h.

      (a)   / sa-'i /   'interval'

                / si-'ə /   'poetic word'

                / ho-'u /   'heavy rain'

(b)   / 'se:-u /   'drizzle'

          / 'si:-ð /   'suburb'

          / 'ha:-o /   'afternoon'

          / 'hæ :-ð /   'abroad'

Stress patterns: CV-'V, 'CV:-V.

5) CV-V where C_i is m or n.

          (a)   / 'mu-a /   'absence of ego'

                   / 'no-ə /   'Russian'

                   / 'nu-i /   'brother's sister'

          (b)   / 'mæ :-u /   'very'

                   / 'næ :-ð /   'couple'

Stress patterns: 'CV-V, 'CV:-V.

6) CV-V where C_i is j or w.

          (a)   / 'jə-a /   'girl'

                   / 'jə-u /   'fox'

                   / 'wa-ə /   'corrupted word'

          (b)   / 'ja:-ð /   'fields'

                   / 'ja:-u /   'night-rain'

Stress patterns: 'CV-V, 'CV:-V.

Generally, stress occurred on the first syllable of CV-V. From the subtypes 2) and 4), the same stress patterns, CV-'V and 'CV:-V were obtained. When the initial consonant of CV- was the aspirated stop or fricative, the syllable held less sonority in -V- of CV-, the syllable nucleus lost its voicing, and stress was given on the following syllable. The occurrences of stress in CV-V are illustrated in table 3.

Table 3. Stress Occurrences

in CV-V.

C_i	Stress	
	1st syllable	2nd syllable
p, t, č, k	'CV -V 'CV:-V	
p^h, t^h, $č^h$, k^h	'CV:-V	CV-'V
p', t', č', k'	'CV -V 'CV:-V	
s, h	'CV:-V	CV-'V
m, n	'CV -V 'CV:-V	
j, w	'CV -V 'CV:-V	

F. Syllable Type 6, CV-CV.

For the observations of stress occurrence, CV-CV was subdivided into six different subtypes and each subtype had six subgroups of C_i of -CV. These combinations brought a total of thirty-six subtypes of CV-CV.

1) CV-CV where C_i of CV- is p, t, č, or k.

(1) p, t, č, or k • V - p, t, č, or k • V.

(a)   / pu-'to /   'nonpayment'

/ to-'po /	'walking'
/ pu-'ča /	'father and son'
/ tu-'kæ /	'cranium'
/ čo-'ki /	'a kind of porgy'
/ ku-'čo /	'structure'

(b)

/ 'pu:-ča /	'wealthy man'
/ 'to:-ku /	'tool'
/ 'tu:-kæ /	'two things'
/ 'čo:-ki /	'an early stage'
/ 'ku:-čo /	'help'

Stress patterns: CV-'CV, 'CV:-CV.

The stress was given on the second syllable. In accordance with the difference between the long and short vowel in the first syllable, stress was found to be changed to the syllable which had the relatively long vowel. For instance, / pu-'ča / 'father and son' became /'pu:-ča / 'wealthy man'.

(2) p, t, č, k · V - p^h, t^h, $č^h$, k^h · V.

(a)

/ 'pæ-t^hæ /	'pregnancy'
/ 'pə-k^hæ /	'crystalized'
/ 'to-p^hi /	'escape'
/ 'ta-$č^h$ə /	'many wives'
/ 'ča-t^ha /	'oneself and others'
/ 'ka-$č^h$i /	'value'

(b)

/ 'po:-$č^h$o /	'sentry'
/ 'tæ:-p^ha /	'heavy damage'
/ 'tæ:-$č^h$u /	'date'
/ 'čæ:-$č^h$a /	'second time', 'again'
/ 'kə:-$č^h$ə /	'one's whereabouts'

Conditioned by the initial aspirated stops of the second syllable, stress moved to the first syllable of CV-CV. Stress occurred on the first syllable which had the relatively long vowel. The stress patterns derived are 'CV-CV and 'CV:-CV.

(3) p, t, č, k • V - p', t', č' k' • V

    (a)   / pa-'p'i /   'busily'

             / tu-'k'e /   'thickness'

             / ča-'k'u /   'constantly'

             / čo-'k'i /   'vest'

             / ko-'p'i /   'reins'

    (b)   / 'tæ:-k'u /   'reply'

             / 'to:-k'i /   'ax'

             / 'ka:-č'a /   'imitation'

Stress patterns: CV-'CV, 'CV:-CV.

(4) p, t, č, k • V - s, h • V

    (a)   / 'ta-su /   'large number'

             / 'ča-se /   'details'

             / 'ki-sa /   'knight'

             / 'pu-ha /   'follower'

             / 'či-ha /   'underground'

             / 'ki-hu /   'weather'

    (b)   / 'pu:-sa /   'adverb'

             / 'tæ:-sa /   'ambassador'

             / 'ča:-se /   'posture'

             / 'ka:-su /   'singer'

             / 'pæ:-hu /   'rear'

             / 'čə:-ha /   'decline'

Stress patterns: 'CV-CV, 'CV:-CV.

    (5) p, t, č, k • V - m, n, l • V

        (a)   / pu-'mo /   'parents'

                / ta-'li /   'bridge'

                / čæ-'mi /   'amusement'

                / ča-'ne /   'you'

                / ka-'ma /   'oven'

                / ka-'lu /   'powder'

        (b)   / 'po:-mo /   'nursery governess'

                / 'tæ:-lo /   'main road'

                / 'to:-næ /   'within a province'

                / 'čæ:-mi /   'residing in America'

                / 'ka:-ma /   'palanquin'

                / 'kə:-læ /   'dealings'

Stress patterns: CV-'CV, 'CV:-CV.

    (6) p, t, č, k • V - j, w • V

        (a)   / pu-'ju /   'floating'

                / tə-'wi /   'hot weather'

                / ča-'wi /   'self-consolation'

                / ko-'jo /   'quiet'

        (b)   / 'po:-ju /   'possession'

                / 'tæ:-jo /   'summary'

                / 'tæ:-wi /   'captain'

                / 'čæ:-wi /   'period of one's reign'

Stress patterns: CV-'CV, 'CV:-CV.

    Through the analyses of the stress occurrences in the subtype 1) of CV-CV, the general stress patterns, CV-'CV and 'CV:-CV, were derived except

'CV-CV where C_i of -CV was the aspirated stop or the fricative.

2) CV-CV where C_i of CV- is p^h, t^h, $č^h$, or k^h.

(1) p^h, t^h, $č^h$, k^h · V - p^h, t^h, $č^h$, k^h · V

 (a) / p^ha-'$č^h$o / 'plantain'

   / t^hæ-'$č^h$o / 'beginning of the world'

   / $č^h$u-'p^ha / 'amorous glance'

   / $č^h$u-'t^hæ / 'ugly behavior'

   / $č^h$a-'$č^h$a / 'gradually'

 (b) / 'p^hi:-$č^h$a / 'each other'

   / 't^ha:-p^ha / 'overthrow'

   / '$č^h$ö:-$č^h$o / 'the very beginning'

   / '$č^h$ə:-$č^h$i / 'disposal'

   / 'p^ha:-$č^h$i / 'defective goods'

Stress patterns: CV-'CV, 'CV:-CV.

(2) p^h, t^h, $č^h$, k^h · V - p, t, č, k · V

 (a) / p^hi-'pu / 'skin'

   / p^hu-'ču / 'butcher's shop'

   / t^hu-'ča / 'investment'

   / $č^h$u-'to / 'mourning'

   / $č^h$e-'ku / 'body'

 (b) / 'p^ha:-kö / 'destruction'

   / 't^hæ:-to / 'attitude'

   / 't^ha:-ča / 'batter'

   / '$č^h$ə:-či / 'situation'

Stress patterns: CV-'CV, 'CV:-CV.

(3) p^h, t^h, $\check{c}^h$, k^h · V – p' t', $\check{c}'$, k' · V

    (a)   / t^ho-'k'i /   'rabbit'

    (b)   / 't^hʊ:-č'a /   'rejection'

Stress patterns: CV-'CV, 'CV:-CV.

(4) p^h, t^h, $\check{c}^h$, k^h · V – s, h · V

    (a)   / p^ha-'su /   'guard'

            / p^hi-'ha /   'under the skin'

            / t^hæ-'se /   'situation'

            / t^hu-'ha /   'throwing down'

            / $\check{c}^h$i-'su /   'size'

            / $\check{c}^h$a-'hu /   'hereafter'

    (b)   / 'p^hi:-sə /   'summering'

            / 'p^hi:-hæ /   'damage'

            / 't^ha:-su /   'hitter'

            / '$\check{c}^h$æ:-so /   'vegetables'

            / '$\check{c}^h$ʊ:-ha /   'the lowest'

Stress patterns: CV-'CV, 'CV:-CV.

(5) p^h, t^h, $\check{c}^h$, k^h · V – m, n, l · V

    (a)   / $\check{c}^h$i-'ma /   'skirt'

            / p^hi-'lo /   'tiredness'

            / t^ha-'læ /   'bunch'

            / $\check{c}^h$u-'li /   'reasoning'

    (b)   / 'p^ha:-li /   'fly'

            / 't^ho:-lo /   'exposing one's thoughts'

            / '$\check{c}^h$æ:-mu /   'debt'

            / '$\check{c}^h$ə:-ne /   'quilt'

Stress patterns: CV-'CV, 'CV:-CV.

(6) p^h, t^h, $č^h$, k^h · V – j, w · V

    (a)   / p^ho-'ju /   'nursing'

             / $č^h$u-'ja /   'autumn night'

             / $č^h$u-'wi /   'cold'

             / $č^h$a-'wi /   'the second place'

    (b)   / 'p^ho:-ju /   'containing'

             / 'p^ho:-wi /   'siege'

             / 't^hö:-wi /   'abdication'

Stress patterns: CV-'CV, 'CV:-CV.

In the subtype 2) of CV-CV, where C_i of CV- was p^h, t^h, $č^h$, or k^h, the stress occurrences were found on the second syllable.

    3) CV-CV where C_i of CV- is p', t', č', or k'.

        (1) p', t', č', k' · V – p', t', č', k' · V

            (a)   / p'æ-'p'æ /   'skinny'

                 / p'o-'p'o /   'kiss'

                 / t'u-'t'u /   'toot-toot'

                 / č'i-'k'i /   'residuum'

                 / k'o-'k'a /   'pretty dress'

            (b) No occurrence.

Stress pattern: CV-'CV.

        (2) p', t', č', k' · V – p, t, č, k · V

            (a)   / 't'a-ta /   'picks'

                 / 't'ɨ-kæ /   'knitting'

                 / 'k'o-ta /   'twists'

                 / 'k'a-či /   'till'

            (b)   / 'p'æ:-ki /   'subtraction'

                 / 't'æ:-ta /   'makes (a fire)'

$$/ \text{ 'k'æ :-ki } / \qquad \text{'awakening'}$$

Stress patterns: 'CV-CV, 'CV:-CV.

(3) p', t', č', k' · V - p^h, t^h, č^h, k^h · V

(a) $/ \text{ 'k'o-č}^h\text{i } /$ 'skewered stuff'

(b) $/ \text{ 'k'a:-č}^h\text{i } /$ 'magpie'

Stress patterns: 'CV-CV, 'CV:-CV.

(4) p', t', č', k' · V - s, h · V

(a)   / 'č'a-sə /   'after wringing'

        / 'k'a-sə /   'after shelling'

(b) No occurrence.

Stress pattern: 'CV-CV.

(5) p', t', č', k' · V - m, n, l · V

(a)   / 'p'u-li /   'root'

        / 't'a-lo /   'seperately'

        / 'č'a-li /   'worth'

        / 'k'o-ma /   'kid'

        / 'k'i-ni /   'meal'

(b)   / 't'a:-li /   'flattery'

Stress patterns: 'CV-CV, 'CV:-CV.

(6) p', t', č', k' · V - j, w · V

(a)   / 'k'æ -wə /   'to awake'

(b) No occurrence.

Stress pattern: 'CV-CV.

There are not many words with the syllable combinations of the geminated stops and other consonants in Korean. Although the corpuses observed were insufficient in subtype 3) of CV-CV, it can be stated that stress was given on the first syllable. The only exception was the CV-'CV type, where each

C_i of CV- and -CV was the geminated stop.

4) CV-CV where C_i of CV- is s or h.

(1) s, h • V - s, h • V

(a)   / su-'su /   'sorghum vulgare'

/ su-'hæ /   'flood damage'

/ sa-'hŏ /   'emceeing'

/ ho-'ho /   'white'

(b)   / 'se:-su /   'washing (one's face)'

/ 'sa:-hŏ /   'four times'

/ 'hæ:-hu /   'chance meeting'

/ 'hæ:-su /   'seawater'

Stress patterns: CV-'CV, 'CV:-CV.

(2) s, h • V - p, t, č, k • V

(a)   / sa-'to /   'private road'

/ su-'či /   'income and outgo'

/ sa-'ko /   'consideration'

/ hŏ-'po /   'reply'

/ hə-'ta /   'many'

/ ho-'ku /   'meager living'

(b)   / 'sa:-to /   'apostle'

/ 'sa:-ko /   'accident'

/ 'hŏ:-po /   'bulletin'

/ 'hu:-ča /   'the latter'

/ 'ho:-ku /   'population'

Stress patterns: CV-'CV, 'CV:-CV.

(3) s, h • V - p^h, t^h, $č^h$, k^h • V

(a)   / 'su-p^ho /   'foam'

	/ 'sə-k^{h}æ /	'nit'
	/ 'hə-p^{h}a /	'lungs'
	/ 'hu-č^{h}u /	'black pepper'
	/ 'sa-t^{h}æ /	'landslide'
(b)	/ 'se:-p^{h}o /	'cell'
	/ 'sa:-t^{h}æ /	'situation'
	/ 'hæ:-t^{h}æ /	'unicorn-lion'
	/ 'ha:-č^{h}e /	'lower part of the body'

Stress patterns: 'CV-CV, 'CV:-CV.

(4) s, h · V - p', t', č', k' · V

(a)   / sæ-'k'i /   'straw rope'

(b)   / 'se:-k'i /   'three meals'

Stress patterns: CV-'CV, 'CV:-CV.

(5) s, h · V - m, n, l · V

(a)   / sa-'mo /   'longing'

/ si-'nu /   'woman's husband' sister'

/ sə-'li /   'frost'

/ ho-'mi /   'weeding hoe'

/ ha-'na /   'one'

(b)   / 'sə:-mo /   'step mother'

/ 'sə:-li /   'deputy official'

/ 'hæ:-ma /   'sea horse'

/ 'hæ:-li /   'sea mile'

Stress patterns: CV-'CV, 'CV:-CV.

(6) s, h · V - j, w · V

(a)   / sa-'ju /   'private ownership'

/ sa-'wi /   'son-in-law'

/ 'ha:-ja /   'retirement (from the public life)'

/ 'ho:-wi /   'escourt'

Stress patterns: CV-'CV, 'CV:-CV.

5) CV-CV where C_i of CV- is m or n.

(1) m, n · V - m, n, l · V

(a)   / mu-'mi /   'tasteless'

/ ma-'lu /   'floor'

/ na-'mu /   'tree'

/ na-'li /   'lily'

/ no-'læ /   'song'

(b)   / 'mæ:-mi /   'locust'

/ 'mi:-læ /   'future'

/ 'næ:-mu /   'home affairs'

/ 'nu:-na /   'boy's older sister'

/ 'na:-li /   'sir'

Stress patterns: CV-'CV, 'CV:-CV.

(2) m, n · V - p, t, č, k · V

(a)   / mo-'tu /   'all'

/ mo-'ča /   'hat'

/ ma-'ku /   'carelessly'

/ na-'pi /   'butterfly'

(b)   / 'ma:-pu /   'footman'

/ 'mo:-ča /   'mother and son'

/ 'ma:-ku /   'horse equipment'

/ 'no:-pi /   'travel money'

/ 'næ:-čo /   'one's wife's help'

Stress patterns: CV-'CV, 'CV:-CV.

(3) m, n · V – p^h, t^h, č^h, k^h · V

    (a)   / 'mo-p^{h}i /   'fur'

            / 'ma-č^{h}i /   'as if'

    (b)   / 'ma:-č^{h}a /   'carriage'

            / 'na:-p^{h}o /   'arresting'

            / 'na:-t^{h}æ /   'laziness'

            / 'na:-č^{h}e /   'naked body'

Stress patterns: 'CV-CV, 'CV:-CV.

    (4) m, n · V – p', t', č', k' · V

    (a)   / mi-'k'i /   'bait'

    (b)   / 'mæ:-k'i / 'every meal'

Stress patterns: CV-'CV, 'CV:-CV.

    (5) m, n · V – s, h · V

    (a)   / 'mo-si /   'ramie fabric'

            / 'mi-so /   'smile'

            / 'na-sa /   'screw'

            / 'no-sæ /   'mule'

            / 'mo-hæ /   'a plot to do harm'

    (b)   / 'mo:-si /   'certain time'

            / 'mi:-su /   'unconsummated'

            / 'mæ:-hð /   'each time'

            / 'no:-hu /   'one's old age'

            / 'næ:-hæ /   'inland sea'

Stress patterns: 'CV-CV, 'CV:-CV.

    (6) m, n · V – j, w · V

    (a)   / 'mu-wi /   'idleness'

            / 'na-wi /   '(not) enough to'

(b)   / 'mu:-wi /   'military prestige'

       / 'mo:-ju /   'mother's milk'

       / 'næ :-ja /   'infield'

Stress patterns: 'CV-CV, 'CV:-CV.

6) CV-CV where C_i of CV- is j or w.

   (1) j, w · V - j, w · V

       (a)   / jə-'ju /   'something extra'

              / jo-'wi /   'waist'

       (b)   / 'ja:-ju /   'raillery'

Stress patterns: CV-'CV, 'CV:-CV.

   (2) j, w · V - p, t, č, k · V

       (a)   / jə-'po /   'hello'

              / jə-'ča /   'woman'

              / jə-'ki /   'here'

              / wi-'to /   'latitude'

              / wi-'čo /   'forgery'

              / wi-'ki /   'crisis'

       (b)   / 'jə:-pu /   'yes or no'

              / 'ja:-ča /   'a palm (tree)'

              / 'ju:-ki /   'organic matter'

Stress patterns: CV-'CV, 'CV:-CV.

   (3) j, w · V - p^h, t^h, $č^h$, k^h · V

       (a)   / 'jə-p^ha /   'aftereffect'

              / 'jə-t^hæ/   'up to now'

              / 'ju-$č^h$i /   'custody'

              / 'wi-t^hæ/   'danger'

              / 'wi-$č^h$i /   'position'

(b)　　/ ˈjaː-pʰo /　　'field gun'

　　　　　/ ˈjə-ɤʰi /　　'a kind of cricket'

Stress patterns:　'CV-CV,　'CV:-CV.

(4) j, w • V - p', t', ɤ', k' • V

(a)　No occurrence.

(b)　　/ ˈjeː-kʼi /　　'damn it !'

Stress pattern:　'CV:-CV.

(5) j, w • V - s, h • V

(a)　　/ ˈjə-su /　　'nostalgia of a trip'

　　　　　/ ˈwi-si /　　'beginning'

　　　　　/ ˈjə-ha /　　'how about'

　　　　　/ ˈwa-hæ /　　'falling to pieces'

(b)　　/ ˈjeː-sa /　　'customary'

　　　　　/ ˈjaː-su /　　'wild beast'

　　　　　/ ˈjaː-hʊ /　　'evening party'

Stress patterns:　'CV-CV,　'CV:-CV.

(6) j, w • V - m, n, l • V

(a)　　/ ju-ˈmo /　　' wet nurse'

　　　　　/ ju-ˈli /　　'glass'

　　　　　/ wi-ˈmu /　　'consolation'

　　　　　/ wi-ˈlo /　　'comfort'

(b)　　/ ˈjeː-mæ /　　'advance purchase'

　　　　　/ ˈjuː-li /　　'profitableness'

　　　　　/ ˈwəː-li /　　'Here doggy!'

Stress patterns:　CV-'CV,　'CV:-CV.

　　Through the systematic analyses of　CV-CV,　the common stress patterns,
CV-'CV　and　'CV:-CV, and the variational pattern,　'CV-CV,　were observed.

In 'CV-CV it was characteristic that the syllable in which the geminated stop was the initial consonant of CV- carried the stress on it. The reason was that great sonority was involved in it to produce the geminated sound. Other instances of 'CV-CV resulted from the syllable -CV where the initial consonant was one of the aspirated stops or fricatives and the first syllable was not lengthened. Affected by the quality of the preceding or following sound, stress changed. It should be noted that even though p, t, č and k of Korean were the voiceless stops, they could not reduce the sonority of the following vowel completely. Thus, stress was found on the first syllables, for example, / 'ka- / and / 'ki- / of / 'ka-č^{h}i / 'value' and / 'ki-hu / 'weather'. To find out the systematic stress patterns, it was necessary to observe and analyze the correlations with syllable position and structure.

The stress patterns of CV-CV are illustrated in table 4.

Table 4. Stress Occurrences

in CV-CV.

CV-CV	Stress	
	1st syllable	2nd syllable
p,t,č,k·V-p,t,č,k·V	'CV:-CV	CV-'CV
-p^h,t^h,č^h,k^h·V	'CV -CV	
	'CV:-CV	
-p',t',č',k'·V	'CV:-CV	CV-'CV
-s,h·V	'CV -CV	
	'CV:-CV	

(Table 4. continued)

−m,n,l·V	'CV:−CV	CV−'CV
−j,w·V	'CV:−CV	CV−'CV
pʰ,tʰ,čʰ,kʰ·V−CV	'CV:−CV	CV−'CV
p',t',č',k'·V−CV	'CV −CV 'CV:−CV	CV−'CV*
s,h·V−s,h·V	'CV:−CV	CV−'CV
−p,t,č,k·V	'CV:−CV	CV−'CV
−pʰ,tʰ,čʰ,kʰ·V	'CV −CV 'CV:−CV	
−p',t',č',k'·V	'CV:−CV	CV−'CV
−m,n,l·V	'CV:−CV	CV−'CV
−j,w·V	'CV:−CV	CV−'CV
m,n·V−m,n,l·V	'CV:−CV	CV−'CV
−p,t,č,k·V	'CV:−CV	CV−'CV
−pʰ,tʰ,čʰ,kʰ·V	'CV −CV 'CV:−CV	
−p',t',č',k'·V	'CV:−CV	CV−'CV
−s,h·V	'CV −CV 'CV:−CV	
−j,w·V	'CV −CV 'CV:−CV	
j,w·V−j,w·V	'CV:−CV	CV−'CV
−p,t,č,k·V	'CV:−CV	CV−'CV

(Table 4. continued)

$-p^h, t^h, \check{c}^h, k^h \cdot V$	'CV -CV	
	'CV:-CV	
$-p', t', \check{c}', k' \cdot V$	'CV:-CV	CV-'CV
$-s, h \cdot V$	'CV -CV	
	'CV:-CV	
$-m, n, l \cdot V$	'CV:-CV	CV-'CV

*Where C_i of -CV is the geminated stop.

G. Syllable Type 7, CV-VC.

In syllable type 4, V-CVC, it was observed that the stress occurrence was conditioned by the final consonant. Thus, CV-VC was divided into two subtypes according to the final consonants.

1) CV-VC where C_f is p, t, or k.

(a) / to-'ɨp /   'the capital'

/ $\check{c}^h$a-'ap /   'confiscation'

/ pi-'ut /   'herring'

/ či-'ok /   'hell'

/ ki-'ək /   'memory'

(b) / 'p^{h}a:-əp /   'strike'

/ 'se:-ip /   'annual income'

/ 'pi:-ok /   'fertile'

/ 'kə:-æk /   'huge amount of money'

/ 'ha:-ok /   'imprisonment'

Stress patterns: CV-'VC,   'CV:-VC.

2) CV-VC where C_f is m, n, ŋ, or l.

    (a)   / ča-'ɨm /   'consonant'

               / ma-'ɨm /   'mind'

               / to-'an /   'design'

               / ho-'ən /   'boasting'

               / mi-'an /   'being sorry for'

               / ča-'uŋ /   'female and/or male'

               / sə-'ul /   'Seoul'

    (b)   / 'čæ:-im /   'being in office'

               / 'čə:-on /   'low temperature'

               / 'ha:-in /   'servant'

               / 'hæ:-an /   'coast'

               / 'mæ:-il /   'every day'

Stress patterns: CV-'VC, 'CV:-VC.

    Stress occurred on the second syllable regardless of final consonant.

H. Syllable Type 8, CV-CVC.

    Having been analyzed and discussed in detail in the syllable type 6, CV-CV, CV-CVC was reviewed with special reference to the final consonant of -CVC.

    1) CV-CVC where C_i of CV- is p, t, č, or k and C_f is p, t, or k.

    (a)   / pu-'čok /   'insufficiency'

               / pa-'k'at /   'outside'

               / to-'jak /   'jump'

               / 'ča-pʰok /   'blowing oneself up'

               / ka-'lak /   'melody'

               / 'ki-suk /   'lodging'

		/ 'ki-hʉk /	'planning'
(b)		/ 'pu:-sok /	'attachment'
		/ 'po:-jak /	'tonic'
		/ 'pu:-lok /	'appendix'
		/ 'tæ :-p^{h}ok /	'full width'
		/ 'ko:-čək /	'historic remains'
		/ 'ka:-hok /	'severity'

Stress patterns: CV-'CVC, 'CV-CVC, 'CV:-CVC.

2) CV-CVC where C_i of CV- is p, t, č, or k and C_f is m, n, ŋ, or l.

(a)	/ tæ -'t'ɨm /	'immediately'
	/ či-'t^{h}æ ŋ /	'maintenance'
	/ čo-'sən /	'Korea'
	/ čo-'haŋ /	'provision'
	/ ka-'čəŋ /	'household management'
	/ ka-'nan /	'poverty'
	/ ku-'lɨm /	'cloud'
(b)	/ 'čæ :-t^{h}aŋ /	'second brew'
	/ 'čo:-sən /	'shipbuilding'
	/ 'ka:-čəŋ /	'assumption'
	/ 'ka:-k'ɨm /	'occasionally'
	/ 'ka:-nɨŋ /	'possibility'

Stress patterns: CV-'CVC, 'CV:-CVC.

3) CV-CVC where C_i of CV- is p^h, t^h, č^h, or k^h and C_f of -CVC is p, t, or k.

(a)	/ p^{h}o-'hak /	'tyranny'
	/ t^{h}a-'kuk /	'foreign country'
	/ t^{h}u-'sək /	'throwing a stone'
	/ č^{h}æ -'č'ik /	'whip'

/ $č^hu$-'$č^h$ɨk /   'guess'

(b)   / 'p^hoː-$č^h$ak /   'capture'

/ 't^haː-pak /   'disparagement'

/ 't^hʊː-sæk /   'discoloration'

/ 't^hʊː-hak /   'withdrawal from school'

Stress patterns: CV-'CVC, 'CVː-CVC.

4) CV-CVC where C_i of CV- is p^h, t^h, $č^h$, or k^h and C_f of -CVC is m, n, ŋ, or l.

(a)   / p^ho-'čaŋ /   'wrapping'

/ t^hɨ-'k'ɨl /   'dust'

/ t^ho-'sil /   'chubby'

/ $č^h$o-'$č^h$əŋ /   'invitation'

/ $č^h$o-'wən /   'prairie'

/ $č^h$e-'nɨŋ /   'physical aptitude'

(b)   / 'p^hiː-sən /   'being elected'

/ 'p^hæː-mul /   'ornaments'

/ 't^hʊː-$č^h$im /   'a kind of wooden pillow'

/ 't^hʊː-wən /   'leaving the hospital'

/ '$č^h$æː-joŋ /   'acceptance'

Stress patterns: CV-'CVC, 'CVː-CVC.

5) CV-CVC where C_i of CV- is p', t', č' or k' and C_f of -CVC is p, t, or k.

(a)   / t'o-'pak /   'exactly'

/ p'i-'čuk /   'sticking out pointedly'

/ k'a-'t'ak /   'budging'

(b) No occurrence.

Stress pattern: CV-'CVC.

6) CV-CVC where C_i of CV- is p', t', ʒ' or k' and C_f of -CVC is m, n, ŋ, or l.

 (a) / p'a-'k'ɨm / 'cracked'

    / k'u-'ʒuŋ / 'scolding'

    / t'u-'k'əŋ / 'lid'

    / t'æ-'k'al / 'shape and color of a thing'

    / k'a-'pʰul / 'skin'

    / k'u-'mim / 'decoration'

 (b) No occurrence.

Stress pattern: CV-'CVC.

7) CV-CVC where C_i of CV- is s or h and C_f of -CVC is p, t, or k.

 (a) / si-'kuk / 'the times'

    / 'su-ʒʰəp / 'memorandum'

    / sa-'sæk / 'thinking'

    / su-'mok / 'arbor'

    / hö-'kap / '60th birthday'

    / ho-'hɨp / 'breath'

    / hə-'lak / 'permission'

 (b) / 'saː-sæk / 'four colors'

    / 'səː-mak / 'opening act'

    / 'saː-joŋ / 'use'

    / 'hoː-pak / 'pumpkin'

    / 'hæ ː-sək / 'interpretation'

    / 'haː-lak / 'fall'

Stress patterns: CV-'CVC, 'CV-CVC, 'CVː-CVC.

8) CV-CVC where C_i of CV- is s or h and C_f of -CVC is m, n, ŋ, or l.

 (a) / sa-'tʰaŋ / 'sugar'

	/ so-'sæ ŋ /	'revival'
	/ sa-'laŋ /	'love'
	/ su-'wan /	'ability'
	/ ha-'tɨŋ /	'whatever'
	/ hə-'pʰuɲ /	'exaggeration'
	/ hə-'mul /	'fault'
(b)	/ 'sa:-kən /	'affair'
	/ 'sa:-ɕʰon /	'cousin'
	/ 'so:-hæ ŋ /	'one's conduct'
	/ 'sa:-wəl /	'April'
	/ 'ha:-tɨŋ /	'lower class'
	/ 'he:-sal /	'obstructing' .

Stress patterns: CV-'CVC, 'CV:-CVC.

9) CV-CVC where C_i of CV- is m or n and C_f of -CVC is p, t, or k.

(a)	/ mæ-'tɨp /	'knot'
	/ 'mu-ɕʰək /	'very'
	/ 'mo-sɨp /	'appearance'
	/ no-'jək /	'hard labor'
	/ no-'lɨt /	'job' or 'function'
	/ nu-'luk /	'yeast'
(b)	/ 'ma:-ɕək /	'bandits'
	/ 'mo:-tok /	'blasphemy'
	/ 'mi:-hɨp /	'insufficiency'
	/ 'næ :-ɕik /	'side job'
	/ 'næ :-kak /	'Cabinet'
	/ 'næ :-sæ k /	'one's facial expression'

Stress patterns: CV-'CVC, 'CV-CVC, 'CV:-CVC.

10) CV-CVC where C_i of CV- is m or n and C_f of -CVC is m, n, ŋ, or l.

      (a)   / ma-'taŋ /   'yard'

                / mu-'saŋ /   'uncertainty'

                / mo-'lan /   'peony'

                / na-'p^{h}al /   'trumpet'

                / nɨ-'k'im /   'feeling'

                / na-'hɨl /   'four days'

      (b)   / 'mi:-p^{h}il /   'unfinished'

                / 'mæ:-wəl /   'every month'

                / 'næ:-t^{h}oŋ / 'secret communication'

                / 'næ:-lan /   'civil war'

                / 'næ:-joŋ /   'content'

Stress patterns: CV-'CVC, 'CV:-CVC.

11) CV-CVC where C_i of CV- is j or w and C_f of -CVC is p, t, or k.

      (a)   / 'ju-hak /   'studying abroad'

                / wa-'č'ak /   'vigorously'

                / 'wi-t^{h}ak /   'trust'

                / wə-'nak /   'by nature'

      (b)   / 'je:-č^{h}ɨk /   'forecast'

                / 'je:-jak /   'pre-engagement'

Stress patterns: CV-'CVC, 'CV-CVC, 'CV:-CVC.

12) CV-CVC where C_i of CV- is j or w and C_f of -CVC is m, n, ŋ, or l.

      (a)   / je-'p'ɨn /   'pretty'

                / ju-'č^{h}ul /   'outflow'

                / jə-'səŋ /   'woman in general'

                / wi-'həm /   'danger'

                / wi-'wən /   'member of committee'

(b) / 'je:-saŋ / 'anticipation'

/ 'ju:-hæ ŋ / 'fashion'

/ 'jə:-lon / 'public opinion'

/ 'ju:-nan / 'unusualness'

Stress patterns: CV-'CVC, 'CV:-CVC.

Stress occurrences were found on the second syllable of CV-CVC in general. The first syllable with the relatively long vowel had stress on it. The exceptional stress pattern 'CV-CVC was derived from the syllable structure of CV-CVC, where the initial consonant of -CVC was either the aspirated stop or the fricative. The obtained stress patterns are CV-'CVC, 'CV-CVC, and 'CV:-CVC.

The stress occurrences in CV-CVC are illustrated in table 5.

Table 5. Stress Occurrences
in CV-CVC.

C_i - C_f	Stress	
	1st syllable	2nd syllable
p,t,č,k-p,t,k	'CV -CVC[*] 'CV:-CVC	CV-'CVC
-m,n,ŋ,l	'CV:-CVC	CV-'CVC
$p^h,t^h,č^h,k^h$-p,t,k	'CV:-CVC	CV-'CVC
-m,n,ŋ,l	'CV:-CVC	CV-'CVC

(Table 5. continued)

p',t',č',k'-p,t,k		CV-'CVC
-m,n,ŋ,l		CV-'CVC
s,h-p,t,k	'CV -CVC**	CV-'CVC
	'CV:-CVC	
-m,n,ŋ,l	'CV:-CVC	CV-'CVC
m,n-p,t,k	'CV -CVC*	CV-'CVC
	'CV:-CVC	
-m,n,ŋ,l	'CV:-CVC	CV-'CVC
j,w-p,t,k	'CV -CVC*	CV-'CVC
	'CV:-CVC	
-m,n,ŋ,l	'CV:-CVC	CV-'CVC

*Where C_i of -CVC is the aspirated stop or the fricative.
**Where C_i of -CVC is the aspirated stop.

I. Syllable Type 9, VC-V.

   1) VC-V where C_f is p, t, or k.

      (a)   / 'ak-ə /   'crocodile'

           / 'ok-ƀ /   'outdoors'

      (b) No occurrence.

Stress pattern: 'VC-V.

   2) VC-V where C_f is m, n, ŋ, or l.

      (a) / 'ən-ə /   'language'

          / 'ɨn-ə /   'jargon'

          / 'in-ə /   'mermaid'

          / 'in-æ /   'human affection'

/ 'oŋ-i /   'node'

(b)   / 'i:ŋ-ə /   'carp'

Stress patterns: 'VC-V, 'V:C-V.

J. Syllable Type 10, VC-CV.

  1) VC-CV where C_f of VC- is p, t, or k.

      (a)   / ap-to > ap-'t'o /
                       'overwhelming'

              / ip-tæ > ip-'t'æ /
                       'enlistment'

              / 'ip-č^{h}e /   'solid'

              / it-hæ > 'i-t^{h}æ /
                       'two years'

              / ək-či > ək-'č'i /
                       'obstinacy'

              / ak-su > ak-'s'u /
                       'handshake'

      (b) No occurrence.

Stress patterns: VC-'CV, 'VC-CV.

  2) VC-CV where C_f of VC- is m, n, ŋ, or l.

      (a)   / 'an-pu /   'welfare' or 'well-being'

              / 'in-næ /   'perseverance'

              / 'an-č^{h}i /   'placing'

              / 'in-sa /   'greeting'

              / 'æ ŋ-tu /   'cherry'

              / 'il-ki /   'weather'

              / 'ol-hæ /   'this year'

      (b) / 'i:m-ča /   'owner'

              / 'a:m-si /   'suggestion'

/ ˈaːm-ho /   'password'

/ ˈæːn-če /   'when'

/ ˈɨːŋ-si /   'steady gaze'

Stress patterns: ˈVC-CV, ˈVːC-CV.

C_i of -CV was geminated when C_f was p, t, or k and C_i of -CV was p, t, č, k, or s. Thus, stress occurred on the second syllable of VC-CV. But when C_i of -CV was the aspirated stop or h, stress was found on the first syllable of VC-CV. When C_f of VC- was m, n, ŋ, or l, stress was given on the syllable VC-. Stress patterns are illustrated in the following table 6.

Table 6. Stress Occurrences

in VC-CV.

C_f	Stress	
	1st syllable	2nd syllable
p, t, k	ˈVC -CV[*]	VC-ˈCV
m, n, ŋ, l	ˈVC -CV	
	ˈVːC-CV	

[*]Where C_i is an aspirated stop or h.

K. Syllable Type 11, VC-VC.

It was observed that stress was given on the second syllable and neither p, t, k nor m, n, ŋ, l of syllable-final was regarded as the

conditioning factor of stress occurrence.

(a)   / ək-'ap /   'suppression'

/ ak-'in /   'villain'

/ ɨm-'ak /   'music'

/ im-'əp /   'forestry'

/ oŋ-'al /   'mutter'

/ un-'un /   'thus and thus'

/ ul-'ɨm /   'crying'

/ æ ŋ-'æ ŋ /   'buzzing'

(b)   / 'uːn-im /   'shipping charges'

/ 'əːŋ-əŋ /   'bawling'

/ 'əːl-əl /   'burning'

Stress patterns: VC-'VC, 'VːC-VC.

L. Syllable Type 12, VC-CVC.

1) VC-CVC where C_f of VC- and C_f of -CVC are p, t, or k.

(a)   / ap-pak > ap-'p'ak /
                              'oppression'

/ ip-pəp > ip-'p'əp /
                       'legislation'

/ ap-čip > ap-'č'ip /
                       'the house in front'

/ 'ap-čʰuk /   'compression'

/ 'ək-čʰɨk /   'conjecture'

/ ok-sæ k > ok-'s'æ k /
                       'jade green'

(b) No occurrence.

Stress patterns: VC-'CVC, 'VC-CVC.

2) VC-CVC where C_f of VC- is p, t, or k and C_f of -CVC is m, n, ŋ, or l.

    (a)   / ip-čɨŋ > ip-'č'ɨŋ /
                         'giving proof'

                / ak-tam > ak-'t'am /
                       'curse'

                / ak-'pʰuŋ /   'bad custom'

                / ip-saŋ > ip-'s'aŋ /
                       'winning prize'

                / ik-sal > ik-'s'al /
                       'joke'

                / ap-'nal /   'future'

    (b) No occurrence.

Stress pattern: VC-'CVC.

3) VC-CVC where C_f of VC- and C_f of -CVC are m, n, ŋ, or l.

    (a)   / əm-'sal /   'big fuss'

                / in-'sam /   'ginseng'

                / an-'pan /   'a dough board'

                / ɨn-'tun /   'seclusion'

                / in-'saŋ /   'impression'

                / an-'tal /   'irritation'

                / aŋ-'sim /   'grudge'

                / il-'tan /   'once'

                / 'aŋ-tʰal /   'grumbling'

    (b)   / 'i:m-kɨm /   'king'

                / 'u:n-kɨm /   'trace of warm air'

/ 'o:n-t^hoŋ /   'all'

/ 'u:n-toŋ /   'physical exercise'

/ 'u:n-soŋ /   'transportation'

Stress patterns: VC-'CVC, 'VC-CVC, 'V:C-CVC.

4) VC-CVC where C_f of VC- is m, n, ŋ, or l and C_f of -CVC is p, t, or k.

(a)   / um-'č'uk /   'moving slightly'

/ 'om-p^hok /   'hollow'

/ ən-'tək /   'hill'

/ an-'sik /   'rest'

/ əŋ-'kəp /   'stickiness'

/ un-'čip /   'gathering in swarms'

/ ul-čək >ul-'č'ək /
                      'loneliness'

/ 'ul-k^hək /   'abruptly'

(b)   / 'o:n-kat /   'all sorts of'

/ 'a:n-sæk /   'complexion'

/ 'a:n-mok /   'appreciative eye'

/ 'ɨ:ŋ-čəp /   'reception'

Stress patterns: VC-'CVC, 'VC-CVC, 'V:C-CVC.

The observation of the stress occurrences in VC-CVC was that unless the initial consonant of -CVC was the aspirated stop, stress was found on the second syllable whether C_f of VC- and of -CVC were segments in the same category or not. The stress patterns are illustrated in table 7.

Table 7. Stress Occurrences

in VC-CVC.

C_f - C_f	Stress	
	1st syllable	2nd syllable
p - p	'VC -CVC*	VC-'CVC
t - t		
k - k		
- m		VC-'CVC
- n		
- ŋ		
- l		
m - m	'VC -CVC*	VC-'CVC
n - n	'V:C-CVC	
ŋ - ŋ		
l - l		
- p	'VC -CVC*	VC-'CVC
- t	'V:C-CVC	
- k		

$^{*}C_i$ of -CVC is one of the aspirated stops.

M. Syllable Type 13, CVC-V.

1) CVC-V where C_f of CVC- is p, t, or k.

    (a)   / 'səp-ŏ /   'negotiation'

            / 'mat-i /   'welcoming'

            / 'puk-ə /   'dried pollack'

/ 'kuk-ə /   'national language'

/ 'mək-i /   'food'

(b) No occurrence.

Stress pattern: 'CVC-V.

2) CVC-V where C_f is m, n, ŋ, or l.

(a)   / 'čʰam-ö /   'melon'

/ 'mun-ö /   'outside of the gate'

/ 'čoŋ-i /   'paper'

/ 'soŋ-i /   'cluster'

/ 'pul-ə /   'French'

/ 'kil-i /   'length'

(b)   / 'pəːm-ə /   'Sanskrit'

/ 'čəːn-u /   'fellow soldier'

/ 'kaːn-i /   'easiness'

/ 'čəːŋ-o /   'noon'

/ 'pəːl-i /   'making a living'

/ 'č'aːŋ-a /   'dragonfly'

Stress patterns: 'CVC-V, 'CV:C-V.

Stress occurrences were observed on the first syllable of CVC-V, of which C_f did not occasion any changes in the stress placement. The stress patterns are 'CVC-V and 'CV:C-V.

N. Syllable Type 14, CVC-CV.

CVC-CV was reviewed with special reference to the analysis of the final consonant of CVC-, which was the main conditioning factor of stress occurrence in CVC-CV.

Here in CVC-CV, stress was given on the syllable depending upon whether

the final consonant of CVC- was one of p, t, and k, or m, n, ŋ, and l.
The initial consonant of -CVC, p, t, č, k or s followed by a syllable-final p, t, or k was reinforced and it sounded like p', t', č', k' or s'.
It was also observed that before nasal consonants or / l / pronounced as / n /,
/ p / became / m /, / t / became / n /, and / k / became / ŋ / by regressive
assimilation.

1) p, t, č, k · V · p, t, k - p, t, č, k · V

    (a)   / kak-'ki /   'individually'

           / tok-'pu /   'wicked woman'

           / tap-'po /   'stepping'

           / pak-'ča /   'rhythm'

           / puk-'tu /   'Great Bear'

           / čək-'to /   'equator'

           / čap-'či /   'magazine'

    (b) No occurrence.

Stress pattern: CVC-'CV.

2) p, t, č, k · V · m, n, ŋ, l - p, t, č, k · V

    (a)   / 'kal-pi /   'ribs'

           / 'pən-kæ /   'lightening'

           / 'čon-tæ /   'eminence'

           / 'tam-po /   'mortgage'

           / 'koŋ-ki /   'air'

           / 'čaŋ-ki /   'a long time'

    (b)   / 'po:l-ki /   'buttocks'

           / 'pu:n-kæ /   'indignation'

           / 'ču:n-pi /   'preparation'

           / 'ko:m-po /   'pockmarked person'

/ 'ka:ŋ-če /   'compulsion'

/ 'ča:ŋ-ki /   'game of chess'

Stress patterns: 'CVC-CV, 'CV:C-CV.

The syllable where the final consonant of CVC- was m, n, ŋ, or l, took stress because the sonority in the vowel of CVC- remained conditioned by the voiced consonants, m, n, ŋ, and l.

3) p, t, č, k · V · p, t, k – CV, where C_i of -CV is other than p, t, č, or k.

     (a)   / kok-ma > 'koŋ-ma /
                                  'circus'

             / pak-sa > pak-'s'a /
                                  'doctor'

             / čək-su > čək-'s'u /
                                  'rival'

             / 'tap-p^ha /   'tramping all over'

             / 'kak-ha /   'your Excellency'

             / 'čap-č^ho /   'weeds'

     (b) No occurrence.

Stress patterns: CVC-'CV, 'CVC-CV.

4) p, t, č, k · V · m, n, ŋ, l – CV, where C_i of -CV is other than p, t, č, or k.

     (a)   / 'kam-sa /   'inspection'

             / 'kim-č^hi /   'Korean style pickles'

             / 'čən-p^ha /   'propagation'

             / 'čan-hæ /   'debris'

             / 'toŋ-mu /   'friend'

             / 'čaŋ-sa /   'trade'

     (b)   / 'ka:m-sa /   'gratitude'

/ 'čə:n-pʰa /   'electric wave'

/ 'ča:ŋ-sa /   'strong man'

/ 'čo:m-čʰe /   'hardly'

Stress patterns: 'CVC-CV,   'CV:C-CV.

   5) pʰ, tʰ, čʰ, kʰ · V · p, t, k − CV

      (a)   / tʰop-ni > 'tʰom-ni /

                         'saw tooth'

            / pʰok-sa > pʰok-'s'a /

                         'death by explosion'

            / tʰak-ku > tʰak-'k'u /

                         'table-tennis'

            / čʰuk-ha > čʰu-'kʰa /

                         'congratulations'

      (b)   No occurrence.

Stress patterns: CVC-'CV,   'CVC-CV.

   6) pʰ, tʰ, čʰ, kʰ · V · m, n, ŋ, l − CV

       (a)   / 'čʰam-sæ/   'sparrow'

           / 'čʰən-li > 'čʰəl-li /

                      'a thousand "li"(about 333 miles)'

          / 'čʰæ ŋ-pʰi /   'shame'

          / 'tʰuŋ-su /   'bamboo flute'

          / 'tʰal-mo /   'doffing one's hat'

          / 'čʰal-na > 'čʰal-la /

                     'moment'

      (b)   / 'tʰo:ŋ-če /   'control'

            / 'tʰa:n-so /   'carbon'

            / 'čʰa:n-sa /   'compliment'

Stress patterns: 'CVC-CV,   'CV:C-CV.

7) p', t', č', k' · V · p, t, k - CV

      (a)   / k'ok-či > k'ok-'č'i /

                                  'knob'

               / č'ak-su > č'ak-'s'u /

                                  'even number'

               / 'k'op-č^{h}u /   'hunchback'

               / 'č'ok-p^{h}a /   'small green onion'

      (b) No occurrence.

Stress patterns: CVC-'CV, 'CVC-CV.

8) p', t', č', k' · V · m, n, ŋ, l - CV

      (a)   / 't'uŋ-po /   'fatso'

               / 'k'ol-č'i /   'the last'

               / 't'am-næ /   'smell of sweat'

               / 'č'an-či /   'radish preserved with salt'

      (b) No occurrence.

Stress pattern: 'CVC-CV.

9) s, h · V · p, t, k - CV

      (a)   / suk-če > suk-'č'e /

                                    'homework'

               / hok-sa > hok-'s'a /

                                    'enslaving'

               / sap-si > sap-'s'i /

                                    'instant'

               / hap-li > 'ham-ni /

                                    'reasonableness'

               / hak-tæ > hak-'t'æ /

                                    'maltreatment'

               / suk-mo > 'suŋ-mo /

                                    'aunt'

(b)   / 'sæ:k-si > 'sæ:k-s'i /

'unmarried woman'

Stress patterns: CVC-'CV, 'CVC-CV, 'CV:C-CV.

10) s, h · V · m, n, ŋ, 1 - CV

(a)   / 'sam-ka /   'respectfully'

/ 'san-č^{h}æ /   'wild edible greens'

/ 'sal-hæ /   'murder'

/ 'hæŋ-lo > 'hæŋ-no /

'path'

/ 'hol-t^{h}æ /   'slim thing'

(b)   / 'sa:ŋ-sa /   'sergeant'

/ 'ha:m-tæ /   'fleet'

Stress patterns: 'CVC-CV, 'CV:C-CV.

11) m, n · V · p, t, k - CV

(a)   / mok-čæ > mok-'č'æ /

'lumber'

/ mak-sa > mak-'s'a /

'camp'

/ 'nak-ha > 'na-k^{h}a /

'falling'

/ 'nap-č^{h}i /   'hijacking'

/ net-'č'æ /   'the fourth'

(b) No occurrence.

Stress patterns: CVC-'CV, 'CVC-CV.

12) m, n · V · m, n, ŋ, 1 - CV

(a) / 'nam-ha /   'southward movement'

/ 'mom-so /   'by oneself'

/ 'mən-ǰi /   'dust'

/ 'non-li > 'nol-li /

'logic'

/ 'noŋ-pu /   'farmer'

/ 'mal-mi /   'nausea'

(b) / 'næ:m-sæ /   'smell'

/ 'ma:n-se /   'hurrah'

/ 'na:n-mu /   'boisterous dance'

/ 'næ:ŋ-su /   'cold water'

/ 'na:ŋ-pʰæ /   'failure'

Stress patterns: 'CVC-CV, 'CV:C-CV.

Through the systematic analyses of the given corpuses of CVC-CV, the following factors that directly conditioned the stress occurrences were observed.

1) When C_f of CVC- was p, t, or k and C_i of -CV is p, t, ǰ, k, or s, C of -CV was reinforced and the stress was given on it.

2) When C_f of CVC- was m, n, ŋ, or l, stress remained on the syllable with C_f m, n, ŋ, or l.

3) When C_f of CVC- was p, t, or k and C_i of -CV was the aspirated stop, stress was found on the first syllable, CVC-.

4) When C_f p, t, or k of CVC- became m, n, ŋ, assimilated by the following nasal consonant or lateral l pronounced as n, stress remained on the syllable, CVC-.

5) When V of CVC- contained relatively long vowel, stress was found

on CVC-.

The stress patterns of CVC-CV are shown in table 8.

Table 8. Stress Occurrences

in CVC-CV.

C_f	Stress	
	1st syllable	2nd syllable
p, t, k	'CVC -CV[*]	CVC-'CV
	'CV:C-CV	
m, n, ŋ, 1	'CVC -CV	
	'CV:C-CV	

[*]Where C_i of -CV is a nasal or an aspirated stop.

O. Syllable Type 15, CVC-VC.

    1) CVC-VC where each C_f of CVC- and -VC is p, t, or k.

        (a)   / kap-'ot /   'armour'

                 / nap-'ip /   'payment'

                 / čak-'əp /   'work'

                 / kuk-'ak /   'national classical music'

                 / hak-'əp /   'studies'

        (b) No occurrence.

Stress pattern: CVC-'VC.

2) CVC-VC where C_f of CVC- is p, t, or k and C_f of -VC is m, n, ŋ, or l.

    (a) / tap-'an /   'written answer to question'

         / čap-'ɨm /   'noise'

         / čək-'im /   'suitability'

         / čʰak-'an /   'conception'

         / nok-'ɨm /   'sound recording'

         / mit-'ɨm /   'trust'

    (b) No occurrence.

Stress pattern: CVC-'VC.

3) CVC-VC where each C_f of CVC- and -VC is m, n, ŋ, or l.

    (a) / hon-'in /   'marriage'

         / paŋ-'an /   'inside of the room'

         / toŋ-'an /   'while'

         / hæ ŋ-'in /   'passerby'

         / cuŋ-'aŋ /   'center'

         / pul-'an /   'uneasiness'

    (b) / 'ha:n-il /   'Korean-Japanese'

         / 'pa:ŋ-im /   'noninterference'

         / 'ca:ŋ-in /   'man's father-in-law'

         / 'tʰo:ŋ-il /   'unification'

Stress patterns: CVC-'VC, 'CV:C-VC.

4) CVC-VC where C_f of CVC- is m, n, ŋ, or l and C_f of -VC is p, t, or k.

    (a) / čam-'ot /   'pajamas'

         / tol-'ip /   'inrush'

         / kan-'ak /   'wickedness'

/ kaŋ-'ap /   'pressure'

/ pʰuŋ-'ak /   'music'

/ noŋ-'əp /   'agriculture'

/ kam-'ok /   'prison'

(b)   / 'paːn-æk /   'half price'

/ 'ʨaːŋ-æk /   'intestinal secretions'

/ 'saːn-əp /   'industry'

/ 'naːn-ip /   'intrusion'

Stress patterns: CVC-'VC, 'CVːC-VC.

In CVC-VC stress showed the common feature of its occurrence on the second syllable, -VC, without any correlation with syllable-finals. The stress patterns of CVC-VC are CVC-'VC and 'CVːC-VC.

P. Syllable Type 16, CVC-CVC.

Since the syllable-final consonant was observed as an important con-ditioner governing the stress occurrence, the combinations of the two sets of final consonant, p, t, k and m, n, ŋ, l were considered to be dealt with in this syllable type CVC-CVC.

1) CV · p, t, k - CV · p, t, k

(a)   / kak-'kak /   'each'

/ ʨʰəp-'ʨʰəp /   'pile upon pile'

/ pəp-'sək /   'fuss'

/ 'tok-hak /   'self-study'

/ 'ʨəp-ʨʰok /   'contact'

/ put-'k'ot /   'iris'

(b)   / 'soːk-kot /   'slip(underwear)'

/ 'sæːt-pap /   'snack'

Stress patterns: CVC-'CVC, 'CVC-CVC, 'CV:C-CVC.

2) CV · p, t, k - CV · m, n, ŋ, l

(a)   / mok-'čʰim /   'wooden pillow'

/ tok-'sin /   'bachelorhood'

/ čəp-'kɨn /   'approach'

/ kuk-'paŋ /   'national defense'

/ mat-'t'al /   'first daughter'

/ čʰap-'s'al /   'glutinous rice'

(b)   / 'so:k-sem /   'inner thoughts'

/ 'ko:p-sal /   'prettiness'

/ 'sə:t-tal /   'December'

Stress patterns: CVC-'CVC, 'CV:C-CVC.

3) CV · m, n, ŋ, l - CV · m, n, ŋ, l

(a)   / sil-'kam /   'real emotion'

/ tɨŋ-'san /   'mountaineering'

/ mal-'tan /   'the end'

/ toŋ-'čəŋ /   'neck-band'

/ pal-'hæŋ /   'publication'

/ čʰin-'čəl /   'kindness'

(b)   / 'to:n-pʰun /   'little money'

/ 'čʰa:n-lan /   'radiant'

/ 'to:ŋ-čəŋ /   'movement'

/ 'to:ŋ-mul /   'animal'

Stress patterns: CVC-'CVC, 'CV:C-CVC.

4) CV · m, n, ŋ, l - CV · p, t, k

     (a)   / ton-'tok /   'sincerity'

             / č^hən-'mak /   'tent'

             / 'mun-hak /   'literature'

             / tan-'kuk /   'authorities'

             / mol-'lak /   'downfall'

             / 'pal-t^hop /   'toenail'

     (b)   / 'ma:n-tam /   'comic chat'

             / 'to:n-tok /   'unhealthy taste for money'

             / 'mu:n-č^hæ k /   'reproof'

             / 'to:ŋ-čak /   'movement'

             / 'ma:l-s'ɨm /   'speech'

Stress patterns: CVC-'CVC, 'CVC-CVC, 'CV:C-CVC.

The above analyses showed that the stress occurrence in CVC-CVC was closely associated with either the vowel length or the syllable-final consonants correlated with the initial consonants of the immediately following syllables. There was no doubt about the stress occurrence on the syllable with relatively long vowel. In general, stress was seen on the second syllable of CVC-CVC except the instances where the aspirated stop or fricative was the initial consonant and the voiceless lenis stop, p, t, or k, instead of m, n, ŋ, or l, was the syllable-final of -CVC.

The stress patterns of CVC-CVC are illustrated in table 9.

Table 9. Stress Occurrences

in CVC-CVC.

C_f - C_f	Stress	
	1st syllable	2nd syllable
p - p	'CVC -CVC[*]	CVC-'CVC
t - t	'CV:C-CVC	
k - k		
p - m	'CV:C-CVC	CVC-'CVC
t - n		
k - ŋ		
- l		
m - m	'CV:C-CVC	CVC-'CVC
ŋ - ŋ		
n - n		
l - l		
m - p	'CVC -CVC[**]	CVC-'CVC
n - t	'CV:C-CVC	
ŋ - k		
l -		

[*] C_i of -CVC is an aspirated stop.
[**] C_i of -CVC is an aspirated stop or a fricative.

2.2. Stress Findings in Three-Syllable Words

Illustration of all the possible syllable types and combinations in three-syllable words would be disproportionately cumbersome in a paper of this magnitude. A brief survey is quite sufficient here, and for this purpose several syllable types have been selected as vehicle to present the prominent features exposed by the analysis.

It was observed that, in general, the prominent stress was placed on the second syllable of a three-syllable word, except for those particular features of the occurrence of the relatively long vowel and the occurrences of the aspirated stop and the fricative in the second syllable, which restrict the stress placement. The degrees of stress were not considered in this pilot study.

The following four stress findings were obtained from the analyses of three-syllable words.

1) Commonly stress occurred on the second syllable of a three-syllable word.

/ a-'i-ko /	'ouch'
/ o-'i-či /	'pickled cucumber'
/ a-'u-tɨl /	'younger sisters'
/ a-'uk-nip > a-'uŋ-nip /	
	'marsh mellow leaf'
/ i-'ut-tæ k /	'the house nextdoor'
/ a-'čə-s'i /	'uncle'
/ o-'čiŋ-ə /	'squid'
/ in-'čəl-mi /	'glutinous rice cake'
/ ək-'či-lo > ək-'č'i-lo /	
	'by force'

/ kə-'mi-ǯul /　'cobweb'

/ nap-'ǯ'ak-k^{h}o /'flat nose'

/ tæ-'ǯaŋ-kan /　'blacksmith'

/ ta-'laŋ-ə /　　'tuna'

/ ko-'in-tol /　　'dolmen'

/ to-'an-sa /　　'designer'

/ mun-'paŋ-ku /　'stationery'

/ mul-'paŋ-a /　'water-mill'

/ po-'sɨl-pi /　'drizzle'

/ sa-'laŋ-paŋ /　'guest room'

/ sən-'sæ ŋ-nim /'teacher'

/ su-'ik-kɨm /　'profits'

/ t^{h}æ-'kɨk-ki /　'national flag of Korea'

The general stress pattern derived is:

$$N - {}^\prime N - N$$

where N stands for any possible syllable structure.

2) Stress occurred on the first syllable when C_i of second syllable = aspirated stop or fricative and/or C_f of second syllable $\neq$ m, n, ŋ, or l.

/ 'u-su-su /　　'rustling down'

/ 'æ-su-si /　　'poem of sorrow'

/ 'it-hæ-s'ik > 'i-t^{h}æ-s'ik /
　　　　　　'for two years'

/ 'o-hi-ljə /　　'rather'

/ 'u-ǯ^{h}e-t^{h}oŋ /　'mailbox'

/ ip-hak-sik > 'i-p^{h}ak-s'ik /
　　　　　　'matriculation ceremony'

/ 'wi-ǯ^{h}ok-caŋ /　'document of entrust'

/ 'nɨ-tʰa-li /   'agaric'

/ 'to-tʰo-li /   'acorn'

/ 'ka-pʰa-lɨn /   'steep'

The implied stress pattern is   'N - N - N.

3) Stress was found on the first syllable when the second syllable was either -CV-(excluding the geminated segment in the structure) or -V-, and the first syllable did not consist of the same structure as the second syllable, -CV- or -V-.

/ 'tu-ə-kæ /   'about two items'

/ 'či-a-pi /   'husband'

/ 'k'o-li-kuk /   'soup made with ox tail'

/ 'koŋ-ču-nim /   'princess'

/ 'tal-mat-i > 'tal-ma-či /

                'viewing the first full moon (of the New Year)'

/ 'tam-po-mul /   'collateral'

/ 'paŋ-a-k'an /   'mill-shop'

/ 'soŋ-a-či /   'calf'

/ 'poŋ-o-li /   'bud'

/ 'čʰam-ko-sə /   'reference book'

Stress pattern: 'N - N - N.

4) When the first syllable had the feature of relative vowel length, stress was placed on the first syllable.

/ 'i:-læ-lo /   'ever since'

/ 'i:-mo-čak /   'two crops a year'

/ 'i:-čʰɨŋ-čip /   'two-story house'

/ 'i:-pal-so /   'barbershop'

/ 'aːn-kjəŋ-tʰæ /   'frame of an eye-glass'

/ 'oː-ʧʰan-hʊ /   'luncheon party'

/ 'koː-ko-hak /   'archeology'

/ 'poː-ko-sə /   'written report'

/ 'poː-mul-ham /   'treasure chest'

/ 'saː-paŋ-tɨŋ /   'square hand lantern'

/ 'ʧʰaːn-soŋ-ka /   'hymn'

/ 'haːn-kuk-ə /   'Korean language'

The derived stress pattern is:

$$\text{'N: - N - N}$$

where N stands for any syllable structure and " : " stands for the feature of vowel length.

3. Conclusion

3.1. Tentative Stress Rules in Two- and Three-
Syllable Words of Seoul Dialect

Though it is quite certain that the feature of stress is not a distinctive nor an emic feature in Korean phonology, the author wished to observe and analyze how stress, as an etic feature, did occur in the words of Seoul Dialect specifically, and to develop a rule describing the occurrence of stress in words.

As mentioned before, this investigation had been accomplished from the analyses of the prepared taped corpuses by the impressionistic means.

Reviewing the observations of the stress occurrences in the two-syllable and the three-syllable words given in the preceding chapter, several systematic rules that describe the stress occurrence in Seoul Dialect were obtained as follows:

1) A syllable which has a relatively long vowel takes the stress; this relative length feature is found only in the first syllable. The length of sounds or syllables is one of the most critical factors in determining stress. Naturally the syllable with a long vowel requires more energy to continue the vibration of the vocal cords and thus, it brings the apparent perceptibility.

/ 'če:-pi /	'swallow'
/ 'ko:p-sal /	'prettiness'
/ 'ko:-ko-hak /	'archeology'

2) In general stress takes place on the second syllable if there are no characteristic segments which condition the stress occurrence, in the preceding and/or following syllable structures. This phenomenon is found both

in the two-syllable and in the three-syllable words. As an established rule, stress occurrence is seen either on the second syllable or on the first syllable without consideration of the number of syllables. But it is usual that stress moves from the second to the first syllable in the presence of the conditioning factors.

/ ka-'či /   'branch'

/ čʰəp-'čʰəp /   'pile upon pile'

/ kə-'mi-čul /   'cobweb'

3) Stress occurs on a syllable in which a geminated consonant is the syllable-initial.

/ 'p'u-li /   'root'

/ čo-'k'i /   'vest'

/ ak-ki > ak-'k'i /

                'musical instrument'

4) When an aspirated stop, p^h, t^h, $č^h$, or k^h, is the syllable-initial in the syllable structure, C_i-, $-C_i$-, $-C_i$, respectively, the sonority in a vowel followed by an aspirated consonant is reduced. With regard to this phenomenon, stress occurs on the preceding or following syllable with non-occurrence of the aspirated consonants, unless it has the syllable-final of m, n, ŋ, or l.

/ čʰe-'ku /   'body'

/ 'ma-čʰi /   'as if'

/ 'u-čʰe-tʰoŋ /   'mailbox'

5) A syllable with a fricative s or h, in the initial position and

no occurrence of m, n, ŋ, or l in the final position of a syllable, is not
stressed.

/ 'ta-su /   'a large number'

/ 'ki-hu /   'weather'

/ 'we-sɨp /   'Japanese custom'

/ 'u-su-su /   'rustling down'

6) Stress occurs on a syllable where the syllable-final is m, n, ŋ, or
l which functions to continue the vibration of the vocal cords.

/ 'kam-ča /   'potato'

/ kʼu-'mim /   'decoration'

/ ma-'čʰim /   'at the right moment'

/ ip-'haŋ >i-'pʰaŋ /

                'entry into sea-port'

Appendix

A Chart of Stress Occurrences

in Two-Syllable Words

Syllable type	Stress	
	1st syllable	2nd syllable
V–V	'V:–V	V–'V
V–CV	'V:–CV	V–'CV
	'V –p^h.V	
	–t^h	
	–č^h	
	–k^h	
	'V –s.V	
	–h	
V–VC	'V:–VC	V–'VC
V–CVC	'V:–CVC	V–'CVC
	'V –p^h.V.p	
	–t^h. .t	
	–č^h. .k	
	–k^h.	
	'V –s.V.p	
	–h. .t	
	.k	

(Continued)

CV-V	'CV -V	$p^h.$V-'V
	'CV:-V	$t^h.$
		$\check{c}^h.$
		$k^h.$
		s.V-'V
		h.
CV-CV	'CV:-CV	CV-'CV*
	'p'.V-CV	
	t'.	
	$\check{c}$'.	
	k'.	
	'CV-$p^h.$V	
	$-t^h$	
	$-\check{c}^h$	
	$-k^h$	
	'CV-s.V	
	-h	
CV-VC	'CV:-VC	CV-'VC
CV-CVC	'CV:-CVC	CV-'CVC
	'CV -$p^h.$V.p	
	$-t^h.$ .t	
	$-\check{c}^h.$ .k	
	$-k^h.$	

(Continued)

	'CV-s.V.p	
	-h. .t	
	.k	
VC-V	'VC -V	
	'V:C-V	
VC-CV	'V:C-CV	VC-'CV
	'V.p-p^h.V	
	.t-t^h.	
	.k-č^h.	
	-k^h.	
	-h	
	'V.m-CV	
	.n	
	.ŋ	
	.l	
VC-VC	'V:C-VC	VC-'VC
VC-CVC	'V:C-CVC	VC-'CVC
	'VC-p^h.VC	
	-t^h	
	-č^h	
	-k^h	
CVC-V	'CVC-V	
	'CV:C-V	

(Continued)

CVC-CV	'CV:C-CV	CVC-'CV
	'CV·p-m·V	
	·t-n	
	·k-l	
	'CVC -p^h·V	
	-t^h	
	-č^h	
	-k^h	
CVC-VC	'CV:C-VC	CVC-'VC
CVC-CVC	'CV:C-CVC	CVC-'CVC*
	'CVC -p^h·V·p	
	-t^h· ·t	
	-č^h· ·k	
	-k^h	
	'CVC -s·V·p	
	-h· ·t	
	·k	

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*The instances of stress occurrences when both C_i of CV-
or CVC- and -CV or -CVC are identical, are also included.

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STRESS IN TWO-SYLLABLE AND THREE-SYLLABLE WORDS
IN SEOUL DIALECT

by

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Abstract

Though it is apparent that stress in Korean is etic and not emic, it is also apparent that speakers of Seoul Dialect produce it and distribute it in a characteristic way and that it must be accounted for in any thoroughgoing description of spoken Seoul Dialect. It is one of those features that must be mastered by anyone who wants to control the phonology of Korean with anything like a Korean accent, and, conversely, the stress habits of Korean are among the interferences that seem to handicap Koreans in learning English. Since little, if any, scholarly work has been done on the stress pattern of Korean, this study is intended to fill a gap in the description of Korean, and, at the same time, provide information of value to learners of Korean and to Korean learners of other languages, particularly English.

The study is mainly concerned with discerning the stress pattern regularities in Seoul Dialect and the factors conditioning stress placement. Lists of two- and three-syllable words were prepared by the author from the phonotactically possible inventory. These lists were given to three informants, speakers of Seoul Dialect, who were asked to read the items one at a time, each in isolation, to the tape recorder. The author then determined by impressionistic means the placement of the stress in each item while listening to the tape. A painstaking analysis of the conditioning factors followed.

It was found that stress placement correlates highly with vowel length, i.e., stress is always placed on the first syllable when its nucleus is a relatively long vowel; in a word whose first syllable contains no long vowel, the stress is placed on the first syllable when the initial consonant of the second syllable is an aspirated stop or a fricative, or when any of a number of phonotactic segmental correlates, e.g., geminates or certain combinations

of first syllable final consonant + second syllable initial consonant, obtain;
otherwise, the stress is on the second syllable.

A detailed discussion of the nature of stress and an extensive review
of the literature precede the analysis, and a chart summarizing the find-
ings is appended.