

# The Phonology and Phonetics of the Stress Patterns of English Compounds and Noun Phrases\*

Joo-Kyeong Lee\*\*

## ABSTRACT

This paper attempts to investigate phonetic substances of the stress patterns of English compounds and noun phrases, showing that the theoretically derived stress structures are not consistent with the accentual patterns in real utterances. Even though it has been long claimed that compounds have the stress pattern [1 3] and that noun phrases, [2 1] as in Chomsky & Halle (1968), their difference has not been yet explored empirically or phonetically. I present a phonetic experiment conducted to see if there is any difference along the tonal contours, mostly focusing on their pitch accent distribution. 36 different compounds and 36 different noun phrases included in carrier sentences were examined, and they were varied in position within a sentence. Results showed that various accentual patterns were produced, and among them, [H\* X] predominantly occurs in all three positions in both compounds and noun phrases, whereas the patterns [X H\*] and [X X] appear relatively more frequently in final position than in initial and medial position. Furthermore, the pattern [Ac + No], in which the preceding element is pitch-accented with no accent on the following one, is the major stress pattern in both compounds and noun phrases and in all three sentence positions. This suggests that there seems to be no difference in accentual patterns between compounds and noun phrases, which is not consistent with the hypothesis. The results are interpreted as saying that the preceding element alone tends to be prominent with no accent following it both in compounds and noun phrases, and that therefore, theoretically speculated phonological claims are not always phonetically supported.

**Keywords:** noun phrases, compounds, intonation, accents

## 1. Introduction

This study attempts to investigate the substantial phonetic patterns of English noun compounds and phrases to see if phonologically derived forms are satisfactorily consistent with

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\* This paper was supported by a Research Grant of the year 2005 from the University of Seoul. I would like to thank the reviewers for their insightful comments. All remaining errors are, of course, mine.

\*\* Department of English Lang. and Litt., University of Seoul

phonetic implementations in real utterance. Theoretical approaches to stress patterns and structures in linear Generative Phonology or non-linear Metrical Phonology are not quantitatively measured or empirically observed but somewhat speculative. That is, stress has been analyzed in the deductive formalism framework, mostly depending on researchers' intuition, and the surface stress representations are derived by phonological rules or hierarchically formalized by grids and tree diagrams (Chomsky & Halle, 1968; Couper-Kuhlen, 1986; Hayes, 1984; Hogg & McCully, 1987; Liberman & Prince, 1977; Nespov & Vogel, 1989; Prince, 1983; Selkirk, 1984). It has been long demonstrated in theoretical phonology that noun compounds have a primary stress on the preceding noun with application of the Compound Stress Rule as in *ac'counting certification* but that noun phrases entail a primary stress on the following noun when applied by the Nuclear Stress Rule as in *certified ac'countant*.<sup>1)</sup> Then, two questions arise here: (1) how is the primary stress manifested in the tonal contours of utterance?, and (2) are the distinctive phonological patterns of stress between noun compounds and phrases always observed in real utterances? This paper presents a phonetic experiment to verify if phonologically derived forms are always consistent with phonetic surface outputs. In the experiment, the intonational patterns of noun compounds and phrases were compared, focusing on their pitch accentual distribution; more specifically, the assessment primarily converges to the differences in whether a pitch accent is assigned in either element or both elements and how the tonal contours are implemented when pitch accents appear.

There has been a previous study in which English noun compounds and phrases are analyzed in terms of their intonational patterns (Kang, Kim, Jeon, & Kim, 2005), but they examined only 5 contrastive pairs of noun compounds and phrases with the same word structures.<sup>2)</sup> It was claimed that the patterns of [L\* H\*], [H\* H\*], and [ \_ H\*] appeared in 13 tokens among 15 in noun phrases, and that they were consistent with the stress pattern of [2 1] in Chomsky & Halle (1968). On the other hand, the patterns of [H\* \_], [H\* !H\*], [!H\* \_], and [L\* \_] appeared in 14 tokens among 15, and they might be supported by the stress pattern suggested in Generative Phonology, which was [1 3]. However, there are some fundamental problems with their understanding of the theory of Generative Phonology and also with their interpretation of the experiment results. First, they don't provide any seemly interpretation of the difference between [2 1] of noun phrases and [1 3] of compounds. Even though there is a substantial difference between the secondary and the tertiary stress, deaccented words are assumed to conform both the secondary and the tertiary stress. In other words, the pattern [ \_ H\*] is assumed to agree with [2 1] in the case of noun phrases, and [H\* \_] is interpreted as the same pattern of [1 3]. An

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1) The Compound Stress Rule (CSR) and the Nuclear Stress Rule (NSR) will be discussed in detail in section 2.

2) For example, the pairs like [blackboard]<sub>N</sub> vs. [black board]<sub>NP</sub> and [White House]<sub>N</sub> vs. [white house]<sub>NP</sub> were compared.

appropriate interpretation about this will be presented in section 2 of this paper.

Second, the low pitch accent L\* is interpreted in such a way that it is not so perceptually strong as H\*, but according to Pierrehumbert & Hirschberg (1990), pitch accents in English are all perceptually salient whether they are high or low. Despite their pitch difference, pitch accented syllables are louder and longer, which results in perceptual salience of the accented syllable. Therefore, even the low pitch accent L\* is perceptually as strong as the other pitch accents, but it represents a different pragmatic meaning from the high pitch accent H\*. Along the same line, the contour pitch accent L+H\* is as prominent as H\*, but it simply entails a distinctive semantic interpretation from H\*. Third, it may be wrong that [H\* !H\*] is considered the same as [H\* \_] in the discussion of the results of noun compounds. The downstepped high pitch accent !H\* is also perceptually prominent even though its pitch peak is relatively lower. Gradient, as opposed to categorical, representations are not allowed in Intonational Phonology. Pitch accents are not evaluated by the degree of prominence, but perceptual prominence directly corresponds to a pitch accent. In other words, wherever a peak is observed along the tonal stream, it is aligned with a high pitch accent. Simply when the peak is comparatively lower than expected from the declination line, it is assigned the downstepped high pitch accent. Therefore, it would be misleading that [H\* !H\*] is treated the same as [H\* \_] and that both conform the stress pattern of [1 3]. Finally, there are a very limited number of target words. 5 pairs recorded by three native speakers produce merely 15 tokens, which is not sufficient to generalize the stress pattern of either noun compounds or phrases. Also, the five contrastive pairs of noun compounds and phrases in 10 sentences might create a situation that the subjects can intentionally differentiate the stress patterns between two categories. It should be much preferable if the noun compound and phrase combinations were extended to non-contrastive and general ones like [mineral water]<sub>N</sub> and [yellow bananas]<sub>NP</sub>.

There were a good number of target combinations of noun compounds and phrases in the current study. The Compound Stress Rule and the Nuclear Stress Rule mentioned in Chomsky and Halle (1968) are not confined to apply to a contrastive pair of noun compounds and phrases such as *blackboard* vs. *black board*. Therefore, numerous combinations of noun compounds and phrases were made up and put in various carrier sentences for the sake of enhancing the generality and reliability of attested patterns in actual utterances.

Stress has been traditionally divided into two different categories, depending on its level of representations; lexical stress and accent (Couper-Kuhlen, 1986; Pierrehumbert & Hirschberg, 1990). Even though it usually denotes lexical stress if there is no prior specification of its domain, it sometimes indicates accent at the level of a sentence; for example, the main stress falls on 'vitamins' in the sentence '*Legumes are a good source of VITAMINS*' (Pierrehumbert & Hirschberg, 1990: 272). This means that words may have an accent if they are spoken with greater emphasis relative to the words surrounding them. Stress, within the domain of a word,

is abstract mental knowledge, i.e., lexical stress, but it is surely implemented as accent at the level of utterance. Along this line, the stress patterns of noun compounds and phrases are determined by their accent patterns if they are uttered in a sentence (Beckman, Swora, Rauschenberg & de Jong, 1990; Horn, 1990; Shattuck-Hufnagel, 1991, 1995; Vogel, Bunnell & Hoskins 1995). Therefore, all the target noun compounds and phrases were labelled into their pitch accents within the framework of Intonational Phonology (Beckman & Pierrehumbert, 1986; Ladd, 1996; Pierrehumbert, 1980).

## 2. Previous phonological work

In Generative Phonology, two distinctive stress patterns are derived between a compound noun and a noun phrase; the Compound Stress Rule assigns the primary stress to the leftmost element of a compound noun while the Nuclear Stress Rule assigns the primary stress to the rightmost one of a noun phrase (Chomsky and Halle, 1968). For example, *blackboard* and *black board* differ in their syntactic category in that *blackboard* is a compound noun and that *black board* is a noun phrase. When each lexical element within a phrase is assigned the primary stress and its bracket is erased, *blackboard* and *black board* have the representations as in (1).

- (1) (a)  $[_N \# \# \overset{1}{\text{black}} \# \# \overset{1}{\text{board}} \# ]_N$   
 (b)  $[_{NP} \# \# \overset{1}{\text{black}} \# \# \overset{1}{\text{board}} \# \# ]_{NP}$

The compound noun (1a) changes its stress pattern to [1 2] when the Compound Stress Rule (CSR) applies as shown in (2a). On the other hand, the noun phrase (1b) changes its stress pattern in [2 1] when the Nuclear Stress Rule (NSR) applies as shown in (3b).

- (2) (a) Compound Stress Rule (CSR)

Assign primary stress to a primary-stressed vowel in the context

$$\text{---} \dots \overset{1}{V} \dots ]_N$$

- (b)  $\# \# \overset{1}{\text{black}} \# \# \overset{2}{\text{board}} \# \#$

- (3) (a) Nuclear Stress Rule (NSR)

Assign primary stress to a primary-stressed vowel in the context

$$\overset{1}{V} \dots \text{---} \dots ]_{NP}$$

(b) # # <sup>2</sup> black # # <sup>1</sup> board # #

Finally, to derive the stress contour of compound nouns, another rule is applied to weaken the secondary stress to tertiary as stated in (4) (Chomsky & Halle, 1969: 17).

(4) Assign primary stress to a primary-stressed vowel in the context

\_\_\_\_. . . # # <sup>2</sup> C<sub>0</sub>V C<sub>0</sub> #]N

Application of the rule (4) to (2a) gives the stress pattern [1 3] as in (5a), but the noun phrase still maintains its stress contour [2 1] as in (5b).

(5) (a) <sup>1</sup> black <sup>3</sup> board : compound noun

(b) <sup>2</sup> black <sup>1</sup> board : noun phrase

The stress contour representations in (5) tell that a compound noun has a primary stress on the preceding element but that a noun phrase has a primary stress on the following element when they are produced in isolation. It should be also noted that the following element is assigned a tertiary stress by the application of rule (4), but that the noun phrase conserves the secondary stress on the preceding element. As discussed in Cheun (2004) and Prator & Robinet (1985), a compound noun entails one main stress while a noun phrase involves two consecutive main stresses on both the preceding adjective and the following noun in a sentence. In other words, the primary and the secondary stresses are assumed to be a main stress, but the tertiary stress or below is not. Therefore, the compound noun *social worker*, for example, has the stress only on the preceding noun *social* as in *She's a sócial worker*, but the noun phrase *a lovely smile* has stress on both *lovely* and *smile* as in *Barbara has a lóvely smíle* (Prator & Robinet, 1985).

The previous Generative Phonology analysis does not seem to be founded on a phonetic examination of real speech production but merely on a researcher's inference or speculation. In other words, the difference in stress between *sócial worker* and *lóvely smíle* is simply derived by theoretical phonological rules without analyzing their acoustic implementations along the tonal contours. Moreover, the degrees of stress can be possibly infinite in an unlimitedly long sentence, but they haven't been clarified in association with accents. This study, however, presents a quantitative acoustic investigation of the stress patterns of compounds and noun phrases when they are produced within a sentence and attempts to explore how the distinction between [1 3] and [2 1] is implemented in real utterance.

### 3. Phonetic experiment

#### 3.1 Stimuli

The stimuli utilized in this experiment were two different word combinations, compound nouns and noun phrases, and they included not only the contrastive pairs with the same word structure such as *blackboard* and *black board* but also non-contrastive and independent compounds from noun phrases, for instance, *Christmas holidays* as a compound and *special equipment* as a noun phrase. 36 different compound nouns and 36 different noun phrases were embedded in various carrier sentences, and recorded by 8 English native speakers. They were placed in three different positions of a sentence, sentence-initial, -medial, and -final, 12 sentences in each position. Similarly, 36 noun phrases were differentiated in sentence position, too. The following examples show compound nouns and noun phrases in different positions in a sentence. Note that the underlined parts are target combinations of compounds and noun phrases, respectively.<sup>3)</sup>

#### (6) (a) Compounds

Initial: The combination lock of the cabinet was broken.

Medial: The employer may demand accounting certification at the interview.

Final: Local production virtually eliminates transportation costs.

#### (b) Noun phrases

Initial: Special equipment is needed to remodel the bathroom.

Medial: There would be a fantastic welcome awaiting for him back here.

Final: Overdrinking is very harmful to your physical condition.

#### 3.2 Procedure

The native speakers were all from America, working as an instructor at a Korean university. They were asked to read the sentences in a casual speech. The sentences were recorded by the recorder of Sony Digital Audio Tape (DAT) and the microphone of Sony ECM-MS90. In total, 280 compound nouns (35 tokens x 8 speakers) and 280 noun phrases (35 tokens x 8 speakers) were analyzed, and their pitch accentual patterns were examined with the *PitchWorks* program based on the ToBI transcription system.

#### 3.3 Hypothesis

The two different stress patterns of [1 3] and [2 1] between compounds and noun phrases

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3) More examples are presented in the Appendix, but due to the limit of space, five examples of the compounds and noun phrases in each of the three positions are shown,

may be implemented as distinctive accentual patterns at the level of utterance. As stated in section 2, [1 3] and [2 1] may be the stress outputs when a compound and a noun phrase are produced in isolation. When the NSR applies iteratively to phrases in a sentence, a noun phrase, if in a nuclear pitch accent position, can be plausibly represented as one of [2 1], [3 1], [4 1], [5 1], etc. depending on how many times the NSR applies (See Chomsky & Halle (1968:23) for details).<sup>4)</sup> On the other hand, if a noun phrase is not in a nuclear pitch accent position, the pattern [2 1] degrades to one of [3 2], [4 3], etc. depending on whether it is prenuclear-accented or not. On the other hand, the stress pattern [1 3] of a compound, which is obtained from the application of the CSR, can be one of [1 3], [1 4], [1 5], etc. in a nuclear accent position, depending on how many times the NSR applies.<sup>5)</sup> When it is in a prenuclear pitch accent position, the primary stress degrades to the secondary. If it is not even pitch accented, the primary stress degrades further to the tertiary stress or below depending on how iteratively the NSR applies.

Given that an intonational contour is composed of a string of pitch accents and edge tones in English and that the nuclear pitch accent, which is supposedly the most prominent, is preceded by one or more prenuclear pitch accents, the primary stress mentioned in Generative Phonology should be the nuclear pitch accent at the utterance level, and the secondary stress should be a prenuclear pitch accent. On the other hand, the stresses below the tertiary stress are not accents at the utterance level, even though they are lexically stressed at the word level. This is consistent to Cheun (2004) and Prator & Robinet (1985) that the primary and the secondary stresses are a main stress, but that the tertiary stress or below is not.

As mentioned above, a compound may have the stress pattern [1 3] when it is nuclear pitch accented. It is assumed that only the preceding noun is assigned a nuclear pitch accent with no accent on the following noun. If it is not nuclear pitch accented, the preceding noun may have a pitch accent or not depending on how many times the NSR applies. Therefore, it is hypothesized that compounds will have either [Accent + No Accent] or [No Accent + No Accent] as presented in (7a). The term 'Accent', therefore, refers either the nuclear pitch accent or a prenuclear pitch accent.

As a noun phrase is applied by the NSR iteratively, its stress structure [2 1] is maintained if it is nuclear pitch accented, but it changes to one of [3 2], [4 3], and [5 4], etc. Recall that the secondary stress maps to a prenuclear stress in utterance. The pattern [2 1] should be manifested as the pitch contour of a prenuclear pitch accent followed by the nuclear pitch accent. Therefore, it is hypothesized that both the adjective and the noun are accented in noun

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4) A word has a nuclear pitch accent in the last position of a sentence in a semantically neutral situation, while its position can vary depending on a speaker's semantic intention like contrast and focus.

5) After a noun compound is assigned the stress pattern of [1 3], it makes up a noun phrase with a preceding determiner, a modifier, an article, etc. Therefore, it is applied by NSR then.

phrases when they are in the nuclear pitch accent position as in [Accent + Accent] and that [No Accent + Accent] will appear when they are prenuclear accented, but that [No Accent + No Accent] will be implemented when they are not accented, corresponding [4 3], [5 4], and so on. This is shown in (7b).

(7) Hypotheses

- (a) Compound nouns will have either accentual combination, [Accent + No Accent] or [No Accent + No Accent].
- (b) Noun phrases will have one of the accentual patterns [Accent + Accent], [No Accent + Accent] and [No Accent + No Accent].

Based on the hypotheses, it is predicted that the compound 'Christmas holiday' will be, for instance, implemented as shown in (8a). On the other hand, the noun phrase 'a wonderful party' is predicted to have three tonal realizations as shown in (8b). The capitalized words indicate that they are accented.

- (8) (a) Compound: People look forward to the CHRISTMAS holidays / Christmas holidays even in November.<sup>6)</sup>
- (b) Noun Phrase: A WONDERFUL PARTY / A wonderful PARTY/ A wonderful party will be held at the hall tonight

### 3.4 Results

To test the hypotheses presented in (7), four different accent combinations are analyzed in <Figure 1>. When the preceding noun is accented with any of the pitch accents within a compound, it is represented as [Ac + No]. Similarly, when both nouns are accented, and it is represented as [Ac + Ac]. When the following noun is accented with no accent on the preceding noun, it is specified as [No + Ac]. Finally, when either noun is not accented, it is represented as [No + No].

A predominant number of compound nouns show [Ac + No] in all three sentence positions; that is, 57.9%, 65.4% and 46.7 % of the compound stimuli show a pitch accent only in the preceding noun in initial, medial and final position, respectively. What seems to be interesting is that [Ac + Ac] occurs relatively more in initial and medial position than in final position. On the contrary, [No + Ac] and [No + No] are the primary patterns in final, as opposed to initial and medial, position.

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6) The capitalized words denote that they are accented.



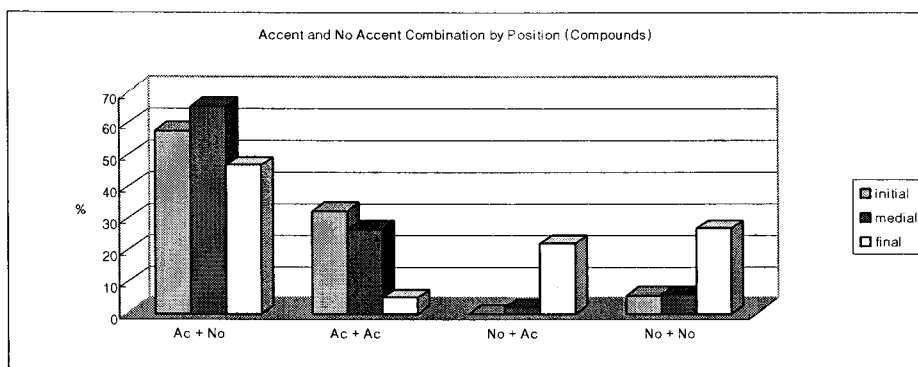


Figure 1. The frequency percentage of the 4 different patterns of compounds: [Accent + No Accent], [Accent + Accent], [No Accent + Accent], and [No Accent + No Accent].

<Figure 2> shows four different accent combinations by position for noun phrases. Similar to the results of compounds, the pattern [Ac + No] is predominant, taking up 54%, 64%, and 32% of the noun phrases in initial, medial and final position. The next frequent pattern is [Ac + Ac], and 40%, 20%, and 33% of the stimuli are implemented with both the adjective and the noun accented. Even though the major patterns of [Ac + No] and [Ac + Ac] show a relatively lower frequency in final position than in initial or medial position, the patterns [No + Ac] and [No + No] occur in more tokens of noun phrases in final position than in initial and medial position.

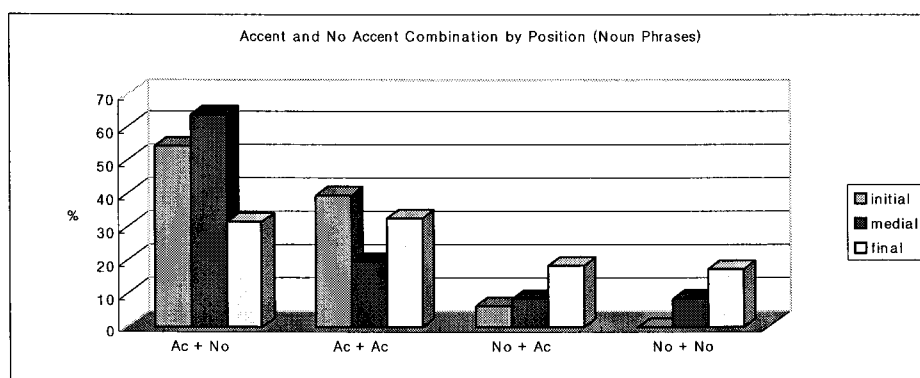


Figure 2. The frequency percentage of the 4 different patterns of noun phrases: [Accent + No Accent], [Accent + Accent], [No Accent + Accent], and [No Accent + No Accent].

<Figure 3> shows the accentual pitch accent patterns of compound nouns by position and their occurrence rates. The primary pattern [Ac + No] presented in <Figure 1> show such pitch accent combinations as [H\* X], [L+H\* X] and [L\* X]. The pattern [Ac + Ac], in which both previous and following nouns are assigned a pitch accent, shows various tonal contours like [L+H\* L\*], [H\* L\*], [H\* H\*], and [H\* !H\*].

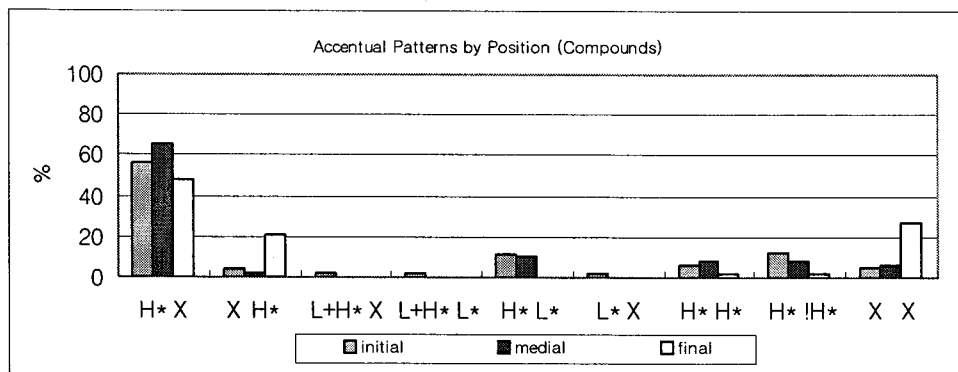


Figure 3. The percentage of the accent patterns of compounds by position. The left most bar in each pattern indicates the occurrence rate in initial position, the middle ar, in medial position, and the rightmost bar, in final position.

In addition, the pattern [X H\*] is classified into [No + Ac]. The pattern [H\* X], in which the preceding noun is realized as H\* and the following noun is deaccented, predominantly occurs in all the positions; 56% of compounds in initial position, 66% in medial position, and 48 % in final position. What should be noted in the patterns of compounds by position that the patterns [H\* L\*], [H\* H\*], and [H\* !H\*] occur more in initial and medial position than in final position, but that [X H\*] and [X X] occur more frequently in final position and either initial or medial position.

<Figure 4> presents the results of noun phrases by position. Similar to compound nouns, the accent pattern [H\* X] shows up predominantly as many as 53%, 90%, and 31% of the stimuli in initial, medial and final position, respectively. In addition, [X H\*] and [X X] are the most frequent patterns in final position, and the patterns [H\* L\*] and [H\* !H\*] show slightly higher occurrence rates in initial and medial position.

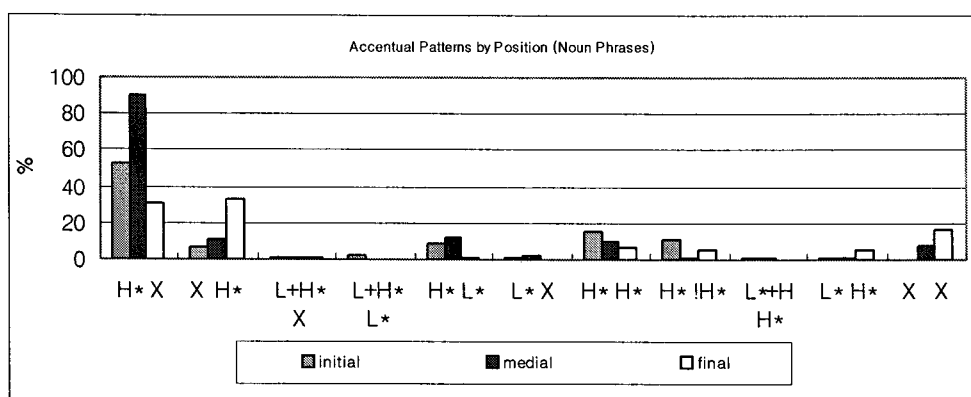


Figure 4. The percentage of the accent patterns of noun phrases by position. The left most bar in each pattern indicates the occurrence rate in initial position, the middle bar, in medial position, and the rightmost bar, in final position.

When the occurrence rates in three positions are pooled up together, the mean percentage of each pattern is calculated in <Figures 5 and 6>.

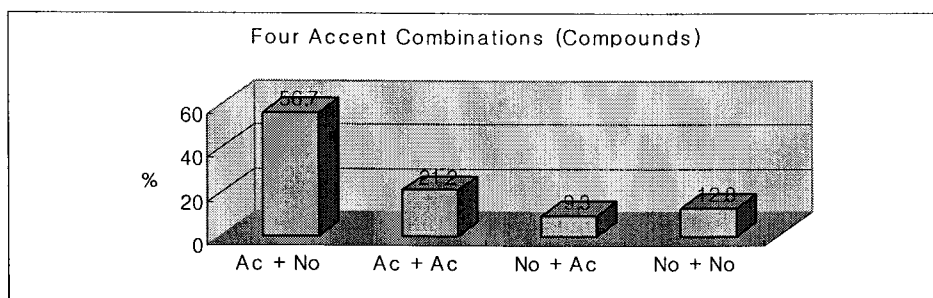


Figure 5. The mean percentage of each of four accent combinations in compounds.

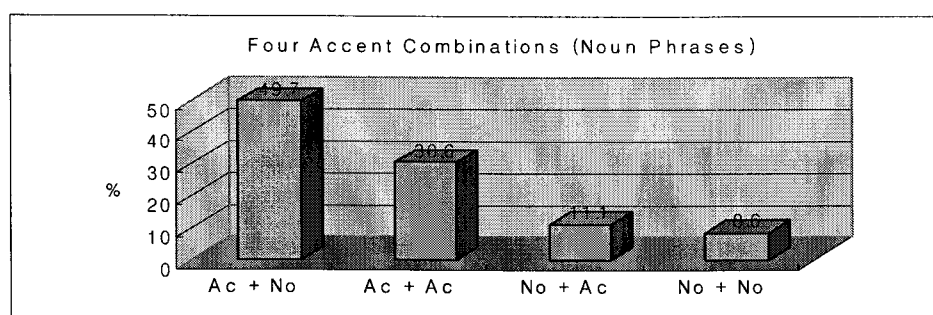


Figure 6. The mean percentage of each of four accent combinations in noun phrases.

Consistently, the stress pattern [Ac + No] predominantly occurs in both the categories, taking up 56.7% of compounds and 49.7% of noun phrases. Both compounds and noun phrases are very similar in accent patterns in that [Ac + Ac] is the next frequent pattern, even though noun phrases show a higher occurrence rate than compounds. Both compounds and noun phrases also show that [No + Ac] and [No + No] appear in comparatively smaller number of targets.

### 3.5 Discussion

<Figures 1 and 2> have shown that the [Ac + No] pattern predominantly occurs in all three positions. As claimed in many studies (Beckman & Edwards, 1990; Cho & Keating, 2001; Fougeron & Keating, 1997; Wightman, Shattuck-Hufnagel, Ostendorf & Price, 1992), the initial position is strengthened segmentally and/or prosodically. That is, the initial element is prosodically prominent due to a speaker's intention to draw attention from a listener. The compounds and noun phrases utilized in this experiment all stand in the prosodically initial

hypotheses, established on the basis of Generative Phonology, are not supported in this experiment, and this suggests that phonetic outputs are not always regulated by phonological rules.

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position, i.e., initial in a phonological word, and moreover, the stimuli in the sentence-initial position should appear in the initial position of an intonational phrase (IP). The sentence-medial stimuli were intentionally placed before a prepositional phrase or a simple adverb, so some of them might be produced IP-initially or intermediate phrase (ip)-initially depending on a speaker's speech rate.<sup>7)</sup>

The patterns [No + Ac] and [No + No] appear more frequently in final position than in initial or medial position. It is well known that the final element is very frequently nuclear pitch accented in an utterance. Along this line, the final element obtains the nuclear pitch accent, and the pattern [No + Ac] is implemented. On the other hand, when the nuclear accent appears prior to the last lexical item for some semantic reasons, the final element is deaccented, and the pattern [No + No] may occur.<sup>8)</sup> <Figures 5> and <Figure 6> are important in that the hypotheses are tested by the results. According to the experiment hypotheses, the two patterns, [Ac + No] and [No + No], should appear in compounds, but it is predicted that [Ac + Ac], [No + Ac], and [No + No] will occur in the case of noun phrases. The unexpected patterns of [Ac + Ac] and [No + Ac] are, however, realized in as many as 21.2% and 9.3% of the compounds. Moreover, [Ac + No] should not occur in noun phrases, but it is actually the most frequent pattern, occurring in as many as 49.7% of the noun phrases. Therefore, the hypotheses are not borne out, and the theoretical difference of stress patterns between compounds and noun phrases is not empirically or phonetically supported. This shows that the phonological rules do not always derive correct phonetic outputs which human beings actually produce. Even though it has been claimed in phonological theory that the rules operate on the underlying representations in the component of human linguistic competence while a speaker produces utterances, this presumption may be very frequently inaccurate because the phonological rules are speculatively and inferentially organized with no empirical examination of real phonetic utterances.

#### 4. Conclusion

I have shown that the accentual patterns of compounds and noun phrases are very similar even though there should be a distinct difference according to Chomsky & Halle (1968). The [Accent + No Accent] pattern predominantly occurs in both compounds and noun phrases, but this is not consistent with the hypothesis that noun phrases will not implement [Accent + No accent]. The next frequent pattern is [Accent + Accent] in both categories, but this is also not consistent with the hypothesis that it is not a predicted pattern for compounds. Therefore, the

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7) Unfortunately, phrasing has not been executed in this analysis.

8) See Ladd (1996) and Pierrehumbert and Hirschberg (1990) for details.

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received: January 28, 2007

accepted: March 2, 2007

▲ Joo-Kyeong Lee  
90 Cheonnong-dong, Dongdaemun-gu  
Department of English Language and Literature, University of Seoul  
Seoul, 130-743, Korea  
Tel: +82-2-2210-5635  
Email: jookyeong@uos.ac.kr

## Appendix

### <Compounds>

- Initial: (1) The White House may be the next target of the terrorists.  
 (2) Christmas holidays are the most joyous in the United States.  
 (3) Earthquake areas are covered by streams of lava.  
 (4) A social worker is a person who helps people solve social problems.  
 (5) Mineral water is very good for your health.
- Medial: (1) People look forward to the Christmas holidays even in November.  
 (2) The school's students publish a class magazine every month.  
 (3) John drinks a cup of mineral water everyday.  
 (4) They are offering a tour package these days.  
 (5) Mary has carried on the family tradition of giving away plants.
- Final: (1) They are cutting off apple trees  
 (2) A certified accountant means a person with accounting certification.  
 (3) I forget the dials of the combination lock.  
 (4) He has urged a complete reform of the welfare system.  
 (5) I don't imagine you can succeed in a business venture.

### <Noun Phrases>

- Initial: (1) A wonderful party will be held at the hall tonight  
 (2) A certified accountant means a person with accounting certification.  
 (3) A new island was discovered by Steve Anderson.  
 (4) The physical condition usually affects the efficiency of work  
 (5) Great progress is made daily
- Medial: (1) The White House may be the next target of the terrorists.  
 (2) Christmas holidays are the most joyous in the United States  
 (3) He has urged a complete reform of the welfare system.  
 (4) States, such as Michigan and Massachusetts, are making deep cuts in welfare.  
 (5) A bride gives a groom a gold watch at a wedding.
- Final: (1) Mary was dazzled by the bright colors.  
 (2) His garage is filled with a lot of special equipment.  
 (3) A social worker is a person who helps people solve social problems.  
 (4) A violent explosion seemed to jolt the whole ground.  
 (5) The basket is full of yellow bananas.