CHAPTER V

5.0.0. Stress and Intonation:

5.0.1. Prolegomena:

This chapter discusses in brief the stress and intonation patterns of DD, as without a study of this type any phonological analysis is not deemed complete and moreover features of intonation signal grammatical distinctions such as between statements and questions.

5.1.1 The analysis is based on data which may be designated the unemotional, non-emphatic rapid combinative style of speech.¹ It is desirable not feasible to incorporate as many styles of speech as possible because just one single style does not constitute the communicative event of speech in society. Therefore, it must be made clear right here and now that

the frame of reference set up is valid for the particular style of speech only.

The statement is Bloomfieldian in orientation but it does not adopt the Trager-Smith type\(^2\) of description and symbolization.

5.1.2 The analysis is partly phonetic and partly phonological. The articulatory-auditory correlates of the stress and intonation patterns have been well taken care of in the phonetic half.

Any analysis of accent must be made with the phonetic syllable, the basic perceptual unit as the basis owing to the fact that accent is the property of the syllable as a whole. Accentual patterns of words and sentences are designated stress-patterns and intonations respectively at the level of phonology.

The choice of the syllable as the basic unit is justified in strict linguistic terms. The choice of the word is ruled out because of the fact that not all DD words are

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\(^2\) Trager, B. : An Outline of English Structure, 1951 & Smith, G.L.
monosyllabic. Words comprise syllables which are characterized by different accents. The segmental sound cannot be taken as the basis for accentual analysis as many of the DD segmental sounds (voiceless and aspirated ones) are devoid of pitch — the primary phonetic parameter resulting from the rate of vibration of the vocal cords.

These linguistic considerations prompted the choice of the syllable as the basic unit for the analysis of accent at the phonetic level. Accents are marked in the transcribed texts by superscript diacritical marks written before the syllables of which they constitute properties.

5.1.3 Any study of accent at the phonetic level needs to take into account the following phonetic variables correlatable to the various degrees of accent and expounding the various phonological stress-types. These are described below:

1. Intensity: this phonetic variable is perceived by the listener as lesser or greater loudness — it results from breath effort and muscular energy — the greater the breath effort and muscular energy — the louder the syllable and vice versa.
2. Pitch: the phonetic variable of pitch is either 
(a) gliding or (b) level. Gliding pitches result from changes 
in the rates of vocal cord vibrations. Level pitches, from 
unchanging rates of vibration of the vocal cords. Any utter-
ance with a gliding pitch expounds an intonation pattern 
whereas a stretch of utterance characterized by level 
pitches constitute a part of an intonation pattern.

3. Duration: this phonetic variable is correlatable to 
the vocoid category of sounds which fluctuate in quantity 
owing to difference in accents in syllables.

Any or all three of these phonetic variables may make 
a syllable auditorily more prominent than the contiguous 
ones.

5.1.4 In consideration of presence of all or any of these in 
varying degrees, accents in DD can be subcategorized as 
— (1) Primary, (2) Secondary, and (3) Tertiary.

A syllable characterized by the presence of one of 
the possible gliding pitches is taken to be characterized 
by primary accent and a primarily accented syllable is
designated the tonic syllable in this study.

In DD the tonic syllables are characterized by one of the following four gliding pitches:
(1) falling, (2) rising, (3) falling-rising and (4) rising-falling. If the rate of vibration decreases during the articulation of a syllable the auditory correlate is that of a falling pitch. A rising pitch is heard when the rate increases, while other two — the falling-rising and the rising-falling are heard if the rate decreases and then increases, and increases and then decreases during the articulation of the tonic syllable. These are marked by appropriate diacritical marks in the transcriptions and graphic representations.

As against primary accent, secondary and tertiary accents are characterized by level pitches in syllables. The phonetic parameters associated with secondary accent are level pitch with relatively greater degree of intensity and longer duration than tertiary accent which is expounded by level pitch and minimal intensity and duration. At the phonetic level a syllable with a secondary accent will be designated an accented syllable while the one with the
tertiary accent will be designated an unaccented syllable. At the phonological level accented and unaccented syllables will be designated stressed and unstressed syllable respectively. These are marked by appropriate diacritical marks -- explained in section 5.1.7.

Primary and secondary stresses are susceptible to contextual variations. Primary stress has the following variations -- auditorily high, mid and low pitch levels with relatively greater degree of intensity and longer duration of vocoid articulation.

The contextual variations of weak or secondary stress are auditorily high, mid and low level pitches with the minimum degree of intensity and of quantity of vocoid articulation.

Thus, accents of varying degrees are skilfully deployed by the speaker to make the desired syllables relatively more prominent than the contiguous ones and are interpreted likewise in auditory terms by the listener.
5.1.5 Every word has a characteristic accentual pattern (or rhythmic pattern) for the speaker and listener alike and can be phonetically interpreted in terms of the variables discussed in the earlier section.

5.1.6 This section describes the phonetics and phonology of accent and stress behaviour of words (that is, word-stress patterns) and sentences (that is, sentence-intonation patterns) in that order. But it must be admitted that the descriptions of DD word-stress patterns and sentence intonation patterns in this chapter are of the preliminary nature. In a study of this type which is not exclusively phonology-oriented and which puts equal emphasis on the grammatical and socio-linguistic components as well, it is (though desirable) not feasible to make an exhaustive analysis of stress and intonation.

DD words with different syllable structures have been chosen for the analysis in the subsequent descriptions. Studies on intonation were deliberately kept confined to the favourite sentence types only characterized by simple (as against complex) intonation patterns.
5.1.7 Stress patterns and intonation patterns are symbolized 
(a) by transcribed texts with diacritical marks explained 
below and (b) by graphic patterns given immediately below 
the texts. The following are the conventions followed in 
this study:

(1) In the transcribed texts stressed syllables will be 
denoted by superscript vertical strokes (*) written before 
the syllables. The unstressed will be left unmarked. The 
tonic syllables will be denoted by the appropriate super- 
script diacritical marks written before the syllables. 
These are explained below:

(\_) denotes the falling pitch;
(\/) denotes the rising pitch;
(\^) denotes the rising-falling pitch;
(\v) denotes the falling-rising pitch.

In the graphic representations the top and bottom 
lines represent the proprioceptively determined frequency 
ranges in which the conversations among the DD speakers 
take place in what has been designated the rapid combina-
tive style of speech. The middle line denotes equal
frequency ranges or pitch intervals correlatable to auditory judgements. The line demarcates the two pitch ranges — any pitch level auditorily perceived at the top range (Range two) is designated high and any pitch level perceived at the bottom range (Range one) is designated low in this discussion. Likewise, falling and rising pitches originating and terminating in Range One are designated low falling and low rising respectively as against high falling and high rising pitches originating in Range Two and Range One and terminating in Range One and Range Two respectively. These are perceptually determined ranges. It must be remembered that these pitches — gliding or level do not have absolute values. They acquire linguistic values only in relative terms. Thus, the high falling or high rising pitches acquire linguistic values only in relation to low falling and low rising pitches and vice versa.\(^3\) The speaker uses the pitches in relative terms and the listener interprets them in identical terms. It is important for a speaker to maintain the pitch levels of syllables in

terms of the degree of prominence relative to the contiguous — preceding and/or succeeding syllables. It is equally important for the listener to perceive the different pitch levels in the syllables articulated and interpret them in accordance with mood, meaning, theme etc. as desired to be conveyed by the speaker in the communicative and social contexts.

Pitch levels — of the gliding and level pitches vary from speaker to speaker. In fact, no two speakers use pitches at the same level. The features common to the speech habits of any two speakers of the same dialect/language is that both the idiolects are characterized by the identical relative pitch patterns.

This study on the stress and intonation of DD is based on the speech habits of the investigator himself. In spite of all inter-idiolectal distinctions, it is claimed that all the basic features are common to the speech habits of all DD speakers — young and old, educated and uneducated. Features like use of gliding pitches — falling, rising, rising-falling, falling-rising
and of level pitches — high and low etc. are singularly common to the speech habits of all the DD speakers. Thus, if in a sentence in a given context, the investigator uses the falling pitch in the tonic syllable any other DD speaker would do likewise. The attitudinal aspects underlying the intonation patterns are common to all — without any distinction whatsoever.

It must be pointed out in this context that the investigator has analyzed DD intonation in the model adopted by Daniel Jones, and his pupils like A.C. Gimson, J.D. O'Connor, G.F. Arnold and so on. This does not constitute a departure from the Bloomfieldian approach. D. Jones and his pupils investigated languages in Bloomfieldian terms subscribing to his basic concepts. The terminology in this section would therefore not conform to those adopted by Bloch, Trager, Smith and Post-Bloomfieldians like Hockett.

4(a) Jones, D. : Outline of English Phonetics
(b) Gimson, A.C.: An Introduction to the Pronunciation of English
(c) O'Connor, J.D. : Stress and Intonation in English & Arnold, G.F.
5. Bloch, B. : Outline of Linguistic Analysis
5.2.0 Word stress in DD:

The phonological definition of a word in DD would be a unit constituted by one or more syllables and exhibiting a stress pattern when articulated in isolation or as part of a larger utterance like a sentence. The stress pattern of every word has a meaning to both the speaker and the listener.

The stress pattern of a word articulated in isolation is subject to modification when articulated as part of an utterance and conforms to that of the overall pattern.

It must be stated here that the stress patterns of DD words are predictable because of the fact that it is the last syllable which is the most prominent syllable. If the word is articulated in isolation, the last syllable becomes the tonic syllable as it is articulated with one of the four gliding pitches — falling, rising, rising-falling, etc. The preceding syllables are characterized by primary or zero stress the phonetic exponents of which are secondary and tertiary accent. In a larger utterance the last syllable of the word receives the primary
accent — that is, it becomes the tonic syllable. Thus, in DD tonicity of a syllable renders it — the most prominent syllable — all other syllables are, relatively speaking less prominent than the tonic syllable in auditory terms.

5.2.1 Any word articulated in isolation constitutes a tonic group — a succession of stressed and unstressed syllables with a final tonic syllable in it. The following analysis picked-up DD words at random — the choice being prompted by the number of syllables only. Words with more than five syllables are deliberately left out from the purview of the analysis.

It is to be assumed that the words have been articulated in the rapid combinative style of speech with a falling pitch in the tonic syllable characteristic of declarative, imperative and interrogative (K-type and Yes/No type) sentences or utterances.

(a) Monosyllabic words: /ko/ say

/kon/ buy

/boh/ sit down
The only syllable constitutes the tonic syllable articulated with a falling pitch. In the particular style of speech in the normal mood the pitch level decreases from a higher level to a lower one in Range One. In other styles there may be different levels of fall. The attitudinal aspect may cause the falling pitch to originate in Range Two and terminate in Range One (the speaker being in angry, irritated or excited mood), as shown below:

/ko/ say
(b) Disyllabic words:

The intonation patterns of disyllabic words show two possibilities:

(i) Unstressed + tonic
(ii) Stressed + tonic

\( /a^h\text{kez}/ \) enmity \( /l^a\text{la}/ \)

\[ b(i) \quad b(ii) \]

In utterance (b) (i) the level pitch of the first (unstressed) syllable relatively lower than that of its stressed counterpart in (b) (ii). The falling pitch in the tonic syllable in (b) (ii) starts at a relatively higher level than that of the tonic syllable in (b) (i). The terminal levels of both are approximately the same.

(c) Trisyllabic words:

DD trisyllabic words exhibit the following patterns:

(i) unstressed + stressed + tonic ((c) (i))
(ii) stressed + unstressed + tonic ((c) (ii))
In word (c) (i) the weak stress in the first syllable has a relatively lower level than its stressed counterpart in word (c) (ii). In word (c) (i) the falling pitch has a relatively higher starting level as the preceding, that is, the second syllable is a stressed syllable articulated with a high level pitch in Range One. The falling pitch in the tonic syllable in word (c) (ii) has a relatively lower starting level as it is preceded by an unstressed syllable having a relatively lower level pitch. The termination points of the falling pitches in both the tonic syllables are perceptually identical.

(d) Quadrasyllable words:

(i) /be'mara zar/ sickness  (ii) /'ani silu/ I have brought it
The stress patterns of DD quadrisyllabic words are
(i) unstressed + stressed + unstressed + tonic,
(ii) stressed + unstressed + stressed + tonic.

In word (d) (i) the unstressed syllables (the first and the third) have level pitches at the same perceptual level. The intervening stressed syllable has a relatively higher level pitch. In word (d) (ii) the first syllable has a high level pitch followed relatively lower level pitches in the second and third syllables. The falling pitch in the tonic syllable in (d) (i) has a lower starting level than that in (d) (ii) as it is preceded by an unstressed syllable as against the latter having been preceded by a stressed syllable.
(e) Pentasyllabic words:

(i) /riˈsubel̩paˈra/ a place (ii) /ˈtitiˈlite̩ ma/ tamamiddu

The stress patterns of words (e)(i) and (e)(ii) -- both pentasyllabic in structure, are as below:

(e)(i) unstressed + stressed + unstressed + stressed + tonic
(e)(ii) stressed + unstressed + stressed + unstressed + tonic

The falling pitch in the tonic syllable in (e)(i) starts at a relatively lower level than that in (e)(ii) and both terminate at perceptually identical levels. This may be accounted for by the fact that in word (e)(i) the first syllable has a lower level pitch as it is an unstressed syllable. On the other hand the first syllable in word (e)(ii) has a perceptually higher pitch level and this affects the overall pitch pattern of the word.
5.2.2 The different falling pitches in the tonic syllables are correlatable not only to sentence types, but also to certain attitudinal aspects. The following examples would support this view. The single-word also a sentence, /tui/ you, monosyllabic in structure, articulated with different gliding pitches convey different attitudes without altering the denotative meaning of the word:

1. /\tui/ you (a cool, calm, detached attitude)
2. /\tui/ you (a resentful, critical, deprecatory attitude)
3. /\tui/ you (a satisfied, excited, impressed attitude)
4. /\tui/ you (a reluctant, guiding, reserved attitude).

These are only tentative statements, exploratory in nature. Stress and intonation demand a very extensive and wide-ranging investigation. A study in capsule of the type incorporated in this dissertation cannot do full justice to the topic.

5.2.3 As has already been stated stress patterns of words are liable to change in larger utterances like phrases, clauses and sentences. This is true to all languages and dialects. Word stress patterns in isolation get merged with the
overall intonation patterns of sentences or other larger utterances so that these can no longer be identified.

In DD there appears to be a tendency in the intonation patterns to avoid a succession of unstressed and stressed syllables. The tonic syllable is usually the most prominent syllable when the speaker's attitude is detached, normal and unexcited and the mode of delivery is what has been designated the rapid combinative variety/style.

But even in this style of speech the speaker with the same frame of mind can make non-tonic syllables more prominent by deploying any or both of the phonetic parameters of intensity and quantity. He/she may use a gliding pitch while articulating the syllable. But in that case the intonation patterns will no longer remain simple. This study has simple intonation patterns only within its purview — others being left out owing to various compulsions.
When a word gets incorporated into a sentence — the tonic syllable in isolation may lose its tonicity. In that case it becomes a stressed syllable and the stress pattern of the word might get modified (though not always). A word like /za\'bi/ you go (a command) articulated in isolation has a final tonic syllable /'bi/ with a falling pitch. But while functioning as part of a sentence like /za\'bi\'tui/ you go! its final syllable no longer functions as the tonic syllable, the tonicity is shifted to the sentence — final syllable /'tui/ and the erstwhile tonic syllable /'bi/ gets changed to a stressed one.

5.1.4 The major intonation patterns in DD have been designated Falling, Rising, Rising-Falling and Falling-Rising in consideration of the gliding pitches characterizing the final tonic syllables. The following are the brief descriptive labels:

(a) Type F: falling intonation pattern
(b) Type R: rising intonation pattern
(c) Type RF: rising-falling intonation pattern
(d) Type FR: falling-rising intonation pattern
Following the common practice (of the British linguists, mainly) the intonation patterns have been correlated to sentence categories and attitudinal aspects.

The following sections describe the four major types of DD intonation patterns. The gliding pitches in the tonic syllables and the primary stress have been marked.

Type F:

(a) Grammatical categories:

affirmation, negation and interrogation (with interrogative formatives or with interrogative k-words).

(b) Attitudinal aspects:

detached, cool, calm, dispassionate, casual, disinterested and unexcited mood.

Examples:

/kodom ah\bo/ Kadam will come:

declarative, affirmative, conclusive.

/ke\nobo^hil/ Keeng didn't sit:

declarative, conclusive, negative.
/tamul ekʰan kʰa/ please have some betel nut:
   imperative, conclusive and grammatically affirmative
/tui nahi bi/ please don't come:
   imperative, conclusive, grammatically negative
/tui zabi na/ Will you go:
   interrogative with interrogative verbal suffix.
/tae kak maris/ whom did he beat:
   interrogative with interrogative K-word.

Graphic representation: The following is a graphic representation of a Type F DD sentence:

/la le kak mari se/ Whom did Lal beat up?

Description: The first stressed syllable has the highest pitch level — in Range Two; and this is preceded and followed by two unstressed syllables articulated with relatively lower level pitch in Range One. Thus the pitch levels of the succeeding syllables fall in terraced steps till the final tonic syllable is reached. The falling pitch of the tonic syllable starts at the level of the preceding unstressed syllable and terminates at the bottom of Range One.
Another variation of Type F, designated Type HF, can be postulated. The falling pitch of the tonic syllable may be designated high falling — it starts from the middle of Range Two and terminates at the bottom of Range One. The high falling pitch can be correlated to any of the following — emphatic, slightly impatient, interested as against casual, irritated, categorical attitude. One phonetic exponent of the high falling pitch is that of lengthening of the vowel in the tonic syllable.

/mui \text{tak da} kai suy/ I have call him /mui \text{tak da} kai suy/

Type F Type HF

Type RF :

(a) Grammatical categories :

affirmation and negation, declarative and imperative.
(b) Attitudinal aspects:

Warm, passionate, interested, affectionate, involved, slightly imploring attitude.

Examples:

/ninai ijak dakaise/ Nina has invited him:
declarative, conclusive, affirmative.

/k'ura axi nahe/ Uncle will not come today:
declarative, conclusive, negative.

/tui olop bo/ you sit down for a while:
imperative, conclusive, grammatically affirmative.

/tui ekebare nak^abi/ Don't eat at all:
imperative, conclusive, grammatically negative.

Graphic representation:

/\h^a

Description: Unlike Type F, Type RF has tonic syllables with rising-falling pitches. The pitch level rises first and then falls — during the articulation of the tonic
syllable. The graphic representation indicates the starting level of the rising-falling pitch — which is approximately at the same level that of the preceding syllable — an unstressed syllable. The falling component of the pitch has identical termination level.

Type R:

(a) Grammatical categories:

Interrogative (without interrogative formative verbal suffixes or interrogative words).

Statements with a critical temper. Imperative with an irritated, impatient tone.

(b) Attitudinal aspects:

resentful, protesting and guarded attitude.

Examples:

/tui b^hat k^abi/ will you take your meal?

d^ore horok marise/ Has Dhara beaten Hara?

/mui zay/ I go then (no use waiting)

/tui k^ha/ Eat! (irritated)

Graphic representation:

/l i  'lai nokore/ Will Lila not do it?
Description: In Type R, the rising pitch in the tonic syllable rises from the same level as that of the preceding syllable stressed or unstressed, terminating in Range One.

Type R comprises another sub-type, Type HR which is correlatable to different connotations. In this type the rising pitch of the tonic syllable has a relatively higher termination level than that of Type R. The termination level reaches the bottom or middle of Range Two.

The grammatical correlates are the same as those of Type R. But the attitudinal aspects are different — passionate, interested, surprised, demanding, slightly irritated, sense of the unexpected and excited.

Example:
/bhargte sakuri iril/ Bharat resigned the post?
Graphic representation:

/mui 'tat zam/na/ Shall I go there? (surprise, irritation)

Type FR:

(a) Grammatical categories:

Statements (grudging admission, reluctant or defensive dissent);

Imperatives (urgent, impatient, irritated);

Interrogations (surprise, astonishment).

(b) Attitudinal aspects:

grudging admission, reluctant or defensive dissent, urgent, impatient, irritated, surprise, astonishment.

Examples:

/mui di/'/ I will give (grudging admission)

/tate za/ Go there! (urgent, impatient, irritated)

/tae zabo/ Will he go? (surprise, sense of the unexpected).
Graphic representation:

/mui V div/ I will give

Description: The falling component of the gliding pitch starts at the level of pitch level of the preceding syllable, in this case a stressed syllable, and falls to the bottom of Range One and then rises again only to terminate at the starting level.