

rhythm and Intonation in colloquial newari¹

Tej R. Kansakar
Tribhuvan University
Kirtipur

1. Introduction: Theory

In the analysis of speech or a series of utterances it is of advantage to begin with the syllable. A syllable however is an ambiguous term and there is yet no satisfactory definition of the syllable as a unit of speech production and perception. From the articulation point of view a syllable can be regarded as a movement of the vocal organs or rather the respiratory muscles referred to by Abercrombie as a 'chest-pulse', 'breath-pulse' or a 'syllable-pulse'. A syllable therefore can be taken as a minimum unit of an utterance, either in its audible or inaudible forms.

Certain chest pulses may be more prominent than others, i.e. a chest-pulse may carry more muscular force, and this produces what is known as a 'stress-pulse' or a 'stressed syllable'. Speech however is a continuous sequence of movements in successive and for the most part regular intervals of time. It is the combination and coordinated uses of 'chest-pulses' and 'stress-pulses' that determine the rhythm pattern of a language. Following Abercrombie it can be said that chest-pulses and stress-pulses constitute the two main kinds of speech rhythm:

- (a) a 'syllable-timed rhythm' in which syllables follow each other in a sequence of regular intervals;
- (b) a 'stress-timed rhythm' in which the stressed syllables occur at equal intervals of time or are 'isochronous'.

Abercrombie further maintains that all languages of the world are spoken either with a syllable-timed rhythm or a stress-timed rhythm and not both. While some would contest this view on the ground that some languages (such as Thai) use both types of rhythm (Theeraphan, personal communication), it is my impression that Newari has a distinct stress-timed rhythm although stress as a phonetic feature is not linguistically significant at the word-level in the language.

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1. This is a revised and slightly expanded paper originally written for the course in General Phonetics held at the Central Institute of English Language, Bangkok (Jan-April, 1976). A brief note on Newari intonation has been added to the present paper in view of the related nature of these two aspects of connected speech. I am indebted to Mrs. Lindsay Friedman for valuable suggestions on the first draft of this paper.

Since rhythm is an important factor in the intelligibility of speech, I wish to examine briefly in this paper the nature and function of rhythm in Newari based on a portion of data representing my own speech as a native speaker of the language.

For the sake of convenience I selected a short story called 'The North Wind and the Sun' for its narrative content and translated it into Standard Newari.¹ While recording this material on the tape I assumed myself to be the story teller and tried to convey the style and feelings of colloquial speech. The text has been arranged in monosyllabic and polysyllabic words, and what this paper seeks to do is to analyze the foot structure as a rhythmic unit and to represent the relative syllable durations based on impressionistic judgements and spectrographic evidence of certain sample utterances. This procedure, I hope, will serve to identify the rhythmic unit as a norm of tempo variation as well as to indicate the time units relatively in triple time.² I believe that this approach can help us to discover the rhythmic patterns in colloquial Newari.

1.2. Method: Rhythmic unit

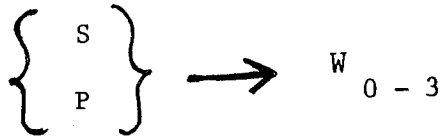
Text 'The North Wind and the Sun'

The North Wind and the Sun were disputing which was the stronger, when a traveller came along rapped in a warm cloak. They agreed that the one who first succeeded in making the traveller take his cloak off should be considered stronger than the other. Then the North Wind blew as hard as he could, but the more he blew the more closely did the traveller fold his cloak around him; and at last the North Wind gave up the attempt. Then the Sun shone out warmly and immediately the traveller took off his cloak. And so the North Wind was obliged to confess that the Sun was the stronger of the two.

Translation: 'फय् व निमाया बाखँ'

फय् व निमा: या सु बल्ला धका त्वापु याना चोंबले ह्मह लूमुगु
गा न्यया वम्ह मनु ह्मह वल । इमिसं थो खं कोहितकी व मनु या गा
तोके फुम्ह बल्ला थहरे जुई धका । अले फय् व वया बल दतले फय् वयका
बिल । तर फय् व: लिसे व मनुनं थ:गु गा फन भूतु भुना वन । उकीं फय्
निरास जुया तोता बिल । अले निमा नं फह्मिफक्को तां न्वेक निमा
तोय्कल । तुरन्त व मनुनं थ:गु गा तोतल । उकीं फय् व थ: सिबे निमाहे
बल्ला धका स्विकार याय् माल: ।

We thus have four kinds of feet in the given data, but in terms of foot structure only two types can be extracted as relevant:



1.3. Method: Syllable durations

Having looked at the rhythmic variation in some detail, I shall use the same data to represent the relative syllable durations. These have been determined for the most part by my intuition as a native speaker and partly by the use of spectrograms in a few doubtful cases. The numbers 1 to 3 or $1\frac{1}{2}$, $1\frac{3}{4}$ etc. indicate the relative duration of each syllable, while the same number appearing under two syllables indicate similar length within a given environment.

Analysis :

phəwən ^j i	ba ja	subə 1	la:	ˆ də ka:	ˆ	lapu	jana
2: 1/2 1/2	2: 1	2: 1	3	2: 1 3	3	1/2: 1/2	1/2: 1/2
tsəŋbəlE	ˆ ts ^h əmə	lumugu ga	n ^j eja	wə: mə	ˆ mə	nu:	
1/2: 3/4 3/4	ˆ 3 2: 1	1: 3/4 3/4 1/2	2: 1	2 1/2: 1/2	ˆ 1: 2 3		
ts ^h əməwə	l ə:	ˆ imi səŋ	thok ^h ə	kots ^h itə	kisu		
2: 1/2 1/2	3 ˆ 3	1/2: 1/2 3	2: 1	2: 1/2 1/2	2: 1		
nāwəmə	nu: jaga	ˆ toke	phətə	wəbəl	la:	thə ^h fe	
1/2: 3/4 3/4	2: 1/2 1/2	1/2: 1/2 3	1/2: 1/2 3	1/2: 1/2	3	2: 1	
dzuidə	ka:	ˆ ə	lE:	phəE	nə̃ uja bəl	dət ^l E	
2: 1/2 1/2	3 ˆ 3	ˆ 1: 2 3 1/2	ˆ 3 1/2	2 1/2	1/2: 1/4 1/4	2: 1	
phəE	wəE kabi	l ə:	ˆ tarə	phəEwə: li	sewəmə		
3	1/2: 1 1/2	3 ˆ 3	2: 1	1/2: 1 1/2	2: 1/2 1/2		
nu: nə̃	thə: gu	ga dz ^h ən	butu	buna wə	nə:		
2: 1	2: 1	2: 1	1/2: 1/2 1	1/2: 1 1/2	3 ˆ 1/2		
u	kiŋ phəE n ^j i	fas dzu	ja:	totabi	l ə:		
2 1/2	1/2: 3/4 3/4	1/2: 1/2 3	3	1/2: 1/2 3	ˆ 3 ˆ 3		
ˆ ə	lE n ^j i	ˆ nə̃ phə	ts ^h iŋ	phə: kə	tāpE kə	n ^j i	
1: 2	2: 1 3	1 3/4: 1 1/4	3	2: 1	2: 1/2 1/2	ˆ 1: 2	
ba	tEkə l ə	ˆ tu	rəntə	wəmə	nu: nə̃	ˆ 3	
3	1/2: 1 1/2 ˆ 3 ˆ 3	1: 2 ˆ 3 ˆ 3	2: 1	1/2: 1/2 1	2: 1 ˆ 1		
thə: guga	ˆ totə	l ə:	ˆ u	kiŋ	phəE n ^j i		
2: 1/2 1/2 ˆ 3 ˆ 3	2: 1 ˆ 3 ˆ 3	3 ˆ 3 ˆ 3	1: 2 ˆ 3	3	2: 1		
thə: si	bE:	n ^j i	ba hE bəl	la: də	ka:		
2: 1 ˆ 3 ˆ 1:	ˆ 1: 2 1/2: 3/4 3/4	2 1/2: 3/4 3/4	2: 1 3	2: 1 3	ˆ 3		
si:kar	jaje ma	l ə:	ˆ	ˆ	ˆ		
2: 1 1/2: 1/2 1	3 ˆ 3 ˆ 3	3 ˆ 3 ˆ 3					

1.4. In conclusion, this brief analyses serve to confirm that Newari utterances do not have isochronous sequence of syllables but rather seem to be regulated by regular stress pattern. Another important point to emerge from this is that the judgement on syllable duration tend to be less arbitrary when it is compared with and co-related to the stress pattern.

Since the tempo of speech is never constant it is to be expected that variations in stress, pitch and rhythm all play their part in giving an utterance its salient qualities. Another factor in the formation of syllable length is vowel length, and it is my impression that both stress and vowel length contribute to syllable duration. The whole rhythm pattern of Newari sentences seems to depend on this relationship.

Finally, we may note briefly the problems involved in measuring syllable length. The main problem is in knowing accurately what to measure. It is not simply a matter of measuring between point (a) and (b), but there is considerable difficulty in selecting these points especially when we cannot decide with certainty on the beginning of aspiration, the onset of voicing, the end of a formant transition and so on. If our decisions in such cases are to be arbitrary, we cannot obtain accurate measurements. Hence I have relied more on impressionistic judgement rather than mathematical accuracy.

2. Intonation Patterns in Newari

Intonation, according to Abercrombie, consists of the non-segmental or suprasegmental features of speech. These features are divided broadly into those components which influence the general quality of the voice, and those components which arise out of the way the voice is handled, i.e. the features of what he calls 'voice dynamics'. Apart from the features of voice quality, of which I shall not be concerned here, I shall concentrate on only one aspect of voice dynamics, that is the fluctuation of voice pitch or 'speech melody' as the basic intonation marker of any speech. Pitch fluctuations or melodic patterns in speech are to be found in all spoken languages, but "there is the greatest diversity in the patterns which make it up, and in the nature of the linguistic functions it performs." (Abercrombie, 1967, p. 104).





In this section of the paper I wish to examine very briefly and in a tentative way the nature of these patterns in Newari and how they relate to syntactic units such as clauses and sentences. Since there is no significant lexical tone in Newari, the role of speech melody at the word level is ruled out, but the basic intonation patterns can be identified and analyzed in terms of pitch-levels or pitch contours. The semantic and grammatical consequences of Newari intonation will not be explicitly discussed but such implications, if any, will be obvious from the given data.

2.1. Description

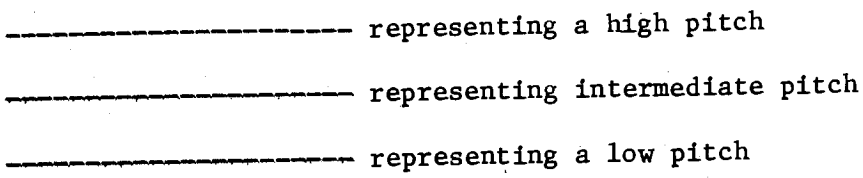
Although Newari does not have contrastive lexical tone, its intonation pattern must be analyzed in terms of pitch levels and pitch movements at the level of syllables and words in the sentence. This implies that the voice pitch of any syllable or series of syllables is a fragment of the whole intonation pattern. On the other hand, in a tone language such as Thai, the intonation of the entire sentence is determined by the melodic patterns of each individual word. In Newari, however, speech melody functions only to determine various sentence types.

It appears that there are two basic tunes or intonation patterns in Newari. Tune I is marked by a pitch fall on the last syllable of the pattern, and Tune II is marked by a pitch rise on the last syllable. The system of transcription used in this paper is that of Jones who represented English intonation with the following marks:

- (a) Dots: - Small dots denote weak level pitches
 - Large dots indicate salient or strongly stressed syllables.

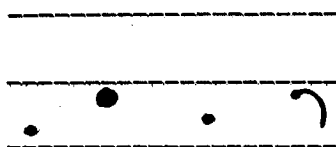
- (b) Curves:  denotes rising pitch
-  denotes falling pitch
-  denotes rising-falling pitch
-  denotes falling-rising pitch

- (c) Staves of 3 lines: dots and curves are placed on a staff of three lines:



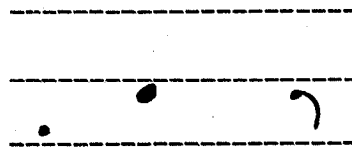
- (d) Dots and Curves (on a staff of 3 lines) are placed above syllables of a phonetic transcription.

(a) Examples of Tune I:



kə ne wə ni

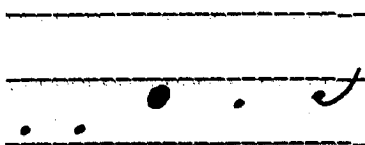
(He) will go tomorrow



wə t^hə^u wə i

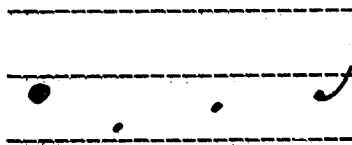
He will come today

(b) Examples of Tune II:



gə bə lE wə ni:

When will (he) go ?



wə^z jæ p^həi la

He may be able to do it

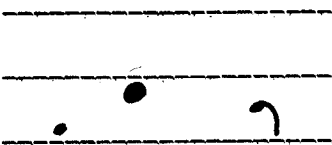
These two intonation patterns seem to relate to syntactic structure in the following way:

Tune I occurs with (a) unmarked statements, (b) questions containing a question-marker at the end of the utterance, (c) commands, and (d) statements with implication.

Tune II occurs in (a) marked statements, (b) questions without a question-marker at the end, and (c) exclamations.

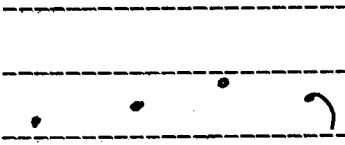
The examples given below for each of these variations represent two tone groups, simple and compound which can be taken as the units of intonation or the units of information. In the transcription the syllable or word pronounced with the emphatic stress is marked with a double stress mark":

2.2. (a) Unmarked statements:



wə wE p^hu

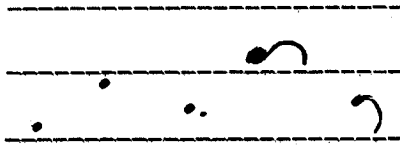
He may come



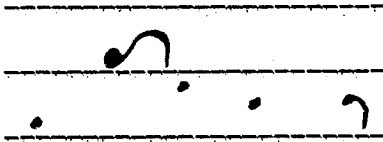
dzi wə ne ma:

I don't want to go

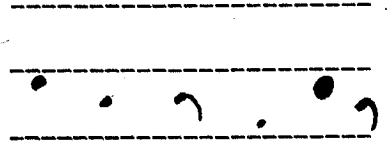
(b) Questions with question-marker:



kə ne wə "ni: la
Will (he) go tomorrow ?



dzi "hE mə dzil la
s it really not possible :

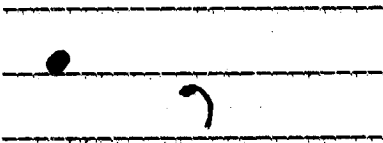


wə̃ jæ p'əi, mə p'əi la
He can do it, can't he ?

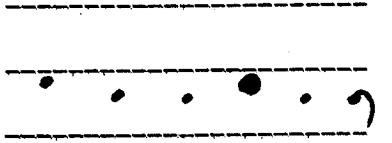


gə be "lE wE gu lE
When are you coming
definitely ?

(c) Commands:



d'əi bu
Tell him !



ts'hə̃ mə ja fe mədzu
You have to do it by all
means



kə ne "hE wE ma:

(You) must come tomorrow (without fail).

(d) Statements with implication:



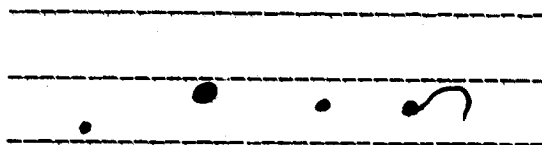
"ts^hə̃ jæ p^hu sa dzu:
w

I hope you can do it (in fact I want you to do it)



wə̃ jæ p^hə̃ i gu "k^hə̃ i la

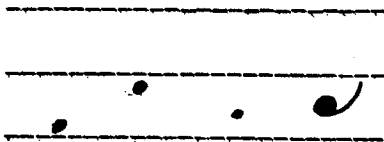
I wonder if he can do it (I doubt it very much)



tsə "lak^h ṃə̃ k^hə̃:

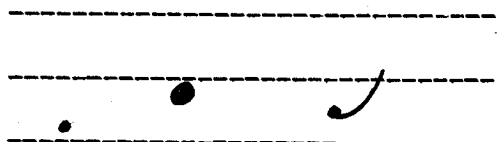
He is very clever (sarcastically used: I believe him to be very dumb)

2.3. (a) Marked statements:



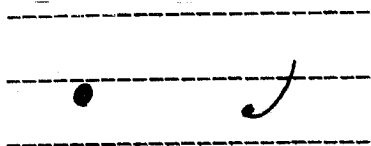
kə ne wə̃ ni:

(He) will go tomorrow
(assurance)



wə̃ t^hə̃̃ u wə̃ i:

He will come today (reaffirmation)



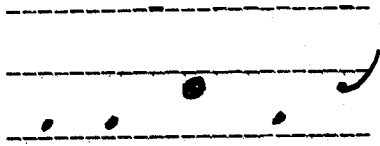
d^həi bu:
w

a: hE ja:

Tell him (reminder)

Do it now (encouragement)

(b) Questions without question-marker:



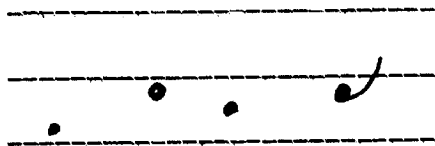
gə bə lE wə ni:

ts^hɛ hə t^hɛ

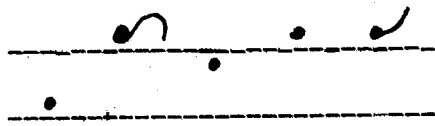
When will (he) go ?

Why such a hurry ?

(c) Exclamations:

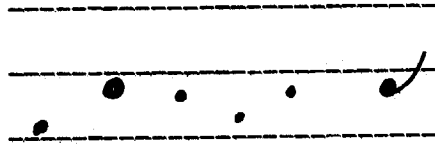


ts^hu jɛ gu "ka:
What am I to do now !



gə "ja gu bā̃ la:

What a beautiful thing !



gə ja mə mənʉ "lʃa:

What a silly person !

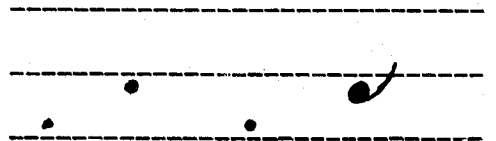
2.4. The uses of Tune I and Tune II:

The contrastive uses of Tune I and Tune II can be illustrated in the following utterances:

(a) Unmarked and marked statements:

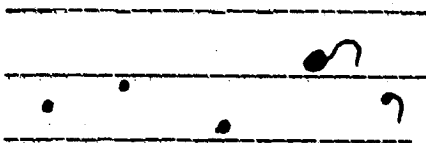


kə ˈne wə ni
(He) will go tomorrow

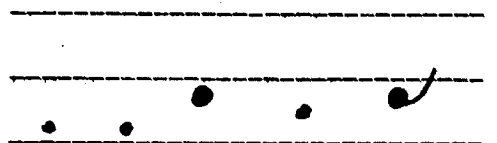


kə ne wə ˈni:
(He) will go tomorrow (assurance)

(b) Questions with & without question-marker:

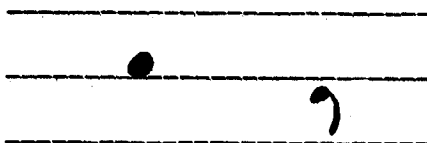


kə ne wə ˈni: la
Will (he) go tomorrow

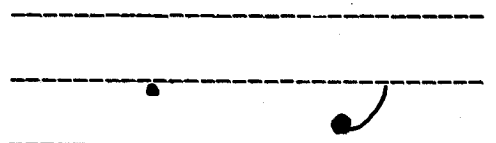


gə bə lE wə ˈni:
When will (he) go ?

(c) Commands with & without implication:

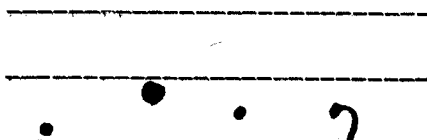


ˈdɛ i bu
Tell him !

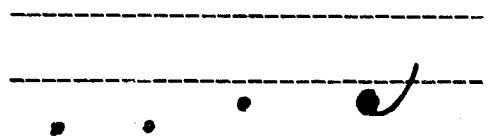


dɛ i ˈbu:
Tell him (reminder)

(d) Statements with implication & exclamation:



tsʰu ˈjɛ gu ka
(Tell me) what I should do.
(not that anything can be done now).



tsʰu jɛ gu ˈka:
What am I to do now !

From the above examples the intonation pattern seems to depend on the position of the stress word in the sentence. If the stressed word occurs in the final syllable there is a corresponding rise in tone. Whereas if the stressed word occurs sentence-initially or medially the final syllable invariably registers a falling tone. This implies that stress and pitch are not two separate systems but function as basic components of Newari intonation, or the rhythm of extended discourse (as suggested in Section 1 above). The data examined is so limited, however, that it would be unwise to assume that pitch is predictable from stress. What is apparent is that stress and pitch elements do certainly have a linguistic function, although in Newari intonation does not operate in the same sense as in English.

This brief analysis and the conclusions drawn from it are however very tentative as they represent a small corpus of sample utterances which may not have yielded "significant generalizations" on the broader patterns of usage. A more extensive work is obviously required before we can hope to capture the inherent complexities of Newari speech.

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