

**Clause, Sentence, and Discourse Patterns
in selected languages of Nepal**

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Part IV, Word Lists

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Further Development

in voice-register theory from descriptions
of languages of South and Southeast Asia

Richard S. Pittman

1. The two-register option on each syllable of a disyllabic word-base may give four apparent tones.

In the winter of 1969-70, the author, 1970 and Jessie Glover, 1970 working primarily with Tamang, Gurung, and Thakali materials, proposed that the four-tone (or four voice-quality prosodies) of these three closely related languages are best viewed as two-register exponents realized on what must once have been disyllabic word bases. This view was maintained in spite of the basically monosyllabic nature of the data worked with. A limited amount of data was also adduced from Sherpa (Kent Gordon, 1970) and Lhasa Tibetan (R. K. Sprigg, 1955) in support.

Now Esther Strahm and Anita Maibaum, working on Jirel, which is fairly closely related to Sherpa, have produced a description (1971) which, while based on an assumption of two tones and two contours, beautifully illustrates the two-register, two-syllable hypothesis. They report the two tones and two contours intersecting to give four tone types, each on a disyllabic word, as shown in Figure 36 which has been adapted from theirs:

	Non-falling Contour	Falling Contour
High tone	high-high	high-low
Low tone	low-high	low-falling

Figure 36. Jirel tones and contours on disyllabic word bases (Strahm-Maibaum analysis).

Using the number 1 to mark high and 2 to mark low pitch syllables, their illustrations are:

thāk ¹ pā ¹	rope	Thāng ² kā ¹	river
phōnggāk ¹	shirt	phēr ² kā ²	stick
cyhīmpāk ¹	liver	cyhīrbūk ²	chicks

nyimā^{1 2} ear of wheat nyimā^{2 2} sun, day

Word-initial voiced stops and affricates occur only on words beginning with low pitch. Other correlations between pitch and consonant features have not been observed.

On monosyllabic word bases the four tone patterns are the same as on disyllabic bases. The contraction of the prosodies of two syllables into one, however, gives extra tenseness in a high-high sequence, a sharp drop in a high-low pattern, and an extra lowness and laxness in a low-low, distinguishing it from the low-high.

2. The final consonant of a monosyllabic word-base is actually the initial consonant of the second (now lost) syllable of that word base.

A beautiful illustration of this comes also from Strahm-Maibaum's Jirel paper. Monosyllabic word-bases which end in a stop also end in prosody 1. Those which end with a nasal consonant or l or r end with prosody 2. (Prosody is here used as a generic term to cover both of the Strahm-Maibaum terms 'tone' and 'contour'.) The following are their examples:

			1-2	rainy season
			yār	
1-1	mucus		1-2	sky
nap			nam	
1-1	dew		1-2	medicine
syit			men	
1-1	louse		1-2	pastures
syik			pan	
2-1	night		2-2	handle
nup			lum	
2-1	kind of tree		2-2	name
bet			nun	
2-1	sheep		2-2	field
luk			sying	
			2-2	snake
			ruI	

3. Magar evidence also supports the theory that a four-prosody system for monosyllabic word bases has resulted from contraction of a two-term system realized on two or more successive syllables.

A typical Magar verb suffix, infinitive -ke, for example, has no inherent prosody of its own but serves as the "carrier" for the second prosody of a monosyllabic word base. In doing this it also provides a basis for determining what the second prosody of a monosyllabic word base is. It is virtually impossible to discover what that prosody is by asking for a word base to be pronounced in isolation.

Gary and Barbara Shepherd, 1971.31 give both the information above and the illustrations below. The two registers in this language are referred to as "clear" and "breathy"; Shepherds distinguish them by writing an h in each breathy syllable, none in clear syllables.

Clear corresponds to register 1 in Jirel and breathy to Jirel 2.

clear-clear	pa-ke	to learn
clear-breathy	pa-khe	to search
breathy-clear	mhat-ke	to separate
breathy-breathy	cha-khe	to pierce

4. One consequence of contraction is that certain lexemes may exercise a prosodic dominance over others.

When the four possible sequences of two registers--1-1, 1-2, 2-1, 2-2--are contracted in any given language the result may be four distinctive prosodic patterns. Or the result may still be a two-term system, one prosody in each sequence being eclipsed or outranked by the other. The recessive prosody is not lost in such a case; it reappears when juxtaposed with a lexeme which it in turn dominates.

David Watters, 1971 gives just such an example. His rules of dominance and illustration chart, slightly reworded, are reproduced below.

- 1) There is one class of stems which dominates all suffixes.
- 2) There is another class of stems which is recessive, that is, it is dominated by any suffix which has an inherent prosody.
- 3) There is a class of atonic suffixes which have no prosody of their own. Any prosody which they appear to have is conferred on them by the stems (or tonic affixes) with which they occur.

<u>Stems</u>	<u>Suffixes</u>
Dominant	Tonic
Recessive	Atonic

Figure 37. Ranking (top to bottom) of stem and suffix prosodies in Kham.

A dominant stem determines the prosody on a tonic suffix. A tonic suffix determines the prosody on a recessive stem. A recessive stem determines the prosody on an atonic suffix.

5. Voice-register theory can account not only for four-prosody languages but also for six- and eight-tone systems as variants of languages with tri-syllabic roots.

Dale Purtle's "Tone from Vowel Register" paper, read at the Decem-

ber 29, 1968 meeting of the Linguistic Society of America in New York, has made a major contribution to the understanding of how tone languages have arisen from register languages. Though he did not have Stewart's "Tongue-root position in Akan Vowel Harmony" paper, and though he should have described register as a syllable (i.e., consonant and/or vowel and/or pitch and/or voice quality) phenomenon rather than as a vowel factor only, his basic thesis is sound. He did not have the necessary Tibeto-Burman data to fit Tibeto-Burman into his system at the time of his writing, but the 1970 Pittman and Pittman-Glover papers filled in that gap.

Not content with the claim that voice register theory can relate the East and Southeast Asia tone and register languages, Purtle went on to allege that it supports Benedict's assertion of relationship between non-tonal Malayo-Polynesian languages and the Thai family of languages. While carrying Benedict's hypothesis substantially forward, he omitted one crucial step in the argument: the demonstration of how the tri-consonantal roots of MP can give eight tones in a language with basically monosyllabic roots.

Since the two registers are frequently realized as high and low tones respectively, the four combinations on disyllabic roots are HH, HL, LH, and HH. These four, if contracted from disyllabic to monosyllabic articulation, give a four-tone system.

If the parent language had a trisyllable (CVCVCV) or triconsonantal (CVCVC) word-base system the total range of combinations possible (using H for first register and L for second) is HHH, HHL, HLH, HLL, LHH, LHL, LLH, and LLL--that is, eight.

Languages with more than four tones but less than eight have realized some potential beyond that of two prosodies in sequence on disyllabic roots but less than the full potential of all two-prosody combinations on tri-syllabic roots. A given language, for example, may have HHH, LLL, HLH, HHL, and LLH, but lack HLL and LHH. If the syllables which carried these prosodies have also been contracted, the result is regarded as a six-tone language rather than a two-register language.

6. There is rapidly growing evidence that retroflexed consonants--/tr/ at least--represent retracted tongue-root articulation (i.e., 1st register) and that voiced aspirates are realizations of advanced tongue-root (i.e., 2nd register) position.

At the Second (January 1968) International Tamil Congress in Madras, India, the author suggested that Tamil retroflexion and Hindi aspiration might prove to be opposite reflexes of the nearly universal South and Southeast Asia register system. That is, retroflexion is often an artifact of a retracted tongue-root position and aspiration, especially voiced aspiration, a consequence of advanced tongue-root position.

In the three years which have elapsed since this hypothesis was advanced the following data have come to hand:

1) All monosyllabic word-bases of Chepang, a Tibeto-Burman language of Nepal, which begin with a retroflexed consonant are in the first (high) register.

2) Robert Harms writes "...rounding pharyngealization, and retroflexion are represented by the single feature 'flat'." (1968,6).

3) Richard Noss, describing Cambodian, 1966:93 states, "The reflexes of stressed *Xr (where X equals a permitted consonant) all produce rising pitch in the vocalic nuclei which following them... ..all vocalic nuclei following *Xr become pharyngealized in Phnom Penh if they were not so to begin with."

4) Greenberg, 1970:133 quotes Hobbey on Bassa of Liberia to the effect that the retroflex consonant in that language is tone-raising.

5) Greenberg also writes (1970:132) "...plain voiced or breathy voiced consonants, particularly obstruents, lower the pitch of the entire vowel segment or that portion which is immediately adjacent..."

6) Shepherd and Shepherd, 1971:32 write, "There are two degrees of breathiness in Magar words... If the (first segment of the word base) is a voiceless stop or affricate the relative lowering of pitch (associated with) breathiness is slight, and... breathiness on the vowel is slight. If the (word base starts with) any other segment or with a vowel, then the relative pitch drop is marked, and the degree of breathiness manifested on the vowel is heavy." (Parenthetical portions my rewording-RSP).

7. Summary. There is no theoretical problem in relating the tonal and non-tonal languages of Asia. In fact, voice-register theory provides all of the necessary theoretical basis for relating them.

The crucial development has been the contraction of tri-syllabic and di-syllabic roots of two-register languages such as Japanese. Though syllables have been lost, the register contrast has been retained, often as pitch and pitch-contour contrast on resulting monosyllabic word bases.

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For an explanation of the abbreviations used, see the references for the introduction.

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