REGISTER IN TIBETO-BURMAN LANGUAGES OF NEPAL: A COMPARISON WITH MON-KHMER[1]

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SUMMARY

A widespread phenomenon in Mon-Khmer languages is a binary division of phonological systems, realised frequently as two contrastive voice qualities in vowels. The term *register* has been given to this opposition, which in different languages has different phonetic realisations. Register probably finds its historical source in the loss of a voicing distinction in initial consonants.

This paper presents evidence from Tibeto-Burman languages of Nepal for a phenomenon similar in phonetic realisation but systematically different in that it is a four-way rather than a two-way division. A hypothesis relating the phenomenon to a postulated historical voicing contrast in both word-initial and word-final consonants is presented.

1. VOICE REGISTER IN SOUTH EAST ASIA

1.1 *PHONOLOGICAL CONTRAST*

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[1]This paper is based very largely on the work of Dr Richard S. Pittman who developed the hypothesis presented and organised the comparative examples.

The field work on which this paper is based was undertaken in Nepal by Mr and Mrs Ross Caughley, Mr Chuda Mani Bandhu, and Mr Ballabh Mani Dahal (Chepang), Misses Doreen Taylor and Fay Everitt (Tamang), Misses Maria Hari and Anita Maibaum (Thakali), Mr and Mrs Kent Gordon (Sherpa), and my wife and myself (Gurung) under the auspices of the Summer Institute of Linguistics and of Tribhuvan University, Kathmandu, to which organisations I wish to express gratitude for their practical support. I thank also Dr Pittman and other colleagues of the Summer Institute of Linguistics in Nepal, and Ken Gregerson and Richard Phillips in Viet Nam, for access to their unpublished materials.

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It has long been recognised that many languages of South East Asia exhibit a binary division of the vowel system, involving frequently a difference in quality of voice in the vowel articulations. The precise phonetic realisations of the opposition differ in different languages, and in any one language the opposition is frequently realised by a complex of several phonetic exponents. However, in many languages quality of voice is impressionistically the most prominent exponent of the opposition. The term *register* thus seems appropriate to describe it.

1.2 *PHONETIC REALISATIONS*

The term *voice register* was first proposed by Henderson (1952:151) in describing contrastive syllables in Cambodian. She associated with the first register 'a "normal" or "head" voice quality, usually accompanied by relatively high pitch' and with second register 'a deep rather breathy or "sepulchral" voice, pronounced with lowering of the larynx, and frequently accompanied by a certain dilation of the nostrils'. Phillips (1962:2) proposed extension of the term register for use 'generally in Mon-Khmer languages wherever there is a distinction (whether phonemic or not) in which some vowels (or syllables) sound deeper or breathier or looser than others. The term is sufficiently noncommittal that it will permit a redefining of the contrast for each particular language.' Numerous other works dealing with the widespread distribution in Mon-Khmer languages of the phenomenon of register are surveyed by Gregerson (1969).

Gregerson points out that terms used to describe the distinction have generally been impressionistic rather than articulatory and notes that one common expression for the distinction, namely tense/lax, has been used with opposite significations by Jacob (1968:4) in describing Cambodian, and Shorto (1966:400) in describing Mon, on the one hand, and by Jenner (1966:34)[2] in a survey of Khmer register phenomena on the other. The use of the former authors, associating tenseness with first register, is shared by Phillips (1962) in describing Hre, Sedang, and Mnong Bunor, three Viet Nam languages of the Bahnaric group in the Mon-Khmer family. The confusion may be a result of differing focus of observation. Thus the muscles of the vocal cords are lax during articulation of a breathy vowel, but Hari (1969:22) comments also on the tightening of the front throat muscles during pronunciation of a lax (breathy) vowel in Thakali. Since the vocal cords appear the primary

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[2] I have not been able to consult Jenner's article. My information is from Gregerson (1969).

articulator in breathiness, the use of the term *lax* to denote breathy vowels seems preferable. On the other hand, in describing Twi, a language of West Africa, Stewart (1967:201) also notes the terminological confusion. He suggests an explanation in terms of the impressions of tenseness or laxness in African vowels being opposite to those predicted by European phonetics.

There is confusion also on the term *pharyngealisation*. It has been used in the sense of pharyngeal constriction by Phillips (1962:8) for *first* register vowels in Sedang. But Jenner (1966:34) and Noss (1966: 92) use the term in the opposite sense, namely of pronunciation with the pharyngeal cavity distended, in describing *second* register vowels in Cambodian. Phillips' use, applying the term to a constriction of the air stream, seems more in line with normal phonetic usage, and is adopted by Pike (1947:22a).

In the vowel system of Twi, Stewart described *tongue root position* as a decisive articulator (1967). Gregerson (1969) has pointed out a remarkable parallel between the register phenomena in South East Asia and those described in terms of tongue root position for Twi.

The key observation by Stewart is the correlation between *vowel openness* and tongue root position. Close vowels have advanced tongue root; open vowels have retracted tongue root[3]. This is paralleled by Jenner's conclusion that in Khmer 'tongue height, critical in deliberate as well as normal speech, is the most stable index of register' (1966:42), and by Phillips' observation (1962:14) that in Mnong Bunor vowels with a second register quality are higher than those with a first register quality. Phillips also notes (1962:5) that in Hre the second register vowels /ɐ̀/ and /ɜ̀/ are higher in aperture than their first register counterparts.

Voice quality has been linked with tongue root position in Pike's description of pharyngeal modification of vowels (1947:21,22). He speaks of a 'fuller' or 'deeper' resonance produced by one or more of 'lowering of the larynx ... fronting of the tongue so that the root of the tongue is farther from the wall of the throat and/or ... the spreading apart of the faucal pillars'; on the other hand he describes a 'choked up' pronunciation with the tongue backed in the mouth. With the former terms may be compared Henderson's 'sepulchral' for second register

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[3]This correlation is what may be expected from a consideration of the physical positioning of the tongue tissue, but most phonetic texts have omitted any comment on it.

in Cambodian (1952:151) and Ward's 'hollow' for Maasai in Africa (1937)[4]. With the latter, compare Phillips' 'tight, pharyngealised' and 'pharyngeal rasp' for first register in Sedang (1962:8) and Stewart's 'creaky' and 'choked or even strangled' for Twi and Fante in Africa (1967:196).

Acoustic analysis provides a further parallel between the register phenomena in Mon-Khmer and the correlation of tongue root position and vowel openness (and voice quality) in West Africa. Comparing Miller's study of Brou vowels (1967) and Pike's work on Twi (1967:138) Gregerson points out that 'the open Twi vowels and the first register open Brou vowels have consistently higher frequencies than their close or second register counterparts' (1969:8-9). Tone, in the sense of pitch of voice, is also mentioned as an exponent of register in Cambodian by Henderson (1952:151), with first register syllables normally higher in pitch than second register syllables.

In the light of the parallel phonetic realisations, in Mon-Khmer on the one hand and Twi and Fante on the other, of the division of the vowel systems, it seems reasonable to extend the term register beyond the Mon-Khmer family to apply to Twi and Fante, and, on the evidence of similar parallels as we shall see below, to Tibeto-Burman[5].

1.3 *ORTHOGRAPHIC AND HISTORICAL CONSIDERATIONS*

Difference in register has been associated in South East Asia historically with voicing and devoicing of consonants, especially stops. In many orthographic systems in Asia a contrast in the consonant symbols derived respectively from the Devanagari voiced and voiceless consonant symbols (used for Sanskrit) is used to mark syllable modifications like tone. Tibetan, Thai, Laotian, and Burmese are examples. Thus Henderson (1952:152) notes that first and second register in Cambodian are signalled orthographically by consonant symbols corresponding respectively to the symbols for voiceless and voiced consonants in Sanskrit. Noss (1962:92) also comments on the correlation in Modern Standard Cambodian between initial consonants and register, which he calls 'pharyngealization'. The historical nature of this correlation is argued for Tai

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[4] I have not been able to consult Ward's article. My information is from Stewart (1967:199).

[5] Gregerson (1969) offers evidence for extending the concept of register, linked with tongue root position, to a number of other widely diverse language families.