

# SOME PHONETIC PHENOMENA IN NEW GUINEA LANGUAGES

S. A. WURM

Some of the very numerous Papuan (or non-Austronesian) languages of the New Guinea area are characterized by the occurrence in them, of speech sounds which are uncommon in languages in other parts of the world.

One of these sounds is a laterally released velar stop or more correctly a heterorganic affricate, which is typical of languages of the so-called Central and East-Central Families situated in the Highlands Districts of Australian New Guinea and also of languages located in the Huon Peninsula. While it has phonemic status in all the languages in which it occurs, its principal allophonic forms in different languages are phonetically of two distinct types. One of them is a usually voiced, midvelar stop with a relatively long fricative lateral release with the tongue-tip usually articulating against the alveola. The other type is a post-velar, always voiced stop with a relatively short, heavy-friction lateral release with the tongue-tip pointing forward without touching anywhere. The former is more common, the latter being restricted to the Yagaria language of the East-Central Family in which it occurs with great statistical frequency. Characteristically, a phonologically conditioned allophone of the former is a voiceless lateral fricative, whereas the latter has no such allophone, and little allophonic variation in general.

Other unusual sounds, also occurring in Yagaria, are pre-glottalized voiced bilabial and alveolar stops. They occur only word-medially and are in complementary distribution with non-preglottalized voiced bilabial and alveolar stops, e.g. [<sup>l</sup>dε<sup>h</sup>dæε] 'they ate'. For phonological reasons, these preglottalized stops are interpreted as complex phonetic units rather than as CC sequences: while preglottalization may occur word-medially with all consonants except the voiceless stops, b and d are never found without preglottalization in medial position; therefore, other preglottalized medial consonants are phonemically interpreted as CC, whereas [<sup>h</sup>b] and [<sup>h</sup>d] are regarded as allophones of [b] and [d] with the allophones [b] and [d] occurring initially.

An unusual sound found in parts of the Southern Highlands is a nasalized trill [ɾ̃] which appears in contrast with a non-nasalized trill [ɾ], e.g. Foe [*gakaro*] = 'short' as opposed to [*yeṛahae*] = 'stand up'. This sound is similar to one found in the Ponérihouen Language in New Caledonia, e.g. [*maṛu*] = 'bird'. In languages of the same area, and of adjacent parts of the Western District, nasal and non-nasal flaps are

encountered in at least one of the languages. Their exact phonemic status is still under study. These sounds have been found both as ordinary and as retroflexed flaps.

In the Kilmeri Language, in the north-western part of the Sepik District, a bilabial voiced trill occurs medially, apparently as an allophone of (b).

The existence of tonal languages in New Guinea has been known for many years, but until not much more than a decade ago, they had been thought to be exceptional. With the rapid expansion and development of New Guinea Linguistics in recent years, an increasing number of languages believed to be tonal has been reported. While in some instances, like with Yabem on the coast of the Huon Peninsula, and Telefol in the centre of the island, this assumption appears to be correct, there have been instances in which different linguists working in two closely related languages (like for instance Gahuku and Benabena in the Eastern Highlands) analyzed one of them as tonal and the other one as non-tonal with phonemic stress conditioning syllable pitch. While this is certainly a possibility, it suggests that there may be room for different interpretations of similar or identical supra-segmental phenomena in related languages. Recent studies have shown that in a large number of New Guinea languages, especially in the Highlands languages of Australian New Guinea, supra-segmental phenomena are present which on first impression appear to be syllable tones, but which upon careful analysis can be explained differently. So for instance, the postulation of three emic stress levels in Yagaria permits the interpretation of tonal phenomena as pitch changes conditioned by stress, e.g. ( $1h\acute{a}^3t\bar{i}$ ) = 'five', [ $^3h\acute{a}^2li$ ] = 'arrow'. Such cases seem to be common in the Highlands, and recent work by S. Wurm in languages of the Trans-Fly area in the Western District has shown that a similar situation appears to exist with some languages there. So-called 'ornamental' tones have been mentioned for other parts of New Guinea, and it seems that languages with complex interacting supra-segmental systems are quite usual in New Guinea.

## DISCUSSION

### *Carnochan:*

From your description and from listening to your recorded examples, I think that articulations very similar to your pre-glottalized plosives occur in a number of Nigerian languages such as Fula, Hausa and Bachama e.g. in Hausa "Sun babbazgi itace" they uprooted all the trees "Sun daddala mashi sata", the pre-glottalization and voicelessness is particularly noticeable in the long stops corresponding to the double letters.