

SOME OBSERVATIONS ON ALVEOLAR AND DENTAL CONSONANT-ARTICULATIONS IN HIGI

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In most languages, it seems to be a commonplace that allophones of phonemes in contact should often manifest some tendency to articulatory similarity, in the place or manner of articulation, or in voicing.

Occasionally, one finds allophones which seem to contradict this generalisation, such as the exponent of non-initial *l* in some accents of English, which has a somewhat velarised quality whether it is preceded by a front or a back vowel.

Similarly, in Higi,¹ a language of Northern Nigeria, there occurs the same arbitrary-seeming lack of similitude in the exponents of vowels and consonants articulated in the front of the mouth.

There are two audibly distinct sets of front vowels, an advanced set, and a retracted set, relatively speaking. These may be represented by the following symbols:

[i e ɛ] [i ɛ ɛ]

Their positions on a Cardinal Vowel chart may be seen in Figure 1.

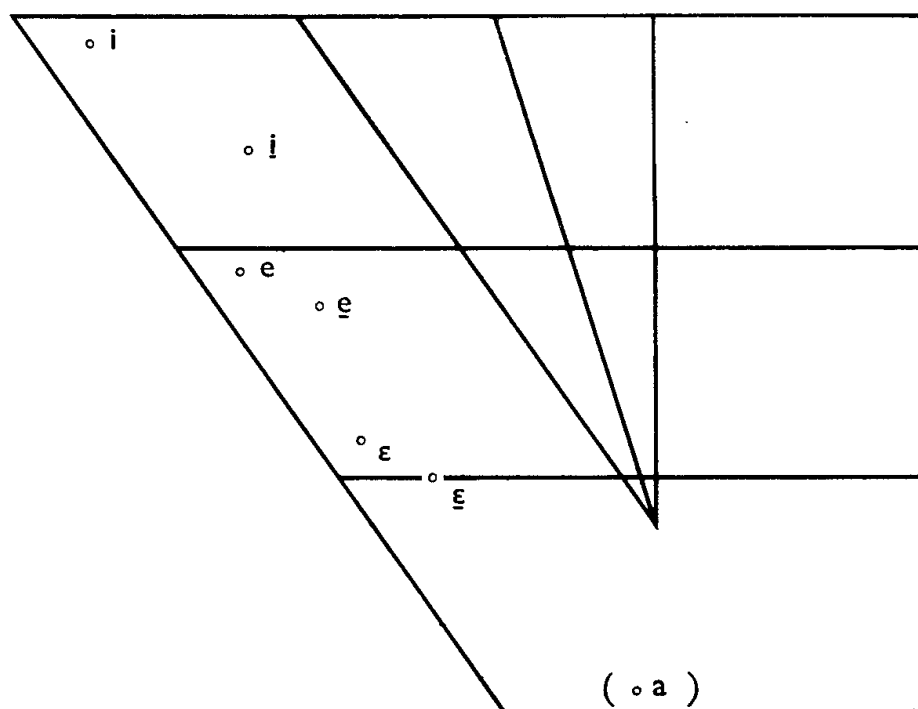


FIGURE 1: Locations of advanced and retracted front vowels.

In the structure -CV-, where the phonetic exponent of *C* is a dental or alveolar consonant, and the exponent of *V* is one of the above vowels, then the allophonic exponents of *C* (provisionally allocating phonemic status to the vowels), show an unexpected

¹ Higi is a language spoken in Sardauna Province in Northern Nigeria, and the adjacent part of Cameroun. It consists of a number of more or less different dialects, and according to Greenbergs' classification is a member of the Chadic branch of Afroasiatic.

character. The consonantal articulations associated with the retracted series of vowels are dental, and those associated with the advanced set are alveolar, or even post-alveolar.

A brief palatographic survey² of some 150 words, embodying the large majority of possible combinations of this sort, was made of the speech of Mr D. Kwace, a speaker of the Nkafa dialect of Higi. According to the impression of Dr C. Hoffmann,³ the speech of Mr Kwace is quite typical, auditorily, of this dialect.

Unfortunately, some of the palatographic film was accidentally damaged. However, enough film survived (although of a rather poor quality), to confirm⁴ the dental nature of the articulation of the consonantal allophones in contact with the retracted vowels, and the alveolar, or post-alveolar nature of those in contact with the more advanced set. Figure 3 contains four palatograms illustrating this distinction.

It may also be of interest to note that the vowels [a] and [ia] seem to pattern with the

	i	ɪ	e	ɛ	ɜ	ɛ	ia	a
t	x		x					
ʈt	x		x					
pt							x	
t̪		x						x
p̪t̪			x		x			x
m̪t̪					x			x
n̪t̪		x						x
d	x		x				x	
md				x				
nd	x						x	
ɖ		x	x		x			
bɖ		x	x		x			x
mɖ		x	x		x			x
nɖ					x			x
ɗ	x			x			x	
ɗ̪		x						x
bɗ̪			x					
l ⁵				x				

	i	ɪ	e	ɛ	ɜ	ɛ	ia	a
ɬ		x	x		x			x
ʂ			x		x			x
tʂ		x			x			x
pʂ					x			
mʂ			x					
nʂ		x	x					
ʐ		x			x			x
ɖʐ		x			x			x
bɖʐ		x	x					
mɖʐ			x					x
nɖʐ			x					x
ɗ̪		x	x		x			x
ɸɗ̪					x			
ɸ			x					
βɸ								x
n				x		x		
ɲ					x			x
mɲ		x						x

FIGURE 2: Table of the mutual occurrences of vowels and consonants that were investigated.

² The method used was that described by D. Abercrombie, in 'Direct Palatography', ZEITSCHRIFT FÜR PHONETIK 10, 1957, and by J. Anthony, 'A new method of investigating the tongue positions of consonants', SCIENCE TECHNOLOGISTS' BULLETIN, October-November 1954.

³ Dr Hoffmann is at present making an analysis of this language, and my thanks are due to him for bringing this particular problem to my notice, and for subsequent discussions.

⁴ A further palatographic investigation will be made as soon as possible, because of the partial nature of the present experimental data; however, as this will not be possible until December 1965 at the earliest, it was decided to publish the initial results as they stood.

⁵ Believed to be a slightly retroflex lateral flap.



FIGURE 3a: [ndí] to get fire

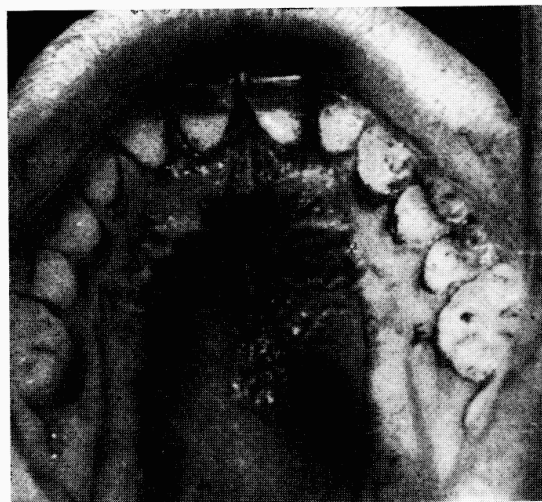


FIGURE 3b: [dzĩ] a bat



FIGURE 3c: [títí] far away

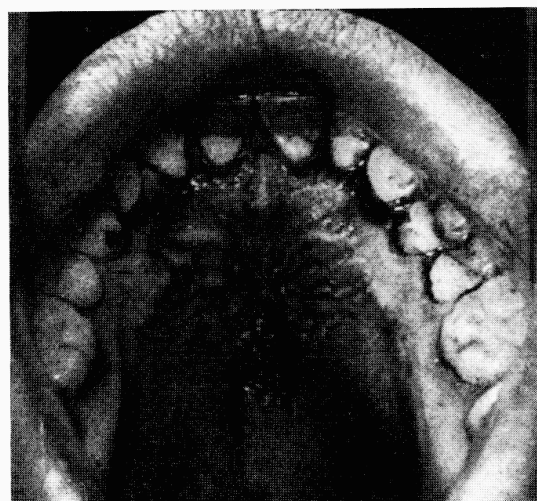


FIGURE 3d: [dzé] to measure

FIGURE 3: Four palatograms illustrating the contrast between the dental articulation of consonantal allophones in contact with retracted vowels (3b and 3d) and the alveolar or post-alveolar articulation of those in contact with the more advanced vowels (3a and 3c).

retracted and the advanced series of vowels respectively, concerning the articulatory behaviour of their associated consonant-allophones.

A table of mutual occurrences of the various vowels and consonant-allophones that were successfully investigated can be seen in Figure 2.

I should be emphasized that the relative phonemic status of the vowels and the consonants is not here considered. The purpose of this article is merely to draw attention to a somewhat unusual phonetic phenomenon in a little-known language.