

## THE 'ARTICULATION BASE' AND CHOMSKY'S 'NEUTRAL POSITION'

W.R. BRIAN ANNAN

Chomsky and Halle in the *Sound Pattern of English* define "Neutral Position" thus:

In most X-ray motion pictures of speech, it can readily be observed that just prior to speaking the subject positions his vocal tract in a certain characteristic manner. We shall call this configuration the "neutral position" and shall describe some of the ways in which it differs from the configuration of the vocal tract during quiet breathing. In the latter state the velum is lowered, thereby allowing air to pass through the nose; in the neutral position, on the other hand, the velum is raised, and the air flow through the nose is shut off. The body of the tongue, which in quiet breathing lies in a relaxed state on the floor of the mouth, is raised in the neutral position to about the level that it occupies in the articulation of the English vowel [e] in the word 'bed'; but the blade of the tongue remains in about the same position as in quiet breathing (1968:300).

The whole of their phonetic classification of sounds rests on this supposed UNIVERSAL of speech. It is my opinion that, should such a neutral position exist (and I believe it does), then it must be language-specific and thereby not a 'universal'. When investigating any language one is impressed by the differences which exist between it and one's first language both at the phonemic level and at the phonetic level. I believe that the neutral position stated above is possibly an adequate statement for American English (though I doubt it) but I should like to suggest that it may not be suitable for all forms of English, let alone any other language. If one looks at vocalic "filled pause" in language one finds great differences of articulation. Boomer defines "filled pause" as "uh /ə/, ah /a/, um /əm/, and similar variants" (Boomer 1965). I use the term 'vocalic filled pause' to indicate any pause marker which is  $\left[ \begin{array}{l} + \text{vocalic} \\ - \text{consonantal} \end{array} \right]$  thereby ignoring the value 'um /əm/. These filled pauses are used for grammatical encoding as stated by Boomer, "If the emerging (phonemic) clause has not yet been subjectively formulated, speech is suspended until the entire pattern is clarified. This suspension may be manifested as either a pause or a vocalised hesitation sound" (Boomer 1968). In my opinion the vocalic filled pause may be regarded as the neutral position and is definitely language-specific; when stating that it is language-specific, I mean that it is a phonemic feature and that the phonemic clause may be seen to be

a neuro-muscular gesture and that the pause marker may be interpreted as a perceptual indication of the same ensuing gesture. Consider the following examples — in my native Scots, /u/ or /e/, dependent on dialect or accent, Erse /ɑ +/, Portuguese and Rumanian /ɐ/, French /ø/, German and Swedish /œ/, Russian /i/ and Cameroons Pidgin /ɛ̃/ or /ã/. Notice also that they are all in phonemic brackets because they all have phonemic value in the stated languages (or dialects). While many of the above examples have a central tongue position similar to what Chomsky and Halle give as their neutral position, others have a higher or lower tongue position and the lip postures and jaw positions are very different; all points which must be taken into consideration when interpreting X-ray films, indeed the neutral position attested by Chomsky and Halle on X-ray films, must be made by measurements of the range of vocalic articulation and jaw-opening for different subjects, and then computed to show statistical relevance (see my article: Annan 1970).

My second point is to develop the idea of the "articulation base", i.e., "the system of characteristic articulatory movements of a given language that confer upon it its general phonetic aspect" (Marouzeau 1943). This can either be biologically defined as by e.g., van Ginneken (1933), or psychophonetically defined as by Francescato: "the phonetic habits of every speaker become fixed in patterns depending on the language he natively speaks" (1968). It is, in my view, best stated by Honikman in her excellent article on "Articulatory Settings" where she writes

An articulatory setting is the gross oral posture and mechanics, both external and internal, requisite as a framework for the comfortable, economic, and fluent merging and integrating of the isolated sounds into that harmonious, cognizable whole which constitutes the established pronunciation of a language (Honikman 1964).

One sees therefore that it is impossible to classify phonetic features on a universal basis and that one must take into account the articulation base both as an articulatory fact and as a basis for perception (intelligibility) — by this I mean that there are limits of intelligibility between dialects and these have a phonological basis (cf. Francescato).

I hope that I have demonstrated here some of my basic doubts about the phonetic framework of generative phonology and that while I have in the main been negative, I should like to suggest that a framework such as is suggested by Ladefoged (1965) wherein contrastive phonemic units are the basis for analysis may produce more positive results.

*Department of Phonetics  
University of Leeds*

### REFERENCES

- Annan, B.  
1970 "A Comparative Study of the Vowels of Different Accents of English", in *Proceedings of the VIth International Congress of Phonetic Sciences*, Prague 1967 (Prague, Academia) [also in University of Leeds, Phonetics Department Report 1].

- Boomer, D.S.  
1965 "Hesitation and Grammatical Encoding", *Language and Speech* 8:148 [reprinted in *Language* ed., Oldfield & Marshall (1968)].
- Chomsky, N. and M. Halle  
1968 *The Sound Pattern of English* (New York).
- Francescato, G.  
1968 "Speech Perception and the Basis of Articulation", *Folia Linguistica* 2:3-4.
- van Ginneken, J.  
1933 "La biologie de la base d'articulation", *Psychologie du langage*.
- Honikman, B.  
1964 "Articulatory Settings", in *In Honour of Daniel Jones*, p. 73.
- Ladefoged, P.  
1965 *The Nature of General Phonetic Theories* (= *Georgetown University, Monograph Series on Language and Linguistics* 18).
- Marouzeau, J.  
1943 *Lexique de la terminologie linguistique*, p. 38 (as quoted by Chomsky and Halle 1968:295).

## DISCUSSION

FROMKIN (Los Angeles)

You conclude with an acceptance (and praise) of the IPA symbols; yet you have stated that you reject any universal features. Certainly the IPA, as well as practically all theories of linguistics, historically assume a set of universal features whether they call them by this term or not. How else can one compare languages, or group segments in one language into natural classes, without some sort of universal referents?

ANNAN

In the written text I make no reference to the IPA but take this from Professor Ladefoged's comments during this morning's plenary session. It is of course time that one has a tacit acceptance of a phonetic i.e., universal framework for the analysis and comparison of languages but my theory is that it is better to work from some articulatory basis that is NOT an artifact which is what I consider the 'neutral position' to be.

PADDOCK (Wolfsville, N.S.)

I strongly support Professor Annan's suggestion that the neutral position is in fact language specific. When one prepares to speak, the articulatory apparatus is 'cocked' into the characteristic position for the speaker's dialect. All other articulatory gestures may be then best regarded as movements FROM or TOWARDS this position. This contributes heavily to the characteristic overall quality for a given dialect.

May I quote Firth's statement that one of the main aims of an Englishman speaking is to sound like an Englishman. It has been reported that the Arabic 'emphasis' gesture, which seems so peculiarly unnatural to non-Arabs, plays an important part in Arabic baby talk. Nothing could be more characteristic of Arabic than this gesture. It is as if the Arab baby learns to sound like an Arabic speaker at the very beginning of his linguistic development.

ANTTILA (Los Angeles)

In the question of the phonemicity of the hesitation vowels in the respective languages, would you or anyone else, care to comment on the well-known front-nasal hesitation vowel of Eric P. Hamp? Is it phonemic?

ANNAN

Without meeting Eric Hamp I should hesitate to comment on any idiosyncratic features his speech might have, but I should like to expand on the phonemic status of the vocalic filled pause. When I say that it is language-specific, I am thinking of an extension from Chomsky's meaning in that it may be referable to socio-linguistically graded communities, e.g., the speech of University Dons at Oxford or the second generation immigrant population of a city. It is quite possible that Eric Hamp belongs to some such grouping.