PHONEMIC SYNCRETISM AND THE PROCESS OF COMMUNICATION

ZDENĚK F. OLIVERIUS

The problem of phonemic syncretism, neutralisation, overlapping of phonemes etc. has been widely discussed by linguists of different schools, of whom I might mention primarily N. S. Trubetzkoy (8), A. Martinet (6), L. Hjelmslev (3), Z. S. Harris (2), A. A. Reformatskij (7) and R. I. Avanesov (1).

The failure of many attempts at automatic detection makes it advisable to revise the concept of minimal linguistic units.

In this contribution I would like to draw attention to the interrelationship of certain features of languages as natural communicative systems and the concept of phonemes as minimal units of the expression level.

The minimal elements of the expression level are usually defined with the tacit presumption that a one-to-one correspondence can be achieved solely on the basis of an analysis of inherent qualities of individual segments. It is assumed that every single segment counts.

This would be the case in a language with zero redundancy (where all possible sequences of segments constitute messages): in such a case only the acoustic image of every single segment would have to be taken into account (not the acoustic images of neighbouring segments); one acoustic image could have — in case of zero redundancy—one and only one function.

The point of departure of this contribution is the obvious fact of greater than zero redundancy in actual communicative systems (with the necessary implication of a) absolute limitations on sequence of segments and b) variations in relative frequency of different sequences).

Stringent limitations as to which segments may occur in utterances permit us to differentiate and keep apart two acoustically identical segments; the environment (sufficiently wide, in some cases extending to the limits of the utterance) takes over the role of the inherent acoustic correlates of distinctive features. The phonemes will consequently be understood not as a bundle of distinctive features but as a class of elements united by one function (identifiable by the inherent features of the given elements plus its environment, i.e. the acoustic features of surrounding segments). Under such circumstances complete overlapping of phonemes is possible. It can be dealt with as a (resoluble or irresoluble) syncretism on the phonemic level.

Two acoustically identical segments [t] and [t] in words род and рот or two other

identical segments [ə] and [ə] in words мальчиком and мальчикам never appear isolated in normal communicative situations. Segments can be ascribed to a phoneme (as members of a class of elements to the class in question) only within normal unambiguous utterance, as for example:

(1)   Его богатство, знатный род и связи давали ему большой вес в губерниях, где находилось его имение. (Пушкин, Дубровский)

(2)   Не шумели, не галдели и оратору глядели прямо в рот. (Д. Бедный, Друг надежный)

(3)   Что за короткость с пустым, глупым мальчиком? (А. Островский, Бесприданница)

(4)   Дима об этом еще ничего не сказал мальчикам.

In the quoted pairs of utterances (1—2 and 3—4) the acoustically identical elements are in different positions (if sufficiently wide positions are drawn in) and permit the full application of Trubetzkoy's I and III rules for identifying phonemes (8,42—44), and also the application of the strictly distributional criteria of Z. S. Harris (2,61).

If we impose the (in linguistics) usual limitation on the analysis of the segments in question and take into account only the inherent acoustic qualities of the segment and a very narrow position, we cannot solve the syncretism and we have to admit the existence of an archiphoneme (i.e. of an element with a limited distinctive power, which is evidently contradictory to the accepted presumption that expression is by necessity built up of discrete elements (which must be either in opposition to each other or be identical—tertium non datur). cf. B. Mandelbrot (5).

But such a limitation—even if it is usual in linguistic analysis—is not imposed on the analysis done by native speakers in the process of decoding utterances containing phonemic syncretisms like род—рот, мальчиком—мальчикам. Otherwise decoding would be impossible and the interlocutor would demand further explanation. In decoding syncretisms like род — рот, мальчиком — мальчикам the listener takes into account the whole sequence of segments before and/or after the element in question to the limits of the whole utterance (or at least certain pieces of the sequence like ...знатный... х ...глядели в... or ...с...х ...не сказал...

The structured message is encoded into a sequence of discrete elements (phonemes). The discrete character of signs and figurae (cf. L. Hjelmslev [3]) is equivalent to the fact that a message can be repeated without distortion and disfiguration. If signs and figurae had the character of continuous elements they could be only imitated (and not repeated), which would of necessity imply a steadily growing disfiguration of a message at each repetition. Communication would be practically impossible under such conditions (cf. M. Mandelbrot [5]).

Discrete elements (phonemes) are, in turn, transformed (via nerve impulses) into continuous muscular activity, then into a continuous sound-wave. The sound-wave reaches the hearing apparatus of the receiver where it is decoded as a sequence of discrete elements again.

At the different stages of encoding and decoding a message we are dealing with a transposition from one code to another. While in normal communication elements of the content level remain identical from the first to the last stage of the process of communication, the elements of the expression level (if I may use the term "expression level" in this rather wide meaning) change from nerve impulses to muscular activity and different shapes of the sound-wave etc. Segments of the successive different subcodes (e.g. the muscular activity, the sound-wave) can be related to the same phoneme. So the discrete element, the phoneme, can be said to correspond with segments of different successive continuous expressions.

The usual definitions of phonemes drawing attention only to one or two stages of the process of communication (the muscular activity and/or the shape of the sound-wave) are not adequate enough.

We can assume that some elements (phonemes) are kept apart at the stage of nerve impulses and neutralised at the stage of muscular activity and sound-wave (many examples could be drawn from Slavonic languages, e.g. Russian and Czech). It seems fruitful to adopt the stimulating conception of A. V. Isačenko, who suggests the presupposition that phonemes are encoded as a complete set of instructions (4,204).

The concept of phonemes as minimal discrete units of the expression level should take into account all stages of the process of communication with different continuous realizations.

Simple and adequate description of the expression level of a language can be achieved by means of only two types of elements: discrete phonemes and continuous allophones. Archiphonemes, morphonemes etc. are not indispensable.

BIBLIOGRAPHY

1. Р. И., Аванесов, *Фонетика современного русского литературного языка*, Москва 1956.
2. Z. S. Harris, *Methods in Structural Linguistics*, Chicago 1963.
3. L. Hjelmslev, *Omkring sprogteoriens grundlæggelse*, København 1943.
4. A. V. Isačenko, Foném a jeho signálový korelát, *Slovo a slovesnost* 27 (1966), 193—205.
5. B. Mandelbrot, Structure formelle de textes et communication, *Word* 10 (1954), 1—27.
6. A. Martinet, Neutralisation et archiphonème. *TCLP* 6, 1936
7. А. А. Реформатский, О соотношении фонетики и грамматики (морфологии). *Вопросы грамматического строя*, Москва, 1955.
8. N. S. Trubetzkoy, Die Grundzüge der Phonologie, *TCLP* 7, 1939.