

SOUND DISTINCTION: UNIVERSAL INVENTORIES
OF PHONIC SUBSTANCE OR LANGUAGE-SPECIFIC SYSTEMS?

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ABSTRACT

Since each language system is a unique segmentation of universal substance shaped into its elements, ultimate phonological units are not items in universal inventories of so-called 'distinctive features' to be incorporated into language systems. Each phonological system segments the universal human arsenal of sound-distinctive capacity in its own way, forming a specific set of neuromuscular impulses, of which each activates a fully automatized aggregate of articulations.

Phonological theory experiences today tremendous difficulties on account of its growing isolation from the needs of modern phonetic technology, which, finding little response to its requirements, has to rely on its own groping solutions of phonological problems. This gap between theory and practice is the inevitable result of the failure to work out an adequate answer to the fundamental question of the ultimate phonological unit.

It is widely believed that phonology as a linguistic science started by assigning that status to the pho-

neme - hence its other name 'phonemics'. However, as early as in 1936 Josef Vachek showed that the phoneme was not the smallest indivisible phonological unit, because it could contain smaller non-successive simultaneous units, e.g. sonority, palatality etc. [13]. The idea was developed by Bohumil Trnka at the 3rd International Congress of Phonetic Sciences in Ghent [12]. Then Roman Jakobson devoted four decades of pioneering work to the search for the phonological quantum - the ultimate language unit named 'distinctive feature' [7; 8; 9]. The best-known result of the quest is the universal inventory of a dozen items, of which phonological systems are built for all languages. The inventory was later revised theoretically and enlarged threefold by Noam Chomsky [4]. While fully recognizing the great scientific and practical value of R. Jakobson's achievements, we have to admit nevertheless that the entities he discovered and catalogued are not what he thought they were, i.e. the ultimate phonological units. It stands to reason that no items from a universal set can be directly employed as units in a language system

[5]. N. Chomsky was therefore quite consistent in stressing the language-independent nature of his inventory of 'features' [3]. What R. Jakobson and N. Chomsky really inventoried is indeed universal, it is the common human arsenal of sound-distinctive capacity. Naturally, all phonological systems are based on it as their substance foundation. But no part of underlying substance can be directly integrated into any system, and language systems are not exceptional in this respect. The elements of the universal anthropophonic distinctive potential listed in the above-mentioned inventories are certainly not ready-made units to be selected by and included into a concrete language system. A language unit is not a mere piece of substance, but substance shaped as an element to fit into the unique structure of the given language system. Consequently, elements of different systems cannot be identical with elements in other systems, however close they might seem in substance. This has long been accepted for phonemes, but not for 'distinctive features', which, according to R. Jakobson, coincide with the same 'feature' in other languages [8]. Regrettably no theoretical explanation was offered for this deviation from the general principle that precludes the compilation of universal inventories for phonemes, morphemes, words from all languages. The phonological system of any language is a specific way of segmenting the universal potential of phonic distinction and molding the

segments obtained into language units - ultimate phonological quanta. The segments are not produced by selecting some 'features' as relevant and discarding the rest as redundant; they are rather aggregates of several articulatory movements together with their auditory correlates. In acquiring the sound pattern of a language a child achieves automatic combination of the uniquely aggregated movements, and the whole aggregate is then activated by a single neuromuscular impulse. The impulse is in fact the substance vehicle for the realization of the corresponding ultimate phonological unit. In many languages (e.g. German, French) vowel labiality and tongue position are separate units, while in many others (e.g. Russian) they are parts of the same aggregated unit; in the latter case there is no point in regarding one of them as relevant and the other as redundant - they are jointly relevant within the same unit in the given phonological system. As for the part which each of these phonic actions plays within the aggregate, its automatic regulation is performed at a lower sublinguistic level. In French and English the consonantal subsystems contain ultimate units of post-centrality combining in their aggregates the phonic features of velarity, palatality and alveopalatality [7; 8; 11]. But the features are differently grouped and realized in the two languages, and despite their similarity together with the unavoidable common designation each unit is unique in being an element of a specific language system.

Full recognition of the status of language units for the phonological quanta calls for the creation of a suitable term, the customary designation as 'distinctive features' being vulnerable in its two components. To begin with, the word 'feature' is incompatible with the status of a language unit in its own right, as a feature is a mere attribute of a unit of higher rank. Indeed, the term appeared when the phoneme was regarded as the basic phonological unit possessing certain characteristic features. Now, when that notion has been replaced by establishing the ultimate phonological unit as belonging to an independent tier in the system, it must be given a designation that would correspond to the new status and not be an adjunct to the phoneme.

Secondly, the new designation should avoid a reference to distinction as the primary function of the unit in question. Units of every language level fulfil that function, and all language units are equally distinctive. At the same time they are all constitutive within higher units. Consequently, language systems have no need for separate distinctive units, for all distinction is achieved by the use of different constitutive elements. The ultimate phonological unit is no exception: phonemes are distinguished by containing different units of this level. Together with the customary designation we must therefore decline the term 'merism' [2].

The best term for the unit in question was suggested by Jan Baudouin de Courtenay at the beginning of the

century - the blend 'kinakeme' [1], containing the Greek roots for 'movement' and 'hearing' together with the suffix -eme.

Like all the other language units of every level in the macrosystem, the kinakemes are elements in a subsystem of their own, which is naturally not a mere inventory but a well-structured body. Its structure displays two principles. One is thorough binarism - all kinakemes are paired into oppositions of positive vs. negative. Positive kinakemes are materialized as neuromuscular impulses to perform the respective movement or recognize the respective auditory signal; their negative counterparts are realized in the absence of the impulse.

The other structural principle provides for a hierarchy of tiers in the kinakemic subsystem: it always contains two categories (modal and local) with possible subcategories in them and with a further division into kinakemic oppositions. The resulting variety of structural patterns is vast, so that each language usually has a very individual organization of its kinakemic subsystem [10; 41].

The purely negative step of discarding the obsolete notion of universal inventories for ultimate phonological units is obviously insufficient. It must be followed by constructive steps in two directions: first, the kinakemic subsystems are to be described for as many languages as possible; second, a typology of kinakemic subsystems is to be worked out to find their common properties as well as possible diversity in them.

REFERENCES

- [1] BAUDOIN DE COURTENAY, J. (1910), "Les lois phonétiques", *Rocznik slawistyczny*, III.
- [2] BENVENISTE, E. (1966), "Problèmes de linguistique générale", Paris: Gallimard.
- [3] CHOMSKY, N. (1972), "Language and Mind", New York: Harcourt.
- [4] CHOMSKY, N. & HALLE, M. (1968), "The Sound Pattern of English", New York: Harper & Row.
- [5] FISCHER-JØRGENSEN, E. (1975), "Trends in Phonological Theory: A Historical Introduction", Copenhagen: Akademisk Forlag.
- [6] GRUCZA, F. (1970), "Sprachliche Diakrise im Bereich der Ausdrucksebene des Deutschen. Beiträge zur allgemeinen Sprachtheorie", Poznań: PWN.
- [7] JAKOBSON, R. (1962), "Selected Writings", I, The Hague: Mouton.
- [8] JAKOBSON, R. (1976), "Six leçons sur le son et le sens", Paris: Editions de Minuit.
- [9] JAKOBSON, R. & WAUGH, L. (1979), "The Sound Shape of Language", Harvester Press.
- [10] PLOTKIN, V. (1976), "Systems of Ultimate Phonological Units", *Phonetica*, 33, 2.
- [11] PLOTKIN, V. (1978), "The Kinakeme as the Ultimate Unit of Language", *Kwartalnik Neofilologiczny*, XXV, 3.
- [12] TRNKA, B. (1939), "On the Combinatory Variants and Neutralization of Phonemes", *Proc. 3rd Int. Cong. of Phonetic Sciences*.
- [13] VACHEK, J. (1936), "Phonemes and Phonological Units", *TCLP VI*. Reprinted in: "A Prague School Reader in Linguistics" (1964), Bloomington: Indiana University Press.