
TWO PROBLEMS OF SOUND PERCEPTION AND PHONEMIC INTERPRETATION IN POLISH

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1. /a/ vs. /o/

As an illustration of the fact that children (as well as foreigners) often fail to grasp a given phoneme's specific vocal-tract configurations while being perfectly able to internalize an adequate table of phonemes in terms of their sensory actualizations. Jakobson adduced in his 1966 Moscow paper on phonic elements and speech perception the case of a three-year-old Polish boy who would substitute /a/ for Polish /o/ in spite of his being able to perceive the difference accurately so that he would attempt to correct the mispronunciation [dapaćągu] as repeated after him (instead of [dopocóągu]) by insisting on what might seem a tautological contradiction: „One can't say [dapaćągu], one must say [dapaćągu]!”² This inability of properly distinguishing between the articulation of the phonemes /a/ and /o/ in Polish, while clearly perceiving the acoustic difference, can probably be related to the fact, recently emphasized by Stieber, that the acoustic effect of Polish /o/ as distinct from /a/ can be achieved in one of two ways: either by a slight labialization concomitant with a raising (and simultaneous retraction) of the back part of the tongue or by a more strongly marked performance of either one (but not both) of these two articulatory movements.² In terms of distinctive features as now reformulated for Polish by Jassem the difference in articulation thus achieved in one of two possible ways amounts to a difference in the low vs. high-tone feature: /o/ (along with /u/ and /w/) is a low-tone vowel while /a/ (as well as /i/, cf. below) is a high-tone vowel, this feature not being relevant for all Polish vowels (viz., not for /i/, /e/, /j/)³

2. /i/ and /i̯/

Among the many unsettled problems of synchronic Polish phonology is the phonemic interpretation of the relationship of /i̯/ and /i/ (the latter written *y*). According

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¹ R. Jakobson, “The Role of Phonic Elements in Speech Perception” (forthcoming). In the conventional IPA transcription the palatal voiceless affricate is symbolized by [tʃ] instead of [t̪].

² Z. Stieber, *Historyczna i współczesna fonologia języka polskiego*, Warsaw, 1966, p. 99.

³ W. Jassem, *Biuletyn Polskiego Towarzystwa Językoznawczego*, XXIV (1966), pp. 98 and 102

to Stieber these two sounds must be considered allophones of one and the same phoneme, at least for the time being and in the language of a vast majority of educated Poles.⁴ Jassem, on the other hand, classifies /i/ and /i̇/ as separate phonemes.⁵ As is well known, a similar discrepancy in phonemic interpretation continues to exist for the corresponding vowels of modern Russian.⁶ In terms of Jassem's distinctive features, Polish /i/ and /i̇/ differ as follows: /i/ is acute, long (as opposed to short /j/), and does not participate in the low/high-tone opposition; /i̇/ is grave, high-tone, and does not participate in the short/long opposition. There is no reason to question the accuracy of the measurements and instrumental data reported by Jassem. How, then, can these conflicting views (as represented by the two Polish scholars) possibly be reconciled? The key to accounting for the two seemingly opposite views lies in a correct appraisal of the underlying respective concept of the phoneme. Jassem (oriented primarily toward physiological data) seems to conceive phonemes as made up exclusively of their constituent distinctive features. Phonemes could therefore be considered merely space-saving, conventional symbols representing actual sets of specific feature complexes; cf. the bracketed feature specifications used in generative phonology. While not explicitly stated, Jassem's concept appears thus to be closely related to the view recently advocated by Chomsky and Halle denying the need, and indeed the possibility, of setting up an independent phonemic level of representation. Stieber, on the other hand, shares the view that a phoneme as a whole is characterized by more than merely its constituent features. Most important of these additional characteristics are a phoneme's distributional properties which can modify (neutralize) features otherwise considered distinctive. It is on the basis of the complementary distribution of Polish /i/ and /i̇/ (granting certain exceptions as possibly foreshadowing an imminent breaking away of /i̇/ as an independent phoneme) that Stieber maintains their allophonic relationship. While both Stieber and Jassem thus recognize a substantial difference in actual articulation and perception of the two sounds, this difference is not considered phonemically relevant by Stieber whereas for Jassem, who does not take into account distributional criteria but only views phonemes in auditory-articulatory and acoustic terms, it is sufficient to separate /i/ and /i̇/ as independent phonemes. Both views can be justified if we realize that we deal here with different levels, the introduction of distributional criteria implying a higher level of abstraction. It is largely also in these terms that one must see the current disputes concerning the very existence of phonemes as truly linguistic entities (instead of merely equalling the sum of their constituent features). Thus on the feature level (i.e., without recourse to distribution), Polish /i/ and /i̇/ must be considered as constituting different feature

complexes. On the phoneme level, on the other hand, the feature oppositions ascertainable on the lower level are suspended by the criterion of complementary distribution rendering the features differentiating /i/ and /i̇/ perceptually and genetically predictable and hence non-distinctive.⁷

DISCUSSION

Mańczak:

I und y sind zwei Phoneme, weil alle Polen sie ohne jede Schwierigkeit isoliert aussprechen können, was im Falle der kombinatorischen Varianten nicht vorkommt. Ein phonetisch ungeschulter Pole ist nicht imstande, die Variante von a in niania oder die von i in pański isoliert auszusprechen. Obwohl in den einheimischen Wörtern i im Anlaut nicht vorkommt, ist nicht wahr, daß es dort unaussprechbar ist, vgl. ypsilon oder scherzhaftes ymynyny „imieniny“. Keine Beweiskraft hat igrek, da frz. i grec.

Lüdtke:

Zur polnischen Metasprache: Wie bezeichnet der normale Sprecher die Laute [i] und [i̇] sowie die ihnen entsprechenden Grapheme *i* bzw. *y*?

Hamm:

On the distinctive feature level, which phoneme is or will (theoretically) be marked, *i* or *i̇* (and which unmarked)?

Birnbaum:

As for the question of markedness, raised by Prof. Hamm, I would think that, in traditional terms, [i̇] would have to be considered the marked member of the [i] ~ [i̇] phoneme, [i] being the basic variant of that phoneme. However, this question becomes irrelevant in terms of the distinctive features of these sounds, as now restated by Jassem who considers [i] and [i̇] different phonemes. Thus the distribution of features is, in his view, as follows:

[i]		[i̇]
acute	vs.	grave
long (marked)	vs.	∅ (unmarked)
∅ (unmarked)	vs.	high-tone (marked)

Was die Benennung des [i̇]-Lautes im Polnischen betrifft, so heißt er dort entweder „y“ (d. h. [i̇]) oder „igrek“ (aber nicht „ygrek“!). Indessen ist die Benennung dieses Lautes kaum entscheidend für die Frage seiner phonematischen Selbständigkeit. Wichtiger ist die für die Verteilung (Distribution) wesentliche Tatsache, daß im Polnischen kein Wort mit „y“ beginnt. Natürlich werden [i] und [i̇] von linguistisch nicht vorgebildeten Polen stets als verschiedene Laute

⁴ Z. Stieber, op. cit., pp. 101—102.

⁵ W. Jassem, op. cit., pp. 87, 95, 97—98, 101—104, 106.

⁶ Cf., e.g., the arguments for the minority view that Russian [i] and [i̇] constitute separate phonemes in A. N. Gvozdev, *Izbrannyye raboty po orfografi i fonetike*, Moscow, 1963, pp. 98—101, and *passim*.

⁷ For a summary of the recent differences of opinion concerning the existence of phonemes as independent linguistic units and for a brief discussion of the insistence on different levels of abstraction (as advocated by Malmberg, Šaumjan, and others), see my paper „Syntagmatische und paradigmatische Phonologie“, *Phonologie der Gegenwart*, Graz—Vienna—Cologne, 1967, pp. 307—352.

empfunden, was jedoch wiederum nicht unbedingt als Beweis dafür angeführt werden kann, daß diese beiden Laute nicht auf einer höheren Abstraktionsebene, nämlich gerade der phonematischen (wenn man an der Annahme einer solchen Zwischenebene trotz der bekannten Einwände der generativen Phonologie festhalten zu dürfen glaubt), als Allophone (Kombivarianten) desselben Phonems gewertet werden könnten. Daß die Frage, ob poln. [i] und [i̯] als selbständige Phoneme oder als Allophone des gleichen Phonems gewertet werden sollen, weitgehend von der Deutung des Phonembegriffs abhängt, habe ich ja in meinem Referat zu zeigen versucht.