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The Origin of the Phoneme:
Farewell to a Myth

Additions and Corrections (August 2014)

Note

This article was reprinted in: Charles W. Kreidler (ed.), *Phonology: Critical Concepts*, *Vol. V*. London, New York: Routledge 2001, 4-20.

Correction to footnote 1

The planned monograph *The Phoneme Story: Fact and Fiction* was not completed. Instead, I published the following papers on the subject, which supersede the present article in some details:

- „Die Anfänge der Phonologie [The beginnings of phonology]", in: Peter Schmitter (ed.), *Sprachtheorien der Neuzeit II: Von der* Grammaire de Port-Royal *(1660) zur Konstitution moderner linguistischer Disziplinen* (Geschichte der Sprachtheorie 5). Tübingen: Narr 1996, 247-318.

  Argues that the insight that some sound differences are distinctive ("capable of distinguishing meanings") while others are not (first stated explicitly in the 1870s in connection with guidelines for phonetic transcriptions) should not be attributed to the "inventors" of alphabetic writing, the Sanskrit grammarians, the author of the Icelandic First Grammatical Treatise, the phoneticians of the 16th-19th c., Jan Baudouin de Courtenay or Jost Winteler; traces the meanings of the term *phoneme* in the writings of A[ntoni] Dufriche-Desgenettes, Ferdinand de Saussure, Mikołaj Kruszewski, Jan Baudouin de Courtenay as well as Lev V. Ščerba, who was the first to associate the term with the principle of distinctivity, and the Prague School, which developed a full-fledged theory of the phoneme as a distinctive unit.
  See https://www.academia.edu/151127/_Die_Anfange_der_Phonologie_

- ''On the Origins of the Term *Phoneme*", *Historiographia Linguistica* 38 (2011), 85-110.

  Provides new biographical information about Antoni Dufriche-Desgenettes, shows that he used *phonème* earlier than hitherto known and suggests that he did not take it from Greek *phōnēma* himself but was indirectly influenced by Petăr Beron, who had employed the term since 1855 for a sound sequence as the expression side of a word.
  See https://www.academia.edu/630367/_On_the_Origins_of_the_Term_Phoneme_

- "More on the Origins of the Term *phonème*", *Historiographia Linguistica* 41 (2014), 185-187.

  Cites an even earlier instance of *phonème* in a letter by Dufriche-Desgenettes.
  See https://www.academia.edu/8099006/_More_on_the_Origins_of_the_Term_phoneme_

Omissions in references

HAVET, L. 1874. "*Oi* et *ui* en français". *Romania* (Paris) 3 (1874), 321 – 338.
LEPSCHY, G. C. 1970. *A Survey of Structural Linguistics*. London: Faber & Faber.

Typographical errors

page 148, line 14: *paris* should be *pairs*
page 150, SAUSSURE 1897: *1897* should be *1879 [actually published 1878]*

MATERIAUX DU BULLETIN PHONOGRAPHIQUE

Joachim Mugdan

THE ORIGIN OF THE PHONEME: FAREWELL TO A MYTH

0. The source of the term *phoneme* and the emergence of the "phoneme idea" have been the subject of several studies (e.g. JONES 1957=1967 : 253-269, JAKOBSON 1971, KRÁMSKÝ 1974, KOERNER 1978b) and are remarked upon in almost every history of linguistics, in numerous textbooks of phonology and the like. But unfortunately I cannot share RUSZKIEWICZ's impression that "the history and meaning of the term phoneme have been satisfactorily clarified in a number of publications" (1978 : 111). On the contrary, a great deal of the information provided is not borne out by an examination of the sources. One such untenable commonplace in linguistic historiography is the claim that the term *phoneme* was first used in its present sense by the two Polish linguists, Jan Baudouin de Courtenay (1845-1929) and his pupil Mikołaj Habdank Kruszewski (1851-1887), during their years at Kazań university (cf. LEPSCHY 1970:60, FISIAK 1972 : 7, SOMMERSTEIN 1977 : 16, to name but a few). The main purpose of the present paper is to destroy this myth and to show what Baudouin and Kruszewski really had to say; a few related issues will also be discussed[1].

1. Although Kruszewski did not invent the term *phoneme*, he was the first to use it in contradistinction to *sound* (Russian звук, German *Laut*). In a review article written and published in 1880 he introduced *phoneme* (Russian фонема) with the following comment:

(1) "This word can be used to advantage as a term to designate the *phonetic unit*, while the word 'sound' could designate the unit in the so-called physiology of sound." (КРУШЕВСКИЙ 1880 : 36n)[2]

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[1] The paper incorporates material from two more extensive studies, "Jan Baudouin de Courtenay (1845 — 1929): Leben und Werk" (München: Fink, 1984) and "The Phoneme Story: Fact and Fiction" (in progress). A brief extempore version was presented at the 16th Annual Meeting of the Societas Linguistica Europaea in Poznań on 21st August 1983.

[2] All translations are mine. Where appropriate, the original terms or further explanations are added in square brackets.

A similar definition appears in his "Ueber die Lautabwechslung", a German version of the introduction to his master's thesis:

(2) "I suggest calling the phonetic unit (i.e. that which is *phonetically* indivisible) by the name *phoneme*, as opposed to *sound*, the anthropophonic unit. The advantage and inevitability of such a name (and such a *concept*) is already evident a priori." (KRUSZEWSKI 1881 : 14n)

What is not evident a priori, however, is the meaning of "phonetic unit" in this context. It is not apparent from the above quotations that Kruszewski's "phoneme" has nothing whatsoever in common with the "phoneme" of classical phonology. But his examples leave no doubt:

(3) "The point is that *the phonetic unit is not always a single sound*: it can consist of two sounds, e.g. *ml'* in the [Russian] word *z'eml'a* [земля, 'earth']³, *št* in the [Old Slavic] word *svěšta* [**свѣшта**, 'candle']. The combinations *ml'*, *št* in these words are *indivisible* from the point of view of phonetics and one cannot find separate correspondents for each of the two sounds in Polish, for example: *ml'* || Pol. *m'* [in *žem'a* (*ziemia*)], *št* || *c* [in *šv'eca* (*świeca*)]. In such cases as [Russian] *znam'a* [знамя, 'flag'], one must regard *a* with softening [i.e. palatalization] of the preceding consonant as the final phonetic unit; thus the phonetic unit here consists of one sound and a quality of another sound." (КРУШЕВСКИЙ 1880 : 36n)

It should be obvious that here "phonetics" cannot be equated with "phonology" in the modern sense, as HEINZ suggests (1978 : 216). Kruszewski's distinction between "phonetics" and "sound physiology" (or "anthropophonics", a term borrowed from C. L. Merkel) goes back to Baudouin's teachings at Kazań: for him, "phonetics" in the narrower sense was the "morphological-etymological part of the science of sounds", which studies "the *equivalents of sounds* (sound units and their combinations)" according to their role in the "mechanism of the language" (БОДУЭН 1879-81 : I.372f=163 : I. 109). More specifically, what Kruszewski called the "point of view of phonetics" is a way of looking at sounds that in Baudouin's earliest lectures was labelled "historical, etymological", as distinct from the "acoustic-physiological" and "mental⁴ (word-formational, morphological)" approaches (1876-77 : II.274-277 =1963 : I. 79-82; cf. 1871 : 301f=1963 : I. 65f). The historical part of phonetics included the investigation of "etymological kinship and identity of sounds within one language or in cognate languages" (1876-77 : II.279=1963 : I. 84). A practical application of this was the "phonetic translation" between cognate languages "according to sound laws and correspondences", which played an important role in the course "Linguistic exercises" (1877-78 : II.119). Thus Russian *z'eml'á* (земля,

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³ Examples from the Slavonic languages are first given in a transcription current among Polish slavicists as it was used by Kruszewski and Baudouin, and then in conventional orthography.

⁴ Throughout this paper, *mental* is used as the translation of German *psychisch*, Russian *психический* and Polish *psychiczny*.

'earth') and *gwlwvá*[5] (голова, 'head') are equivalent to Polish *žem'a* (*ziemia*) and *glova* (*głowa*), i.e. *m'* is the correspondent of *ml'*, *lo* is the correspondent of *olo* (cf. KRUSZEWSKI 1881 : 15n and quotation 3). Within a language, cognate sound elements are called correlatives:

(4) "The *correlative* of Greek ι ἔλιπον ‖ λείπω) will be the combination ει; the correlative of Russian *u* = ⱴ (cf. smuščén'je ‖ s'm'at'én'je = смущение embarrassment, смятение confusion) will be *a* with palatalization of the preceding consonant; [...]". (KRUSZEWSKI 1881 : 14n)

Again, as in the case of correspondents, the unit that enters into a correlation need not be a single sound[6]; it can be a sequence of two or more sounds or even a sound and a property (e.g. palatalization) of a neighbouring sound: *ml'* and *m'*, *olo* and *lo*, ι and ει, *u* and *'a* are all phonemes in Kruszewski's sense. It should be noted that *ml'* and *m'* are not the s a m e phoneme: *ml'* is one (in Russian), *m'* another (in Polish), as the examples demonstrate. Therefore FIRTH misrepresented Kruszewski's views when he wrote that "in English, for instance, -s, -z, -iz would be one morphological phoneme" (1934 : 45 = 1957 : 2). JAKOBSON committed the same error when he claimed that Kruszewski (and Baudouin) "initially understood 'phoneme' in its genetic aspect as a common prototype of 'homogens' [sic!] in different related languages (*i.e.* of sounds derived from an original single element in a common patrimony [)]". (1971 : 407).

2. While the conceptual foundations for Kruszewski's opposition between *sound* and *phoneme* were laid by Baudouin, the new t e r m was taken over from SAUSSURE'S "Mémoire" (1879), where it occurs frequently, but without definition. Although this was one of the works Kruszewski discussed in his review of 1880 (cf. quotations 1 and 3), he did not mention his source. But Baudouin pointed out that *phoneme* was "a term borrowed from de Saussure, who, however, used it in a different sense" (БОДУЭН 1881 : 339 = 1963 : I.126). In view of this statement, it is somewhat surprising that Leont'ev believed Kruszewski to have employed the term "not in the Baudouinian, but in a purely Saussurean sense — as an equivalent of sound" (ЛЕОНТЬЕВ 1968 : 11f). But apart from that — what really is the "Saussurean sense" of *phoneme*? Like Leont'ev, JONES assumed that Saussure "used the term 'phonème' regularly to mean 'speech-sound'" (1957 : 6n = 1967 : 257n). The same view was expressed by ROBINS (1967 : 204) and others. But these authors did not distinguish clearly between SAUSSURE'S "Mémoire" and the "Cours de linguistique générale" (1916). GODEL'S interpretation does not suffer from this inaccuracy; he defined the *phonème* of the "Mémoire" as:

(5) "An element of a phonological system where, regardless of its exact articulation, it is recognized as being different from any other element [...]." (1957 : 272).

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[5] In KRUSZEWSKI's transcription, a symbol resembling *w* stands for an indefinite vowel "between *a* and *o*" (1881: 9), approximately IPA [ʌ].

[6] In this respect Kruszewski's "correlation" differs from the otherwise very similar relation of "homomorphonemy" (or "belonging to the same morphoneme") as defined by Bańczerowski (cf. BAŃCZEROWSKI, POGONOWSKI & ZGÓŁKA 1982: 320).

JAKOBSON incorporated this version into his view that in the "Mémoire" *phonème* was used "only to render a strictly historical concept" (1971 : 397):

(6) "The comparative studies disclosed that in cognate languages morphological units of common origin show regular phonetic correspondences, and that each of these correspondences reflects a common prototype in the parent language. This hypothetical uniform and distinct prototype of later multiform progeny was labeled *phonème* in Saussure's *Mémoire*. This entity was conceived as an element of the phonological system that, irrespectively of its precise articulation, is recognizable as different from its other elements." (ibid.)

It is true that SAUSSURE demonstrated European *o* and *ā* to have been "*distinct from each other and distinct from all other phonemes*" in the proto-language (1879 : 121) without going into the "exact determination of the sound that the different phonemes must have had" (1879 : 122). But the use of *phonème* in this context does not imply that 'being different from all other elements of the phonological system regardless of the exact pronunciation' forms part of the meaning of this word. SAUSSURE'S argument would not be affected in the least if *phonème* was replaced by *voyelle*, and in fact, these terms are used more or less interchangeably in his book (cf. e.g. 1879 : 113). *Phonème* is not restricted to reconstructed proto-units, either. The very first occurrence of *phonème* in the text, viz. "les phonèmes sortis du *ŗ*" (1879 : 2), can hardly refer to Proto-Indoeuropean; and a few pages later we read: "au *ŗ* indien correspond presque constamment en zend un phonème particulier [...], savoir *ĕrĕ*" (1879 : 6f). The most striking aspect of this remark is, of course, not that *phonème* is used for an element of an attested rather than a reconstructed language (i.e. Old Persian), but that it applies to a group like *ĕrĕ*. This was no accident — SAUSSURE even spoke of "les phonèmes *ĭr* et *ăr*" in Sanskrit (1879 : 35n). Apparently, he regarded the reflex of a given protoelement as a single "phoneme" whether this reflex is a single sound or not. This usage, overlooked by previous commentators, may explain why Kruszewski chose the term to designate those units that enter into correspondences and correlations. Thus the shift in meaning from Saussure's "phoneme" to Kruszewski's does not appear to have been a radical one — certainly it was not a shift from a diachronic to a synchronic meaning, as HEINZ maintained (1978 : 216).

Since SAUSSURE did not comment on the meaning of *phonème* in his "Mémoire", the motives that led him to use the term in this particular way cannot be ascertained. It seems, however, that he tended to see an identity between the proto-element and its reflexes, as statements like "l'*o* [in Latin *forma*] est donc a_2" indicate (1879 : 75). But he was not consistent in this. At any rate, the application of *phonème* to groups like *ĕrĕ* was an innovation that had no precedent in the previous use of the term. It was coined, for all we know, by A. Dufriche-Desgenettes (cf. KOERNER 1976), who used it in a paper on nasal consonants presented at the meeting of the Société de Linguistique de Paris on 24th May 1873. The new word first appeared in print on 7th June 1873 in a brief anonymous report on the meeting (ANON 1873) and was taken up by Louis HAVET soon after, with the following note:

(7) "*Phoneme*, a term I borrow from Mr Dufriche-Desgenettes [...], designates any articulated sound [son articulé], whether vowel or consonant." (1874 : 321n)

A discussion of the reasons that led Dufriche to propose a new term and his colleagues to adopt it lies beyond the scope of this paper, but there seems to be convincing evidence against JAKOBSON's claim that *phonème* was chosen as "a one-word equivalent for the German *Sprachlaut* instead of the cumbersome *son du langage*" (1971 : 196), a claim that KOERNER regarded as "plausible" even though he pointed out that "the sources available do not provide a basis for Jakobson's speculations about Dufriche's motivation for his coinage of the term" (1976 : 226n; capitalization deleted). A few minor points in JAKOBSON's account also require further comment. His translation of Greek φωνημα — which is likely to have been the stimulus for Dufriche's coinage — as 'sound' (1971 : 396) is ambiguous and misleading; his statement that "it was from Havet's studies that the term *phonème* [...] entered the [...] *Mémoire* [...]" (1971 : 397) is another of his numerous conjectures: Saussure could just as well have come across the term in Dufriche's writings, or indeed somewhere else. Another topic that cannot be dealt with in sufficient detail in this paper is Saussure's later use of *phonème* (in the lectures on which the "Cours" is based); it appears to have been somewhat inconsistent, and the parallels that have been suggested between Saussure and Baudouin should certainly not be extended to this area: the "phoneme" played a negligible role in Saussure's famous lectures, whereas it always remained a crucial part of Baudouin's theories.

3. Baudouin very quickly adopted Kruszewski's suggestion and used *phoneme* (*фонема*) for "that which is indivisible from the point of view of the comparability of the phonetic parts of a word" (БОДУЕН 1881 : 333=1963 : I.121). But in some respects he went beyond the definition proposed by his pupil. He described correlatives (within a language) and correspondents (across related languages) as two categories of "homogenes", i.e. sounds of common origin (1881 : 322=1963 : I.118). From correlatives he distinguished "divergents"[7], i.e. "variants [видоизменения] of one (and the same) sound, conditioned by sound laws applying at present" (1881 : 325=1963 : I.119). Such a divergence presupposes "coherence", i.e. a unilateral or bilateral dependence of one sound on a neighbouring one (1881 : 321f=1963 : I. 118). For example, Russian only allows the sequences *ty* and *t'i* (but neither *t'y* nor *ti*): there is coherence between *t* and *y* and between *t'* and *i*. In this case, the dependence is bilateral, but in the case of *t'e* it is unilateral: *e* is only possible after *t'* (not *t*), but *t'* can occur with other vowels than *e* (e.g. *i* above). Divergence further presupposes an anthropophonic similarity between the sounds in question. For example, Russian *k* and *č* or Polish *t* and *ć* are too different to be considered divergents (1881 : 326). As a typographical symbol for "a sound that changes according to the 'laws' of coherence", Baudouin used a subscript *m* for "*mutabile*" (1881 : 344). For example, *кручивать* ('to twist') is transcribed without the subscript as *krúčъvъt'* or with it as *krúči$_m$va$_m$t'* (1881 : 328); *nóška* (*ножка*, 'leg') is also rendered as *nož$_m$ka* (ibid.) and *o$_m$ro$_m$* can stand for *orъ* in *vórъt* (*ворот*, 'collar') or for *åro* in *våróta* (*ворота*,

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[7] KRUSZEWSKI acknowledges that this term was introduced by Baudouin (1881: 12n). In other cases it is very difficult to disentangle the contributions of the teacher from those of the pupil.

'gate') (1881 : 329). Thus the same sound ъ (IPA [ə]) is identified as a variant of a_m in *krúčъvъt'*, but as a variant of o_m in *vórъt*. Such a solution would not have been acceptable to Daniel JONES, who took it "as axiomatic that one sound cannot belong to two phonemes of a language" (1967 : 11); N. S. TRUBETZKOY would have assigned the *š* in *noška* not to *ž*, but to an archiphoneme unspecified with regard to voicing, since in his framework this is a case where the phonological opposition between *š* and *ž* that holds in other positions — cf. *šar* (шар, 'sphere') vs. *žar* (жар, 'heat') — is neutralized (cf. 1939 : 70f). In other words, Baudouin's "divergence" covers two cases that are kept neatly apart in classical phonology:

(a) variants ("allophones") of a single "phoneme";

(b) alternations between different "phonemes", provided the alternation is, in BLOOMFIELD's words (cf. 1933 : 211), both "phonetic" (i.e. the alternants are phonetically similar) and "automatic" (i.e. the alternation depends on phonetic peculiarities of the environment).

In explaining the need for a distinction between sound and phoneme, Baudouin placed Kruszewski's reason second (viz. that the "phonetic unit" that enters into correlations and correspondences need not coincide with a single "anthropophonic unit" or sound). His first point was:

(8) "In determining *correlatives* (within one language) and *correspondents* (when comparing several languages) we must completely purge them from the fortuities of divergence, and for the different variants of one and the same sound conditioned by a living relationship of coherence we must substitute a general expression [общее выражение] of the sound ramifying into these divergent variants. Such a concept cannot be the concept of the *anthropophonic* sound, it can only be the concept of a certain phonetic generalization." (БОДУЭН 1881 : 331 =1963 : I.120)

For example, in establishing correlations and correspondences one must ignore the difference between *orъ* and *åro* in *vórъt* / *våróta* and operate with the generalization *oro* ($o_m ro_m$), which is a correlative of *ra* in *vraščat'* (вращать, 'to turn') and a correspondent of Polish *ro* in *vrota* (wrota, 'gate'), etc. (cf. 1881 : 332). This generalization *oro* is the "sum" of the anthropophonic properties of *orъ*, *åro* etc. that Baudouin had in mind in the following definition:

(9) "Thus, a *phoneme* is the sum of the generalized anthropophonic properties [свойства] of a certain phonetic part of a word that is indivisible in establishing relations of correlation within one language and relations of correspondence between several languages". (1881 : 333=1963 : I.121)

According to Baudouin, it may be necessary to work with phonemes of different orders, i.e. different degrees of generalization (1881 : 336=1963 : I.123). For example, the divergence $k \mid\mid k'$ must be represented by its more basic member (viz. k) in establishing the correlation $k \mid\mid č$, which must in turn be represented by its more basic member (again k) in establishing correspondences. That member which is less complicated in anthropophonic terms (i.e. is "indifferent in a certain respect as opposed to a definite property of the other member"), in logical terms (i.e. occurs under conditions that are "indifferent in a certain respect as opposed to definite

conditions for the other member") or in historical terms (i.e. "has undergone fewer spontaneous changes") is to be regarded as basic (1881 : 337=1963 : I.124). This approach bears a striking resemblance to the theory of markedness, although both the purpose and the criteria are not identical.

On the basis of definition 9, the relationship between phonemes and sounds can now be described as follows:

(10) "From the anthropophonic point of view a *phoneme* can be equal to:

    1) a complete indivisible sound (the most frequent case), whereby the sum of its abstracted properties

        a) either coincides with the sum of the anthropophonic properties of the positive sound that can be encountered in a given position of the word analysed (*v* in *v*orot...),

        b) or does not coincide (*v* in *r*o**v** [pronounced *rof*]...);

    2) an incomplete sound, because certain of its properties

        a) either appertain to [literally: benefit] another, neighbouring phoneme (*s'adu* || *sad*..., *sm'at'en'je* || *smuščen'je* [where the palatalization of *s'* and *m'* forms a unit with the following *a*]...),

        b) or constitute only an 'accident' of coherence and divergence that is of no significance to the correlation (*voroty* || *vorot'it'* ..., where the concept of the last phoneme of the root morpheme [viz. *t/t'*] has no connection with the palatal or non-palatal variety of the resonance tract which is peculiar to the conditions of coherence and the divergence that depends on it);

    3) a complete sound + a property of another (*smuščen'je* || *sm'at'en'je* ..., where the sum of the anthropophonic properties of the vowel phoneme in the root morpheme [viz. *u/a*] is indissolubly linked with the property of the palatal or non-palatal opening of the preceding consonant);

    4) two or more sounds" (1881 : 333f=1963 : I. 121f).

Against the background that has been explained above, this passage ceases to be "rather cryptic" as it was to SCHOGT (1966 : 23), whose account (based on the extracts in БОДУЭН 1963 rather than on the unabridged text) contains quite a number of inaccuracies. JAKOBSON's rendition of Baudouin's views is also not to be trusted (cf. 1971 : 407-410) and even HÄUSLER's fairly reliable study is somewhat disappointing in the chapter on "the phoneme as a morphological-etymological unit" (1968 : 49-55). For example, when he found it "hard to imagine how Baudouin would generalize and sum up the anthropophonic properties of his phonemes *ra* and *oro*" (1968 : 53), he apparently did not realize that *ra* and *oro* already are the generalizations. He also placed the following passage in an entirely inapropriate context:

(11) "[...] *the concept 'phoneme' subdivides into two substantially different ones*:

    1) simply the generalization of anthropophonic properties,

    2) the mobile [подвижной] component of a morpheme and the characteristic of a certain morphological category." (БОДУЭН 1881 : 334=1963 : I. 122)

This has nothing to do with the "concept of sound type" on the one hand and a "phonetic-morphological unit" on the other (HÄUSLER 1968 : 55). What Baudouin had in mind will become clear if we take a closer look at his examples: having established

oro and *ora* as "phonemes" in *vorot'it'* (воротить, 'to return', perfective aspect)
and *-voráčivat'* (-ворачивать, imperfective aspect corresponding to *vorot'it'* in
prefix formations), respectively, he added that the "morphologically mobile pho-
nemes" would be different, viz. *o* ‖ *á*, whereas *oro* ‖ *ora* are "morphologically immo-
bile" (Бодуэн 1881 : 334=1963 : I. 122). The key terms are defined in connection
with correlatives: "morphologically mobile correlatives" are those "whose diversity
coincides with a diversity of certain morphological categories", whereas "immobile"
correlatives are not connected with any morphological function (1881 : 327f=1963 :
I. 119). In the above example, the difference between *o* and *á* coincides with the
morphological difference in aspect — not only in *oro* ‖ *ora*, but also elsewhere — cf.
govor'it' / *-govár'ivat'* (говорить / -говаривать, 'to talk'), *kopát'* / *-kápyvat'* (копать/
-капывать, 'to dig'), etc. These ideas foreshadow Baudouin's later views on "mor-
phologization" (cf. 5.).

   4. During his tenure at Dorpat (1883-1893), BAUDOUIN gradually developed a
new definition of *phoneme*, in which he abandoned the criterion of interlingual
correspondences and intralingual correlations. His usage fluctuated for some time,
but the new concept finally prevailed in his "Versuch einer Theorie phonetischer
Alternationen", where a *phoneme* is explained as:
(12) "a unitary concept belonging to the world of phonetics which arises in the mind
     [Seele] by means of a mental fusion of the impressions derived from the pro-
     nunciation of one and the same sound=the mental equivalent of the speech
     sound." (1895 : 9)
The need for such a concept follows from BAUDOUIN's tenet that "the whole basis
of language is mental throughout" (1888-89 : 128). The crucial point is this:
(13) "[...] human language in general and speech sounds in particular do not and
     cannot last uninterruptedly. An uttered word or an uttered sentence dis-
     appears immediately at the same moment as it is uttered. There is no physical
     connection between one utterance and another that follows it. The link be-
     tween the individual utterance acts [...] are representations[8], images in
     memory [Erinnerungsbilder], and during the utterance itself these images
     in memory become the stimulus to set the speech organs in motion in the
     appropriate way". (1895 : 18)
Thus Baudouin now opposed the phoneme as a lasting mental representation to
the sound as a fleeting physical event. Such a distinction, though theoretically
important, may not seem to be of great practical relevance. But, interestingly,
BAUDOUIN made particular assumptions about the mental representations of sounds:
(14) "Either the physiological conditions inherent in the activity of the speech
     organs allow the group of phonatory activities indended by the brain centre
     to be executed completely or else the said physiological conditions do not
     allow this. In the first case there is complete agreement [...], in the other
     case, however, there is a collision between the phonetic intention [...] and its
     execution. In this latter case, in the case of a collision, our phonetic habits,

   [8] *Representation* stands for German *Vorstellung*, Russian представление and Polish *wyo-
brażenie.*

as well as universally human conditions of phonetic sequences, force us to change the pronunciation of the intended sequence a little [...]. [...] The discrepancy between the phonetic intention and its execution consists in the substitution of a possible activity for an intended impossible one". (1895: 18f) For example, a speaker of Polish will intend to pronounce *atr*, *mąż* and *wódka* as [atr], [mõʒ] and [vudka][9], but will actually say [atr̦], [mõʃ] and [vutka] (ibid.). BAUDOUIN did not justify in detail why this should be so, but he spoke of an "intention based on related words and forms" (1895: 19f) and adduced as proof for similar assumptions "first the orthography and then the frequent disputes about which sound we hear in this case" (1895: 45), not without admitting that what we hear may be influenced by the spelling (ibid.).

From the point of view of classical phonology, the above examples again include both "allophonic" variation and certain kinds of "morphophonemic" alternation — just as with the category of "divergence" (cf. **3.**), which BAUDOUIN continued to use in much the same sense as before (cf. 1895: 44f). In this respect the earlier model was retained: variants based on divergence belong to a single phoneme. The main difference is that in a case like *oro* we no longer have one phoneme but a sequence of three (cf. 1895: 38). Although this is a major shift in terminology, it does not represent a fundamental change of views. In particular, there was never the alleged "disadvantageous transfer of phonological problems from the firm ground of linguistic analysis to the hazy area of introspection" (JAKOBSON 1971: 419): for one thing, in defining *phoneme* first as a unit that enters into correlations and correspondences and later as a mental representation of a speech sound, Baudouin dealt with entirely different problems; for another, the "psychological" approach was not an innovation, but pervaded his linguistic thinking at all times. As early as 1870 he said, for example:

(15) "Only a physiological necessity operating throughout all periods of development of the language can explain the law of Polish (and the Slavonic languages in general) that at the end of a word voiced consonants turn into the corresponding voiceless ones [...], although psychologically, according to the feeling of the people [чутьё народа], in the mechanism of the language they remain voiced". (БОДУЭН 1870: 38)

Of course, this is a debatable point — and in his lectures at St. Petersburg, Baudouin even began to concede that for some speakers of Russian the mental representation of the final consonant in a word like *l'ot* (*лёд*, 'ice') might have become independent of the phoneme *d* as in the genitive *l'da* or the instrumental *l'dom* (1917: 143=1963: II. 271f). The difficulty is, obviously, that we cannot discover the mental representations, which undoubtedly exist, by looking into the speaker's brain; we can only rely on circumstantial evidence. Such evidence could come from the predictability of the variation between the allomorphs of a morpheme. Consider, for example, the homophonous German words [raːt] ('wheel') and [raːt] ('council') with their genitive forms [raːdəs] and [raːtəs], respectively. Given [raːt], one

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[9] For the sake of clarity, Baudouin's transcription is here replaced by the IPA.

cannot predict whether the genitive will have [t] or [d], but the nominative [raːt]
is predictable both from [raːtəs] and (by a rule of final devoicing) from [raːdəs].
In view of this, would it not be plausible for the mental representations to be so-
mething like the "base forms" [raːd] ('wheel') and [raːt] ('council'), which also
underlie the conventional spellings (*Rad, Rat*)? Baudouin was inclined to believe
so, but he could not be sure. In the later development of phonology, three approa-
ches to this problem emerged:

● The Moscow School of phonology (A. A. Reformatskij and others) adopted
and refined Baudouin's method of setting up "base forms", but this is where their
analysis ends — the question of mental representations is not asked.

● Generative phonologists of various persuasions, though for the most part igno-
rant of Baudouin's work, share his aim of finding mental representations. Since
the "psychological reality" of such constructs cannot be reliably tested, their ap-
propriateness is largely a matter of belief; accordingly, different schools have de-
veloped, but typically the representations suggested are more "abstract" than
Baudouin's.

● Trubetzkoy and other members of the Prague School, having initially fol-
lowed Baudouin in defining the phoneme as a sound image, soon rejected this and
argued that there are acoustic and motor representations for each phonetic variant,
e.g. the palatal and velar allophones of German *g*:

(16) "Someone who intends to pronounce the word *gib* must eo ipso have the in-
   tention to execute all the movements of the speech organs necessary for this,
   including the intention to articulate a palatal *g* — and this intention is not
   the same as that which one has if one wants to pronounce the word *gab* with
   its velar *g*." (TRUBETZKOY 1939: 37)

This argument, already advanced earlier by others (cf. БУЛИЧ 1902), is not com-
pelling, since "intention" need not refer only to fully specified articulatory plans
(cf. LINELL 1979: 48 - 50). However, the objections to Baudouin's approach led
to an entirely different analysis in which a given sound always belongs to the same
"phoneme", irrespective of morphological considerations. In this way, *phoneme*
acquired yet another meaning, that of "distinctive unit". Such a definition was
first suggested by Baudouin's student Ščerba:

(17) "[...] a phoneme is the shortest general phonetic representation in a given
   language that is capable of associating with representations of meaning and of
   differentiating words and that can be emphasized in speech without distorting
   the phonetic structure of the word". (ЩЕРБА 1912: 14)

Ščerba's departure from the views of his teacher, which is partially concealed by
the continued use of "psychological" diction, is undoubtedly due to his contact
with PASSY in Paris (1908 — 1909), who solved the problem of representing sounds
in writing as follows:

(18) "[...] we will distinguish two sounds when they serve or can serve to distin-
   guish two words; we will merge them when their distinction would be useless
   from the point of view of meaning." (1887: 51)

This principle, which arose from the practical needs of phonetic transcription,

forms the cornerstone of classical phonology in its several varieties (Ščerba's Leningrad School, the Prague School, Daniel Jones, American descriptivism, etc.).
Passy was not the first to state it (an equally lucid remark was made by SWEET
1877: 103), but the history of the "idea of the phoneme" (JONES 1957 :1=1967:
253) as a distinctive unit cannot be traced here. Suffice it to say that, contrary
to popular belief, neither the Sanskrit grammarians nor the author of the First
Grammatical Treatise nor Jost Winteler and most other 19th century phoneticians
ever clearly expressed such an idea. As for Baudouin, distinctivity never played
any role in his teachings.

   5. The fact that the first definition of *phoneme* in terms of a distinctive function was given by Ščerba was well known to the members of the Leningrad School;
but they came under heavy attack from their Moscow rivals for saying so — "Why
then repeat the false 'version' for the hundredth time?", Reformatskij demanded
angrily (РЕФОРМАТСКИЙ 1970: 108). He maintained that it was Baudouin who had
formulated this idea as early as 1868; as supporting evidence he adduced Baudouin's
concept of "semasiologization" and "morphologization" (ibid.). However, what
Baudouin was concerned with was something very different from distinctivity — Reformatskij's perception seems to have been blurred by the feud between the two
Soviet schools of phonology. (This also applies to his attempt at identifying the
"morphological" approach of the Moscow School with Baudouin's "morphological"
definition of *phoneme* during the Kazań period (cf. 1970: 41, 48f etc.), although
these have next to nothing in common.) But even linguists who stood to gain nothing from such an interpretation believed that in his paper "Wechsel des s (š, ś)
mit ch in der polnischen sprache" written in 1868 Baudouin "drew attention to
the fact that a difference of one sound may serve to distinguish the meanings of
two words" (HEINZ 1978: 214). This is what BAUDOUIN actually said:
(19) "This alternation [wechsel] of s and š with ch is so firmly rooted in the
      nature of the Polish language that it is used — as a consonantal gradation,
      as it were — for the differentiation [differenzierung] of meaning (consonantal
      inflection). For instance, by changing the s (or š) of the root into ch one designates the bigness or grossness of the object in question, e.g. nos (nose),
      noch [sic!] (a big, gross nose) [...]". (1869: 221f)
Obviously, he was not interested in just any difference in meaning, such as that
between *nos* and *noc* ('night'), but in specific meanings that are signalled by specific sounds. A suitable example from English is the difference between final voiceless and voiced fricatives that often goes with the difference between noun and verb
(e.g. *proof/prove*, *house* [s]/*house* [z], etc.).
A similar point of view plays a role in the notions of "morphologization" and "semasiologization" which follow from BAUDOUIN's belief that everything in language
is mental:
(20) "Each of the mental elements of the pronunciation side associates either with
      morphological representations of the language, or else with semantic, semasiological representations". (1908: 11)   •
A phonetic representation is called "morphologized" if it is associated with a mor-

phological representation and "semasiologized" if it is associated with a semasio-logical representation (1908: 12), the difference between the two being roughly equivalent to that between grammatical and lexical meaning. For example, in Polish there is a morpheme with the "modifications" [vod], [vodz̨], [vut], [vud][10] — cf. [voda] (*woda*, 'water') with the dative [vodz̨e] (*wodzie*), the diminutive [vutka] (*wódka*, 'vodka') and its diminutive [vudetʃka] (*wódeczka*), etc. The semasiologized elements are: the representation of [v], the representation of a rounded vowel com-prising [o] and [u] and the representation of apical closure with voicing; the diffe-rence between [o] and [u] is morphologized, as is that between lack of palataliza-tion in [d] and presence of palatalization (with additional "diphthongization") in [dz̨]; the difference between [t] and [d] is attributed to a *vis maior* that does not allow [d] in certain positions (cf. 1908: 11 - 13). Elsewhere, BAUDOUIN pointed out that only a few articulatory-auditive elements are morphologized, whereas all are semasiologized (1922: 66f); he also used minimal paris like *tam/dam* etc. to illus-trate the "semasiological distinction" of words (БОДУЭН 1917: 171f). This is the only place where he comes reasonably close to the concept of distinctivity, but it should be noted that these passages date from the time after Ščerba's definition of *phoneme* as a distinctive unit and that they do not affect Baudouin's *phoneme* at all.

6. As JAKOBSON has pointed out, "the term and the concept of the phoneme actually emerged almost simultaneously, but quite separately and only later found one another" (1971: 396). This complex process took very nearly forty years — from the 1870s, when the term *phoneme* was coined and the concept of distinctivity was formulated, until 1912, when Ščerba linked the two. Today, the term is still used in several different senses and the usefulness of the concept is under dispute. Why then make matters even more complicated by retracing a tangled tale from an age long past? It seems to me that BAUDOUIN's motto "de mortuis aut verum, aut nihil" (1888-89: 173) should already suffice as a justification for revising linguistic historiography — especially in the case of so popular a topic as the his-tory of the phoneme. But this is not all. There still is a strong tendency to think of modern linguistics as something very new and different from the "traditional" study of language. But a look at the history of our discipline soon reveals that most of the questions we are discussing today have been raised before and that m any old answers are no less adequate than those that are being given now. Can w e really afford to ignore them?

REFERENCES[11]

A NON 1873. ,,Société de linguistique. Séance du 24 mai 1873". *Revue critique d'histoire et de littérature* (Paris) 7e année (1873), 1er semestre, 368.
B AŃCZEROWSKI, J., POGONOWSKI, J. & ZGÓŁKA, T. 1982. *Wstęp do językoznawstwa*. Poznań: Wydawnictwo Naukowe UAM.

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[10] Cf. footnote 9.
[11] I have maintained the original orthography, except that Russian ѣ and i are replaced by e and u and final ъ is dropped.

BAUDOUIN DE COURTENAY, J. 1869. „Wechsel des s (š, ś) mit ch in der polnischen Sprache". *Beiträge zur vergleichenden Sprachforschung* (Berlin) Bd. 6 (1870), Heft 2 (1869), 221 - 222.

БОДУЭН ДЕ КУРТЕНЭ, И. А. 1870. *О древне-польском языке до XIV-го столетия.* Лейпциг: Бэр и Герман. Reprinted in: J. N. BAUDOUIN DE COURTENAY. *Dzieła wybrane*, t. II. Warszawa: PWN 1976.

БОДУЭН ДЕ КУРТЕНЭ, И. А. 1871. „Некоторыя общия замечания о языковедении и языке". *Журнал Министерства Народнаго Просвещения* (Санкт-Петербург) часть 153 (1871), отд. 2, 297 - 316.

БОДУЭН ДЕ КУРТЕНЭ, И. А. 1876 - 77. „Отчеты командированнаго Министерством Народнаго Просвещения за границу с ученою целию... о занятиях по языковедению в течение 1872 и 73 гг." *Известия Императорскаго Казанскаго Университета* (Казань) том 12 (1876), 45 - 80; том 13 (1877), 122 - 206, 270 - 308.

БОДУЭН ДЕ КУРТЕНЭ, И. А. 1877 - 78. „Подробная программа лекций... в 1876 - 77 учебном году". *Известия Императорскаго Казанскаго Университета* (Казань) том 13 (1877), 309 - 324; том 14 (1878), 61 - 133.

БОДУЭН ДЕ КУРТЕНЭ, И. А. 1879 - 81. „Подробная программа лекций... в 1877 - 1878 учебном году". *Известия Императорскаго Казанскаго Университета* (Казань) том 15 (1879), часть 2, 353 - 382, 445 - 492; том 16 (1880), часть 2, 369 - 480; том 17 (1881), № 1, 481 - 612.

БОДУЭН ДЕ КУРТЕНЭ, И. А. 1881. „Некоторые отделы 'сравнительной грамматики' словянских языков". *Русский Филологический Вестник* (Варшава) том 5 (1881), 265 - 344.

BAUDOUIN DE COURTENAY, J. 1888 — 89. „Mikołaj Kruszewski, jego życie i prace naukowe" in: BAUDOUIN 1904: 96 - 175. First published in: *Prace Filologiczne* (Warszawa) tom 2, z. 3 (1888), 837 - 849; tom 3, z. 1 (1889), 116 - 175.

BAUDOUIN DE COURTENAY, J. 1895. *Versuch einer Theorie phonetischer Alternationen. Ein Capitel aus der Psychophonetik.* Straßburg: Trübner.

BAUDOUIN DE COURTENAY, J. 1904. *Szkice językoznawcze*, tom I. Warszawa: Laskauer. Reprinted in: J. N. BAUDOUIN DE COURTENAY. *Dzieła wybrane*, tom I. Warszawa: PWN 1974.

BAUDOUIN DE COURTENAY, J. 1908. „O związku wyobrażeń fonetycznych ż wyobrażeniami morfologicznemi, syntaktycznemi i semazjologicznemi". *Sprawozdania z posiedzeń Towarzystwa Naukowego Warszawskiego* (Warszawa) rok 1 (1908), Wydział jęz. i lit., 9 - 28.

БОДУЭН ДЕ КУРТЕНЭ, И. А. 1917. *Введение в языковедение.* Издание 5-е. Петроград: Литография Юделевича.

BAUDOUIN DE COURTENAY, J. 1922. *Zarys historji języka polskiego.* Warszawa: Polska Składnica Pomocy Szkolnych. Reprint: The Hague: Europe Printing 1964.

БОДУЭН ДЕ КУРТЕНЭ, И. А. 1963. *Избранные труды по общему языкознанию*, том I & II (Сост.: В. П. Григорьев & А. А. Леонтьев). Москва: Издательство АН СССР.

БЕРЕЗИН, Ф. М. 1968. *Очерки по истории языкознания в России (конец XIX — начало XX в.).* Москва: Наука.

BLOOMFIELD, L. 1933. *Language.* London: Allen & Unwin 1935. American edition: New York: Holt, Rinehart & Winston 1933.

БУЛИЧ, С. 1902. „Фонема" in: *Энциклопедический словарь*, том 36. Санкт-Петербург: Брокгауз & Ефрон, 239 - 240.

FIRTH, J. R. 1934. „ðe wə:d 'founi:m'" (the word 'phoneme'). *Le maître phonétique* (London) 12ᵉ année (1934), (No. 46), 44 - 46.

FIRTH, J. R. 1957. *Papers in Linguistics 1934 — 1951.* London/New York/Toronto: Oxford Univ. Press.

FISIAK, J. 1972. *Wkład Polski do językoznawstwa światowego.* Poznań: Wydawnictwo Naukowe UAM (=Wykłady inauguracyjne 11).

GODEL, R. 1957. *Les sources manuscrites du cours de linguistique générale de F. de Saussure.* Thèse Univ. Genève. (=Univ. de Genève, Faculté des Lettres, Thèse 160).

HÄUSLER, F. 1968. *Das Problem Phonetik und Phonologie bei Baudouin de Courtenay und in seiner Nachfolge.* Halle: VEB Niemeyer. 2. Auflage 1976.

HEINZ, A. 1978. *Dzieje językoznawstwa w zarysie.* Warszawa: PWN. Wydanie 2, 1983.

JAKOBSON, R. 1971. "The Kazan' school of Polish linguistics and its place in the international development of phonology" in: R. JAKOBSON *Selected Writings II. Word and Language*. Den Haag/Paris: Mouton, 394 - 428.

JONES, D. 1957. *The History and Meaning of the Term "Phoneme"*. London: Int. Phon. Ass. (=Supplement to *Le maître phonétique*).

JONES, D. 1967. *The Phoneme. Its Nature and Use*. 3rd edition. Cambridge: Heffer.

KOERNER, E. F. K. 1976. "A Minor Figure in 19th-Century French Linguistics: A. Dufriche--Desgenettes". *Phonetica* (Basel) 33 (1976), 222 - 231. Reprinted in: KOERNER 1978a.

KOERNER, E. F. K. 1978a. *Toward a Historiography of Linguistics. Selected Essays*. Amsterdam: Benjamins. (=Amsterdam Studies in the Theory and History of Linguistic Science, Ser. III, 19)

KOERNER, E. F. K. 1978b. „Zu Ursprung und Entwicklung des Phonem-Begriffs. Eine historische Notiz" in: *Sprache in Gegenwart und Geschichte. Festschrift für Heinrich Matthias Heinrichs zum 65. Geburtstag* (Her.: D. Hartmann, H. Linke & O. Ludwig). Köln/Wien: Böhlau, 82 - 93. Reprinted in: KOERNER 1978a.

KRÁMSKÝ, J. 1974. *The Phoneme. Introduction to the History and Theories of a Concept*. München: Fink. (=IBAL 28).

КРУШЕВСКИЙ, Н. В. 1880. „Лингвистическия заметки I. Новейшия открытия в области арио-европейскаго вокализма". *Русский филологический Вестник* (Варшава) год 2-ой, том 3 (1880), 33 - 45.

KRUSZEWSKI, M. 1881. *Ueber die Lautabwechslung*. Kasan: Universitätsbuchdruckerei.

ЛЕОНТЬЕВ, А. А. 1968. „Предисловие" in: БЕРЕЗИН 1968 : 3 - 24.

LINELL, P. 1979. *Psychological reality in phonology. A theoretical study*. Cambridge etc.: Cambridge Univ. Press. (=Cambridge Studies in Linguistics 25).

PASSY, P. 1887. *Les sons du français, leur formation, leur combinaison, leur représantation*. Paris: Firmin-Didot.

РЕФОРМАТСКИЙ, А. А. 1970. *Из истории отечественной фонологии. Очерк. Хрестоматия*. Москва: Наука.

ROBINS, R. H. 1967. *A Short History of Linguistics*. London: Longmans. 2nd edition 1979. (=Longman Linguistics Library 6)

RUSZKIEWICZ, P. 1978. "Jan Baudouin de Courtenay's Theory of the Grapheme". *Acta Philologica* (Warszawa) 7 (1978), 111 - 128.

SAUSSURE, F. de 1897. *Mémoire sur le système primitif des voyelles dans les langues indo-européennes*. Leipzig: Teubner. Reprint: Hildesheim: Olms 1968.

SAUSSURE, F. de 1916. *Cours de linguistique générale* (Publié par: C. Bally, A. Sechehaye & A. Riedlinger). Édition critique (Éd.: T. de Mauro), Paris: Payot 1972 (Identical with 2nd edition 1922). First published 1916.

ЩЕРБА, Л. В. 1912. *Русские гласные в качественном и количественном отношении*. Санкт-Петербург: Типография Эрлих.

SCHOGT, H. G. 1966. "Baudouin de Courtenay and phonological analysis". *La linguistique* (Paris) [vol. 2] (1966), fasc. 2, 15 - 29.

SOMMERSTEIN, A. H. 1977. *Modern Phonology*. London: Arnold. (=Theoretical Linguistics 2).

SWEET, H. 1877. *A Handbook of Phonetics*. London: Oxford Univ. Press (Oxford: Clarendon Press).

TRUBETZKOY, N. S. 1939. *Grundzüge der Phonologie*. Göttingen: Vandenhoeck & Ruprecht 1958. First published as: *Travaux du Cercle Linguistique de Prague* (Prague) 7 (1939).