

Baudouin de Courtenay - a pioneer of structural linguistics

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Baudouin de Courtenay, whose life straddled the nineteenth and twentieth centuries, took up the study of linguistics when it was in its infancy. Polish by birth, and an iconoclast by inclination, he worked alone, far from the major academic centres, and created little stir in his own time. In spite of this isolation and obscurity, he left an indelible imprint on linguistics by erecting the landmarks for the course it was later to take, with such rich rewards. He is associated primarily with helping to formulate the concept of the phoneme, but his contribution is not limited to this. His legacy is seen most clearly in his influence on the Linguistic Circle of Prague and their disciples, whose collective ideas have dominated modern linguistics, setting its trends and staking out its proper domain.

Baudouin, then, blazed the trail for structural linguistics. Perhaps it is not entirely fortuitous that his raw material came from the Slavonic languages. M.A.K. Halliday has pointed out that, whereas few today subscribe to the theory of linguistic relativity, i.e., that a language shapes the thought of the people using it, "There is one special exception in which such a connection is naturally admitted, namely the study of language itself" (1981, p.123). The early linguists usually began by studying their home language, and its nature decided what direction their activities should take. Thus, scholars in both ancient India and Greece, whose native languages exhibited a complex word morphology, examined first, word paradigms and, eventually, syntax, while in classical Chinese, in which morphology is virtually non-existent, Chinese linguists concentrated on lexicology and phonology.

Baudouin, for his part, with an extensive knowledge of Slavonic languages, could not fail to notice the abundant sound correspondences and alternations in Slavonic morphology. His detailed observations of this data served as

the spring-board for some inspired deductions about the function of speech sounds and their representations that were crucial to the subsequent development of the study of language.

Jan Ignacy Niecislaw Baudouin de Courtenay was born in 1845 in Radzymin, near Warsaw. He traced his descent from a long line of French aristocrats, among them Baldwin, Count of Flanders in the 13th century. His impoverished great-grandfather migrated to Poland to become colonel of artillery and head of the court guard to August II. His grandfather was court chamberlain to Stanislaw Poniatowski, last king of Poland, and was a man of letters who dabbled in writing and translating. Though Baudouin was, by ancestry, French and Catholic, he considered himself Polish and an atheist.

After high school, where his chief interest was mathematics, Baudouin attended the faculty of historical philology at the University of Warsaw and received a master's degree in 1866.

He travelled widely in pursuit of learning, and studied comparative Indo-European, Sanskrit and Slavonic philology in Prague (under Schleicher), in Berlin (under Weber), and in Jena, Leipzig and St. Petersburg. He received a doctorate at Leipzig and a second master's degree at St. Petersburg for his study of old Polish. In 1872 he made a field trip to study Slovenian dialects in S.W. Austria and N. Italy, and attended Ascoli's lectures in Milan. He was awarded a second doctorate in Russia, for his phonetic outline of Slovenian.

In 1875 he moved to Kazan' as the Professor of Comparative Indo-European and Sanskrit. Baudouin's exposure to prevailing linguistic theories has served only to leave him disenchanted with them. Indeed, he always considered himself self-taught. He rejected both the Neo-Grammarians' teachings of Leskien, Brugmann and Delbrück, and the narrow "archaeological" approach of the philologists in St. Petersburg. In Kazan', where he spent nine years, he was free to develop his own ideas, and it was a time of great creativity for him, surrounded as he was by a lively academic community, including notably

his pupil, M. Kruszewski. Working together, they developed some original concepts of lasting value.

In 1883 Baudouin left Kazan' and moved to Dorpat, where, among other interests, he studied Baltic dialectology. Ten years later, in 1893, to his immense delight, he was appointed as professor in Cracow and returned to work in Poland. The enthusiasm was not shared by the Austro-Hungarian authorities. Baudouin was an outspoken critic of the government's social, political and national policies and did not hesitate to attack the Hapsburg regime. Not surprisingly, his contract was not renewed, and he returned to St. Petersburg after five years. Here he again attracted and stimulated some outstanding young linguists, among them E. Polivanov and L. Ščerba. Still a firebrand, he continued to air seditious views and, eventually, again ran afoul of the authorities, this time for publishing a pamphlet attacking the Tsarist suppression of national minorities. For this, in 1913, at the age of 68, he was sentenced to two years in prison. He was freed, after serving several months, only by the outbreak of World War I. When Poland became independent, he moved to Warsaw to occupy the Chair of Indo-European Linguistics. He died there on November 3, 1929 at the age of 85.

Baudouin commanded an impressive number of languages. He was fluent in Polish, Russian, Slovenian, Czech, German, French, Italian and Yiddish. He was proficient in the proto-languages of Sanskrit, Latin, Slavonic, Baltic, Turkic and Finno-Ugric. He was also conversant with artificial languages such as Ido and Esperanto.

Baudouin was a man of passionate conviction and dedication. He devoted himself whole-heartedly and uncompromisingly to scientific research and expected no less from others. He was an independent thinker, with a refreshing lack of reverence for received ideas, especially when these were bolstered by tradition or the prevailing fashion. He displayed a caustic wit, often aimed at muddled or timid reasoning. He was an ardent advocate of political and social justice, and, remained all his life a fervent Polish patriot.

He was generous in his treatment of students and deserving colleagues, and modest about his own achievements; for instance, he decried any mention of a "Kazan' school of Linguistics". He was aware of the rudimentary nature of some of his findings and his failure to integrate them into a cohesive theoretical system.

Baudouin died a disappointed man. He had attracted few disciples in Poland, and he was deeply hurt by this neglect and lack of appreciation. He wrote: "At every step I have met only blows and disappointments... Laisse nous oublier que nous avons vecu" (sic) (Stankiewicz, 1972, p.12).

Baudouin de Courtenay's achievements are not, however, so easily overlooked.

Linguistics in the late nineteenth century

When Baudouin de Courtenay arrived on the scene, studies in linguistics had reached a stalemate. A. Schleider and other scholars adhered to the Romantic view, that language was an organic whole, a synthesis of external and internal form. According to W. von Humboldt, "In the word, 2 units, the sound and the idea coalesce. Words thus become the elements of speech; syllables lacking significance actually cannot be so designated" (1836 [1971 p.49]). Schleicher maintained that language as a separate organism developed independently of man and therefore lacked any unconscious generalisations and needed no psychological explanations. (Baudouin de Courtenay, "August Schleicher", 1870 in Grigor'ev, 1963, I p.37).

Careful attention was given to "internal flexion", vowel alternations in the stem, and to the reconstruction of Indo-European systems. Languages were rated according to the complexity of their grammatical markings, and and European languages were considered examples of the most advanced development. The interest in historical phonology was concerned less with establishing the forms of the proto-language than with tracing the processes of phonetic change involved. Using this knowledge, linguists hoped to formulate immutable

laws, universally applicable to all languages. In the prevailing intellectual climate, advances in biology and physics led to a belief in causality and determinism in science, which held that the laws of nature followed an inexorable course, independent of man and society. Many considered that, for linguistics to qualify as a science, it, too, must operate according to similar inflexible principles.

The first item in the Neo-grammarians programme, announced in 1878 by H. Osthoff and K. Brugmann, read: "All sound changes follow laws that are valid without exception ... for all speakers of a given speech community and for all words in which the given sound occurs" (Stankiewicz, 1972, p.13). For this bold manifesto to work, it had immediately to admit exceptions and restrict its scope: so the dialect of a speech community was defined as narrowly as possible, and any forms that might have resulted from analogical levelling were pronounced ineligible. Baudouin, perennially sceptical of established authority, made the withering comment that the predictions of the omnipotent phonetic laws were as reliable as those of a weather forecast.

Another important trend placed great weight on the compiling of facts for their own sake and disdained abstractions. The linguist was urged to leave behind "the murky circle of his work-shop, beclouded with hypotheses, and step out into the clear air of palpable reality" (Osthoff and Brugmann, 1878, in: Stankiewicz, 1972 p.14) One linguist, H. Paul, went so far, in 1886 as to deny the possibility of making any generalizations about language as a social system: "In reality we have to recognise as many languages as there are individuals" (1920, p.37).

The science of linguistics, then, found itself fragmented, relying on faulty arguments and short-sighted policies. Its "universal" laws could not be universally validated. Data on speech were collected on an individual basis, without reference to any wider social significance; and abstract analyses were resolutely shunned.

Baudouin's linguistic principles

Baudouin found these mechanistic and atomistic conceptions of language clearly inadequate. At the very outset of his career he charted an independent course. In an introductory lecture (published in 1871) that he gave at the age of 25 as a docent at the University of St. Petersburg in December, 1870, he pinpointed the shortcomings of many of the fashionable beliefs, refuted their conclusions and outlined the tasks facing the science, of which the most important was the analysis of language.

Above all, he gave precedence to the study of living languages over extinct ones, because he felt that one must proceed from the known to the unknown, not vice versa, and also because concentrating on a fossilized language, frozen at a single moment in time, yielded only limited information. (He carefully separated the forces which act in the existing language from those which have conditioned its development). Similarly, he objected to comparative grammar, as practised then, because it insisted on an absolute, inherent purity of language. This meant that a strictly limited number of roots were accepted as suitable for study, and the effects of diffusion or borrowing were totally ignored. There could, therefore, be no question of obtaining a comprehensive picture of the structure of a language.

Baudouin also disagreed with those who rejected morphological analysis. Sayce, an English linguist, disparaged in 1890 "the empty clatter of stems and suffixes" (Stankiewicz, 1972, p.34). Delbrück (1880) proposed that the time was ripe for treating the word itself as the basic unit of language, just as the Greeks had done, rather than breaking it down into its constituent parts, a method he dismissed as having outlived its usefulness. Baudouin, meanwhile, devoted himself in Kazan' to investigating morphological structure. In fact he considered morphology the "soul" of the linguistic system, and saw syntax as "morphology of a higher order" (Vinogradov, 1963, p.14). Similarly, he defended analysis as the beginning of precise investigation in the sciences (1903).

Baudouin also felt strongly that gathering facts was simply a preliminary to drawing conclusions. He declared in 1871: "The goal of all science is explanation, because reality is not a heap of incoherent and disconnected phenomena" (Stankiewicz, 1972, p.72). Observation and interpretation, therefore, must go hand in hand, making the broadest possible use of the inductive method.

The Kazan' period

In Kazan', which was something of an academic backwater, Baudouin was completely free to pursue his ideas, which are clearly laid out in the lectures he gave there from 1875 to 1878, and which testify to his attempt to apply a strictly scientific method to linguistics.

He elaborated distinctions that had not been clearly enunciated before. He contrasted "static" laws and "conditions that form the foundation of the life of sounds in a language at a given moment", and "dynamic laws and forces" which determine historical development. Jakobson (1971) claims that this distinction was being made for perhaps the first time and corresponds, in a rudimentary way, to the concepts of synchrony and diachrony in language. Later, in the 1890s, de Saussure was also to draw attention to the "fundamental duality of language".

Baudouin divided "phonetics", as linguistics was then called, into two separate disciplines. One branch dealt with the exhaustive scientific examination of speech sounds in relation to their acoustic and physiological properties: this activity he labelled "anthropophonics".

The other aspect he termed "phonetics in the strict sense of the word", i.e. "the morphological-etymological part of the general science of sounds", in which sounds were studied for their connection with word meanings. Its task was to analyse the "equivalents of sounds (sound units and their combinations) with respect to the role they play in language". For example, some elements may alternate while fulfilling the same function in a word.

To clarify the difference between the physical nature of sounds and their function in the language system, Baudouin compared the sound structure of language to that of musical tones. He said that every language possessed a sound scale of its own, so that physiologically identical sounds occurring in different languages might have different values in each, in accordance with the whole sound system of that language. In other words a sound is perceived in relation to other sounds in the same language and not as carrying certain absolute, intrinsic properties.

Baudouin's lectures continued to develop the principle of the relativity of sound categories. He found that sounds could be classified into parallel sets, based on their distinctive, physiological properties, including: voiced and voiceless, long and short, stressed and unstressed, soft and hard, (i.e., palatalized and unpalatalized). etc. Languages made use of these differences to set up certain parallel sound oppositions and so distinguish the meanings of words and parts of words.

In attempting to impose logic on linguistic analysis, Baudouin consciously looked to mathematics as a model and expected an increasing use of quantitative thinking and methods. He said: "Just as mathematics reduces infinite quantities to finite ones, which are susceptible to analytical thinking, so we should expect something similar for linguistics from a perfected qualitative analysis." He had already realised that zero may be of contrastive value in some languages, alternating with a sound of a certain magnitude (Russ. masc. nom. son. gen. s \emptyset na, i.e., o > \emptyset during inflection). One Czech linguist, Zubaty, dismissed Baudouin's work as algebra rather than linguistics (Jakobson, 1971 p.401).

Already, in these lectures in the 1870s, Baudouin had marked out the territory that the school of structural linguistics was later to explore in depth. He distinguished between the present state of a language and its historical development, hinting at a synchronic/diachronic division. He discriminated between the phonetic quality of sounds and their function in word-building. And, finally, he concluded that the sounds within a language formed a relative system which could be subjected to and described by quantita-

tive analysis.

Baudouin showed how his methods could be applied when, in his 1877-78 lectures, he classified the Slavonic languages using what is, in effect, a system of binary oppositions in the vowels, based on a pattern of long/short and stressed/unstressed contrasts. This dazzling feat of analysis has stood the test of time with only minor revisions.¹

Baudouin concluded that, when stress becomes fixed and stable, as in West Slavonic, it loses its value as a morphological device and remains only as an "anthropophonic" quality. Fixed stress still may act as "phonetic cement", binding syllables together into words, just as vowel harmony does in the Ural-Altaic languages.

His attempts to explain the stabilization of stress, though ingenious, are less convincing. He lists as contributory factors purely phonetic processes, analogy (one word assimilating to another), and the influence of foreign languages (which he thought very powerful).

Baudouin's contribution to phonological theory:

The concept of the phoneme

Baudouin's interests led him to search for a phonetic "atom", an indivisible unit of language, parallel to the atom as the unit of matter, and the digit 1 in mathematics, i.e., a sort of basic building block. This idea received a fresh impetus when he was joined in Kazan' in 1878 by Mikolaj Kruszewski (1851-1887), a 27-year old Polish linguist with a rigorous and searching mind. Kruszewski was attracted to Kazan' by Baudouin's views on language, and he was intrigued by the possibility of explaining logically and extrapolating a general law from all the linguistic data collected.

Baudouin and Kruszewski stimulated and encouraged each other; their partnership was so fruitful and successful that it is difficult to separate the contributions of each in apportioning credit. It is easier, then, to

treat their ideas at this stage as a product of their collaboration. Baudouin was generous in his appraisal of Kruszewski's work in his comparative Slavonic grammar in 1881. Kruszewski's ideas were, in fact, so daring and startling that academic journals in Germany refused to publish the introduction to his thesis, giving the excuse that it dealt more with methodology than linguistics. Baudouin retorted, with his usual colourful turn of phrase, that their real reason for refusing it was because it "introduced a new principle for research into phonetics, and the overwhelming majority of scholars fear new principles as they fear fire." (Jakobson, 1971 p.405).

In his thesis, Kruszewski examined vowel alternations in Old Church Slavonic. Like Baudouin, he distinguished between a sound as a product of a physiological process with acoustic properties, and as an item having structural significance. To eliminate confusion, he chose to apply a different term, phoneme, to the latter function. He appropriated the word from de Saussure, with whose work he was familiar and who had used it in a different sense, to denote a proto-sound in a parent language. "I propose to call the phonetic unit (i.e., what is phonetically indivisible) a phoneme, as opposed to the sound - the anthropophonic unit. The benefit and indispensability of such a term (and of such a concept) are obvious a priori" (1881, p.14). He was, of course, over-optimistic in his last assumption. He was immediately attacked for inappropriate innovations in technical terminology in academic circles of the day (Jakobson, 1971).

The Polish linguists had trouble finding a definition for the phoneme comprehensive enough to cover its various applications. Baudouin described it, in 1881, as "a unit that is phonetically indivisible from the standpoint of the comparability of phonetic parts of the word." Though its definition remained elusive, the phoneme held a firm place in their scheme of linguistic analysis. Baudouin (1881) divided the structure of audible speech, in anthropophonic terms, into sentences further sub-divided into words, syllables and sounds. The grammatical structure of speech was composed of sentences, i.e., meaningful syntactic wholes, which could be divided into meaningful

words, and words into morphological syllables, or morphemes (coined by Baudouin on analogy with phoneme). If the morpheme, a semiotic unit, were to be further sub-divided, it should, logically, be split into homogeneous elements, i.e., smaller semiotic units. Purely physical entities, such as sounds, whose acoustic properties are irrelevant in this context, do not fulfill this requirement. Therefore, the term, phoneme, was chosen expressly to designate the minimal unit carrying meaning. It is claimed that Baudouin was the first linguist of modern times to realise that sounds and their combinations mean nothing by themselves, but are used to transmit information (1889, Stankiewicz, 1972 p.139), so that distinctions of sound impart distinctions of meaning, as in the Russian minimal pairs, tam/dam, tom/tam (1917 Grigor'ev 1963 II p.279).

The interest that Baudouin and Kruszewski shared in the alternation of sounds led to some striking revelations. Kruszewski (1881) methodically differentiated between different types of alternation including, for example, the alternation of s~z, as in German: Haus, Häuser, where the sound change is gradual, predictable and phonetically conditioned, and the alternation of z~r, in German: gewesen, war, where the sounds are dissimilar, conditioned by a different set of factors and form part of a morphological pattern.

In 1893-5 Baudouin published (in Polish and German) "An attempt at a theory of phonetic alternations" and this study of synchronic variants ("das Nebeneinander" in his words) led to what Jakobson (1971 p. 410) has called "Baudouin's magnificent discovery", the merger of the Russian and Polish variants [ɨ] and [i] into one phoneme, called i mutabile. Influenced by de Saussure's approach to morphological structure, Baudouin was struck by the fact that the same ending showed up in two different forms: the nominative plural ended in [ɨ] after a hard (unpalatalized) final stem consonant, and [i] after a soft one, e.g., bal, "ball", nom. plural balɨ; dal', "distance", nom. plural dal'i. In modern terms, these are allophones in complementary distribution. Baudouin was not aware of all the implications of his discovery,

nor was this terminology available to him, but he realised that the two sounds make up one phoneme, and that the representation of the high unrounded vowel was determined by the representation of the consonants. This interpretation made it necessary to view the phoneme as an abstraction that could be realised in more than one way, the sum of generalized properties elicited from different combinatory variants.

He astutely supported his argument for the reality of the phoneme by citing traditional Russian and Polish rhyme schemes, where [i̇] and [i] were regularly paired, as in: ḃil - m'il: pokṙit' - l'ub'it' (1917, Grigor'ev, 1963 II, p.264).

Not all problems of Slavonic phonology were solved as successfully. He examined alternations such as k ~ č, and k ~ c, as in p'ekú, 1st. sing. 'I bake', p'ečót, 3rd. sing., and p'ecí, imperative (obsolete). He saw these forms as giving way to the more frequent k ~ k', (pek'í, imperative), by analogy (1894, Stankiewicz, p.181).

From the perspective of a century later, it is simple to identify the shortcomings of such analyses. He lists the alternants that appear, but he does not formulate rules by which one set is derived from the other, nor, of course, does he establish any base forms. These omissions made it impossible to construct a neatly ordered hierarchy of sound changes, operating according to regular laws to produce a predictable pattern.

The difficulties of making a correct analysis at this time should not be under-estimated. Jakobson (1971) considers that the worst obstacle that the pioneer linguists had to face was the absence of an adequate theoretical basis that would have encouraged the development of their novel ideas. Instead, they struggled unavailingly against adverse criticism and the sterile dogmas of the day.

The early years of innovative discoveries gave way to more modest achievements. Baudouin never completed the ambitious programs he had laid out in

his youth. He left Kazan' in 1883. Kruszewski fell ill the next year and died prematurely in 1887, uttering the poignant cry: "Oh, how quickly have I passed across the stage".

Baudouin's subsequent activities and views changed radically. He concentrated increasingly on the mental aspect of speech sounds as perceived by the individual, which he now recognized as the only reality in language. He revised his opinion of Kruszewski's work, and re-interpreted many of their earlier ideas, including the concept of the phoneme, which became "the psychological equivalent of a speech sound", produced by a fusion of the psychological impressions which result when a sound is pronounced. Removed from a concrete linguistic context, and placed at the mercy of individual introspection, the phoneme lost much of its operating value in this formulation.

His best students in these later years skilfully separated the wheat from the chaff. L.V. Ščerba (1957) considered that Baudouin's later fuzzy "psychologism" could easily be disregarded and still leave essentially intact Baudouin's linguistic theories and the valuable insight they contain.

Contributions to linguistics in other areas

One of Baudouin's endearing characteristics was his intellectual democracy in an age when snobbery of all kinds was rampant. He demanded "equal rights" for the study of all subjects and all languages, even Yiddish, which the purists rejected as "jargon" (Vinogradov, 1963, p.19). As a result, his range of interests was staggeringly diverse.

The bulk of his work was, of course devoted to Slavonic linguistics which he vastly enriched. He collected a great number of Serbo-Croat and Slovenian texts and Lithuanian folk-songs. He wrote on the history, structure and dialectology of Polish, Slovenian and Russian, as well as their comparative relationships. In historical linguistics, amongst other things, he isolated the third palatalization of velars in Proto-Slavonic, and also Linden's law (the treatment of initial wr-). His book on "Old Polish before the 14th. century" is a brilliant reconstruction of Old Polish phonology from Latin texts. His penetrating analysis of Kashubian, which had baffled other linguists, definitively established it as most resembling Polish.

For Baudouin, language was not a dry academic bone to be worried, but a vital part of everyday life. He took a keen interest in the practical application of linguistics, a somewhat neglected aspect of his work. This included looking into the possibility of using linguistics to help the deaf communicate. Further, he was struck by the possible implications for linguistics in the utterances of aphasics, and he made a record of the speech of one aphasic patient. He noted marked differences in the speech of educated and uneducated speakers, that is, in the conscious and unconscious use of language, suggesting that allowances should be made for metalinguistic awareness. Many of these issues, that he brought to light, re-appear and are treated more thoroughly in the works of later Russian linguists and psychologists.

His ideas were also to make a lasting impact on education. He realised at an early stage that Russian phonology and orthography fail to correspond exactly, and that the graphemes do not represent the phonemes accurately in certain all-important respects. If the two systems are confused, the task of learning to read is made incomparably more difficult. "Only a clear knowledge of the sound of the language, as opposed to their graphic representations) and of the origin and structure of words can provide a good method of teaching children (and adults) to read and write a given language" (1871, Stankiewicz, p.51). The gap between speech sounds and the written symbols for them is especially pronounced in Russian, as palatalization, a feature of major contrastive importance, is represented in Russian script most often by the vowels. Baudouin first suggested that the feature belonged to the consonants rather than the vowels (1912).

This perception has helped to promote an approach to teaching literacy, according to which children are introduced first to the sounds of Russian, and only later to the letters. A pioneer in this field was K.D. Ushinsky (1824-70) and his method was later followed and amended by V.A.Flerov and V.P. Vakhterov (Nazarova, in J. Downing (ed.), in press). Before learning to read children are taught to discriminate phonemes, e.g. pat, pot, put, and to segment utterances. A development of this method, again based on sound phonological principles, advocated by D.B. Elkonin is to present the

phonematic unit of the open syllable, consonant + vowel, rather than the phoneme in isolation, as the basic unit of language, and thus express the duality of hard/soft consonant + vowel in a rational and consistent way: la/l'a, not l+a/l+ya, (Downing, in press). The need for this approach and the theoretical rationale were both outlined by Baudouin.

Conclusion

Although Baudouin's ideas made little headway in his own time, they have proved durable, surviving through his successors. De Saussure took note of them, as did Meillet in his theory of alternations. Meillet wrote an obituary in 1930, regretting the neglect of Baudouin's work (Kilbury, 1976). A line of succession in phonological theory can be traced through Polivanov and Ščerba to Trubetskoï, Jakobson and other linguists of the Prague Circle, and from them to their disciples, Halle and Chomsky. In England, the phonetician D. Jones acknowledged a debt to Ščerba for introducing him to the phoneme (Kilbury, 1976). J.R. Firth (1957) in 1934 discussed the Kazan' linguists' classification of alternants, listing the English plurals, /-s, -z, -əz/ as an example of a "morphological phoneme", and made use of their findings in his own work (Albrow, 1981).

Starting from the principles set forth by Baudouin, linguists have produced definitive work in the fields of phonology and distinctive features, morphophonemics, diachronic phonology, and aphasic and child language. Other topics, such as typology, language universals and sociology, which Baudouin considered important, are now being given detailed attention, largely because all these subjects came under the scrutiny of this remarkable man.

NOTES

- 1 In this schema, Serbo-Croat retains both oppositions, offering, for example: gen.sing., dr̩veta, "of the tree"; nom. plural, dr̩veta; and gen. plural, dr̩vétā, where " indicates a short falling stress. ` is short rising, / is long rising, - is long unstressed, and a short, unstressed vowel is unmarked.*

Slovenian preserves the long/short opposition only in stressed syllables. In Bulgarian and the East Slavonic dialects, including Russian, only the stressed/unstressed opposition survives. Conversely, Czech and Slovak show only the long/short opposition. Lusatian and Polish have lost both types of opposition.

* My examples. I.M.H.

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*N.B. In listing the works of Baudouin de Courtenay, I have drawn upon two sources: 1) A Baudouin de Courtenay Anthology, translated and edited by E. Stankiewicz, 1972. Bloomington: Indiana University Press, which includes an informative introduction to Baudouin's life and times; in this case the titles are given in English; 2) the two-volume, Russian language edition of Baudouin's selected works, compiled by V.P. Grigor'ev and A.A. Leont'ev, published in 1963 by the Soviet Academy of Sciences, Moscow. Discrepancies exist in dates of publication as Baudouin published the same work in different languages at different times (and later revised it). For instance, Baudouin issued An Attempt at a Theory of Phonetic Alternations first in Polish in 1893-4, then in Germany in 1895. I have used the date given in the source from which I have taken it.