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Citation: Galina E. Kedrova & Constantine Leo Borissoff. “The Concept of ‘Basis of Articulation’ in Russia in the First Half of the 20th Century”. *Historiographia Linguistica*, Volume 40, Issue 1, 2013, pages 151–197.

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## The Concept of ‘Basis of Articulation’ in Russia in the First Half of the 20th Century\*

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### 1. Introduction

There are concepts in linguistics which, while staying in the background of ‘mainstream’ research, keep coming back with remarkable cyclicity. In Phonetics one such concept is the ‘basis of articulation’ also known as ‘articulatory base’ and ‘articulatory setting’. This has been around for decades, regularly surfacing in the works of prominent linguists and phoneticians.

At the root of the idea is the notion that phonetic systems of languages and even groups of related languages possess some general articulatory and supra-segmental voice quality features which make them distinctly different. Because of their elusive nature, these features are not easy to ‘pin down’ and describe, so there has been no specific term for them. Usually, they were viewed as manifestations of different ‘habits’ or ‘manners of articulation’. John Laver (1978) gave a comprehensive account of the history of this notion quoting works of early British phoneticians, but it was in 19th century Germany where this vague idea had received not one but several names.

It has become customary to give credit for inventing the term for these specific features to Eduard Sievers (1850–1932) who proposed *Operationsbasis* [“basis of operation”], and to Felix Franke (1860–1886) with his *Artikulationsbasis* [“basis of articulation”] and another, seemingly parallel, definition *Indifferenzlage* [“neutral setting”] (for details, see Kelz 1971, Laver 1978, Jenner 2001). These terms are

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\* The authors would like to acknowledge the very useful comments received from Bryan Jenner, Olga Krivnova, Piers Messum, Ian Wilson, the editor and the external, anonymous readers of an earlier draft.

<sup>1</sup> The word *Indifferenz* may be interpreted as ‘neutral’ so *Indifferenzlage* is usually translated as the ‘neutral setting’ although there is a slight semantic difference between ‘indifferent’ and ‘neutral’.

usually treated as synonyms but while *Indifferenzlage* receives little or no attention, this concept pre-dates *Operationsbasis/Artikulationsbasis* by at least two decades, as will be shown later.

*Operationsbasis* first appeared in a note to a paragraph in which Sievers was dealing with variations of vowel quality between German dialects. According to him, they were caused by differences in their *Articulationsweise* [“manner of articulation”]. Being true to his general systemic approach, Sievers believed that such differences followed from a relationship not between separate sounds but between phonetic systems (*Verhältnisse der Systeme*). Consequently, in studying these variations he argued that one should analyse not separate sounds but the main principles of the corresponding phonetic systems:

Such principles include the participation of the higher or lower lips [...] various stages of nasalisation [...]. Particularly, here also belongs the storage position of the tongue, constantly held throughout all vowels of the system, stemming from differences in the resting position of the organs.<sup>2</sup> (Sievers 1876: 103)

It was in this context that the term *Operationsbasis* first appeared in the text:

Trying to speak e.g. the pithy North-German dialect such as Holstein, I as a Central German speaker, should first of all make the tongue somewhat withdrawn and broadened; once the correct position, to some extent the *Operationsbasis*, is found and understood as being the same when switching between different vowels, the characteristic sound nuances of the dialect follow all by themselves.<sup>3</sup> (ibid.)

As we can see, the initial idea of Sievers was that by modifying *Operationsbasis* to match that of the target dialect/language, the ‘characteristic sound nuances’ would follow ‘all by themselves’. Importantly, under *Operationsbasis* Sievers specifically meant only a certain language specific position of the tongue (*Lagerung der Zunge*) which, as he believed, was constantly maintained throughout speech. According to him, the storage position followed out of the language specific state of vocal organs: *Ruhelage* [“resting position”]. This is, perhaps, the most critical point in his concept. In the preceding chapter of *Grundzüge* Sievers gave the following description of *Ruhelage* as a state of quiet breathing in which:

The vocal tract and the larynx are then in a position which allows the inspired air and noise to flow through uninhibited. The glottis is wide open for this purpose in both its parts. The soft palate hangs limply, so that the respiratory flow may occur both in the oral cavity and in the nasal cavity. The tongue is flabby in the mouth, which it partly fills. The jaws are moderately apart, lips closed, or, especially with children and during quiet sleep, a little open in a slit-shape. We call this storage position of organs the resting or neutral setting.<sup>4</sup> (Sievers 1876: 20)

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<sup>2</sup> “Solche Principien sind beispielsweise die stärkere oder geringere Beteiligung der Lippen [...], verschiedene Stufen der Nasalirung [...]. Ferner gehört hierher namentlich auch eine durchgehends bei allen Vocalen des Systems abweichende Lagerung der Zunge, die von Differenzen in der Ruhelage der Organe herrührt.”

<sup>3</sup> “Versuche ich als Mitteldeutscher z. B. eine prägnant norddeutsche Mundart wie etwa die holsteinische zu sprechen, so muss ein für allemal die Zunge etwas zurückgezogen und verbreitert werden; hat man die richtige Lage, gewissermassen die *Operationsbasis*, einmal gefunden und versteht man dieselbe beim Wechsel verschiedener Laute festzuhalten, so folgen die charakteristischen Lautnuancen der Mundart alle von selbst.”

<sup>4</sup> “Das Ansatzrohr und der Kehlkopf befinden sich dabei in einer Stellung, welche der Athmungsluft gestattet ungehemmt und geräuschlos hindurchzuströmen. Die Stimmritze ist zu diesem Zwecke in

Although nowhere in this passage did Sievers explicitly mention that this resting position was language specific, presented in this way, the definition of the ‘neutral setting’ effectively implied that it was an inherent physiological feature which might be different between speakers of various languages and dialects. This crucial aspect of his theory needs some further clarification.

Sievers was the first to use the terms *Ruhelage* and *Indifferenzlage* in conjunction with *Operationsbasis*, but the idea was not new. Some twenty years earlier, Wilhelm Scherer (1841–1886) used these notions, although he named them as *Indifferenzzustand* [“neutral state”] and *Ruhezustand* [“position of rest”] (1868: 22–25). Scherer referred to some earlier sources, particularly, *Grundzüge der Physiologie* (1856: 39) by a speech physiologist Ernst Wilhelm Brücke (1819–1892) and *Physiologie der menschlichen Sprache* (1866: 37) by Carl Ludwig Merkel (1812–1876).

Importantly for this discussion, Scherer distinguished between *physiologischen Indifferenzzustand* [“physiological neutral setting”], or the state of total inactivity of speech organs, and *sprachliche oder active Normalstand der Organe* [“speech or active normal state of organs”], which he defined as “the position of organs to which in their activity they return better and easier”.<sup>5</sup> He also clearly stated that this ‘active normal state’ was language and dialect specific: “this normal state is different for all languages and for every particular dialect of a language”<sup>6</sup> (1868: 23). A more detailed definition of *Indifferenzlage* was given later by Arnold Schröder (1857–1935):

The neutral position is known as the state of rest, in which the speech organs are located during a pause in speaking, and from which they can most easily access the various special provisions in the individual sounds, without us being aware of it.<sup>7</sup> (Schröder 1884: 12-13, quoted by Bierbaum 1886: 31)

Obviously, this notion related to a certain ‘static’ position of the speech organs which was maintained during speech corresponding to Scherer’s *sprachliche oder active Normalstand der Organe*. Equally, for Sievers *Operationsbasis* was a particular tongue posture which ‘stemmed’ from a more general static ‘resting position of the organs’. However, since he discussed both phenomena in close relation to the manner of articulation (*Articulationsweise*) — an inherently dynamic notion — the division between the static and dynamic aspects was not made clear enough. This failure to distinguish between the static and dynamic aspects of articulation and also between the physiological (passive) and the speech ready (active) neutral settings had a

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ihren beiden Theilen weit geöffnet. Das Gaumensegel hängt schlaff herab, so dass der Respirationsstrom sowohl in die Mundhöhle wie in den Nasenraum eintreten kann. Die Zunge liegt schlaff in der Mundhöhle, welche sie zum Theil ausfüllt. Die Kiefer sind mässig von einander entfernt, die Lippen geschlossen oder, namentlich bei Kindern und während des ruhigen Schlafs, ein wenig spaltförmig geöffnet. Wir nennen diese Lagerung der Organe die Ruhe- oder Indifferenzlage.”

<sup>5</sup> “[...] diejenige Stellung der Organe, zu welcher sie in ihrer Activität am leichtesten und liebsten zurückkehren”.

<sup>6</sup> “[U]nd dieser Normalstand ist für alle Sprachen, ja für jeden besonderen Dialekt einer Sprache verschieden”.

<sup>7</sup> “Die Indifferenzlage ist bekanntlich der Zustand der Ruhe, in dem sich die Sprachorgane während einer Pause im Sprechen befinden, und aus dem sie am leichtesten zu den verschiedenen Spezialstellungen bei den Einzellaute gelangen können, ohne dass wir uns dessen bewusst sind.”

negative effect on the later development of the concept.

The expression *natürliche Basis* [“natural basis”], with its perceptible biological connotation, was no less problematic. Although it referred exclusively to his notion of *Indifferenzlage*, in many peoples’ minds *natürliche Basis/Indifferenzlage* became firmly linked to *Operationsbasis* leading to a persisting misconception that these were one and the same thing. This was despite the elucidations of phoneticians like Friedrich Techmer (1843–1891) who, describing the position of the speech organ in its neutral state, clearly differentiated the “[...] absolute neutral setting (inertia) [...], as the natural equilibrium of the organs in a state of physiological rest, and the relative neutral setting, as the basis of operation of the forces in field”<sup>8</sup> (1880: 39). This unambiguous clarification did not help as the label of *natürliche Basis/Indifferenzlage* had already been attached to *Operationsbasis* and then to *Artikulationsbasis* – a more linguistic-like term<sup>9</sup> coined by Felix Franke (1886) and adopted by Sievers in the later edition of *Grundzüge*:

[...] the storage position of the tongue, stemming from differences in the resting position of the organs and which is now most usually described (by F. Franke) as the specific *Artikulationsbasis* [sic] of the above mentioned languages (formerly, I proposed the name ‘*Operationsbasis*’).<sup>10</sup> (Sievers 1893: 105-106)

However, the change of name did not alter the inherent fallacy. This initial confusion was compounded by Felix Franke who included in his *Artikulationsbasis* not only the ‘tongue storage position’ but also the lip action and, importantly, some other undefined “characteristic features of the entire speaking mechanism”<sup>11</sup> (Franke 1890: 15) which could have related to various dynamic aspects of speech. Moreover, Franke used *Indifferenzlage* in one of his papers instead of *Artikulationsbasis* adding to the confusion (Franke 1886: 29). As Kelz (1971: 196) noted, Sievers’ notion of the basis of articulation did not include the activity of speech organs (dynamics). Initially, by *Operationsbasis* Sievers meant specifically the *Lagerung der Zunge* [“tongue storage position”] but not any other aspects of *Artikulationsweise* [“manner of articulation”], however, by adopting the ambiguous Franke’s *Artikulationsbasis* with its lack of distinction between the static and dynamic aspects, he unwittingly brought in with it the inconsistency of Franke’s definition. Thus the ground for future controversy was laid from the start.

Both Sievers and Franke only mentioned *Artikulationsbasis* in passing and it would have probably remained largely unnoticed if not for Wilhelm Viëtor (1850–1918) who actively promoted this concept in his *Elemente der Phonetik* (1887). Notably, *Artikulationsbasis* appeared in a section dedicated to supra-segmentals

<sup>8</sup> “[...] absolute[r] Indifferenzlage (inertia) [...] als der natürlichen Gleichgewichtslage der Sprachorgane im Zustande physiologischer Ruhe und von relativer Indifferenzlage als der Operationsbasis der Kräfte im Felde.”

<sup>9</sup> *Operationsbasis* was mostly used at that time as a military term meaning “a naval base”.

<sup>10</sup> “[...] Lagerung der Zunge, die von Differenzen in der Ruhelage der Organe herrührt und die man jetzt meist [mit Felix Franke] als die spezifische Artikulationsbasis der betreffenden Idiome zu bezeichnen pflegt (früher hatte ich den Namen ‘Operationsbasis’ vorgeschlagen).”

<sup>11</sup> “charakteristischen Einstellung des gesamten sprechenden Mechanismus.”

where Viëtor described ‘articulation bases’ of French and English (French and German in the English edition (Ripmann 1899)) taking note of ‘characteristic’ positions of speech organs (tongue, lips, jaw). However, his understanding of the basis of articulation did not relate to the tongue storage position or the resting position, which were not even mentioned. While for Sievers the basis of articulation was embodied in a particular tongue resting position, Viëtor, following Franke, understood it in a broader way as an assembly of certain ‘characteristic features of the entire speaking mechanism’. To add to the confusion, he used the two terms *Artikulationsbasis* [“basis of articulation”] and *Artikulationsweise* [“manner of articulation”] successively in the same paragraph:

The determination of *bases of articulation* must be established, essentially, on a preliminary comparison taking German as a starting point. The general German *basis of articulation* is, of course, only an almost questionable abstraction, as the dialects considerably differ in this respect, likewise in both English and French. However, it is possible to identify some characteristic features of the difference between the English, French and German *bases of articulation*. The English *manner of articulation* is different from the German by the following peculiarities: the tongue is lowered, withdrawn and broadened (flattened), with a tendency to have a concave depression of the anterior part of the tongue. The lower jaw moves slightly forward. The lips contribute little to the formation of sounds, although they are moderately rounded, but neither spread appreciably outwards (it is almost a rule to move the lips as little as possible); the mouth is open only moderately. The larynx remains lowered (?) [*sic*] and the voice has a dark, almost muffled sound and little modulation.<sup>12</sup> (Viëtor 1903: 76; our emphasis: GEK & CLB)

As we can see, for Viëtor ‘basis of articulation’ was the same as ‘manner of articulation’ so his understanding of the basis of articulation as a loose set of *Eigentümlichkeiten* [“peculiarities”] did not add much clarity. Besides, as noted by Fritz Abel, he missed the important point about the ‘classic’ definition: “[t]he phrase of Sievers certainly refers only to the formation of vowels and to a specific tongue storage position. In the context of the quote by Viëtor such restrictions are not mentioned”<sup>13</sup> (Abel 1982: 31).

Otto Jespersen (1860–1943), another active advocate of the basis of articulation, also took the notion further, uniting ‘neutral setting’ and ‘basis of articulation’ when saying that “every language has its (active) neutral setting or basis of operation or basis of articulation or — to use the good Storm’s word<sup>14</sup> — mouth setting”<sup>15</sup>

<sup>12</sup> “Die Bestimmung der Artikulationsbasen wird vorläufig wesentlich auf Vergleichung beruhen müssen, wobei als Ausgangspunkt die eigne, deutsche, zu dienen hat. Eine allgemein deutsche Artikulationsbasis ist freilich nur eine fast bedenkliche Abstraktion, da die Mundarten auch in dieser Hinsicht bedeutend voneinander abweichen; und ähnliches gilt vom Englischen und Französischen. Immerhin ist es möglich, durch einige charakteristische Züge den Unterschied zwischen der englischen oder französischen und der deutschen Artikulationsbasis zu kennzeichnen. Die englische Artikulationsweise unterscheidet sich von der deutschen im allgemeinen durch folgende Eigentümlichkeiten; die Zunge wird gesenkt, zurückgezogen und verbreitert (abgeflacht), mit Neigung zur konkaven Vertiefung der Vorderzunge. Regel, die Lippen möglichst wenig zu bewegen); der Mund ist nur mäßig geöffnet. Der Kehlkopfsteht tief (?), und die Stimme hat einen dunkeln, beinahe dumpfen Klang und wenig Modulation.”

<sup>13</sup> “Der Satz von Sievers bezieht sich ja ausdrücklich nur auf die Bildung der Vokale und auf eine besondere Lagerung der Zunge. Im Kontext des Zitats ist bei Viëtor von solchen Einschränkungen nicht die Rede.”

<sup>14</sup> The reference is to Johan Storm’s (1836–1820) term *Mundlage* [“mouth setting”] (1881: 32).

(Jespersen 1912: 185; see also the earlier text in the Danish edition of 1899: 510-511). Nevertheless, his clarification ‘(active) neutral setting’ should be noted.

Wilhelm Viëtor was one of the key figures in the language teaching movement commonly known as the ‘Reform Movement’. The concept of the basis of articulation (in the way understood by Viëtor) was widely disseminated through multiple reprints of his books as an important element of his pronunciation teaching method. Since his *Elemente* was also printed in English (Ripmann 1899), the literal translation of *Artikulationsbasis* as ‘basis of articulation’ soon replaced Henry Sweet’s earlier English term ‘organic basis’ which had first appeared in a reworked edition of his *Handbook of Phonetics* (1877) published under the new title *A Primer of Phonetics* (1890).

In this earlier work Sweet had already included a chapter entitled “Synthesis” in which he compared the ‘articulatory habits’ of English, Scottish, Saxon German, German and French, but nowhere in the text did he use any specific term for these phenomena uniting them only under a general “Voice quality (timbre)” title (1877: 97-99). In this respect, he continued the tradition of earlier English phoneticians (Wilkins 1668, Cooper 1685, Bayly 1758) whose works he, undoubtedly, knew. However, in the reworked edition, Sweet extended this chapter by adding a subsection *Organic basis* which he placed immediately after describing voice quality features:

Every language has certain general tendencies which control its organic movements and positions constituting its organic basis or basis of articulation. [...] In English we flatten and lower the tongue, hollow the front of it, and draw it back from the teeth, keeping the lips as much as possible in a neutral position. The flattening of the tongue widens our vowels, its lowering makes the second elements of our diphthongs indistinct, front-hollowing gives a dull resonance which is particularly noticeable in our *l*, its retraction is unfavourable to the formation of teeth-sounds, and favours the development of mixed vowels, while the neutrality of the lips eliminates front-round vowels. [...] In French everything is reversed. The tongue is arched and raised and advanced as much as possible, and the lips articulate with energy. French therefore favours narrowness both in vowels and consonants, its point-consonants tend to dentality, and, compared with the English ones, have a front-modified character, which is most noticeable in the *l*, while the rounded vowels are very distinct. (Sweet 1890: 69–70)

As Bryan Jenner (2001) noted, the idea of ‘organic basis’ (translated by Sweet as *Artikulationsbasis* in the German edition (1885)) was probably borrowed from the works of Sievers. The influence of Sievers, whom Sweet held in high esteem, was also reflected in his concentration on tongue postures. However, the notions of ‘tongue storage position’ and ‘resting position’ were completely missing in his ‘organic basis’ being replaced by ‘keeping the lips as much as possible in a neutral position’. Although, on the next page of the English edition Sweet did make a reference to the ‘neutral tongue position’ (absent in the German text) saying that “[o]ur neutral tongue position is the low-mixed or mid-mixed one in the vowels in *further*” (1890: 70), it appeared as an isolated insert without any direct relation to his concept of ‘organic basis’. Nevertheless, this brief phrase is significant because it

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<sup>15</sup> “[...] jede Sprache ihre (aktive) Indifferenzlage oder Operationsbasis oder Artikulationsbasis – um Storms treffendes Wort zu gebrauchen – ihre Mundlage hat.”

shows that Sweet, unlike Sievers, clearly associated the neutral tongue position with a particular vowel so it could not be taken as a position of physiological rest or quiet breathing.

Generally, Sweet's 'organic basis' was rooted in the notion of voice quality features and may be considered as an eclectic crossover between the impressionistic descriptions of 'manners of articulation', traditional for British phoneticians, and the innovative ideas of Sievers. The choice of the word 'organic', which Sweet often used throughout his works in various contexts, was problematic. On the one hand, it was clearly a reflection of the credo of Romantic philosophers of an "'organic' whole (which determines the function and properties of the parts)" (Stankiewicz 1972: 12) opposed to the widespread simplistic understanding of a language as "a mechanical system (in which the whole is a sum of its parts)" (ibid.). This is an important division which should be kept in mind for the following discussion.

On the other hand, in the dictionaries of that time, as well as in modern English, the word 'organic' had the general meaning "of the bodily organs, vital" and a secondary, derivative, meaning: "constitutional, inherent, fundamental, structural; organized or systematic or coordinated" (Fowler & Fowler 1919: 576). Obviously, Sweet took it in its secondary meaning but it is unclear whether he intended by it the 'inherent basis' or the 'structural basis' or both. Being intricately connected with Biology this term implicitly promoted the controversial view of the basis of articulation as an inborn, ethno-specific quality, especially in conjunction with Sievers' specific understanding of the position of physiological rest as *natürliche Basis*.

Henry Sweet's organic basis and Viëtor's specific understanding of *Artikulationsbasis*, centred on voice quality and dynamic aspects rather than on the static resting or neutral posture, could be the prime causes of the notorious dichotomy reflected even in dictionary definitions. A good illustration of such confusion is an entry in the *Routledge Dictionary of Linguistics* where the basis of articulation is listed under 'articulation base' and defined in two different ways:

- 1) Group of articulatory characteristics common to all speakers in a speech community.
- 2) Starting position (= resting position) of the articulators in the articulation of a speech sound. (Bussmann 1996: 91)

The first part of this definition clearly relates to speech dynamics while the second part is about a static 'starting position (= resting position)'. Although unintentionally, the same dichotomy is also present in the apparent synonym 'articulatory setting' defined by Honikman (1964) firstly as "the disposition of the parts of the speech mechanism [static] and their composite action [dynamic]" but also as "the overall arrangement [static] and manœuvring of the speech organs necessary for the facile accomplishment of natural utterance [dynamic]". Honikman's paper was cited by David Abercrombie (1967: 93, and n.3) and, particularly, by John Laver (1980: 12-13) in conjunction with voice quality settings, so that now in the English language linguistics literature the articulatory setting is firmly associated with voice quality settings while the static component is often overlooked. In fact, there have been attempts to dispose of it leaving only the dynamic aspect. For example, Wadsworth

insisted that ‘articulatory setting’ should be preferred to ‘base’ or ‘basis’ because, as he believed, the articulatory setting was:

[...] an implicitly dynamic term and thus obviates the dichotomy inherent in the essentially static term basis. Namely, the confusion between the position of the organs of speech at rest and their overall configuration during speech. (Wadsworth 1979: 256)

It is beyond the scope of this article to engage in an argument about the validity of such a radical approach which would effectively mean rejecting Sievers’ initial idea. However, the recent empirical research in this area focuses, mainly, on the static aspect of the articulatory setting represented by ‘inter-utterance (speech) postures’ (ISPs). Gick et al. (2004) used X-Ray film data to explore the ‘inter-utterance postures’ of Canadian English and Québécois French. They concluded that these were not just “transition point[s] solely determined by immediately surrounding sounds” but were “tightly specified as actual speech targets”. According to them, such postures are language specific and they generally correspond to the earlier impressionistic descriptions of the articulatory setting.

Wilson (2006: 10) believed that such ‘underlying’ postures could be considered as “the most representative, least biased configuration at which to measure the position of the articulators in order to infer a language’s AS [articulatory setting]”. The only currently ongoing comprehensive study of Schaeffler, Scobbie & Mennen (2008), is also dedicated to ISPs. Similar studies have been performed in Russia (Skalozub 1979, Kedrova, Zaxarov & Anisimov 2008).

To summarise the above, we could say that the vision of the basis of articulation as a certain static basis on which the phonetic system of a language is built was a remarkable insight. However, this initially simple concept, soon became ‘hazy’ and ‘nebulous’ when the same term started to be applied indiscriminately not only to a specific ‘starting’ or ‘resting’ position but also to anything relating to language specific manner of articulation and voice quality phenomena.

The numerous terms applied to this concept, often created *ad hoc* and poorly defined, were contradictory and ambiguous.<sup>16</sup> Such lack of cohesion did not help to clear the notorious ‘haziness’ of this concept. The controversies and other aspects of the evolution of this notion in the West were extensively covered in Kelz (1971), Laver (1978) and Jenner (2001), but developments of this idea in Russia, where it took a specific course, remain largely unknown outside Russia. This paper aims to give a detailed account of the principal approaches to the basis of articulation in Russia in the first half of the 20th century.

## 2. *Developments of the concept in Russia*

### 2.1 *‘Artikuljacionnaja baza’ of A. I. Tomson*

From its emergence in 1724 the Russian Academy of Science was closely connected with German scholarship. This was particularly true of language studies which were predominantly German oriented until the beginning of the 20th century

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<sup>16</sup> For instance, it is not clear whether ‘articulation basis’, ‘basis of articulation’, ‘articulatory basis’ and ‘articulatory setting’ are synonyms.

(Andreeva 2003). The *Grundzüge der Lautphysiologie* and *Grundzüge der Phonetik* by Sievers were easily accessible to Russian scholars but it took some time for the concept of the basis of articulation to become established in the country.

The first use of the Russian analogue of *Artikulationsbasis*, translated as ‘*artikuljacionnaja baza* [“articulatory base”<sup>17</sup>], may be attributed to Aleksandr Ivanovi Tomson<sup>18</sup> (1860–1935) who was then a professor at *Novorossijskij Universitet* in Odessa. In his *Foneti eskie etjudy* [“Phonetic studies”] (1905) Tomson proposed that dialectal variations in vowel quality stem from individual differences in their articulatory bases. However, he did not provide either a clear explanation of the term *artikuljacionnaja baza* or its sources simply defining it as:

[...] individual differences in pronunciation, conditioned by individual variations in the articulatory base, i.e. not only by the individual inborn peculiarities of the form and movements of organs of speech, but also by acquired habits influenced by various acquired dialects and languages.<sup>19</sup> (Tomson 1905: 288)

We can see from this quote that for Tomson the articulatory base was a set of customary articulatory movements common to the majority of speakers of a given language or dialect, which were obtained in early childhood by the way of imitation of auditory representations produced by adult speakers. However, in his view, these ‘customary articulatory movements’ could also be partly explained by hereditary factors.

Tomson generally favoured an acoustic approach and, as far as vowels were concerned, he viewed articulations mainly as means of changing resonant properties of the vocal tract. Having empirically arrived at the notion of allophones (‘varieties’ of the same vowel in his terminology), he tried to explain them by the variability of physical parameters of speech between individuals (individual differences in pronunciation). This called for postulating an ‘individual articulatory base’ which could undergo changes in time under the influence of age and other factors (e.g., language contact).

Although such understanding of the basis of articulation did imply a certain static element in the form of ‘individual inborn peculiarities’ as well as some dynamic elements (‘movements of organs of speech’) it is difficult to affiliate Tomson’s articulatory base to either Sievers or Sweet. Presumably, Tomson could have been influenced by Sievers who specifically used the basis of articulation in conjunction with dialectal differences and vowel quality variations (*Lautnüancen der Mundart*). He was also, undoubtedly, well aware of Sweet and, probably, Viëtor (the latter being less frequently mentioned in works of Russian linguists of that time). The words ‘individual inborn peculiarities’ are also reminiscent of Sweet’s (1890) ‘peculiarities of [...] organic basis’, however, there is an important difference: Tomson repeatedly

<sup>17</sup> From here onwards, ‘articulatory base’ will be used as the literal translation of the Russian term *artikuljacionnaja baza*.

<sup>18</sup> Spelled as ‘Thomson’ in some sources, notably his work in languages other than Russian.

<sup>19</sup> “[...]”

used the word ‘individual’ in this context while Sweet spoke only of the *general* character of the organic basis common to speakers of a language or dialect.

It is also significant that immediately below the quoted text Tomson added that these individual differences in pronunciation resulted from the “summing-up of various individual pronunciations”.<sup>20</sup> In modern terms we might say that he referred to the effects of bilingual (multilingual) phonetic interference. As we can see, although Tomson used the term ‘articulatory base’, in his interpretation this notion did not correspond to the ‘classic’ definition of Sievers that was centred on *Ruhelage der Zunge* [“tongue resting position”]. Instead, it was closer to the dynamic ‘general tendencies’ of Sweet and, particularly, to the ‘characteristic features of the entire speaking mechanism’ of Viëtor.

Tomson further developed the concept of ‘articulatory base’ in his next work dedicating to it a whole section of his *Obščee jazыkovedenie* [“General linguistics”] (1906; reprinted with some slight modifications in Tomson 1910a) entitled *Artikuljcionnaja baza: Opredelenie zvukov na praktike* [“Articulatory base: Defining sounds in practice”]. The subsection *Artikuljcionnaja baza* started with the assertion:

In every language there exist common peculiarities in articulations, explained, for the most part, by acquired habits in movements and development of certain speech muscles connected with them.<sup>21</sup> (Tomson 1906: 214)

The beginning of this definition bears a striking resemblance to the definition of the organic basis by Henry Sweet: “[e]very language has certain general tendencies which control its organic movements and positions, constituting its organic basis or basis of articulation” (1890: 69). However, this likeness is superficial since a few lines further Tomson continued: “[t]he whole aggregation<sup>22</sup> of these physiological conditions of the given language, dialect etc. is called the articulatory base and one can recognise it by comparison with other languages, dialects etc.”<sup>23</sup> (idem). As with his earlier definition, it had little in common with *Artikulationsbasis* of Sievers and was also different from Sweet’s ‘organic basis’. Compared to the previous work (1905) his views had undergone some change, so instead of a set of ‘certain general tendencies’ Tomson now spoke of *sovokupnost’ fiziologi eskix uslovij* [“aggregation of physiological conditions”] and imagined the articulatory base as an assembly of various discrete features. It is also significant that the word ‘individual’ was no longer used.

Comparing the articulatory bases of Russian and French, Tomson, like Sweet, started from the tongue position by making an observation that in Russian the tongue was generally pulled back in comparison with French. This could be taken as the recognition of the articulatory base as a static element if he had not added immedi-

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<sup>22</sup> Other possible translations may be: “summation, sum total, totality”.

<sup>23</sup> “

ately after: “if we do not consider the palatalisation of consonants often occurring in Russian”,<sup>24</sup> thus mixing the static and dynamic aspects.

Sweet, while concentrating on tongue positions and their effects on articulations of vowels and consonants, also provided some description of the lip activity saying that in English the lips were “as much as possible in the neutral position” while in French they “articulate with energy” (1890: 69). Contrarily, Thompson only briefly mentioned the tongue position before assessing in detail not only the lip activity but also all other aspects of articulation such as tension, breath, vocal cords and velum:

Articulations of the Russian language, including tongue articulations, are generally less energetic and tensed. Consequently, tense vowels are absent and unstressed vowels are produced incompletely. Expiration from the lungs is performed by calm and fairly uniform pushes; air-flow is not intense and does not increase when it is not impeded by vocal cords i.e. when they do not sound. Because of this, unvoiced obstruents are relatively weak in Russian (e.g. in contradistinction to strong noise of German obstruents) and aspirated obstruents do not develop.<sup>25</sup> (Tomson 1906: 214)

Speaking of sonorants, Tomson noted that “[i]n Russian, sounding of vocal cords is produced with calm and significant force and clearness”<sup>26</sup> but due to the “non energetic articulation of the soft palate, the nasal cavity does not close tightly”<sup>27</sup> (1906: 215) causing some nasalisation of vowels preceding nasal consonants and even of voiced obstruents before vowels. He described the lip action in Russian as “moderate, considerably minor and less energetic”<sup>28</sup> (ibid.). Such ‘less energetic’ lip activity was, in his opinion, the cause of the common change of an unstressed /o/ to an unstressed /a/, and the low sensitivity of Russian speakers to various nuances of /o/ compared with diverse types of /e/.

All the above features are important but they refer entirely to the realm of speech dynamics and voice quality. Notably, the words ‘energetic’ and ‘energy’ were used several times throughout the text. For instance, comparing the three languages Tomson (p. 215) wrote: “[c]ontrarily to French, there is a fairly significant difference in the energy of production between stressed and unstressed vowels in Russian, but less than in German.”<sup>29</sup>

This repetitive use of ‘energetic’ was not accidental. As already mentioned, Tomson’s articulatory base did not relate to either *Indifferenzlage*, *Ruhelage* or

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*Lagerung der Zunge*, postulated by Sievers. Instead, it largely corresponded to various phenomena classified in German literature of that time under *Artikulationsweise* label. The gist of his specific understanding of the articulatory base may be expressed as ‘aggregation and summing-up of individual peculiarities’.

Being a follower and successor of the founder of the ‘Moscow Linguistic School’ Filipp Fëdorovi Fortunatov (1848–1914), Tomson was influential so his works became essential handbooks for the following generations of Russian and early Soviet linguists. It is also important for the following discussion that, although Tomson spent most of his time in Odessa, in 1910 he became a corresponding member of the St. Petersburg Academy of Science and remained closely connected (until his death in 1935) with St. Petersburg University, significantly influencing the St. Petersburg (later Leningrad) phonetic school formed around Lev Vladimirovi Šerba (1880–1944).

## 2.2 Jan N. Baudouin de Courtenay and the Kazan Linguistic School

At the end of the 19th century there were two principal linguistic trends in Russia. One was represented by the ‘Moscow Linguistic School’, formed at Moscow University around F. F. Fortunatov. The other one was the so-called ‘Kazan Linguistic School’, although it was not really recognised as such at that time (Zvegincev 1964, Kolesov 2003) and even its founder Jan Nieciśław Baudouin de Courtenay (1845–1929)<sup>30</sup> did not favour the word ‘school’, preferring to call it a ‘linguistic circle’ or ‘society’ (1903). However, despite the critical and often scornful attitude towards it from the representatives of the Moscow School, “most of what was innovative in Russian linguistic thought in the early twenties century derived from Baudouin de Courtenay” (Priestly & Star evi 1997: 606-607). It was, therefore, not by chance that Kazan became the place where the first specialised phonetic laboratory was opened by Baudouin de Courtenay’s former student Vasilij Bogorodickij in 1884.

When the ideas of *Artikulationsbasis* were formulated, Baudouin had already been an established scholar with his own original views on language. Mental processes lying at the basis of the speech system, their formation and development rather than the speech physiology were in the focus of his study, so his concept of language was generally psychological (Adamska-Sałaciak 2001: 183). Thus, in phonology Baudouin favoured the idea of a collective-individual basis of language. This collective side, in his view, revealed itself most amply in phonetics, therefore, both speech and hearing skills determining an individual’s language activity throughout the entire life, could only form via the social interaction.

Importantly, Baudouin de Courtenay repeatedly stressed the automated nature of these skills as well as the need of a speaker to keep reproducing them in an unchanging form. The relative stability of such automated articulations was, in his view, due to the principle of the economy of effort and the maintenance of an effective balance of movement of the speech organs. Baudouin believed that a change of this balance constituted the driving force of historical sound changes. It was in

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<sup>30</sup> Russian self-name: Ivan Aleksandrovi Boduèn de Kurtenè.

conjunction with the principal causes of the phonetic change that Baudouin made the only use of the term ‘basis of articulation’ (1910a: 72) the ‘weak stability’<sup>31</sup> of which, as he thought, was one of the main factors behind historical phonetic changes.

It is not clear what Baudouin de Courtenay meant by ‘articulatory base’ since he never defined it, however, in the Polish text he translated *base d’articulation* as ‘ogólny układ wymawianiowy’ [“general articulatory setting”] (1910b: 14) which may give an insight to his understanding of the term. Importantly, in his earlier work (1963 [1905]) Baudouin made some interesting observations about different types of articulatory systems and their organic connection with phonetic systems. According to his theory, the development of human language could be described as a constant process of shifting from a back-centred articulation towards a more frontal type:

If one takes the evolutionary point of view, then it should be presupposed that the transition from the linguistic state of an animal to the linguistic state of a human consisted in the general exit of sound-imitative activity from the laryngeal cavity to the buccal cavity and in the appearance of a true articulation of pronunciation.<sup>32</sup> (Boduèn de Kurtenè 1963 [1905])

Baudouin believed that in the earlier periods of existence of various languages the larynx was more active in speech production and he saw remnants of this primordial situation in Arabic and the languages of the Caucasus. These ideas, which may appear controversial now, resembled the understanding of the basis of articulation as an inborn biological quality, implied by Sievers and elaborated later by Jac. van Ginneken (1877–1945) in 1933. Interestingly, in the article on phonetic laws Baudouin made several references to an earlier work by Van Ginneken (1907) which, while not containing yet the term *base d’articulation*, had some ideas<sup>33</sup> developed later in *La biologie de la base d’articulation* (1933).

Baudouin de Courtenay was well acquainted with Sweet and even actively corresponded with him around 1900 (Adamska-Sałaciak 2001: 191) so, perhaps, his understanding of the basis of articulation was also affected by the organic basis of Sweet with its perceptible biological connotation. Although Baudouin used the term ‘articulatory base’ only once, there is evidence that this topic was discussed at his lectures and during regular private meetings with his students in Kazan. Already in the program of lectures for 1875–1876 and long before the appearance of the term *Operationsbasis/Artikulationsbasis* Baudouin wrote:

The physical and geographic conditions of a country have an influence on the organic make-up of a people, which in turn determines the character of their language. Conversely, the language influences the make-up of the speech organs and the physiognomy of both the individual person and the entire people. Probably as a

<sup>31</sup> In the Polish text ‘mało stateczny [little static]’, translated in the French text as “la faible stabilité de la base d’articulation” which was incorrectly translated as “the stability of the articulatory base” in Baudouin de Courtenay (1972 [1910]c: 270).

<sup>32</sup> „

<sup>33</sup> Particularly, in Chapter 4: *Volonté et automatisme*.

result of physical conditions and the specific development of Language itself, some languages tend to make predominant use of the front speech organs, and other languages of the back speech organs. etc. (1972 [1876]: 90-91)

Although Baudouin de Courtenay never clearly defined his understanding of the basis of articulation, analysing the clues scattered in his works we may tentatively place it closer to the organic base of Sweet and Van Ginneken's *base d'articulation* than to Siever's *Operationsbasis/Artikulationsbasis*. In any case, it was different from the atomistic 'aggregation of individual peculiarities' of Tomson and largely reflected the antagonism between the 'organic whole' and 'mechanical system' approaches. Baudouin de Courtenay was also well aware of the concept of *Indifferenzlage* had his own views on it, as will be shown later. His influence is clearly perceptible in the successive works of his disciples Vasilij Bogorodickij and Lev Šerba.

### 2.3 V. I. Bogorodickij and 'Indifferenzlage'

Vasilij Alekseevi Bogorodickij (1857–1941) is relatively unknown in the West, but in Russia he is acknowledged as the most typical representative of the Kazan School (Susov 1999: 133). Influenced by Baudouin de Courtenay, Bogorodickij also paid much attention to the social aspect of language; however, the physiology of speech was central to his studies. In this respect he may be compared with his German contemporary Friedrich Techmer (1843–1891), who also "kept his particular interest in the physiological, physical and biological aspects of language" (Koerner 1973: 6).

It is puzzling that Bogorodickij never used the terms 'basis of articulation' or 'articulatory base' while regularly engaging *Indifferenzlage* which was translated into Russian in his works as *indifferentnoje položenie* ["neutral position"].<sup>34</sup> This concept frequently appeared in Bogorodickij's papers, although his views on it undertook some evolution. At first, Bogorodickij, possibly influenced by Sievers, understood this posture in a specific way:

Under calm breathing the flow of air passes through the nose or also through the mouth with both jaws parted one from another to allow only an easy passage of breathing between them. It is this *undefined* aperture of the mouth that I call as neutral or narrow.<sup>35</sup> (Bogorodickij 1901: 36)

This questionable assertion provoked a rightful criticism from Baudouin de Courtenay who did not agree that *Indifferenzlage* referred specifically to the state of absolute rest. Also, Bogorodickij believed that this state corresponded to the articulatory posture of the vowel /a/ in Russian. Baudouin de Courtenay reasonably objected to this by asking: "Indeed, is the pronunciation of the vowel *a* completely limp, without any tension of the organs of speech?"<sup>36</sup> (1903: 305). Bogorodickij took the criticism seriously and in all successive works made a special effort to separate the neutral physiological resting setting from the speech-ready state: "[a]part from this

<sup>34</sup> Also *indifferentnoe sostojanie* [neutral state] and *indifferentnyj układ* [neutral setting].

<sup>35</sup> “

<sup>36</sup> “

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neutral setting, defined as absolute, there is also another neutral setting: relative, directly preceding the commencement of speech”<sup>37</sup> (1907: 123-124). A couple of years later Bogorodickij refined the definition making it even clearer:

[...] one has to distinguish the absolute and relative neutral setting, of which the former is characteristic of calm breathing in the absence of pronunciation, while the latter constitutes a transitory base towards the commencement of pronunciation when all parts of the speech apparatus experience some general excitement or some general tonicity.<sup>38</sup> (1909: 12)

Importantly, he stated that this relative neutral setting was language and dialect specific (pp. 12-13): “The neutral setting, serving as the starting point for pronunciation of sounds, cannot be fully identical for sounds of various categories, and, moreover, for sound systems in different languages.”<sup>39</sup>

Although his definition resembled the notion of *Indifferenzzustand/Indifferenzlage* of Scherer and Schröder, quoted in the introductory section, the important contribution of Bogorodickij was a clear statement that it served as the starting point for pronunciation of sounds.

As already mentioned, Bogorodickij founded the first laboratory of experimental Phonetics in Russia at University of Kazan in 1884 (which predated the renowned laboratory of Jean-Pierre Rousselot created in 1897); so he was truly an ‘experimentalist to the very roots of his being’. The laboratory had some advanced, for that time, equipment but there were no technical resources to view and register speech dynamics. Most of Bogorodickij’s studies were based on palatogrames with all inherent limitations of this method. Applying it to the study of the neutral setting, which Bogorodickij viewed as the starting point of articulations, he obtained two types of palatogrames which he related to the ‘absolute’ and the ‘relative’ neutral settings respectively. Bogorodickij was aware of the shortcomings of the palatogram technique so, perhaps, this was the reason why he had to invoke such a subjective way of study as ‘the muscular feeling’ (1907). This provoked scornful remarks by Tomson<sup>40</sup> who branded it as “the most unreliable, subjective in the highest degree, unclear and variable indicator”<sup>41</sup> (1910: 189).

It may appear that the rivalry with Tomson was the main reason why Bogorodickij refrained from using the already well established term *artikuljacionnaja baza* which he avoided even in the lecture (1915)<sup>42</sup> dedicated to the comparison of physiological

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<sup>37</sup> “

<sup>38</sup> “[...]”

<sup>39</sup> “

<sup>40</sup> Ironically, Tomson himself defended the advantages of analysing vowel frequencies by ear (1905: 227–228).

<sup>41</sup> “

<sup>42</sup> Reprint with some modifications of his initial article published in 1903.

differences of pronunciation of French, English and German in respect of Russian, where it would seem perfectly suitable. However, such a view would be superficial and the true cause might be in the different perception of the concept.

Unlike Tomson, Bogorodickij did not consider the articulatory base as an ‘aggregation of individual peculiarities’ so he did use the word ‘base’ but in a different context. Having clearly differentiated the ‘absolute’ and the ‘relative’ neutral positions, Bogorodickij defined the latter as *perexodnaja baza k na alu proiznošenija* [“the transitory base to the beginning of pronunciation”] (1915: 13). According to him, the pronunciation of a sound departing from this ‘base’ could be divided into three phases: excursion (movement toward the articulatory target), intermediary stage (fixing the target) and recursion (return of the organs of speech to the relative neutral position). Importantly, Bogorodickij took this starting position as being language specific (p. 67):

[...] however similar sounds in different languages may appear, in every language they represent different nuances which depend on peculiarities of relative articulations. i.e. of the tongue, lips etc.; but also on peculiarities in their neutral setting which serves as a starting base for articulations of this sound system.<sup>43</sup>

It was here that Bogorodickij introduced his own term for the basis of articulation defining it as *sistema artikuljacionnyx ukladov jazyka* [“system of articulatory settings of a language”], which may be compared with the ‘general articulatory setting’ of Baudouin. He used it exactly in the same context<sup>44</sup> where Tomson employed his ‘articulatory base’: “[...] the system of articulatory settings in French pronunciation is more frontal or more moved forward compared to Russian [...]”<sup>45</sup> (1915: 68).

The approach is clearly systemic and the articulatory base in the interpretation by Bogorodickij, appears not as a holistic ‘assembly of features’ but as a complex hierarchical structure. At the base of it lies a language specific ‘relative neutral setting’ from which various articulatory settings of individual sounds depart and which directly affects their parameters. The relative neutral setting and the individual articulations are united together forming a ‘system of articulatory settings’. Therefore, Bogorodickij not only distinguished the static and dynamic aspects but united them in what we may define in modern terms as a ‘heterogeneous complex system’.

Such consistent application of this systemic approach to articulatory settings resulted in a special section in his opera magna *Obščij kurs russskoj grammatiki* [“The general course of Russian grammar”] where Bogorodickij particularly stressed the need “to pay attention to the transformation of sounding of foreign words according to the system of a native language” (Gordina 2006: 386). As Lev Rafailovi Zinder (1904–1995) also believed, such ‘transformation of sounding of foreign words’

<sup>43</sup> “[...]”

<sup>44</sup> For example, discussing the articulatory base Bryzgunova (1981 [1969]) referred to this paper by Bogorodickij and not to Tomson although he was the first to introduce this term.

<sup>45</sup> “[...]”

[...]”

reflected most amply the phonematic capabilities of the borrowing language (1979: 66). This idea, directly flowing out of the systemic approach to articulatory setting, became the basis for a separate direction of phonetic research in Russia, being actively developed by Zinder's followers, for example, by N. D. Svetozarova (2000: 80-96).

Bogorodickij particularly highlighted the role of the unstressed 'neutral vowel'<sup>46</sup> which he considered a phonetic realisation of the relative neutral setting: "[t]he weak neutral vowel , met in all three examined languages, has in them not the same articulation and not the same nuance"<sup>47</sup> (1915: 74). In the next paragraph Bogorodickij gave a detailed description of some peculiar features of / / in German, English and French. For example, he described the English / / as having 'a more backed setting with passive lips'<sup>48</sup> while for French as a 'more frontal coupled with some, albeit weak, lips participation'.<sup>49</sup> Interestingly, for the Russian 'system of articulatory settings', which he placed between the English (backed) and French (fronted), Bogorodickij postulated not one but two neutral vowels: "[i]n Russian, the typical neutral vowel is a somewhat different sound - (a kind of weak short ) after hard consonants and - (a kind of a weak short )"<sup>50</sup> (1915: 74). According to him, the neutral vowel could be taken as reflecting the language specific 'system of articulatory settings' and the language specific *isxodnyj fonacionnyj bazis* ["initial phonation basis"] of a language'. For his time it was a remarkable insight but it took many decades before this idea resurfaced again as a response to the universal 'neutral vowel' promoted by the Generative Phonology (Chomsky & Halle 1968: 300).

Brian Annan, criticizing Chomsky & Halle, wrote: "[...] should such a neutral position exist (and I believe it does), then it must be language specific and thereby not a 'universal'" (1972: 1080). Annan pointed out the differences of articulation of vocalic filled pauses (also called 'hesitation vowels') across various languages which he regarded as 'definitely specific' neutral positions. Developing this idea Lawrence Schourup proposed to use hesitation vowels as phonetic instantiations of language specific bases of articulation:

One would expect the hesitation vowel of a language to involve the minimal; vocal gesture that will hold a place in speech. [...] the quality of the vowel would then directly reflect the tongue position of the basis of articulation. (Schourup 1981: 5)

With the development of research technology this assumption was tentatively confirmed by Gick et al. who believed that such neutral (inter-speech) postures "exert measurable influences on speech targets, most notably including effects on the properties of neutral vowels such as schwa" (Gick et al. 2004: 231).

<sup>46</sup> Bogorodickij used the term *indifferentyj glasnyj* ["indifferent vowel"] which was a literal translation of the German *Indifferenzlaut* .

<sup>47</sup> „

<sup>48</sup> „

<sup>49</sup> „

<sup>50</sup> „

Bogorodickij was a contemporary of the appearance and development of the phonemic theory, yet these ideas were not reflected in his works. He may seem as a mere continuator of the descriptive phonetic school of the 19th century (Gordina 2006: 382), yet his papers contained many truly ‘prophetic’ insights which only become appreciated today. Such was the concept of a language specific indifferent vowel as the instantiation of the ‘the initial phonation basis of a language’. This idea was hardly compatible with the purely phonological approach developed by the leading Moscow linguistic school of that time, but it made some impact in the field of Slavonic dialectology.

#### 2.4 *Olaf Broch and the place of the basis of articulation in Slavonic dialectology*

The prominent Norwegian dialectologist Olaf Broch (1867–1961) wrote several important works in Russian including the influential *O erk fiziologii slavjanskoj re i* [“Essay on physiology of Slavonic speech”] (1910), published also in German under the title *Slavische Phonetik* (1911), where he made this interesting note:

In conclusion, regarding some special position or some common “basis”, from which allegedly parts Slavonic speech in formation of its vowels, for the latter, in my view, there are no grounds. On the somewhat nebulous concept of ‘articulation basis’ I would not go at all, although I could also put together some doubtful phonetic peculiarities of individual languages to a general pattern.<sup>51</sup> (Broch 1911: 109)

Kelz (1971: 198) used this quote to illustrate the decrease of interest in the basis of articulation and the growing scepticism toward it by the end of the 19th century; however, this is not quite justified since in a footnote to this text Broch specifically made reference to Tomson’s *General Phonetics*. Therefore, the critical remark referred particularly to the notion ‘articulatory base’ as it was defined by Tomson, which was indeed rather ‘nebulous’, and not to the ‘basis of articulation’ concept in general. Importantly, Broch intentionally said ‘in formation of its vowels’ leaving consonants out of the picture.

Nevertheless, after expressing such a sceptical attitude towards the existence of a particular *Artikulationsbasis* in Slavonic languages (for vowels), Broch did admit that at least one Western dialect of Ukrainian bordering Hungary, namely, Bojkski (*bojkischer*) had a “common position of the tongue body, which is different from that of other Slavic languages”<sup>52</sup> (1911: 109). Broch cautiously attributed this phenomenon to the influence of ethnological factors (language contact). He also described the peculiar articulation of /o/ in this dialect which, according to Broch, was characterised by the retraction of the tongue backwards and downward as a result of a specific ‘basis’ of the body of the tongue which was common for a number of vowels. By saying this, Broch de-facto admitted the existence of a certain common vowel

<sup>51</sup> “Zu Schlüssen auf eine gemeinsame eigene Lage oder etwa «Basis», von welcher die slavischen Sprachen bei der Bildung ihrer Vokale gewissermaßen ausgehen, geben die letzteren, soviel ich sehe, keinen Anlaß. Auf den etwas nebelhaften Begriff ‘Artikulationsbasis’ möchte ich überhaupt nicht eingehen, wemgleich sich auch zweifellos gewisse lautliche Eigentümlichkeiten einzelner Sprachen zu einer allgemeinen Charakteristik zusammenstellen lassen.”

<sup>52</sup> “[...] gemeinsamen Lage des Zungenkörpers, die von derjenigen der übrigen mir bekannten slavischen Sprachen verschieden ist.”

producing ‘basis’ for Slavonic languages from which Bojkski dialect deviated but, because this ‘basis’ was different from Thompson’s definition of the articulatory base, he did not make a connection with it.

While Olaf Broch was critical of *Artikulationsbasis* (more precisely, of *artikuljacionnaja baza*), he mentioned *Indifferenzlage* on several occasions. He understood it as a specific ‘*relative Ruhelage* [relative resting position]’ of the tongue being characteristic mostly of Western European languages and having its acoustic realisation in German in the specific unstressed<sup>53</sup> vowel [e]. Broch noted that of all Slavonic languages only Slovenian [e] approximated this position (1911: 109). Importantly, in footnotes he referred to some earlier works of Bogorodickij for *Indifferenzlage*. The influence of Bogorodickij is also clearly perceptible in his proposition of two neutral vowels for Russian: [ ] and [ ].

The monumental *Slavische Phonetik* published in Russian and German became a standard handbook for generations of Russian dialectologists and phoneticians so the stigma of a ‘nebulous concept’ remained attached to the basis of articulation concept for several decades until it was partly rehabilitated by another former student of Baudouin de Courtenay – Lev Vladimirovi Šerba (1880–1944).

## 2.5. L. V. Šerba and the articulatory base

Lev Šerba holds a special place as a scholar who ‘bridged’ the pre-revolutionary Russian linguistics with the newly emerged ‘Soviet Linguistic School’. He creatively developed many ideas of Baudouin de Courtenay, particularly, the theory of phoneme. In 1912 Šerba completed his Master’s dissertation *Russian vowels in qualitative and quantitative respect*<sup>54</sup> (1912) where he mentioned the articulatory base for the first time. Importantly, this was done in connection with a discussion on vowel quality variations:

Fluctuations in pronunciation will differ qualitatively and quantitatively from language to language because they depend on the general phonetic (and, partly, morphological and syntactical) set-up of a language, in other words, on the language habits of representatives of the given language group.<sup>55</sup> (Šerba 2002 [1912]a: 126)

It was here that Šerba introduced the articulatory base defining it as *summa privy ek v oblasti proiznošenija* [“sum of habits in the area of pronunciation”]. Both the context in which he mentioned the articulatory base and its definition with the key word ‘sum’ could imply the influence of Tomson (who already was a corresponding member of the St. Petersburg Academy of Science at that time) but, interestingly, Šerba preferred to refer to *Eléments de phonétique générale* by Roudet (1910) instead. There was a good reason for this because for Roudet the basis of articulation (he also referred to it as ‘organic basis’) was an abstraction which he defined as:

<sup>53</sup> “Defined also as “*irracional’nyj* [irrational]” in the Russian version of the book (Broch 1910: 76).

<sup>54</sup>

<sup>55</sup> „

The assembly of language-specific articulatory tendencies received a name of basis or articulation of organic basis. The basis of articulation is thus an abstraction. It is not a position determined by the tongue or other organs, it is a combination of motoric tendencies.<sup>56</sup> (Roudet (1910: 37)

It was this understanding of the basis of articulation as a set or assembly of certain dynamic features or tendencies that may be considered as the closest to the prevailing notion of the articulatory base established in Russia. Roudet is also mainly known as the “psycholinguist avant la lettre” (Nerlich 1990: 776) and his mentalistic approach certainly appealed to Š erba.

The articulatory base did not appear in Š erba’s works published in the 1920s and 1930s, but in his *French Phonetics* (1937) he included one small paragraph (§ 86) about the articulatory base of French:

Concluding this section, a few words should be said about the general set-up of speech organs characteristic for French or, to be more precise, about some general direction of movements in articulating French vowel and consonant phonemes, which is called the articulatory base.<sup>57</sup> (Š erba 1963 [1937]a: 76-77)

Comparing this definition with the earlier one of 1910 we can see that there has been a certain evolution of his vision of the concept. The articulatory base here was no longer a purely abstract *summa privy ek* [“sum of habits”] inspired by *une association de tendances motrices* of Roudet (1910), but a slightly more palpable and static ‘general set-up of speech organs’ alongside with the more dynamic ‘general direction of movements’. Although the ‘general set-up’ was still a vague notion, its separate elements could be described and measured so Š erba gave the following account of the French articulatory base:

The tongue is, on the whole, always placed in the front, only the back « :» presents an exception, so it is not without reason that it is often missing being confounded with «a». The tip of the tongue is always situated below by the lower teeth. Its middle part always strives to lift forward and upwards more energetically than the front part on which there usually forms a typical concavity. The lips articulate energetically. The whole articulation is very precise and tense. The main colouring of consonants is «œ» which reveals itself in all cases of articulation of final consonants as a small additional sound « ».<sup>58</sup> (Š erba 1963 [1937]a: 77).

Notably, most of the description relates to the tongue posture while the word ‘always’ repeated three times strengthens the general impression that its posture has some constantly maintained static quality. The last sentence is particularly interesting

<sup>56</sup> “L’ensemble des tendances articulatoires propres à chaque langue a reçu le nom de base d’articulation ou base organique. La base d’articulation est donc une abstraction. Ce n’est pas une position déterminée de la langue ou des autres organs, c’est une association de tendances motrices”.

<sup>57</sup> “

<sup>58</sup> “

« :»

«a».

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many years. It is well known that *French Phonetics* became an important milestone in the linguistic heritage of Lev Šerba in which he elaborated the theory of phoneme distancing from his earlier psychological approach (Zinder & Matusevič 1953: 72-73). Perhaps, he felt that the articulatory base was needed to cover some aspects which were beyond the limits of his phonemic method. Alternatively, we may suppose that Šerba felt compelled to mention ‘articulatory base’ because by that time the concept was included as a separate entry in the first edition of the authoritative *Bol’saja Sovetskaja Enciklopedija* [“Great Soviet Encyclopaedia”] (BSE 1926–1947). The entry was signed ‘R. Š.’ and this abbreviation stood for ‘Rosalija Šor’.

#### 2.6 R. O. Šor and sociological linguistics

Unlike Lev Šerba, Rosalija Osipovna Šor (1894–1939) represented the ‘young generation’ of Soviet linguists. Her study from 1913 to 1919 at the German language department of Moscow Higher Women’s Courses (MHWC), transformed into Second Moscow University in 1918, coincided with the period of revolutionary turmoil. The general profile of MHWC was more pedagogical and, although the teaching staff included the renowned linguist Aleksandr Aleksandrovič Reformat’skij (1900–1978), it was not equipped for a specialised phonetic training. Rosalija Šor did complete a course in Linguistics in 1920–1921 at (First) Moscow University, but she remained, essentially, a philologist. According to Alpatov (2010: vi), Šor had many qualities but she lacked independence in her views and did not have a coherent scientific position, being eclectic in her approach.

The first significant work by Rosalija Šor *Jazyk i obščestvo* [“Language and society”] appeared in 1926. In the introduction she clearly stated that her book was a review of the main achievements of the sociological linguistics abroad. The list of sources given in the preface included Saussure, Meillet, Bally, Sapir, Jespersen, Schuchardt, Baudouin de Courtenay and some other prominent linguists. The book was meant for a wide audience of language teachers and did not intend to give any critical discussion but was rather a general sketch of their ideas (Lähtenmäki 2010: 40).

Following Marxist-Leninist doctrine, Rosalija Šor viewed language not as an inherent organic quality but as a purely social product and a “cultural tool created and passed on by a community, a collective”<sup>61</sup> (1926: 45). This bears a striking resemblance to Sapir’s definition of speech as a “non-instinctive, acquired, ‘cultural’ function” (1921: 2). However, Šor bridged this idea with structuralism (she was an active member of the Moscow Linguistic Circle of Roman Jakobson) and gave a rather adequate, albeit a sociologically orientated, explanation of phonemes as the “sounds [more exactly: sound-types] existing in a language collective which may serve as signs of meanings and differentiate words”<sup>62</sup> (1926: 51). Rosalija Šor also believed that individual peculiarities in production of phonemes would lead to a subtle

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build-up of minute differences (similar to Sapir's 'drift') causing an accumulation of variations in articulatory patterns between generations. It was at this point that she brought in the notion 'articulatory base':

[...] a habit towards certain articulatory movements determines the whole position of our speech apparatus not only during speaking but also in a quiet state the speech organs of one member of a language collective take a different position than those of a member of another language collective: this habitual position of speech organs, typical for all speakers of the given language, in linguistics has a name of the articulatory base.<sup>63</sup> (Šor 1926: 52)

This definition, while stemming from the unfortunate lack of distinction between the physiological and active neutral settings and the subsequent erroneous association of the physiological neutral setting with the basis of articulation, still presented a new turn in the development of the articulatory base concept in Russia. As shown earlier, neither Tomson — the originator of the Russian term 'articulatory base' — nor other representatives of the 'old school' (Bogorodickij and Šerba) considered it as a language-specific neutral setting at the state of physiological rest. For Tomson it was a somewhat static 'aggregation of [...] physiological conditions'. Šerba took a similarly abstract but a more dynamic-oriented approach defining it as a 'general set-up of speech organs' and the 'general direction of movements'. Bogorodickij, while avoiding the terms 'basis of articulation' and 'articulatory base' altogether, clearly distinguished between the two neutral settings — passive and active.

This was the only mentioning of the neutral setting in the book and Šor never returned to it again in the subsequent text. For example, describing the English the articulatory base of English, she wrote:

In production of sounds in English the tongue is not tense, it is made thick and retracted backwards; its point is made blunt and raised upwards towards the alveoli; the lips are tucked up, tense, moved apart with their ends lifted upwards.<sup>64</sup> (Šor 1926: 52)

This may be taken as the correct description of the English articulatory base but it would be ridiculous to imagine that English speakers habitually maintain this setting in a state of absolute rest. Šor never mentioned the 'quiet state' in the description of the Russian articulatory base either. Instead, she started it with the words that "in formation of sounds in the Russian speech the lips are soft, limp, more extended forward; their ends are lowered while the tongue is tense, flattened and lies down; its tip is pointed and stretched out to the teeth."<sup>65</sup> (1926: 52)

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Repeating the definition of the articulatory base in the glossary at the end of her book, she also avoided the use of the ‘quiet state’ changing it to ‘typical position of speech organs before commencement of speech’.<sup>66</sup> This definition is ambiguous since it can be interpreted either as ‘speech ready state’ or ‘active neutral state’. The above explicitly shows the lack of coherence in Šor’s concept of the articulatory base.

The definition of the articulatory base was elaborated by Šor in an entry written for *Bol’saja Sovetskaja Ėnciklopedija (BSĖ)* where it was formulated as follows:

BASE, articulatory, a linguistic term introduced by Sievers, Ed. (see) for denoting of an aggregation of physiological conditions of speech, customary and common for all members of a given community. As the result of such skills is that even in the quiet state of speech organs, they have different position in representatives of different language communities.<sup>67</sup> (BSĖ 1926: 328)

This is the first time in Russia that Sievers was mentioned as the originator of the term, however, Šor missed the important aspect that by *Operations/Artikulationsbasis* Sievers meant only the specific tongue posture during speech. She made the common mistake of freely reinterpreting the text of Sievers’ *Grundzüge* and assigning to him something that he never said: “[t]his quiet state of speech organs ‘defining as a natural basis the character of separate articulatory movements’ Sievers proposed to call ‘basis of articulation’ in its proper meaning” (ibid.).<sup>68</sup> The rest of the entry was dedicated to the particular importance of the articulatory base as the key factor for explaining phonetic change. As an example, Šor took a situation when ‘members of a language community’ would be forced to acquire a new language (e.g., as a result of being conquered or subjected by a more economically or culturally powerful group). In doing so they would transfer their original articulatory base onto the new language’s phonetic system causing interference and a systemic phonetic shift.

The particular attention to language change was not accidental. This was the time when the so called ‘Japhetic theory’ of Nikolaj Jakovlevi Marr (1865–1934) was in its height dominating the whole field of Soviet linguistics. One of its central tenets was the rejection of the conventional principles and methods of historical linguistics with its reliance on ‘sound laws’. The concept of ‘articulatory base’, robed in the Marxist theory of social classes, was a convenient alternative explanation of sound changes and it blended well with the teaching of Marr that all languages were the results of multiple language mixing. Incidentally, Nikolaj Marr was the editor of the section of modern languages of *BSĖ*, so Šor’s entry could not have appeared without his consent.

Since Lev Šerba did not share Marr’s doctrine, the re-appearance of the articulatory base in *French Phonetics* (1937) could be treated as a cautious response

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to this ideologised definition published in *BSE*. Šerba would not object to the assertion that social factors and language mixing were the principal cause of language change since he clearly called them “the most capital factor of language change<sup>69</sup>” (1974 [1937]b) but, as a practical phonetician, he could hardly admit the existence of any language specific neutral setting at the state of physiological rest.

As mentioned earlier, Rosalija Šor did not hold a consistent position; as a result, it is pointless to seek in her definition of the articulatory base anything other than various possible sources of the key concepts from which it was constructed. However, the positive side was the introduction of several ideas which were not clearly expressed by Tomson, Bogorodickij or Šerba. One of them was the recognition of the causative nature of the basis of articulation. For example, Šor explained the apical-alveolar character of English [t] and [d] by the effect of retracted and raised tongue setting in English, while Russian dental stops were predetermined by a specific fronted articulatory base. She also highlighted its general systemic role:

[...] articulatory movements for different sounds of a language are mutually determined and they complement each other; this is why a change in pronunciation of one sound usually induces changes of similarly articulated sounds. [...] Therefore, an apparently insignificant change of the articulatory base may generate quite substantial changes in the phonetic system of a language.<sup>70</sup> (Šor 1926: 53)

Although Šor’s definition of the articulatory base was firmly established in *BSE*, it failed to produce any notable impact. We could find only one brief reference to it in the subsequent literature on the topic in Vide [Wiede] (1968).

### 2.7. ‘Phonetic Base’ of S. I. Bernštejn

By some strange coincidence almost simultaneously with Šerba another notable Soviet linguist, Sergej Ignat’evič Bernštejn (1892–1970), provided his own vision of the articulatory base. Bernštejn graduated from St. Petersburg University in 1916 and at different times his professors were Baudouin de Courtenay and Lev Šerba. He did not belong to either the St. Petersburg or Moscow phonological schools and developed his own approach to the concept of ‘phoneme’ integrating the tenets of both methods.

Bernštejn was not a prolific writer and his list of publications is not long. His specific vision of ‘phoneme’ was most fully laid out in *Osnovnye ponjatija fonologii* [“Principal concepts of Phonology”] written in 1936 but published almost thirty years later (Bernštejn 1962). However, the influence of his specific approach was clearly felt in the main published work *Voprosy obučenija proiznošeniju* [“Questions of pronunciation teaching”] (1976 [1937]).

The declared aim of the book was ‘to set up the rational bases’<sup>71</sup> of teaching

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Russian pronunciation to foreign students. It opened with a criticism of the ‘direct imitative method’, commonly practised at that time. In Bernštejn’s view, the complete reliance on hearing in imitation of foreign sounds was a mistake because, as he believed, “we hear correctly only those speech sounds which we can articulate”<sup>72</sup> (1976 [1937]: 9). Thus, a teacher’s task should be to create a proper association between audio and articulatory representations and teach students “to dismember whole articulations into their constituent elements and to synthesize these elements into new unfamiliar combinations”<sup>73</sup> (p. 14). This approach apparently integrated some elements of the phonemic ‘analytic-linguistic’ method clearly perceivable in Š erba’s *French Phonetics* (1937).

Nevertheless, Bernštejn did not wholly accept Š erba’s understanding of the phoneme which focused on the physical (speech production) aspect neglecting, to a large extent, its functional aspect. The functional approach of the Moscow School based on the idea of the universality of the principle of linguistic abstractness was more appealing to Bernštejn but it also did not satisfy him completely:

I saw a gap between the acoustic matter and its function in the concept of my Moscow colleagues. I was not satisfied that their system of phonemes lacked a direct reflection of the acoustic composition of words (which, among other things, impedes the use of the phonemic theory in the teaching of practical phonetics of foreign languages).<sup>74</sup> (Bernštejn 1962: 63)

The desire to bridge the two phonological approaches and to adopt them for the practical application in pronunciation teaching may explain why Bernštejn decided to recur to the articulatory base and also the obvious duality of his view on this concept. Like Š erba, he defined the articulatory base as *sovokupnost’ artikuljacionnyx (dvižatel’nyx) tendencij* [“summation of articulatory (movement) tendencies”] (1976 [1937]: 22) also quoting Roudet’s *l’ensemble des tendances articulatoires*. Importantly, according to Bernštejn, the notion of the articulatory base could “only be deduced on the grounds of the comparison of articulatory skills of different languages”<sup>75</sup> (idem). He also believed that the articulatory base was a composition of certain ‘general features’ distinguishing the pronunciation of one language from another. Under the ‘general features’ he took: “[...] such phonetic moments which, going out of the limits of separate sounds, lie in the basis of all or a large part of pronunciation performance of the given language and their acoustic effects”<sup>76</sup> (ibid.).

The mentioning of ‘acoustic effects’ is important as it helps to explain why Bernštejn stressed the practical importance of the articulatory base in language

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language.<sup>82</sup> (Bernštejn 1996: 41)

Notably, Bernštejn only mentioned the ‘passive setting of speech organs’ and did not distinguish it from the ‘active setting’.

Despite the obvious shortcomings, such as the sketchiness and the lack of proper scientific grounding, this definition of the articulatory base by S. I. Bernštejn has played an important role in the evolution of the concept in Russia. Not only did the author manage to successfully integrate the articulatory base into the Russian linguistic theory and methodology of pronunciation teaching, but he also succeeded in setting it up as a key concept of foreign language teaching in Russia.

### 3. *Conclusion and outlook*

The concept ‘basis of articulation’ has had a long history in Russian linguistics. It decoupled from the ‘classic’ definition (active resting position of the tongue) at an early stage and took a specific course of development. From its appearance in 1906 it was predominantly conceived as a ‘summation’ of certain specific salient ‘features’ or ‘peculiarities’ distinguishing phonetic systems of different languages and received the name *artikuljacionnaja baza* [“articulatory base”]. Apart from Bogorodickij, with his attention to language specific (active) *Indifferenzlage* [“neutral setting”] as a starting basis (static) for pronunciation, ‘articulatory base’ was mainly seen as a set of dynamic articulatory features or, more abstractly, of articulatory ‘tendencies’ or ‘general direction of movements’. However, there were also attempts to posit the articulatory base either as an additional element meant to cover some areas of speech production which were not explained by the phonemic theory (Š erba), or as a ‘bridge’ between the two principal approaches to the phoneme (Bernštejn).

Starting from Baudouin de Courtenay and Tomson, Russian linguists tended to view the articulatory base in a wider phonological framework. They aimed not only to describe it but also to explain certain processes and to highlight the causative-consequential relations which would give the concept the power of predictability. For this purpose they often tried to expand the field of research of the articulatory base to involve elements from different levels of Phonetics and Phonology.

Šor’s definition remained in the *BSE* until the early 1950s, representing the ‘official’ view but it did not make any serious impact. With the demise of ‘Marrism’,

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her article on the articulatory base was replaced in the second edition of *BSĚ* with a shorter one, written by L. R. Zinder, which closely followed the definition of Š erba. Zinder also devoted several paragraphs of his popular textbook *Obščaja fonetika* [“General phonetics”] to the articulatory base describing it as “the summation of movements and positions of speech organs, habitual for a given language”<sup>83</sup> (1979: 78-81). Although the article on the articulatory base disappeared altogether in the newest edition of *Bol’shaja Rossijskaja Ėnciklopedija* [“Great Russian Encyclopaedia”] (published regularly from 2004), the definition of Zinder is still widely quoted in Russian sources, and it has become a standard reference for many contemporary Russian studies in foreign language pronunciation teaching.

It is significant that almost all ideas which were worked out in the development of the concept of the articulatory base in Russia in the first half of the 20th century have been required by successive scholars. They were particularly used in applied linguistics for developing specific methods aimed at reducing foreign accent and other manifestations of phonetic interference in second language teaching (Torsuev 1977, Kulešov & Mišin 1987, Aleksandrova 2009). One of the most notable works here was *Zvuki i intonacija ruskoj reči* [“Sounds and intonation of Russian speech”] by Bryzgunova (1974). This work is interesting for its synthesis of the main tenets of Bogorodickij and Bernštejn resulting in the notion *sistema pereključenija artikulacij* [“system of switching of articulations”] (1981<sup>[1969]</sup>: 83).

The idea of ‘initial phonation basis of a language’ by Bogorodickij was also the starting point for an interesting interpretation of the articulatory base as *prednastrojka i optimal’naja rabočajaja poza rečevogo apparata* [“pre-tuning and the optimal working posture of the speech apparatus”] proposed in 1971 by Konstantin Mixajlovi Kolosov (1971a: 42). Kolosov is also remarkable for his successful application of his concept of the articulatory base in practical pronunciation teaching (Kolosov 1971b, 1979). Kulešov & Mišin (1987) developed Kolosov’s ideas with the special attention to the role of a ‘neutral’ vowel as a phonetic instantiation of the articulatory base.

Bernštejn’s attempt to incorporate the articulatory base into the phonemic theory for the use in pronunciation teaching found a continuation in some following works. For instance, in Loginova (2006) the phonological system and the articulatory base were treated as mutually-complementary entities.

The view on the articulatory base as a set of specific dynamic articulatory features gave impetus to several interesting works, particularly in the study of co-articulatory patterns in different types of vocalic and consonantal clusters in Russian and their statistical distribution in the flow of speech (Bogomazov, Paufošima & Ševoroškin 1973, Bondarko 2000). To this we can add the comparative (contrastive) research of phonetic inventories of syllabo-phonemes of Russian and German by Podxaljuzin (2006).

Heinrich Kelz (1971) had noted the frequent use of ‘articulatory basis’ in Eastern Europe and, as we can see, there was a reason for this. The influence of the Soviet

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linguistic school spread onto other countries of the former ‘Socialist Bloc’ and the Russian interpretation of the articulatory base was widely disseminated there. The prominent Czech linguist Bohuslav Hála not only described the basis of articulation of Slavonic languages as a summation of a number of various features (1957: 303-311) but also objected to treating it only as the ‘resting position’ of the tongue (1962: 375).

Discussing Zacher (1969) Bryan Jenner (2001) noted that he used German sources for his detailed comparison of the German and Russian bases of articulation without naming them for ideological reasons.<sup>84</sup> No doubt that Zacher was aware of Sievers, Viëtor and other ‘originators’ of the *Artikulationsbasis* concept, and, perhaps, also of Werner Vockeradt (1925)<sup>85</sup>, whom Jenner assigned the key role in spreading the concept in the post-war Germany (Jenner 2001: 128). However, Zacher did not refer to them not because of the ‘ideological climate’, as Jenner (2001: 127) suggested, but simply because the notion of the articulatory base was so well developed by Russian linguists that he, probably, felt no need to make reference to any Western sources. Instead, he mentioned S. I. Bernštejn and his follower O. A. Nork and even made use of Bernštejn’s ‘phonetic basis’ translating it as *phonetische Basis* (1969: 55).

The sociological approach to the articulatory base, which was most explicitly promoted by R. Šor, combined with the legacy of Broch had an effect on the development of contemporary Russian dialectology. L. L. Kasatkin (1989, 1999) used the articulatory base concept for explaining historical phonetic changes in Russian dialects as a process of transition from a tensed to a more relaxed articulatory base (1999: 131-139).

The understanding of ‘articulatory base’ as an assembly of specific articulatory features distinguishing phonetic systems of different languages has become, although in a transformed way, an essential part of several comparative studies of phonetic systems of different languages. So V. M. Nadeljaev (1986) developed an original and sophisticated system of classification and analysis of articulatory bases of Siberian languages. This work has been continued by his followers (Seljutina et al. 2011).

To conclude this article, we may say that although the development of the idea ‘basis of articulation’ in Russia has not been easy there was a much greater interest in this concept which never “flagged” (Kelz 1971) as it happened in the West. Indeed, while in the English-language linguistic literature the concept had almost disappeared by the late 1930s, in Russia this was the period of a remarkable revival. It would not be an exaggeration to say that the concept had a second birth in Russia, although in a specific form of ‘articulatory base’ having drifted far from the original idea of *Artikulationsbasis*. Nevertheless, Kelz’s (1971) comments could be applied to the developments of this concept in Russia: there has never been a thorough discussion on ‘basis of articulation’ or ‘articulatory base’ in Russia and those phoneticians who wrote on this topic rarely referred to earlier publications. There has also been a

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<sup>84</sup> Bryan Jenner (p.c. 2012) commented on this “[...] my remarks on Zacher were of course speculative, and based on ‘circumstantial evidence’. I only learned of Zacher’s work myself through a reference in a DDR phonetics textbook by Arnold and Hansen [...]”

<sup>85</sup> The work of Vockeradt appears to be completely unknown in Russia as we could not find any trace of it in Russian publications and library catalogues.

considerable disarray in terminology with every researcher tending to create his own specific vision of the articulatory base which was often little compatible with other interpretations. This was noted by Kolosov (1971b) who wrote:

Insufficient research into the subject, disorder in its interpretation, vagueness of notions of the genesis of the basis of articulation – all this sometimes creates distrust in the possibility of the practical implementation of the accumulated facts and observations for (foreign) pronunciation teaching.<sup>86</sup> (Kolosov (1971b))

The recurring theme of all the papers on the history of the basis of articulation concept is the scarcity of objective data to confirm the existence and well-defined parameters of ‘articulatory setting’ or the specific ‘starting posture’. As mentioned in *Introduction*, some studies on ‘inter-speech postures’ were carried out recently by Gick et al. (2004); Wilson (2006); Schaeffler, Scobbie & Mennen (2008). In Russia similar research was performed by Skalozub (1963, 1979) using X-Ray photography and cinematography and by Kedrova et al. (2006; Kedrova, Zakharov & Anisimov 2008) employing a modern MRI technique. However, in Russia (as in the West) such research has not been consistent enough and has not yet produced the conclusive results one wished to see.

In the West, the interest in the basis of articulation had generally ebbed away by the early 1920s and, despite a short spike of attention in the 1970s after Honikman’s article (1964), supported by Abercrombie (1967) and Laver (1978), this concept has almost disappeared in modern English-language linguistic literature. Contrarily, in Russian linguistics it has always been present, albeit in a specific form, and although it continues to be a marginal direction of research, with many phoneticians treating it with caution, it remains viable and attractive particularly in the fields of pronunciation teaching, dialectology and language typology.

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#### SUMMARY

This article traces the development of the concept of the 'basis of articulation' in Russia of the first half of the 20th century, analysing in detail the major works in this area of research. In Russia this concept took a specific course of development. From the beginning it has been mainly conceived as a 'summation of features', distinguishing phonetic systems of different languages, however, Russian linguists tended to view it in a wider general-phonemic framework. While in the West the interest to this concept generally subsided, in Russian linguistics it was always present and remained viable and attractive particularly in the fields of the teaching of phonetics, dialectology, and language typology.

#### RÉSUMÉ

Cet article retrace l'évolution du concept de 'base d'articulation' en Russie de la première moitié du XXe siècle, tout en examinant les principaux travaux effectués dans ce secteur de recherche. Ce concept a connu en Russie un développement particulier. En effet, il était traditionnellement et communément considéré comme un 'ensemble de traits' distinguant les systèmes phonétiques de différentes langues. Toutefois, les linguistes russes étaient pour leur part enclins à le placer dans un système général de phonétique. Alors qu'en Occident l'intérêt pour ce concept a généralement tourné court, dans la linguistique russe il a toujours été présent et est resté d'actualité tout particulièrement dans le domaine de l'enseignement de la prononciation, la dialectologie, et la typologie linguistique.

#### ZUSAMMENFASSUNG

Dieser Artikel zeichnet die Entwicklung des Konzepts der Artikulationsbasis in

Russland in der ersten Hälfte des 19. Jahrhunderts nach und analysiert die wichtigsten Arbeiten der Hauptvertreter auf diesem Gebiet. In Russland hat dieses Konzept einen besonderen Entwicklungskurs eingeschlagen. Von Beginn an wurde es als ‘Summierung charakteristischer Merkmale’ zur Unterscheidung phonetischer Systeme verschiedener Sprachen wahrgenommen, allerdings tendierten russische Sprachwissenschaftler dazu, das Konzept in einem weiteren, allgemeinen phonemischen Rahmen zu betrachten. Während im Westen das Interesse an diesem Konzept allgemein abebbte, war es in der russischen Linguistik immer präsent und blieb besonders auf den Gebieten des Phonetikunterrichts, der Dialektologie und Sprachtypologie lebendig.

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