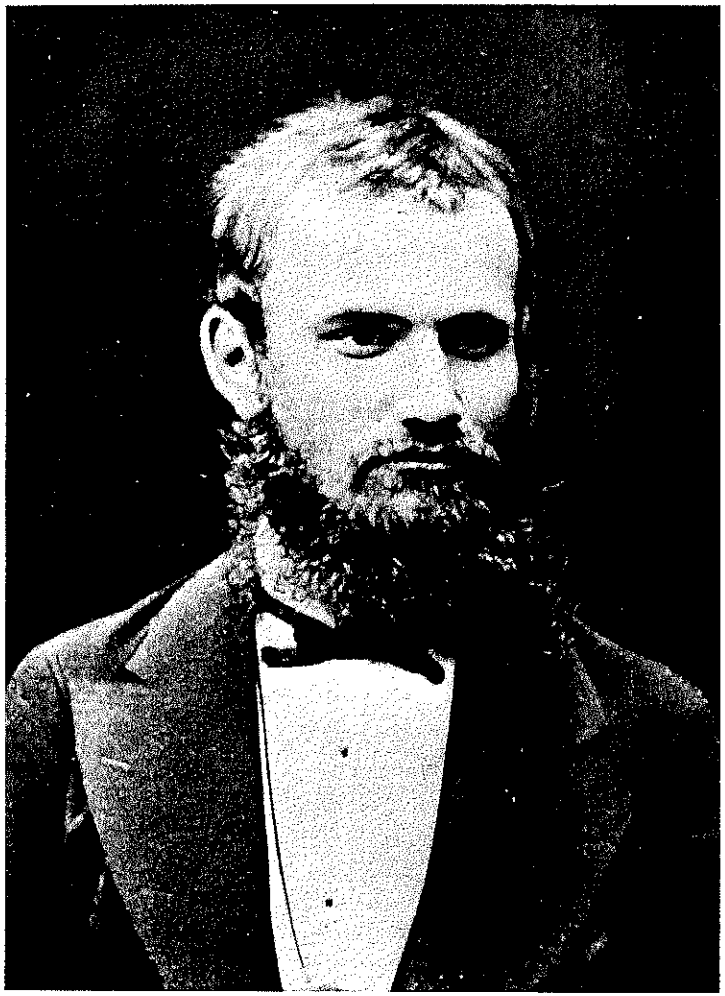

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Baudouin de Courtenay

ANTHOLOGY

The Beginnings of Structural Linguistics

By Jan Baudouin de Courtenay
Translated and edited with an introduction by

Edward Stankiewicz

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XIV

Phonetic Laws

DESPITE AN EXTENSIVE LITERATURE, the question of so-called phonetic laws is still insufficiently elucidated and not exhausted. The reason for this lies in the confusion of certain concepts whose precise formulation must be the first task of linguistic theory.

It would be presumptuous on my part to maintain that my modest remarks can bring us nearer the solution of this problem; nevertheless, I think that they will not be without some interest.

I am presenting here my views on the method of solving this problem. In essence, I am not proposing anything new. Everything written here has been stated and elaborated before by others. If I raise this question again, it is perhaps only out of pedantry. I always insist on the necessity of pursuing an object of research to the very end, putting its results in precise formulas in conformity with the facts, using technical terms with the utmost care and consistency as dictated by these facts, and devising symbols for the elements of speech activity established in the course of linguistic analysis.

An adequate formulation of the concept of phonetic law requires that we place this concept within the proper framework. One must take into account man's experience in the various spheres of life, man's relation to the various areas of nature as a whole, and the importance of a general world-view.

⟨. . .⟩ We shall try to present clearly the linguistic processes which connect the psychological system that carries linguistic representations with other psychological systems. Assuming that linguistic phenomena and processes are manifestations of *social intercourse among individuals,* we must consider the four "worlds" which make up the object of theoretical inquiry:

1) *the psychological world of the individual,* the basis for the existence of invariant and lasting linguistic ideas;

2) *the biological and physiological* world of a given organism, the first centrifugal transmitter of linguistic representations from one individual to another;

3) *the external, physical world,* the second transmitter;

2^b) *again the biological and physiological* world of the members of the speech community, now the centripetal transmitter of linguistic representations from one individual to another;

1^b) *the psychological* world, etc.;

4) the transmission of linguistically expressed ideas from one individual to another by means of the human organism and the external world is a linguistic process that takes place in the *social world,* but presupposes man's faculty of speech (PT. 41–42).[1]

All this refers both to articulatory-auditory language and to the graphic-visual language of people who know more or less how to read and write. I shall leave aside the graphic-visual aspect and dwell here only on the articulatory-auditory aspect of language, with which the notion of "phonetic law" is closely connected.

All linguistic communication, including the transmission of the articulatory-auditory properties of a language, can be seen as a complex process of transition from one phase of development to another.

The articulatory-auditory representations that exist potentially in the psychological system of an individual are converted into *physiological energy* when they are implemented with the help of the speech organs, that is, when they are discharged by the *organism* which sets the speech organs into motion. *The operation of the speech organs* in turn converts the physiological energy into physical energy, which involves not only acoustic phenomena but also phenomena of a mechanical order (such as thermal, electrical, or metabolic phenomena). The acoustic vibrations in the physical world which evoke *auditory impressions* affect the receptive powers of other organisms and produce corresponding types of physiological energy that are converted into perceptive energy of the psychological system. The acoustic impressions activate *sensory nerves* which transmit these impressions to the cerebral center. The *apperception* of the received impressions takes place in this system. Thanks to apperception, each representation is potentially

and actively *associated* with and enriched by other existing representations (PT. 43).

In view of the above, we may distinguish two types of phonetics: an *anthropological phonetics* (an anthropophonic or even zoophonic phonetics), which is a phonetics of articulation and hearing (and which is an ethnic and national property), and an *etymological phonetics,* which is associated with morphological and semasiological representations (and which is relevant for history, ethnography, etc.) (PT. 4–5, 34, 40–41).

Only articulatory-auditory representations are transmitted in the process of social communication. The transmission is of an acoustic nature and is effectuated through the physiological (biological) and physical worlds. Everything that goes beyond articulatory-auditory representations, everything that is related to morphology and semasiology, or even to morphological and semasiological phonetics, must occur and renew itself in each individual (PT. 42).

As I have said, there exists only *individual language,* which is the sum total of articulatory-auditory representations that are associated with linguistic and extralinguistic concepts. The articulatory-auditory representations manifest themselves in phonetic phenomena which, being transient by nature, mere fleeting moments of social intercourse, can in no way be considered to have any real existence. That is why languages are neither phonetic nor acoustic in their nature.

Since phonetic language does not exist, it follows that neither are there sounds of language. And what does not exist, what is of only a transient nature, what is but a sign, so to speak, of that which does exist, can neither change nor develop. Thus *there is no phonetic development of sounds or of words composed of sounds.*

In individuals endowed with speech there is only development of:

1) general linguistic representations, in particular articulatory-auditory ones, and

2) functions of the speech organs, of the faculty of phonation and audition.

Thus, one may speak about "phonetic laws" only with respect to acoustics, but not phonetics (PT. 5–6).

It is impossible to point to those connections and causal relations of speech sounds that would qualify as genuine "laws." Instead of "phonetic laws" we should speak of:

1) *psychological laws* concerning the human mind, that is, laws of psychological states and change, and

2) *laws of the ways* through which social communication comes about, the laws of the manifestation of linguistic representations by means of organic and physical media.

We must assume that in the course of many generations, witnessing the various changes that go under the name of "phonetic laws," there was an infinite number of moments in which each transition depended both on the *conditions of individual linguistic thought* and on the *conditions of social interaction,* including interaction of each individual with himself. These moments made themselves felt (1) in the psychological system of the individual (both in isolation and collectively), (2) in the manifestations of the articulatory-auditory ideas, and (3) in the process of perceiving speech through the auditory organ, that is, during hearing (PT. 7, 9–10).

Thus, we have to deal with (1) *psychological* "laws" (of association, perception and apperception, emotion, etc.); (2) *physiological* laws (reflex motions, mechanical responses of the organism); and (3) *physical* laws (of acoustics, mechanics, optics, etc.).

The interplay of various factors which is subject to the law of *regularity* (conformity to rules, *Gesetzmässigkeit*) has, in other words, a psychological, psycho-physiological, physical-physiological, mechanical, and acoustic basis, as well as a psychological-receptive one which depends on the individual's psychological state and the socio-linguistic conditions of communication.

The historical results of the causally related phenomena which are used to transmit linguistic representations and are based on habits of articulation and perception are governed by *uniformity* and *regularity* (PT. 46).

Socially conditioned linguistic behavior is thus a highly complex process consisting of more specific processes. Each of these processes is based on an infinitely large number of possibilities which vary under certain conditions. These possibilities include:

1) individual and collective-individual psychological systems;

2) individual and collective-individual organisms;

3) the physical world; and

4) the social world, or the representations formed as a result of social solidarity.

In speaking of *individuals,* we must separate the *anthropological*

aspect pertinent to all living *organisms* from the *social* aspect concerning human *individuals*, who possess the faculty of speech and are members of specific speech communities. We must also pay attention to factors of *heredity* and *adaptation* to the physical and social world; adaptation begins at the embryonic stage of the individual.

Heredity is determined both biologically (anatomically and physiologically) and psychologically. In dealing with "phonetic laws," it is important to note the effect of heredity on the structure of the speech organs (primarily their histological structure), on the ability in particular to speak a given language, and on the articulatory and auditory abilities and tendencies of a given individual (PT. 34).

We must, furthermore, take into consideration (1) the different psychological states of speakers; (2) their different linguistic abilities; (3) differences in the responsiveness to linguistic stimuli (which ranges from 0 to 1, i.e., to a maximum); (4) different articulatory and auditory dispositions; (5) differences in automatization of the organs of speech and hearing; (6) differences in adroitness in controlling the functions of the speech organs; (7) differences in morphologization and semasiologization of the articulatory-auditory representations; (8) differences in the instinct for self-preservation, which goes with the tendency toward economy of labor in all three areas of language: (a) in cerebration; (b) articulation (or manifestation of the linguistic representations); and (c) audition, perception, etc. It should be added that there is a difference between linguistic cerebration and the various systems of pronunciation and perception that are found within one and the same speech community (PT. 14–16, 20–21, 38–39).

There is also a difference between the psycho-linguistic system of people who can only speak, that is, communicate by means of articulatory-auditory representations, and the psycho-linguistic system of people who can also read and write, and thereby correct and regulate their pronunciation and auditory impressions on the basis of graphic and optic impressions. The psychological difference between these two categories of people also has a bearing upon phenomena of their ethnic or national language that pertain to the problem of "phonetic laws."

The anatomical and physiological differences between individuals belonging to the same speech community are connected with

deviations in the articulatory-auditory development of a given language. These may depend on age, on individual idiosyncrasies, on organic defects, including paralysis and deafness (e.g., the various kinds of aphasia and, in particular, dysphonia) ⟨. . .⟩ (PT. 34–36).

The auditory impressions of our speech activity may, in turn, depend on the channel of transmission, especially on the atmospheric conditions of a given locale (the seashore, mountains, village, city, etc.) and their changes (fog, humidity, etc.). So far, such a dependence can only be postulated, for no one has, as yet, shown that it exists.

The receptive side of linguistic intercourse is, furthermore, affected by visual impressions. Visually perceived articulations (for example, lip movements) leave a stronger and more permanent impression than invisible articulations produced inside the vocal apparatus. In the latter case, the speaker relies on his muscular sensitivity for control and regulation of the auditory impressions, whereas the hearer imitates potentially the articulatory activities of the speaker (PT. 29).

The individual peculiarities exerting an influence on the articulatory-auditory development of a language are, as we have seen above, either of a collective-individual character (i.e., ethnic or national), or individual in the proper sense of the word.

Linguistic intercourse between *normal* members of a speech community, that is people who do not suffer from speech defects, activates the collective-individual characteristics of their psychological system; the mobilization of these traits takes place both in the speaker and, by means of perception, apperception and association, in the hearer.

Other individual peculiarities affecting the articulatory and auditory qualities of verbal intercourse retain their individual character, even though they are interpersonal. One such psychological and organic peculiarity is the manner of speaking which is determined by the social status of the speaker, his environment, way of life, diet, etc. (PT. 37).

In the final analysis, however, it is difficult to draw a sharp line between individual-collective and purely individual peculiarities. We might say that the occurrence of individual peculiarities ranges from I (restricted to one individual) to Σ (shared by all members of a speech community).

As happens in other fields of social life, language in general and

its articulatory-auditory aspects in particular is affected by the drive to imitate, by the herd-instinct, which is a social factor of a lower order.

We have noted above (p. 262) the various ways for the transmission of the articulatory and auditory features which lie at the foundation of any language regardless of its fullness and diversity. One kind of energy passes into energy of another kind: the central, psychological energy of performance passes into physiological energy of performance; the latter is transformed into external, physical energy; this again, into physiological energy of reception which is converted, finally, into the central, psychological energy of reception. During these various conversions certain changes inevitably occur, as a result of the discrepancy between the intention, or original impulse, and its implementation. The psychological arrangement of elements on the side of performance, that is, at the starting point of the cycle of conversions, may differ from its arrangement on the side of perception, at the end of the cycle of conversions. The action of the above-mentioned forces may account for the discrepancy between the psychological value of the phonemes and their realization (PT. 12–13, 38).

Furthermore, the ways to be transversed by the articulatory and auditory elements may be so complex that some of them become weak and disappear without a trace. In such cases the movements of the speech organs may reach the physical world without reaching the receptive organ, the ear. But then, hearing varies in different people, what one person cannot hear, another will hear quite well.

We must note an extremely important fact: the *facultativeness* in the manifestation and duration of the articulatory elements. An articulatory element may be activated in the psychological system, with the corresponding innervation of the muscles, without yielding the articulatory work itself. These facts have a singular bearing on the social-ethnic and national language (PT. 21, 23–24, 39).

The facultativeness in mobilizing the articulatory-auditory elements is closely connected with the degree of their *morphologization* and *semasiologization*. Phonemes whose elements are weakly morphologized and semasiologized tend to disappear when language is transmitted from one individual to another. Conversely, phonemes whose elements are more strongly morphologized and semasiologized, though superficially they may seem to be identical,

have a greater social value and remain stable for a long time.

The degree of morphologization and semasiologization depends on (1) the *psychological prominence* or *psychological stress* (accent), a special case of which is the psychophonetic stress, *sensu stricto*, and on (2) the occurrence of *syntactic junctures* between syntagms (between words and expressions) and *morphological junctures* between morphemes. It is clear that the psychological accent and degree of morphologization of the phonetic elements of morphemes are stronger when the morphological formants are *monomorphic*, and weaker when they are *polymorphic* (as is the case in most Indo-European languages) (PT. 16, 20–21).

The above-stated dependence of the stability of articulatory-auditory representations on their morphological and semasiological functions, or on their degree of morphologization and semasiologization, also has a bearing on the so-called phenomena of analogy and folk etymology, or *morphological assimilation* and *semasiological attraction*. The ability of morphology and semasiology to resist purely phonetic change, that is, *prohibitive analogy*, requires no further explanation (PT. 20–23, 39).

The various psychological, morphologized, and semasiologized units of collective-individual language function either as indivisible units or as complexes of different parts forming a scale that includes: *syntagms*, as components of the sentence, *morphemes*, as components of the syntagm, and *phonemes*, as components of the morpheme. However, requirements of scientific analysis, which is obliged to do justice to the realities, do not allow us to stop with the phonemes. The phonemes consist of ultimate psychological (articulatory and auditory) elements which cannot be decomposed into smaller elements. From the point of view of linguistic production, or pronunciation, these ultimate elements are the *kinemes*, whereas from the point of view of audition or perception, they are the *acousmemes*. I consider these terms indispensable for the greater precision of the abstract concepts of our science (PT. 10–12, 22–23).

I must emphasize the importance of errors in hearing (*lapsus auris*), when one word is mistaken for another, as a factor of change at any given moment of linguistic intercourse and in the history of language as a social phenomenon. Experimental methods can help to define the types and directions of these errors which depend on physical conditions, on the sense of hearing of individuals,

and on the degree of morphologization and semasiologization of the mobilized articulatory and auditory representations.

Mistakes in hearing are sporadic or permanent in any speech community whose members possess a greater or lesser command of their native language. Among the errors in hearing we must count those mistakes, or rather inaccuracies of "comprehension," that occur when speakers of one language are confronted with the new and incomprehensible articulatory and auditory elements of another language. Such errors can be viewed as a kind of collective-individual auditory (acoustic) Daltonism and as a distinctive anthropological and ethnic trait (PT. 17–22).

In the process of linguistic intercourse, of which I have spoken above, we also encounter the so-called confusion of tongues, that is, the influence of speakers on each other in the realm of linguistic concepts in general and of psychophonetic representations in particular, and in the area of automatized (articulatory and auditory) habits. Along with the influence of speakers on each other, there also is the influence of each speaker upon himself. In the articulatory-auditory domain we find thus the following types of mixing of languages that are related to the problem of "phonetic laws":

a) in the brain of each *individual* there is constant interaction of linguistic and extralinguistic concepts. Moreover, each speaker has at his disposal several individual "languages," which differ from each other articulatorily and auditorily and which are endowed with different social values: an everyday language, an official language, a language of church sermons, a language of university lectures, etc. The use of these languages may vary according to age, mental state, time of day, season, and recollection of former and newly acquired linguistic habits;

b) interaction of people belonging to the *same milieu*: members of a family, profession, etc.;

c) interaction of people belonging to different *ethnic* and *national groups,* to which they owe their heterolinguistic and heteronational concepts and habits;

d) interaction of generations. The basic tendencies in children's language, which accumulate over generations, may bring about historical changes in the language of the entire ethnic group;

e) the influence of people suffering from speech defects, from various kinds of aphasia and other deviations from normal speech upon their environment; and

f) the influence, finally, of "inert" and organic nature upon hearing.

Uniformity and purity of language are then fictions based on prejudice. Language did not emerge, like Minerva from the head of Jupiter, all at once, but was formed and is constantly being formed in each speaker through the fusion and interaction of multiple and diverse automatized concepts and habits (PT. 25–26, 29–34, 35–36, 36–37, 37–38, 41.

Thus it should be apparent that the articulatory and auditory representations of each individual—his muscular sensitivity (sensitivity of the muscular apparatus), his acoustic impressions, etc.—are in a state of constant fluctuation, qualitative variation, and quantitative change.

The fluctuations and variations are most apparent when individual languages are being compared. For example, the degree of morphologization and semasiologization of the articulatory and auditory elements differs in various speakers, though at first glance it seems to be identical in all of them. Even if we were to assume the lack of such difference, we would soon enough become aware of the existence of "accidental" variations in the speech of different speakers.

There are, furthermore, fluctuations in the processes accompanying linguistic intercourse, namely in the psycho-physical behavior of man's organism and in the physical world. Given the constant changes in the make-up of any speech community, we must admit *a priori* the existence of fluctuation in that fiction which is known as the "average" ethnic or national language.

The transmission of language from one individual to another, constantly involves a rearrangement of linguistic concepts ($A \geqslant A_1 \geqslant A_2 \geqslant A_3 \ldots \geqslant A_n$).

The history of language in general, and of its articulatory and auditory representations in particular, is a history of continuous change; something is constantly being born and something constantly disappears.

Nevertheless, and in spite of all the flucuations and variations, we must note the presence of "conservatism." The saying "something is constantly changing" should, consequently, be supplemented with "and something is constantly being preserved, something remains stable."

The articulatory and auditory representations of the contempo-

rary variant of a given "average" language form, on the one hand, the same combinations as in the past, in the various stages of historical succession and, on the other hand, they yield new combinations which vary to a large extent according to:

1) the articulatory-auditory composition of the phonemes, that is, the combinations of the *kinemes* and *acousmemes* of the phonemes;

2) the stability of the articulatory base; and

3) the degree of morphologization and semasiologization (PT. 13–15, 38–39, 16–17, 20–23).

The whole set of *representations,* and particularly of the articulatory and auditory representations, the *receptive* and *productive* habits are *bound* and *interconnected with each other,* and are transmitted through linguistic intercourse from one person to another, from one generation to another, from one ethnic group to another, and from nation to nation. Through all the fluctuations and deviations the linguistic facts and their causal relations exhibit remarkable uniformity and regularity and constant coincidence (PT. 43–47).

Uniformity and regularity characterize both the stability of the combinations of the articulatory and auditory elements and their fluctuations and changes. They apply to:

1) alternations within one language (phenomena of a monolingual character);

2) correspondences, or relations of morphologized articulatory and auditory elements among several languages (phenomena of a multilingual character);

3) variations and differences, both microscopic and macroscopic;

4) coincidence of certain special conditions and of the interrelation of peculiarities of phonetic systems; and

5) the general character of historical-phonetic differences and the general direction of articulatory-auditory changes. In one way or another, the *psychological* processes accompanying the mobilization and manifestation of phonemes together with social processes bring about historical changes in the average ethnic language.

The uniformity and regularity which is observed in the narrow sphere of individual cerebration and in linguistic intercourse must not, however, be viewed as a relationship which can be embraced by an exact formula of "phonetic law"; it is rather a statistical

constant of coincidence under certain conditions of socio-linguistic intercourse (PT. 46–48, 5, 7–9).

From an epistemological point of view, the results of observation and theoretical thought depend, on the one hand, on the observed object, and, on the other, on the mind of the observer, who formulates the results of his findings and judgments.

In like manner, the formulation of "phonetic laws" is different for the individual and the collective-individual types of thought and understanding (PT. 44–45).

Our thought is influenced by graphic and visual representations which are associated with phonetic and acoustic representations. Even the simplest elements of writing are the result of a deeper analysis of complex linguistic representations. But the application of this analysis to the choice of our graphic symbols (graphemes), stops with the phonemes which are, from the point of view of simultaniety, heterogeneous combinations of more basic articulatory and auditory activities of a certain type. The decomposition of phonemes into these elements is only partially reflected in writing. This peculiar relationship between writing and pronunciation and auditory perception has left its mark on the interpretation of "phonetic laws." It is the *suggestive power of our writing* that has led and is leading linguists to their customary doctrines of "phonetic laws."

The *confusion* of letters with sounds, of *graphemes* (representations of letters) with *phonemes* (representations of sounds), is responsible for:

1) conclusions about the difference and identity of sounds based on the difference or identity of letters;

2) the transfer of the notion of homogeneity and indivisibility from graphemes to phonemes. The proper analysis of the phoneme should lead us, on the contrary, to conclude that it is an objectively complex concept, a composite of irreducible elements, of the most simple real representations which are psychologically no longer divisible. On the articulatory side, they are representations of different activities (which are, in my opinion, incorrectly called "articulations"); and on the auditory side, they are representations of acoustic differences, resulting from the uniformity of representation of the vocal activities. I shall call the representations of the vocal articulatory activities *kinemes* and the representations of the

acoustic, psychologically indivisible differences, *acousmemes*. The unity of *kinemes* and *acousmemes* constitutes a *phoneme*. Phonemes are not like separate notes, but are like chords composed of several elements.

The totality of phonemes, kinemes and acousmemes found in any linguistic cerebration constitutes the systems of phonetic notions which are objectively present in men's "souls" (PT. 6–7, 52, 10–12).

The articulatory aspect is, moreover, usually confused with the auditory aspect, the emission of sound with perception, the representations of muscular sensations (the sensations of performed activities) with the acoustic and perceptive sensations. "Sounds" are called "labial," "dental," "palatal," etc.

It must be said that this confusion of ideas is characteristic of many scholars; only a few make the effort of thinking clearly and precisely.

Many scholars, who are either undemanding or incapable of critical thinking, confuse law, that is, functional interdependence, with statistical statements of facts or with plain coincidence. Others posit logical, methodological, and epistemological axioms, set up conditions *sine qua non* for each scientific proposition, and formulate subjective laws for any theoretical idea in place of objective laws that account for the relationships of observable facts. Almost all "phonetic laws" formulated by Kruszewski (PT. 52–53) belong to the latter category.

As happens in other fields of theoretical thought, the part of linguistics which contemplates the nature of "phonetic laws" breeds two kinds of theoreticians: those who are capable of dealing only with the concepts of elementary mathematics, such as the mathematical forms of discontinuity, integers, sums, intervals, finite states, and those who are capable of conceptualizing continuity in higher mathematical terms of differential and integral calculus.

Many linguists fail to understand that *causal relationships* can be subsumed under the *idea of law* precisely because there exist *imperceptible microscopic fluctuations and changes*. Between the starting and ending point of historical change (such as the transition from an original *k* to *č*, or *ei* to *i*), there is no relationship that could be interpreted as a law of evolution. On the contrary, the path of evolution taken by a series of generations presents an in-

finite number of discrete points, such that *each successive stage depends directly on the conditions of individual linguistic thought and on the conditions of social intercourse*. These points appear either in the individual or collective-individual psychological systems, or in the manifestation of articulatory and auditory representations (through the speech organs in the process of phonation or when the perceptive organ, the ear, receives the corresponding impressions).

Thus we must *exclude* from the domain of phonetic laws: (1) all the historical interrelations of the articulatory and auditory representations which can be stated in terms of precisely defined *alternations* of a given linguistic system (for example, in the linguistic system of Polish); (2) all the *phonetic correspondences of heteronomous linguistic cerebrations* (for example, the various correspondences in the linguistic cerebration of Slavic, Romance, Indo-European, and other languages); (3) the various *errors in pronunciation (lapsus linguae)* and *in hearing (lapsus auris)* (when we mistakenly hear one word instead of another); and (4) all easily observed cases of *substitution* of separate *phonemes*, etc. All *changes* which fall under the concept of "phonetic law" *occur unnoticeably*, like the changes in the mental states of a man or in the development of an organism (PT. 7–8, 33–34).

The confusion of the *individual language* with the *common language* is one of the greatest obstacles to the proper understanding of linguistic relationships and in particular of the problem of "phonetic laws." This confusion gave birth to Mr. Schuchardt's theory, according to which the "frequency of repetition of a word" determines its change and shortening. If it were only a matter of the constant repetition of a word by one speaker, the consequence of this purely mechanical effort and ensuing fatigue would, indeed, conform to the proposed theory. But this kind of repetition is peculiar to all members of a speech community, so that each individual, on his own part, pronounces the same word, if not for hours on end, at certain intervals (PT. 26–27, 40).

In the history of scientific and pseudoscientific linguistics the problem of phonetic laws has given rise to the following theories and interpretations:

1) According to those for whom language is an organism similar to the organisms of animals and plants, that is, an organism existing apart from man, all phonetic laws without exception are

"laws of nature" (*Naturgesetze*). This "theory" is a dogma, an article of faith, without practical consequences. Despite its vacuousness, it has for some time enjoyed popularity and is even now unconsciously at the basis of conclusions concerning individual linguistic behavior and linguistic thought in general. At any rate, the claims that language is born and dies independently of people, that the development, growth, and the history of a language are mutually exclusive, that there are no mixed languages, that words do not exist, etc., are closely connected with this viewpoint (PT. 49).

2) Another theory, which is the antithesis and complement of the first theory, sees language only as caprice, chaos, anarchy, and derides any attempt to discover in it relationships, causation, and to formulate scientific laws (PT. 44–45).

3) The appearance of the Neogrammarians (*Junggrammatiker*) and their followers should be seen as a protest against the theory which treated language as an organism apart from man. The Neogrammarians placed language again on a solid basis, regarding it as a function of man's organism. They explained the interdependence of phonemes or "sounds" of language and the "transitions" of sounds into other sounds in connection with the changes taking place in the speech organs. Unfortunately, the mind of many proponents of this theory is befuddled by that confusion of ideas which we spoke of earlier. Such is the confusion of the idea of individual language with that of average language or, in other words, the *fiction of the continuity of a linguistic base* in time and in space, and of the temporal continuity of one and the same pronunciation. For these scholars there is always an individual personifying all mankind or some ethnic group or a nation, who speaks continuously, never closing his mouth; this phonetic *perpetuum mobile* speaks, futhermore, so artfully that he constantly, without sleep and without rest, utters simultaneously all sounds or phonemes. The proponents of this theory, which confuses individual evolution with the history of an ethnic group (with polygenetic evolution), admit, it is true, the existence of gradual changes of phonetic representations (*Erinnerungsbilder, Lautbilder*), but they treat these changes as if they were taking place in a colossal brain of a single man or, at least, of an ethnic group (as far as the anatomical and physiological side of language is concerned) or in a monolithic psychological system of all mankind or, at least, of an

ethnic group (as far as the psychological side of language is concerned).

It would be unjust to assume that the proponents of this doctrine do not realize that changes in the so-called ethnic or national language cannot occur without the aid of social intercourse. In dealing with the question of "phonetic laws," they nevertheless choose to close their eyes to this outstanding fact. The carrier of linguistic variations is for them some imaginary being, representing all mankind, and the respective linguistic facts are investigated without any reference to the social interaction of people (PT. 49–50).

The Neogrammarians preach the dogma of the "unexceptional character of phonetic laws." If this is not to be an empty phrase, it can mean only that there is a *certain uniformity of phonetic correspondences* in the area of monolingualism and multilingualism, of correspondences that are conditioned historically by provenience from a common source or rather from common sources (PT. 8–9).

4) The Neogrammarian lack of respect for the fact that the general and abstract concept of an ethnic and national language is dissolved in the multitude of individuals, in the actually existing world of speakers and hearers who communicate through the intermediacy of the external world, has evoked opposition and brought forth a critique of their views. Most decisive and vigorous was the critique launched by Schuchardt.

This far-reaching critique and total rejection of the Neogrammarian dogma have, on the other hand, led to the view that linguistic, and in particular phonetic, changes are the result of more or less conscious *imitation*, that is, simply the result of *fashion* and the *mixture* of languages (PT. 50–51).

According to this view, which is now quite widespread and which arose in reaction to the rigid conception of the "unexceptional character of phonetic laws," each phonetic change has its own author, its own initiator (sex, age, and social position are irrelevant, though prominant personalities are supposed to play an important role), whom other people imitate, like sheep or geese. I suggest that we have to do here with a misunderstanding that will be overcome when the concept of *collective individuality*, which I am proposing, is generally accepted. Certainly any change, in nature or in social life, must have some starting point, must originate in some individual "soul," but this does not exclude the *simul-*

taneous beginning of a certain tendency, of a certain trend in different places and in different minds. This simultaneity should not be interpreted in a strictly mathematical sense. The difference of a second or even of several days (which cannot be pinned down *a posteriori*) is, from a historical point of view, still a case of simultaneity. In any event, I definitely *reject the opinion* that ascribes *to one man* the introduction of a linguistic innovation in the entire development of a language of a given ethnic group (PT. 24–25, 39).

There is no doubt that the consciousness and will of a people may exert a certain influence on changes of language. The same must be said of the role of literacy, education, etc. (PT. 27–28, 41–42). But if these were decisive, there would have to be noticeable, *macroscopic* differences in pronunciation. And, as I have already pointed out, any conditioned combination falling under the concept of "law" belongs to the field of imperceptible, *microscopic* differences.

The same applies to all kinds of mixing of languages and to borrowings that cause changes in pronunciation. As far as they carry the mark of macroscopic differences, they must be excluded from the concept of "phonetic laws," and if the concept of "phonetic laws" is to hold, the specific changes must be viewed as being microscopic and imperceptible (PT. 25–26, 30–34, 51).

After all that has been said, my opinion on this question should be clear. I shall complete it with a few remarks.

The "unexceptional character" of all phonetic correspondences and generalizations which go under the pretentious name "phonetic laws" can be compared with such "laws" as apply to meteorological generalizations or to various kinds of statistical generalization; in fact, they are only statements of what occurs on the surface of phenomena. Genuine "laws," the laws of causality, are *hidden in the depth,* in the intricate combination of the most diverse elements. "Laws" do exist, but not where they are being sought (PT. 9).

Of course, in any field, scientific thought, if it is not to be self-defeating, must start from the premise that nothing happens without a "cause," nothing happens outside a successive chain of causal connections and independently of condtions. The lack of exceptions is merely a corollary of logical thinking. We do not reject causality, leaving it to the nihilists and anarchists of science to do so.

We recognize *necessity, lack of exceptions,* and *absolute conditioning;* we recognize *regularity* and the *necessity of absolutely identical changes and the absence of absolutely identical changes under absolutely identical conditions.* But at the same time we must remember that the object of our observations, language, presents extremely complex conditions, a multitude of the most diverse combinations, and a variety of factors that operate in individuals as well as in the process of social interaction, including the interaction of the individual with himself. We must also remember that absolute identity of conditions is an extremely rare case (PT. 9–10, 45–46).

In the light of all this, it is even more amazing that we so often encounter agreement between phonetic facts and their determining factors. And it is this very agreement that gives the impression of a "law" and which has given birth to the fiction of "phonetic laws."

NOTES

1. (This article is a translation of the French summary (pp. 57–82, in the Sov. edition erroneously pp. 37–82) following the Polish article "O prawach gtosowych.") The abbreviation PT and the page numbers refer to the Polish text.