

Notes

1. Vāk-ás as accusative plural Rigveda 1.113.17 according to Grassmann under the word sjūman and Ludwig 1.p.12.
2. In Old Persian the accusative plural of stems ending in consonants is not attested.
3. Compare the instrumental singular -bhim, plural -bhim-s etc.; see Leskien, Die Declination im Slavisch-Litauischen und Germanischen, p. 99ff. 1876.
4. An apparent exception is formed by the participle bhāra-nt- in the weak cases, e.g. gen. bhāratas; concerning this see the excursus at the end of the article (not included here).
5. Earlier I had explained the difference to myself by ascribing to the vowel designated as connecting vowel the value of an irrational vowel in the original language.

CHAPTER FOURTEEN

HERMANN OSTHOFF AND KARL BRUGMANN
 PREFACE TO MORPHOLOGICAL INVESTIGATIONS
 IN THE SPHERE OF THE INDO-EUROPEAN LANGUAGES I

From Morphologische Untersuchungen auf dem Gebiete der indogermanischen Sprachen I (Leipzig: S. Hirzel, 1878) pp. iii-xx

By 1878 the young linguists at Leipzig were confident enough of their methodology to undertake investigations of virtually all Indo-European problems. To publish their views Osthoff and Brugmann founded a journal of their own, which continued until 1890.

The preface to this journal, written by Brugmann but also signed by Osthoff, states the principles which they and their colleagues followed. The central axiom, that sound laws have no exceptions, was first published by the oldest of the group, August Leskien in Die Declination im Slavisch-litauischen und Germanischen (1876). With Leskien, Wilhelm Scherer, as the preface indicates, gave the initial impulse to the group. One of Scherer's contributions was his rejection of the old notion that the languages of today represent a decline from those of the past; in this way he freed linguistics from some of the burden maintained from the first part of the century.

The principles elaborated by Brugmann were also applied by the other notable neogrammarians: Braune, Delbrück, Paul, and Sievers in addition to those mentioned above. Their shortcomings have been widely discussed. Students who have heard primarily about these may be surprised at the restraint of the preface: the insistence on oral, not paper, language; the study of speech as one of the cultural activities of men; the concern with contemporary language, even with dialects; the suspicion of theory — even today the last sentence of footnote 3 is not without validity; the temperate statement of the neogrammarian axiom and concomitant recognition of analogical modification. After reading the preface one may wonder how it could have led to the shortcomings for which the neogrammarians are blamed. It is clear how on these principles many of the phonological and morphological problems of the Indo-European languages were clarified.

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Since the appearance of Scherer's book *Zur Geschichte der deutschen Sprache* (Berlin, 1868), and principally through the impulses that went out from this book, the physiognomy of comparative linguistics has changed considerably. A method of research has been instituted since then and is winning more and more supporters; it differs in essential respects from the method by which comparative linguistics proceeded in the first half-century of its existence.

The older linguistics, as no one can deny, approached its object of investigation, the Indo-European languages, without first having formed a clear idea of how human speech really lives and develops, which factors are active in speaking, and how these factors working together cause the progression and modification of the substance of speech. Languages were indeed investigated most eagerly, but the man who speaks, much too little.

The human speech mechanism has a twofold aspect, a mental and a physical. To come to a clear understanding of its activity must be a main goal of the comparative linguist. For only on the basis of a more exact knowledge of the arrangement and mode of operation of this psychophysical mechanism can he get an idea of what is possible in language in general — by that one should not think of the language on paper, for on paper almost everything is possible. Moreover, only through this knowledge can the comparative linguist obtain the correct view of the way in which linguistic innovations, proceeding from individuals, gain currency in the speech community, and only thus can he acquire the methodological principles which have to guide him in all his investigations in historical linguistics. Articulatory phonetics concerns itself with the purely physical aspect of the speech mechanism. This science is several decades old, and the older linguistics, since about the 1850's, has also profited by its results; for this we must give it great credit. But the matter is far from ending with articulatory phonetics alone, if one wants to acquire a clear understanding of man's speech activity and of the formal innovations that man undertakes in speaking. Even the commonest sound changes, as, for example, the change of nb to mb, or bn to mn, or the metathesis of ar to ra, are incomprehensible if one proceeds solely from the standpoint of the physical production of sounds. In addition, there must necessarily be a science which undertakes extensive observations of the operation of the psychological factors which are at work in countless sound changes and innovations as well as in all so-called analogical formations. The first outlines of this science were drawn by Steinhil in the essay "Assimilation und Attraktion, psychologisch beleuchtet" (Zeitschrift für Völkerpsychologie, I, 93-179), which up to now has received little notice from linguistic science and articulatory phonetics. In the work named below (KZ 24, 50f), one of the two authors will

soon try to demonstrate fully, starting from this essay of Steinhil, how important it is to form a clear idea of the extent to which sound innovations are on the one hand of a purely psychomechanical nature and on the other hand the physical reflections of psychological processes. Further, the author will there examine thoroughly the effect of association of ideas in speech activity, and the creation of speech forms through the association of forms; and he will attempt to develop the methodological principles relative to it. The older comparative linguistics, while it readily accepted and utilized the teachings of articulatory phonetics, hardly concerned itself at all with the psychological aspect of the speech process, and as a consequence it fell into numerous errors. Only in very recent times is one becoming more aware of that neglect. Fortunately the movement starting with Scherer's efforts, the "neo-grammarians" movement, has already done away with some of the fundamental errors which dominated the entire older linguistics. These errors originated in that very failure to recognize the fact that even the changes and modifications taking place solely in the external speech form and affecting only the phonetic expression of thought are due to a psychological process which takes place prior to the materialization of the sound by the vocal organs. In this regard future research will of course have to investigate many things more carefully and in more detail, and many other viewpoints important to the method of historical linguistics will presumably be disclosed through this association, when historical linguistics and psychology will have entered into a closer relationship with each other than they have maintained up to now.

The insufficient investigation of the speech mechanism, especially the almost total disregard of its psychological side, was in itself a drawback which, in the older comparative linguistics, impeded and retarded the acquisition of correct guiding principles for the investigation of form change and formal innovations in our Indo-European languages. But in addition there was something which had a far worse effect and which gave rise to an error that made the discovery of these methodological principles flatly impossible as long as it persisted.

Formerly the reconstruction of the Indo-European parent language was always the chief goal and focal point of the whole of comparative linguistics. The consequence was that all investigations were constantly directed toward this original language. Within the individual languages known to us through written documents, within the development of the Indian, Iranian, Greek languages, etc., almost exclusive interest was held by the oldest periods, those lying closest to the original language, such as Old Indic, here again especially Vedic, Old Iranian, Old Greek, here chiefly the Homeric dialect, etc.

The more recent language developments were thought of as stages of decay, of decline, of aging, and with a certain amount of disdain they were disregarded as much as possible. From the forms of the earliest historically accessible periods the original Indo-European forms were constructed. And the latter were made the generally held criterion for evaluating the structures of attested language formations; so much so that comparative linguistics acquired its general ideas of how languages live, are maintained and change primarily on the basis of the original Indo-European forms. That this, however, was not the right way to arrive at correct guiding principles for the investigation of form change and form innovation in Indo-European languages is so very obvious that one must be surprised at how many have not yet become clear about it. Is not, after all, the authenticity, the scientific probability, of the original Indo-European forms, which are of course all purely hypothetical creations, totally dependent on whether they agree in general with the proper conception of the development of linguistic forms and on whether they are constructed according to correct methodological principles? Thus the investigators went around in the most obvious circles, and even today many still do so, without knowing it or wanting to admit it.

We have a picture of the manner in which linguistic forms in general are maintained, not by means of the hypothetical reconstructions in the original language, nor by means of the oldest forms known to us of Indic, Iranian, Greek, etc., whose prehistory can be inferred only by way of hypothesis and reconstruction, but — according to the principle that one has to start with the known and from there advance to the unknown — by means of those linguistic developments whose previous history can be pursued at some length on the basis of texts and whose starting-point is directly known to us. The more linguistic material is made available for our observation in an unbroken written tradition extending through the centuries, the better off we are; and the farther, with reference to the present, a stage of a language is removed from the point where its historical tradition begins, the more informative it necessarily becomes. Therefore, the comparative linguist must turn his attention from the original language to the present if he wants to arrive at a correct idea of the manner in which language is maintained, and he must once and for all rid himself completely of the thought that as a comparative Indo-Europeanist one need concern himself with the later stages of the Indo-European languages only when they offer linguistic material that is of importance for the reconstruction of the original Indo-European language.

Language fields like Germanic, Romance and Slavic are without doubt the ones where comparative linguistics can most securely

acquire its methodological principles. In the first place, the main condition is met here: we can pursue the development, the process of change of linguistic forms through many centuries on the basis of texts. Further we are here to a much greater extent involved with genuine popular speech, with the common language of communication and colloquial speech than in such languages as Old Indic, Old Greek, and Latin. What we know about the old Indo-European languages through the texts handed down to us is in such a way and to such an extent literarily influenced speech — the word "literary" taken in its broadest sense — that we scarcely get to know the genuine, natural, spontaneous, everyday language of the old Indians, Greeks, and Romans. But it is precisely this latter way of communication of thoughts which one must have clearly in mind in order to acquire the correct standpoint for evaluating the linguistic change taking place in the vernacular and especially for the evaluation of all pre-historic language development. Furthermore, the younger languages referred to are also by far superior to the ancient languages with reference to the purpose under discussion, because their development in everyday use, which can be pursued for centuries on the basis of texts, terminates in a living language abounding in dialects; but this language does not yet differ so sharply from the older state of the language of centuries ago, accessible solely in a written reproduction, that it could not furnish an excellent corrective against the errors that must necessarily creep in repeatedly with exclusive dependence on this written reproduction of the speech forms of earlier centuries. Everyone knows, for example, how we can establish the history of High German sounds in the individual dialects from the Old High German period up to the present day far more reliably than we can establish the history of Greek sounds in the Old Greek period, because the living sounds of the present permit the possibility of correctly understanding the characters through which the Germans tried to represent their sounds in past centuries. Let-ters are indeed crude and awkward, and very often actually misleading representations of the spoken sound. It is not possible at all to get an exact idea of the course of the process of changes, for example, of an Old Greek or Latin dialect.

Precisely the most recent stages of the newer Indo-European languages, the living dialects, are of great significance for the methodology of comparative linguistics in many other respects too. Here I may especially emphasize only one other thing to which linguistic research has paid much too little attention until now, simply because of the belief that whenever possible it must turn its back on the language life of the more recent and of most recent times. In all living dialects the shapes of sounds peculiar to the dialect always appear much more consistently carried out throughout the entire

linguistic material and maintained by the members of the linguistic community than one would expect from the study of the older languages accessible merely through the medium of writing; this consistency often extends into the finest shades of a sound. Whoever is not in the position of making this observation in his native dialect or elsewhere may refer to the excellent work by J. Winteler *Die Kerenser Mundart des Kantons Glarus* (Leipzig and Heidelberg, 1876) where he can convince himself of the accuracy of what has been said.¹ And should not they now take this fact to heart, who so willingly and so often admit of unmotivated exceptions of the mechanical sound laws? When the linguist can hear with his own ears how things happen in the life of a language, why does he prefer to form his ideas about the consistency and inconsistency in phonological systems solely on the basis of the inexact and unreliable written transmission of older languages? If someone wants to study the anatomical structure of an organic body, and if the most excellent preparations stand at his disposal, will he then take recourse to notoriously inexact diagrams and leave the preparations unexamined?

Therefore: only that comparative linguist who for once emerges from the hypotheses-beclouded atmosphere of the workshop in which the original Indo-European forms are forced, and steps into the clear air of tangible reality and of the present in order to get information about those things which gray theory can never reveal to him, and only he who renounces forever that formerly widespread but still used method of investigation according to which people observe language only on paper and resolve everything into terminology, systems of rules, and grammatical formalism and believe they have then fathomed the essence of the phenomena when they have devised a name for the thing — only he can arrive at a correct idea of the way in which linguistic forms live and change, and only he can acquire those methodological principles without which no credible results can be obtained at all in investigations in historical linguistics and without which any penetration into the periods of the past which lie behind the historical tradition of a language is like a sea voyage without a compass.

The picture of the life of language that someone gets, on the one hand, through the study of more recent language developments and of the living dialects and, on the other hand, through a consideration of those things which an observation of the psychological and physical speech mechanisms place at his immediate disposal — this picture differs in essential features from that other picture which comparative linguistics formerly saw arising out of the original Indo-European fog when it was still looking only for the primitive language; this picture is still the guiding form for many investigators

today. And precisely because this discrepancy exists, there remains, we believe, no other choice than: to reform the previous methodological principles of our science and to abandon forever that hazy picture which can in no way disavow its foggy home.

That is by no means to say that the whole structure of comparative linguistics, as far as it has been erected till now, should be torn down and built up again from the beginning. In spite of the above-mentioned shortcomings of the method of investigation, such an abundance of important, and so it seems, permanently reliable results have been achieved through the discernment and industry of the investigators who have been active in our field, that one can look back with pride upon the history of our science so far. But it is not to be denied that many faulty and untenable things are mixed in with the many good ones, even though many investigators at present still regard the untenable components as certain conclusions. Before one builds further, the whole structure, as far as it now stands, has need of a thoroughgoing revision. Even the foundations contain numerous unsolid places. That part of the masonry which is already set on top of these must necessarily be brought down again. The other part of the masonry, which already towers fairly high in the air, can remain standing or need only be touched up because it rests on a good foundation.

As was already indicated above, it is Scherer's achievement to have effectively broached the question of how changes and innovations take place in a language. To the horror of not a few fellow investigators, but luckily for the discipline itself, Scherer in the book named above, made ample use of the principle of leveling in his explanations. Many forms of even the oldest historically accessible stages were suddenly according to him nothing other than formations by "false analogy",² until then investigators had always regarded these as purely phonetic developments from the original Indo-European forms. That was against all tradition and hence aroused distrust and opposition at the outset. Now, in many points Scherer was without doubt wrong; in not a few, however, also without doubt correct. And no one can contest his right to that one achievement which overshadows all errors and which can hardly be valued highly enough: because of him investigators were for the first time faced with the question of whether the way in which they had previously been accustomed to judging form changes in old stages of a language, as in Old Indic, Old Greek, etc., could be treated right one, and of whether these languages did not have to be treated from the same point of view as the newer languages in which they had readily admitted "formations by false analogy" in rather great measure.

Some linguists, particularly a few most directly concerned

passed over the question and, abruptly rejecting it, remained satisfied with the old way. No wonder. When serious attempts at upset are directed against a procedure that one is used to and with which one feels comfortable, one is always more readily stimulated to ward off the disturbance than to undertake a thorough revision and possible alteration of the accustomed procedure.

But with others, especially younger scholars, the seed scattered by Scherer fell on fruitful ground. Leskien above all seized upon the thought, and since he reflected on the concept of "sound law" and "exception to the law" more profoundly than had been done before, he arrived at a set of methodological principles which he at first made fruitful in his university lectures in Leipzig. Then other younger investigators, personally stimulated by him (among them also the authors of these *Untersuchungen*), tried and still do try to bring them to wider acceptance and recognition. These principles are based on a two-fold concept, whose truth is immediately obvious: first, that language is not a thing which leads a life of its own outside of and above human beings, but that it has its true existence only in the individual, and hence that all changes in the life of a language can only proceed from the individual speaker;³ and second, that the mental and physical activity of man must have been at all times essentially the same when he acquired a language inherited from his ancestors and reproduced and modified the speech forms which had been absorbed into his consciousness.

The two most important principles of the "neogrammarian" movement are the following:⁴

First, every sound change, inasmuch as it occurs mechanically, takes place according to laws that admit no exception. That is, the direction of the sound shift is always the same for all the members of a linguistic community except where a split into dialects occurs; and all words in which the sound subjected to the change appears in the same relationship are affected by the change without exception.

Second, since it is clear that form association, that is, the creation of new linguistic forms by analogy, plays a very important role in the life of the more recent languages, this type of linguistic innovation is to be recognized without hesitation for older periods too, and even for the oldest. This principle is not only to be recognized, but is also to be utilized in the same way as it is employed for the explanation of linguistic phenomena of later periods. And it ought not strike us as the least bit peculiar if analogical formations confront us in the older and in the oldest periods of a language in the same measure or even in still greater measure than in the more or most recent periods.

This is not the place for going into further particulars. Yet let

us here briefly call attention to two other main points so that we may justify our method in the face of some objections made to it recently.

One of them is this. Only he who adheres strictly to the principle of sound laws, this mainstay of our whole science, has firm ground under his feet in his investigations. There are, on the one hand, those who needlessly, only to be able to satisfy certain desires, admit of exceptions to the sound laws governing a dialect,⁵ who except either individual words or classes of words from a sound change which has demonstrably affected all other forms of the same type, or who postulate a sporadic sound change which has taken place only in isolated forms and which has not affected all other forms of the same kind; and finally, there are those who will say that the same sound, in the very same environment, has changed in some words one way, in other words another. He who does this and who in addition sees in all these unmotivated exceptions which are favored by him, something very normal which he thinks follows from the very nature of mechanical sound change, and he who then even — as very frequently happens — makes these exceptions the basis of further conclusions, which are to abolish the consistency of the sound law that is otherwise observed,⁶ he necessarily falls victim to subjectivism and arbitrariness. In such instances he can indeed put out quite ingenious conjectures, but none that merit belief, and he must not then complain when he is faced with cold rejection. That the "neogrammarian" movement is not yet in a position to explain all "exceptions" to the sound laws is, of course, no basis for an objection against its principle.

And secondly, a few more brief words about the use of the principle of analogy in the investigation of the older periods of a language.

Many believe that analogical formations arise principally in those stages of a language in which the "feeling for the language" has "degenerated" or, as one also says, in which "the awareness of language has grown dim"; and thus they believe that one cannot expect analogical formations in the older periods of a language to the same extent as in the later.⁷ A strange way of looking at things! This point of view arose among those who think that a language and the forms of a language lead a life to themselves, apart from the individual speakers and who permit themselves to be governed to such an extent by terminology that they continually regard metaphorical expressions as reality itself and even incorporate into the language concepts which are only the ways in which the grammarian looks at things. If someone could once and for all manage to get rid of these generally harmful expressions "youth" and "old age" of languages! These and many other in themselves quite innocent grammatical

terms have so far been almost exclusively a curse, hardly a blessing. For the child who was born in Greece in the Homeric age, who became aware of the speech forms of his linguistic community by hearing them, and who then reproduced them in order to make himself understood by his fellow men — for that child were these speech forms ancient? Did he feel and handle them differently from the way in which a Greek of the Alexandrian age or someone of still later times felt and handled them? ⁸ If today a Greek dialect of the 20th century B.C. or a Germanic dialect of the 8th century B.C. suddenly became known to a grammarian, would not he then immediately alter his conception of antiquity, which he associates with the Homeric and Gothic dialects, and henceforth call old things young? And would he not in all probability henceforth drop the notion that the Greeks of Homeric times and the Goths of the 4th century A.D. were people with a "degenerate feeling for language," with a "dim awareness of language"? And do such predications have anything at all to do with the thing itself? Or might the older Indo-European peoples, suspecting what was coming, not have analogized the forms of their time a great deal in order to satisfy the grammatical desires of their offspring and not make the business of reconstructing the Indo-European parent language too difficult? We believe: as sure as we are that our Indo-European forefathers had need, just as we do, of their lips, tongue, teeth, etc. for the articulation of the sounds of their language, just as sure can we be of the fact that the entire psychological aspect of their speech activity (the emergence of sound images preserved in the memory from a subconscious state, and the development of concepts of sounds to words and sentences) was influenced by the association of ideas in the same way and in the same measure as today and as long as people are people. One must also understand that the difference in overall make-up which exists between the individual old Indo-European languages, the descendants of the same original Indo-European language, would not be nearly so considerable if in prehistoric periods regular phonetic change of the original forms had only taken place and if reformations and new formations by analogy had not supplemented it to a very great extent. Therefore there is nothing to that difference between old and young.

At first glance another objection which has been raised against us recently in order to discredit our efforts makes more sense. It is said: whoever operates with the concept of analogy can here and there perhaps hit upon the right thing with a stroke of luck, but in the main he can only appeal to faith. Now, that latter statement is quite right, and everybody who deals with the principle of analogy is also clearly aware of it. But consider the following. First: if, for example, the suffixal ending of the nominative plural Gk *híppoi*, Lat.

equi can not be reconciled with that of Osc. *Núvulanús*, Goth. *vulfós*, Old Ind. *agvás* on the basis of the sound laws, and if we have come to the conclusion that one of the two formations must be an analogical creation, is it such a bold stroke if we assume that *híppoi* and *equi* were formed according to the pronominal declension (such as originally *tai*, from *ta-*, Old Ind. *te*, Gk *toi*, etc.)? Of the same or similar simplicity are, however, countless other instances where we have recourse to our principle, whereas others arbitrarily stretch and bend the sound laws in order not to let the speaking peoples be bad grammarians who did not remember their forms and paradigms properly. Second: A principle which we strictly maintain, to the best of our ability, is: only then to take recourse to analogy when the sound laws compel to us. Form-association is for us too an "ultimum refugium." The difference is only that we see ourselves confronted with this much sooner and much more often than are the others, precisely because we are so punctilious about the sound laws and because we are convinced that the boldest assumption of the operation of analogy always has more claim to be "believed" than arbitrary evasions of the mechanical sound laws. Third: It was not long ago that the beginning was made to establish rights for the principle of analogy. Hence it is, on the one hand, very probable, indeed sure, that blunders have been made here and there in the assumption of form associations. But, on the other hand, it is also very probable that more general principles will gradually be found to cover the diverse tendencies of association, especially when the modern languages have been investigated more thoroughly with regard to their analogical formations. In this way a probability scale can also gradually be established for the assumption of association. The essential thing in the meantime is for people to have the good intention of permitting themselves to be instructed by the facts of modern language developments and then for them to conscientiously apply what they have learned to the older periods of a language.

Thus we believe that the objection that our work with the principle of analogy is reprovable because it terminates in mere conjecture has been proven to be unjustified, and we want to add one more thing in conclusion of this discussion. If the "neogrammarian" movement with its methodological principles gives up many of the original Indo-European forms which have circulated for a long time in our science and which are probably very dear to many, and if the movement is not now in a position to go along on the "idealistic flight" into the periods of primitive and pre-primitive language — as this flight is now so often attempted — and if the neogrammarian movement with its skeptical attitude seems to lag behind those who are always looking toward the primitive language and if it

appears inferior in its efficiency to the older movement, it can surely console itself with the thought that for a young science, as comparative linguistics is in spite of its sixty years, it must be of more concern to fly as safely rather than as far as possible. On the other hand, it can cherish the hope that what it gives away in primitive and primitive-primitive linguistic niceties will be amply made up for through the attainment of a deeper understanding of the mental activity of human beings in general and of the individual Indo-European peoples.

We believed that we should preface the present *Untersuchungen* with our creed because they are to contribute primarily to bringing the "neogrammarian" movement into more and more general acceptance. We may also, however, here ask our several critics to keep in mind constantly the principles by which we have decided in favor of this or that assumption. In the last years people have unfortunately passed numerous unfavorable judgements on our movement or on some of the opinions advanced by this movement; they only prove that the judges in question have not considered at all what motives led us to follow just this method and no other. An understanding and agreement between the different movements in our science which are at present battling with each other can not be brought about by such occasional skirmishings which skirt the basic questions and not by directing one's blame solely against details, but only by taking aim at the leading motives and principles. That is not to say, of course, that we, for our part, would not be heartily grateful for a detailed demonstration of mistakes and errors.

Heidelberg and Leipzig, June, 1878

Notes

1. One should give special consideration to the remarks this phonetician (p. 233) makes in general about the unreliability of the usual representation of the spoken word and about the dangers which result from it for linguists.
2. Thus Scherer maintained, for example, (which one of the authors, O., still disputed unjustly in his *Forschungen*, II, 137) that Old Indic bhārāmi "I carry" was not the phonetic descendant of an original Indo-European form *bharāmi*, but that in Indo-European one said *bharā* and that Old Indic *bhārāmi* was a new creation by analogy with athematic verbs like *dādāmi*.
3. This had previously been accepted in theory. But the fact that people were accustomed to seeing language only on paper as

well as the fact that people always said "language" when, strictly speaking, they ought to have said "the men who speak" — it was not, for example, the Greek language which was averse to spirants, dropped final *t*, changed *thithēmi* to *tithēmi*, etc., but those among the Greeks with whom the sound change in question started — had as a consequence that people frequently forgot the true state of affairs and attached a completely false idea to the term "language." Terminology and nomenclature are often a very dangerous enemy of science.

4. The following have expressed themselves (in general) about these principles: more briefly: Leskien, *Die Declination im Slavisch-litauischen und Germanischen* (Leipzig, 1876), Merzdorf, *Curtius' Stud.*, IX, 231 f.; 341, Osthoff, *Das Verbum in der Nominal-composition* (Jena, 1878); more extensively, Brugman, *Stud.*, IX, 317 ff. and *Kuhn's Zeitschr.*, XXIV, 3 ff.; 51 ff. and especially Paul, *Beitr. zur Gesch. der deutschen Sprache u. Liter.*, IV, 320 ff. In addition, most recently Brückner, "Zur Lehre von den sprachlichen Neubildungen im Litauischen," *Archiv für slav. Phil.*, III, 233 ff. and Osthoff's review of Ascoli's *Studi critici* in *Jena Lit.-zeit.*, 1878, no. 33.
5. We are of course speaking here only of mechanical sound change, not of certain phenomena of dissimilation and metathesis. The reason for the latter lies in the peculiarity of the words in which they appear; they are always the physical reflections of purely psychological stimuli and in no way nullify the concept of sound law.
6. Reference is made to such an example below p. 156, fn. 1. (not included here).
7. Often one encounters the statement in linguistic works that a given form stems from too ancient a period to be considered a formation by false analogy.
8. Naturally we are here speaking only of common colloquial speech and of the people who approached language with no literary or grammatical training.